

The game birds and wild fowl of Sweden and Norway : together with an account of the seals and salt-water fishes of those countries / by L. Lloyd.

Contributors

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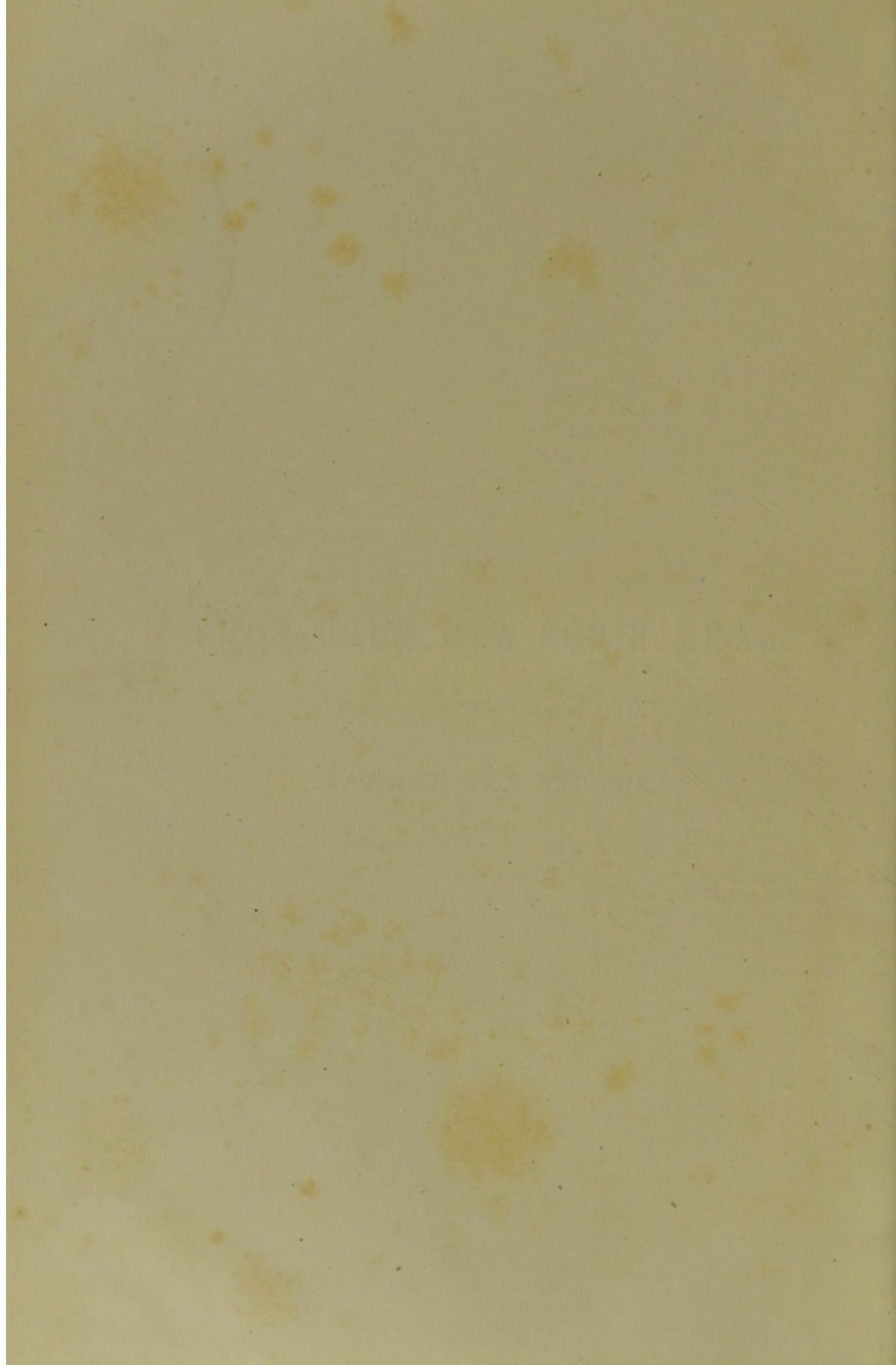
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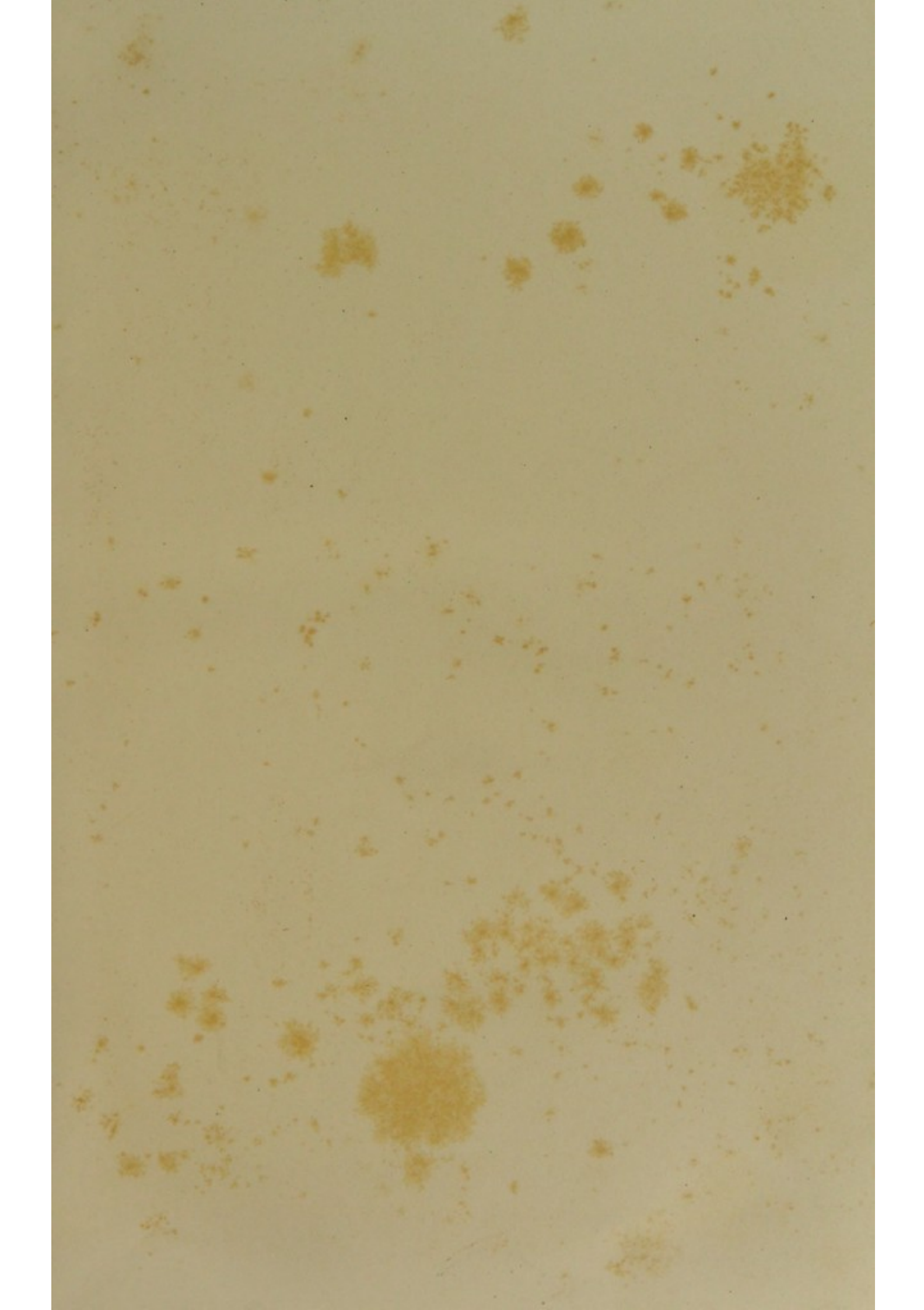
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THE
GAME BIRDS AND WILD FOWL
OF
SWEDEN AND NORWAY.







By J. G. Thompson, 1881

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Ed. H. P. 1881

C A P E R C A I L I

THE
GAME BIRDS AND WILD FOWL
OF
SWEDEN AND NORWAY;
WITH
AN ACCOUNT OF THE SEALS AND SALT-WATER FISHES
OF THOSE COUNTRIES.

By L. LLOYD,
AUTHOR OF "FIELD SPORTS OF THE NORTH OF EUROPE,"
"SCANDINAVIAN ADVENTURES," ETC. ETC.

With Map, Woodcuts, and Chromo Illustrations.

LONDON:
FREDERICK WARNE AND CO.
BEDFORD STREET, COVENT GARDEN.
1867.

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PREFACE.

MY former Works, "*Field Sports of the North of Europe*," and "*Scandinavian Adventures*," having been well received, I am induced to submit the present volume to the consideration of the Public.

In the last of these works a full, though concise, account is given of all the feathered tribe included in the Northern Fauna, with a promise, at some future time, to enter more into detail as to that portion of it coming under the designation of *Game Birds*, — such as the Capercali, the Black-Cock, the Hazel-Hen, the Ripa, &c. &c. That promise I have now fulfilled, more especially as regards the Capercali, the pride of the Northern forests, which has so lately been introduced into Scotland, and in which we all feel so much interested.

The reader will find a popular account of the several kinds of Seals frequenting the coasts of the Peninsula,

as also of the Scandinavian Salt-water Fishes, systematically arranged according to Jenyns—those pertaining to the lakes and rivers of the interior having been already treated of in “*Scandinavian Adventures*.”

A chapter has been devoted to a description of the monumental remains of the ancient Northmen; those very remarkable hieroglyphical figures (*Hällristningar*) which seem to be principally commemorative of the exploits of the famous “Sea Kings,” and which may be seen in various parts of Scandinavia, carved on the face of precipitous rocks; and of certain extraordinary cavities (*Elf-Grytor*), supposed to have been formed by the “Great Rolling Flood.” These are subjects which, critically speaking, may be considered beyond the scope of the present work, but which are yet of sufficient importance to the antiquary and the geologist, to suggest their insertion.

Throughout these pages the reader will observe, that in many instances I have entered considerably into detail when describing the various devices—some of a rude, though efficacious nature—adopted in these Northern climes for the capture and destruction of birds and four-footed animals; but no apology on my part is, I am sure, needful, as such particulars cannot but be interesting to the British sportsman.

Nor can the latter—or indeed the general reader, I would remark in parenthesis—be otherwise than gratified with the very numerous and beautiful illustrations adorning these pages, the greater portion of which were

executed expressly for this work by the late M. KÖRNER, one of the most celebrated of Swedish artists, and have been here reproduced by the publishers in full fac-simile as to colour and drawing by means of Chromolithography. Several of the woodcuts are by Mr. WOLF, whose delineations of wild animals can hardly be surpassed.

The reader will further notice, that in this, as in my former works, quotations from Scandinavian writers occur somewhat frequently. This may seem to require explanation; but it being my object to show how matters relating to "flood and field" are managed in Scandinavia, I have thought it best to allow the Northern naturalist and sportsman to tell their stories in their own way.

In conclusion, I would remark that, presuming the reader to be acquainted with my former works, I have not in the present volume so fully explained the meaning of Sporting and other terms as I should otherwise have done.

L. LLOYD.

London, 20 Dec., 1866.

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ERRATA.

Page 53, line 3 (*heading of chapter*), for "ach Häf," read "öch Häf."
 „ 442, line 1, for "plat" read "palt."
 „ 463, line 7, after the word "fish," insert "and to take out the liver."

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CHAPTER I.

THE CAPERCALL. — Geographical Limits. — Accidental Varieties. — Sterile Hens. — Food. — Roosting in the Snow. — Partial Migrations. — Bewilderment. — Pugnacious Disposition. — The Boy and Capercali. — Bewitched Bird.

OF the Scandinavian game-birds, the Capercali, or Capercailzie, the largest of the European Gallinæ (*Tjäder*, Sw.; *Tiur* (male), *Röi* (female), Norw.; *Tetrao Urogallus*, Linn.), which is to the forests of Northern Europe and Asia what the wild turkey is to those of North America, takes undoubtedly the first place. Part of what follows respecting this noble bird appeared, I should remark, in a former work of mine, "Field Sports of the North of Europe;" but as it has lately been introduced into Scotland, and with every prospect of success, I feel fully assured, that all the details I can give in regard to its habits, &c., cannot but interest the reader.

The Capercali has a wide geographical range, extending at least from the vicinity of the Frozen Ocean to the Spanish Pyrenees. Temminck says, indeed, it has been met with in some of the Islands of the Grecian Archipelago, in Siberia, and throughout a large portion of the Russian Empire in Europe (including Poland and Livonia). In the mountainous and wooded districts of Hungary, Germany, and Switzerland, it is met with more or less

frequently. It is also found in parts of France, though perhaps rather sparingly.

Throughout all the wooded parts of Scandinavia, from Altengaard in Norway, 70° N. lat., where the northernmost pine forests in Europe exist, to the northern portion of Scania, in short, wherever the pine-tree flourishes, it is pretty common. As high up, indeed, as Muonioniska, in Swedish, or rather Russian, Lapland, 68° lat., I myself once shot a brace of old birds; but beyond that place it is said to become scarcer and scarcer.

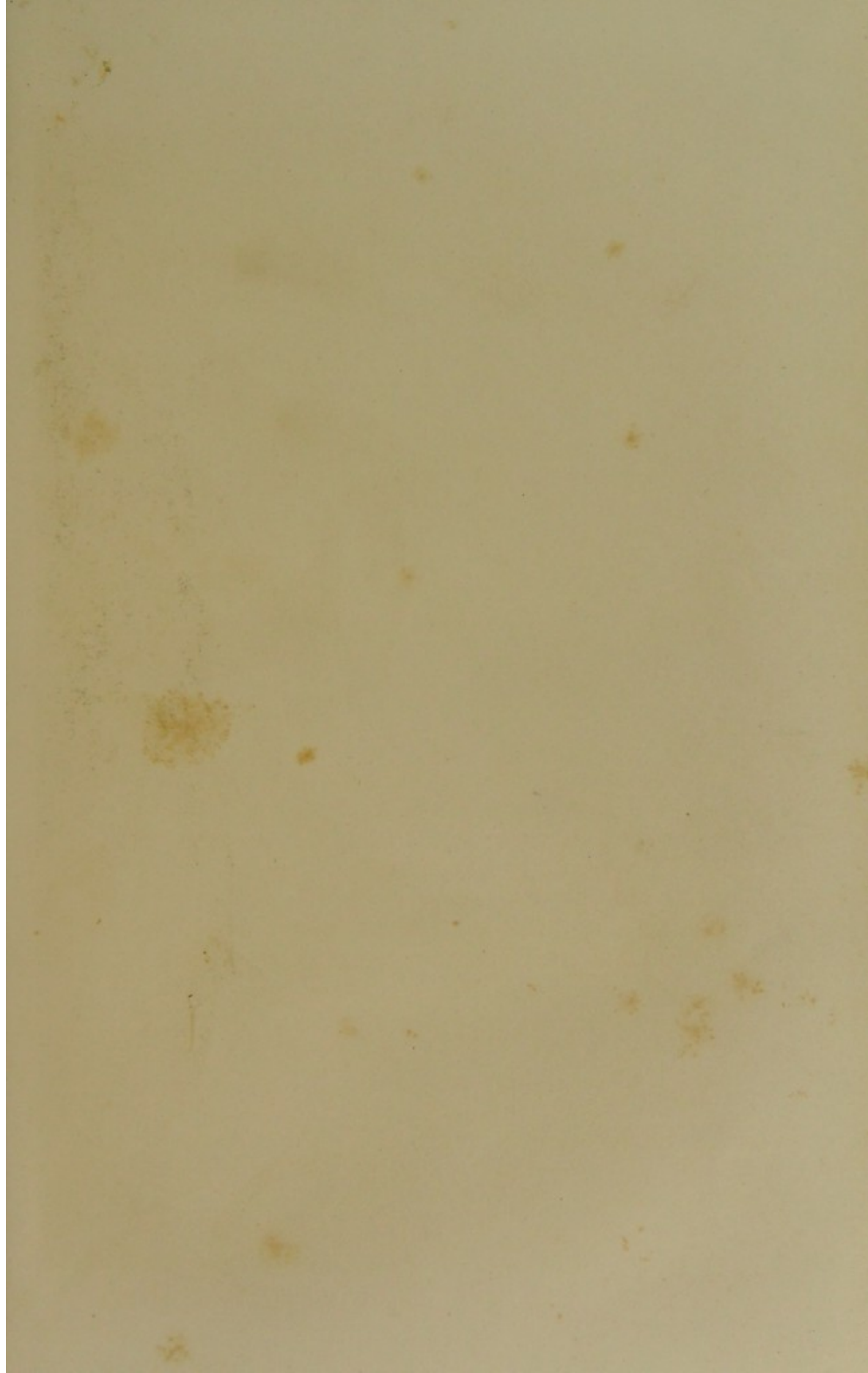
The male and female vary very greatly in plumage, the predominant colour of the former being black or dark-brown, whereas that of the female is reddish-brown with black bars.

In size also the sexes greatly differ, the female being fully one-third less than the male, which, when full-grown, measures some three feet in length, and four from tip to tip of wing. Its size, however, much depends on the latitude it inhabits. In Lapland, at least in the northern parts, it seldom exceeds eight to nine pounds in weight, whilst in the more southern portion of Sweden it has not unfrequently been met with weighing as much as fourteen or sixteen pounds, or even more.

The Capercali is supposed to attain a considerable age, which may be partly inferred from its not being fully grown until its third or fourth year. The old male birds may readily be distinguished from the younger, not only by their superior size, but also by their greater length of tail, their more eagle-like beak, and the more beautiful lustre of the plumage on the breast.

Accidental varieties of both sexes are not of unfrequent occurrence. Nilsson makes mention of as many as four such varieties, viz. :—

1st. A male killed in Dalecarlia and preserved in the museum of the Academy of Sciences in Stockholm.—The





M. Küster del.

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CAPERCAILLIE HEN. (SINGULAR VARIETY.)

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upper part of the back white, with rust-coloured, fine, brown, wavy spots; lower part of the back black, interspersed with white feathers; belly and tail spotted with white; legs dirty-white.

2nd. A male taken in Lapland, and now in the Thunberg collection at Upsala, under the name of *Tetrao Eremita*.—Less than ordinary size; colour ash-grey, with head and neck somewhat darker.

3rd. A female in the same collection.—Very pale; upper part of the body grey, with yellowish and white bars; under part white with rusty-red bars; and the breast red-brown.

4th. A female from Enontekis in Lapland, and at present in the Stockholm museum.—Colour dirty-white, here and there shaded with brownish spots.

The Professor, when speaking of the varieties in question, says, "One finds that all these belong to the high north, that their colour is faded, and that they are most commonly of a less size than usual, two circumstances which may easily be the consequence of a severe and uncongenial climate."

There may be some truth in the above remarks; but if Nilsson imagines that accidental varieties amongst Caperkali are confined to the northern parts of Scandinavia, he would seem somewhat in error, as they are sometimes met with in the more southern provinces of Sweden. Of such a variety of a female, I subjoin the portrait kindly sent me by the late Count Carl Piper, with the following note in his own handwriting appended:—

"This bird was killed in the beginning of September, 1828, in the province of Småland. She had a brood of young ones with her, one of which, a female, was also shot; and this young one, nearly full-grown, had the usual colour of a capercali hen."

At times one meets with Barren Hens (*Gall-Hönor*,

Sw.), which assume in great measure the plumage of the young male, together with its thick, crooked, and white beak, and its longer tail; but they are always readily distinguishable by their inferior size.

"Their sterility," says Nilsson, when speaking of the birds in question, "is not always a consequence of old age; for those that I have dissected were in their first year, but in all of them the ovary and the oviduct were in a diseased state and more or less destroyed. The younger they were," the Professor proceeds to say, "the less they resembled the male, and the older the closer resemblance they bore to him."

The chosen haunts of the Capercali are mountainous and hilly districts, where *Barr-Skogar*, or pine woods, abound, particularly such as are of mature growth and studded with lakes and morasses. Sometimes, however, it is met with in woods interspersed with deciduous trees (*Löf-Skogar*), more especially the oak; as it feeds freely on acorns. Excepting in the autumn, and when the young are small and follow their mother, these birds are seldom seen in brushwood or even in woods of young growth, and then only when in the vicinity of great woods.

During the summer, the food of the Capercali consists chiefly of several kinds of plants, ferns, and buds of certain trees and bushes, such as the alder, birch, and hazel; of acorns, where procurable; of almost all sorts of berries found in the northern forests, as, for example, the cranberry (*Oxycoccus palustris*, Pers.; *Vaccinium oxycoccos*, Linn.), the red whortleberry, or cowberry* (*Vaccinium*

* The berry of this plant, which in the London market often goes under the erroneous name of Cranberry, is not of so fine a flavour, when preserved, as the latter; but, owing to being less acid, it is preferred by thrifty housewives in Sweden, as requiring a smaller quantity of sugar. Recently I sent a good many living specimens of the Cranberry to Sir Thomas Maryon Wilson, which are now flourishing at his seat, Charlton House, in Kent.



M. Kerner, del.

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STERILE CAPERCALI HEN.



Vitis Idæa), the common bilberry or bleaberry (*Vaccinium Myrtillus*), the wild strawberry (*Fragaria vesca*), and raspberry (*Rubus Idæus*), the juniper-berry (*Juniperus communis*), and of insects, etc. It also feeds on the leaves of the Scotch fir (*Pinus sylvestris*, Linn.), and of the spruce pine* (*Pinus Abies*), though of the latter, so far as my own observation goes, very sparingly. In the winter time, when the ground is deeply covered with snow, and berries, &c., not readily procurable, the Caperkali would seem to subsist almost altogether on the leaves of the trees named, large portions of which, indeed, may always be seen in its droppings.

The young Caperkali feed, at first, on insects, larvæ, ant-eggs, and small worms; but they soon learn to eat the several kinds of berries specified, as also by degrees acorns and pine leaves.

According to Swedish naturalists, the Caperkali flies heavily and with much noise, and seldom high or to a distance. But in this matter I am somewhat at variance with them; because, taking the large size of the bird into consideration, its flight appears to me rather light than otherwise; and I have not only seen it at a considerable height, but known it to fly for several miles at a stretch.

The learned tell us, moreover, that the Caperkali seldom sits on the tops of trees. This is also rather contrary to my own experience, certainly so far as regards the winter; for at that season one often sees the male bird perched on the very topmost branches of a pine.

During daytime, in the summer and autumn, the Caperkali is for the most part on the ground, feeding on

* The Larch (*Abies Larix*, Rich.; *Pinus Larix*, Linn.), excepting in ornamental plantations, is unknown in Sweden. But the late Lord Breadalbane told me recently, that at Taymouth Castle, where that tree abounds, the Caperkali feed on its leaves with avidity.

the numerous berries with which the northern forests abound. Very often, however, it then sits in the trees, and commonly in their most umbrageous parts; but in the winter, when snow covers the ground, it is rarely met with elsewhere than on the pines, the leaves of which, as said, then constitute its chief sustenance.

In summer and autumn one finds these birds alone or in families; but during the winter the males for the most part *pack*, and often, as will presently be shown, in very large numbers.

The Caperkali generally roosts on trees, though not always, as stated by Swedish ornithologists; for in the winter, more especially if the weather be very severe, it not unfrequently passes the night, and it may be the day also, in the snow. It usually burrows into it at dusk, and thus snugly ensconced remains until morning, when, leaving its warm and comfortable quarters, it flies up into the adjacent pines to feed.

The Caperkali burrows into the snow horizontally, so that the spot whence it emerges is somewhat distant from that where it enters. The depth of the burrow is said to be regulated by the temperature; for if very cold, it is proportionately greater. Some writers assert, that when the bird is thus embedded in the snow, its bill protrudes above the surface; but this I much doubt; for, excepting the aperture by which it entered—rendered, however, hardly perceptible by the collapse of the snow—nothing whatever makes its presence known, at least to the casual observer. But it is only when the snow is in a *loose* state that it can burrow in the manner spoken of; for if there is a crust upon the surface, it would be difficult, if not impossible, for the bird to force its way through the obstruction.

This rather peculiar habit of roosting in the snow—which, however, is also common to the Black-Cock, the

Hazel-hen, the *Ripa* (a species of grouse, to be spoken of presently), and other forest birds—is, as will hereafter be shown, often taken advantage of by the fowler in certain parts of Scandinavia.

The fact of the Capercali thus burying itself in the snow is perfectly well known to all the northern chasseurs. More than once, indeed, when I have been traversing the forest soon after daybreak, a whole pack of these birds has suddenly risen near me from out of the snow. And even in the middle of the day, single birds have frequently flown up at my very feet; but whether these had been in the snow over-night, or had recently dived into it, I cannot say.

When thus snugly buried in the snow, in fancied security, it often falls a victim to the fox, or others of its numerous enemies, who, guided by their unfailing scent, find out its hiding-place and pounce upon it.

Though the Capercali comes under the category of *Stånd-Foglar*,* it happens during certain years, especially in the northern portions of the peninsula, that numbers of these birds *sträcka*, or partially migrate; so that districts where they previously abounded, become almost denuded of them; whilst in other districts where they had before been very scarce, they suddenly appear in large packs, consisting generally of males alone. This will be better understood from the following quotations:—

“One day in October, 1807, when I was doing duty in the parish of Svennevad, in the province of Nerike,” writes the Rev. J. Wulf, “a peasant came to me and

* The learned in Sweden class the birds belonging to their fauna under three several heads, viz.:—1. *Stånd-Foglar*, that is, such birds as remain all the year round in the district where they are bred. 2. *Sträck-Foglar*, or those that at times wander far away from the place of their birth, but do not leave the peninsula. 3. *Flytt-Foglar*, or such as migrate to other countries on the approach of winter.

reported, that an extraordinarily great number of Capercali had for several consecutive days been seen in a certain wooded eminence near the village, and that they every morning alighted in a newly-sown rye-field close by, and either devoured the young grain or trampled it under foot. As, during my four years' residence in the parish, I well knew that in the isolated little wood in question, which was not a (English) mile in length, and less than half a one in breadth, there was seldom even a black-cock to be seen, much less a Capercali, I considered the story as fabulous, or at all events greatly exaggerated; but as my informant persisted in his statement, I made up my mind to visit the spot indicated the following morning.

“ But although I was there at dawn of day, I arrived somewhat too late; for the birds were already in motion, and part of them had settled in the fields. By concealing myself in a ditch, however, I fortunately succeeded in killing one, which on inspection proved an old cock.

“ I hastened now to the place pointed out by my guide. A quarter of an hour had hardly elapsed before the birds, a few at a time, returned and alighted close about me. Being well out of sight, I was in no hurry to fire, but took time to watch their proceedings. All remained quite passive, and not one moved from the very spot on which it had settled; neither could I observe that any of them ate of the young rye. As the daylight increased, I cast my eyes over the whole pack, which I judged to number from seventy to eighty; but amongst them I could not discover a single female, one and all being males—a fact previously observed by the peasant. Seeing at length that some few of the more distant birds were taking wing for the wooded hill in question, I thought no time was to be lost, and therefore discharged my gun into the nearest and densest mass, and with such good effect that three more fell dead on the spot.

“The remainder now moved off, and in the same direction their comrades had taken; but still I perceived they flew beyond the wooded hill. In anticipation of their return, I remained in my hiding-place until broad daylight, but saw no more of them.

“I now returned home for my dogs, and for several hours carefully searched all the woods in the vicinity; though without avail, for not a single Capercali was to be found anywhere. To judge from the quantity of droppings on the wooded hill named, their numbers, supposing they had only been there for a few days, as stated, must have been very much greater than just mentioned. And though I renewed the search on the two following days, as also a short time afterwards, it was with no better success. The birds were never again seen there, nor could I learn that they had been observed elsewhere in the parish. During the succeeding spring, moreover, not more Capercali were met with thereabouts than usual.

“From their plumage, and the strength of their lower mandibles, I came to the conclusion that the four Capercali I had shot were all old birds, at least not bred that year. Not one of them exceeded nine pounds in weight, and they could not therefore have been natives of our province, where, during the autumnal months, when birds are in their best condition, they usually weigh ten, and frequently eleven or twelve pounds. I therefore considered them to be wanderers from Norrland—the northernmost of the main divisions of Sweden—where, as known, the Capercali are smaller than those found in the middle and southern parts of Sweden.

“So far as I can recollect,” M. Wulf goes on to say, “there was nothing unusual in the weather, either in regard to premature snow-storms, or early night frosts, during this particular autumn, as compared with those of former years.”

Again: "We had just crossed a morass on our way from Quickjock to Arieplög," writes the Rev. Petrus Læstadius, the celebrated Lapland missionary, "when we saw at a little distance a great many black-looking birds perched in the trees. At first we thought they were crows; but on a nearer approach found them to be Capercali, which had collected together in very unusual numbers, like a flock of crows or jackdaws. . . . In the afternoon of the same day (6th May), we returned by the same route; but when we came to our Capercali region, not a single one of those we had observed in the morning was to be seen. My companion, the catechist Lars Pehrsson, an experienced *Jägare*, said they were *Flytt-Foglar*, or migratory birds, which do not remain in one place.

"It is a remarkable circumstance with the Capercali," the reverend gentleman goes on to say, "that it, as every one hereabouts maintains, should 'flytta,' or migrate. Instinct teaches it to take a certain course, and it therefore, for years together, almost disappears from the country. People assert that in misty weather it sometimes proceeds right out to sea; and when it becomes exhausted, falls into the water and perishes. They also say that when it flies westward, in the direction of the fjälls, one soon gets it back again; but if, on the contrary, it takes an easterly course, it will never more return, and in consequence there will be a great dearth of birds for a long period to come."

Once more: "With us," says M. Nordholm, in his work published in the middle of the last century, treating of the methods resorted to in Jemtland (a portion of Norrland) for the capture of wild animals, "both Capercali and Black-Cock are very irregular. One sometimes sees great numbers of these birds, but after a short period they nearly all disappear, whilst at other times

the reverse is the case. The people here have the saying, that if there be a southerly wind on Michaelmas Day, the birds from the south country will come to us in large 'packs,' and face for the fjälls, so that during the winter great captures will be made; but if, on the contrary, the wind on that day be from the north, not only the birds then in the country, but also those on the fjälls, will fly away to strange places, and the fowler in consequence will reap but a sorry harvest.

"We ought to know the reason," this writer continues, "why during certain years birds in our country appear in such small numbers, whilst during others they are so abundant. I will not go further back than the autumn of 1745, when birds were exceedingly scarce in all their usual haunts, but in the following year so very plentiful as to fill all the woods, both great and small. Throughout Jemtland every experienced fowler had a sledge-load to sell. The same winter, or beginning of 1747, birds were of so little value that a hazel-hen, or a ripa, was exchanged on the market-place for a single fig! The country people had eaten so many birds as to be disgusted at the very sight of them, and no one would buy game, because every dealer who had taken birds to Stockholm for sale had lost largely by the speculation. The succeeding winter, that of 1747-8, not a fourth part of the captures were made. My opinion in regard to the matter in question is, that when birds appear in Norrland in unusual numbers, they must have come from other countries—from Norway, Russia,* &c., for one then meets with individuals of an altogether different size to ours. Many of the Capercali

* The notion seems pretty generally entertained both in Sweden and Norway, that some at least of the migratory Capercali in question come from Siberia, where, Pallas tells us, a small variety of this bird is found, at the lower Toonguska river, and to the Russians known by a name,

and Black-Cocks are very small and lean, and such the fowlers call *Flytt-Foglar*, or migratory birds. In seasons when game is scarce none of these are to be seen."

These periodical wanderings of the Capercali are much speculated upon by naturalists and others in Scandinavia, a matter on which I myself am unable to throw any light; for during my sojourn in the northern forests I never remember observing any very sensible increase or diminution in the number of these birds, at least not to any greater extent than might readily be accounted for by good or bad seasons.

By some their migrations are attributed to extensive fires in the forest, or to great droughts, which drive the birds away from their usual breeding-grounds; by others, again, to unusually heavy snow-storms, or extreme severity of the weather, which causes them to retreat to more sheltered situations. There are, however, those who maintain that more males than females are always born, and that the supernumeraries are therefore compelled to seek for mates elsewhere.*

But be the causes of these partial migrations what they may, the subject cannot but be of interest to the

implying Mountain Capercali; and Steller mentions a similar variety met with near the mouth of the river Ud—which flows into the Sea of Okhotsk—and by the Yakutes similarly denominated.

* "From experience I have found," says the author of '*Tidskrift för Jägare*,' "that both Capercali and Black-Cock broods contain more males than females. If such is also the case in Norrland, the migrations in question are of easy explanation. Instinct drives the cocks in excess to seek for hens in other districts, for example, in Nerike and Södermanland, where, owing to the increasing number of poachers, the cocks are all destroyed as soon as the pairing season commences in the spring. In spite of this, other males make their appearance there the following year. It is probable that nature in this way provides, from the superabundance of the northern provinces, a compensation for the bad management in the south; otherwise these birds, still not so uncommon hereabouts, would be exterminated."

owners of Capercali forests in Scotland, and I have therefore thought it right to enter into fuller details than I otherwise should have done.

The Capercali is said at times to *förflyga sig*, that is, to fly it knows not whither; or rather with no fixed destination. Hence it occasionally makes its appearance in very singular localities. We read, for instance, that "at Tistad, in Södermanland, two Capercali cocks were shot by the Baron Bengt Rosenhane, the proprietor of that property, one on the roof of the mansion, and the other in a high poplar tree close by. The portraits of both birds were taken and are still preserved by the family."

Again: "The late Dr. Rislacki, an ardent sportsman and naturalist, whilst residing as tutor at Jacobsberg, also in Södermanland, left the house early one spring morning on a shooting excursion; but it being then very misty, he stood for a while speculating on the weather. Looking upwards through the gloom, he espied, perched on the chimney top, a large bird, which he took to be an eagle-owl. He fired at once, and the quarry fell down the chimney. It proved to be a male Capercali."

We also read of a clergyman in the same province, who, looking one Sunday morning from his window, whence he had a good view of the neighbouring church, saw, through the mist, a black object wandering to and fro on the roof of the sacred edifice. Feeling convinced it could not possibly be any one of the would-be hearers of that day's sermon, he took his gun and shot the stranger, who, as in the instance just related, proved to be an old Capercali cock.

We are furthermore told that, "at an estate in Wermland, one of these birds was taken alive in a pig-stye, whilst in the very act of fighting with the inmates."

These erratic wanderings of the Capercali have been

much ventilated in Scandinavia; but as they mostly occur during the breeding season, and seem confined to males alone, it appears to be the general opinion, that they arise from the senses of the bird being bewildered by disappointed affections. "Love," says the late Rev. C. U. Ekström,* "has the same effect on this bird as on many other animals, and sometimes leads to acts that seem so anomalous as to partake of madness; and when this passion, which always obscures the faculties, is mixed up with stupidity, the effect is more apparent. So it happens with *Pelle* (the nickname of the Capercali): when he is driven from a harem, where a more powerful Pasha than himself is ruling, he seeks his fortune in other quarters; and if the atmosphere at the time be misty, he often pursues a wrong course, and as a consequence is met with in places, where one would no more dream of seeing him than of seeing an ostrich."

The Capercali is of a pugnacious disposition. M. Svederus tells us, that it is courageous "and has been known to maintain long and bloody combats with the eagle before becoming its prey!" That it should struggle violently when in the talons of "the king of the air," I can well understand, but that it should maintain

* A naturalist and sportsman of the very first order, combining qualities seldom found united in the same individual, and rendering his remarks infinitely more valuable than those of the generality of mere closet naturalists, whose chief object seems to be to split hairs and invent species for their own glorification. Well might Bishop Pontoppidan, when speaking of them, and complaining of their having made out no fewer than thirty-six kinds of thrushes, exclaim: "They give themselves a particular deal of trouble to find out the characteristic marks of each kind of bird in his generation; yet I am of opinion that one may, in this as in other things, multiply species without occasion, and thereby confuse one's ideas, instead of clearing up or establishing them; for between some of them the difference is so small, that I look upon it to be rather accidental than specific." —(*English Translation*, 1755.)

a "stand-up fight" with the eagle is quite beyond my comprehension, the more so, because I have often known it to be pursued and killed by hawks of the smallest size. When domesticated, it is true, the Capercali can put on a very bold countenance, but in its native wilds it would seem shyness itself.

From some unexplained cause, however, there are times, even when in a state of nature, that it loses its habitual timidity, and becomes what in Sweden is called *Folk-ilsken*, or viciously inclined towards people, actually attacking those who come in its way. Of this fact more than one instance is on record.

"During a number of years," says M. Adelberg, "an old Capercali cock frequented the estate of Willinge, on the Island of Wermdö, who, as often as he heard people in the woods, had the temerity to alight on the ground, and with continual flapping of the wings to peck at the legs and feet of those who disturbed his domain."

M. Brehm mentions a somewhat similar incident. "A male Capercali had its resorts in a wood a (German) mile from Renthendorf, in the vicinity of a tolerably well frequented road. This bird, as soon as it perceived any one approaching, would fly towards him, furiously attacking him with both beak and wings, and could with difficulty be driven away. A Jägare succeeded in capturing it, and carried it to a place two (German) miles distant, but on the following day it had returned to its old haunts. Another person afterwards caught it with the intention of taking it to the "Ober-Jägermeister." At first the bird remained quiet, but soon began to tear and peck at him so effectually, that he was compelled to restore it to liberty. After the lapse of some months, however, it totally disappeared, having probably fallen into the hands of a less timid birdeatcher."

Once more: "In the month of August," we are

informed by M. Roman, "a youth of about twelve years of age, from Willingsberg, captured an old Capercali cock with his hands. It occurred in the following manner: the boy, who was catching crayfish in a stream, observed the bird promenading amongst some heather on a little eminence close by, and he immediately conceived the idea that he would endeavour to make it his prize. For this purpose he crept stealthily up the side of the knoll, but on reaching the top, what was his surprise to find *Pelle*, with head and tail erect, and feathers ruffled, as if in great anger, coming 'full tilt' against him" — as seen in the accompanying drawing by M. Körner. "He nevertheless mustered courage, and tranquilly awaited the onset of the foe. The contest was severe, but in the end the youth came off victorious, the Capercali for its temerity paying the penalty of its life." *

The Capercali thus divesting itself of its natural shyness, and fearlessly approaching people, has occasionally given rise in Sweden to the notion that it is actually "*possessed*."

"About this time last year," Lieutenant Jack relates, "whilst the cottager Anders Pehrsson, of Bengtsbo, in the province of Westmanland, was collecting brushwood in the forest, a Capercali cock, without showing the smallest apprehension, came and alighted on the ground immediately near him. The old belief in *Troll-Foglar*, or enchanted birds, once so common, and which is still

* May not the "people-hating" Capercali spoken of above be such as have escaped from confinement? Or may they not have been seized with a species of madness, as would at times seem to be the case with other birds? In "Scandinavian Adventures," for instance, I have related that on one occasion a goshawk furiously attacked the horses harnessed to a gentleman's carriage; and only recently we read in the English papers of a poor girl being assailed and most cruelly maltreated about the face by a rook!



M. Körner, del.

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T H E D U E L .



retained by a portion of the peasantry, could not but have its effect on the man from such clear and conclusive evidence. With this crotchet in his head he therefore hastened to the *klockare*, or clerk of the parish, named Pettersson—who was also its oracle—residing at a distance of about an English mile from the spot, and related to him what had happened.

“Pettersson, who professed not to have the most distant apprehension of the ‘troll’ and their emissaries, at once put his gun in order, and accompanied by Pehrsson repaired to the spot indicated, which the Capercali had not yet quitted. The ‘klockare’ advanced to within a few paces of the bird and pulled the trigger, but the gun ‘clicked.’ It was cocked a second and a third time, though with the same result. The flint is now hammered and fire at length produced, but confined to a flash in the pan. The ardour of the sportsman rose to the highest pitch. How provoking! neither pricker nor other implement to clear the touchhole. These had been forgotten in the hurry of departure from home. As a substitute, a pointed piece of wood is had recourse to, but it breaks short off in the touchhole and only makes matters worse. All this while the Capercali remains motionless, a quiet spectator of the enemy’s proceedings. The ‘klockare,’ on his part, gazes at the bird, and that with a feeling somewhat akin to awe. He is on the point of sharing his comrade’s belief in *förtrollning* or enchantment. Once more, however, he musters up courage, and renewing his endeavours, finally succeeds in clearing the touchhole; fresh priming is then put in the pan; but when all is in readiness, and he is prepared to discharge his piece, the bird, which hitherto had not budged an inch from the spot, suddenly takes wing. Our Nimrod is just about to give vent to his feelings, and pour maledictions on his villanous weapon, when, to his joy, he sees the

bird alight on a tree within an easy distance. To place the gun to his shoulder and fire is now the work of a moment; and to the undisguised delight, not to say astonishment, of both our doughty knights of the chase, the old blunderbuss went off with a loud bang, and the troll-bird gave up the ghost."

"Even during the following year," so we are further informed by Lieutenant Jack, "fortune once more favoured Pettersson and his wretched gun. One fine day a Caper-cali cock came and perched on a wood-pile near to his house; and although many people were moving about, it evinced no alarm whatever. Pettersson, on seeing the bird, lost no time in loading his piece, the touchhole of which, in consequence of the past year's misadventure, he had caused to be considerably enlarged; but in cocking the gun the mainspring broke, thus rendering it impossible to obtain fire in the usual manner. But Pettersson's cleverness overcame even this difficulty; for, after an unsuccessful attempt with flint and steel to ignite the powder in the pan, he applied to it a live coal taken from the grate, when the charge instantly exploded, and *Pelle* fell dead to the ground."

CHAPTER II.

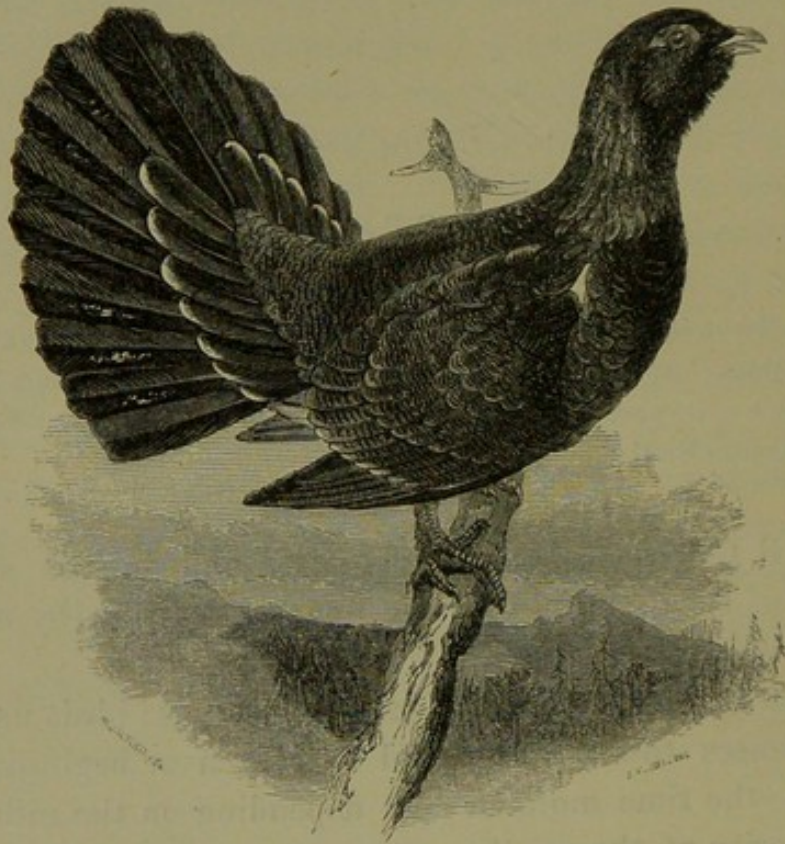
Pairing-Grounds. — Breeding. — Habits. — The Harem — Pugnacity. — Curious Crosses. — Anserine Predilections. — Enemies. — Value for the Table. — Domestication. — Treatment when in Confinement. — Naturalization in Scotland.

THE Capercali is a polygamist, and in the spring of the year collects the hens about him by means of his *spel* or love song.

The *lek-tid*, or pairing season, with these birds usually commences towards the end of March or beginning of April—the time more or less depending on the mildness or severity of the weather, the state of the snow, &c.—and continues until the middle of May, or it may be the end of that month. The *lek-ställe*, or locality where affairs matrimonial are carried on, is commonly a wooded eminence near a morass, tarn, or other opening in the forest; sometimes, however, though not frequently, “on a level rock with fir trees growing in and about it.” The “lek-ställe” is generally of some extent, and the Capercali resort to it year after year, unless the trees have been felled, or the forest otherwise disturbed.

The oldest or strongest male (or males, as the case may

be) is the first in the spring at the "lek-ställe," and in the more northern forests, even when the snow is deep on the ground, he commences his spel either on the surface of the snow—on which one often sees the marks of his trailing wings where he has paraded to and fro—or perched on the upper branch of a pine.



At such times his neck is stretched out, his wings droop, his feathers are ruffled up, and his tail spread out in the manner of a fan, as depicted in the illustration sketched by M. Wilhelm von Wright.*

* Like M. Ekström, a first-class naturalist and sportsman, and, as regards subjects of natural history, undoubtedly the best draughtsman at present existing in Sweden, although since some years, it grieves me to say, on a bed of sickness.

The spel of the Capercali, which consists, so to say, of three notes, is of a rather singular nature. An attempt, though an imperfect one, has been made to imitate it by the following words, viz.:—First note, *Pellep*!—*Pellep*!—*Pellep*! Second note, *Klickop*! Third note, *Hede*!—*Hede*!—*Hede*!—*Hede*! The first note, *Pellep*, called *knäppningen* (pl. *knäppningar*), is said to resemble the sound of two dry sticks struck together. The second, *Klickop*, named *klunken*, has been likened to a sort of gulp in the throat, the noise made when the tongue is smacked against the palate, or when a cork is drawn out of a bottle. The third, *Hede*, termed *sisningen*, has been compared with the sucking-in of the breath, as it were, or the sound caused by sharpening an edged tool on a whetstone. The giving utterance to these several notes may altogether occupy from two to three minutes; and, provided the bird be not in any way disturbed, he almost immediately afterwards commences repeating them, and continues to do so almost without ceasing.

His spel is not loud, and, if there be wind stirring at the time, cannot be heard, at least by the inexperienced, at any considerable distance. In the most favourable weather, indeed, it is not audible at more than one hundred and fifty to two hundred paces.

Between the *knäppningar*—the first note of his spel—there is usually at the commencement some little interval, but presently these follow so close on each other as to be all but continuous. Whilst the *knäppningar* lasts, the bird is wide awake, and not unfrequently turns his head from side to side, as if to look out for the enemy; and this, to a certain extent, is also the case when he sounds his second note, *klunken*! But during his third and last note, *sisningen*, his head is thrown backwards, his neck moves to and fro, wave fashion; his expanded tail stands at something like right angles to his body, and

froth issues from his mouth.* He is worked up into such an agony of passion, as to be all but unconscious of what is passing around him. Many, indeed, assert he is then both deaf and blind;† and it is at this critical moment, as will shortly be shown, that so many of these noble birds fall to the gun.

The exertion during the spel has an extraordinary physical effect upon the Capercali, as is evidenced by the frequency and abundance of his droppings; and during his last note, *sisningen*, when, as said, he is worked up into a state of ecstasy, he trembles to such a degree that even the pine, however large, on which he is perched, sensibly vibrates to the touch!

On hearing the spel of the cock, the hens assemble at the "lek-ställe" from all parts of the surrounding district, and alight either on the very tree where he is perched, or other trees in the immediate vicinity, when they make their presence known by their somewhat melancholy *läck-ton*, or call-note, resembling in degree the words *Gock! Gock! Gock!* or rather, perhaps, the croak of the raven.

A little before sunrise, the cock usually descends from his perch and alights on some open spot in the forest close by, where the hens (as seen in the accompanying drawing) collect about him; and here, during the intervals of his

* In parts of Sweden the peasants entertain the very singular notion that it is with this froth, which the hens pick up from the ground, that they become impregnated.

† It is the commonly received opinion, that during *sisningen* the eyes of the Capercali are altogether closed. But this is not the case, it having been ascertained by experiments on tame birds that, though the globe of the eye is then covered with the nictitating membrane, and as a consequence the bird cannot see, yet the eyelashes themselves remain meanwhile altogether open. From the same spasmodic affection its organs of hearing are contracted; whence it becomes deaf; often, indeed, to such a degree that it does not seem to take the slightest notice of even the report of the gun.





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T H E H A R E M .

M. Körner, del.

spel, which he still continues, and whilst parading amongst the ladies of his harem, he pairs with each in succession.

Immense excitement is then exhibited, not only by the male, but also by the female. The latter may be seen, with outstretched neck and hurried movements, flitting round and round her lord, as if challenging his notice, till at length, approaching more boldly, she nestles close beside him and solicits attentions, which his gallantry ultimately accords. Indeed, so absorbing is the love of the female Capercali during the pairing season that hens, whose mates have been shot, have been found lying on the ground in a state of excitement, and at the same time giving utterance to the plaintive call-note by which they were wont to lure him to pairing; and so abstracted, moreover, as actually to allow themselves to be taken by the naked hand.

Several cocks, old and young, not unfrequently congregate at the same "lek-ställe;" but so long as the old birds live, the young, or those of the preceding season, are not allowed to spel; and should they venture so to do, are pretty sure of getting what Brother Jonathan calls "badly whipped." But when the old birds are shot, the young ones, after the lapse of a day or two, commence; and occasionally several may be heard at their spel at the same time, and then, as M. Greiff says, "it goes gloriously."

Early in the pairing season, when the male for the most part is quite alone, he does not spel regularly or with much animation, merely giving expression to a few straggling notes; but when at an after-period the females make their appearance at the "lek-ställe," he "opens his pipes," as has been quaintly observed, "in right good earnest." "When the woodcock *ródes*,* the frogs croak

* This word "RODE," which is derived from the French verb *RÔDER*, to prowl about in search of prey at dusk, is not to be confounded with the

in the marshes, the snipe *drums* in the air, and the dung-beetle buzzes about one's ears," the Capercali is said to spel best. Commonly he holds his spel from day-break to sunrise, and from a little after sunset until quite dark. The length of time greatly depends on the state of the weather and the season of the year. When the spring is far advanced, indeed, he not unfrequently continues his spel throughout the greater part of the night.

During calm and misty weather, the spel of the Capercali is most animated. Even during a regular downfall of rain or sleet, unless accompanied by a high wind, he carries it on. Ekström mentions having on one occasion shot a Capercali at the "lek-ställe," whose sides were altogether white with wet snow, which had fastened amongst his feathers. If the weather be extremely cold, his spel is either dull or he ceases altogether, and for the reason, as surmised, that the froth, which at such times exudes from his bill, becomes congealed, and prevents him from expressing his notes.

The period when the Capercali discontinues his spel depends much on the season; for if forward, he begins early and concludes early; but if, on the contrary, the spring be backward, the reverse is the case. As a general rule, "sportsmen consider his spel ended when the leaves of the mountain ash are as large as the bird's own foot:" but in parts of the country the peasants entertain the notion, that the cessation of his spel is dependent on other causes than the state of the weather. They say that, "every time he holds his spel he plucks away one of the horny scales growing about his toes, and that it is not until they are all gone that his spel terminates."

The Capercali occasionally strikes up a few notes about

word *roul*, as usually written when speaking of the morning and evening flight of the woodcock.

Michaelmas; but his spel at that time is not of long continuance. I myself never then heard him spel; but many a chasseur has assured me that they have shot him whilst in full play. The *Jägmästare* Lindberg tells us, indeed, that he himself has known more than twenty cocks to be thus shot in the autumn—the greater part of them in September, but some also in October. Why the Capercali should spel at this time of the year is matter of speculation with many in Sweden. M. Greiff suggests it may be for the purpose of showing the young birds the situation of the “lek-ställe.”

During the pairing season the Capercali is very pugnacious, and fierce combats are then common between the rival males. These always take place on the ground, and for the most part on some little eminence, free from brushwood or other obstruction. The birds when charging each other spring high in the air, in the manner of gamecocks; and, whilst striking with their wings, tear one another with their claws. Their bills are also brought into play, and he that succeeds in getting such fast hold of his opponent as to pin him to the ground, in which position he punishes him severely, usually comes off the victor. Whilst the fight lasts—and it is often of long continuance—the combatants not unfrequently snap their bills together with great force, the noise of which, together with that caused by the blows inflicted with their wings, may, in clear and calm weather, be heard at a very considerable distance.

During these duels the birds are not unfrequently so blinded by rage as to be altogether forgetful of their own safety; and if due precaution be used, they may then be captured by the hand, of which more than one instance is on record.

“Some years ago,” says Ekström, “a servant of mine, in company with another man, left home one spring

morning to cut wood in the forest. When arrived there, they saw two Capercali cocks fighting desperately on a rising ground. Neither of the men having a gun or other weapon, my servant at once sprang forward and threw himself on the combatants; but his comrade being somewhat timid did not come to his aid, and he was only able to retain one of the birds, which he brought home to me."

When the pairing season is over, or even previously, the females retire to their several breeding-grounds. These comprise not only the great pine forests of the lowlands, but those clothing the lower slopes of the fjälls. We are told, indeed, by M. Barth, that "on two occasions, during the autumn of 1862, he met with broods of Capercali in small patches of willow bushes on the high fjälls themselves, and at a considerable distance above the last birch-tree."

The female makes her nest, which is a mere hole scraped in the ground, under a tree or bush. The eggs, numbering from five or six to twelve or fifteen, according, as it is believed, to the age of the bird, are of a dirty yellow colour, marked with light-brown spots and blotches. In length they are $2\frac{1}{16}$ inches, and in thickness $1\frac{6}{8}$ inches.

The period of incubation is said to be a month. The young, usually hatched about the beginning of June, keep with the mother until towards the approach of winter, or even longer, but the cock separates from her at a much earlier period.

In connection with the breeding habits of the Capercali, I am reminded of a story told me by a friend, for the authenticity of which he vouched, namely, that several eggs of this bird had been sat upon and hatched by a bed-ridden old man. The wonder, however, ended not here; for the chicks were reared, and one, if not more, lived for two years afterwards. And the story may be true, for a

similar one, well verified, is told regarding the eggs of the wild duck.

Capercali not very unfrequently pair with Black-Cock, but of the produce of this connection, in Sweden called *Rackel-Fogel*, more will be said in a future chapter.

Some curious crosses have also occurred between the Capercali and other birds. M. Beckman tells us, for instance, that he himself possessed three poults, the produce of a turkey hen by a Capercali cock. "The father of the brood was captured, in the autumn, when between one and two years old. The turkey hen, a young one, was kept during the winter in a separate place from the turkey cock, and had no opportunity of coming near him. In March and April she was introduced to the Capercali, who, after several days' courtship, was plainly seen to fulfil his matrimonial duty towards his strange consort. In consequence, however, of the turkey hen's plaintive cries, it was needful to remove her, and to keep her away from him until the following morning, when pairing once more took place between them.

"This proceeding was repeated for about fourteen days, when the Capercali, at the sight of a white goose, which promenaded near his prison, would no longer acknowledge his faithful spouse. The goose was therefore placed in the coop in lieu of the turkey hen, but her loud hissings testified to the displeasure she felt at the ardent caresses of her admirer; and he on his part was so affrighted, or it may be disgusted, at his advances being thus rudely repelled, that all further inclination, whether for the goose or the turkey hen, was at an end; and all subsequent attempts to rekindle his desires by again introducing to him his quondam favourites—and they were repeated the following year—proved equally unsuccessful.

"The eggs laid by the turkey hen on the occasion in question were somewhat less and darker in colour than

those usually produced by that bird. Six of them were placed in a nest along with seven legitimate turkey eggs, and all were hatched; but the two broods were totally dissimilar in appearance. Unfortunately, however, during my absence from home, all the chicks, that claimed the Capercali for father, died when going through their first moult, being then of the size of the common barn-door fowl."

The Capercali has many enemies, four-footed as well as winged, independently of man. Though a large and powerful bird, it not unfrequently falls a prey even to the smaller species of the genus *Falco*. "Some weeks before last Christmas," writes Major Matern, "I was taking a stroll in a pasture field, thinly studded with oak and birch trees, and adjacent to an extensive pine wood. When looking up I observed in the distance two birds, sometimes flying high and at others low, and all the while fighting in the air. At last they approached near to me, when they proved to be an unusually small hawk and an old Capercali cock, into the back of which the former had fixed his talons, endeavouring to deprive it of life. As yet, however, the hawk had only succeeded, and that by picking at the wing-joints, in compelling the Capercali to take to *terra firma*, where a severe scuffle ensued between them. This was, however, soon put an end to by my arrival at the scene of action. The Capercali was entirely exhausted, and the little hawk could only with difficulty disentangle itself from its coveted prey, after which it perched on a fence in the vicinity. The Capercali was an acceptable prize to me, and though a good deal plucked about the neck and somewhat wounded on the wings, was in other respects uninjured. I was enabled to carry it home alive."

In Scandinavia the Capercali is in considerable request for the table. It is more palatable, however, during the

autumnal months, when it lives for the most part on berries and the like, than in the winter, when its food chiefly consists of pine leaves, which give its flesh a somewhat resinous flavour. In Wermeland and the adjacent country it is a standing dish during the last-named season at the houses of the gentry, who usually lay in an ample supply of these birds at the setting-in of the frost. On the occasion of births, marriages, and burials, with the peasantry, the Capercali is looked upon as a needful addition to the feast. With them it is eaten either simply boiled, or first parboiled and afterwards roasted until hard as a stone, in which state it will keep for weeks or months. During my residence in Wermeland the price of a Capercali cock was about one shilling sterling, and of a hen sixpence, but since then these birds have probably become much dearer.

The Capercali is easily domesticated, and if reared from a chick becomes very tame. I have myself seen more than one running at large in the poultry yard; and even if captured in the forest when full-grown, more especially if in its first year, it soon becomes reconciled to confinement. I speak from some experience, having had many hundred in my possession. When throwing grain to them in the aviary, where at times there were as many as between twenty and thirty, a large portion of them would collect about my feet, like so many barn-door fowls, and some would even feed out of my hand. To a sportsman it was a glorious sight!

Certain people in Sweden have speculated on the practicability of converting the Capercali into a useful adjunct to the homestead. As regards England, no point would be gained, even were the experiment to prove successful; but for the good reason given by M. Nordholm, as will be seen below, it might be worth trying in Scandinavia.

"Young Capercali hens," he tells us, "may be cheated into laying against their will. One may take eggs from them, leaving only two or three in the nest, and they will daily lay others in their places; so that from a single nest as many as twenty eggs may be obtained. This being the case," he goes on to say, "it does not seem impossible, if these birds were tamed, to turn them to the same account as common hens. They could be kept on the produce of the forest alone, whereas the latter during the winter eat up many sacks of barley and other kinds of grain."

The Capercali breeds readily in confinement, provided proper arrangements be made for the purpose. I myself, it is true, never tried the experiment, considering it less troublesome to procure the adult birds from the forest than to rear them; but many instances are related showing the matter to be of easy accomplishment.

We are told by the Director, M. af Uhr, for example, that "at the smelting-works of —, in the province of Dalecarlia, the old birds in the winter time were kept together in a very large loft, where they were fed with grain, &c., and that early in the spring they were turned into an inclosure, protected by a high fence, near the house. In this inclosure were firs and pines, the common trees thereabouts. During the period of incubation no one went near to the place except the individual who fed them.

"Their food then consisted of barley and fresh sprigs of the trees just mentioned. It was indispensable to let them have full liberty, and to remain entirely undisturbed, if the hens were to sit and hatch their young. So soon as this had occurred and the brood were out, they were removed to a roomy yard closely fenced in, so that the young could not escape. The wings of the old birds were always clipped to prevent their flying away. I have

seen several such broods, both of the Capercali and the Black-Cock, each numbering eight to twelve. They were so tame that, like common hens, they would run forward when grain was thrown to them. They should always have a good supply of sand and water."

When speaking of the rearing of the chicks, M. Greiff says:—"They are to be supplied with ant-eggs, hard-boiled eggs chopped up and mixed with moistened barley-meal, also pea-haulm and trefoil-grass. They must have plenty of water, which should be so placed that they cannot overturn the pan, for they suffer very much if they get wet when young. Dry sand and mould they should never be without; when they get larger they eat with avidity cabbage-leaves, strawberries, red whortleberries, and bleaberries; and, when full-grown, barley and wheat. In the winter they should be provided with tender shoots of pine and birch-buds. I have known many people who thought they treated young birds well by giving them juniper-berries, but they never resort to this kind of food except in case of necessity."

Though the Capercali in a state of nature may be considered a hardy bird, yet in confinement, especially if recently captured, when it of course suffers from deprivation of liberty and change of diet, it can hardly be said to support that character. With myself, in spite of every precaution, they not unfrequently died, some apparently from apoplexy, others from worms, others again from diarrhœa; but, although several medical men dissected the bodies, no positive decision was arrived at as to the cause of death.

When confined in coops, however, the mortality was greater than in roomy aviaries; but even in the latter, if roofed in, they never throve well. The better plan is to give them the run, in the daytime, of a small inclosure netted over, so that they have the full benefit of air

and sun; and, at nightfall, to shut them up in a close shed, whereby they are protected both from wind and heavy rains, which are very injurious to them; as also from cats, owls, and other large vermin. Not that these can obtain access to the interior of a well-constructed coop or aviary; but by their presence they so frighten the birds as to cause them to fly against the bars of their prison, and oftentimes to seriously injure themselves. With me these nightly alarms were of frequent occurrence, and generally attended with disastrous consequences. One morning, indeed, we found two birds quite dead and several others so much injured that they survived a few days only.

The aviary, it is proper to remark, should be located in a dry and airy situation, though not exposed to cutting winds, which birds detest of all things. The site is of more consequence than may be generally supposed; for, if low and damp, disease and mortality are frequent; but if elevated and dry, the birds commonly remain healthy. The Earl of Orkney, whose aviaries were particularly well situated, assured me that out of twelve brace of Capercali he never lost a single bird from causes connected with the locality.

To those who keep Capercali in confinement, the following directions as to their treatment may be found useful, being the result of much experience:—

First. If the birds be recently captured, suffer no one but the keeper to go near them.

Secondly. Always approach them cautiously, so as not to create sudden alarm.

Thirdly. Whilst near them be as quiet as possible, and retire slowly.

Fourthly. The site where they are kept should be dry and airy, and a portion of the space allotted to them should be protected from falling weather.

Fifthly. They will eat nearly all kinds of grain, particularly wheat, barley, and also white peas, of which they are specially fond.

Sixthly. They should be constantly provided with fresh sprigs or boughs of the Scotch fir. Give them occasionally green food, such as grass-sods, berries, cabbage-leaves, &c.; but should their "droppings" appear *washy*, desist altogether for a time. They eat heather.

Seventhly. Do not overfeed them. Fifty birds die from repletion to one from starvation.

Eighthly. They must be constantly supplied with fresh water, especially in the summer time.

Ninthly. It is highly important that they should be well provided with coarse sand and grit (small gravel), as also with a *large heap* of fine sand in which to *dust* themselves.

Tenthly. If any bird appears to *mope*, or to be sickly, remove it at once from the others, more particularly if the place be confined. The healthy birds will otherwise molest it, and prevent it from feeding.

Eleventhly. In the spring of the year, as the pairing season approaches, the several males should be separated; for, being then very quarrelsome, they may otherwise injure or even destroy each other.

To proceed.—It is fortunate for the sporting world that the Capercali, after the lapse of more than a century, is once more included in the British Fauna, and I feel proud in having been a contributor in a small degree to so desirable an event. It had long been my anxious desire that a proper attempt should be made to naturalize those birds with us, never doubting of success, provided the experiment was made on a sufficiently large scale, and not in dribblets, as had previously been the case. Years ago, indeed, I volunteered my services to more than one influential proprietor in Scotland, amongst others to the late Marquis of Huntly; but from imagining "his woods

were too open to afford the Capercali adequate protection," his Lordship declined my offer.

For a long while no one would move in the matter, but at length, in the autumn of 1836, the late Sir Thomas Fowell Buxton, then recently returned from Taymouth Castle, where he had been much struck with the great capabilities of the woods for the naturalization of the Capercali, took up the affair in good earnest, and, as with everything else in which his energetic mind was engaged, with the determination of carrying it through if possible. "Influenced by the desire, in which I am sure you will concur," so he wrote to me, "to introduce these noble birds into Scotland, coupled with that of making Lord Breadalbane some return for his recent kindness to me, I request you to procure for his Lordship, at whatever cost, the requisite number." He at the same time placed his head keeper at my disposal—no slight sacrifice for a Norfolk game preserver. It was, indeed, an onerous commission, as prior to this time it had been a matter of difficulty to procure even a brace of living Capercali in Sweden; but by distributing placards throughout the country offering ample rewards, and by instructing the peasants how to knot their snares so as not to kill the birds, my object was at length gained, and within a few months of the receipt of the Baronet's letter, twenty-nine Capercali, followed up shortly afterwards by twenty more, were on their way from Sweden to Taymouth Castle, and with the exception of a single one killed by accident, all reached their destination in safety.

The arrival of this magnificent collection in Scotland created quite a sensation; every one was delighted that matters had thus far gone well, and no one more so than Sir Fowell, who addressed to me a letter on the occasion, somewhat too complimentary for publication.

Again: In September 1837, not very long after the

arrival of the first batch of twenty-nine, he wrote me as follows:—"I have just returned from Taymouth, where I have been reminded of you very frequently by the Caperkali. I saw eighteen of them in excellent health and plumage a few days ago; the other ten, six hens and four cocks, were turned out, and there is reason to hope they are doing well—so that, thanks to your energy in collecting them, Larry's care in bringing them over, and Lord Breadalbane's anxiety for their welfare, our experiment is likely, I trust, to succeed; and Scotland to be restocked with this noble bird. They are greatly admired by every one, and very deep interest is felt about them." "Nothing can surpass the woods into which they are to be turned out, and the protection they will receive," the writer goes on to say; "and as Lord Breadalbane's territory is so large, I hope they will not be disposed to leave such excellent quarters."

Sir Fowell's anticipations as to the success of the experiment, owing to the good management of Lord Breadalbane, were fully realized, as will be seen by the accompanying note from his Lordship to myself, dated 11th October 1841, that is some five years after the introduction of the birds in Scotland.

"I have great pleasure in informing you that the Caperkali have thriven most excellently. The experiment of putting the eggs under the Grey-Hen was attended with perfect success, and there are now a goodly number of these birds hereabouts."

It is very satisfactory to add that the Caperkali have subsequently flourished in the Highlands in an extraordinary manner. Less than four years ago, indeed, Lord Breadalbane himself told me he imagined there were then fully one thousand of these birds on the Taymouth property. His head keeper, moreover, in a letter to a friend estimated them at double that number.

Being desirous, when last in England, to learn how the Capercali were getting on in Scotland, as also if they had in any way changed their ordinary habits, I applied to Lord Breadalbane for information on the subject, which he kindly promised to give me after communicating with his keepers; but before receiving a reply to my inquiries, he was unhappily seized with the malady which proved fatal.

Sir Alexander Campbell, a near relative of Lord Breadalbane, however, told me that the Capercali were then as common about Taymouth Castle as the Black-Cock, but that it was quite impossible to estimate their number. That they had spread from Taymouth over all the more wooded parts of the Highlands as far as Aberdeen. That they at times took long flights, he himself having repeatedly seen them cross from one hillside to another, a distance, perhaps, of a couple of miles. That they feed freely on the larch. That in the autumn they appear to confine themselves to certain zones, the places where they had previously been abundant being then all but deserted by them. That in the winter the males and females keep for the most part separate, the latter chiefly resorting to localities near the water, and being very tame;* that the cocks are then "packed," and that he has often seen twenty and upwards together, and in the course of a single day as many perhaps as eighty. That hybrids between the Capercali and the Black-Cock are common, but their *parentage* uncertain.

* Lady Breadalbane herself assured me that when taking an airing in her carriage on the banks of Loch Tay, she has repeatedly driven under the very trees in which the Capercali hens were perched, and that without their taking the slightest notice.



J. Wolf, del.

THE CAPERCALI LEK.

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CHAPTER III.

Shooting Capercali at the Pairing-Ground.—To the Pointer.—Tragical Event.—Swedish Criminal Law.—To the “Fogel-Hund.”—Adventure with a Bear.—Good Sport.—How to make a Bag.

THE Capercali, owing to its great size and eatable qualities, being in every sense of the word “a great acquisition to the larder,” various are the expedients resorted to in Scandinavia to effect its capture.

Many fall to the gun, and, for the most part, in the pairing season; at which time, though contrary to law, thousands of these noble birds (chiefly males) are mercilessly slaughtered. Any lump of a fellow, indeed, who is able to pull a trigger can then knock them down in the way I am now about to describe.

The whereabouts of the *Lek-ställe*, of which mention was made in the last chapter, having been ascertained, the gunner—for a sportsman he can hardly be called—proceeds to the spot either over-night (in which case he bivouacks in its vicinity), or at a very early hour in the morning. “He should be there,” we are told, “by the first dawn of day, when the Woodcock begins to *rôde*,

and the shrill notes of the Woodlark (*Alauda arborea*, Linn.)—hence called the *Tjäder-klockan*, or the Capercali-watch—are heard in the forest.”

Here the man listens in profound silence until he hears the spel of the cock, then, for the most part, perched on or near to the top of a pine. Sheltering himself as much as possible behind trees, and other cover, he stealthily approaches the bird; but, owing to imperfect daylight and the thickness of the wood, he is often unable to see it until close upon it. So long, however, as the first and second notes, *knäppningen* and *klunken*, last, he must remain stationary, and, if in an exposed situation, immovable as a statue. But when the bird's third note, *sisningen*, commences, which, as said, continues only a very short time—and in the while the bird is all but blind and deaf—he takes three to four steps, or rather strides, in advance (as shown in the accompanying illustration by J. Wolf), when he again halts. Should all remain perfectly quiet, however, the bird almost immediately recommences its spel, and, when it once more comes to *sisningen*, the man, as before, moves forward several steps; and, by thus alternately halting and advancing, he at length arrives within gunshot of the Capercali, whose fate is then soon sealed.

The Capercali during its spel is very watchful; and the fowler must, therefore, be exceedingly guarded in his movements whilst thus stealing on it; and, at such times as the bird is heard, although not seen, he should of all things avoid looking about him. Want of caution on the part of the fowler in this matter has saved the lives of many Capercali. Its eye, indeed, is said to be so piercing as more readily to discover the face and hands of the man, if they be uncovered, than his person; and some, therefore, deem it advisable, not only to wear gloves, but to hold down the head.

The fowler should also be careful never to advance until the *sisningen* has actually commenced, for an old Capercali cock that has previously been persecuted will, perhaps, when one imagines it is on the very point of beginning the last-named note, suddenly stop in its spel; and, if one then advances, will most assuredly take wing. When again the man halts after *sisningen*, it should be in an easy position; so that, however long he may have to wait before the bird re-commences its spel, it will not be needful for him to change it for another.

During the early part of the spring, when the cock carries on his spel quite alone, he runs the greatest risk of his life; but, when at an after-period he is joined by the hens, they act the part of his guardian angels. On the least appearance of peril, they, to put him on his guard, utter a peculiar kind of cackle; and, should not this suffice to attract his attention, one or other of them will straightways fly past the tree on which he is perched, and at times so near to him as apparently to strike him with the tip of her wing, which unmistakable hint he cannot but comprehend, and, as a consequence, moves off at once "in the wake" of his kind monitress.

Happily but few hens, comparatively speaking, are shot at the *Lek-ställe*, partly because they are more wary than the cock, but chiefly, I take it, owing to the fowler having other and better game in view. Indeed, were a proportionate slaughter to take place amongst them, the breed, in parts of Scandinavia, must soon become extinct. As it is, the cocks are so ruthlessly shot down during the pairing season that a large portion of the hens are unable to find mates; and hence the number of barren birds (*Gall-Hönor*) one meets with in the forest. Were people to refrain from killing the cocks until the spring is well advanced, and pairing for the most part over, no great harm would be done, and they still might have ample

amusement; for the cocks, especially the young ones, continue, as said, to spel until the middle of May, or it may be even longer.

The number of Capercali—of the cocks I speak—that a man may thus kill at the *Lek-ställe* within a given time depends greatly on circumstances. If, for instance, the weather be boisterous, or there be a crust on the snow, which in the more northern parts of Scandinavia often remains on the ground until late in the spring, it may happen that even the most experienced chasseur will hardly kill a single bird in a week; but, under favourable circumstances, on the contrary, a good deal may be done. I myself have known more than one man to shoot from five to six of these birds in the course of the morning and evening of the same day, but one or two is a more usual number. A peasant in the interior, however, who knows what he is about, and devotes much of his time to the purpose, as many do, will probably kill from fifteen to twenty cocks in the course of the spring. I was, indeed, assured by an acquaintance of mine, who resided in the heart of the Wermeland Finn Forests, that one particular spring he shot no less than twenty-nine. This, in a country where nearly every one carries a gun, will give some idea of the havoc that is thus annually made amongst these noble birds.

In the northern parts of Scandinavia, the Capercali is generally shot at the *Lek-ställe* with a small pea-rifle; but in the south the shot-gun is almost universally used for the purpose.

Though the Capercali is so large a bird as to be thought impossible to miss, it nevertheless not seldom escapes the fowler, even though provided with a shot-gun. Several causes contribute to this. In the first place, it is usually very dark when one fires; secondly, it is not always that an unobstructed view of the bird can be

obtained; and, lastly, “a good dose” is required to bring it to the ground.

Accidents, and those of a serious nature, sometimes occur at the *Lek-ställe*; for, when at early dawn the fowler is stealing on the Capercali in a bent position, a brother sportsman similarly engaged may take him for a bear or other wild beast, and send a ball into his body, many instances of which are on record.

In connection with this subject I subjoin some lines by the late Bishop Tegnér, the great northern bard:—*

Green hunter! load
Your rifle now:
Your stealthy road
Winds o'er the mountain's brow
To yonder swamps.
Yet is it time: night's starry lamps
Smile on the earth; young love lies warm
Cradled in Spring's fond arm.

Hush! hush! hush!
Birds, like joy, are full of fear,
Wakeful love can danger hear:
Creeping, slow,
Softly go:
Hark! they are stirring in the bush.

See, how the night
Fades, dies away
In morning grey;
While streaks of light
Land and sea are calling up;
Day is red on the hill-top:
But underneath,
The dales, the groves, are dark as death.

* From “Specimens of German and Swedish Poetry.” Translated by J. E. D. Bethune. Published by John Murray. 1848.

Seest thou yonder pine-clad isle
 Dimly smile,
 In the light :
 Now the tree-tops are faintly bright
 In the twilight cold and clear :
 Birds to-day are pairing there.

Hark ! how their tender lay
 Salutes the day,
 Salutes the mate, already seen
 Perched on the branches green ;
 How lovingly the strain
 Pours forth, to gain
 The bashful bride, as coy as though
 She the courtship did not know.

Hark ! how in murmurs sweet,
 They the old tale repeat ;
 Love, which must eternal be,
 Endless truth and constancy ;
 All that fondest longing feels,
 All that brightest hope reveals :
 There is sorrow's gentle sigh,
 There is joy's exulting cry,
 Mingling in one ;
 And not a tone
 Discordant from a single bush or tree ;
 All is delicious harmony.

How eloquent thou art,
 Eternal voice of Nature's heart !
 Thou holy flame,
 Ever changing, still the same ;
 Life's endless spring,
 Soul of every living thing,
 Height of joy and depth of pain
 Known in Heaven, or felt on earth ;
 Love ! love ! no song to which my heart gives birth
 Speaks the wild joy of thy tumultuous strain.

Louder swell the notes
 Gushing from their throats,
 Murmuring, thrilling through the grove :
 Songs of rage as well as love,
 Love and rage and rivalry.
 Chased must the hated rival be
 O'er hill and dale, far from the trysting tree.

What can assuage
 Their jealous rage ?
 War, and warlike songs.
 The prize, the struggle, is the same
 As before Troy, whose deeds of fame
 In many a battle-song are shown :
 To the forest strife belongs
 Rightly an Iliad of its own.

The squadrons stand aside,
 While Paris forth is gone
 With Menelaus to contend alone,
 And battle for the beauteous bride.
 There Helen sits, not upon Ilion's wall,
 But on a pine-tree tall ;
 Thence she beholds the strife,
 Destined to be the conqueror's wife.

With fierce delight
 The Greek and Trojan fight ;
 They clap their wings,
 With eager springs
 Breast against breast they rise ;
 And the red ring swells round their fiery eyes.

Claw and crooked beak
 Their hate and rage bespeak.
 Feathers fly ; the life blood drops,
 Spattering the green grass tops ;
 Till, weary of the fight,
 Paris turns to flight.
 But ah ! a Pandarus is there,
 Already plans his treacherous snare,
 His bow already on the Spartan bends,
 While he struts proudly through his Grecian friends.

The victor's song
 Sounds now : he will not triumph long.
 He boasts of deeds of glory done
 For his dear love, while in the tone
 The songster's rage is still expressed ;
 But, in his loving breast,

Rage cannot last ;
 Already is it past.
 Hark ! how the melody outpouring
 Seems to decay,
 And melts away,
 Sweetly for love imploring ;
 And, in complaining longing sighs,
 Softly dies.

Hunter ! be quick, observe the tone ;
 Steal along,
 While swells the song,
 Sight and hearing then are gone :
 But, when he holds his warbling breath,
 Crouch down, as low, as still as death.
 Heed not that the swamp is deep,
 Through the marshes you must creep ;
 If the victor you would win,
 Get your rifle's range within.

Fire !
 Hushed is the song, dispersed the choir,
 And in the warbler's heart the lead.
 But he died without a pang,
 Fondest loved, and sweetest sang,
 Happy dead !

Many Capercali are also shot during the autumn to the *Stånd-Hund*, or pointer, in the midland and southern parts of Scandinavia, and in what we in England should call a sportsmanlike manner. In the far north that description of dog is hardly known, even by name.

At the season in question, when these birds are much on the ground, and usually met with in the more open parts of the forest, near water, and where berries abound, the pointer is very available. But he should be steady, under perfect command, and not too wide a ranger. He ought, moreover, to be a good *roader*—that is, draw well on game; for though at times the Capercali lies close to the pointer, yet at others it not only runs far ahead, but quickly, in which case it is desirable that the sportsman be as near to it as possible when it takes wing, more especially in thick cover.

Pointers are not unfrequently met with in Sweden which, when ranging far ahead, will, on finding game, leave it undisturbed, and, hastening back to their master, intimate to him by their gestures that their search has proved successful, and afterwards lead him up to the quarry. A dog so trained, or self-taught—called *rappörtör*, or reporter—is invaluable in wood-shooting.

Such a one I myself recently possessed. His instinct, indeed, was extraordinary; for if, when hunting at a distance from me in the open country, he found birds, he, instead of returning to me, would mount a rock or other eminence, and commence barking loudly to attract my attention, not ceasing until such time as he noticed that I was making towards him, when he would at once return to his point.

In shooting Capercali to the pointer I was not very fortunate, never having bagged more than four or five in any one day; but then it was rarely I went in search of those birds in August or the early part of September, the only time the pointer can be used to advantage; and I never shot, moreover, in forests, where they either abounded or were preserved.

But some of my friends and acquaintances have been much more successful than myself. Captain B., a country-

man, told me that, when in Norway some years ago, he and a friend thus bagged in a few days nineteen and a half brace of those birds.

When shooting Capercali, or, indeed, any other kind of game in cover, with a pointer, it was my custom to hunt him with a bell about his neck, which I found an immense advantage; for if the bell suddenly ceased ringing, I was pretty sure, on proceeding to the spot, to find the dog at a point. It might be supposed the bell would alarm the birds, but this did not appear to be the case, probably because they were accustomed to the sound of it, as one or more of a herd of cattle pasturing in the northern forests is almost always provided with that appendage.

As regards the country about Ronnum—the place of my late residence—the best Capercali shooting was on the hills of Hunneberg* and Halleberg. But these being Royal domains and strictly preserved, it was only once in a time, by the courtesy of M. Sandelhjelm, the late Governor of the province of Wenersborg, that I obtained access to them. On these occasions I was always accompanied, agreeably to rule, by a keeper, and more than once by an individual named Mörk, who some years subsequently met with a very sad fate.

He had been missing from home for some time, and after several days' search by a large body of men, called out by the authorities for the purpose, his mangled remains were at length found under a heap of brushwood, evidently cast over them by his murderer. A peasant

* Or mountain of the *Huns*. It may be deserving of notice, that the remembrance of the *Goths* is preserved in the Swedish names of *Öster-Göthland*, *Wester-Göthland*, *Gothland*, *Götha* river, &c.; and I think Sweden is the only country in Europe that can show localities named after that once so powerful nation. The Swedish monarch, it may be added, still bears the title of the "King of the Goths."

whom poor Mörk had shortly before prosecuted, either under the game laws or for making free with timber, and who had been heard to vow vengeance against him, was at once arrested, and the proofs of his guilt being strong, was at the subsequent trial condemned to lose his head. As, however, the evidence on which he was convicted was only *circumstantial*, which by the Swedish law (in capital cases, at least) is insufficient, unless the culprit himself admits his guilt, which this man refused to do, the sentence could not be carried out. But he was detained in prison for several years, during which no exertions were spared by the clergy and others to induce him to confess the crime with which he was charged, but altogether unavailingly. At length, however, whether owing to doubts about his guilt or other cause I know not, he was restored to liberty, and is now, I am told, alive and flourishing.

During the autumn the *Fogel-Hund*, literally "bird-dog," is, for Capercali shooting, in much greater request than the pointer. His forte, after flushing the bird, is to "challenge" to it when "treed," whereby the fowler is enabled to ascertain its whereabouts. The best dogs are said to come from Lapland, such as were used by me in bear-shooting, and of which several are depicted in both my former works. Generally, however, the *Stöfvere*, or hare-dog, for the most part a hybrid kind of harrier, is used for the purpose; often, indeed, any kind of mongrel which is well trained answers well enough.

Swedish sportsmen, when speaking of the Fogel-Hund, tell us:—"He should not run hare, at least to any distance. The smaller he is the better, for if large the Capercali is apt to be alarmed and take wing; and if he be party-coloured it is an advantage, as dogs so marked attract the special attention of the bird. He should have a good nose, so as to be enabled to wind the quarry from a distance; and when it flies, whether

from off the ground or from tree to tree, he must not bark until it perches, and then only occasionally; and always from the *same* side of the tree; he should not be allowed to run barking and yelping round about the tree, and least of all to gnaw and scratch the stem with his teeth and claws, as in that case the bird becomes frightened and moves off."

When the Capercali is "treed" by a well-trained dog—and it seldom flies far after being flushed from off the ground unless it sees the fowler—it often remains quite passive, and looks down with curiosity rather than fear on the enemy beneath. In the meanwhile the man stealthily makes his way towards the tree beneath which the dog is challenging; and as the attention of the bird is in great degree taken up by the dog, the man is frequently enabled to get within gun-shot before it becomes aware of his presence. But even when one is close to the tree—supposing it is an umbrageous pine—it is not always easy to discover the bird. In this case it is best, in the first instance, to follow with the eye the stem of the tree from the ground upwards, and afterwards to peer amongst the branches. It happens at times, nevertheless, that one never discovers it until it takes wing.

In the early part of the autumn, cocks and hens, when "treed," sit equally well to the Fogel-Hund, but as the season advances, the cocks become so excessively wild as usually to fly as soon as the dog begins to challenge. This is by no means the case with the hens, who will often remain in the tree until a person approaches quite close to them.

From the large size of the Capercali one might suppose it would be an easy shot, and such is the case if it be flushed from off the ground and that the cover be pretty open; but when it dips down unexpectedly from the pines nearly to the ground, as frequently happens, it is often

all but out of shot, or concealed by the foliage, before one can take a proper aim. Such at least has been my experience.

When the Capercali are young, No. 4 or 5 shot, or even smaller, answers perfectly well, but later in the year much larger shot is requisite, as regards the old cocks.

During the autumn, the proper season for the purpose, circumstances prevented me from killing more than an odd Capercali to the Fogel-Hund, under which category came my own bear-dogs; but in the winter, when the snow lay deep on the ground, and whilst searching for bears, I have shot a good many of those birds; one particular year, indeed, between forty and fifty, and of these five in one day; for when the dogs found and "treed" a Capercali, I not unfrequently substituted small shot for ball, and stole upon the bird.

On one occasion, however, this change of missiles was attended with inconvenient consequences. Accompanied by a peasant, I was traversing a very wild part of the Dalecarlian forests, distant probably ten to fifteen miles from the nearest habitation, when our dog suddenly challenged loudly in a dense brake a little ahead of us. If dogs fall in with a wild beast, I should remark, their bay is always louder and deeper than usual; but the dog in question being all but a stranger to me, I was not well acquainted with his voice; and as we had recently flushed several Capercali, I imagined it to be one of them, or a Hazel-Hen, that occupied his attention. Leaving, therefore, my man stationary, I made stealthily towards the dog, but being equipped with *Skidor*, or snow-skates,* and as the cover was very thick and the trees and bushes loaded with

* Implements ten to twelve feet in length, by about three inches in breadth, described and depicted both in "Field Sports of the North of Europe" and "Scandinavian Adventures."

snow, I had considerable difficulty in forcing my way through it. At last, however, I sighted the dog; but instead of being at a bird, as I had imagined, I found him savagely baying at a huge bear, then not more than twelve to fourteen paces distant from me. The beast was standing on all fours; but, owing to the denseness of the brake and the stem of a large pine intervening, I saw little more of the brute than head and shoulders. Had I now had wit enough to put balls—of which I always carried several loose in my waistcoat-pocket—into my gun, everything would, no doubt, have ended well; but thinking that if I delayed at all the bear would move off, I at once levelled at the root of its ear, which was fully exposed to my view, and fired. On receiving my shot the beast fell like a sack to the ground, but in a second or two it was again on its legs, and whilst retreating received the contents of my second barrel in its hind quarters, which however seemed to take no more effect than if discharged against a brick wall. Had I been on *foot* when it fell to my first barrel, I should at once have closed with it, and most likely put an end to it with the second one. But, hampered as I was with “Skidor,” which implements are all but unmanageable in a tangled brake, it was impossible to advance except at a snail’s pace. So mortified I have seldom felt in my life—to lose so great a prize within my grasp, so to say, and that altogether through my own stupidity! Our only consolation was that the bear, which proved to be a female, left her baby-cub behind, which we carried alive to our quarters, where, however, owing to want of proper treatment, it died some days afterwards.

It would be a long story were I to narrate the several chases we subsequently had after the old bear, which, to judge by the quantity of blood left at her several halting-places, must have been severely wounded. Suffice it to say that, owing to the lateness of the season and the very

unfavourable state of the snow—which at one time, from the effect of thaws, was a perfect mash, and at another so hard frozen that the track of the beast was imperceptible—she finally made good her retreat.

It was said, however, that during the following summer her doom was sealed in a steel trap, and that on being skinned a number of my shots were found embedded in the skin or flesh about the side of her head, the point at which my first barrel was directed. The bear in question was one of the very few that, once on foot, escaped from me during my sojourn in the northern forests.

Though I myself have shot but few Capercali with the Fogel-Hund, there is no doubt that with its aid great execution may be done in the early part of the season; for the poults, when “treed,” then sit so close as to be easily approachable. Of the number that may thus be shot in a good line of country, some idea may be formed from a statement, apparently a truthful one, that recently appeared in a Swedish periodical.

The writer, a government official, who signs himself A. M. Ö., was, in the autumn of 1864, with a companion on a tour of inspection of some extensive royal forests, covering 600,000 to 700,000 acres, in Jockmock and Arvidjaur Lapland, where game is supposed to be more abundant than elsewhere in Scandinavia, and from whence Stockholm and other large towns are chiefly supplied in the winter. These gentlemen had a pointer of their own, and the use of a Fogel-Hund, named Pompe, by all accounts perfection itself, which they had borrowed from a “squatter.” They would appear to have shot only occasionally, when off duty. A. M. Ö. gives us in detail several of their best days’ performances—which were, indeed, extraordinary—and sums up by saying that, “between the 29th August and 15th September, himself and friend bagged no fewer than 128 Capercali;” and there

can be no doubt, from the season of the year, these were in general well-grown birds. The same writer tells us besides that "a shot-gun was previously unknown in those parts, and the peasants looked on with admiration and astonishment when a bird was brought down on the wing;" and still further, that the Capercali, from being little molested, were so very tame as hardly to get out of the way of the fowlers.

When, however, the autumn is far advanced, and the Capercali have become exceedingly wild, the better plan to circumvent them is without any dog, unless it be a retriever, or one that "keeps to heel;" for these birds will then oftentimes permit a man to approach within gun-shot; not always the case when they are beset by the Fogel-Hund.

If there be two or three "guns," and they form a line, with beaters between them, the probability of making a "bag" is of course much greater than when one is entirely alone, because the bird, whether flushed from off the ground or from a tree, is then very apt to fly within range of one or other of the company. But in the event of there being several sportsmen, the "line"—to enable it to hold a straight course—must "dress" to some one in particular, either to the man in the centre or to the person at the extremity of one of the wings. But whilst thus traversing the forest, no more noise must be made than an occasional low challenge responded to by all, thus enabling each man to keep his proper place.

But Capercali shooting in the manner spoken of, either with or without a dog, was never a very favourite amusement of mine; for though one occasionally meets with tolerable sport, yet it happens not seldom that, owing to the immensity of the northern forests, and the uncertainty of the whereabouts of the birds, you may wander a whole day without obtaining a single shot.

1871

1872

1873

1874



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STALKING CAPERCALI IN WINTER.

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CHAPTER IV.

Stalking Capercali. — Northern Forests. — Shooting by "Läck." — The "Stick-Nät." — The "Kasse." — The "Läm." — The "Fall-Stock." — The "Flaka." — The "Bloss." — The "Bloss ach Häf." — The "Bulvan."

TO stalk Capercali with a rifle in winter—a not unusual pursuit with the peasants in the primeval forests of the northern parts of Scandinavia—is a much more exciting affair than pursuing them in the way spoken of in the last chapter.

At the season in question the cocks are mostly in packs, and though I myself have never seen more than fifteen or sixteen together, yet old chasseurs have assured me that in their younger days, when game by all accounts was more plentiful than at present, they have known these birds to assemble in far greater numbers. Hens are seldom seen in these packs, but would appear to keep almost entirely by themselves.

The favourite resorts, during the winter, of these packs of Capercali cocks are the borders of the numerous lakes and morasses studding the face of the northern forests, and when the snow lies deep on the ground and the trees

are mantled in white, the birds are generally to be seen perched on the upper branches of the Scotch fir, the leaves of which then constitute their chief nourishment.

A large pack of Capercali thus feeding, with their dark colour beautifully contrasting with that of the snow-clad pines, is one of the most striking and interesting of sights, of which the reader may form some idea from the annexed illustration kindly executed for this work by my talented friend, Colonel Frits von Dardel, Aide-de-Camp to the King of Sweden.

The great difficulty is to find the "pack," unless one has previous information regarding its whereabouts. Not unfrequently, indeed, a man may wander for a day or two in the forest, and in the while go over an immense extent of country, without meeting with more than an odd bird; such at least has been my experience. If a "pack" be found, however, the sportsman may generally manage to follow it for the whole day, or it may be for several days together.

The larger the "pack," the better; as well because the birds are then more discernible at a distance, as that, when disturbed, they seldom take wing all at one time, and hence the gunner is usually enabled to observe the direction taken by one or other of them; and where it alights, or in the near vicinity, he is pretty sure to find its comrades. But if, on the contrary, the "pack" be small and the distance great, one may readily pass the birds unobserved; or should all take wing at once when the eye is not on them, it may happen that they are lost altogether.

Speaking generally, the longer one pursues a "pack" of Capercali, the more approachable the birds become; partly, no doubt, from getting accustomed to the report of the gun, but chiefly, I take it, owing to their being prevented from eating their fill. Towards evening,

indeed, should the "pack" have been followed the whole day, their flight is usually not extended to any distance.

One's sport when thus stalking Capercali depends much on the state of the snow. Should this be loose under foot, and one's movements in consequence conducted in silence, and if there be much snow in the trees, whereby the sight of the birds is obstructed, it is not very difficult to approach them within rifle-range. But if, on the contrary, there be a crust on the surface of the snow—as after rain, or a partial thaw followed by frost, is always the case—and if there be little or no snow in the trees, it is far from easy to get near them. At such times, indeed, from their vision being but little impeded, and from their hearing the snow crackle under the feet, the birds are constantly on the alert, and it is rather by accident than otherwise that one succeeds in obtaining a shot.

The weather has also much to do with this sport. If it be calm, the atmosphere thick, and a little snow falling, the chances of success are greatly increased; for the Capercali then sit on the pines, with their feathers ruffled up, and looking for all the world like so many turkey-cocks; and even when disturbed they seldom fly far. But if, on the other hand, the cold is intense, or if it blows hard, the birds are frequently on the ground, buried beneath the snow, or so shrouded amongst the lower or more umbrageous parts of the trees, as not to be easily seen; and when they do take wing, they frequently fly a very long way.

Some management is requisite in stalking the Capercali in the winter time, as, from their usually frequenting the more open parts of the forest, suitable cover is not always at hand to enable one to stalk them to advantage. And it is more especially difficult to get within range of a large pack; for let the gunner take what

direction he will, the eye of one or other of the birds—scattered as they usually are—is pretty sure to be upon him. We are told, however, that should a man at such times be robed in white—an expedient never adopted by myself—the Capercali will allow him to approach much nearer than if in his usual dress.

In following this amusement, one should be provided with a rifle that shoots accurately at from a hundred to a hundred and fifty yards, as it is not always easy to get within a shorter distance of the Capercali; and the smaller the ball the better, for if at all large it is apt greatly to disfigure the bird. If near the Capercali when you fire, and that the ball goes wide of the mark, the bird almost invariably takes wing at once; but if, on the contrary, the distance be considerable—say one hundred and fifty to two hundred yards—it will often remain on its perch until you have “emptied a powder-horn.” Owing to want of accuracy in my rifle, I have fired in quick succession from eight to ten shots at the same bird, without its altering its position in the least; and it has only taken wing at last when the ball has scraped some feathers from its body.

When within range of the Capercali, one of course rests the rifle against a tree or a stone, if such be at hand; but, failing other support, it is a good plan to lie on the back, and fire from the upraised knee, which forms an admirable rest for the rifle.

To the distant looker-on it is interesting to observe a Capercali brought down with a rifle-ball. One instant the noble bird is seen perched on the pinnacle of a pine; and the next, before the report of the piece is heard, it is tumbling headlong to the ground.

Occasionally it happens that the Capercali when shot makes, in its fall, a lodgment amongst the branches; in which case, unless the fowler is willing to relinquish his

prize, he must either climb the tree or cut it down; an expedient to which I myself once had to resort, and in that case the tree, a Scotch fir, was of such huge dimensions that my man was employed for fully half an hour in felling it.

From the early part of November (by which time the ground is usually covered with snow, at least in the northern parts of the Peninsula) to the middle or latter end of February is the best time to stalk the Caperkali. As the spring draws near the birds become shy, partly owing to there being less snow in the trees, and partly to the approach of the pairing season.

Early in the winter, before much snow has fallen, a man may follow the Caperkali on foot; but when the snow lies deep on the ground, *Skidor* or *Skarbâgar** are absolutely necessary. When at all near to the birds, however, it is in most cases desirable to divest oneself of these implements, and to make further advances on foot; a somewhat wearisome operation when the snow is three or four feet in depth.

Though, owing to a very bad rifle, my own performances when thus stalking the Caperkali were small—for on no one day did I ever bag more than three of those birds—yet others have been much more successful.

* *Skarbâgar* are frames of open wicker-work, of a roundish or oval shape, about fifteen to eighteen inches in length, and twelve in breadth, described and depicted in "Field Sports of the North of Europe." These implements are of imperfect construction, but possess the great advantage of being easily made and as easily repaired. In the Northern forests, when the snow lies deep, one often sees horses provided with *Skarbâgar*, which consist of circular iron rings, ten to twelve inches in diameter, across which are several transverse bars of the same metal; they are fastened to the fetlock with leathern thongs. Thus equipped, the horses necessarily straddle a little in their gait, but are then enabled to traverse the forest in all directions, let the snow be ever so deep.

I was assured, indeed, by Jan Finne, of whom so much mention was made in my former works, but who (as well as M. Falk and the rest of my old comrades) is now in his grave, that he once thus shot no less than six Capercali cocks in a single day, and these out of a pack numbering twenty-six at the commencement of the winter, but of which at its conclusion he only left one. This man, like most of the northern peasants, shot with a rifle carrying a ball but little larger than a marrow-fat pea; but even with this weapon he frequently made in my presence what might be looked upon as long shots.

A peasant near Hjerpledan, on the Norwegian frontier, informed me, furthermore, that in his younger days he had known a pack of Capercali to consist of fully two hundred; that he himself and a comrade often went in pursuit of these birds, and in the course of the winter killed about forty; but in spite of this slaughter, he went on to say, the pack was apparently little reduced in number. And this I can well believe, as from the vast extent of country the pack was driven over in its course, it must necessarily have had frequent accessions from other packs or addition made by single birds.

To stalk Capercali in the manner described I hold to be, in a small way, one of the noblest of sports. The scenery alone affords ample compensation for one's exertions. The savage grandeur of the northern forests, their vastness, and their solitude, can only be duly appreciated by those who like myself have wandered in their wilds. Mountain, rock, and glen, are all deeply covered with the melancholy-looking pine, which may be seen waving in endless succession as far as the sight can reach. "In vain," says a contemporary writer, "does the eye, darting between their tall, straight forms, rising in stately dignity, and in their green, unchanging beauty, endeavour to penetrate the dark extent, and to catch some traces of civi-

lization ; and equally in vain does the sun attempt with his rays to pierce through their waving tops and illumine the gloom below." Amongst this luxurious foliage, crags of the most picturesque description often present themselves to the view ; whilst the surface of the ground is strewn in every direction with large and broken fragments of rock. Many of these immense masses have doubtless been detached from the neighbouring crags ; but others again are lying loose and disjointed, in such situations that they could only have found their way there owing to some extraordinary convulsion of nature. Though the wild forest scene is at all times sufficiently monotonous, the landscape is often relieved by some of the numerous tarns and lakes, often beautifully studded with islands, that cover the face of the country ; whilst streams, even if unseen, may at times be heard gurgling through some deep and lonely dell.

In calm weather a solemn and death-like stillness often reigns in these desolate regions ; but during storms, the crash and noise amongst the trees is sometimes tremendous. Vast numbers of pines, which for ages, perhaps, have set the elements at defiance, are then either uprooted or rent in twain by the force of the blast. In such situations where the trees are only slightly embedded in the soil, the fall of one often causes the destruction of all around it, so that it is not unusual to see the trunks of thirty or forty lying in immediate succession. Were not the numerous morasses, which intersect the country, and the broken nature of the ground sufficient obstacles, this cause alone would prevent the Scandinavian forests from being traversable in any other manner than on foot, the number of prostrate pines rendering it almost impossible to proceed on horseback.

But how very different the scene in the winter time. " Beautiful as is the forest in the spring," says the

lamented Inglis, "when the trees unfold their virgin blossoms—beautiful as it is in summer, when the wandering sunbeams, falling through the foliage, chequer the mossy carpet beneath—beautiful as it is in the autumn when the painted leaves hang frail—it is more beautiful still when the tall pines and gnarled oaks stand in the deep silence of a winter noon, their long arms and fantastic branches heaped with the feathered burthen, 'that has never caught one stain of earth.' Then, too, the grey rocks, picturesque even in their nakedness, assume a thousand forms more curious still when dashed with the recent offering."

To proceed. In the early part of August, when the young Capercali are still small, say the size of the Black-Cock, numbers are shot by *Låck*, that is by the fowler imitating the call-note of the mother or chicks, as the case may be, and thus enticing the birds within reach of the murderous gun.

For this kind of "Jagt"—for sport it can hardly be called—the Fogel-Hund, as ranging wider and making more disturbance in the forest, is preferred to the pointer. When this dog has found and scattered the birds, he is called "to heel," and coupled up, and unless thoroughly under command, muzzled as well, to prevent his barking. The fowler then conceals himself either amongst the bushes or within a small "screen" that he constructs out of boughs. Here he remains in perfect silence for nearly an hour, the time depending on the age of the poults, for the older they are the longer he must wait before he commences *låckning*. Many details might be given as to his subsequent proceedings; but as this barbarous system of shooting is little likely to find favour with the reader, it is sufficient to say that, if all goes well, both the old hen and her progeny are, one after the other, attracted to the ambush, and should the gunner be deadly inclined, the





M. Kirby del.

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THE STICK-NÄT.

whole of them are shot. But the man must be very careful, we are told, not to pick up any of the birds until the butchery is fully accomplished, for should he prematurely leave his place of concealment, the still surviving birds would become aware of his presence and might not afterwards respond to his call-note.

When, however, the fowler wishes by *Läck* to take the Capercali, or other of the large forest game, alive, he provides himself with a so-called *Stick-Nät*,* in principle the same as the fisherman's common flue-net, that is, the birds are not driven into it *par force*, but make prisoners of themselves.

This net, in its original state, is usually sixty to seventy fathoms in length, and twenty to thirty inches in depth, with the meshes some three inches square; and generally each of its sides is provided with a "walling." The *Telnar*, answering to our cork and lead lines, consist of stout packthread, but instead of being fastened to the net itself, they are merely run through its outer meshes, and hence the net travels on them in like manner as a curtain on a brass rod. Short sticks, previously blackened by fire and sharpened at the lower end, for more ready insertion in the ground, are fixed cross-wise to the net, or rather to the *telnar*, ten to twelve feet apart. The *telnar* are about one-third shorter than the net itself, and consequently there is a considerable quantity of loose netting called *Lös-Garn*. On the net being set, this loose netting is drawn up in folds to the several cross-sticks mentioned, and when the Capercali runs into the net, the *Lös-Garn* forms a sort of bag about the bird, making escape next to impossible. The net should be dyed either green or grey.

* Made from very strong linen thread, the meshes being quadrangular (not rhomboidal, as with fish nets).

The fowler's proceedings in this case are very similar to those adopted by him when shooting by *Läck*. When the brood has been flushed, he sets his net as near as may be in the midst of the scattered birds, in a quadrangular form, and then conceals himself within the little enclosure, as represented in the annexed illustration. After a while he commences *läckning*, and should matters be well managed, the whole or greater part of the brood will soon be within the toils. The old hen is seldom made captive by this means, for instead of keeping to the ground, as the chicks usually do, she for the most part continues flying from tree to tree so long as the *läckning* lasts. Should it so happen that she at such times alights either behind or at the side of him, so that he cannot shoot her without altering his position in the brake, and thereby run the risk of being discovered, it is better for him to remain still and allow her to take another flight.



THE KASSE.

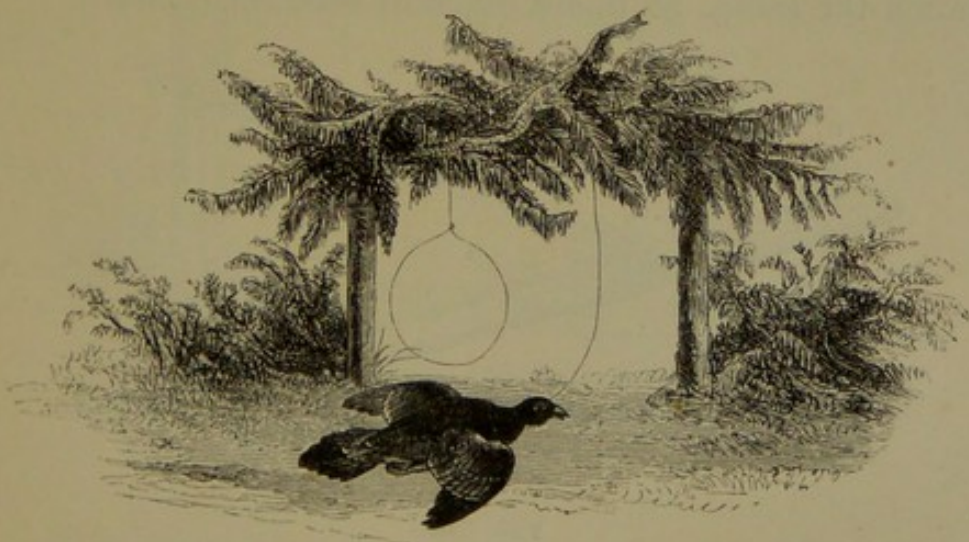
A second very simple kind of net for taking the Caper-cali alive is named the "*Kasse*," signifying a basket; but unlike the device just described—which is only available during the autumn—this net can be used at any season of the year.

It is about thirty inches square and made of twisted silk, with meshes so large as readily to admit the head

of the bird. If there be snow in the forest, the net should be white, but if the ground be bare, green or some other dark colour.

The *Kasse* is hung across a cattle-path or other by-way, the four corners being secured to the adjoining bushes, or to pine twigs, inserted in the ground, for the purpose, by means of woollen threads of just sufficient strength to retain it in its position. A stout silk line is passed through the outermost meshes of the net, both ends being fastened to a sapling at the edge of the path-way.

When now the Capercali gets his head entangled in the meshes, and meets with resistance, he rushes forward, when the woollen threads give way, the net is drawn together purse-form, and the bird lies helpless and with his wings so closely pressed together that he can neither injure himself, nor destroy the net.



THE CAPERCALI SNARE.

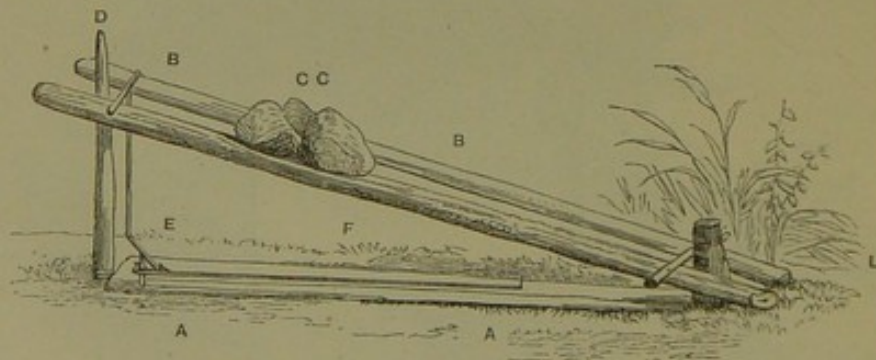
During the autumn many Capercali are also taken in snares. A common way of setting them is as follows:—

Two stout sticks, forked at the upper end, some

eighteen inches in length, are inserted upright in the ground on either side of a pathway or other favourable locality, and across these, again, a third stick is placed, to which, as seen above, the snares are fastened. Over this so-called *Ställning*, or stand, several pine boughs are placed, as well to conceal the stand as to protect the snares from falling weather.

These snares—one or more in number, according to the breadth of the pathway or opening—are sometimes made of twisted horse-hair, but more commonly of wire that has been passed through the fire for the purpose of discolourment, and also to render it more ductile. The snare or snares should hang about three inches from the ground; and to retain them in their place, they are secured with blades of grass, or something similar, to the overhanging pine branches.

Numbers of Capercali are also captured during the autumn in traps, which, though in principle all pretty much the same, go under different denominations.



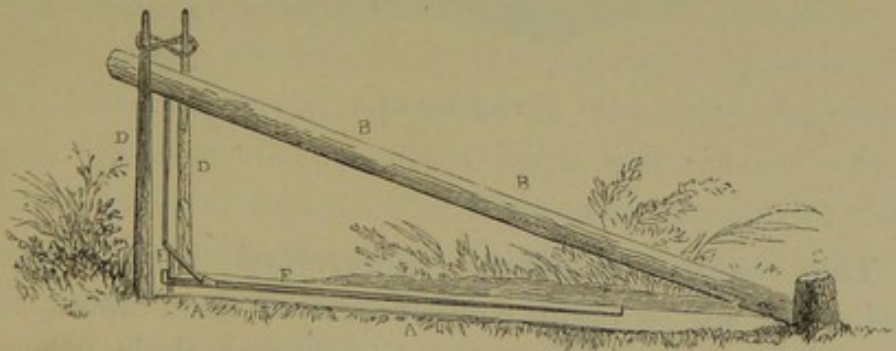
THE LÄM.

The device, here represented as "*gillrad*," or set, is thus constructed:—

A A is a stake, or pole, about four feet long, placed lengthwise on the ground, where it is secured by wooden

pegs. B B, the "drop," consists of two somewhat stouter and longer poles, connected at both ends by cross pieces. These poles, it will be observed, are several inches apart; so that, on falling to the ground, there will be just sufficient space between them for the fixed pole A A. L is a post at the lower end of the "drop," B B, to keep it in its place; and D, an upright pole at its higher end, to prevent the "drop," when descending, from swerving to the right or left. C C are stones laid on the "drop" B B, to accelerate its fall; E, the "*gillring*" apparatus—well known to gardeners and boys as "the figure of 4 trap;"*—and F, the "*giller-pinne*," a stick extending nearly the whole length of the "*Läm*."

When now the Capercali attempts to pass through the opening, he must of necessity touch the *giller-pinne* F; when the "drop" B B, being released, falls, and the bird is crushed between it and the fixed pole A A.

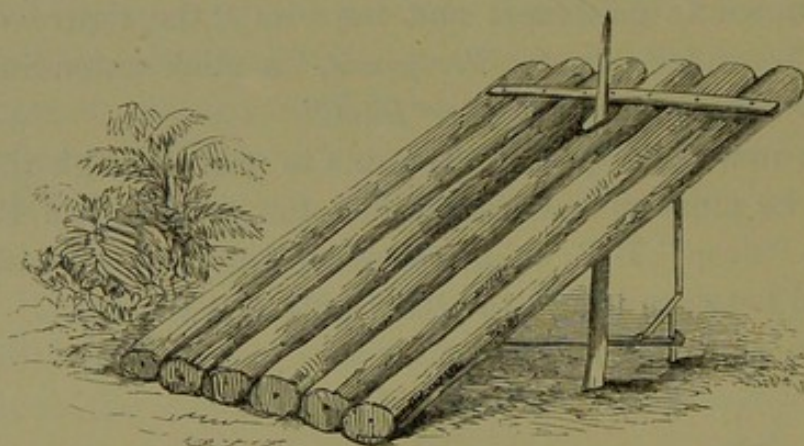


THE FALL-STOCK.

This trap—also shown when "*gillrad*"—differs but little in construction from the *Läm*.

* See "Scandinavian Adventures," where this method of setting a trap is depicted on a much larger scale than is the case in the present drawing.

It consists of two poles, each about four feet in length. The smaller, A A, is secured lengthwise to the ground; whilst the other, B B, the "drop," is either in itself so heavy as to kill the bird in its descent, or is made so by being loaded with stones. C is a post at the outer end of B B, to keep it in its proper position; and D D two uprights at its foremost end, to ensure its falling directly on to the pole A A.



THE FLAKA.

This engine, likewise represented as "*gillrad*," consists of six to eight thick pieces of wood about four feet in length, and connected together at their foremost ends by a cross piece. Near to this there is an aperture, through which passes a stout stake firmly fixed in the ground, and inclining somewhat backward, which not only keeps the "*Flaka*" in its place when set, but causes it to fall in a perpendicular direction.

This trap is "*gillrad*" in like manner as the *Läm* and the *Fall-stock*, and has this advantage over them, that neither birds nor beasts of prey can readily gain access to the captured game, an evil to which they are very liable.

From the construction of the *Flaka*, it must necessarily be placed on level ground.

The snares and traps described, and the kind used, depend on the nature of the ground, and are set in such parts of the forest as are known to be the favourite resorts of the Capercali; as, for instance, in cattle and by-paths, between trees but little apart, in narrow passes amongst rocks, and on knolls and eminences abounding with berries; as also near to sand-holes and other cavities; as to such situations birds are in the habit of resorting, either for shelter in bad weather, or for the purpose of "balling," *i.e.*, dusting themselves.

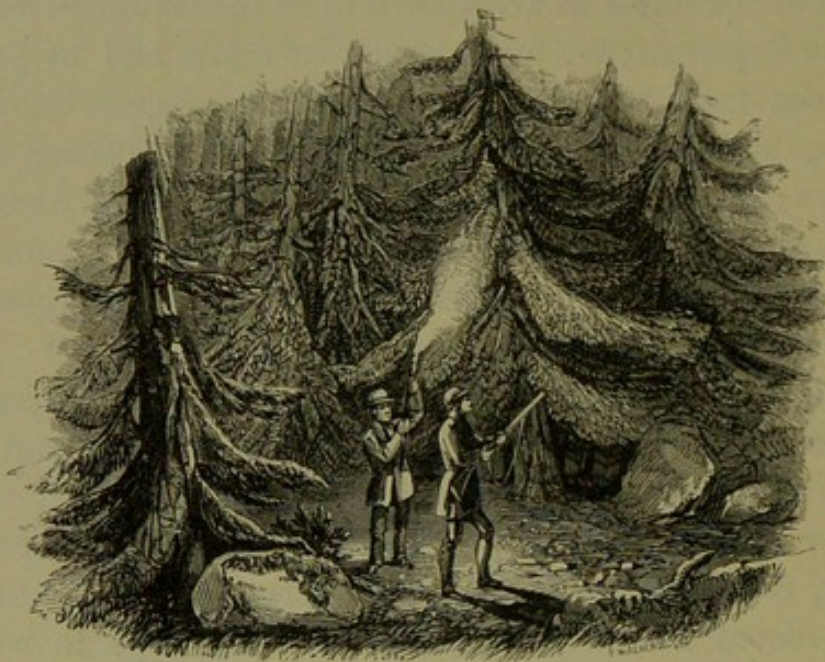
Cowberries and other berries, to which the Capercali are partial, must always be scattered under and about the traps and snares; and, unless the locality be such as to render the expedient needless, a "*Ris-Hag*," or low fence, composed of twigs of the spruce-pine, should be constructed on either side of the pathway, in which these devices are set, to lead the birds into the toils.

The proper time to bring the devices in question into use—and the fowler, to make it remunerative, should have "at least one hundred traps and snares"—is the early part of October. The woods are then pretty clear from cattle, and the night frosts have set in; and, as the greater part of the berries have by this time fallen to the ground, the birds are more readily attracted by those placed as lure by the fowler.

The duration of the trapping season depends much on the weather; for it is at an end as soon as snow falls in any quantity, because the traps and snares are thereby smothered, so to say; and because birds, from being unable to find sustenance on the ground, confine themselves, for the most part, to the trees.

"This system of trapping," M. Ekström remarks, "does not form a part of the calling of the true sportsman

who on the contrary should refrain from following it. He ought not, nevertheless, to be altogether in ignorance as to the manner in which it is carried on."



THE BLOSS.

In parts of Scandinavia, more especially in the provinces of Småland and Westergöthland, the Capercali, as also the Black-Cock, are not unfrequently, when roosting in the trees at night, shot by the aid of "*bloss*,"* or by means of torchlight.

* The *bloss* for spearing fish, as shown in "Scandinavian Adventures," consists of chips of resinous wood placed in a sort of iron cradle at the stern of the boat; but that used by the fowler is composed of several long strips of wood, inserted in an iron ring, or it may be of a single piece of wood cleft lathwise to within a few inches of the hand-fast. Scotch fir is preferred for the purpose, but it must be perfectly dry and of an inflammable nature. If the *bloss* be a really good one, it throws out a splendid light; and whether it illumines the forest or the lake, the effect on a dark night is strikingly beautiful.

There are always two men on these nocturnal expeditions; one carries the gun and the other the "bloss." Starting after dark, they explore the part of the forest where the birds have at dusk been heard to "tree" for the night, or where there is reason to believe they are roosting. The gunner goes in advance, and is followed at a little distance by his companion with the "bloss," which should be held aloft, so as to throw a steady and bright light amongst the upper branches of the surrounding pines. Both men keep a sharp look-out; and when they discover the Capercali, which are said to remain stupidly gazing at the fire beneath, the gunner shoots them at his leisure. It is asserted, indeed, that if he commences with the undermost bird, he may kill the whole pack in succession; if, on the contrary, he first shoots the uppermost, the probability is that the rest will instantly take wing.

But even when the whereabouts of the Capercali have been previously ascertained, it happens that, owing to the darkness of the night, the men go astray. To prevent this mishap they sometimes mark the direction in which the birds are known to roost by a prostrate tree, or by a tree felled for the purpose. And when, at night, they betake themselves to the forest, they, instead of a single "bloss," make use of two, which are placed at either end of a long pole. The man carrying this pole goes a certain distance in advance of the gunner, who remains at the tree in question to keep it and the two lights in an exact line with each other. A halt is then called and the gunner rejoins his companion; and thus they proceed, alternately advancing and halting, until they have reached the part of the forest where the birds are known or believed to be "treed," when they commence searching for them in the manner already described. By the adoption of this ingenious contrivance it seldom happens that the fowlers go very wide of their mark.

Another very destructive plan of capturing the Capercali and the Black-Cock is by the aid of "*Bloss och Håf*," that is, by torch-light and a sort of landing-net.

As said in the first chapter, the Capercali not unfrequently passes the night buried in the snow. Of a cold winter evening, therefore—for on such more especially they seek this warm shelter—the fowlers (for there are always two) proceed to that part of the forest where the birds are known to resort, and carefully watch their movements; as beneath the trees on which the Capercali were last seen perched, or in the near vicinity, they are pretty sure to make their couch. When it has become dark, the men set off on *skidor*, that their movements may be conducted more silently. One carries the *Bloss* and the other the *Håf* or landing-net, which is provided with a very long handle. When they arrive at the suspected place they narrowly scan the surface of the snow, and so soon as they discover the slightest indentation or depression therein—the only evidence, as already said, of the presence of the birds—the *Håf* is at once placed over the spot, and pressed down as hard as possible, to prevent the captive bird from creeping beneath it and from fluttering, thereby alarming others of the *pack* that may be lying thereabout.

But it is only in Dalecarlia and certain other parts of Scandinavia, I believe, that this plan of taking the forest birds is resorted to, which perhaps is as well; for we are told that, in districts where game is plentiful, two men have been known thus to capture from twenty to thirty Capercali and Black-Cock in the course of a single evening. We are further informed that a certain individual was in the habit of taking every year by this means upwards of a hundred of these birds.

This method of fowling has, however, many advantages. It is unattended with danger of any kind, is not cruel,

and permits the fowler, should he be mercifully inclined, to spare the hens and afterwards restore them to liberty. By this device, moreover, one very great inconvenience attendant on traps and snares—the loss of a large number of the captures being carried off by birds and beasts of prey—is obviated.

In parts of Sweden the Capercali are said to be shot in winter to the "*Bulvan*," that is, a stuffed or artificial bird, placed on a tree-top or in some commanding situation within gun-shot of the fowler's ambush. But from what I know of the habits of these birds I cannot imagine that this device, which answers admirably for Black-Cock, as I shall presently have occasion to show, can serve to beguile many of the former birds.

CHAPTER V.

The Black-Cock.—Barren Hens.—Habits.—Food.—Resorts.—Snowed-in.
—Migratory Birds.—Cause of Migration.—The Pairing Season.—The
Spel of the Black-Cock.—Combative Propensities.—Cross Breeding.—
In Confinement.

THERE was a fair sprinkling of Black-Cock, or Black-Grouse (*Orre*, Sw.; *Aarfugl*, Norw.; *Tetrao Perdrix*, Linn.), near to Ronnum, both in the forest and on the open moorlands.

This bird has a wide geographical range, extending from Scandinavia, Russia, and Siberia, in the north, to the southern slopes of the Pyrenees in the south, and is much more generally distributed over Central Europe—where it inhabits both mountainous and marshy countries—than the Capercali, being found, locally, in Germany, France, Holland, and the British Isles.

As regards the Scandinavian Peninsula, the Black-Cock is much more abundant, and more widely spread, than the Capercali. In almost all places, indeed, where there are woods or moorlands, it is found. Its northern limits, however, are not so extended as those of the Capercali; but it certainly goes as high up as Muonio-niska, in Lapland, about the 68°; for though I myself



M. Körner, del.

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Day & Son, Limited, Lith.

BLACK-COCK.



did not see it there, I learned that it occasionally visited that part of the country. It is scarce in Denmark, and is there confined to certain districts.

The Black-Cock is too well known to require a minute description. It may, therefore, be sufficient to say that the male and the female, as seen in the accompanying drawing, differ widely in plumage; that of the male, as the name denotes, being black, whilst the female, on the contrary, is dark brown, whence her designation with us of Grey-Hen. The male is also very much larger than the female.

The idea is very generally entertained in the more northern parts of Norway, that there is a second kind of Black-Cock, grey in colour, and less in size than the common Black-Cock, and which is there called the *Half-Orre*, or half Black-Cock. It is further said that this bird is not unfrequently found amongst the game sent during the winter from the mountainous districts to Drontheim. M. Boie, when in Upper Herjeådalen, a portion of Norrland (the northernmost main division of Sweden) also heard speak of a lesser kind of Black-Cock inhabiting the copse wood on the upper slopes of the Fjälls.

The sight of the Black-Cock is reputed to be very piercing, and its senses of hearing and seeing exquisite, surpassing those of any of its congeners. Its flight, though somewhat noisy, is lighter than that of the Capercali, and it may often be seen flying both high in the air and to a long distance. Northern ornithologists tell us "it is a wild, shy, and crafty bird." To judge of its proceedings during the pairing season, it is certainly of a most pugnacious and savage disposition.

Accidental varieties are not unfrequent amongst these birds. Several males beautifully variegated with white have come under my own observation, and one of them is now in the collection of a friend in this country.

Nilsson makes mention of three other varieties, but as a scientific description would weary the reader, I shall content myself with saying that two of them are now in the Stockholm Museum.

Sterile females, which have assumed in degree the plumage of the other sex, are also occasionally met with. That represented in the annexed illustration, and now preserved in the Lund Museum, is not only of a much darker colour than the common Grey-Hen, but her tail is forked in the same manner as that of the cock.

During spring and summer, the Black-Cock feeds on birch-buds, tender leaves, plants, heather, and berries, such as the red whortleberry, the bleaberry, &c., and on insects and larvæ; as also, when procurable, on grain, more especially oats, in fields of which, prior to their being cut, I have seen and shot a good many of these birds. In potato fields, moreover, I have now and then met with and killed them; but whether they were there for the purpose of feeding or taking shelter, I cannot exactly say. In the winter time, however, it subsists almost wholly on birch-buds and juniper berries, the latter of which are always obtainable, however deep the snow may be on the ground.

Water is indispensable to the Black-Cock; and it is, in fact, not without example that the want of it during certain years has, in some districts, visibly diminished their numbers. In dry summers, moreover, one always finds these birds unusually numerous about springs and near the shores of lakes, rivulets, and water-courses.

Their chief resort, in Scandinavia at least, are pine woods interspersed with deciduous trees, more especially the birch. The deep recesses of the forest, which are the favourite haunts of the Capercali, this bird would seem to shun, keeping, on the contrary, more to the confines of the woods and to the borders of the numerous and exten-

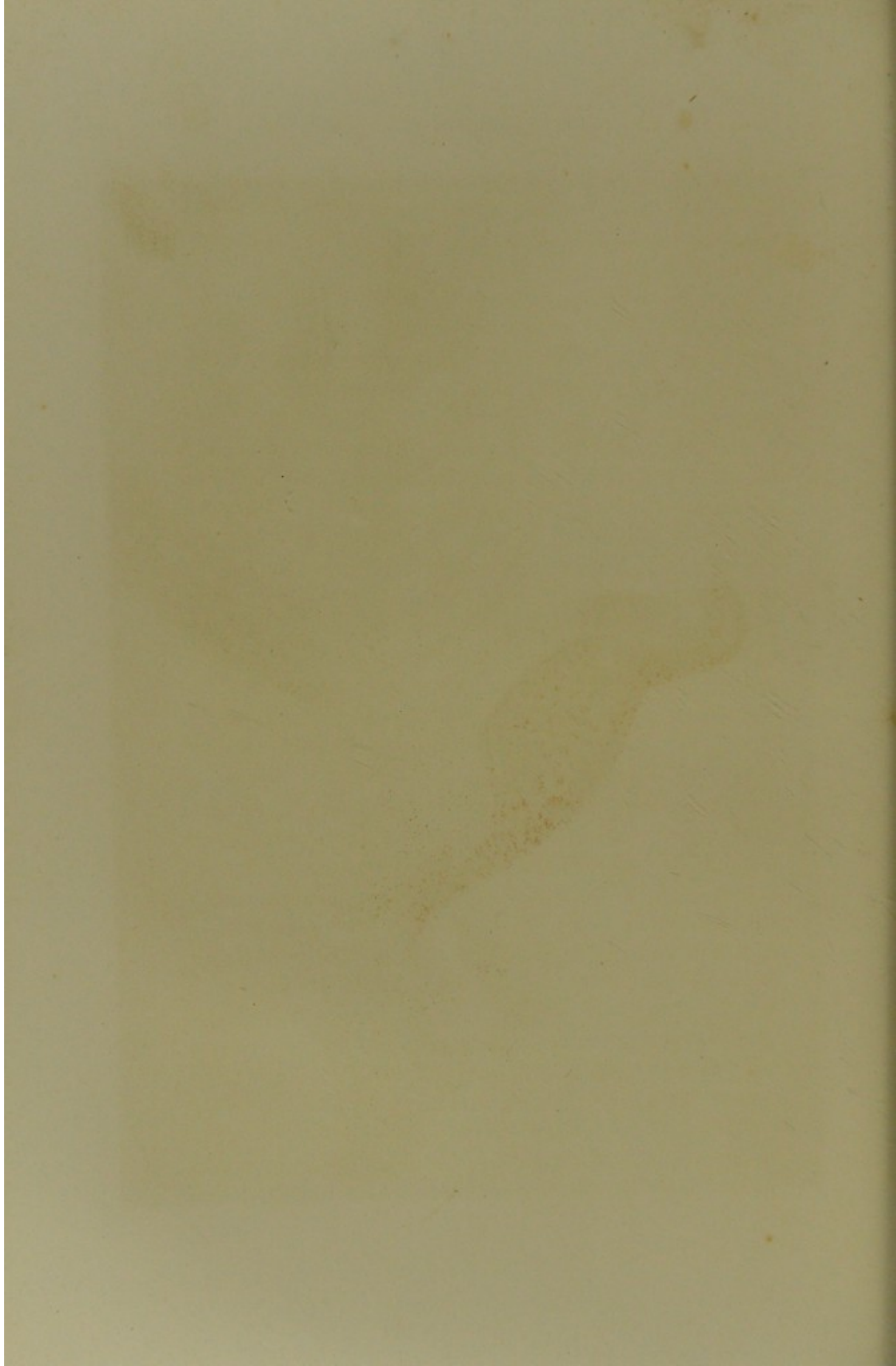


M. Korner, del.

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STERILE GREY - HEN



sive morasses, with which the northern wilderness is studded. During the summer and autumnal months, however, one meets with them on open moorlands, where, indeed, very many breed.

In summer and early autumn they are found alone or in families; but as the season advances they congregate, and during winter, when the snow is deep, may oftentimes be seen in packs of forty to fifty, roaming the country in search of food.

Unlike the Capercali, which mostly roosts in trees, the Black-Cock almost invariably passes the night on the ground; and in the winter, more especially if the cold be intense, it not seldom *buries itself in the snow*.

Nilsson would seem to impugn the well-known fact, that the Black-Cock, of its own free will and accord, thus embeds itself in the snow; for he says:—"I have at times observed that towards evening this bird has made a hollow in the snow, and lain still there, allowing itself to be covered with the falling flakes. I have often flushed it when lying thus *nedsnöad*, or snowed-in, so that only the head remained uncovered."

All this is a mystery to me, for when the Black-Cock is desirous of the shelter afforded by the snow—which may be the case not only on the approach of evening, but in the daytime—instead of waiting to be "*nedsnöad*," a somewhat tedious and uncertain process, it makes a regular burrow for itself in the snow, the depth depending, it is generally believed, on the mildness or severity of the weather.

That a bird may be accidentally *nedsnöad*—which, sorely against my inclination, has more than once happened to myself when bivouacking in the forest—I can well understand; but that it should of its own free will, and for the sake of keeping itself warm, undergo the slow and disagreeable operation in question, is more than I can

credit. And that the head of the bird, as Nilsson states, should at such times be above the surface of the snow, also seems to me very strange. Scores of times, when crossing glades and other openings in the forest, where the surface of the snow, to the casual observer at least, appeared to be smooth as glass, one or more Black-Cocks have suddenly emerged from beneath the snow almost at my feet; and when, expecting every moment others to follow, I have carefully looked about me, I never could discover anything beyond the slightest indentation in the snow where the bird had burrowed, the hole itself being filled up by the sides collapsing; and yet, perhaps within the next minute, half a score more Black-Cocks would fly up all around me. That their heads were above the surface previously to their leaving the snow I hold to be utterly impossible, nor can I conceive that even their beaks protruded, as others will have it. If air be needful to birds when thus embedded in the snow, their breath, no doubt, forms an almost imperceptible orifice, through which they are enabled to respire.

The fact of birds thus burrowing into the snow has been known from time immemorial. Nor did it escape the notice of the learned Bishop Pontoppidan, who, though he at times deals somewhat in the marvellous, is generally pretty correct in the main.

"In the winter time," so he writes in his usual quaint way, "the Black-Grouse take care of themselves in this manner: they first fill their craw with as much food as it will hold, so that it hangs like a bag under their necks, whereby they are provided with something to live on for some time; then they'll drop themselves down into the soft snow, and don't stay in their first hole, but undermine and burrow in the snow some fathoms from it; and there they make a small opening for their bills, and thus lie warm and comfortable."

Though the Black-Cock, like the Capercali, is looked upon as a *Stånd-fogel*, or stationary bird, yet, as with the latter, it not unfrequently wanders away, for a while at least, from its native home, of which there are many instances recorded.

"If I mistake not greatly," writes the Chamberlain M. G. A. Schmitterlöw, of Olstorp, in the province of Östergöthland, "there have been *sträckande*—partially migratory—Black-Cocks in this part of the country. A large pack, from thirty to fifty in number, of these birds were recently seen hereabouts, but all at once lost sight of. They arrived, as it seemed to me, in the beginning or middle of December, and departed again soon after Christmas. My first reason for supposing they were not bred in the country was that when the attempt was made to drive them towards the *Bulvan*—or artificial decoy bird—they could not be induced to go near it, but held their own course, backwards and forwards, a thing that hardly ever occurs at this kind of *Jagt*. Subsequently they disappeared altogether, and, as it would seem, took all the Black-Cocks in the district along with them, for during the remainder of the winter those birds were hardly ever seen. In the autumn of 1830, to the best of my recollection, a similarly large pack also made its appearance in this vicinity, but vanished again in the month of January, 1831, and so far as I am aware, without having been seen by any one elsewhere in the district."

Again: "It has been clearly ascertained," says M. Brummer, "that the Black-Cock is a *Flytt-fogel* (migratory bird), though not in all years, so far as we know, for certain. But it is only the males that leave, the females, unless too much disturbed, commonly remaining in the same locality. About the period of migration, say the end of October or beginning of November, all the males in the southern country collect and fly away to the north. One

can see several hundreds depart together, in case a westerly or south-westerly storm sets in."

Once more: "When packs of these birds are seen high in the air," writes Dr. Ödman, "directing their course towards the *Skärgård* (the belt of islands girding in places the Swedish coast), the common people say: *Öländningen drager Orrarne till sig*, that is, the inhabitants of the Island of Öland draw to themselves the Black-Cocks.

The partial migrations of these birds have created considerable interest amongst naturalists and others, and many are the speculations hazarded as to their cause. They can hardly be attributable to heavy snow storms, great droughts, or extensive fires in the forest, alleged by some as the reason why the Capercali sometimes desert the forests of the far north; but more likely on the grounds assumed by M. Ekström, who says:—

"These autumnal migrations, which occur immediately after the birds have packed in October, are probably for the purpose of seeking distant districts where the birch-tree abounds, as its buds then constitute their principal nourishment. Their migrations in the spring, again, are a natural consequence of the desire felt by them to propagate their species, which causes them to return to their own pairing-grounds."

The Black-Cock is polygamous, and in the pairing season, as with the Capercali, has its "lek-ställe," or pairing-ground. A morass, a "clearing" in the forest, or it may be the frozen surface of a lake, is usually selected, and to the self-same locality, unless subject to unusual disturbance, the birds resort for years together.

The pairing season with the Black-Cock takes place somewhat earlier than with the Capercali; in the more central and southern portion of the peninsula it usually commences about the middle of March, or perhaps some-

what later, and continues until the end of May. But in the far north, where the snow often covers the ground until the spring is far advanced, it naturally both begins and terminates somewhat later.

The birds repair over night to the vicinity of the "lek-ställe," where they assemble even before the first dawn of day. One and all make their appearance at nearly the same time. The number depends, of course, on their abundance or scarcity in the neighbouring country. At some pairing-grounds one sees, perhaps, less than half a score, whilst at others there may be forty or fifty, or even more. The hens are probably fully as numerous as the cocks, but are less noticeable from keeping more in the trees, and amongst the bushes.

The *spel* of the Black-Cock consists of two notes, or rather succession of sounds, called in Swedish *kuttra* and *blåsa*, the first being a sort of loud cooing, and the latter a kind of hissing noise.* The *spel* of the Capercali, as said, can only be heard at a comparatively short distance; but that of the Black-Cock is, in clear and calm weather, audible a mile or more off. Some imagine that the bird, during his *spel*, is incapable of hearing, and hence the saying, *Döf som en Orre i spelet*, or "Deaf as a Black-Cock during his *spel*." But this is not the case, for though, when engaged in courting the ladies of his seraglio, he is

* When the Black-Cock is provoked, or affrighted, it has a third note: *Krökökärn*, which by the poacher—in Swedish *Kryp-skytt* (literally, creeping shooter)—is interpreted as "crooked fellow," and expressly intended for himself.

In parts of Sweden the *spel* of the Black-Cock is looked on in the light of a barometer. When, for instance, his *spel* is heard at an unusual season of the year, or time of day, a heavy downfall of rain or snow may be expected; and if in the immediate vicinity of a village, a storm of wind is at hand. If, again, he is heard to *spel* from the top of a pine, fine weather may be anticipated; but foul, if amongst the branches.

less on his guard than at other times ; still, even then, if he were incautiously approached by the fowler, he would soon let it be known that he was in full possession of his auditory organs.

So soon as the birds have alighted at the pairing ground, the old cocks begin to "kuttra" and "blåsa," and to make love to the hens, to which the latter are nothing loth ; or to give chase to rivals. Whilst the cock is thus parading to and fro, with his neck stretched out, his wings trailing on the ground, and his expanded tail raised nearly at right angles to his body, he frequently vaults high in the air, and in the while so "slews" his body round that on alighting again his head is turned in an opposite direction. At such times the young cocks keep at a respectful distance from the old ones, and "kuttra" and "blåsa," fighting the while amongst themselves.*

Desperate combats between the cocks are frequent at the "lek-ställe." They not only savagely charge each other, but make such effectual use of both bills and claws that the feathers fly in every direction. The victory usually rests with the bird that succeeds in getting sure hold of the head of his antagonist, whom he then drags about the arena until fairly tired out, and who, when released, is pretty sure to take wing and fly away.

Battles royal between the congregated cocks are also not uncommon, and one may sometimes see several engaged in a regular *mélée*, tumbling over one another.

* Some will have it that, at the pairing ground, there is one old cock in particular, called the *Spel-orre*, who takes command over the rest, and who may readily be known by being the first to arrive at the lek, and to "open the ball." This bird, they say, should not be killed, as in that case the total dispersion of the lek would probably be the immediate consequence. But others laugh at this notion, and shoot the first cock that happens to come in their way.

Whilst the cocks are thus indulging in their combative propensities, the hens run to and fro with drooping wings, and uttering a dolorous cry, *äck, äck, äck, āā*, expressive of their anxiety for an embrace. Actual pairing, however, would not seem to take place so much at the "lek-ställe" itself as amongst the surrounding bushes.

More than one ornithologist tells us that the hens never solicit the favours of the cocks; but the reverse is the fact, as clearly evidenced by what came under the personal observation of M. Hultman, the owner of the estate of Rycketofta, situated in a wooded district. This gentleman "possessed a tame Black-Cock which had the run of a closely-fenced garden near the house, and at a very early hour in the morning was accustomed to commence his spel. When this had continued for a short time, several hens, often as many as four or five, would come flying to him in the garden from the neighbouring forest, with all of whom in succession he regularly paired, as witnessed by M. Hultman from his bedroom window. When, however, the people of the house were up and moving, the hens would fly back to the woods, though always to return on the following morning."

To continue. Matters thus proceed until sunrise, when the birds fly up into the neighbouring trees, where, for a time, the cocks are silent, as if resting from their labours. But presently they descend once more to the ground, and for a short period the game goes on as merrily as ever.*

The lek over, the birds separate, each cock accompanied by the ladies of his harem.†

* The spel before sunrise is called *Morgon-spel*, or morning spel; that after the sun has risen, *Sol-spel*, or Sun spel; whilst that in the afternoon—for when the season is advanced, the Black-Cock occasionally "opens his pipes"—is termed *Quäll-spel*, or evening spel.

† In districts where these birds are so shot down that only a few stragglers

The pairing season ended, the hens separate, and retire to their respective breeding-grounds, which may either be in the more open part of the forest, or on far distant moorlands.

The nest of the Grey-Hen is a very simple affair, being a mere hole she herself scratches in the ground under a bush or tussock. Her eggs are from six to twelve in number,* in colour yellowish-white, thickly sprinkled with small rust-red spots and blotches, which, towards the thicker end, are somewhat larger; in length they are two inches and one-sixteenth, and in thickness one inch and one-sixteenth. The period of incubation, according to some, is three weeks; but others say a month. It is said that if the old bird, whilst sitting, has occasion to leave the nest, she covers the eggs over with moss.

“Fourteen days after the chicks are hatched,” so we are told by Ekström, “they leave the nest and follow their mother; but it is not until they are seven weeks old that they begin to fly up into the trees and to perch on the branches.”

Hybrids between the Black-Cock and the Capercali—called *Rachel-Fogel*—are not of uncommon occurrence. The Black-Cock has also been known to pair with the Ripa, a species of grouse, as already said. But of these hybrids more hereafter.

It is even on record that the Black-Cock has occasionally formed still stranger alliances. We are told, for instance, that M. Skogberg, having purchased one of

remain, no regular lek is held by them; but every cock—*Squalt-orre* called—spels for himself, most commonly from the top of a lofty pine, or, it may be, from a naked rock. Here the hens resort to him, and when his spel is over, he distributes his favours amongst them.

* Nordholm tells us the hens, during their first year, lay eleven eggs, and that afterwards the number diminishes, so that in old age they only lay five.

these birds from a Finn, confined it in a roomy coop, and that some days afterwards he introduced to it a common speckled hen in the hopes of obtaining a breed between them. At first the Black-Cock evinced great displeasure, for he not only gave the stranger a most ungracious reception, but actually maltreated her. By degrees, however, his dislike diminished, and at length he received in good part his allotted partner, and pairing took place between them. When she had laid ten eggs, and shown an inclination to "sit," the Black-Cock was removed from the coop, and she was placed on the eggs, and in due time seven chicks were produced. At first these had a difficulty to walk, and their legs were therefore bathed with brandy; but afterwards they thrived well and grew rapidly. When full feathered, they most resembled the mother in colour, all being speckled; their tails were also of the same shape as hers, but their feet and legs most resembled those of their father. The heads of all were provided with a broad comb. They were females, and proved good "laying hens."

Again: "People of undoubted veracity have assured me," writes the late Cornet Carl Geijer, "that about fifty years ago M. Vigelius, a clergyman in Wermeland, had a Black-Cock which paired with a common hen. The chicks bore as much resemblance to the father as to the mother. They were of both sexes, and attained to maturity; but it was said never propagated their species."

We read further: "That M. Hultman endeavoured to obtain a cross between the Black-Cock and the common hen. At first the experiment was unsuccessful; but at length he procured a hen that had long been without a mate, and was so impassioned, that even if a person pointed his finger at her she would appear as if prepared to receive the attentions of the cock. With this bird the Black-Cock paired, and her eggs were placed under another

hen, which hatched them; but the chicks only survived for three days."

The Black-Cock is easily domesticated, and if reared from a chick, or taken when young, soon becomes quite tame—more so even than the Capercali. We read of one, indeed, that was accustomed to sit on the shoulder of his owner and accompany him over the estate; and if it then happened that other Black-Cocks were seen in the distance, it would leave its perch and fly to them, though always to return after the visit was paid.

At different times I myself have had great numbers of these birds in confinement; but during the pairing seasons the males gave me much trouble, being then so quarrelsome that, to prevent casualties, I was always obliged to separate them.

In the rural districts of Sweden one often sees a caged Black-Cock at the houses of the gentry, this bird being greatly admired by every one, both for his beauty and for his spel, or song, which, though perhaps anything but musical, is still wild and pleasing, and, during the pairing season, almost continual.

When confined in a coop, or aviary, its treatment is very similar to that of the Capercali. It eats freely almost all kinds of grain, and most of the forest berries, especially the juniper: of the *Knopp*, or incipient bud, of the birch-tree it is also very fond. Water and sand, both coarse and fine, it should never be without.

The Black-Cock is said to breed readily in confinement; but I myself never tried the experiment, thinking it less troublesome to procure young birds from the forest in the autumn.





M. Körner, del.

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THE BLACK-COCK LEK.

CHAPTER VI.

Shooting Black-Cock at the Pairing-Ground—With a Pointer—With a Fogel-Hund.—Capture by Nets.—Artificial Decoy Birds.—Stalking on Foot—In a Sledge.—Traps and Snares.—The Orre-Tratt.—The Orre-Benne.

THE Black-Cock is a favourite dish at the tables of the upper classes in Scandinavia, and the consumption of these birds is therefore great. About the year 1760 it was calculated, on pretty sure data, that from sixty to eighty thousand annually found their way to the Stockholm market, and that at least two hundred thousand more were consumed elsewhere in Sweden. If the consumption was so considerable in those days, what must it be at present, when wealth and luxury have so increased?

This bird being so highly prized, various expedients are adopted to obtain it. Very many are shot, and a large portion at the "lek-ställe," or pairing-ground, spoken of in the last chapter. This, as said, is usually situated on a morass, or other opening in the forest, or it may be on the surface of a frozen lake; and here the fowler constructs for himself a *Skjut-koja*—literally

shooting-hut—or “screen,” in which to conceal himself, as seen in the accompanying drawing.

This “screen” generally consists of from five to six spruce-pine boughs, which, after being pointed at the ends, are stuck slantingly in the ground opposite to each other, so that the tops meet, and thus form a sort of roof; or it may be of a small square inclosure fenced in by pine branches laid lengthwise on each other to a height sufficient to conceal the man when seated within it. Such a “screen” has the advantage of being easy to construct, and of not being liable to be blown away.

If, however, one has complete control over the spot, and that the soil be wet, the better plan, we are told, is to sink a large tub some four feet in the ground, and afterwards to roof it over with turf, leaving, of course, an aperture for the admission of the fowler, as also several loopholes through which he may fire, so that when bushes are placed around the tub, the casual observer would suppose it was merely a little eminence. But let the “koja” be constructed in what way it may, it should be in readiness during the preceding summer, so that the birds may become accustomed to the sight of it.

When the pairing season has arrived, the fowler proceeds to his ambush at a very early hour in the morning, whilst it is still quite dark; and there he patiently awaits the coming of the birds. These usually make their appearance at the very first dawn of day, and for the most part simultaneously; and immediately afterwards commence carrying on love affairs in the manner recently mentioned. The cocks “spel” with might and main, and either engage in fierce battles with rivals, or pay their addresses to the hens, who are not backward in meeting the advances of their lovers.

So soon, however, as one or other of the birds approach sufficiently near to the man’s place of concealment, he

fires, and as the distance is usually short, commonly with deadly effect. Many of the birds, the hens especially, now take wing, though to return shortly afterwards; but the cocks, a portion of them at least, are generally so engaged in hostilities with each other as to pay little attention to the shot, and continue to *kuttra* and *blåsa*, and fight amongst themselves as bravely as ever.

The savage disposition the cocks display in their combats almost exceeds credence. "I have myself," says Ekström, "seen a recently-shot Black-Cock, whilst fluttering in the agonies of death, furiously fallen upon by a comrade, who continued to revenge himself on the corpse of his late rival until I had reloaded, when I killed him likewise."

And M. Wilhelm von Wright, when describing his own experiences at the *Orre-Lek*, testifies to the same effect. "They seldom fly up at the shot," he says, "but, on the contrary, fiercely attack their late associate, who in his lifetime perhaps had been their great persecutor, until a fresh discharge from the *koja* hits one of the revengeful assailants."

If the fowler on these occasions be an adept in imitating the "spel" of the cock, or the call-note of the hen, it is a great advantage, as he may then often succeed in luring both the one and the other to within gunshot. Often, indeed, in the grey of the morning, the birds will of themselves approach immediately near to the "screen," or it may be actually alight on it; in which case it happens that the man, through an opening left for the purpose, pulls the bird by its legs into his ambush, and is thus saved the waste of powder and lead.

Under favourable circumstances several shots are usually obtainable in the course of the morning, and when the cocks are engaged in a general battle, two or more are often killed at a single discharge. But the great

barbarity of the sport—if such it can be called—consists in this: that the wounded must remain on the ground along with the slain until the massacre is entirely over; for should the fowler previously leave his place of concealment, the rest of the birds would, in all probability, desert the “lek-ställe,” at least for that day.

Pontoppidan, in his peculiar way, thus describes the proceedings of both fowler and birds at the pairing-ground: “The most convenient time for shooting the Black-Grouse,” says the good Bishop, “is in the spring of the year, at early sunrising, for then the bird lies on the smooth ground, from whence it is called *Leeg-vold*; for it is the nature of it, at that season, to be quite heedless through its amorous disposition, and with its eyes shut it lies crowing and chirping for the hen. These commonly lie three or four, or more, together, so that there is a good mark to aim at. If the cock falls, then all the hens fly away; but if he stands still crowing, and appears to be stupid, as is sometimes the case, they shoot again.”—(*English Translation*, p. 69.)

Accidents, though rare, occur now and then at the Black-Cock lek. We read, for instance, “that a *Krypskytt*, or poacher, heard one evening a Black-Cock ‘spel,’ and crept, like a snake in the grass, towards it. Although it was then getting dark, he presently discovered what he took to be the red comb of the bird, and immediately levelled his gun and fired. But at the instant there arose a cry of distress; and on hastening to the spot he found to his dismay that, instead of a Black-Cock, he had hit a brother poacher, bent on the same errand as himself. The sufferer wore dark blue gaiters, which, agreeably to the fashion of the country, were secured to his legs by red garters tied in large bows; and no wonder, therefore, that our friend mistook all this finery for the Black-Cock’s comb. Fortunately for the sufferer, he was standing somewhat

sideways to the misdoer, or, in spite of his reindeer-skin breeches, he might have been seriously hurt; as it was, he escaped with a few well-deserved shots in the bend of one of his knees."

Many Black-Cocks are also shot to the *Stånd-Hund*, or pointer, in the central and southern portion of the peninsula, for in the far north that dog is little available, owing to the extent and denseness of the forests.

In certain localities in Sweden, and the same is no doubt the case in Norway, very good Black-Cock shooting may be had with the pointer. M. Greiff tells us, for instance, that at Kafvelås, the seat of the Baron von Essen, upwards of a hundred of those birds have been shot in a single day; and in other quarters I have known considerable slaughter to be committed.

At times I have myself been tolerably successful. One day, when crossing the country at haphazard, so to say, I bagged fourteen and a half brace of Black-Cock, and on the following afternoon—the morning having proved an entire failure—seventeen and a half brace; and this, be it remembered, was in the middle of September, when the poults were full grown, and hardly to be distinguished from their parents. These were somewhat exceptional days; but on tolerably good ground I could always pretty well calculate on bagging from three or four to eight or ten brace of the birds in question. I am, however, speaking of the olden times, when game of every description in Sweden was, by all accounts, much more abundant than at present.

But as compared with the great extent of country a man usually goes over when Black-Cock shooting, the number of birds he meets is usually miserably few. This is, no doubt, greatly owing to the multitude of sportsmen, almost every one nowadays carrying a gun; but chiefly, I consider, to the vermin, both winged and four-footed,

which swarm everywhere. Excepting foxes, indeed, which are sought after solely for their skins, hardly any one would seem to make the least exertion to destroy noxious animals.

When thus shooting Black-Cock with the pointer in the more open country, one not unfrequently falls in with partridges, ducks, snipes, &c., and when on the confines of the great woods, with Capercali also, of which birds I have at times shot several. On one occasion, out of a family of five, I bagged four in less than an hour, and this late in the season, when the poults were full grown.

But far fewer Black-Cock are shot to the pointer than to the '*Fogel-Hund*'—described when speaking of the Capercali—partly because the pointer is all but unknown in the far north, but principally because very many of the peasants, from one end of Scandinavia to the other, possess a cur of some kind that will "tree" a bird; and as these men not only shoot pretty well, but spend much time in the pursuit of game, the slaughter committed by them amongst the Black-Cock, and other forest birds, is very great. More than one chasseur has assured me, indeed, that on excursions of a day or two, he has not unfrequently filled a sack with the spoil. And this I can well believe, because in the early part of the season the poults often sit so close as to be with difficulty driven, by the dog at least, from their perch—of which a notable example is given by M. Wilhelm von Wright, who says:—

"On one occasion we heard the dog *skälla stånd*, that is, challenge from one and the same spot, on the opposite side of a lake near our house. This was between ten and eleven o'clock in the morning, but no one thought it worth his while going up to him. As, however, the dog continued to bark, my father, who supposed it to be a

squirrel that he had 'treed,' ordered a servant of ours to row across the lake and shoot the animal, otherwise it was feared the dog would remain there the whole night. But how astonished were we when the man returned to find that, instead of a squirrel, he had shot a half-grown Black-Cock, which had sat to the dog for about six hours."

As, however, the manner in which the Black-Cock is shot to the "Fogel-Hund" is very similar to that usual with the Capercali, I shall refrain from troubling the reader with further details on the subject.

In the early part of the season many Black-Cock also fall to the gun by "*Läck*," or by the fowler imitating the call-note of the old bird, or of the poults, as the case may require, which brings them within reach of his piece. But as operations are conducted in a very similar manner as with the Capercali (see page 60), it would only be waste of time were I to enter into particulars; suffice it to say, that, with the Black-Cock, it is not needful for the man to wait so long after flushing the brood as with the Capercali; and that he should avoid concealing himself in too thick cover, because the Grey-Hen, unlike the Capercali hen, which generally flies from tree to tree, almost invariably keeps to the ground when making her approaches towards the ambush.

In early autumn, moreover, the *Stick-Nät*, spoken of at page 61, is frequently used by the fowler to circumvent the Black-Cock. But, as Ekström is even more versed in poaching matters than myself, it may be best to quote what he says on the subject:—

"When the 'pack' is flushed and dispersed by the dog, the jägare, after waiting a while, begins to 'läck,' and continues so doing until the old bird responds, and thus makes known to him her whereabouts. In all silence he then places four 'Stick-Nät' between her and himself, and after retiring about one hundred paces begins

again to 'låcka.' The old hen rarely takes wing on these occasions, and whilst running towards the man, is pretty certain to get enveloped in the folds of the net, of which fact he is surely made aware, either by her call-note suddenly ceasing, or by her responding to his 'låck' from the same spot.

"When the old bird is made captive, she is placed by the fowler in a small coop, constructed of hazel or other wands; and after he has arranged the nets in the form of a little square, and placed the coop in the middle of it, he once more conceals himself, and begins to 'låcka.' Though the bird is now a prisoner, she seldom allows much time to elapse before responding to the man, and if he has sufficient patience, will not cease doing so until the whole of her progeny are likewise captured. If the fowler be mercifully inclined," Ekström goes on to say, "he will release the old hen and two of the poults, in which case he will be certain the following year to find a brood in the same locality."

During the winter, again, the Black-Cock is frequently shot whilst embedded in the snow; for the gunner, observing a slight depression in the latter, and it may be a little discoloration also, occasioned by the bird lying but a little beneath the surface, aims at the spot, and often with deadly effect. I was assured by my chasseur, Elg, that he had thus killed very many Black-Cock.

Though I myself never shot these birds when beneath the snow, yet I have not unfrequently done so just as they have emerged from it; for, warned by the sudden apparition of one or other of the "pack" that has flown up near me, and expecting others to follow, I have divested my gun of its case, and knocked over the next that made its appearance. Most commonly, however, the whole of the "pack" had taken wing before I was in readiness to fire.

When the snow lies deep on the ground in winter, many Black-Cock are taken in the night time, by torch-light, and by means of a sort of landing net; but as this method of capture has been described when speaking of the Capercali (see page 70), I will not weary the reader by repeating the story.

A very common plan of shooting the Black-Cock in the winter time is with the aid of a "*Bulvan*," or artificial decoy bird.* This is affixed to the top of a long and slender pole—or of two poles tied together—which is then hoisted a little above the top of a birch-tree, standing on an eminence, that it may be seen from a distance. The fowler then conceals himself in a "screen," constructed of a few fir boughs previously prepared for the purpose. Here he patiently awaits the coming of the birds, and when, attracted by the "*Bulvan*," or driven towards it by people patrolling the surrounding country for the purpose, they alight in the tree on which the decoy is placed, or on those in the immediate vicinity, one or other of them usually meets its doom.

At times two or three individuals take part in this amusement, and if there be several wooded knolls in the same locality, each may be occupied to advantage by a jägare and his "*Bulvan*," for as the birds, when alarmed at the shot, keep flying from one "*Bulvan*" to the other,

* A stuffed Black-Cock is the best for the purpose; but, in lieu thereof, an imitation one may be made out of an old hat, or piece of dark-coloured cloth. Two small patches of red cloth, one on each side of the head, represent the combs over the eyes, and two others of white stuff the white spots on the bird's shoulders. The tail of a veritable Black-cock is usually affixed to the "*Bulvan*," but should not this be procurable, one made of black cloth, and lined with white, can be substituted in its stead. Legs are not required, the stick to which the "*Bulvan*" is fastened supplying their place. At times, however, the "*Bulvan*" is carved out of a piece of wood, and afterwards painted.

they are pretty sure to be killed sooner or later. On these occasions, the fowler should be provided with at least one double gun, and if with two it is an advantage, for the birds often visit the "Bulvan" in such quick succession that, in the interim, there is not time to reload. And should the cold be extreme, it is needful to keep the gun covered as much as possible, for it then shoots with less force than usual.

The best season for the "Bulvan" is towards the end of November, when the leaf has fallen, the night frosts have set in, and the ground is covered with snow. But this amusement cannot be followed to advantage excepting in districts abounding with deciduous trees, more especially the birch, as it is on its buds that the Black-Cock chiefly subsists during the winter.

Calm and moderate weather are the most favourable for the sport, as, if it should blow hard, or if there should be a downfall of rain and snow, the birds will not readily approach the "Bulvan." Early in the morning, when they are hungry, is the best time, as in the middle of the day they are mostly on the ground. But, however favourable the weather may be, or good the fowler's arrangements, all goes wrong so soon as the goshawk, the Black-Cock's great enemy, makes his appearance; for he not only pounces on the "Bulvan," and probably rends it, but his mere presence scares away—for that day at least—all the birds thereabouts. It is true the man often revenges himself by shooting the depredator, though this is poor compensation for returning home with an empty bag.

Shooting Black-Cock in the manner described is very destructive. M. Greiff informs us, that "the great hunter, Baron Ungern von Sternberg, was every year accustomed thus to kill on his estate of Näs nearly one hundred of those birds. We are also told by M. Maxmontan, that

"during the autumn of 1827, on the estate of Buckila, in the parish of Pukkis, Finland, he himself shot in a very short time nearly fifty Black-Cock with the aid of the "Bulvan;" and one morning in the year 1840 no fewer than sixteen of those birds.

If this amusement were pursued with moderation and judgment, and the hens wholly or for the most part spared, no very great havoc would be done; but such forbearance would not seem to be practised in all parts of the country.

"The common people hereabouts," says M. Hallongren, writing from Eskilstuna, "have within the past few years learned to shoot the Black-Cock to the 'Bulvan,' and now carry this murderous practice so far as to exceed all due bounds. The peasants, the labourers, and the soldiers, from the commencement of November to the end of March, neglect their usual avocations, and when the weather permits, they, in conjunction with their sons and servants, pursue the pastime without cessation. Lads, so soon as they can carry and fire a gun, form shooting clubs amongst themselves, solely for this kind of 'jagt,' and making a common purse, kill cocks and hens indiscriminately: in a word, everything that comes in their way."

The Black-Cock is often "stalked" in the winter time, and in much the same way as the Capercali. In the early part of that season this may be done on foot, but at a later period, when the snow is deep, either *Skidor*, or *Skarbågar*, are indispensable.

During the winter, as said, these birds usually congregate; and "packs" of from ten to fifty, or more, are then frequently met with; not, however, consisting of cocks alone, as with the Capercali, but of a proportionate number of hens. These "packs" mostly keep to the more open parts of the forest, and to birchen and aspen

groves, bordering on the cultivated country, where they find abundance of their favourite food.

“Of a cold and clear winter’s morning, when the trees, from the hoar frost, seem to be even thicker than when covered with leaves,” says M. Wilhelm von Wright, whose description is true to the life, and to whom I am indebted for the accompanying very beautiful illustration, “a large ‘pack’ of Black-Cock, perched on the trees, the whole of them in motion, and their attitudes varying, is a most beautiful sight, and one that gives life and animation to the otherwise desolate face of nature. At the very slightest movement of the birds, the rime falls from the boughs, and the rays of the sun seem to the eye like so many minute silver spangles.”

The difficulty of finding a “pack” of Black-Cock in the winter time is not usually very great, their haunts being for the most part known to the peasantry and others, and as, when pursued or shot at, their flight is commonly short; the nearest of the “pack,” indeed, seldom flying farther than to the most distant. And this continues the whole day, unless some untoward circumstance, such as the sudden appearance of the Black-Cock’s mortal enemy, the goshawk, in which case they all instantly take wing and move off elsewhere.

The better plan of “stalking” the Black-Cock in winter would seem to be with a horse and sledge. But this can only be accomplished when there is comparatively little snow on the ground, for when it lies deep, as is usually the case as the season advances, the woods are not traversable for man or beast until the feet be provided with implements of some kind or other.

“The sledge used for the purpose,” M. Wilhelm von Wright tells us, “should be provided with broad runners, to prevent it sinking deep in the snow, and with *fjättrar*—or uprights between the runners and the body of the



W. van WRIGHT del.

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STALKING BLACK-COCK IN A SLEDGE.

Day & Son Limited, Lith.



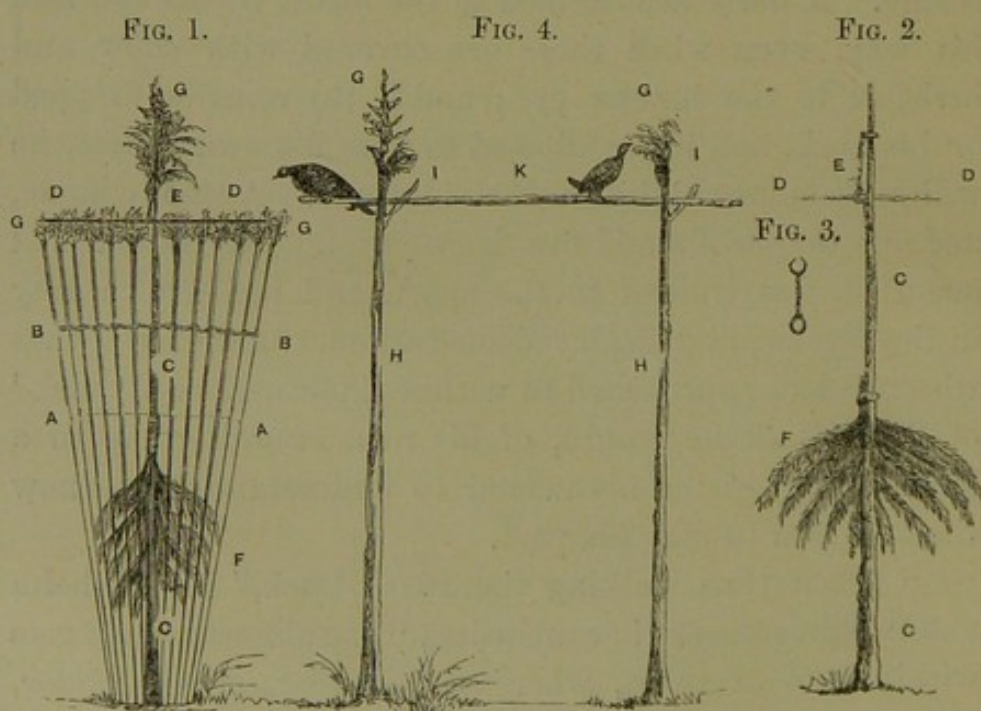
sledge—of sufficient height to allow of one's driving over sticks, stones, &c., that lie in the way, as also with a so-called *Skjut-ställning*, or shooting-stand, constructed on the ladder principle, so as to allow of its being elevated or depressed at pleasure, on which to rest the gun when one is about to fire. The fowler," he further says, "should be furnished with two rifles and a common fowling-piece—with a second rifle, because if the distance be considerable, it may happen that he gets more than one shot from the same spot, often, indeed, at the same bird; and with a common gun that he may not only be able to secure wounded birds, but shoot others that chance to fly past him. If a man be well acquainted with the country, he need not trouble himself to drive too much in the woods, where he is frequently obliged to clear away with his axe such bushes as will not yield to the pressure of the sledge. A horse accustomed to the forest tracks can find his way, even when these are covered with snow and invisible to the human eye; and if the reins be dropped on his neck, and he be allowed to take his own course, he will most assuredly hit on the right one. A steady horse, and one that will stand fire, is essential. My father had one that was trained to the sport, and had grown grey in the service, and displayed such wonderful sagacity, that when he had approached to within rifle-range of a 'pack' of Black-Cock he would, of his own accord, come to a halt, thereby giving his master to understand it was now time for him to play his part.

"When thus stalking the Black-Cock," M. Wilhelm von Wright remarks in conclusion, "one almost always gets within shot of them, whereas if on foot, or on *Skidor*, the attempt often proves unsuccessful. This system of shooting is, besides, attended with very little labour, for, excepting to pick up the slain, or to drive the birds from places where they cannot be followed to more accessible

localities, the fowler has little or no occasion to leave his vehicle."

When the weather is favourable, and provided the rifle be held straight, when stalking Black-Cock, whether on foot or in a sledge, one may pretty well calculate on making a fair "bag." I myself, it is true, was never very successful, owing to a miserable rifle; but I have known others to do considerable execution. One of my own men, indeed, assured me that with a pea-rifle he had thus shot nine birds in one day.

Numbers of Black-Cock are likewise taken in traps and snares of various kinds. Some of the devices are similar to those used for the capture of the Capercali, which have been already described; but others are differently constructed, and of these I shall now speak.



The first in order, as regards ingenuity at least, is called the *Orre-Tratt*—or Black-Cock funnel—represented

above as "*gillrad*," or set. All the wood of which this trap is constructed—and the remark equally applies to other traps—should be unbarked, as otherwise the birds will not approach it, at least not for a long time.

A A (see figures 1, 2, and 3) are some thirty stout stakes, about nine feet in length, fixed in the ground in a circular form, and constituting, in fact, the *Tratt*, or funnel, the diameter of which at the bottom is some eighteen inches, and at the top forty-two inches. B B, withy bands, knitting the stakes, A A, firmly together, and keeping them at an equal distance apart. C C, a stout pole in the centre of the *Tratt*. D D, the so-called "*Giller*," or balance-pin, a perfectly smooth and straight stick, of about three feet in length, affixed cross-wise, by the hank E (see figure 3), to the upper part of C C. F, a *Gran-ruska*, or top of a young spruce pine, secured in a *reversed position* to C C. And G, a small unthrashed sheaf of grain, tied to the top of C C, to entice the birds into the toils.

Figure 4 shows the so-called *Stånd*, which, as seen in the drawing, is in immediate contiguity to the *Tratt* itself. This stand consists of two stout poles—H H—fixed upright in the ground at about ten feet apart; and K, a third pole, resting horizontally, in notches, at the upper ends of H H, and nearly on a line with, and at a very short distance from, the balance-pin, D D; and G G, grain sheafs tied to the tops of the poles, H H.

When now the Black-Cock espies the oat sheaves, G G, and makes towards them, it in the first instance usually alights on the horizontal pole, K (see figure 4), where for a while it amuses itself by feeding on the grain so temptingly placed over its head; presently, however, it is attracted to the sheaf on the *Tratt* itself, and proceeding to the end of the pole, it hops from thence to the balance-pin, D D, which, giving way beneath its weight, it falls

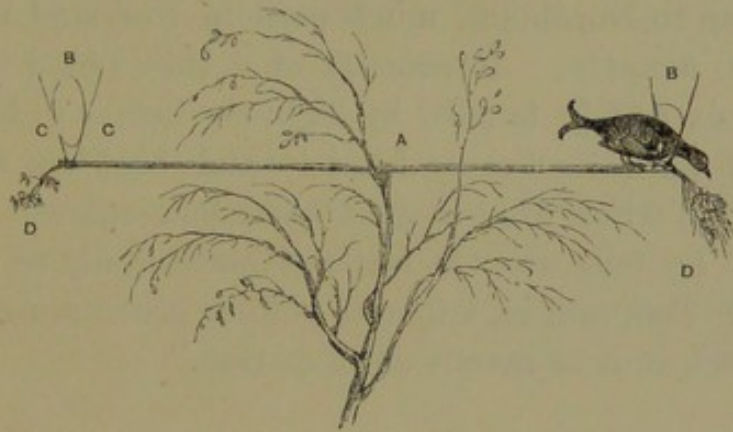
helplessly to the bottom of the *Tratt*, from whence escape is next to impossible; for though the reversed branches of the "Gran-ruska" offer little or no resistance to the bird in its descent, they effectually prevent it from leaving its prison-house.

As will be readily understood, the balance-pin, D D, when relieved from the weight of the bird, at once resumes its horizontal position, and other birds, therefore, undeterred by the fate of their comrade, who, moreover, is all but hidden from sight by the "Gran-ruska," afterwards take the same leap, and share in its captivity. This is a great advantage. With most traps one is obliged to remove each prisoner before another can be made, but in so doing runs the risk of scaring all the birds that happen to be in the vicinity. But not so with the *Orre-Tratt*, for without going near it, one continues catching bird after bird so long as daylight lasts.

With this device, however, everything depends on the proper arrangement of the balance-pin, D D, and on its relative position to the horizontal pole, K; for if the distance or height between the two be too great, the bird, in hopping from the one to the other, is apt to spread its wings, in which case it does not follow the balance-pin when the latter gives way beneath its feet. If, on the contrary, the distance or height be too little, the bird does not fall sufficiently heavily on to the balance-pin as to cause its fall to the bottom of the *Tratt*, and it therefore flies up again and makes its escape.

The best localities in which to construct the *Orre-Tratt* are, we are told, where groves of birch and elder abound, as such are the great resorts of the Black-Cock in the winter time; and if there be oat stubbles in the vicinity it is an advantage, because the birds, having been accustomed to the same kind of food, will the more readily approach the sheaves placed to tempt them.

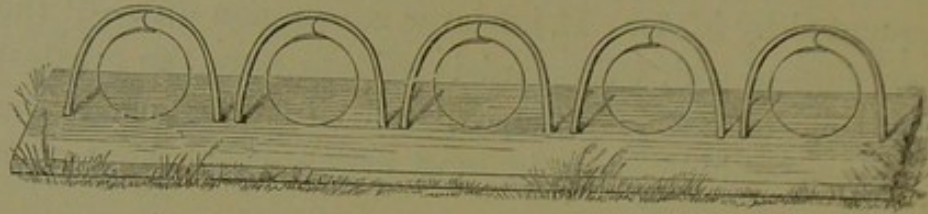
The *Orre-Tratt* ought to be in readiness before the frost sets in, and is most successful when the ground is covered with snow. It should be examined every evening at dusk, as foxes are in the habit of prowling about localities frequented by birds. If, however, a common gun—of the mere sight of which Reynard is said to have the greatest dread—be placed in some exposed situation near to the trap, these animals may, in most instances, be kept at a distance.



Another very simple device to capture the Black-Cock in winter is called the "*Orre-Benne*;" but its use is chiefly confined to the more northern parts of Scandinavia and to Finland. A is an unbarked stick, some three feet in length, secured cross-wise to the crown of a birch-tree, standing in some commanding situation; C C, small wooden pins, about nine inches long, inserted, fork-fashion, in both ends of A; B B, stout horse-hair snares, placed between C C, in which are slight notches to retain them in proper position; and D D, small bunches of birch twigs, rich in buds, to allure the birds.

When now the Black-Cock descries the dainty fare set before him, he alights on the tree, and seeing no other

means of obtaining access to the berries than by the cross-stick A, he hops on to it, and inserting his head in the snare B, presently pays the penalty with his life.



A second kind of "Orre-Benne," depicted above, is, according to Nordholm, much used in Norrland and the adjacent country. It consists of a thin board of from four to six feet in length, by eighteen inches in breadth, to which are affixed several hazel wands bent bow-fashion, and within which are set stout horse-hair snares. "This device," he tells us, "is fastened horizontally to the top of a *Går-Tall*, that is, a fir-tree neither green nor dry, and birds flock to it as ravens do to carrion."





M. Körner del.

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RACKEL - FOGEL.

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CHAPTER VII.

The Rackel-Fogel.—Not a Separate Species.—The Learned at Fault.—Plumage of these Birds.—Their Parentage.—Opinions differ.—The Rackel-Fogel in Confinement.—Their Habits.—Pugnacity of the Males.—Their Spel.

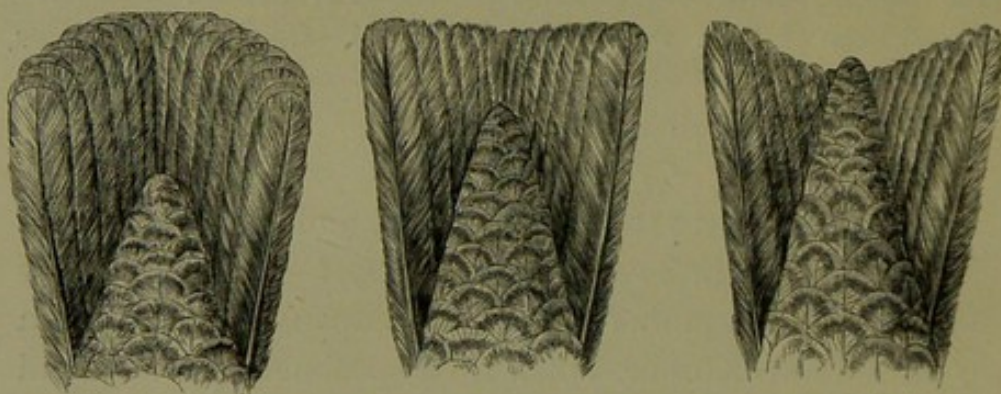
HYBRIDS between the Capercali and the Black-Cock—called in Sweden *Rackel-Fogel*—are not so very uncommon in Scandinavia. The accompanying illustration by the late M. Körner, taken from specimens in the Lund Museum, gives a very good idea of the general appearance of these birds.

The existence of the Rackel-Fogel *as hybrids* has been perfectly well known in the peninsula for a very long time. Some years ago, however, Russian and German naturalists, thinking they had made a discovery, elevated this bird into a separate species, to which they gave the name of *Tetrao intermedius*, and afterwards *Tetrao medius*; but since then they have, I believe, found out and rectified their error.

The plumage of the *Rackel-Hane*—the male—is said to vary considerably in different individuals. According

to the late M. Falk, indeed, "out of twenty *Rackel-Hanar* not two are alike." The dress of those that have come under my own observation has been somewhat similar to that of the Black-Cock; but their tails, though slightly cloven, were not forked as with that bird. The usual length of the "*Rackel-Hane*" is about two feet three inches, and the expanse of its wings three feet three inches; weight from five to six pounds.

The *Rackel-Höna*—the female—is considerably smaller than the male, her length not much exceeding one foot nine inches. Her plumage also differs widely from his, for in general appearance she is not very unlike the Grey-Hen, and, when young at least, is undoubtedly often mistaken for her.



CAPERCALI HEN.

RACKEL-HÖNA.

GREY-HEN.

Independently of difference in size and plumage, the "*Rackel-Höna*" may be readily distinguished both from the Caperkali hen and the Grey-Hen by the form of her tail, which, when somewhat spread, is—as seen in the subjoined drawing (for which I am indebted to M. Malm, the talented curator of the Gothenburg Museum)—nearly square, instead of rounded like that of the Caperkali hen, or slightly forked as in the case with the Grey-Hen; as also by the white points of the under coverts being

more elongated than in the Capercali hen, but less so than in the Grey-Hen.

The parentage of the "Rackel-Fogel" has long been a mooted question with great authorities in Sweden, and I am not quite sure that it is even yet settled. Some contend, and among the rest the late M. Falk, that there are two kinds of these birds in Scandinavia, one being the offspring of the Black-Cock and Capercali hen, and the other of the Capercali cock and Grey-Hen. Nilsson and others, on the contrary, roundly assert that one and all of the "Rackel-Fogel" claim the Black-Cock for father, and the Capercali hen for mother. The professor says, in addition, that the several specimens seen by M. Falk, and from which, in part at least, that gentleman formed his judgment, were really not "Rackel-Fogel," but sterile Capercali hens (similar to the one depicted at page 3 of this volume), which had assumed the plumage of young Capercali cocks.

One reason for Nilsson assuming the paternity of the "Rackel-Fogel" to rest solely with the Black-Cock is, that although the latter has been seen on different occasions to pair with the Capercali hen,* no one can

* "One morning, in the year 1828," says the Ensign Herkepä, "I was at an 'Orre-Lek' in the parish of Lampis, in Finland, and had already shot two Black-Cock when a Capercali hen alighted on the ground about ninety paces from my 'screen.' She was immediately surrounded by the cocks, who, to my great surprise, one after the other regularly paired with her, while the other cocks, six to seven in number—although there were several hens present—engaged in a general battle amongst themselves. As it was then full daylight, and the Capercali hen a considerable distance from me, I did not care to disturb the Lek by firing at her, and had therefore ample opportunity of convincing myself of her identity. And it was little likely I could be mistaken, as the Capercali hen has not only a longer neck than the Grey-Hen, but is much larger than even the Black-Cock himself. Two mornings subsequently, and at the same Lek," the Ensign goes on to say, "a Capercali hen—probably the one seen by myself

testify to the like fact as regards the Capercali cock and the Grey-Hen; and a second reason is, that in districts where the Capercali cocks are all but extirpated at the Lek, the Rackel-Fogel are greatly on the increase, the inference to be drawn from which is that the Capercali hens, being thus deprived of their conjugal rites, submit, from necessity rather than choice, to the embraces of the Black-Cock.

On the first of Nilsson's objections too much stress ought not, perhaps, to be laid, for we must take into consideration that the Black-Cock always carries on love affairs in the open, and exposed to the view of every one, whilst the Capercali, on the contrary, holds his Lek in the depths of the forest, where his pairing once in a time with the Grey-Hen may possibly escape observation.

The professor's second reason, again, founded on the assumption that in districts where the Capercali cocks are so mercilessly shot down, the "Rackel-Fogel" are greatly on the increase, would seem to be invalidated by M. Falk, who says:—

"It is a well-known fact, that fifty years ago—and we need not go farther back—when the Wermeland forests abounded with Capercali, the 'Rackel-Fogel' were found in about the same numbers as at present." . . . Again: "I know of several instances in which these birds have been met with in well-preserved districts full of Capercali." . . . Furthermore: "Some years since, when little or no protection was afforded to the Capercali cocks at the Lek, and when they, from the constant warfare carried on against them, were all but exterminated,

—together with a Black-Cock that was perched on her back, seemingly in the act of pairing, were killed by a peasant at one and the same shot. The Capercali hen weighed six pounds and a half; the Black-Cock three pounds."

not a single 'Rackel-Fogel,' so far as I could learn, was either seen or shot. If, therefore, the popular belief of the Black-Cock being the father of all the 'Rackel-Fogel' were well founded, the latter ought to have been numerous; but the contrary was the case.

"Every one who is accustomed to shoot Caperkali at the Lek," M. Falk goes on to say, "must have remarked, that so long as an old cock remained alive, the young ones dare not go near the hens; but must watch his proceedings from a respectful distance. It is these young cocks, irritated as they are by unsatisfied desires, that propagate the greater part of our 'Rackel-Fogel,' and it is to this cause, and not to the want of Caperkali cocks, as now assumed, that their origin is owing."

And to support his position that a portion at least of the Rackel-Fogel owe their existence to the Caperkali cock, M. Falk adds:—"Every jägare in our fatherland is fully aware that Rackel-Fogel are hybrids between the Caperkali and the Black-Cock. In what I am about to state it is not my purpose in the slightest degree to call this fact in question, but only to gainsay what I consider the too hastily formed opinion as to their all having the Black-Cock for father and the Caperkali hen for mother. I contend, on the contrary, that the very reverse is the case, excepting in some rare instances. In this matter the experience of both old and young sportsmen agree. The size and colour of the greater part of the Rackel-Fogel, moreover, are not consistent with their being hybrids between the Black-Cock and the Caperkali hen, because amongst animals the young in general take after the father. Now the "Rackel-Hane," which has the Caperkali cock for father, is nearly as large as a young Caperkali cock, say from six and a half to seven pounds in weight, and would resemble him in appearance, if he had a green breast, a round tail, and a yellow bill; whilst the offspring of the

Black-Cock and the Capercali hen bears a greater resemblance to the father, the tail being similar to his, and the size intermediate between both parents.

“But more direct evidence can be adduced as to the Capercali cock being the father of many of the Rackel-Fogel. In the year 1830 M. Holm fell in with a brood of Black-Cock, amongst which were two of these hybrids. The one, a female apparently, was shot at the time; the other, a male, was seen in the same brood in the autumn of that year, and was killed in the following spring. It was stuffed by myself, and its father was beyond doubt a Capercali cock. The above brood of Black-Cock was met with in one of M. Holm's well-preserved districts, where many old Capercali cocks were left unmolested in 1830. M. Wilhelm von Wright also speaks of a Rackel-Hane being found amongst a brood of Black-Cock; and says, moreover, that the Rackel-Fogel for the most part keep company with the latter in the winter time. My experience is the same. They follow the Black-Cock as well to the Lek as at other periods of the year, and it is very seldom indeed that they are met with amongst the Capercali, for the reason, probably, that they thrive best amongst those with whom they have been brought up.

“Rackel-Fogel,” M. Falk continues, “are scarce in Wermeland. During the thirty years that I have given my attention to the subject I have only been able to collect six males for the purpose of preserving, and to hear of two more which I was unable to obtain. Five of the six had the Capercali cock for father, and only one the Black-Cock. The last-named hybrids are much the most rare, and at the present moment I know not of a single specimen, the one I stuffed having been sent, if I remember right, to Germany.

“All this,” says M. Falk, in conclusion, “gives more probability to my opinion, that the most part of our

Rackel-Fogel are hybrids between the Capercali cock and the Grey-Hen; whereas in support of the old theory, that they are all the produce of the Black-Cock and the Capercali hen, we have no other evidence than loose guesses and vague surmises."

The late M. Grill, another high authority on sporting and matters relating to natural history, takes the same view of the subject as M. Falk. "There are," he says, "two kinds of Rackel-Fogel, differing in their nature and habits. The one kind confines itself to the great woods, and the spel or love song of the male in part resembles that of the Capercali; his first and second notes, *knäppningar* and *klunken*, being somewhat similar to those of that bird, though more modulated; but instead of *sisningen*, the third and last note of the Capercali, he utters a sound called *rackla*,* which is not unlike the grunting of a pig. This kind of Rackel-Hane is about the neck more like the Capercali cock, and may be approached at the Lek in the same manner as that bird, or even with greater facility, because of his continuing to *rackla* for a longer time than the *sisningen* of the Capercali lasts. The other kind of Rackel-Hane is about the neck more like the Black-Cock, and in the spring resorts to the pairing-ground of the latter, where, by his jealous and useless pursuit of the cocks, he usually spoils the Lek."

So much for the controversy in regard to the hybrids in question, a subject on which I, for my part, am unable to throw any light whatever; for though I have seen a good many specimens reputed to be Rackel-Fogel, I have only killed a single male, and that in a densely-wooded country, where both Capercali and Black-Cock were pretty numerous—the former, if anything, the most so. It is

* From the verb *rackla*, to hawk, or force up phlegm with a noise, and hence, probably, the Swedish designation of "Rackel-Hane."

possible, however, that from similarity of appearance between the Grey-Hen and the Rackel-Höna, especially in the early part of the season, when the plumage of the poults is not properly developed, I may occasionally have killed a Rackel-Höna without being aware of its identity.

Owing to the scarcity of the Rackel-Fogel, their habits, when in a wild state, are but little known. But Professor Nilsson, in the second edition of his valuable work on the Scandinavian Fauna, has favoured us with some observations on a Rackel-Hane that he had in confinement for a considerable time.

“He is more dull than lively. For the most part he will sit for a whole day on his perch in a passive attitude, with his tail hanging down, his feathers somewhat ruffled, and his eyes closed. He is, nevertheless, wild and shy. Towards people who approach his coop, he evinces more shyness than malice; but to small animals and birds that come near him, or attempt to purloin his food, he displays an exceedingly angry and spiteful temper. About March, when he puts on his beautiful summer plumage, he is more vicious than usual. Towards the end of that month, or early in April, when fine weather sets in, he commences his spel. In this, however, he never indulges at an early hour in the morning, but only in the daytime, both before and after noon. His moulting commences about July, and continues for a long period. His food consists of red whortleberries and other forest berries, when obtainable; but he is also fond of apples chopped up small, cabbages, and various vegetables, as well as of barley and the seeds of the spruce pine.”

The Rackel-Fogel are not believed to breed amongst themselves. This may, indeed, be inferred from the Rackel-Hane not having a Lek of his own, but always resorting to those of the Capercali and the Black-Cock, where, however, owing to his ferocity and quarrelsome

disposition, he is anything but a welcome guest. When he alights at the Black-Cock Lek he attacks and disperses the congregated males; and at the Lek of the Capercali he never remains stationary, but keeps flying from tree to tree in chase of the bird that is holding his spel. Hence the saying amongst sportsmen:—"There is no order at the Lek so long as the Rackel-Hane is there, and the first endeavour is therefore to shoot him."

The spel of the Rackel-Hane is described by some as "between that of the Black-Cock and the Capercali cock;" but others, again, and M. Grill among the rest, speak of it very differently, as just shown. The call-note of the Rackel-Höna, which occasionally makes her appearance at the Capercali Lek, has not been fully identified. The Count Corfitz Beckfriis, however, seems fully convinced he heard it on one occasion, and says: "Though weaker than that of the Capercali hen, it is stronger than that of the Grey-Hen, but it is impossible to say which of the two it most resembled."

CHAPTER VIII.

The Hazel-Hen.—Widely diffused.—Description.—Accidental Varieties.—Haunts and Food.—Breeding.—Domestication.—Naturalization in England.—The most delicious of Northern Game Birds.—The Pointer.—The Fogel-Hund.—Sagacity of the Dog.—The Hjerp-Pipa.—Traps and Snares.

THE Hazel-Hen, Hazel-Grouse, or Gelinotte (*Hjerpe*, Sw. and Norw.; *Tetrao Bonasia*, Linn.; *Bonasia Europæa*, Auct.), was scarce in my neighbourhood, which is also the case throughout the southern portion of Scandinavia, where it is confined to a few districts far distant from each other. In the extreme south of Sweden, indeed, there are none, which may be attributed to extirpation in former times. In all the northern parts of the peninsula, however, as high up certainly as Muonioniska in Lapland, lat. 68°, these birds are comparatively abundant; and though found on the fjäll sides, they do not go so high up, it is said, as the Capercali and the Black-Cock.

The Hazel-Hen dwells in many countries, being met



M. Körner, del.

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T H E H A Z E L H E N .



with in Russia, (including Finland *), in Poland, and in Siberia; as also in Germany, France, Switzerland, Holland, and elsewhere in Continental Europe. "It goes as low down in the south," so my friend, Mr. George Chichester Oxenden, writes me, "as Carniola and Istria, where I have found them freely, in both pine woods and hazel copse." Dr. Latham states, indeed, that "these birds are so numerous in a small island in the Gulf of Genoa that the name 'Gelinotte Island' has been applied to it;" but it is almost everywhere a local bird, and pretty much confined to wild and mountainous districts. Singularly enough, the Hazel-Hen is not included in the Fauna of Denmark, but Kjærbølling entertains the idea that it is an inhabitant of Holstein, a former dependency of that kingdom, but of which it was recently so shamefully despoiled by Prussia and Austria.

The Hazel-Hen is perhaps the handsomest of the grouse family; but it is needless for me to speak of its plumage, as the annexed illustration, by the late M. Körner, will give a far better idea of these birds than can be expressed in writing. I may mention, however, that it measures fourteen to fifteen inches in length, and nineteen to twenty from tip to tip of wing. But though its length and alar expanse are greater than those of the partridge, it strikes me that its body is somewhat less than that of the latter. In the more southern portion of the peninsula it is said to attain a somewhat greater size than in the far north, where its plumage is of a clearer colour, inclin-

* M. Wilhelm von Wright mentions that on his father's estate alone, in Finland, some three hundred Hazel-Hens were killed annually. And, further, that "the Finns entertain the very singular notion that, at the Creation, this bird was the largest of the feathered tribe; but that year by year it has decreased in size, and will continue to do so until at last it will become so very diminutive as to be able to fly through the eye of a needle; and when that happens the world will come to an end."

ing to bluish-grey ; while in the south it is more brown. The male is rather larger than the female ; but with that exception, the only material difference between the sexes is that the male has a black mark under the throat, and a white one on the cheek, extending from the base of the bill to a little beyond the eye ; whereas the throat of the female is whitish with grey-brown and smaller black spots, and the angular mark between the bill and the eye is reddish-brown.

Accidental varieties are occasionally met with. Nilsson speaks of an individual of a faded colour, in which the portion of the plumage that is usually black was brown ; and M. Wilhelm von Wright of others as being "almost white, though more commonly greyish-white, with faint approximation to the usual colour ;" such a one, he tells us, he himself shot when residing in Finland, on the 12th September, 1824.

The flight of the Hazel-Hen is very noisy, but short withal, seldom extending beyond a couple of hundred yards. During both summer and winter it is mostly on the ground, but when flushed invariably takes refuge in a tree, rarely on its top, however, as some tell us, but generally about halfway up, and amongst the most leafy of the branches.

Where these birds roost during summer and autumn I know not, but in the winter time there is reason to believe they often pass the night in the snow.

In Finland, M. Wilhelm von Wright tells us, the Hazel-Hen is found in larger or smaller packs, according to their greater or less abundance in the district. It is not for me, of course, to question the accuracy of so good an observer ; but, singularly enough, I myself never saw or heard of more than a single family in company. Sweden, however, is not Finland, and the habits of birds may vary in different countries.

In Scandinavia the Hazel-Hen is classed as a *Stand-Fogel*, or stationary bird, and beyond doubt it is about the most so of the genus *Tetrao*. The Capercali and the Black-Cock, as shown, occasionally migrate, for a time at least, from the locality where they were bred; but not so with the Hazel-Hen, which would seem pretty much to confine itself to one district. Such at least is the result of my experience, which has been considerable; for when roaming the forest, a day seldom passed that we did not meet with some of these birds.

The favourite haunts of the Hazel-Hen are hilly and wooded districts. In the open country it is never found, but it somewhat varies its ground according to the season of the year. During summer and autumn one often observes these birds in young woods consisting chiefly of deciduous trees; but when the leaves begin to fall, they retire to the great pine forests, for the reason, as some suppose, that they may be the less exposed to the attacks of birds of prey.

Its food in the autumn consists of worms, larvæ, and the various berries with which the Scandinavian forests abound; but in the winter, when the snow lies deep on the ground, it subsists chiefly on the tender tops of the birch and the alder, especially the latter. I have then also found in their crops the stalks and tops of the bleaberry.

The Hazel-Hen—unlike its congeners, the Capercali and the Black-Cock, both of which are polygamous—lives in monogamy. The pairing season usually commences at the end of March or beginning of April, though the time is somewhat dependent on the state of the weather. The sexes attract each other by a peculiar and almost melancholy cry; that of the male consisting of a long-drawn whistle, followed by a chirp: *tī hīh-tī-tī-tī-tī*; whilst that of the female is more simple, being

often only a single sustained *tih*, vibrating or quivering towards its termination.

The female makes her very artless nest in a small cavity, which she herself scratches in the ground, and lays from eight to twelve eggs of a pale yellow colour, marked with brown spots. "The chicks are hatched about Midsummer, and in the course of a very few days, and when they are only feathered on the wings and tail, begin to fly."

It is asserted that the male keeps company with the female until incubation commences, when he deserts her for a season, and in the interval wanders alone in the forest; but as soon as the chicks are nearly full-grown, and have acquired the call-note of their mother, he rejoins his family, and keeps with it during the winter, until the return of the pairing season in the spring. The like is related of the *Fjäll-Ripa*, a species of grouse, of which hereafter.

The Hazel-Hen is readily domesticated, though I have seen the contrary stated in a recent publication. I speak partly from my own experience, having had more than one in confinement that had been captured when full-grown; but chiefly on that of others. We are told, for instance, by M. Wilhelm von Wright that "as an aviary bird it is beyond everything tame and amusing to its owner. The more people are about it the sooner will it become reconciled to confinement. The first days of its captivity, however, it will not eat anything, but endeavours to conceal itself in a corner of its prison-house; for which reason it is best to leave it to itself, after placing water and food before it. Red wortle-berries and juniper berries are the best to give it in the first instance; but hemp seed, barley, buck-wheat, and other kinds of grain, it eats with avidity after it has once partaken of them. To induce it to drink, some berries

should be put in the vessel containing the water, which it is then sure to observe. As with domestic fowls, it eats, when in confinement, meat, whether raw or boiled. It should be constantly supplied with dry sand placed in a box, or something similar, as it daily 'dusts' itself. Thus provided, especially should the sun shine, it forms for itself a hole with its beak in the sand, which it throws over its body. Afterwards it lies first on one side and then on the other, or it may be on its back, and with its eyes half shut. Oftentimes it mounts on some little elevation in the coop and whistles. One is seldom fortunate enough to rear the chicks when taken very young, most probably because the proper food cannot be procured for them."

It is to me a mystery why the Hazel-Hen, which from its English name would almost seem to have been a former inhabitant of the British Isles, has not been naturalized with us, inasmuch as it is of all game birds the most delicious, of consummate beauty, and of unconquerable hardihood, "and adapted, moreover," according to Mr. George Chichester Oxenden, who has seen and shot these birds in most European countries, "to every variety of cover, from pine forests to hazel and oak copses." But it is not too late in the day for the Acclimatization Society to take the Hazel-Hen in hand; and if the localities were suitable for the purpose—and such there are no doubt in both England and Scotland—and the attempt were made with from twenty to fifty brace of these birds, I see no reason why it should not succeed. If the necessary steps were taken, and competent people—properly appointed with dogs and nets—were sent over to Scandinavia in the early part of the season, there could be no great difficulty, to my thinking, in procuring the requisite number of birds.

Epicures tell us the Hazel-Hen bears away the palm

from every other Scandinavian game bird, but to partake of it in perfection it must not have been previously frozen, as is probably the case with all those that come to the English market. From olden times, indeed, this bird has been looked on in the peninsula as a great delicacy. The worthy Bishop Pontoppidan, when speaking of it, says: "The Hjerpe or Francolin is an excellent land bird. It serves the Norwegians instead of pheasant and moor game. . . . For its white, sound, and tender flesh, and its delicious taste, I prefer it to all kinds of fowl I know of. . . . In the diocese of Aggerhaus and Trondhjem, where they are found in great abundance, they don't prefer anything to the Hjerpe when well roasted."*

The Hazel-Hen being held in such high estimation in Scandinavia, various are the devices resorted to for effecting its capture.

Some are shot to the "Stånd-Hund," or pointer; though the number, I take it, is inconsiderable, from that dog being little available in wooded districts, where alone those birds are found. But very many fall to the "Fogel-Hund," especially in the early part of the autumn; for when "treed" by the dog, the birds *trycka*, or sit close, and can with difficulty be induced to leave their perch. Not so at a more advanced period of the season, for then, so soon as the dog begins challenging, they commonly take wing and move off elsewhere. But even during the winter I have shot many when "treed" by my bear dogs,

* According to M. Broman, the Jägare's plan of preparing the Hazel-Hen, and other small game, is as follows:—"The head, tail, and wings are first cut off, and after it has been disembowelled and washed, and salt, pepper, &c., introduced into the stomach, it is enveloped in a moderately thick coating of clay, and then placed in hot ashes. When the clay begins to crack, it is taken off the bird, and the feathers following it, the delicious morsel is then in readiness to be discussed."

or when, after being scared by the latter, they were flying from tree to tree.

There are dogs in Scandinavia, nevertheless, whose sagacity teaches them not to "give tongue" to the Hazel-Hen when "treed," seeing that it will not "trycka" to them in like manner as the Capercali and the Black-Cock; and when, therefore, the bird has flown up into a pine, the dog stations himself a few paces from its stem, and by merely wagging his tail and whining in the quietest manner possible, gives his master to understand where the quarry is to be found.

Even when the Hazel-Hen is "treed," a practised eye is often required to discover its whereabouts, for it frequently sits so shrouded amongst the branches of an umbrageous pine as not to be readily discernible, at least to the casual observer. It is so cunning, moreover, as to regulate its movements by those of the fowler; for whilst he is on the look-out for the bird on one side of the tree, it creeps to the opposite, leaving during its progress little more than its head exposed, and that solely for the purpose of keeping the enemy in sight.

The usual way, however, of shooting the Hazel-Hen is without any dog, and solely with the aid of the so-called *Hjerp-pipa*, or pipe. This implement, which is much less in size than one's finger, and constructed of wood or metal, or it may be "the wing-bone of a Black-Cock," emits a soft whistling sound, that can be varied according to the call-note of the bird. Such a pipe is readily manufactured: Often, indeed, when we have accidentally met with a Hazel-Hen, has my man with his knife alone made one out of a sapling of some pithy tree, and that in the course of a very few minutes.

Provided with this implement, the fowler traverses the forest in all silence, and when he has succeeded in flushing the brood, he after a time begins to "läcka," when

one or other of the birds is pretty sure to respond, or it may be fly directly towards him; and in the end he usually succeeds in shooting the whole or greater part of them. Nordholm tells us, indeed, that "it often happens that a pack of ten, twelve, and eighteen, are thus shot without it being needful for the man to move a single foot from the spot."

We are informed, moreover, that "if there be several Hazel-Hens in the same tree, the gunner may kill all, provided he first shoots the undermost!" This may by possibility be the case in the very early part of the year, but certainly not when the season is advanced; for, nine times out of ten, the other birds, if there be more than one in the tree, almost invariably take wing on hearing the discharge of the gun.

Looking on Hazel-Hen shooting, whether in the manner described, or with the aid of a "Fogel-Hund," as the very tamest of sports, I have seldom shot these birds unless they have crossed my path; but I have known others to commit considerable execution amongst them. A man of mine, indeed, one day killed eleven Hazel-Hens with his pea-rifle.

Not a few of these birds are taken in traps and snares, which being similar to those used for the capture of the Capercali and the Black-Cock, there is no occasion to speak further of them.

The number of Hazel-Hens annually taken in Scandinavia is something enormous. Brunius, in his *Hand-Lexicon*, published in 1798, calculated that 60,000 were yearly consumed in Stockholm alone, and 40,000 more in other parts of the country. At the present day that number is, beyond doubt, very greatly exceeded.





M. Kirtz, del.

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DAL-RIPA, IN SUMMER PLUMAGE.

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CHAPTER IX.

The Dal-Ripa.—Where found.—Description.—Plumage.—Moulting.—Resembles the Scotch Grouse.—Resorts.—Food.—Feeds at Night.—Habits.—“Trees.”—Roosts in the Snow.—Its Lek.—Breeding.—Parental Affection.—Enemies.—Naturalization in England.—In request for the Table.—The Rip-Orre.

OF the *Ripa*, the well-known Scandinavian bird, belonging to the genus *Tetrao*, there are two species in the Peninsula, viz., the *Dal-Ripa*, or Valley-Ripa, Sw.; *Skov-Rype*, *Dal-Rype*, Norweg. (*Tetrao Lagopus*, Linn.; *Lagopus subalpina*, Nilss.), identical, as many suppose, with the Willow Grouse (*Lagopus Saliceti*, Temm.);—and the *Fjäll-Ripa*, or Alpine Ripa, Sw.; *Fjeld-Rype*, *Skare-Rype*, Norw. (*Tetrao Lagopus*, Linn.; *Lagopus alpina*, Nilss.), believed by some to be the common Ptarmigan (*Lagopus mutus*, Auct.).

Both the Dal-Ripa and the Fjäll-Ripa have from time out of mind been known in Scandinavia as different birds.* But Linnæus, considering the Fjäll-Ripa to be

* “The Ripa,” says Bishop Pontoppidan, “is a peculiar Norwegian bird, and belongs to this, perhaps, rather than any other country.

merely a variety of the Dal-Ripa, classed them both as one species, and it was not until lately that they have been identified by Swedish naturalists as specifically distinct.

The Dal-Ripa inhabits all the more wooded parts of Northern Scandinavia, as also the Loföden and other islands off the Norwegian coast. As regards Sweden, its limits to the southward in summer would seem to be about the 60°, though in one instance I myself found it breeding on an island in the Wenern more than one degree farther south; but in winter, especially if there be much snow and the weather unusually severe, it occasionally falls considerably lower down.

In Norway this bird ranges much farther to the south than in Sweden, as will be seen by the accompanying letter, dated Christiania, 18th April, 1866, received by me from Professor H. Rasch, an indefatigable sportsman and accomplished naturalist.

"The Dal-Ripa is found breeding in the southern parts of Norway, nearly as far south as Lindesnäs (58° lat.), where the nature of the country is adapted to its habits. It gives the preference to marshy regions at an elevation of at least 1,000 feet above the sea-level, more especially when cleared of large timber and covered with stunted pines, small willow and birch bushes, as well as heather. In winter it falls down as far as Lindesnäs itself. But few pairs, however, are found to breed in Southern Norway at the above-named altitude, and they only become numerous in suitable locali-

We have two kinds; viz., the *Field-Ripa*, which lives high in the rocks, and is less than the other; and the common sort. They are both about the size of a pigeon, which they much resemble, excepting that their legs are covered with feathers; and they are therefore called *Lagopus*, or hare-foot. Both sorts are white in the winter, in the spring speckled, and in the summer grey. They are in great numbers, but some years more than others."

ties at a height of 2,000 feet above the level of the sea. The case is quite different in the western part of Norway to the north of Stadt (62°). It breeds, for instance, in great numbers in Smölen—situated about fifteen (English) miles to the north of Christiansund—a large flat, marshy island, about fifty (English) miles in circumference, which is destitute of trees, and the highest part of which does not reach an altitude of 400 feet above the sea-level. The vegetation on these islands lying out at sea, and denuded of trees, is analogous to that found in the alpine ranges, and such places are therefore chosen by the Dal-Ripa.” . . .

The Professor adds in a subsequent letter, in reply to inquiries of mine: “It is quite certain that this bird sometimes selects for its abode localities that are far removed from the higher mountain ranges. That it nests sparingly in the upper portion of what is strictly called the pine region, is undoubted; but its proper breeding-grounds are higher up; viz., in the birch region (*regio betulina*), and in lower portions of the willow region.”

The Dal-Ripa has the short thick bill characteristic of the genus Tetrao, with the upper mandible convex and arched. There is a naked red skin above the eye, and the legs are plumed. The length of the male is from sixteen to seventeen inches, and breadth from tip to tip of the wings twenty-four to twenty-five inches. The female is somewhat smaller than the male.

As will be seen by the accompanying illustration, the neck and breast of the male, when in its full spring dress, which it does not acquire until near Midsummer, is of a reddish-brown, the back dark-brown, the quill feathers and part of the under surface of the body, as also the legs, white. The plumage of the female is somewhat like that of the male, but of a paler colour, often inclining

to yellow. "But during the autumn—say August and September, it is on the whole more brownish, and consequently darker than in the spring." In winter, however, with the exception of the tail feathers, which are at all times black tipped with white, both male and female become quite white.

M. Barth,* when speaking of the spring moulting of the Dal-Ripa, says: "The male begins to put on his spring dress towards the latter end of March, say from the 20th to the 23rd; but this cannot be said to be fully developed till the middle of June, the change thus occupying nearly three whole months. The female commences moulting decidedly later than the male. Prior to the 8th of April I have seldom seen the slightest change in her plumage; but owing to the process with her being much more rapid, the transformation is completed by the end of May, or within about a month and a half; and she is therefore the first by two or three weeks to appear in her new attire."

In regard to the autumnal moulting of the Dal-Ripa, the same authority says:—"This as a general rule commences, with the male, in the early days of September, and is completed in about two months; whilst with the female, who does not begin changing her dress until a fortnight after the male, the process is over in much less time. There are exceptions; however; for even when November has been well advanced I have seen males not altogether divested of their autumnal garb. Once,

* A well-known Norwegian sportsman, who gives us much valuable and curious information respecting both species of Ripa, the habits of which he has probably had better opportunities of studying than any man living, and whom I quote with the greater pleasure, as I am assured by a very high authority, that "the word of M. Barth may be received as gospel truth," which is not always the case with the utterances of every one when relating incidents of "flood and field."

indeed, on the 3rd of January I shot an individual that still retained a few brown feathers on its head. On the other hand, I have killed males in full winter dress in October."

M. Genberg, writing from Robertsforss, not far from the town of Umeå, in the Gulf of Bothnia, tells us that the moulting of the Dal-Ripa is regulated by the mildness or severity of the weather, and by the common people looked upon as a sign of the early or late advent of winter. Sometimes it takes place as early as the end of September, when the old birds begin to be white, though they are never fully so until the close of October, and occasionally even later. The young invariably change their plumage later in the fall of the year than the old ones. During certain winters they are not fully white even at Christmas. In the spring, however, they retain their white dress longer than their parents."

M. Wilhelm von Wright, when treating of the moulting of this bird, remarks: "The change of plumage is its only defence against its numerous enemies. In the summer time, when the bird is brown and the ground bare, it is comparatively tame; whilst in the spring, on the contrary, when the ground is bare and the Ripa has not yet laid aside its winter dress, it is generally exceedingly wary, and if its legs will not save it from the fowler, it takes wing a long way ahead of him. This period of the year is most perilous for the Ripa as regards hawks and owls, which, in open and exposed places where the bird usually resorts, are then enabled to descry it from afar."

The Dal-Ripa, particularly the male, is not very unlike our grouse in the summer season, and on taking flight cackles in a similar manner.* But to say nothing of

* His cry at such times is "*errackackack-kah*." When he alights, it is

difference in plumage, even during the summer, the fact of the Dal-Ripa being only found in districts more or less wooded, of its frequently perching on trees and bushes—which the common grouse is seldom known to do*—and other peculiarities too tedious to mention, clearly mark it as a species distinct from the *Tetrao Scoticus*, for which, nevertheless, it has been mistaken by more than one English traveller.

The Scotch Grouse, it should be remarked, is not found in Scandinavia; but strenuous efforts, which it is to be hoped will prove successful, are now being made by Mr. Oscar Dickson, of Gothenburg, to introduce that bird into Sweden.

Swedish naturalists tell us the Dal-Ripa is seldom found in large woods, but such is not exactly the fact; for though doubtless much more plentiful in comparatively open country, such as the higher slopes of the fjälls, where there is little besides brushwood, yet to my personal knowledge these birds are pretty common both summer and winter in the great northern forest.

According to M. Barth, the Dal-Ripa thrives best in localities where woods of large birch trees are interspersed

"Kävāu! Kävāu!" The Finnish peasants imagine they hear in this cry the words "*Kopék, Kopék,*" for which reason they jestingly call the Ripa by the name of the coin current in Russia. Those of Gullbrandsdal, in Norway, suppose that the Ripa cries "*Ta Karn,*" i. e., catch the fellow; and in Hallingdal, "*Kä bār dū? Kä bār dū?*" or, what do you carry?

* "The instance to which you allude of Grouse 'treeing,' writes an acquaintance who knows this bird well, "occurred in Ayrshire some four or five years ago. I was driving with a friend, and saw several birds feeding in the corner of a small enclosure by the edge of the moor, and other birds, all red grouse, were in a small ash tree close by. I waited until these flew down and fed with the other birds, on the corn stubble of the enclosure. There was no possibility of a mistake, as I could not be fifty yards distant, and I remarked to my friend that I had never before seen or heard of Red Grouse treeing."

with bushes of birch and juniper, especially the latter, as it is under these that they take shelter when moulting during the spring and autumn. But if the cover consists solely of birch bushes, one never finds so many birds.

During the summer the Dal-Ripa feeds upon the leaves, &c., of various bushes and plants, such as the grass-willow (*Salix herbacea*), and several other kinds of willow; on those of the bleaberry (*Vaccinium Myrtillus*), and more especially on the flowers and seeds of the knot-grass or bread-wort (*Polygonum viviparum*), which for that reason is called in Norway *Rype-gräs*, or Ripa-grass. In the autumn it lives for the most part on berries, such as the Arctic raspberry (*Åkerbär*, Sw.; *Rubus Arcticus*, Linn.); the cloudberry (*Hjortron*, Sw.; *Rubus Chamæmorus*, Linn.); the red whortleberry or cowberry (*Vaccinium Vitis Idæa*, Linn.); the bleaberry; and the crake or black crowberry (*Kräkbär*, Sw.; *Empetrum nigrum*). During winter and spring its food mainly consists of the incipient buds and tender shoots of the willow, as well as those of the dwarf and common birch. It then also occasionally eats, it is said, the berries and leaves of the juniper bush.

"The Dal-Ripa during winter," M. Barth tells us, "feeds only during the night. At dusk they descend from the higher slopes of the fjälls to lower localities, and return again before dawn. These nocturnal wanderings commence as early as September and continue until about the middle or end of March. . . . After a fall of snow one may frequently track them for six to eight hundred paces in a direct line, and be tolerably sure of finding the place where they lie."

In summer and early autumn the Dal-Ripa keep in pairs or in families, but on the approach of winter they usually "pack," and at times in the fjäll regions in enormous numbers, nearly all the birds in the district getting together at one and the same spot; and thus they

continue to roam the country until the spring, when they separate in pairs.

The Dal-Ripa frequently "trees," a fact which many people in Scandinavia seem to doubt; but, to say nothing of having myself been an eye-witness to the fact, there is abundant evidence to show such is of frequent occurrence.

M. Genberg, of Robertsforss, near Umeå, after informing us that the Dal-Ripa in the winter commonly resorts to dense pine-woods, interspersed with birch, &c., continues: "Sometimes, however, when the weather is very severe, these birds make excursions to the more open country, and are then often seen perched on the upper branches of the birch trees, plucking the buds."

The Rev. Conrad Grönlund, writing from Qvickjock in Lapland, informs us, moreover, that "during the pairing season the male often sits on the top of some lofty pine or Scotch fir, probably that he may be the better enabled to discover a rival."

But the most conclusive testimony is that given by M. Barth, who says: "From the middle of April the Dal-Ripa—who at mid-day are mostly on the ground in the thick woods—generally sit during the forenoon and afternoon in the trees, especially when the weather is mild and the sun shines. One can then often see as many as two hundred Dal-Ripa perched here and there on the tops of the birches, the dark colour of the trees making their white and shining bodies more prominent. It is a beautiful sight. At such times they are occupied in feeding on the tops of the birch, of which during the spring their food almost exclusively consists. I have also occasionally seen them sitting on the trees late in the autumn and winter, but never during the summer." In a succeeding chapter, treating of the capture of these birds, further evidence as to the fact of their "treeing" will be found.

The Dal-Ripa, as with several other forest-birds, frequently passes the night in the snow, though not deeply embedded, it would seem, as I have always found it easily alarmed. The learned Bishop Pontoppidan was fully aware of this "fact;" for after describing the manner in which the bird feeds in the summer, he observes: "But in the winter they do as has been said of the black grouse. They seek covering and warmth by burying themselves into the deepest snow, where they sit in great heaps together, taking a magazine of food with them in their crops, by stuffing them as full as they can with willow and birch tops, so that their breasts stand out and make them look as big again; with this store they support themselves till the following spring. This particular I have from Olaus Magnus, and is quoted in his Theolog. Lib. N.C., 13, as an instance of the Almighty and Wise Creator's care for those things that otherwise would perish."

The Dal-Ripa is monogamous. Nevertheless it would appear that before the great packs that one meets with in the winter time break up in the spring, they hold something very similar to a Lek, though it may be in a different sense from that of the Black-Cock and the Capercali.

"After the middle of March," says M. Barth, "these birds, then for the most part in packs of from one to two hundred, seem to begin to choose their mates and to carry on their Lek. From their tracks in the snow it is evident that with their wings trailing on the ground they pace to and fro after the manner of the Capercali in the breeding season. . . . By degrees the packs, spreading in the while, gradually descend from the fjäll sides to the lower valleys, and eventually to the sea-coast itself, where the boulders and every little elevation may be said to be covered with them. Here, though not in such large packs as before, and still living amicably together, they carry on love affairs in right good earnest.

"If one is then abroad at an early hour in the morning, one is treated to a very singular concert, consisting of the most various cries and notes, which in disharmonious confusion proceed from hundreds of Dal-Ripa, dispersed throughout the surrounding country. Here is seen a male perched on a stone cooing, and emitting at intervals his customary sound when in a passive posture: *gack, gack, gack—ka, ka, a, a, a, a, a*. There flies another male uttering his sharp *errrrakka, kak, kakaka*; but presently alighting again he cries *kavaro, kavaro*, upon which follows a clear ringing *kavau*, twice repeated. A third male, with outstretched neck and expanded tail, promenades proudly to and fro on the snow, emitting his *gao, gao*, and while in this attitude, with his dazzling white body, dark brown head, and large red crest, looks as haughty as the Great Mogul himself. In this while the subdued *njau, njau* of the females are heard at intervals, together with another peculiar sound, which cannot be represented by any combination of letters.

"It is chiefly in the morning, though occasionally in the evening, that the Dal-Ripa are thus occupied; for in the middle of the day they mostly lie still or sit basking in the sun on hillocks, stones, or stumps of trees. This way of life they continue until about the middle of May, when the several pairs separate to search for suitable nesting localities."

My lamented friend, "The Old Bushman," would seem to gainsay the fact of the Dal-Ripa holding a Lek; but it strikes me that, owing to the very unfavourable state of the snow on his first reaching Lapland, and his inability to go on "skidor," the season, when he took the field, was too far advanced to enable him to make his observations to advantage. For if the Dal-Ripa really does hold a Lek, or the semblance of one, as M. Barth and others tell us, it no doubt takes place very early in the

spring and before the dispersion of the great winter packs spoken of.

But whether or not the Dal-Ripa hold a Lek prior to the breaking up of the great packs, as M. Barth would seem to imply, we have ample information as to the proceedings of this bird at an after-period.

"In the spring of the year," says the celebrated missionary Læstadius, "the great packs of Dal-Ripa separate, and these birds are then only seen in single pairs. They are, therefore, not polygamous. Nevertheless, they would not appear to hold the nuptial tie particularly sacred, for I have often seen the males engaged in desperate combats and pursuing one another in the air with the most savage hatred, now and then uttering a wrathful and broken cry somewhat resembling the sound of *ag*. The female has a certain call-note by which she entices not only her young brood when separated from her, but also the male in the pairing season, which note resembles a soft, subdued, and whispering-like *njau, njau, njau*.

"The Ripa, at the season in question," the worthy missionary goes on to say, "keeps up a right joyous noise in the woods; for the males often 'laugh,' and when the one gives forth his triumphant cry, another, in his own locality, replies to let the challenger know he is as good a champion as himself; and thus the cry, which is responded to by all the males in succession, runs through the woods in like manner as a speaking telegraph. It is at an early hour in the morning, say from one to four or five o'clock, and for a while in the evening, that the forest thus rings with the glad notes of these birds."

Again: "The pairing season with the Dal-Ripa," we are told by M. Grönlund (Qvickjock, Lapland), "commences in May. They do not hold any regular Lek like the Caperkali and the Black-Cock, but it is said that, as

with these birds, the old males always spel first, and when they have finished the younger ones commence. The Dal-Ripa are now no longer seen in packs as during the winter, but here and there in single pairs. At about two o'clock in the morning the males make the woods resound with their sharp laughing cries, followed by a less loud note, *kavau, kavau, kavau*, to which the female replies, *njau, njau, njau*."

"From what I have observed," says M. Genberg, "the Dal-Ripa are the first of the forest birds to commence their Lek. The time is however regulated by the state of the weather. If the spring be mild, they already begin at the end of March or early in April, or it may be even previously. They are then almost always found on the outskirts of woods near morasses. In this part of the country the Dal-Ripa is looked on as the *väckare*—or awakener—of the forest birds, as its *prrrr, pack prr*, is always heard prior to the spel of the Capercali or the Black-Cock."

"At the Lek of the Dal-Ripa there are said to be more males than females, attributable by some to the latter being most exposed to the attacks of vermin, and many of the males are consequently left without mates. When, therefore, the pairing season is over, these males assemble in large or small packs and pass the summer as best they may in some remote and out of the way place, as if wishing to avoid the sight of their more favoured rivals."

The female forms a simple nest under a bush, the stump of a tree, in heather, or the like. She lays from eight to fourteen eggs. "Sometimes," M. Barth states, "as many as twenty," which in size and colour so greatly resemble those of the Scotch grouse that it is difficult to distinguish the one from the other.

As a general rule, the young are hatched about the middle of June; the time, however, much depending on

the state of the weather and the locality. It is said, indeed, that incubation takes place some fourteen days later in the fjäll regions than in the lower grounds. "The young are able to fly within seven to eight days of their leaving the shell, at which time they are about the size of larks," and so soon as they have acquired their first feathers they bear a considerable resemblance to their parents.

"Whilst the female is sitting," says M. Grönlund, "the male always remains in the near vicinity of the nest, to protect her against the attacks of foxes, weasels, and the numerous birds of prey by which she is then often molested. He never separates from her, even after the young are hatched, but accompanies the family everywhere, and evinces the same regard for the mother as for the poults. When meeting a family of Dal-Ripa in the forest, one has the opportunity of witnessing the instinct implanted by nature in the parents to protect their offspring. Should a person then approach the spot where they are collected, the male, for the purpose of drawing the enemy's attention from them to himself, runs forward to meet him with plaintive cries and outstretched wings, thereby endangering himself to secure the safety of those he holds dearer than even life itself."

Again: "When the fowler comes suddenly upon a brood of young Dal-Ripa," M. Barth relates, "it is really distressing to see the mother running to and fro before him. Should he remain stationary her boldness gradually increases, until at length—either from a feeling of her own weakness, or from her fears being dispelled at seeing him make no attempt to injure her—she by degrees retires with the same pitiable mien, and ultimately hides herself behind a bush, waiting for the moment when she may once more venture to call her chicks together. Oft-times has a female Dal-Ripa

approached so near me in the way described that I could readily have killed her with my foot. The male acts in a similar manner as the female, but his actions do not indicate the same admixture of timidity and courage, inasmuch as he never comes so near as she does. When, however, the fowler proceeds on his way, the male bird follows for a long distance, running and flying in the while from spot to spot, with the endeavour to lure the man from its young family, which it does not rejoin until the enemy is so far distant that no further peril is to be apprehended."

M. Wilhelm von Wright testifies to the like effect: "In few birds is the parental feeling so strong as in the Dal-Ripa. If one approaches the poults, the old birds run with depressed wings and outspread tail so close to one's legs that they may readily be killed with a stick; but when they imagine the chicks have had time to conceal themselves, they gradually retire, though still with the intention of enticing one from the spot where their progeny is harboured. So long, however, as their young are in jeopardy they never take wing, and thus place their own lives in the greatest possible danger. In common with other birds, the parents show greater regard for their offspring whilst small than at any other period, for as the young increase in age the parental affection sensibly diminishes. During the summer the family keep together, both male and female evincing equal attachment to their progeny."

M. Barth mentions a trait regarding the Dal-Ripa which is not devoid of interest:—"As the young of these birds whilst of a tender age are often exposed to losing their parents, nature, in order to prevent them from perishing, has implanted a reciprocal instinct of preservation between the several families, the parents of which take charge of the motherless poults that seek

their protection, and foster them with the same affection as their own. One, therefore, not unfrequently meets with a pair of Dal-Ripa accompanied by some thirty young ones. Hence one may sometimes go on shooting as many as fifteen out of a pack, consisting originally of about twenty, without sensibly diminishing their numbers; for as the old ones are usually the first killed, the young ones then 'call' to themselves birds of another brood, which settle down contentedly with them and never again return to their old locality."

Besides man, the Dal-Ripa has many enemies, not the least formidable of which is the mosquito. "When the young are small," says Læstadius, "the mother shelters them under her wing during the night. She does the same to protect them from the mosquitoes. My father told me that one summer, when those insects were unusually numerous, he came upon a Ripa thus circumstanced. She had nine chicks under her wings and three others lay dead by her side, her wings not extending wide enough to cover them. During severe mosquito summers," the rev. gentleman proceeds, "the forest birds suffer greatly from these pests, and one then marks a sensible diminution in their numbers."

The Dal-Ripa, though not looked on as an especial dainty in Scandinavia, is nevertheless considered superior to the Fjäll-Ripa. According to M. Falk, its flesh in the winter tastes of the willow, the tops of which then constitute its chief subsistence. If the bird were properly cooked, however—which is seldom the case in Sweden, where game as well as meat is usually either burnt to a cinder or boiled to rags—it would probably be found little inferior to our grouse; that is, if dressed prior to having been frozen, in which state most northern birds reach England; for afterwards its fine flavour is, for the most part, gone.

Of late years there has been much talk of naturalizing the Dal-Ripa in Scotland, and if the experiment were tried on an extended scale, I see no impossibility of its proving successful. The Fjäll-Ripa (supposed to be our Ptarmigan) from the nature of its food and habits, cannot exist elsewhere, I believe, than on mountains of very considerable altitude. Not so, however, with the Dal-Ripa, which breeds, as recently shown, in the very south of Norway, in about the same latitude as Scotland, and on islands off the Norwegian coast—that nowhere rise to a greater height than 400 feet—as also in one instance on a low island of the Wenern, which lake is only 140 feet above the level of the sea. Hence it is pretty clear that so far as Scotland is concerned, neither the latitude nor the elevation of the hills presents any serious obstacle to the success of the experiment.

Hitherto this has not been tried, owing, I understand, to the difficulty of procuring the birds. Not long ago, indeed, M. Butenschön wrote me that “all attempts in Norway to collect and keep the Dal-Ripa have failed, although considerable care and expense have been devoted to the subject.” There may be truth in what my friend says as to these birds not thriving in confinement, though to me it seems very problematical if those in question were sufficiently supplied with their natural and proper food, &c.; but on this point I can say nothing, never having had a living Dal-Ripa in my possession. The difficulty, however, of obtaining them, spoken of by M. Butenschön, I look upon as mere moonshine, being fully convinced that with good management the required number of poults would be procurable.

The Dal-Ripa occasionally breeds with the Black-Cock. The produce, which are called *Rip-Orre*, are of course only found in localities inhabited by both of those birds. I have never seen other than stuffed specimens



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THE RIP - ORRE.



of this hybrid, of which, indeed, but few have hitherto been met with. Both sexes have in a marked manner the main characteristics of their parents. The male is some eighteen inches in length, of which the tail forms six inches, and for its plumage in winter I refer the reader to the accompanying illustration, which will give him a far better idea of the bird than any written description of mine. As yet, I believe, no specimen of either male or female has been obtained in the summer plumage, and it is therefore not known whether, as with the Ripa, it moults twice at least within the year, or only once as with the Black-Cock. Nothing seems as yet to be ascertained regarding the habits of the *Rip-Orre*.

CHAPTER X.

The Fjäll-Ripa.—Southern limits in Scandinavia.—Plumage.—Moulting.
—Habits.—Resorts.—Food.—Feeding at Night.—The Lek.—
Breeding.—The Male a Truant.—Enemies.—For the Table.

THE Fjäll-Ripa, in regard to size and habits, much resembles the Scotch Ptarmigan (*Lagopus mutus*, Auct.); but never having shot the latter, excepting in its autumnal dress, I am not prepared to say they are one and the same. There would, indeed, appear to be doubts on this point, for if the Fjäll-Ripa be really identical, as Nilsson believes, with the *Tetrao Islandorum* of Faber, which both Yarrell and Faber seem to think a distinct species from the *Lagopus mutus*, it may turn out that the Fjäll-Ripa is another species, or at least variety, of the *Tetrao* genus. This matter, however, I leave to the decision of the learned.

The Fjäll-Ripa abounds on all the alpine ranges of the Scandinavian peninsula, as also on those of the Lofoden and other islands lying off the western coast of Norway; but only above the limits of arborous vegetation, which in the extreme north are not at any very considerable



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FJÄLL - RIPPA IN SUMMER PLUMAGE



elevation. "The Old Bushman" tells us that the Dovrefjeld, lat. 62° , may be considered as the limit of these birds to the south; but in this matter—as also in regard to the southern limits of the Dal-Ripa—he is somewhat in error, for their range in that direction is much more considerable, as will be seen by the following extracts from Professor Rasch's letter to me, dated April, 1866:—

"The Fjäll-Ripa," he says, "is found so far south in the province of Christiansand that its southern limits can certainly be placed in lat. $58^{\circ} 40'$. It occurs wherever the mountains rise above the limits of the dwarf birch, with steep precipices and stone rubble. On mountains in the southern districts of Norway at the height of 3,000 to 3,500 feet, one may be tolerably certain of meeting with one pair or more of these birds." . . . The Nore-fjeld, in Krydsherred, situated nine (Norwegian) miles to the eastward of Christiania," the professor continues, "is, as far as I have been able to ascertain, the nearest Fjäll-Ripa mountain to us, and there they are tolerably numerous."

The length of the male Fjäll-Ripa is from fourteen to fifteen inches, and the expanse of wing nearly two feet. The female is somewhat smaller than the male. Accurately to describe the summer plumage of this bird would be next to impossible, owing to its being in an almost constant state of moult. By all accounts, indeed, it puts on at least three different dresses in the course of the year. The illustration at the commencement of this chapter will, however, give a very fair idea of the plumage of the Fjäll-Ripa at the season in question. But in the winter, with the exception of the tail feathers, which are at all times black, and that the male retains the small black mark reaching from the base of the bill to the temple, both sexes, as with the Dal-Ripa, are then clad in white. Even then, however, the male Fjäll-Ripa may readily be distinguished from the male

Dal-Ripa, not only by its inferior size, but by the black angular mark spoken of above the eye. The difference between the females of the two species is less evident, but the female Fjäll-Ripa may be known from the female Dal-Ripa by being smaller and having a different shaped bill and more crooked claws.

M. Barth, when speaking of the moulting of the Fjäll-Ripa, says: "To judge from appearances, the male begins to put on his spring dress about the middle of April, or nearly a month later than the Dal-Ripa, but with the greater part of the males it is not fully developed until after the middle of June. The female commences moulting some days later than the male, and has mostly completed it by the end of May, or in the first days of June. The Fjäll-Ripa, therefore, requires a much shorter time in which to moult in the spring than the Dal-Ripa; inasmuch as the process is over with the male Fjäll-Ripa in about two months, and with the female in about five weeks, whilst the male and female Dal-Ripa require about three and two months respectively to effect the change.

As regards the Fjäll-Ripa's autumnal moulting, M. Barth gives us less precise information. After telling us that in the last days of June he has seen "packs" of old males in their full spring dress, he proceeds to say:—"But subsequent to that time I never shot any Fjäll-Ripa until the commencement of September, when the whole family (the males, as will presently be shown, separating for a time from the females and the poults) were collected together. They had then already assumed the greater part of their autumnal dress, which about the middle of that month begins to be supplanted by the winter dress, but in such manner that the autumnal moulting is simultaneously continued."

In disposition the Fjäll-Ripa is but little shy; some even describe it as a silly and stupid bird. During

summer and early autumn, when one meets with it alone or in families, it is usually very tame, and will often allow a person to approach quite near without taking wing. Not unfrequently, indeed, the fowler, or the wayfarer, finds himself in the very midst of a brood without having been previously aware of their presence. But as the season advances the several families pack, and they then become very wary, especially should they have accidentally become mixed up with the Dal-Ripa, which are of a much wilder nature; and thus they keep together throughout the winter, and until the month of May, when they separate in pairs.

The favourite resorts of the Fjäll-Ripa are amongst stones and shingle, where they find shelter in bad weather, and from which in their summer plumage they are hardly to be distinguished.

Its food varies according to the season of the year. During summer and autumn it feeds on the leaves and seeds of plants indigenous to the elevated regions it inhabits; but in the winter, when from heavy snow-storms it is unable to obtain access to the crakeberry plant (*Empetrum nigrum*)—its favourite food, the leaves of which remain green all the year round—it subsists for the most part on the tender tops of the dwarf-birch and willow, which are met with somewhat lower down on the fjäll sides.

“The easily satisfied appetite of the Fjäll-Ripa,” M. Barth remarks, “coupled with the fact that the crakeberry grows in such profusion everywhere as in many places to cover the whole slope of the fjäll up to near the line of perpetual snow, explains the cause why these birds never lack food in the higher regions where one would least suppose it possible for any living creature to find the wherewithal to sustain existence. The crakeberry plant in some years has so many berries that the ground

looks black with them; nevertheless, in those years I never found the berries themselves in the crop of the Ripa, but only the stalks and leaves. After producing fruits in such abundance, the crakeberry plant would seem to require some time for rest, inasmuch as during the succeeding year scarcely a berry is to be seen on it. The Ripa would therefore be badly off, if its taste only permitted it to feed on the berry and not on the stalk. Another instance of the wise foresight of Nature."

According to M. Barth, the Fjäll-Ripa, as with the Dal-Ripa, feeds in the night-time during the winter; and for that purpose descends the fjälls somewhat, though never so low down as to be within the limits of arborous vegetation.* "When one is abroad of a winter's morning before dawn," he says, "one not unfrequently hears the peculiar burring or murmuring sound made by the Fjäll-Ripa on the middle slopes of the fjäll; but as daylight increases, the sound becomes more and more indistinct, owing to their gradually ascending higher and higher; and when it is full daylight, by which time they have reached the summit of the fjälls, it is no longer audible. From the tracks left by the Fjäll-Ripa after these nocturnal excursions, one sees that they have mostly wandered amongst the birch and willow bushes, just above the limits of arborous vegetation, and the tops of which they have eaten off. But they would not appear to resort to this kind of food excepting when the snow has prevented them from obtaining access to the crakeberry."

The Fjäll-Ripa lives in monogamy, but I have an

* "As an exception it may be mentioned, that in certain localities where the mountains slope gradually down to the sea, and are denuded of grass and trees—for the latter of which the Fjäll-Ripa would seem to entertain fear and aversion—these birds may occasionally be seen at dawn only some few hundred feet above the sea-level. It is not, however, common for them to descend thus far, and later in the day they mostly remove higher up.

idea that these birds, like the Dal-Ripa, hold something akin to a Lek before the great winter packs disperse in the spring. Their proceedings at that time, however, may not have been sufficiently noticed by persons competent to describe them, partly in consequence of the distance being usually considerable from the more habitable part of the country to the fjälls, but chiefly, I take it, because the latter, owing to the breaking up of the frost, are not always in the most traversable state.

At a more advanced period of the spring, however, by which time, probably, the Fjäll-Ripa have for the most part paired, we have ample information as to their proceedings at the "Lek-ställe." "Here, at a very early hour in the morning," says Nilsson, "the male begins to utter his cry, which by Faber has not inaptly been likened to the croaking of a frog, and by others to the snoring of a man. The female soon replies by a subdued *ii-ack ii-ack*. The male then takes wing and proceeds in search of her. It is said, however, he never runs towards her in the manner of the Dal-Ripa, but always flies."

When the pairing season is over, the female makes her nest amongst stones, or even in the hollow of a stone, or it may be amongst heather, grass, &c., and lays from eight to fourteen yellowish-coloured eggs marked with brown spots. The chicks are hatched about the middle or towards the end of June, though the time much depends on the state of the season. According to M. Barth, they are of very quick growth, "for though in the middle of September they may be distinguished from the old ones as regards size, yet the difference in plumage is but very slight."

Whilst the female is sitting, the male is said always to remain with her, but as soon as the chicks are out of the shell, he deserts his family and repairs to the higher ranges of the fjälls, where he joins other males similarly

circumstanced to himself. In the month of August, by which time the chicks are pretty well grown, the old hen takes them also to the more elevated regions, when the brood is rejoined by "paterfamilias;" and from that time forward they all keep company until the approach of winter, when the several families collect together in large packs.

Though these partial separations of the male from his family—and the like is said of the Hazel-Hen, as previously shown—seem very singular, yet every one asserts such to be the fact. But after all, may there not be a mistake in the matter? Is it really true that the male acts as described, for though not seen in the company of the female, may he not be in the near vicinity? and may not the packs of old male Fjäll-Ripa so often seen on the fjälls by sportsmen and others, be individuals who, as with certain male Dal-Ripa, have been unable to mate themselves, and not, as generally asserted, truant mates?

The Fjäll-Ripa has many enemies: the snowy owl, eagles, and hawks of various kinds, among the rest. From the velocity of its flight, however, even the gyr-falcon, about the swiftest of the feathered tribe, has not always an easy task in capturing it; for when pursued, instinct teaches it to keep above its assailant, and it sometimes happens, we are assured, that both the pursuer and the pursued fly to so great a height as to be lost to the view of the spectator. It is said that when the poor Ripa is thus hard pressed it will occasionally take refuge in the *kåta*, or hut, of the Laplander, or it may be amongst his rein-deer.

Of all the genus Tetrao, the Fjäll-Ripa is in the least request for the table in Scandinavia; but if well dressed, I have always found it very palatable, and little inferior to the Dal-Ripa.

CHAPTER XI.

Shooting Ripa at the Lek-ställe—To the Pointer.—Migrations to the Coast — How Caused. — Enormous Packs. — Tracking. — Shot when “Treed.”—By Bloss at Night. — Traps and Snares. — The Rip-Hag.—Anecdote.—Large Captures.—The Snar-gång.

VAST numbers of Ripa are annually killed in Scandinavia, especially during the winter, when their transit is easy to the distant towns, which constitute the chief and almost only market. Not a few of both species fall to the gun at the “Lek-ställe,” in the manner that I am about to describe.

“About one o’clock in the morning,” says Nilsson, when speaking of the Dal-Ripa, “the male begins to *raxa*, or give utterance to its loud *prrrr*, *pack prrrr*, and its deeper *kavau*, *kavau*. The female responds with a subdued *njau*, *njau*, which she often repeats, and in the while the sexes approach each other. Should the fowler at such times imitate the call-note of the female, a reply is soon received from the male, and if he then conceals himself behind a bush or a stone, and

continues to "låcka," the male presently comes either flying or running within gunshot of him. Occasionally the bird halts, erects its expanded tail in the manner of a fan, trails its wings on the ground, throws its neck backwards, and cries *kavau, kavau!* Sometimes the female is in his company."

Again: "When now the fowler hears a male Dal-Ripa 'laugh' during the pairing season in the spring," says the missionary Læstadius, "and imitates the call-note of the female, the male comes and settles near the man, shows himself indescribably ardent, gives another laugh, and appears to listen, but instead of a rendezvous with the object of his affections, he meets his doom."

Once more: "During the pairing season," writes M. Grönlund, "it is not difficult to kill the Dal-Ripa. If one then hears the cackling or laughing cry of the male, it is only necessary to hide oneself behind a stone or tree, and mimic the call-note of the female, when he soon approaches, either running or flying. But it is not always that he responds; when one may be sure he has the female in his company, in which case he will on no account allow himself to be beguiled."

The Fjäll-Ripa is shot at the Lek-ställe in a somewhat similar manner as the Dal-Ripa. "The fowler after concealing himself imitates the call-note of the female; on hearing which the male flies directly towards the spot where he imagines her to be, and at times, it is said, actually alights on the man's shoulder."

The Ripa (of both species, I speak) is also shot to the pointer, or other dog, though the number thus killed is, I take it, very inconsiderable; partly because the peasants are cautious of wasting ammunition on so valueless a bird in their eyes, and partly because the gentry of the country seldom take the trouble of going so far as the fjälls in search of sport.

But that first-rate shooting of both species of Ripa is obtainable in all the more northern parts of Scandinavia is certain. Indeed, from the number of those birds that I myself met with when wandering during the summer months amongst the mountains of Norway and Lapland, I feel perfectly confident that had it been the proper season, and that I had been well appointed with dogs and markers, I could any day have loaded a horse with the spoil.

Several of our countrymen have had exceedingly good Ripa shooting on the Scandinavian fjälls, and I have now letters before me from friends speaking of their having bagged from fifty to sixty brace of those birds in the course of a very few days.

Good, however, as is the shooting on the mainland, still better, by all accounts, is to be had on the Lofoden and other islands lying off the north-west coast of Norway. Some of them were a few years ago visited by the late Sir Hyde Parker, for the purpose of shooting, and the success he had was something extraordinary; but not having his letters by me, I can neither state the number of birds killed, nor the species, though I imagine the whole, or the greater part of them, to have been Dal-Ripa.

The Fjäll-Ripa abounding, as shown, on all the alpine ranges of the Peninsula, one may everywhere have shooting of these birds to his heart's content. To my notion, however, they afford but poor sport, for in the early part of the season they sit like so many pigeons amongst the grey rocks, and are, moreover, so tame that even if one be shot out of a brood, the rest usually fly only a short distance before again alighting. "At times, indeed, they sit so close that should the fowler accidentally come directly upon them, he is obliged to retreat somewhat before firing, unless he would blow them to pieces."

But the case is very different on the advent of winter, when the several families pack; for they are then no longer approachable.

M. Barth, when describing his experiences in the Lofoden islands, where he would appear to have spent more than one year, mentions some peculiarities of the Fjäll-Ripa which may be worth transcribing.

“Provided there be no snow on the ground,” he says, “the best time to shoot these birds is from the commencement of October, for their white winter dress is so unlike that of the naked rocks that one is enabled to discern them from a great distance; and though their colour is then in such striking contrast to all surrounding objects, I have always found them very tame. No sooner, however, does snow fall, and the fjälls are clothed in white like themselves, than they all at once become so exceedingly wary that from thenceforward, and until the packs separate in the spring, I never succeeded in getting within gun-shot of even a single bird.”

“But when, as happens during certain winters,” he proceeds to say, “the Fjäll-Ripa fall down in great packs from the mountains to the sea-coast, and settle closely together on the naked rocks, amongst dwarf bushes, or it may be on the bare ground, the case is widely different; for they are then so tame that many will not take wing even when their comrades are killed in the very midst of them, and those that do fly up generally settle again within gunshot of the spot from whence they were flushed. At such times one may commonly kill from three to four at a shot, and a couple of fowlers, supplied with a sufficiency of ammunition, as many as three hundred in one day. They would seem to be altogether bewildered at finding themselves in a locality so strange, and where they are unable to see as freely around them as from their own alpine haunts.



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SHOOTING FJÄLL RIPA IN WINTER.



“Nine or ten years ago the Fjäll-Ripa on Lofoden and Westeraalen thus fell down to the coast, and were killed in such numbers throughout the whole winter as to be sold for 2 skillings, or 1d., each, the usual price being 6 skillings, or 3d. They were then mostly used as food for servants. Of late years, however, these migrations of the Fjäll-Ripa have been of less frequent occurrence than formerly, when they usually took place at intervals of only a few years.

“The cause of the migrations in question is believed to be, that during the years when they occur the fjälls are covered with dense masses of snow, which, instead of drifting in places, as usually happens, has fallen in calm weather and rested evenly everywhere; and from its surface having subsequently frozen, the Ripa are prevented from obtaining access not only to the crakeberry—their favourite food, which, as said, remains green all the winter—but to the dwarf birch and willow, on the buds and tender shoots of which, when the crakeberry is debarred them, they also feed.”

These periodical migrations of the Fjäll-Ripa from their alpine homes to the lowlands would not seem to be confined to the Lofoden islands, for Nilsson informs us that, when at Upper Hallingdal, in Norway, he was told by the people there that “on the occurrence of heavy snow-storms, these birds would descend from the fjälls, and perch on the birch-trees in such numbers that they seemed clad in white.”

Again: “This year, 1863,” writes M. Widmark from Qvickjock, in Lapland, “there are unusually few Fjäll-Ripa on the Luleå fjälls. This may possibly be owing to the enormous quantity of snow that fell during the past winter, which drove them down from their proper haunts—the *Skogsbyn*, or upper edge of the birch region—to the forest region, even to the forest itself, and to

inhabited places, where immense numbers were captured ; as, for example, in Råneå, and in the valley of the river Calix." "It is a certain sign of the near approach of snow-storms," this writer goes on to say, "when one in the autumn sees the Fjäll-Ripa collected in large packs. At times there may be as many as a thousand together. They are then exceedingly wary ; and an old male gives notice to the rest, by his singular cry, when danger is at hand."

Though the Fjäll-Ripa affords but little sport, the same cannot be said of the Dal-Ripa. The best shooting as regards the latter is probably on the upper slopes of the fjälls, which for the greater part are clothed with mere brushwood, and the ground in consequence most favourable for both the gunner and the pointer. The young are fit to shoot about the beginning of September, and as the birds then *trycka*, or lie well to the dog, any moderate number may be bagged in a day.

"When pursuing this amusement," M. Barth tells us, "one not unfrequently falls in with packs of old males that had been unable to mate themselves in the spring, and which wander about alone and disconsolate during the summer and early autumn. Once, on a little island covered with brushwood, myself and friend fell in with a company of about forty of these 'widowers,' and succeeded in killing fifteen of their number.

"Late in the season," he continues, "the several families begin to pack, and to remove higher up the fjälls, where their numbers are constantly increased by fresh arrivals, and ultimately they take up their abode just below the limits of arborous vegetation. From the moment the Dal-Ripa are thus congregated together, they will no longer 'trycka,' but for the most part either take wing a long way off, or, should the cover be thick, run rapidly ahead. During the winter, indeed, they

make fully as much use of their legs as their wings, and the sportsman may often see them on the snow in long columns, and with rapid strides making their way up the acclivities. On these occasions they will not readily fly up until he is within one hundred and fifty to two hundred paces of them, their first endeavour being always to outrun him.

“Not seldom there may be as many as five hundred individuals in such a pack, which on one’s near approach take wing in parties of twenty, forty, to one hundred, letting it be known by their sharp *gack! gack! gack!* that they are aware of the impending danger, and thereby summoning their comrades to follow. The fowler is seldom enabled to get near these great packs, but he may very often obtain shots at the stragglers that remain behind.

“So long as the ground continues bare of snow, and the birds retain their summer dress, the packs remain from choice in the places where they first located themselves; but should the ground continue bare after they have wholly or in part assumed their winter dress, and the fjälls be covered with snow, the packs remove still higher up to the solitary valleys, &c., where, near to the margin of alpine lakes, dwarf birch and willow bushes are still to be found. In such localities the Ripa collect from all the surrounding districts, within the limits of which subsequently not a single bird is to be seen, so that if a person be unacquainted with their retreats, he might readily come to the conclusion they had one and all deserted the country.

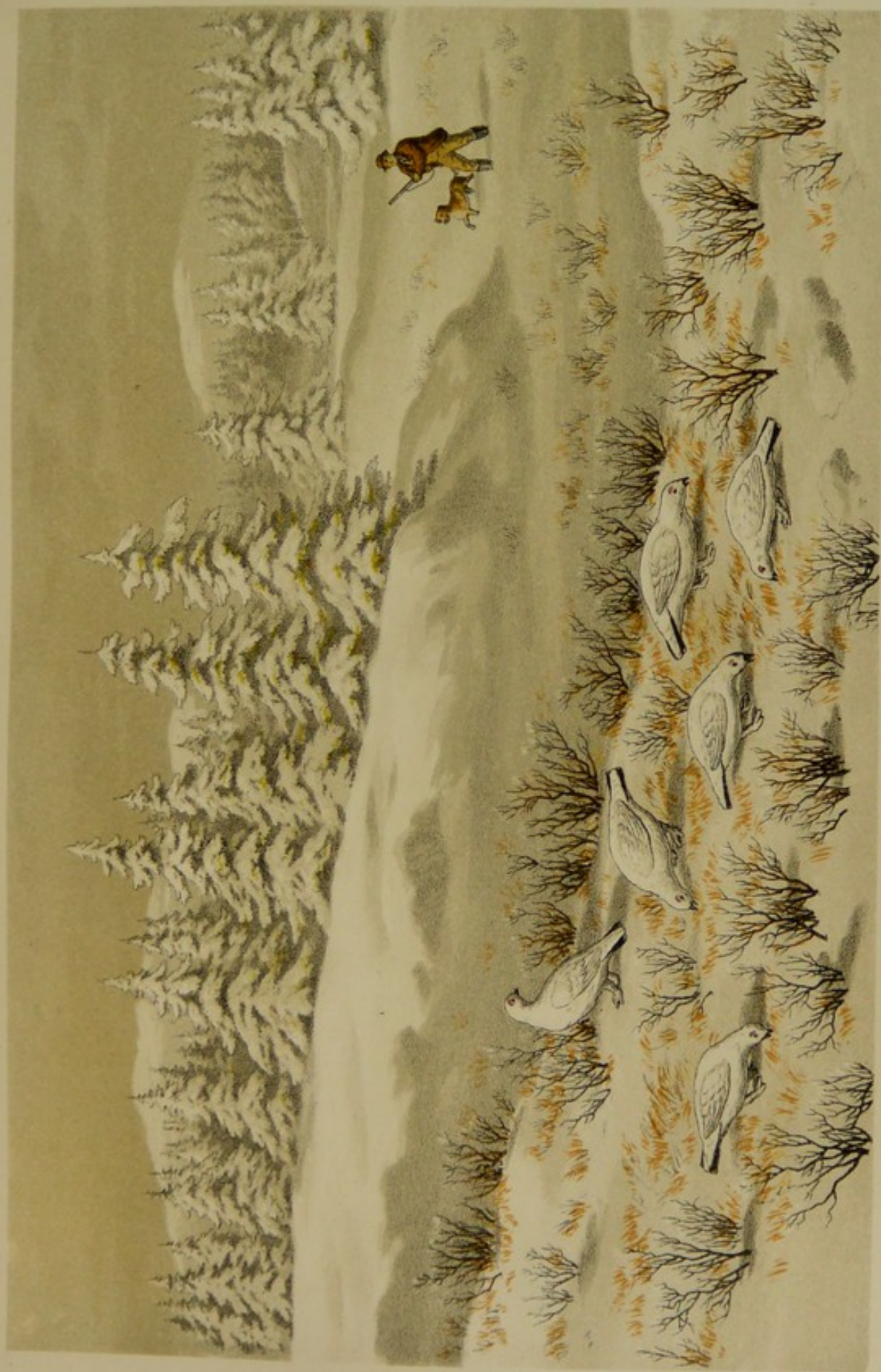
“Between the 3rd and 10th November, 1850, I was several times in pursuit of one of these immense packs, which, on taking wing after the birds had collected together at nightfall, formed a thick white cloud of several hundred ells in extent, and caused a rushing sound as

of a hurricane. If I say that in this pack there were nearer three than two thousand, that number will be rather under than above the mark.

"Speaking generally," M. Barth continues, "I have not found what the people in Lofoden and elsewhere have told me, as to the shyness or tameness of the Dal-Ripa, being dependent on a clear or misty atmosphere, cold or mild weather, wind or rain, sufficiently corroborated by my own experience to enable me to comprise it within any general rule; but one thing is certain, that however wild the birds may have been during the day, they always become tamer on the approach of evening; as also that their shyness increases as the winter advances; so that in the months of January and February the 'packs' cannot often be approached within three hundred to four hundred paces. It is likewise certain that the Dal-Ripa, when met with alone, is always tamer than when several are in company, and that the wariness of the pack increases in proportion to the number of individuals of which it is composed."

With the exception of the few Ripa that I killed with a pea-rifle when wandering, as said, amongst the fjälls in summer, my shooting has been altogether confined to the forest, where in the winter time I very frequently met with Dal-Ripa, and that chiefly amongst birch and willow bushes near to lakes, rivers, morasses, or other open places. But having usually other game in view, it was seldom that I took the trouble to follow them. Had I, however, devoted time to the purpose, it is possible that, even here, a fair bag might have been made. I do not remember having ever shot more than three brace in any one day.

On observing the tracks of the Dal-Ripa in the forest, our plan was to follow them in silence until we sighted the birds, and then to shoot them on the ground, or on



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their taking wing, as the case might be. Many of the northern chasseurs thus kill the Dal-Ripa—whilst sitting, I mean—with their pea-rifles, and that without rest of any kind. Elg, my follower, assured me, indeed, he has shot as many as eight or nine of these birds in the course of a very few hours.

The best time to shoot the Dal-Ripa in the way mentioned is soon after a fall of snow, for its tracks being then quite fresh, and one's own movements conducted noiselessly, it is not difficult to approach it. Not so at all times, however; for if the tracks be old and numerous, it requires an experienced eye to follow them with certainty and dispatch; and should there be the slightest crust on the surface of the snow, the bird, from hearing it crackle under one's feet, usually takes the alarm and moves off.

The Dal-Ripa is not unfrequently shot in the day-time when "treed." "From the time that these birds begin, in the spring, to perch in the birch-trees," says M. Barth, "they partly lose their natural shyness; but still great caution is necessary in stalking them. They care very little for the noise made by the fowler when walking on the frozen snow, provided he himself keeps out of sight. Should this be impracticable, however, he must at least contrive to have something—were it only a single twig—between himself and them. They are then less alarmed than if his whole person were exposed, for if that should be the case they usually take wing at once, let the distance be ever so great."

I was told by Elg, moreover, that at Brunberget, in the Wermeland Finn forests,* there was a lofty aspen tree

* So called from numbers of Finlanders having located themselves there during the reign of Charles IX., King of Sweden, who, being desirous of peopling that part of the country, held out certain inducements to

on the upper branches of which Dal-Ripa were often to be seen perched; that an acquaintance of his was accustomed, morning and evening, to lie in ambush near to this tree; and when the birds came to feed, he shot them with his pea-rifle.

In winter the Dal-Ripa is sometimes shot when "treed" in the night-time by means of "Bloss," or torchlight. "One would have supposed," says M. Falk, "that these birds, which, when flushed in the daytime from the ground, always settle there again, would also pass the night upon it; but this is not the case. Here (Risäter, Wermeland), where I reside, are extensive aspen woods near the lake Råda. Some years ago, when great numbers of Dal-Ripa visited us, it was customary for the people to shoot them after dark, when perched on these trees, where they were readily seen. I contend, therefore, not that the Dal-Ripa never pass the night on the ground, but that this is not always the case. The probability is, that they roost both on the ground and in the trees."

We are further informed by Professor Nilsson that when at Bratteforss, in Norway, he was told by the inhabitants that they were accustomed in the winter to shoot the Dal-Ripa by torchlight in the night-time when roosting in the willow bushes."

Although many Ripa fall to the gun in the several ways described, the number is inconsiderable as com-

settlers, and to the Finns in particular, of which the latter, owing to war and famine in their native land, were not slow to avail themselves. Hence large tracts of the forests in question, as also of those in Dalecarlia, go by the designation of *Finn-Skogar* or Finn Forests. To this day, indeed, one meets with distinct colonies of these Finns, or rather their descendants, scattered up and down in the wilderness, which, if not already known to be such, may be easily recognized by the people retaining many of the customs of their ancestors, whose language, besides, some of them still speak.

pared with those taken during the winter in traps and snares of various kinds, more especially in the so-called *Rip-Hag*, or Ripa fence.



THE RIP-HAG.

This consists of a long and low hedge, so to say, constructed of bushes, with openings at stated intervals. A A are straight sticks, of the thickness of one's finger, inserted in the snow at either side of these apertures; and C C forked sticks, between the prongs of which the snares B B are suspended. To lure the Ripa into the toils, small branches of birch-twigs are placed both in front and rear of the several openings, and when, therefore, the bird has eaten all the buds from off the one bunch, and attempts to renew its meal on the bunch at the opposite side of the fence, it is compelled to insert its head in the snare, and is made captive in the manner represented above.

At times, however, the forked sticks C C are reversed in the snow, the prongs pointing, in consequence, upwards instead of downwards; so that in the event of a heavy fall of snow, the trapper has only to raise the sticks sufficiently to allow of the snares hanging about a hand's-breadth above the snow.

From M. Grönlund's account, it would seem that, in his part of Lapland (Qvickjock), but very few besides Dal-Ripa are taken in the "Rip-Hag," or other devices.

“Hereabout,” he says, “the people never trouble themselves with the Fjäll-Ripa; but as a proof that these birds may readily be caught in snares, I may mention the following incident:—In the winter of 1832, two men from the parish of Luleå, who, owing to the prevailing dearth, were unable to procure sustenance at home, and in the hopes of bettering their fortunes, set off across the fjälls for Norway. But the Lapp who acted as their guide, being utterly devoid of the common feelings of humanity, left them to their fate in the wild mountains during so heavy a snowstorm that they could not see farther before them than their own feet. Oppressed by their melancholy thoughts, and wandering they knew not where, they were at length led by the hand of Providence to a lake, about seventy (English) miles from Qvickjock Church, where they found a *kåta*, or hut. Happy in having at last a roof over their heads, they for the moment forgot their sufferings. As, however, it was long since they had eaten anything, hunger soon reminded them that they had no provisions remaining in their wallet; and as they neither knew the way forwards nor backwards, they doubted not it would be their certain fate to die of famine.

“But their grief vanished on seeing a pack of Fjäll-Ripa. With some thread they had about their persons, they hurriedly prepared and set several snares, and presently captured such numbers of these birds that they lived well for a whole week; and they would have secured very many more had not the foxes and other vermin divided the plunder with them.”

The number of Ripa taken in the northern parts of Scandinavia during the winter months is, as said, something enormous. The late Sir Arthur de-Capell Brooke tells us that in the parish of Kautokeino, in Lapland—one, it is true, of very great extent—no fewer than 60,000 of these birds were killed during the season preceding that in which

he visited those parts. This number, however, was not arrived at from actual computation, but from the weight of the feathers, each Ripa being supposed to furnish about one ounce. We are further informed by Bishop Pontoppidan that the Ripa in his time were so very plentiful as to be brought down to Bergen in thousands, and after being partially roasted, were packed in firkins and exported to other countries.

In further proof of the abundance of Ripa, I may mention, on the authority of a Swedish newspaper, that a *Nybyggare*, or squatter, during the past winter, 1865-6, captured and sold at the fairs of Gellivara and Jockmock no fewer than 1,400 of those birds!

Læstadius also testifies to their numbers in Lapland, and adds:—"What with their feathers and their flesh, they are quite a treasure to the inhabitants of the cold North. Many poor Lapps would die of hunger had they not as a resource the Capercali in spring, fishing in the summer, and the Ripa in winter."

Besides Stockholm, Christiania, and other towns in the Peninsula, many of the captured Ripa find their way to Copenhagen, where, in good seasons, "it is not unusual for a single game-dealer to dispose of from 50,000 to 60,000 of those birds in the course of the winter." Considerable numbers are also sent to England. Yarrell informs us that "in the spring of 1839, one party alone in Norway shipped 6,000 to London, 2,000 to Hull, and 2,000 to Liverpool; and in the year 1840 no fewer than 15,000 of these birds were consigned to a single dealer in Leadenhall Market."

From the foregoing account it will be seen that the forest birds of Scandinavia—in which category are included the Capercali, the Black-Cock, the Hazel-Hen, and the Dal-Ripa—constitute no insignificant portion of the natural wealth of the country, and of which the inhabitants are

not slow to avail themselves. This is more particularly the case in Norrland—the most northern of the four grand divisions into which Sweden is divided—where shooting and trapping, the latter especially, are made a sort of profession.

“Every *Hemman** in the province of Herjeådalén” (a part of Norrland), so M. Albin informs us, “has its own *Snar-gång*, or locality, where traps and snares are set; and there is not a single proprietor who has less than 500 of these devices; the greater part 2,000, and many 3,000. The parish of Sveg, for instance, contains about 300,000 Tunnland (some 367,000 English acres), the owners of which are about 170 in number. Now if it be assumed that each of these men sets on an average 1,765 snares, it will therefore be one for every Tunnland. In this parish,” he adds, “no single path-way, or other suitable spot for the purpose, is without traps or snares, and it is a common saying with the people that, ‘*bara fogeln går*

* The whole of Sweden is divided into Hemmans, signifying homesteads; and these again, very generally, into smaller farms. Each Hemman is burthened with one and the same imposts. This institution took place years and years ago for military purposes. At the time, it was probably an equitable division of the land in regard to its money value, without reference to its area. The size of the Hemman, as a consequence, varies very greatly in the several provinces. To give a better idea of this, I may mention, that in that of Malmö—about the richest and best cultivated in Sweden—the Hemman contains the one-hundredth part of a square mile, whilst in that of Piteå, which is very scantily populated and overrun with forests (formerly nearly valueless, but now of great worth), it contains one square mile and a quarter; that is, a Hemman in the province of Piteå is one hundred and twenty-five times larger than one in the province of Malmö.

When speaking of the size of an estate in Sweden, it is customary to say, it consists of so many Hemmans, not Tunnländs, or acres, as with us. But this description, as will be gathered from what is above stated, gives very little idea of the real extent of the property.

ned på marken så är han fast ; that is, provided the birds alight on the ground, they are surely made prisoners."

"For the better preservation of the dead birds," says Nordholm, "they are deposited in a dry room, where the weather cannot affect them; and as soon as the first night frost occurs, they are exposed in the open air to be frozen, and afterwards taken in again. Some people, however, place their birds in large tubs, where they are embedded in *gran-ris*, or twigs of the spruce pine, in which it is said they will remain uninjured for eight whole weeks."

The captures made are commensurate with the exertions of the fowlers. Nordholm tells us that in his time—independently of those consumed at home and in the neighbouring towns—80 sledge-loads, each containing from 2,000 to 3,000 birds of one kind or another, were annually sent from Norrland to Stockholm alone, which produced a considerable sum of money.

"The feathers of the captured birds," the same writer tells us, "are valuable not only as merchandise, but for household purposes, every peasant being provided with two or three down beds. The eggs of the forest birds," Nordholm adds, "are set great store by, and are used in like manner as those of the common hen, and have an equally agreeable taste."

Great, however, as is the extent to which "trapping" is carried in the north of Sweden, it must not be supposed that any one peasant captures a sufficient number of birds to load a sledge for a distant market. There are not many individuals, indeed, who take more than from 200 to 300 head of game in the course of the season. It is the regular dealer who, when the birds are frozen, goes from homestead to homestead and purchases from the trapper and subsequently conveys them himself to far-off towns.

A large portion of the birds thus shot and trapped in

the Northern Provinces is, as said, sent in the winter time to Stockholm. The game-market in that city, during that season, is a most imposing sight, the number of birds exposed for sale being something like legion. When I was in the capital, years ago, the cost of game was very moderate; say 2s. 6d. to 3s. for a brace—cock and hen—of Capercali, and Black-Cock in proportion; but at the present day, the price of these birds, as well as of everything else, has, no doubt, greatly risen.

From Stockholm being thus abundantly supplied with game in the winter, a stranger might be led to imagine it must be very plentiful in Scandinavia; but the opposite is the case. It must always be borne in mind that the 200,000 to 300,000 game birds that find their way to the capital during the winter, are the joint capture of half a dozen provinces, more than one of which is something like the size of England itself.





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PARTRIDGES.

M. Körner, del.

CHAPTER XII.

The Common Partridge.—Scandinavian and Northern.—Their Habits and Sufferings.—Curious Incubation.—The Partridge-Pipe.—Sportsmen's Expedients.—The Klafve.—Training the Pointer.—Partridge-Shooting.—Daring of the Goshawk.—The Tirass.—The Hög-Nät.—The Ryssja.—Stock Birds.—A Church-goer.

THERE were a few of the Common Partridge (*Rapphöna*, Sw.; *Raphöne*, Norw.; *Agerhöne*, Dan.; *Perdix cinerea*, Briss.) in the vicinity of Ronnum. This is also the case throughout all the more cultivated districts of Southern and Central Sweden; but higher up in that country than lat. 62° they do not seem to be found. In Norway, Professor Rasch states that they are pretty generally distributed, though somewhat scarce everywhere, owing to the destruction that takes place amongst them on the occurrence of "snow winters." "Of late years," he adds, "they have spread over the open parts of the province of Trondhjem, lat. 63°, which may be considered their northern limits." Throughout Denmark, according to Kjærbølling, these birds are quite common.

The Partridge is not indigenous to the Peninsula, but

though the time of introduction does not seem to be exactly known, it is generally supposed to have been during the reign of the great Gustavus Vasa, now some three hundred years ago. And I can well believe it to be of foreign extraction; for, even at the present day, the inhabitants of Oroust, one of the larger of the islands on the west coast of Sweden, call it the *Hjerpe*, or Hazel-Hen, a bird that once abounded there, but which, since the destruction of the woods, is now extinct, or nearly so.

The Scandinavian Partridge, as seen in the accompanying picture, is, in appearance, a counterpart to the English, though it strikes me as being somewhat smaller. What the weight of ours may be I know not, but six brace that I one day shot in Sweden, at the very end of October, weighed, on the following morning, exactly ten pounds avoirdupois. They were chiefly young birds, though in plumage nearly resembling their parents. But then it must be borne in mind that Partridges in Sweden breed at a somewhat later period than in England; so that it is probable the birds in question would, a few weeks later, have been somewhat heavier.

The Northern Partridge would seem to be more erratic in its habits than ours in England, owing, in part, probably to a hard climate, and a somewhat sterile soil; for it is at times said to be met with in localities where one would almost as soon expect to see a dodo; as, for instance, in the Wermeland Finn Forest, to reach which they must of necessity have passed over several miles of dense pine woods, without break or opening of any kind. It may happen, however, that they are driven to such out-of-the-way places by hawks or other birds of prey.

Partridges are on the increase in the Peninsula, attributable, in part, to the large extent of ground that of late years has been brought into cultivation. Their numbers, however, fluctuate greatly; for, on the occurrence of an

unusually severe winter, the breed in certain places becomes almost extinct. Many then perish from cold, hunger, and the attacks of vermin; but still more beneath the snow, to them ordinarily a place of retreat or shelter; for, on its surface becoming frozen, as happens when a partial thaw is succeeded by frost, they are unable to work their way through the obstruction, and necessarily die of famine. The remains of whole coveys that have thus miserably perished, are often found under snow-drifts in the spring. They suffer most, it should be observed, in open and exposed districts, where there is little to protect them from the inclemency of the weather, and where, besides, they have difficulty in obtaining sustenance; for, in partially wooded localities, especially in those where the juniper bush abounds, they fare much better, as they there find both food and shelter.

To guard, in measure at least, against the effects of these periodical visitations, many of the great proprietors in the South of Sweden are accustomed, in the autumn, to net a considerable number of Partridges in a way that will be presently shown, and to retain them in confinement until the spring, when they are restored to liberty, that the breed may be replenished.

The nesting habits of the Scandinavian Partridge are similar to those of our own; but the female seldom lays until the end of May or beginning of June, when the night-frosts are over; and she thus avoids having her eggs frozen, as so often happens to some of the forest birds, especially the Black-Cock. Hence the poults are usually very small on the 12th August, when the shooting season in Sweden commences.

The belief is generally entertained in the Peninsula, that when the nest of the Partridge has been disturbed, the old birds—the male, as well as the female, assisting in the operation—remove the eggs elsewhere, and often to

a considerable distance. They are said to carry one or more eggs under each wing, and to run backwards and forwards until the whole are safely deposited in the new habitation. As the same is recorded of the English Partridge, we may presume that there is some truth in the story.

The task of incubating such Partridge eggs as are casually met with, usually devolves on the little bantam, or the common hen; but, in Sweden, I once knew an old turkey-hen thus to officiate; and when—a few days after the birth of the chicks, ten to twelve in number—I saw them following their gigantic foster-mother, they looked healthy and well, and had every appearance of long surviving.

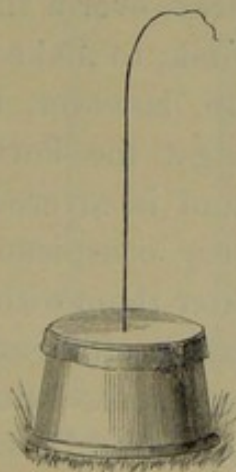
If we are to credit a statement made to me by Captain P., of the Swedish army, for the truth of which he vouched, Partridge eggs are, at times, hatched in a way that may succeed well enough in the burning plains of Africa, but which one hardly expects in the cold north. My friend's story was this:—A Partridge's nest was one day found by the mowers in a field near to Åmål, in the province of Dalsland. The eggs, which had been sat on for about half the usual time, were carried to that town, where, as a matter of curiosity rather than anything else, they were placed in the frontispiece of the apothecary's shop, which had a southern aspect. Some days afterwards, however, to the astonishment of everybody, a number of young Partridges, *hatched solely by the heat of the sun*, were seen parading to and fro amongst the many party-coloured bottles decorating Esculapius's window.

Partridge-shooting is a favourite amusement in Scandinavia; and in its more central and southern parts, especially as regards Sweden, not a few of these birds are killed to the pointer.

Many of the northern sportsmen shoot exceedingly

well, and in a way that we in England would call sportsmanlike; but some, even amongst the gentry, have rather too much an eye to the "pot." Indeed, I well remember hearing a very distinguished Swedish jägare, and a great ally of my own, somewhat boastfully relate, that on one occasion, when his dog pointed at a juniper bush, where he had reason to believe a recently flushed covey of Partridges had taken refuge, he fired at random into the midst of it, and at a single discharge killed no less than eight of the number. It is hardly fair of me, however, thus to "show up" my friends; because I myself, when hard pressed for game, have occasionally been guilty of acts that could not with propriety be "proclaimed on the house-tops."

Various wiles are, at times, resorted to in the Peninsula by the gunner to circumvent the poor Partridge. When, for instance, the covey is so wild as to be unapproachable, he will fire a charge of perforated slugs into the midst of it; the whirr of which so alarms the birds as to cause their instant dispersal, when, as a matter of course, they become much more accessible.



THE PARTIDGE-PIPE.

Then, again, he makes use of the so-called *Rapphöns-Pipa*, or Partridge-pipe, depicted above. This usually consists of a tailor's thimble, open at both ends. A

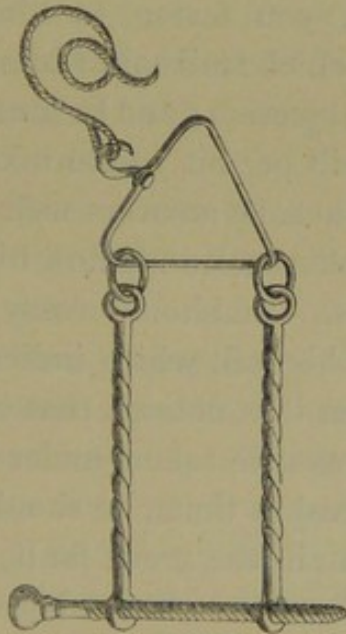
piece of parchment, previously wetted, is drawn over and secured to one end of the implement. When the skin is dry, a perforation is made in the middle with a needle, and a single horse-hair, doubly knotted at the end, passed through it from within, and remains hanging on the outside. When the "Rapphöns-pipa" is brought into use, the horse-hair is drawn between the finger and thumb (after they have been previously moistened), when the pipe emits a sound exactly resembling the call-note of the Partridge. Provided with this implement, the gunner proceeds in quest of the covey, and when he has found and dispersed the birds, he, after a time, imitates their call-note, to which responses are presently given. Thus, he not only ascertains their whereabouts, but, in many instances, succeeds in luring one or other of them within reach of his murderous weapon.

But, after all, the expedients mentioned to beguile the poor Partridge are not more objectionable than some of those resorted to by us in England for the like purpose; as, for instance, flying a huge paper kite, fashioned in measure as a bird of prey, over a turnip-field, as I myself have seen done in Norfolk, to make the birds lie close.

As regards the gun, however, the great destruction that takes place amongst the Partridges is during the winter, when the ground is covered with snow, and they are in consequence very conspicuous; for the peasants and others then slaughter them without mercy, something like a whole covey being often annihilated at a single discharge. During very severe winters, again, especially after heavy snow-storms, when these poor birds draw near to the homestead, not a few are captured by boys and others, by means of a common sieve, and in like manner as sparrows with us.

Many of the Pointers one sees in the Peninsula are well-bred and well-looking; but, speaking generally, much

cannot be said in their favour. Occasionally they are well broken-in, though seldom sufficiently so to come up to our English ideas of perfection. In most instances they are taught to bring the game to their master, and, as a consequence, usually "run in" at the shot. Nearly one and all, moreover, when they sight a hare, charge the poor animal as savagely as a terrier does a rat. The character given by M. Greiff of a favourite dog of his own is, in short, pretty applicable to the Northern Pointer of the present day. "As something remarkable," he says, "I may mention that I was once possessed of a bitch named *Caresse*, that was never 'trained' in any way; that stood quite steadily to birds that would *trycka*, or lie close; challenged to them when 'treed;' and gave chase to hares, foxes, &c."



THE KLAFVE.

As the usual plan in Scandinavia of training a Pointer differs somewhat from our own, it may be proper to devote a page to the subject. Three different sorts of collar, to which a long line is attached, are used for the purpose.

One kind consists of a stout cord, heavily knotted at intervals of an inch; a second, called a *Rosenkrans*, of a number of wooden balls, an inch and a half in diameter (whence protrude blunted iron spikes, $1\frac{1}{2}$ line in length), strung on a piece of stout packthread; and a third, named *Klafve*, the nature of which will be readily understood by the above drawing. The choice of the collar depends on the disposition of the dog. If he be very self-willed and head-strong, the "Klafve," as being the most severe, is the best; for, on the two side-cords being drawn together by the triangle, the animal is put to much pain. But it must be borne in mind that, whichever of the three collars be used, it should fit the dog's neck close and well, yet not so tightly as to impede respiration.

M. Greiff, speaking of the training of the Pointer, says: "When first used, you fasten to him a line of three fathoms in length, which trails after him, and reminds him that he stands in subjection; and he must not be allowed to range wider than will permit you to take hold of the line when required. When he answers well to the *appel*, you wind the line about his neck and allow him to hunt, according to circumstances. You should always have an eye to his movements, and to his tail, which indicates the vicinity of the game; and when it is noticed that he has scent of the birds, he must always be taken under the wind of them. If he accidentally flushes them, he should be reprimanded; but should he commit the great fault of running ahead after you have fired, and to chase what rises before him, he ought to be severely punished. He should always hunt in advance of the sportsman, and to the right and left as indicated by the hand. As soon as he points, he must be warned by the words '*tout beau*,' or in the language he is taught; and, if a young dog, care must be taken to hold the line to prevent his advancing farther. If he be unwilling to move, it is a certain sign the birds are near him;

in which case one advances slowly and cautiously, so as not to excite him; and if, on their rising, you kill one of them, let him fetch it, and then caress him; but he should never get into the very bad habit of squeezing or biting the game."

Partridge-shooting in the cultivated parts of Scandinavia—in Sweden at least—is very fair; not that birds are numerous, for one seldom meets with more than a covey or two in a day, but owing to the favourable nature of the ground; so that, with a good dog and a good marker, one may always calculate on making a tolerable bag. I here speak of the wilder part of the country, or that owned for the most part by the peasantry; for on the estates of the gentry, which in general are preserved, very much better sport is obtainable. But then, as a set-off, it has always appeared to me that the fewer birds you shoot the more you are likely to be in favour with the proprietors; and no wonder, considering the comparative scarcity of Partridges in the Peninsula.

To give a better idea of the sport obtainable in Scandinavia, I may mention that, on two different occasions, in October, when on short excursions in the more southern parts of Sweden, I have, to my own gun, bagged upwards of 100 brace of Partridges in the course of from fourteen to sixteen days' shooting; and, on another occasion, in October, though this was in an opposite direction, $62\frac{1}{2}$ brace in seven consecutive days—my best day being 14 brace. But my performances are nothing as compared with those of some of my acquaintance—that is, supposing what they tell me is to be received *absque grano salis*.

In Partridge-shooting, as in other pursuits, strange things sometimes occur. One day, in September, 1864, when a friend of mine, Captain Roos, of the Swedish army, was enjoying this amusement, his Pointer *Rapp*—one of the steadiest that I know—found a covey, and, whilst standing

firm as a rock, one of the birds flew up from the ground, and, to the no small wonderment of the gallant officer, as also no doubt to that of his well-trained dog, actually perched on the back of the latter.

When Partridge-shooting in the Peninsula, one is at times annoyed by the presence of the Goshawk, the mortal enemy of those birds. On one occasion I had shot a brace of Partridges, right and left. Whilst reloading, something passed close by my ear with the rush of a whirlwind, and, on looking up, I saw a Goshawk in the very act of pouncing on one of my birds that was lying dead within less than thirty paces of where I stood, and which, to my no small mortification, it bore triumphantly away in its talons. Similar instances of the daring of the Goshawk are not at all uncommon. At times, indeed, it will "stoop" to a hare under the very nose of the gunner; of which more than one example is on record.

Partridges are frequently taken in nets in Scandinavia. One kind, called the *Stick-Nät*, is similarly constructed, though smaller, to that previously spoken of for the capture of the Capercali and the Black-Cock. This is set in a zigzag form amongst low bushes, etc., where the birds, after the dispersal of the covey, are known to have taken refuge. And if the fowler, after remaining quiet for a while, then imitates their call-note with his "*Rapphöns-pipa*," they will presently respond, and of themselves run into the toils.

Another kind of net is called the *Tirass*, signifying a drag-net. It is usually of a quadrangular shape, but its size varies considerably. Commonly, however, it is about 12 feet in diameter, with meshes $2\frac{3}{4}$ inches square. Two lines, of from 16 to 18 feet in length, are attached to the foremost corners of the net. When the dog points, two men, one on each side, draw the "*Tirass*" over the spot where the covey is supposed to lie; and as the after-



M. Körner, del.

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DARING OF THE GOSHAWK.

Day & Son, Limited, Ltd.



part of the net trails along the ground, the Partridges, on its near approach, are sure to take wing; on which the lines are immediately dropped by the fowlers, and the birds are enveloped in the folds of the net. The "Tirass," we are told, should be dyed green.

Then, again, there is the so-called *Hög-Nät*, or high-net; but this device is little used, I believe, in the Peninsula. It is 30 to 40 fathoms in length, by 30 feet in depth, and the meshes some 3 inches square. At early morn and late in the evening, Partridges, when going to or returning from their roosting-places, always fly low, often at hardly the height of a man, and they, moreover, almost invariably take the same course. This point ascertained, the net is set up on two poles of about 20 feet in height, the upper line being fastened at some 18 feet from the ground, and the under line at 4 feet, so that the lower portion of the net forms a sort of bag. Two men keep watch near the net, whilst others, with dogs, hunt the surrounding country; so that when the Partridges are flushed, and take their usual course, they fly against the net and fall into the bag mentioned. The watchers at the same instant wrench up the poles supporting the net, and throw them to the ground on the top of the latter, which renders the escape of the birds almost impossible.

The net, however, most in request in Sweden, by gentlemen in the daytime and poachers at night, for the capture of Partridges, is called the *Ryssja*, which in principle is very similar to the device of the same name, described and depicted in "Scandinavian Adventures," for the taking of fish. As seen in the accompanying illustration, it is cone-shaped, the hoops forming the framework, gradually diminishing in size from the entrance to the apex; it is provided with arms or wings placed obliquely forward. The usual length of the "Ryssja," in Scania at least, is about 24 feet, and its diameter at its

outer end 14 inches. The arms are 16 inches in height, and each of them 62 feet in length. The "Ryssja" itself, as well as the arms, are constructed of slight materials; and, as the hoops fall into each other in the manner of a telescope, it is very portable.

"With his 'Ryssja' in a bag, and his *Lykta** suspended to the saddle-bow," says the Count Corfitz Beckfriis—and there is no greater adept in the art of netting Partridges than himself—"the fowler takes the field on horseback. On the pointer finding the Partridges, he is called to 'heel,' when the man, after retiring a little distance, dismounts, takes off the saddle, and fastens the dog to it. Under cover of the horse, whose nose is so tied down as to make him appear in the act of grazing, the fowler then proceeds towards the covey in a zigzag direction, cruising, as it were, and in the while keeping his body bent, that the birds may not be aware of his presence. When arrived within about a hundred paces of where he supposes them to be lying, he halts until one or other of them gets on its legs, and thus makes known to him their exact whereabouts. This ascertained, he shows himself, on which they all immediately squat again.

"Leaving his horse, the fowler now sets the 'Ryssja' in the form of an open triangle, at the point towards which he deems it desirable to drive the birds. The net should face a furrow or ditch, if possible, as it is difficult to make birds cross rising ground; and, if they be very wild, it should be hidden with brushwood. The man then returns to the horse, and, crouching behind the animal as before, again advances towards the covey—now between himself and the 'Ryssja'—and, when the

* A sort of bag, formed of canvas (the lower portion distended by two circular hoops at from ten to twelve inches apart, and connected together by upright splints), in which to deposit such of the captured birds as are intended to be kept alive.



M. Körner, del.

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MODE OF CAPTURING PARTRIDGES IN SCANIA.

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birds begin to run, he follows leisurely after. Should they show a disposition to turn to the right or left, he opposes the horse to them and heads them back again. When they have advanced to within the arms of the net, the speed of the horse may be increased; and when they have reached the 'Ryssja' itself, they commonly run into it of their own accord. As soon as the last bird is within the toils, the fowler leaves his horse, and, hurrying to the net, pulls up the stakes by which it is pinned to the ground; thus securing the prize. The man then places the captives in the *Lykta*, and, after fastening this to his saddle-bow, proceeds in search of fresh adventures.

"The great difficulty attendant on thus netting Partridges," the Count goes on to say, "is to sight them in the first instance, though this is partly obviated by the use of a pocket-telescope. In other respects the operation is generally very easy. Not so at all times, however. Early in the autumn, for instance, Partridges are so fearless that it is no easy matter to get them out of the way of the horse otherwise than by kicking the ground with one's feet, so that the dust flies over them. Occasionally, indeed, one is obliged to manœuvre the horse to within the wings of the net, or, it may be, even up to the very entrance of the 'Ryssja.' Late in the autumn, on the contrary, these birds are often so very wild that it is needful, when driving them, to keep at a distance of from two hundred to three hundred paces; and, however improbable it may seem, I have myself known them to take wing from the mere circumstance of my turning the horse's head towards them instead of his hind quarters. If they have been much shot at previously, they are more difficult of capture; and if there be a lame bird in the covey, one must be in the highest degree careful, for, should it be unable to keep up with the rest, it makes use of its wings, and, so soon as one flies, the others are

pretty sure to follow its example. Should there be two jägare in company, and each provided with a stalking-horse, matters are greatly facilitated. With the aid of my keeper," so the Count tells us in conclusion, "I one autumn thus captured upwards of four hundred Partridges,* and this notwithstanding we always set at liberty the old birds and a pair of the young ones."

The Partridges thus taken in the "Ryssja," or in the other nets described—and intended to be kept alive as a supply for the table during the winter, or as breeding stock to be turned out again in the spring—are confined in a loft or other suitable place, the floor of which should be strewn with coarse sand. If there be a glazed window, it ought to be covered over with sacking, which partially excludes the light, and prevents them from flying against the glass and injuring themselves. Some, indeed, to guard against a similar danger, hang matting at a little distance from the walls. The birds are fed on barley, and other kinds of grain, and are constantly supplied with fresh water and juniper bushes; as they not only nestle under them, but feed on their berries. They should never be without a heap of sand in which to dust themselves.

The winter over and the snow gone, such of the captives as have escaped the cook are turned out in pairs in the places where it is wished they should locate themselves. Various expedients are adopted to prevent their wandering. Some, we are told, smear their bodies with a composition of ashes, which disables them for several days from flying; others pluck out one or two of the pinion feathers to prevent them from straying; whilst

* When on a visit some years ago to the Count, at his fine estate of Börringe Kloster, in Scania, his keeper told me that on one occasion his master captured no less than sixty-two Partridges at a single haul of the "Ryssja."

others again, as Ekström tells us, "in order to render the birds forgetful of their former haunts, are sagacious enough to swing the poor creatures round and round by the legs until quite giddy, and then to lay them under a bush where water and barley have been previously placed." It seems the general opinion, however, that but few of these half-domesticated birds breed the first summer after being restored to liberty. Indeed, the Count Beckfriis says, that "if only one pair in three have a family, even during the following year, it is quite as much as can be looked for."

Formerly—and in accordance with the ordinances of the 22nd March, 1647; 29th August, 1664; 5th May, 1736; and 6th November, 1772—the Partridge was a privileged bird in Sweden, and none but nobles, or those possessed of certain estates, were permitted to kill it. But these unjust laws are now abrogated, and at the present day the bird is on the same footing as all other kinds of game.

Speaking of ordinances respecting this bird, reminds me of a paragraph that, a few years ago, ran the round of the Swedish papers. "On the last Sunday in Lent, the Governor's order prohibiting the capture or shooting of Partridges from November to August was notified from all the pulpits within the diocese of Gotland. Scarcely was the reading of the above announcement concluded in B. church, when a fine cock Partridge, as if aware of the powerful protection just accorded him, boldly entered the sacred edifice, and, marching up the middle aisle, stationed himself for a couple of minutes in front of the pulpit. Here this unwonted church-goer was for the time carefully taken in charge, and afterwards restored to liberty, it being contrary to the law just promulgated to detain him a prisoner."

In concluding this chapter, I should remark that the

Red-legged Partridge (*Perdix rufa*, Mont.) is not found in Scandinavia. Neither is the common Pheasant (*Phasianus Colchicus*, Linn.), although attempts on a large scale were made to introduce it by the late King Oscar. Endeavours to effect that desirable object are, however, still making by a friend of mine in Sweden; but from the severity of the climate, and from the country swarming with vermin and birds of prey of all sorts, it is very doubtful, to my thinking, if the experiment will be attended with success.





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M. Körner, del.

Q U A I L S.

CHAPTER XIII.

The Common Quail.—Its Habits.—Migrations.—The Bishop of Quails.
The Great Bustard.—Their Love-Season.—Mode of Capture.—The
Little and the Ruffed Bustard.

THE Common Quail (*Waktel*, *Liten Rapphöna*, or little partridge, Sw.; *Vagtel*, Norw.; *Perdix Coturnix*, Lath.) was rare in the vicinity of Ronnum, as also in the west of Sweden; but in certain localities near the eastern coast, and in Scania, it is not so very uncommon. It would seem to be on the increase in the Peninsula, and, as with the Partridge, gradually to find its way farther to the north. Its limits in that direction are not very well ascertained, but within a recent period it has been met with somewhat beyond the 60° of lat. That these birds are generally scarce may, however, be inferred from the fact that, during my long residence in Sweden, I never met with but a solitary specimen, and that was during the past autumn in the province of Halland.

"In Norway," Professor Rasch writes to me, "the Quail is, at times, tolerably common; but some seasons one hardly hears the call-note of a single one. I found them

in 1825, in Upper Tellemarken, at the northern end of the Lake Tindsjöen. During the years 1831-33, they were very abundant in the neighbourhood of Christiania." In the Danish islands, Kjærbölling tells us, this bird is pretty numerous during the summer months. It arrives there in May, and departs again in October.

The Quail has a very wide geographical range, being generally scattered over Asia, Africa, and the southern parts of Europe; but it seems to be scarce in more temperate climes.

To describe so well-known a bird would be superfluous, it being depicted in the drawing at the commencement of this chapter. It may suffice to say that it is the smallest of the genus *Perdix*, its extreme length being from seven to eight inches.

It is spoken of by Northern ornithologists as a sprightly, restless, and shy bird. Its flight is rapid, and near the ground, but only for short distances. It runs very fast, and to escape its enemies trusts more to its legs than to its wings; indeed, excepting during migration, it rarely flies, and then only when one comes suddenly upon it. It is said that, if pursued by a dog or bird of prey, it hides its head in a hole, and then believes itself in safety. Its call-note, *pick wervick, pick wervick*, often repeated ten to twelve times in quick succession, is heard both by day and by night, more especially if the weather be fine.

The Quail, as regards Scandinavia, is seldom met with except in the open country. Extensive and unenclosed tracts of arable land are its favourite resorts. Wooded districts, or anything resembling bush, it would seem sedulously to avoid. Its food consists of various kinds of grain, seeds, green herbs, grasses, insects, larvæ, &c.

Nilsson informs us that "the Quail lives in monogamy, in like manner as the Partridge," which is somewhat at variance with what we are told by other writers, both

English and foreign. Kjærbölling says, for instance, "Each male has several females about him, and does not confine himself to one alone; but should he be obliged to restrict himself to a single partner, there is scarcely to be found amongst our native birds that live in pairs, a single one that is so base a paterfamilias as the Quail, who in this respect resembles all others that are polygamists."

The female makes a very simple nest in the ground: a mere cavity, in short, that she forms herself in a corn-field or meadow. Her eggs, from eight to fourteen in number, are of a greenish-yellow colour, marked with brown and black spots and blotches. The period of incubation is believed to be twenty-one days. The poults are said to grow rapidly, and to be fully fledged in the course of a few weeks.

The Quails captured in Scandinavia are few in number. Some are taken in nets along with the Partridge; others, again, are shot to the Pointer, or enticed within reach of the gunner by imitating its call-note.

It is highly prized for the table, its flesh being very delicate and "little inferior to that of the Land-Rail." The English market, as known, is abundantly supplied with these birds from France. We are told, indeed, that "as many as 3,000 dozen have been purchased of the dealers by the London poulterers in a single season."

The immense flights of Quails seen during their autumnal migrations from Europe to the shores of Africa, and on their return from thence in the spring, are the astonishment of every one, and singularly corroborate the account given in the Scriptures of the prodigious numbers met with by the Israelites when in the wilderness. We are told by travellers, for instance, that whilst these birds are crossing the Mediterranean they often alight on the intermediate islands in such immense flocks as almost to cover them; that on the western coast of

what was the kingdom of Naples they have at times appeared in such great quantities that, within a space of five or six miles, 100,000 have been taken in a single day; and that on the island of Capri, near the city of Naples, so many used to be captured as to constitute the chief revenues of the Bishop of the diocese, who was therefore called the Bishop of Quails.

Smart, in his "Travels in Turkey," tells us further, that "in the vicinity of Constantinople the sun is often nearly obscured by the prodigious flights of Quails, which alight on the coasts of the Black Sea near the Bosphorus, and are taken by means of nets spread on high poles planted along the cliffs, some yards from its edges, against which the birds, exhausted by their passage over the sea, strike themselves and fall. In October, 1829, the Sultan sent orders to one of his admirals to catch 400 dozen. In three days they were collected, and brought to him alive in small cages." And Madden says that "they visit Egypt in immense flights about harvest-time, where the Arabs take them by thousands in nets. They fly," he adds, "in a direct line from north to south, and very rarely from east to west."

The account given in Holy Writ, as to the mode of drying these birds in the sun, is also singularly corroborated by the traveller Maillet. "There is," says he, "a small island off the coast of Egypt, where the Quails usually alight in the autumn, on which they are taken in such quantities, that, after having been stripped of their feathers, and dried in the burning sands for about a quarter of an hour, they are worth but one penny the pound. The crews of those vessels which at that season of the year lie in the adjacent harbour, have no other food allowed them."

The Great Bustard (*Stor Trapp*, Sw.; *Trapgaas*, *Trappe*, Danish; *Otis tarda*, Linn.), which was once

common in Sweden, is now exceedingly scarce in that country, and in Norway would appear to be altogether unknown. It is also very scarce in Denmark proper; but in Holstein, a former dependency of that kingdom, it is not, according to Kjærbölling, so very rare. The proper home of this noble bird would seem to be Africa and the south-eastern parts of Europe, Southern Russia, Wallachia and Moldavia, Hungary, Galicia, and Dalmatia; but it is also found in France, Switzerland, Germany, and Belgium. In former times it was pretty common in England.* As a migratory bird, it first arrives in Sweden in April. "They are then met with in small companies; but before leaving the country in the autumn they collect in flocks, and, occasionally, in considerable numbers. Usually they are somewhat spread, but, at times, stand ranged in lines or ranks."

The Great Bustard, which is the largest of the European birds, measures from 3 feet 5 to 3 feet 8 inches in length, but the female is considerably smaller. It is a shy and cunning bird, and always keeps to open ground, far away from bushes, fences, &c. In the summer it will not readily take wing, but endeavours to elude its pursuers by means of its wonderful rapidity of foot. What with legs and wings together it scuttles along at a most extraordinary pace. When at that season it is desirous of flying, it is compelled first to run a long way before it can rise from the ground; but once fairly on the wing, its flight, which is slow and short, is attended with less trouble. In the autumn, on the other hand,

* Very recently, I am told, several Bustards were seen in Lincolnshire, in localities, it is to be presumed, that once were fens. If such really was the case, it is, therefore, to be hoped that these fine birds, which the other day seemed all but extinct with us, will again, as aforetime, become pretty common.

it rises with facility into the air, and then flies high, and to a distance.

Its food during spring and summer consists of green herbs and tender leaves, as also of cabbage and turnip leaves, insects and worms; in the autumn, of various kinds of grain and seeds.

The Great Bustard is polygamous. The love-season is in April and May. Desperate battles then take place amongst the males: the tail of the bird is raised and spread, the wings hang down to the ground, and they charge each other like turkey-cocks. The strongest collects about him the largest harem, and pairing takes place in the same amusing way as with turkeys. The female lays two to three olive-grey eggs, marked with faint, sometimes hardly distinguishable, liver-brown spots, in a hole she herself makes in the ground. The period of incubation is said to be twenty-eight days. As soon as the young are hatched they are capable of following the mother.

The flesh of the old birds is somewhat hard and dry, but that of the young ones, especially in the autumn, when they are fat, is looked on as a delicacy.

Formerly the Great Bustard was quite common on the extensive heaths and plains of Scania; and, not very long since—so I was assured by the Count Corfitz Beckfriis—it bred in the south-western parts of that province, near Falsterbo, off which place is the reef so much dreaded by mariners. But at the present day it is rarely met with, excepting in the vicinity of the town of Åhus, situated on the south-eastern coast. A few years ago, indeed, when I was travelling through that part of the country, my driver spoke of having seen three of those birds during that very summer.

Once on a time, however, the Great Bustard makes its appearance in localities where one would little expect

to find it. We read, for instance, that, "on a Sunday morning in the autumn of 1863, a youth residing in the parish of Mjölby, in Östergötland—one of the more mid-land Swedish provinces—went out with his gun for the lawful purpose of shooting crows or the like. Whilst crossing a rye stubble, he saw a large bird fly up from the ground and make directly towards him; and when it came sufficiently near, he fired, and had the good fortune to break one of its wings. Being no longer able to fly, the bird took to its heels, followed by the jägare, who, during the chase, contrived to reload his gun, and at the second shot broke its other pinion, and was then readily enabled to secure his prize. Neither himself nor his friends, however, had the least idea what bird it was; some supposing it to be a Capercali, and others a Crane. But an educated person in the vicinity sent its portrait to Professor Sundevall (of world-wide reputation as a naturalist) at Stockholm, who at once pronounced it to be a female Bustard. It weighed ten pounds and a half."

The methods adopted in Scandinavia for capturing the Great Bustard are various. From its extremely shy nature, and from always keeping to the open country, it is not easy of approach. Of wayfaring people, however, it seems to have little apprehension; and the common method, therefore, is for the sportsman to clothe himself like a peasant or to put on female apparel, and, with a basket on his back and holding the gun close by his side, to make up to it. At other times he approaches it under cover of a *skjut-häst*, or shooting-horse, either real or artificial. Should there be several sportsmen, however, the usual plan is to make an extended ring around the bird, which, gradually closing in from all sides, so bewilders it that it is either shot where it stands or whilst endeavouring by flight to evade its pursuers. Occasionally, also, the birds are chased with greyhounds, which are conveyed towards them in covered

carts, until such times as they evince symptoms of alarm and begin to move off, when the dogs are slipped from their couplings, and not unfrequently pull them down before they are enabled to take wing.

The Northern Fauna includes two other species of Bustard; viz., the Little Bustard (*Liten Trapp*, Sw.; *Dværg-Trapp*, or dwarf-bustard, Danish; *Otis tetrax*, Linn.), and the *Otis Houbara*, Linn. (*Krage-Trapp*, i. e. collared or ruffed bustard, Sw.; *Trave-Trapp*, i. e. trotting bustard, Dan.), both of which claim more southern latitudes as their proper home. But as neither of these birds, excepting in very rare instances, has been met with in Sweden or Denmark, and as Northern ornithologists seem to know little more about them beyond what is to be gathered from books, I will merely mention that both the species in question are believed to be polygamous, and that their habits and manner of feeding are very similar to those of the Great Bustard.





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THE WOODCOCK.

CHAPTER XIV.

The Woodcock.—Scarce in Scandinavia.—The Cause.—Two Species?—Varieties.—Its Habits.—Its Food.—Mode of Feeding.—The Call-note.—Incubation.—Woodcock carrying her Young.—Her Maternal Affection.—Anecdote.—Migration.—Always Nocturnal.—*With the Wind*.—Cause of Migration.—“The Lament.”

THE Woodcock (*Morkulla*, Sw.; *Rugde*, Norw.; *Scolopax rusticula*, Linn.) was pretty common in the Ronnum country, and a few bred there. With the exception of the extreme south of Sweden, this is the case in all wooded districts throughout the length and breadth of Scandinavia, as high up certainly as the Polar circle, and it may even be to the valley of the Alten river, lat. 70°, where Mr. Oxenden Hammond tells me he feels almost assured he saw one of these birds. Their great breeding-grounds would, however, seem to be the more central parts of the Peninsula, for, by all accounts, the farther one proceeds north the scarcer they become.

“Morkulla,” the Swedish name of this bird, comes from *mor*, red earth, &c., and *kulla*, maiden: hence, maid of the moor. In Scania the peasants call it *Wal-Snäppa*,

which name bears a close affinity to the German *Wald-Schnepfe*, as the Woodcock is called in Germany.

The Woodcock has a wide geographical range. Besides Scandinavia, this bird passes the summer months in Finland, Russia, and Siberia, as also in northern and north-eastern Asia; and winters in Asia Minor, the northern parts of Africa, as also in the more western and southern of Europe, especially in countries bordering on the Mediterranean.

Excepting during spring and fall, when Woodcocks are occasionally met with in considerable numbers near the southern and western coasts of Sweden and Norway, they may truly be said to be scarce in Scandinavia; for during the summer months a man may wander—in the interior at any rate—for days together in the forest without seeing more than a stray bird. Such at least has often happened to myself.

That Woodcocks should be thus scarce in the great Scandinavian forests, from whence, as it is believed, we in England are chiefly supplied, and so plentiful with us—in Ireland rather—in the winter time, is perhaps easy of explanation; for in their breeding-grounds, extending, as shown, over the greater part of Northern Europe, there is probably a thousand times more wood than in the whole of the United Kingdom together; and when, therefore, the birds, or a large portion of them, come to be *concentrated*, so to say, in our small covers, they consequently make a very great show.

The idea used to be entertained in England, and may be so at this time for all I know to the contrary, that the present scarcity of Woodcocks with us, as compared with former times, is attributable to the Scandinavians subsisting largely on their eggs. Now, to say nothing of these being unknown as an edible in the Peninsula—and where, indeed, even naturalists have difficulty enough in procuring

them for their collections—if any person who entertains the singular notion in question were to see the boundless northern forests, I feel convinced he would agree with me in saying that, even if the whole of the scanty population of that part of the world were to turn out for the express purpose of searching for the eggs of this bird, they would not be able to explore a hundredth part of the woods in the course of the year.

If Woodcocks be now really scarcer in Great Britain than in olden times—and the same complaint is made in other countries—the diminution is probably attributable to the increased number of gunners (in Sweden, at least, ten people shoot nowadays to one formerly), and to the murderous war everywhere carried on against those birds. But let the decrease in their numbers arise from what cause it may, certain it is that the egg-sucking crotchet has nothing to do with it.

Many sportsmen and others, both in Scandinavia and Denmark, believe that two species of Woodcocks exist in the Peninsula; viz., the common kind, and that answering to the *Stein-Schnepfe* * of the Germans, a new species, or variety, which Bechstein thus describes:—"It is nearly one-third less than the common species, of a darker colour, and marked with closer black spots and bars; has bluish legs, and a shorter and ash-grey coloured neck. Its flight is more rapid, and its home would seem to be the cold mountainous regions of the high North, because it comes to us later in the autumn and returns earlier in the spring than the common Woodcock."

May not naturalists and others be splitting hairs

* I myself have occasionally shot diminutive Woodcocks in Sweden, answering in the main to Bechstein's *Stein-Schnepfe*, and one of which is now in the Gothenburg Museum; but in shape and make little difference was observable between them and the common Woodcock—not sufficient, certainly, to entitle them to be considered a separate species.

in regard to this matter? To me it seems that the so-called *Stein-Schnepfe* and the common species are one and the same, and that the difference noticeable between them in regard to size and colour may readily be accounted for, if we assume, as is probable, that they are bred in wide-apart localities. As a case in point I may mention that the Capercali in northern Lapland seldom exceeds nine pounds in weight, whereas in the more southern provinces of Sweden it not very unfrequently weighs from fourteen to fifteen pounds, or even more; and the difference, moreover, between the northern and southern birds in regard to plumage is also said to be very perceptible.

The usual length of the Woodcock is about fourteen inches, expanse of wings two feet one inch, and weight from twelve to fourteen ounces. The female is somewhat larger than the male. The heaviest I myself ever killed in Scandinavia little exceeded sixteen ounces, and that was shot very late in the autumn, when excessively fat. Such a monster Woodcock as that spoken of by Yarrell, which was killed at Narborough, in Norfolk, and weighed twenty-seven ounces, I never saw or heard of in the Scandinavian Peninsula.

Accidental varieties of this bird are not uncommon in Sweden. Nilsson speaks of an individual of a yellowish-white colour, and Kjærbölling of one shot in Denmark some years ago, the head and wings of which were white; as also of a second that had white spots on its head and back. "There are, moreover," he says, "entirely white, yellowish-white, and straw-coloured Woodcocks."

The Woodcock is a bird of solitary habits, and would seem to shun the society not only of its own species but of its congeners. Ordinarily, indeed, one seldom finds more than a pair, or it may be a brood, in company. During migration, it is true, these birds are occasionally met with

on the coast in so-called "flights;" but this is solely attributable, I take it, to their being delayed there by storms and adverse winds. That one often observes numbers in the same cover, as, for instance, in some of the great cock-preserves in Ireland, or in countries bordering on the Mediterranean, where Mr. George Chichester Oxenden assures me he has himself seen fully a dozen on the wing at the same time, is certain; but this arises, I imagine, from the attraction of food and locality, and not from love of their fellows.

The Woodcock is to a certain extent a nocturnal bird. For the most part it passes the day in woods, and then moves but little if left undisturbed;* but at night-fall it betakes itself to the more open country, to moors, pasture fields, &c.—often very far from home—in search of food, where it remains during the night, and does not return to the shelter of the cover until the day begins to break; and hence the "Cock-droppings" one so often meets with in out-of-the-way places.

Hilly and wooded localities, intersected by morasses, would seem to be the favourite resorts of the Woodcock in the summer time. Sir Humphry Davy, I observe, believes it to be a fable that this bird raises its young habitually in the alpine or mountainous countries of the central or southern parts of Europe. And in this matter he may possibly be right; but it is very certain that in Scandinavia the Woodcock is often found very high up in mountains, where, indeed, I myself have met with it amongst stunted brushwood. M. Barth tells us, moreover, that when sporting on the Norwegian fjälls on the 3rd

* "A laurel- or a holly-bush," says Sir Humphry Davy, "is a favourite place for their repose: the thick and varnished leaves of these trees prevent the radiation of heat from the soil, and they are less affected by the refrigerating influence of a clear sky, so that they afford a warm seat for the Woodcock."

September, 1864, he shot with his first barrel a Dal-Ripa, and with his second a Teal, that rose at the discharge of his gun ; on the 11th a Fjäll-Ripa with his first barrel, and a Dal-Ripa, that took wing at the shot, with his second ; and immediately afterwards he killed, right and left, a Dal-Ripa and a Woodcock that flew up simultaneously. "Thus in a willow brake of a couple of hundred ells in length," he continues, "there were lying Dal-Ripa, Fjäll-Ripa, and Woodcock."

Professor Rasch writes me, besides, that "the Woodcock is often found in the willow region ; and that a friend of his, M. Friis, a Northerner, and capital shot, has killed a couple of these birds in the month of September at an elevation of at least 3,800 feet above the level of the sea ;" and adds : "In the pairing season I do not think it goes above the limits of the pine region ; but later in the year it is allured higher up by the abundance of food that is procurable there."

The food of the Woodcock consists of earthworms, small beetles, and various kinds of larvæ. Nilsson tells us that tender grass and grass-roots have been found in its stomach ; and Ekström, that "it is said to feed on bleaberries and certain water plants." "Its stomach," says Sir Humphry Davy, "sometimes contains seeds, which I suspect have been taken up in 'boring' amongst the excrements of cattle. Yet the stomach of this bird has something of the gizzard character, though not so much as that of the Land-Rail, which I have found half-filled with seeds of grasses, and even containing corn, mixed with May-bugs, earthworms, grasshoppers, and caterpillars."

The Woodcock's manner of feeding is singular, and is thus described by Daniel, as observed in an aviary at St. Ildephonso, in Spain :—"There was a fountain perpetually flowing to keep the ground moist, and trees planted for

the same purpose. Fresh sod was brought to them, the richest in worms that could be found. In vain did the worms seek concealment; when the Woodcock was hungry, it discovered them by the smell, stuck its beak into the ground, but never higher than the nostrils, drew them out singly, and, raising its bill into the air, it extended upon it the whole length of the worm, and in this way swallowed it smoothly, without any action of the jaws. This whole operation was performed in an instant, and the action of the Woodcock was so equal and imperceptible, that it seemed doing nothing; it never missed its aim. For this reason, and because it never plunged its bill beyond the orifice of the nostrils, it was concluded that the bird was directed to its food by smell."

The Woodcock, prior to proceeding to its feeding-grounds in the evening and return to cover in the morning, always flies, during spring and summer at least, several times backwards and forwards over precisely the same line of country, uttering meanwhile its peculiar call-note, of which presently. Such a locality is in Sweden called a *Morkull-drag*, or *sträck*, *i. e.* stretch; answering to our "Cock-rôle" or "Cock-shoot."

These "rôdings" of the Woodcock, which Linnæus says "often extend to a distance of a mile,"—Swedish, equal to nearly seven English,—"in a quarter of an hour," and which he describes as "singular and wonderful, and confined to this bird alone," have long puzzled the learned, and others, in the Peninsula; but at the present day it seems to be pretty generally admitted they are more or less connected with the "*Lek-tid*," or love-season. And such is probably the case; because Mr. G. Chichester Oxenden writes me that, "during autumn and mid-winter, this bird never 'rôdes' in the way spoken of; but proceeds *in a straight line* from the cover where it has harboured in the daytime, to its

feeding-grounds in the open country.* In the spring, before leaving our shores," he adds, "its 'rôdings' are for amatory purposes, the males seeking the females; and here" (Broome Park, in Kent, where the woods are of enormous extent), "we have sometimes seen of an evening as many as fifteen thus occupied."

The Woodcock is monogamous, and pairs early in the spring, either prior to, or immediately after, its return to Scandinavia; and, as it is believed, at the "Drag," of which mention has just been made.

"During its morning and evening flights at this time," says Ekström, who is much more at home on this subject than myself, "it gives utterance to a peculiar '*Läck-ton*,' or call-note, which sportsmen express by *knort*, *knort*, *knisp*! or more properly, perhaps, by *orrt*, *orrt*, *pisp*! The first, *knort* or *orrt*, is a hollow, coarse, and somewhat lengthened nasal sound; the second, *knisp* or *pisp*, a short, fine, and sharp sort of whistle, which, when one is accustomed to it, may be heard at a considerable distance. This note clearly appears to be the one by which the betrothed invite each other to pairing; for the bird seems to pay very little attention to the *orrt*, but always listens and looks about it as soon as it hears the *pisp*. When two Woodcocks, whilst 'rôding,' meet, or come in near proximity, they chase each other; and whilst casting themselves with the rapidity of lightning amongst the trees and bushes, even to the very ground, they give quick and hurried utterance to their finer note, *pisp*. Although one can seldom witness actual pairing,†

* "During the winter," Mr. Oxenden further says, "I have often stationed myself at the famous 'Rôding-stand,' on the limits of the great Muccrus Woods (Killarney) which adjoin the bogs, and on one occasion shot four couple of Cocks in half an hour."

† This is said to take place on the ground, in some open space in the forest. During the act of pairing, the male, Kjærbölling tells us, spreads his tail, fan-form, and droops his wings in the same manner as the Black-Cock.

it is certain that these actions of theirs are preparatory to the matrimonial act, and are to be looked on as an evidence of the modesty with which the female meets the bold advances of her lover; for when the pairing season is over, one not unfrequently observes Woodcocks to meet, whilst 'rôding,' without pursuing one another.'

The Woodcock is an early breeder. Some, indeed, say it pairs before returning to Scandinavia in the spring. And they may be in degree right; for on their first arrival one often finds these birds in couples. We read, moreover, of well-developed eggs being then found in the female. She makes her nest—a mere hollow in the moss or heather—under a bush or tussock, and lays three or four eggs of a dirty yellow-green colour, marked with large and dark-brown spots pretty equally distributed over the whole surface. They are one inch eight or nine lines in length, and one inch four lines in thickness.

The young are usually hatched about the end of May. The Count Corfitz Beckfriis informs us, indeed, that, in the province of Södermanland, a young Woodcock was taken on the 11th of May, so well grown as already to have blood-feathers in its wings. Though it has been confidently stated to the contrary, it is now, I believe, pretty well ascertained that the Woodcock only breeds once within the year.

The mother, as with the Partridge and some other birds, is very careful of her nest and young. When a dog or other animal approaches them, she conducts herself in such a manner as to lead him to suppose that she is wounded, and unable to make her escape from him. She either runs to and fro before him with expanded tail and drooping wings, or she flies almost in his face, with her head and legs hanging downwards, until such times as she has succeeded in luring him to a distance from her

offspring, when she very quickly gives him to understand that she has the free use of all her members.



WOODCOCK CARRYING HER YOUNG.

When her progeny are in danger, she, moreover, not unfrequently removes them in the manner shown above, to a place of safety. "Once during a hare-hunt," writes my friend M. Anders Oterdahl, "I myself shot a Woodcock, flushed by the dogs, and when flying at about six feet from the ground, that was bearing an unfledged young one in her claws. It seemed to me she grasped it with her feet, one foot having hold of one wing and the other foot of the other. Though, owing to intervening branches, I did not observe the old bird when she rose, I was fortunately so near to her as clearly to see what I have stated. Afterwards I found two other young ones under a neighbouring bush, where they had retreated for safety."

When the above story appeared in my former work,

"Scandinavian Adventures," it was looked on by many both in Sweden and England as a fable; but from the number of similar instances since recorded, it is now, I believe, received as an admitted fact in both countries that Woodcocks, when their young are in jeopardy, not unfrequently thus convey them to a place of safety.

The statements we used to read of Woodcocks bearing their offspring from the woods where they reposed by day to their feeding-grounds at a distance, were also at one time looked on as inventions; but that such is really the case no one at the present day would for a moment venture to question.

In Scandinavia I never heard of the Woodcock as an aviary bird. On more than one occasion, young ones, three parts fledged, have been brought to me; but owing probably to improper food and treatment, they did not long survive. That it may readily be domesticated, however, is evidenced by the instance recently mentioned. The late Lord Derby, moreover, had one at Knowsley that, as I understood, throve exceedingly well, being daily supplied with worms, &c.

The Woodcock, generally speaking, is but little valued for the table in Scandinavia, which is the less surprising as our Northern neighbours have not much idea of dressing it properly. They are even Goths enough to throw away the *trail*, and as a matter of course the delicious toast is wanting. Ninety-nine times out of a hundred, moreover, instead of being "walked through the kitchen," as is, I believe, the correct rule, it is usually brought to table literally "done brown," and as dry as a chip. I of course speak of the rural districts, for in the capital and other large towns things are managed somewhat better.

Speaking of the Woodcock's "trail" reminds me of a rather ludicrous incident that occurred in the house

of a friend of mine. I had presented him with an old Capercali cock at a time when that bird, being far less known than at present, looked on as was a great delicacy. My friend in consequence invited a large party to discuss it. The question then arose as to how it was to be dressed? This was at length referred to the cook, and she in her turn had recourse to the cookery-book. Her master had told her that it was a "cock of the wood," which to her comprehension meant a "Woodcock," and it was in consequence prepared as such. But what must have been the astonishment of the guests at finding the unfortunate Capercali brought to table *trail and all*! And what made matters still worse, something very much resembling a young fir-tree was found in its stomach.

As a general rule, all the Woodcocks leave Scandinavia on the approach of winter,* though, if a very mild one, stragglers occasionally remain in the more southern parts of both Sweden and Norway, as also in Denmark. In two instances, indeed, I knew it to pass that inclement season in the near vicinity of Ronnum.

The departure of these birds from the Peninsula tallies with their arrival in England, the larger portion leaving at the end of October and beginning of November, the time somewhat varying according to the state of the weather. Unless delayed by storms and adverse winds on the coast, where numbers then often congregate, they would seem mostly to depart in dribblets rather than in flights. Whilst on their way from the interior to the coast, they are believed to travel by slow journeys, and to rest

* Strange to say, there are people in Sweden at the present day who entertain the very singular crotchet that the Woodcock—as is said of the Swallow—passes the winter months in a torpid state, at the bottom of a lake or river, and is revived in the spring by the genial warmth of the sun. It is not very long since, indeed, that the subject was seriously mooted in print.

frequently by the way. Hence, whilst migration lasts, which is commonly for three or four weeks, there is a constant change of visitors in the woods; for no sooner has one batch moved farther south, than another takes its place. When those that are bound for Scotland strike the west coast, it is probable that they at once cross the North Sea; but those whose destination is England and Ireland, it is believed, gradually edge down to the south of Sweden, as far, in short, as they can follow the land, before finally departing for our shores.

The late Bishop Stanley, in his very interesting work, "Familiar History of Birds," when speaking of the migrations of the Woodcock, says: "On their first reaching the eastern coast of England they are usually lean, poor, and often in a scurvy condition; but that this is not attributable to exhaustion on the voyage, is proved by the fact that those which are killed in Norway before migration has taken place are already found to be in an emaciated state, and infected with vermin." In this statement there must surely be mistake. That owing to baffling winds, and a long and stormy passage, the birds, in crossing the North Sea, may lose flesh, I can well understand; but that they should start from Scandinavia in the miserable plight spoken of is quite beyond my comprehension, because those shot by myself on the western coast of Sweden just prior to their departure—and they are numerous—were, as a rule, in excellent condition.

The return of the Woodcocks to Scandinavia in the spring also agrees with their departure from our shores.* They make their appearance in Scania towards the end of March or beginning of April, at first in scanty numbers,

* We in England believe that these birds revisit the selfsame localities year after year, and the same belief exists in the Peninsula; but I am not aware of the fact having been proved by actual experiment—I mean by *marking* the Woodcock.

but subsequently in somewhat larger flights than on their departure in the autumn. After resting a while in this province to recruit their strength, they gradually make their way into the interior. Many follow the western coast; and should the weather be mild, delay but little on the road, their flights being then longer, and their rests fewer, than during the autumn. But if, on the contrary, their progress northwards be impeded by ice and snow, as often happens, whereby the stream of emigration is, so to say, dammed up, they are compelled to remain for a time on the coast, where they are then often collected in considerable numbers.

In Denmark, also, the periodical visits of the Woodcocks agree in point of time with their arrival and departure from our shores. "Their spring migrations," says Kjærbølling, "commonly commence on the 12th March, though occasionally some days earlier, and continue for fourteen days; but at times, owing to favourable winds, for about four days only. They come to us and depart for the North in company with the Red-winged Thrush (*Turdus iliacus*), with a southerly wind, and return in October with a north or north-easterly one. Occasionally they wait for a fair wind to prosecute their journey, until the first days of November, or even later. Whilst migration lasts, they are plentiful everywhere."

In Norway, the spring migrations of the Woodcock are somewhat later than in Sweden and Denmark. "If the season be a mild one," writes Professor Rasch to me, "one sometimes meets with this bird in the south-eastern parts of the country, during the latter days of March, though, as a rule, not until the end of April; but in the south-western parts of Norway, where individuals occasionally winter, they are said to arrive in the beginning of April.*

* If this be correct, it seems pretty clear that the Woodcock, when migrating, steers a straight course across the North Sea.

One then finds them amongst brushwood on the hill-sides, where, in open places, snow-drifts often still remain; but their stay on the coast is short, as they soon spread themselves over the surrounding country. It is rare, therefore, to meet with many in the same locality, excepting at Frederikstad, where numbers are often seen congregated."

The migratory flights of the Woodcock are believed to be always nocturnal. No one, at least, either in England or Scandinavia, seems to have witnessed them in the day-time. It is also the general belief in the Peninsula—one that Nilsson would likewise seem to entertain,*—that the migratory flights of these birds are pretty much confined to moonlight nights. But this can hardly be the case, because the late Lieutenant Anders Uggla, an indefatigable sportsman, tells us that, "in the year 1845, these birds arrived in Scania between the 29th March and 10th April, when the nights were the darkest." The oft-recorded fact of Woodcocks destroying themselves on dark nights, by flying against the windows of light-houses, goes very far to prove the correctness of my lamented friend's statements.

It is also the commonly received opinion in Scandinavia that the Woodcock, when migrating, always flies, as a rule, *with the wind*; and from what Kjærbölling and others tell us, this would appear to be the fact. But if what Ekström says of the habits of the Thrush family, when

* "M. Borgström and M. Svedenborg, both distinguished sportsmen," says the Professor, "assure me, after the experience of several years, that Woodcocks for the most part arrive in Sweden during the full moon of Easter, when the nights are the lightest. This interesting information," he goes on to say, "can without doubt materially assist in clearing up several points relating to the migratory habits of these birds. As is known, birds of passage arrive in the night-time. Their earlier or later arrival in the same district in different years must thus in great degree depend on the nature of the nights."

speaking of their migrations from the interior to the coast prior to leaving the country, be equally applicable to the Woodcock, it does not seem to be always the case; for the flight of these birds (the Thrushes) is then, he says, “always *in the very teeth of the wind*, and, in preference, when it is blowing hard.” And Ekström is not alone in entertaining the theory, if such it can be called, of some birds of passage at least flying *against the wind*; for others tells us that “birds, if they can possibly avoid it, never take long flights *with the wind*, because their covering feathers then become ruffled, which inconveniences them; and their wings, moreover, are so depressed by the pressure of the air, that their flight is rather impeded than facilitated.”

In further corroboration of Ekström's theory, we have the evidence of the keeper of the light-house at Landsort—in the neighbourhood of Stockholm—which stands at an elevation of 148 feet above the sea:—“Of the numerous birds of passage that during migration fly on dark and misty nights against the ‘Lantern,’ one and all *strike it on the lee side*.” *

In concluding these few observations on the migratory habits of the Woodcock, I would remark, that it is necessity, not choice, that compels these birds, on the approach of winter, to leave their summer abode in the cold North for more genial climes. Their chief food, as shown, consists of worms, small beetles, &c., the breeding and existence of which are dependent on the state of the weather. On the coming of the frost, these retire to

* He further mentions that “on two several occasions Eider Ducks have flown with such force against the glass—at least two-tenths of an inch in thickness—as to smash it to pieces, and to force their way into the ‘Lantern’ itself, where by their fluttering they broke several glasses and injured the mirrors; but died shortly afterwards from the injuries they had received.”

their winter quarters, and the Woodcock being then unable to obtain the needful sustenance, is obliged to change its quarters, and whilst removing by slow degrees to the South, it renews, at its several halting-places, its attempts to obtain food. And its return to the North in the spring is equally easy of explanation; for in addition to its desire to revisit its old haunts, where it no doubt finds both climate and soil more congenial to its habits, is added another powerful influence,—the sexual feeling.

LAMENT OF THE BIRDS OF PASSAGE.

Behold! the birds fly
 From Gauthiod's strand,
 And seek with a sigh
 Some far foreign land.
 The sounds of their woe
 With hollow winds blend:
 "Where now must we go?
 Our flight whither tend?"
 'Tis thus unto heaven that their wailings ascend.

"The Scandian shore
 We leave in despair;
 Our days glided o'er
 So blissfully there.
 We there built our nest
 Among bright blooming trees,
 There rock'd us to rest
 The balm-bearing breeze;
 But now to far lands we must traverse the seas.

"With rose-crown all bright
 On tresses of gold,
 The midsummer night,
 It was sweet to behold.
 The calm was so deep,
 So lovely the ray,
 We could not then sleep;
 But were tranced on the spray,
 Till waken'd by beams from the bright car of Day.

“ The trees gently bent
O'er the plains in repose,
With snow-drops besprent
Was the tremulous rose.
The oaks *now* are bare,
The rose is no more ;
The Zephyr's light air
Is exchanged for the roar
Of storms, and the May-fields have mantles of hoar.

“ Then why do we stay
In the North, where the Sun
More dimly each day
His brief course will run ?
And why need we sigh ?
We leave but a grave
To cleave through the sky
On the wings which God gave ;
Then, Ocean, be welcome the roar of thy wave.”

When earth's joys are o'er,
And the days darkly roll,
When autumn winds roar,
Weep not, O my soul !
Fair lands o'er the sea
For the birds brightly bloom,
A land smiles for thee
Beyond the dark tomb,
Where beams never fading its beauties illume.

(*Chambers' Journal*, translated from the Swedish of Stagnelius)





M. Körner del.

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WOODCOCK SHOOTING AT FLIGHT-TIME.

Day & Son, Limited, Ltd.

CHAPTER XV.

The "Kors-Drag."—Ekström's Description.—The Lark-pipe.—Shooting at the Drag.—The Poacher's Expedient.—Shooting with the Pointer.—In Scania.—On the West Coast.—In the Island of Gotland.—In Southern Europe.—Traps and Snares.

FEWER Woodcocks, in proportion to their numbers, are probably killed in Scandinavia than any other bird coming under the denomination of game; and this is easily accounted for, as, excepting during migration, when they congregate to some extent in the more southern parts of Sweden and Norway, it is hardly worth any one's while to go expressly in search of them, owing to their being so very thinly scattered over the country.

The larger portion of those that are killed are probably shot during the pairing and breeding season at the "Drag," or "Rôding-stand," recently mentioned,—a practice that we in England would look on as little better than poaching. I myself, it is true, have occasionally taken part in the amusement, and might therefore, from personal experience, describe how matters are carried on; but as

Ekström is much more at home at this kind of "Jagt" than I am, and as he, besides, gives us much curious information in regard to the habits of the Woodcock, I prefer quoting his words to telling my own story:—

"Should the sportsman be unacquainted with the 'Drag,'" says the reverend gentleman, "he ought some fine evening to take a walk in the forest and ascertain its whereabouts; but in this he must be guided by the weather, for if stormy, the task would be hopeless. It should be calm, and, in preference, raw and cold, with a drizzling rain, as the Woodcock then rôdes best. Most commonly the 'Drag' is situated amongst hills and eminences, interspersed with morasses. The Woodcock seldom flies across the latter, but along their sides. When, therefore, one meets with a morass of a somewhat oval or oblong form, bounded by woods, one is pretty sure to find what is called a '*Kors-Drag*,' or spot where the birds that 'rôde' along the sides of the morass, and those that 'rôde' across the ends of it, intersect each other. The sportsman having found such a locality, stations himself there, and, if possible, on rising ground, partly to shorten the distance should the Woodcock fly high, and partly that he may be enabled to keep a better look-out. The trees, however, should not be too lofty, or the under-cover too dense, as in that case his view would be impeded, and he would be unable to see the bird until immediately above his head; and being thus obliged to fire somewhat at random, he would be very apt to miss it. When the trees on the spot selected by myself have been too high and close, I have lessened the evil by causing several to be cut down, so that an unobstructed view might be obtained. But this plan has not always succeeded; for though the stumps of the felled trees have been covered with moss, &c., the birds have taken the alarm and changed their 'Drag.'

“ During the first days of spring, the Woodcock commences ‘rôding’ the instant the sun has sunk below the horizon, but at a more advanced period somewhat before its total disappearance, and continues until night-fall. In the morning, it begins ‘rôding’ whilst still quite dark, and ceases previous to its being full daylight. When the bird ‘rôdes,’ there is always an interval between each *tour* and *retour*, which is more observable in the evening, when it goes and returns three several times. The first time it always flies high, and generally with rapidity; the second, its flight is but little above the tree-tops, and commonly slower; the third time still nearer the ground, and yet more leisurely; but it is then—especially in early spring—too dark to take proper aim. One ought, therefore, always to fire when it makes its appearance for the second time.

“ In the morning no one attempts thus to shoot the Woodcock. It ‘rôdes’ at so early an hour that it is difficult to distinguish the bird, and more so to take correct aim. Its ‘rôdings’ then last so short a time, besides, that when it becomes light enough to shoot they are over. Probably the female then lays her eggs, and the male, knowing this to be the case, puts off all thoughts of love until the proper season—the evening.

“ Though the Woodcock when on the wing,” Ekström goes on to say, “ seems in no hurry, yet its flight is very rapid, and it is not the easiest bird to shoot. Occasionally, indeed, it makes the inexperienced sportsman look very foolish; for when he has fired, it drops nearly to the ground, thus making him believe it to be killed; but presently recovering from its panic, it rises again in the air, and makes known by its *Orrt! orrt! pisp!* that it has escaped with a whole skin. A flash in the pan invariably causes the bird to diverge from its course, though not always downwards, as is generally sup-

posed; for in its endeavours to avoid the shot, I have sometimes seen it ascend obliquely upwards. If the sportsman be provided with a percussion gun, this manœuvre will not avail it at all times. But the Woodcock has other wiles. If, for instance, it has been previously persecuted, it always keeps a good look-out, and takes another course; and should the man have stationed himself in an open spot, and neglected to conceal his person, it will frequently wheel about suddenly and return by the way it came. A large proportion of the innumerable misses at the 'Drag' originate from the Jägare not having acquired the knack — a rather difficult one — of taking a rapid aim in the dusk of the evening.

"To avoid firing at too long a range," says Ekström, in conclusion, "I was accustomed in my youth, and before practice rendered the expedient needless, to repair to the 'Drag' whilst it was full daylight, and pace the distance to some of the trees in the vicinity; and when the birds made their appearance, was thus pretty well enabled to judge whether or not it was worth while to fire."

The fowler, when at the "Drag," I should observe, is often provided with a so-called *Lärk-pipa*, or Lark-pipe; and when the Woodcock is flying over his head, he, by imitating its call-note with this implement, so attracts its attention as often to cause it to stay its course for a second or two, and to hover, as it were, over his head, in which position the greatest bungler can hardly fail to hit it. The Lark-pipe is also often brought into requisition by the fowler in the autumn, when the brood has been flushed and dispersed.

The *Krypskytt*, or poacher, has another expedient, we are told, to beguile the poor Woodcock. He hides himself at the "Drag," and when the bird is immediately in front of him, he casts his cap high in air; on which the Woodcock, supposing the cap to be its mortal enemy the

Goshawk, at once alights on the ground, where it presently meets its doom.

This very destructive system of shooting Woodcocks at the "Drag," which is common throughout the length and breadth of Scandinavia, is bad enough in itself; but if confined to the early part of the spring, when birds have only partially paired, might be excusable enough. Unfortunately, however, it is in many places continued, and oftentimes by the first people of the land, throughout the whole summer,* when, to say nothing of the old birds, vast numbers of chicks, that are deprived of their natural protectors, must necessarily perish.

Of the slaughter committed amongst the Woodcocks, in Scandinavia, at the "Drag," some idea may be formed by what we are told by the Jägmästare Sylvan, who, when speaking of the island of Gotland, says: "These birds, which in the spring arrive here in thousands, are nevertheless in a short time decimated. If one goes into the forest of a fine Saturday or Sunday evening, one hears the most lively fusilade from all points of the compass; and even if the occasional call-note of one or other bird makes known that it has escaped harmless, it is nevertheless certain that immense numbers are thus shot during the pairing and breeding season."

Though the poor Woodcock is so generally persecuted, there are certain districts in Scandinavia where it altogether escapes molestation. "The only bird allowed to breed undisturbed in this part of the country," writes M. B., a resident of Nordmark, Wermeland, "is the

* I have now, indeed, a letter before me from a distinguished Norwegian sportsman, in which, when speaking of the Woodcock, he says: "No regular 'Drag' takes place after the commencement of July; but in the Frogneraasen, near to Christiania, I have shot three birds on the 7th July; and at Tind, in the Tellemarken, there was a good 'Drag' on the 10th July. In the autumn I have observed no 'Drag.'"

Woodcock, which is here very common. As with the Owl, it is looked upon as of ill omen, and when people hear its call-note at the 'Drag,' they lose heart, believing it to be a *Troll-fogel*, or bewitched bird, and this simply because, on alighting on the ground, it runs rapidly and unperceived from the spot. Its appearance, gestures, and bearing, which are at times comical enough, have, moreover, given rise in Nordmark to the strange notion that it is afflicted with epilepsy, and has the power of communicating that disorder to the individual who touches or molests it. This strange feeling has not only the effect of deterring people from pursuing or injuring it, but causes them to entertain for it both fear and aversion. Hence if a boy finds a Woodcock in a snare or trap, he not alone kicks it away from him with his foot, but spits three several times after it, as also on the spot where it has lain, to free himself from the *förtrollning*, or enchantment, to which he might otherwise be subjected." *

Many Woodcocks are likewise shot in Scandinavia to the pointer,† or other dog, during their autumnal and spring migrations. These birds are then often met with in considerable numbers in the more southern parts of the country, especially in Scania, their usual point of departure and arrival, as regards Sweden at least.

But the shooting in that province in the spring, at which time it is the best, depends much on the state of the weather; for if on the arrival of the Woodcocks the

* In the eyes of the superstitious, the act of *spitting* is considered as an infallible means of keeping the Powers of Darkness at a distance. Had space permitted, I could fill pages with similar stories.

† The dog used for Cock-shooting, it will be readily understood, should be perfectly steady, and not hunt far ahead; for if he be a wide ranger he will flush birds out of number, and consequently do more harm than good. If he is trained to *rapportera*, that is, to leave his point when he has found game, for the purpose of informing his master, he will be doubly valuable.

temperature be mild, and the ice and snow in great part gone, they rest only a short time before proceeding to their breeding-grounds in the far interior. But if, on the contrary, the season be an inclement one, and the country still fast bound in the iron chains of winter—or if subsequent to the coming of the birds, there should be a great “snow-fall,” as not unfrequently happens—they are detained in the covers on the coast for a long time, when shooting to heart’s content is then, by all accounts, to be had everywhere. Such was the case recently, as may be gathered from what follows :—

“The Woodcock Jagt in 1862,” says A. von B., “was the best known in the memory of man. The warm weather in the southern and midland parts of Germany hastened the departure of those birds to Zealand (Denmark) and Scania. The first of them, the head of the column, already appeared in the very beginning of March (commonly they do not arrive until about the 16th), and were gradually followed by the main body, which was in larger numbers than ordinarily. They afforded a rich harvest. But it was not confined to the first ‘Jagt;’ for, after the birds had remained the usual time on the coast, and had continued their journey a shorter or longer distance to the northward, there set in, at the commencement of April, a very severe frost, which compelled them to retrace their steps, and seek a warmer climate. In Scania there was, therefore, a second migration; but this time from north to south. They flew to and fro between Zealand and Scania. When the wind was from the north and east, the Danish Jägare had quite sufficient employment, and when, on the contrary, the wind was southerly or westerly, the cannonade was renewed in Sweden. It was not until the end of April that the last left us.

“If we assume that between 2,000 and 3,000 Woodcocks were killed in Scania alone during this long spring

migration, the estimate would certainly not be too high. That the Jagt in Zealand was also in an extraordinary degree successful, may be inferred from the fact that a Danish forest-keeper shot in the course of a few hours on the plantations of Hornbeck, two (Swedish) miles from the town of Elsinore, no fewer than thirty-five of those birds; * and as further evidence of their abundance, I may mention they were then sold in the Copenhagen market for 1s. 6d. the couple, the ordinary price being 4s. In spite, however, of the great destruction amongst them in the spring spoken of," the writer goes on to say, "the autumnal migration, which commenced in the first days of October, was very considerable. On one gentleman's estate, thirty-five couple—an unusual number—were killed; the last bird on the 22nd November."

Even in ordinary years, the spring Cock-shooting in Scania is very fair; and if a man is fortunate enough to obtain access to good coverts, several couple of these birds may any day be bagged. The disadvantage, however, of shooting at this season, is that the birds are usually in such very poor condition, that many would say they were hardly worth "powder and shot."

The autumnal Cock-shooting in Scania is inferior to that in the spring; but, as a set-off, the birds are then in good condition, and, as a rule, they lie well to the pointer, which is not always the case in the last-named season. The autumn—as well as the spring—shooting varies,

* M. Holst, whom I met last autumn in Scania, spoke of a similar slaughter, or it might be the very one spoken of above, in which he himself took part; viz., that a friend of his in Jutland on the 2nd April, 1862, bagged thirty-six Woodcock before four o'clock in the afternoon, when he was obliged to desist from shooting owing to the want of ammunition. For a part of the day M. Holst shot in company with this individual, and killed twelve birds in addition; so that together they bagged twenty-four couple, which, under the circumstances, was not bad work.

however, considerably, owing, probably in degree, to the state of the wind; for, some years Cocks are pretty plentiful, whilst in others comparatively few are met with. But even in the autumn some of my friends have been rather successful; amongst the rest "The Old Bushman," who, in a letter to me, says:—

"The autumn of 1849 I spent at Höganäs, near the town of Helsingborg. Towards the end of October a strong south-westerly gale set in, and our little harbour was filled with sloops weather-bound. On the 27th October two captains came down to me and asked me to go out shooting. We left at nine in the morning, and the whole of the day up to dinner-time was spent in drinking *finkel* (potato-brandy) with the farmers, and shooting Fieldfares and the like. About three o'clock in the afternoon, when on our road home, we came to a patch of oak scrub, probably about one hundred acres in extent, covered with stumps of trees that had been felled, and from which young shoots had grown up, forming bushes, as it were, to the height of two or three feet. The underwood was perfectly dry. As I was getting over the fence, a couple of Woodcocks rose at my feet. I shot right and left, and bagged one. I beat the place without a dog, and in about two hours bagged seventeen Woodcocks, one Hare, and one Black-Cock, out of about twenty-eight shots. The shooting was beautiful. I had several right-and-left shots, and I feel confident I flushed above one hundred couple of Cocks. I knocked off at last for want of ammunition; otherwise, I am sure I could have had fifty shots. The plantation was about three English miles from the sea-coast. I went there the next morning; but the wind had chopped round to the eastward, and I do not think five couple of Cocks were left. I do not recollect the state of the moon, but the weather was very fine, with strong gales."

Very fair Cock-shooting is also to be had during spring and fall on the coasts of Bohuslän and Halland, the latter being the adjoining province to Scania. Birds are here oftentimes pretty abundant, and as the woods consist, in great part, of coppice, the ground, as a consequence, is very favourable for both the sportsman and the pointer. In this line of country, as in Scania, I have known heavy bags to be made. A friend wrote me some years ago that, during the preceding spring he himself (aided on only one or two occasions by an acquaintance) had shot in about a fortnight $43\frac{1}{2}$ couple of Cocks, and on one particular day as many as 12 couple. This was in the vicinity of Gothenburg, and at a time when the birds were prevented by frost and snow from leaving the coast and proceeding to their breeding-grounds in the interior.

In the island of Gotland, again, where many Woodcocks breed, and where numbers of others rest for awhile during migration, the shooting is said to be exceedingly good, probably equal to, or better, than is to be found elsewhere in Sweden, the woods being generally open, and remarkably favourable for the gunner.

In Southern Norway good Cock-shooting is procurable during migration, especially in the spring, when the birds are often forced to remain awhile on or near the coast.

My own performances with the Woodcocks in Scandinavia have been very inconsiderable. In the interior of the country, which for the most part is one continuous forest, I never bagged more than two couple in any one day. These were shot casually, so to say, when I was in pursuit of other game; but supposing I had gone expressly in search of Woodcock, it is very doubtful if that number could have been doubled: and, even when shooting near the western coast during migration, I never, to my own gun, shot more than four and a half couple—an insignificant bag as compared with the feats of others;

but then it was never my fortune to fall in with anything resembling a "flight," as has not unfrequently happened to my acquaintances.

But, after all, what does the Cock-shooting in the Peninsula amount to as compared with that in Ireland or the more southern parts of Europe! I have now letters before me from old friends, narrating their exploits in those regions, which may be deserving of insertion here. The first is from the late Sir Hyde Parker, in which, when speaking of the Morea, he says, "We killed 450 Woodcocks in ten days, and the party that preceded us 650 in the same number of days." The second letter is from Mr. George Chichester Oxenden, in which he states that, "from January 14th to February 11th, with twenty days' shooting, Captain G. Fitzhardinge Berkeley and myself bagged 862 Woodcocks, 11 Hares, 11 Ducks, and 34 Snipes; together, 918 head. Our best day was fifty couple of Cocks and one Hare."

The Woodcock is also occasionally taken in Scandinavia in snares, as also in traps, such as the *Läm* and the *Fall-stock*, that are set for the Capercali and the Black-Cock; but I am not aware of any special contrivance being had recourse to for the capture of Woodcocks. Nets were formerly used for the purpose, but Linnæus, who mentions the fact, omits to describe their nature. He merely says, "they are suspended in the air in the track of the Woodcock, because it does not fly high."

CHAPTER XVI.

The Solitary Snipe.—Geographical Range.—Two Species?—Flight.—Retired Disposition.—Favourite Haunts.—Aversion to Wood.—Food.—Feeds only at Night.—Breeding Habits.—Migration.—Dish for a King.—Shooting at the Pairing-ground—To the Pointer.—Capture in Nets.—Diminished Numbers.

THE Solitary Snipe, Double Snipe, or Great Snipe (*Dubbel Beckasin*, or double snipe, Sw.; *Dobbelt Bekkasin*, or double snipe, Norw.; *Stor Bekkasin*, or great snipe, *Tredekker*, or three-decker, Dan.; *Scolopax major*, Gmel.), the second in order of the *Scolopax* genus, was likewise one of our summer visitants, and bred, it was believed, near to Ronnum, and most assuredly so on Tjurholmen, an island in the river Gotha, at no very great distance from the town of Gothenburg; for only last year an acquaintance of mine took its nest there. It also breeds, though very locally as it would seem, throughout a large portion of Scandinavia. As regards Sweden, it is much more abundant in the central provinces, especially in Upland, which would appear to be its head-quarters, than in the more southern or northern. Its limits to the north do not seem to be well ascertained; but

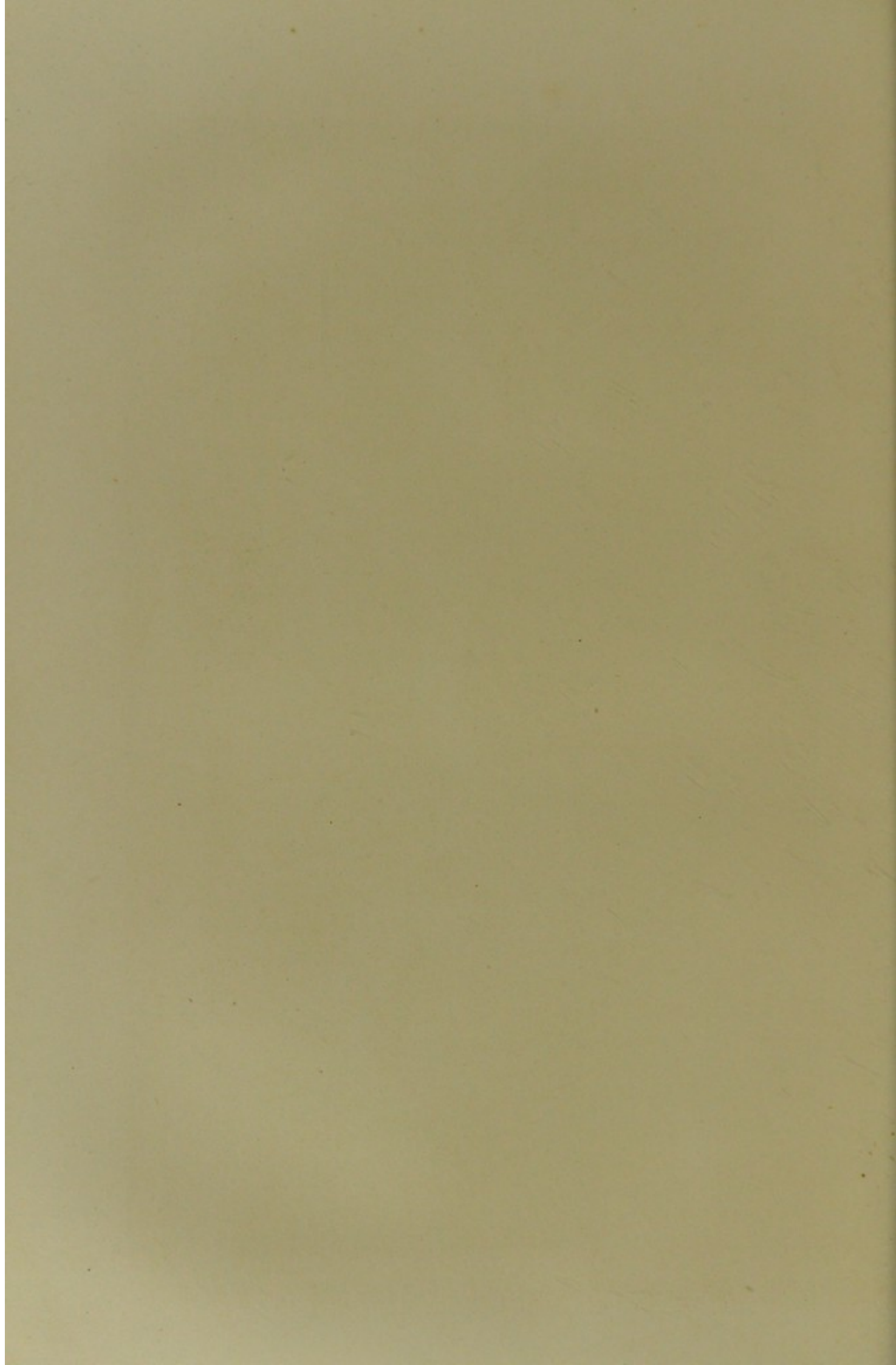


M. Korrer del.

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THE JACK, SOLITARY AND COMMON SNIPE.

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that it proceeds as high up as Bodøe, lat. 68°, on the western coast of Norway, is certain, because Mr. Oxenden Hammond met with it there.* I have my doubts, however, as to its breeding in the more northern parts of Swedish and Russian Lapland, because I neither met with it myself, nor does M. Malm make mention of it when enumerating the birds found in the surrounding country to the great Enare lake, lat. 69°.

The geographical range of the Solitary Snipe is very considerable, being found during the summer months not only in Scandinavia, but in all the more northern and eastern countries of Europe, and the western of Asia, as far at least as the eastern tributaries of the river Obis, in Siberia. But its limits are said to be more confined than those of its congeners, the Woodcock and the Common and Jack Snipe, and it is also said to be less numerous than either of those birds. It winters for the most part, I believe, in Africa and Asia Minor.

Sportsmen and others in Scania contend there are two kinds of the Solitary Snipe, one smaller, and the other larger, which they call *Stor Dublett*, *i. e.*, great double snipe, or *Tredäckare*, *i. e.*, three-decker. But Nilsson says, that "unless the female of the *S. major* be meant, I am unacquainted with the latter bird."

The Solitary Snipe is considerably larger than the Common Snipe; its usual length being between eleven and twelve inches, from tip to tip of wing nineteen

* "This was on the 17th August, 1851," so that gentleman wrote to me. "Our route lay across a bog, when the dogs hunted up a very great number of Solitary Snipes. I had never before seen them alive. They lay very close, and rose silently, flying a very short distance. The dog caught one, which I stuffed. If we had had guns with us, we could have killed a large number of these fine birds." The specimen in question was subsequently shown me by Mr. Hammond, and I can testify to its being, as he said, a young Solitary Snipe.

inches, and weight from six to eight ounces, according to age and the season of the year. The female is somewhat larger than the male. During spring and summer it is comparatively lean; but in the autumn, as a general rule, excessively fat; so much so, indeed, that on falling to the ground when shot, it at times bursts its skin; and should several of these birds be placed together in the pocket or the game-bag, the probability is that when one reaches home their feathers will be found quite saturated with oily matter that has exuded from their bodies.

The Solitary Snipe, independently of its superior size, may readily be distinguished from the Common Snipe by the most casual observer, by its shorter bill, its plumper look, and its grey spotted breast, and, when on the wing, by its outspread tail. The learned point out other differences between the two; amongst the rest, that whereas the Solitary Snipe has sixteen feathers in its tail (the outer ones of the adults being white), the Common Snipe numbers only fourteen.

The flight of the Solitary Snipe is somewhat slow and heavy, and almost invariably in a straight line, never zig-zag, as with the Common Snipe. When flushed, moreover, it never flies to any considerable distance, seldom, indeed, to more than two or three hundred yards. Just prior to alighting, it not unfrequently hovers, as it were, for an instant in the air, but more commonly casts itself at once to the ground as if dead, which, should it have been previously fired at, one might almost suppose to be the case. Occasionally, when rising from the ground, it makes a peculiar noise with its wings, for which the Swedes have not, as far as I am aware, a name, but the Germans call it *wuchteldes Getöse*.

We are told by more than one author that the Solitary Snipe, on taking wing, never gives utterance to any cry whatever. But this is not exactly the case; for, though

many are then quite silent, others do give forth a short and coarse sound, which may be represented by the word *bäd*. Some say this cry is confined to very obese birds, and only emitted by them the first time of being flushed, as afterwards they are altogether mute.

The Solitary Snipe would appear well deserving of its English epithet; for one never meets with these birds in flights, or "wisps," as with the Common Snipe. A good many, it is true, may occasionally be met with in near proximity to each other; but it is the goodness of the pasture, I take it, and not a social feeling, that thus brings them together. As evidence of such being the case, it may be mentioned, that should several be flushed at the same time, each one always takes its own independent course. Commonly, one only meets with a single bird, or a couple, at the same spot. It may happen, however, that three or four others, forming, probably, part of the same family, are lying close at hand, and which, on hearing the report of the gun, likewise take wing.

We are told by a writer in "*Svenska Jägarförbundets Nya Tidskrift*," — a periodical of great merit — that, "owing to the love entertained by the Solitary Snipe for low and marshy ground, bordering on water-courses, it follows that its dwelling-places are but little above the level of the sea; and this bird, therefore, belongs properly to the low lands of the Old World." But this must surely be a mistake; because we learn from the late Mr. Richard Dann, a good naturalist, who spent many summers in Scandinavia, that, to his personal knowledge, "the Solitary Snipe nests in considerable numbers in the mountainous parts of both Sweden and Norway, as high up as the range of the birch woods extend. . . . On the Dovre fjeld at Jerkin, and at Fogstuen, some thousands of feet above the sea-level," he goes on to say, "they are numerous on the grassy

swamps, avoiding the wet. They also frequently resort to the small rills used for irrigating the land. Their nest is placed on a hummock or tuft of grass, near the willow bushes on the borders of swamps."

The testimony of Professor Rasch is equally conclusive as to the Solitary Snipe nesting in alpine countries; for, in reply to my inquiries on this point, he says: "As regards the southern portion of Norway, it breeds almost exclusively in that tract of the fjälls called the 'willow region' (*zona salicum*), though it is sometimes found nesting in the highest range of the birch region. I have only observed it on a single occasion hatching in the lower country. It chooses principally for breeding-grounds the vicinity of alpine 'shealings;' in the luxuriant grass near to which one often sees the tracks of these birds, the old hen taking her chicks there a short time after they are out of the shell. The region frequented by the Solitary Snipe during the summer ranges from 2,500 to 3,500 feet above the level of the sea. During our Ripa Jagt, in the latter part of August, we have often shot it in the same region where the Fjäll-Ripa is found, particularly where the broad-leaved willow (*Salix lanata*) thrives.

The Solitary Snipe, though often found in bogs and marshes, would seem much less partial to wet ground than either the Common or the Jack Snipe. Indeed, one most generally meets with it in comparatively dry places; such as tussocky moors and pastures, and not unfrequently in stubble fields, though it may be at no great distance from ditches, rills, or the like. It is said to give the preference to soils consisting of clay or mould, and to avoid such as are sandy, on account of the great dearth of worms.

Localities overgrown with *starr-gräs*, or sedge-grass, are its favourite resorts; and hence, in Germany, this bird is called the *Ried-Schnepfe*, or sedge-grass snipe. This

grass would almost seem to be essential to its existence, in the breeding season at least; for if, owing to increased cultivation, or other causes, it disappears, the bird, we are told, deserts its usual haunts, and nests elsewhere.

We are further informed that the Solitary Snipe has an invincible aversion to localities even partially overgrown with wood; and that during the breeding season it never dwells in a so-called *Skogs-äng*, or bushy pasture. But, bearing in mind Mr. Dann's remarks as to its nesting near willow bushes, &c., I must confess to some doubts as to the correctness of this statement; the rather as, during the autumn, when these birds are migrating, it is not at all unusual to meet with them amongst scattered scrub bushes, where the ground is wet and marshy.

The Solitary Snipe would not appear to be erratic in its habits, at least during its stay in Scandinavia. We are told, indeed, that from its first arrival in the spring to the end of July, when migration commences, it confines itself almost entirely to the moor or the meadow that it has selected for its summer abode, and seldom or never leaves it unless it may be to repair to its *Lek-ställe*, or pairing-ground.

Its food consists of larvæ,* water insects, and small

* "From the food, and the remains of food, found in the Solitary Snipe's stomach, which is the thinnest amongst birds of the *Scolopax* tribe," says Sir Humphrey Davy, "I think I have ascertained that it requires a kind of worm, which is not found in winter even in the temperate climes of Europe; and that it feeds differently from the Common Snipe. There are certainly none found after the end of October in either Illyria or Italy; and I believe the same may be said of the end of May, as to their summer migration, or their breeding migration. I have opened the stomachs of at least a dozen of these birds, and their contents were always of the same kind: long, slender, white, hexapode larvæ, or their skins, of different sizes, from that of the maggot of the horse-fly to one thrice as long. I believe all these insects were the larvæ of the different species of the *Tibula* (flies known by the common designation of Father Long-legs). In the Common

snails, and worms. It is not probable that it partakes of any sustenance that is above ground ; for though vegetable matter and the fibres of roots have at times been found in its stomach, it is most likely that they have been swallowed along with its own proper food. Its digestion is rapid ; and it is only in individuals that are shot early in the morning that one can discover the least trace of undigested food. Its "droppings" are usually of a dark-green colour, and very thin.

"It is not its eye," we are told, "that serves it to obtain food, but the feeling excited in the point of its bill, so rich in nerves. This it inserts in the ground to the depth of about an inch ; and if there be anything living there, it at once grasps it. The aperture made by its bill looks as if formed by a slate pencil, and several of them are often observable immediately near to each other."

It would seem the general opinion in Scandinavia that the Solitary Snipe feeds during the daytime ; but observant and well-informed persons assert, on the contrary, that, if left undisturbed, it then remains stationary, and probably sunk in slumber. At such times it for the most part lies between two tussocks, against which it leans its body in a horizontal position ; its neck somewhat drawn in, or contracted, so as to appear thick ; its bill inclined downwards, the tip of it occasionally touching the ground, and its legs drawn up, but not bent, so that it still stands on its feet. Its position at such times is thus different from that of gallinaceous birds, which draw in the neck altogether, and bend the tarsal joint so that they rest on their bellies. Such is the posture of the bird when it and

Snipe's stomach, which is stronger and larger, I have generally found earth-worms, and often seeds, rice, and gravel. I conjecture that in the temperate climates of Europe most of the aquatic larvæ on which the Solitary Snipe feeds are converted into flies in the late spring and autumn, which probably limits the period of their migration."

the sportman first catch sight of each other ; and (except whilst casting a side-long glance at the enemy, when it gradually raises up its short and light-coloured tail, till the latter stands nearly at right angles with its body) in this posture it continues until it becomes alarmed, or tired, when it hurriedly draws up his legs, in preparation to spring from the ground, and at the next instant takes wing and flies away.

Thus it rests during the daytime, and it is not until the approach of evening that hunger compels it to rouse itself from its lethargy, and to look out for food. This it seeks only in wet and moist places. Sometimes, at night-fall, it has been observed to fly to an open spot, free from grass, on a foraging expedition. Here it marches to and fro with its legs, and neck outstretched, searching for food. Probably it again rests during the darkest period of the night, and at early morning recommences feeding.

The Solitary Snipe is believed to be polygamous. Like the Capercali and the Black-Cock, it has its pairing-ground, where affairs matrimonial are carried on. "I was already an old sportsman of thirty years' standing," says M. Greiff, "before it came to my knowledge that these birds had their 'Lek-ställe' on a morass, where there was a good 'Orre-Lek.' I had heard their cry, during a whole spring, but not seeing anything, I concluded it was occasioned by frogs. At last, however, I discovered that it proceeded from Solitary Snipes, which looked like so many large rats as they ran about amongst the tussock. The cry commenced with a sound resembling the smack of the tongue, and was followed up by four or five others still louder, and finished with a *sugning* or sucking-in of the breath, as it were, during which time the bird swelled itself out in the manner of a Peacock, and flapped its wings."

Again : "As the Solitary Snipe only inhabits wet and

marshy ground," says Dr. Söderberg, "so it also selects such for its 'Lek-ställe.' That with which I am particularly acquainted, is situated on the outskirts of an extensive morass, studded here and there with bushes, where the ground is open and dry, and low sedge-grass grows between the tussocks. On the same spot, which cannot be more than 1,000 to 1,200 feet in circumference, they have held their 'Lek' for several consecutive years; and though there are equally favourable localities in the vicinity, I could never discover that they had any other place of rendezvous than the one in question.

"At dusk the birds begin to collect from all parts of the surrounding country.* For some time they keep perfectly quiet, and concealed among the grass, where they lie so close that one may almost trample on them before they can be induced to rise on the wing. When, however, night has fairly set in, the 'Lek' commences somewhat in the manner of that of the Black-Cock, and in this wise:—They strike up together a slow whistling sort of song, which nearly resembles the squeaking of mice. The first simple notes, which may be expressed by *hŷ, hŷ, hŷ, hŷ*, gradually increase in rapidity and sharpness, and finally become confusedly mixed up, and finish with several clear and long-drawn *pīū-pīū*, which are not without a certain melody. During the song, some one individual joins in with a sort of *bass*, like an air-bubble which bursts on rising to the surface of the water; and I at first imagined that it proceeded from a bird running through a puddle. This note is even more distinctly

* Curiously enough, all the birds frequenting these rendezvous are believed to proceed to them on foot. M. Gardain tells us, indeed, that though he repaired to a 'Lek-ställe' at so early an hour as five o'clock in the afternoon, he could not observe any to arrive there flying; but that later in the evening, when the 'Lek' commenced, a great number took part in it.

heard than the song itself, and has probably given rise to the belief that the 'Spel' of the Solitary Snipe resembles the *knäppningar*, or first note of the Capercali. Taken altogether, the chorus of these birds, which in calm weather is audible at a distance of from 150 to 200 paces, forms a far from disagreeable symphony, especially when heard during the hours of darkness.

"At the conclusion of each of these songs there always ensues a considerable pause, during which the birds run to and fro amongst the tussocks in chase of each other, fighting, and making a great hubbub. They are not at all afraid; and if the spectator remains perfectly quiet, will occasionally come running close up to him; and even should he raise himself from the ground, they will only retreat a short distance, and soon return again. A shot, indeed, does not alarm them greatly. At length one of the company—but I cannot take on myself to say that it is always the same individual—hops on to a tussock, stretches himself and flaps his wings, and commences a new song, in which all the rest immediately join. In this way the 'Lek' is kept up until midnight, when all remains hushed for a while; but at early morn it commences afresh, and continues until daylight.

"It is a moot point," the Doctor goes on to say, "whether or not both males and females take part in these gatherings, but it is one not in my power to solve; for, owing to the 'Lek-ställe' in question being some ten miles from my home, the opportunities I had of visiting it were very few. It is remarkable, nevertheless, that the seven birds I myself captured were all males. The matter in dispute is a weighty one, in regard as well to the natural history of the Solitary Snipe, as to the propriety of killing or sparing it during the pairing season. If it be polygamous, and that males alone are present at the 'Lek,' one might, without injury, kill a few of them;

but if, on the contrary, the females take part in the 'Lek,' they should be left for shooting in autumn with the pointer. It is possible, however, that the females are present at the 'Lek' in the early part of the spring, and do not retire from it until they have laid the full complement of eggs and commenced sitting; and that, subsequently, the 'Lek' is continued by the males alone. This I am inclined to believe is the case, because my own captures were made at the end of May, when the birds were very lean; and if so, provided that these birds do not breed twice within the year, they (the males) need not be spared. At what period in the spring the 'Lek' commences, I cannot state; but even at the end of May it was carried on with full vigour."

The number of Solitary Snipe that congregate at the 'Lek-ställe' depends of course on their abundance or scarcity in the vicinity; but that they are occasionally very numerous, may be inferred from the slaughter committed. It is said that, however their numbers may be reduced by the net or the gun, the survivors will continue to resort to the spot.

The Solitary Snipe, as observed, breeds both in the lowlands and in the highlands of Scandinavia. About the beginning of June the female forms her very simple nest, consisting of a few blades of grass, either in the depression of a tussock or between two tussocks. Her eggs, commonly four in number—longer, but less thick, than those of the Woodcock—are pear-shaped, and pale olive-green in colour, with large black spots and blotches, especially at the thicker end. Their usual length is 1 inch 6 lines, and thickness 1 inch 2 lines; but they vary greatly in size. Often, indeed, one finds an egg in the nest of this bird considerably smaller than the remainder. "As out of a lesser egg weaker chicks are produced, so in this fact we have an explanation of the

common observation, that of all birds, the Solitary Snipe differs more in size than almost any other. Not unfrequently, indeed, one meets with an individual not much larger than the Common Snipe, whilst others again approach the Woodcock in bulk."

Whilst the female is incubating, one may almost tread on her before she can be induced to desert her eggs, and even when flushed she flies but a short distance, and soon returns to them again. "I question," writes Professor Rasch to me, "if the male seeks for or remains with the female whilst she is sitting; but when the young are led by their mother to the feeding-places mentioned, near to the alpine 'shealings' (see page 218), he is undoubtedly with his family." The chicks are hatched in from seventeen to eighteen days, and begin to run, as the saying is, "with the shells on their backs." In their downy state they have a very singular appearance, and then much resemble the young of the Common Snipe. They grow very rapidly, and by the 1st of August are in a fit state to shoot.

The Solitary Snipe is the first of the genus *Scolopax* to migrate from Scandinavia. Some usually depart as early as the beginning of August; and though stragglers may remain after the middle of September, the main body are usually gone by that time. During certain seasons, however, these birds leave the country at a much earlier period than at others. The cause is not exactly known, but it is thought probable that the greater or lesser moisture of the ground, and the consequent greater or lesser facility in obtaining sustenance, has much to do with it. In proof of this being the case, it may be mentioned that in 1860, when there was a great deal of rain in the month of August, they remained in the more central parts of Sweden until the 20th of September; but the previous year, when the weather was very wet during the whole

summer, they left that part of the country in the middle of August, or say a whole month earlier.*

The migrations of the Solitary Snipe are said to take place simultaneously—that is, at the same time as the birds bred in the southern parts of the country depart for foreign lands, those that have passed the summer months in the interior and far North, leave their breeding-grounds for the coast. These, as with the Woodcock, are believed to travel by slow journeys, resting frequently by the way. At their several halting-places there is, therefore, a constant change of visitors; for as the one batch moves farther south another succeeds it, and thus the movement goes on as long as any remain in the country.

As with other defenceless birds, the migrations of the Solitary Snipe always take place in the night-time; not, however, in greater or lesser flights, as with several other birds of passage, but singly, or in couples, or it may be in families. On leaving the Scandinavian shores, they steer a much more easterly course than their congeners the Woodcocks, and the Common and the Jack Snipe (of whom so many regularly winter with us in England), as is evident from the fact that it is only on rare occasions that they visit our country, and then, probably, owing solely to having been driven there by northerly gales in the autumn, or easterly in the spring.

Although the Solitary Snipe is the first of the Scolopa-

* Sir Humphry Davy would appear to entertain the like view of the subject; for when speaking of the Solitary Snipe he says: "Their late passage this year (1828) would seem to have been an indication of a wet summer in the north of Europe; but to form an opinion upon facts of this kind requires much knowledge and caution. The perfection of the larvæ of the *Tibula* on which this Snipe feeds, depends upon a number of circumstances: the temperature of the last year; the period when the eggs were laid; the heat of the water when they were deposited, and the quantity of rain afterwards."

eidæ to depart from the Peninsula in the autumn, it is the last to return in the spring; for in Scania, where these birds first land, they seldom make their appearance before the end of April or beginning of May; and in the far North, for instance, at Bodøe, lat. 68°, on the western coast of Norway, not until the end of May; that is, they revisit Scandinavia a full month later than the Woodcock or the Common and the Jack Snipe. Kjærbølling assigns the end of April as the period of this bird's arrival in Denmark when on the way to its breeding-grounds in the far North, and September as that of its return.

In closing these few remarks on the migrations of the Solitary Snipe—of which we in England are so much in the dark—it may be proper to add those of Sir Humphry Davy, who seems to have studied the habits of this bird more than any one with whose works I am acquainted:—“In the autumn,” he says, “they pass more to the east, both because they are aided by westerly winds, and because the marshes in the East of Europe are wetter at that season; and in the spring they return, the larger portion through Italy, where they are carried by the Sirocco, which at that time is extremely wet. . . . In 1827, the Solitary Snipe passed through Italy and Illyria between the 15th of March and the 6th of May. I heard of the first at Ravenna, the 17th of March, and I shot two near Laybach on the 5th of May; but though I was continually searching for them for a fortnight after, I found no more. This year they returned from the North early, and I saw some in the marshes of Illyria on the 19th of August. In 1828 they were later in their vernal passage, and likewise on their return. I found them in Illyria through May, as late as the 17th, on which day I shot three, and they did not reappear till the beginning of September. I found one on the 3rd and three on the 4th, and twenty were shot on the 7th.”

The Solitary Snipe, when fat, is looked on as the most delicious of its genus; and if justice be done to it in the kitchen (as rarely happens in Scandinavia), is in reality what the peasants call "*kungs-mat*," or a dish for a king; and being thus valued, is, as a consequence, a good deal sought after.

Many are shot at the '*Lek-ställe*,' of which mention was recently made. "For him who has good eyes and quick hearing," says Dr. Söderberg, "it is only needful to shoulder his fowling-piece, and proceed to the nightly rendezvous of the Solitary Snipe, and there wait in perfect silence for a renewal of the broken-off concert, and be in readiness to knock over the first that ascends a tussock; but from the darkness, and the resemblance the bird bears to withered grass, stumps of trees, &c., it is no easy matter, unless one be very near, to distinguish it. This kind of Jagt," he continues, "succeeds best in the morning at daybreak; but under any circumstances it is not possible to avoid shooting wide of the mark." The number of Solitary Snipes thus shot is hard to say; but we read of a '*Lek-ställe*' in the vicinity of the town of Upsala, where some seventy of these birds were killed in 1862.

But the greater number of these birds that fall to the gun are shot during their autumnal migrations; which is the less surprising, as, from their flight being slow and heavy, and always in a straight line, they present the easiest mark imaginable.

At the season in question, admirable sport in certain localities is obtainable in both Sweden and Norway, as may be gathered from what follows:—"At the end of July, when the meadows are mown," says M. Greiff, "shooting commences with the pointer, and continues until the end of September. They may also be shot in the spring; but I have remarked that this is injurious to the autumnal Jagt. In the whole round of sporting

this is the most amusing. They are very easy to shoot, and, where preserved, fifty or sixty, or even more, may be killed in a day."

"I myself," writes Professor Rasch to me, with reference to Norway, "never killed more than forty-two Solitary Snipes in any one day; and the late Colonel Helgesen shot sixty-one on the same day; but M. Isaksen is reported to have killed upwards of seventy in the same space of time. These Jagter," the Professor continues, "were formerly conducted on some flat and low islands in the river Glommen, near to where it falls into the lake Öieren, but the peasant proprietors themselves have now learnt to shoot flying, and are well paid for their booty, and no one at the present day is, therefore, allowed to sport thereabouts."

It is on record, moreover, that in the autumn of 1847, when the Solitary Snipes were unusually numerous, five hundred of these birds were shot in the *Kungs-äng*, or Royal meadow, near Upsala.

My own doings with the Solitary Snipe have been very unimportant. Altogether, it is true, I have shot a good many of those birds, but never any considerable number on any one occasion. The best shooting I ever had was one afternoon, near the town of Gothenburg, where on a small extent of marshy land, I bagged ten and a half couple. I then saw only a very few, probably not more than five or six, besides those shot. But, comparatively scarce as they were, yet had the day been before me, and a sufficiency of country, there is no doubt I might readily have doubled or trebled the number stated.

Many Solitary Snipes are taken in the *Stick-Nät*, spoken of at page 61 of this volume. "That used for the capture of these birds is," Dr. Söderberg informs us, "from 30 to 40 feet in length, 10 to 12 inches in depth, with meshes about one inch square. Sometimes it is

provided with a '*grimma*,' or 'walling,' but not always; for if one keeps a good watch on the net when set, this addition is not needed for so small a bird as the Snipe. Should the net, however, be left unattended the whole night, the 'walling' is an advantage, as it is then next to impossible for the captive to extricate itself from the meshes. The net should be dyed green. It is placed in a zigzag form amongst the tussocks at the '*Lek-ställe*,' and in such wise that if the bird follows the one *nät-sträckning*—or space between two of the pegs that fasten the net to the ground—it becomes entangled in the next, which forms an angle with it. And it has happened to me," the Doctor proceeds, "that when one of the birds has been chasing a rival, both have been made prisoners in the same compartment of the net."

The *Stick-Nät* would seem to be a very destructive engine; for we read that "no less than sixty Solitary Snipes have been taken in one of them at a pairing-ground in Upland in the course of a single night; and still," the record goes on to say, "their numbers on the following night seemed not materially diminished."

Besides the *Stick-Nät* I am not aware of any device being employed in the Peninsula for the capture of the birds in question; but in parts of Denmark, Kjærbølling tells us, a sort of springe, that will hereafter be described, is employed for the purpose.

The Solitary Snipe, like other birds of chase in Scandinavia, are said to have greatly decreased in number of late years, partly attributed to the diminution of their favourite breeding-grounds, owing to increased cultivation, but principally to the exterminating war made on them during the pairing season by both nets and guns.

CHAPTER XVII.

The Common Snipe.—Widely dispersed.—Accidental Varieties.—Resorts.
—Food.—Social Habits.—Breeding.—It drums.—Curious Legend.
—Migration.—The Jack Snipe.—Extensively spread.—Snipe-shooting.
Widtsköfle.—The Ruff.—Its Pugnacity.

THE Common Snipe (*Enkel Beckasin*, or single snipe, Sw.; *Skuddeföll*, or horse of the mist, Norw.; *Dobbelt Bekkasin*, or double snipe, Danish; *Scolopax Gallinago*, Linn.) was a summer visitor with us, as also throughout the length and breadth of Scandinavia, as high up at least as the 70°; but it is much more plentiful in the midland and southern parts of the Peninsula than in the far North. In Denmark it is also very numerous. The Danish name for this bird is identical, it will be noticed, with that by which the Solitary Snipe is known in Sweden. Naturalists and sportsmen will therefore do well to bear this circumstance in mind, or otherwise great mistakes may be made.

The Common Snipe is much more generally distributed than its congeners the Woodcock and the Solitary

Snipe, as it belongs not only to the Faunas of almost all European countries, but to many of Asia and Africa.

This bird measures from ten to eleven inches in length, and from tip to tip of wing seventeen to nineteen inches; the bill alone is near three inches long—longer, in short, than that of the Solitary Snipe, which bird, as shown, is of considerably greater size. It weighs about four ounces. According to Nilsson, the female is somewhat larger than the male; but Kjærbölling tells us the reverse; so, as doctors differ, the reader must decide the matter for himself. The flight of this bird is very rapid, usually zigzag, and against the wind. Commonly its *katsch! katsch!* is heard on its rising from the ground, and generally it flies to a considerable distance before again alighting.

Accidental varieties of the Common Snipe are occasionally met with. We read of individuals wholly white, or white with rusty-red streaks, and of others more or less marked with white.

The learned in Germany appear to believe in the existence of a second species of the Common Snipe, to which they have given the name of *S. Brehmii*. In regard to size and colour, this bird is described as bearing nearly a perfect resemblance to the *S. Gallinago*, the only material difference being, that whereas the Common Snipe has only fourteen tail-feathers, the *S. Brehmii* numbers sixteen. Swedish naturalists, however, think it probable that the newly-discovered species is a mere variety of the *S. Gallinago*.

Wet and marshy grounds are the favourite resorts of the Common Snipe. One oftentimes meets with this bird, it is true, amongst dry heather, or the like, or it may be in stubble fields; but this I take to be the exception and not the rule.

Its food consists of worms, insects, larvæ, and mollusks. Digested grass and other vegetable matter have occasionally

been found in its stomach ; but these it is thought have accidentally found their way there along with its proper sustenance.

We in England entertain the notion that the Common Snipe is a social kind of bird, and one that from choice associates with its fellows. Swedish and Danish naturalists tell us, on the contrary, that "though large numbers are not infrequently met with in the same morass, they always lie separate from each other ;" thereby implying, I imagine, that it is the favourable nature of the feeding-ground, and not a feeling of sociability, that causes them thus to consort. This is somewhat incomprehensible to me, because both in the English fens and in Ireland, one very often flushes them from the selfsame spot in flights or wisps.

Whether the Common Snipe is polygamous or monogamous I am not prepared to say. The learned in Scandinavia tell us that "during the pairing season they run after each other in nearly the same manner as the Ruff, and one can then readily approach to within gun-shot of them." But of this matter I have neither personal knowledge, nor has any written description as to the manner in which these birds make love hitherto met my eye.

During the pairing and breeding season, especially in fine and calm weather, the Common Snipe, as is well known to sportsmen, is often heard to "drum" over one's head. On rising into the air on these occasions, it cries *dicka ! dicka ! dicka !* or rather, perhaps, *vittja ! vittja ! vittja !* and after attaining to a certain height, descends rapidly again to the ground ; in which while its wings quiver, as it were, and one hears a singular neighing kind of noise. This noise, which is common to both sexes, long puzzled the learned ; some imagining it proceeded from the bird's bill, and others from its throat. M. Altum has now, however, satisfactorily proved that it originates

from neither the one nor the other, but is caused by the air forcing itself, during the bird's rapid descent, through the quill feathers of its outspread tail.

The neighing kind of noise in question made by the Common Snipe during the breeding season has caused it in Germany to be called the *Himmelsgeiss*, or heaven's goat; in Norway, the *Skuddeföll*, or horse of the mist; and in parts of Sweden, the *Horsgök*, or horse cuckoo; and many believe to this day that at one period it was a veritable steed. "Once on a time," so runs the legend, "a peasant had a horse, which for several days together was led by a servant to a distant pasture entirely destitute of water, without the animal having been previously allowed to drink. One fine afternoon both master and man proceeded to the field, which was well fenced, for the purpose of fetching home the horse; but on arriving there they found, to their great surprise, that he had vanished altogether. Whilst pondering on the matter, they, to their still greater wonderment, heard a neighing overhead, and the next instant saw the lost steed quietly drinking from a spring in an adjoining pasture. They hastened to secure the animal; but as soon as he had drunk his fill, and under their very eyes, he was transformed into a Snipe, and forthwith flew up in the air, where he was afterwards heard neighing as long as daylight lasted."

The Common Snipe, like the Solitary Snipe, breeds both in the lowlands and in the mountains; at times, indeed, very high up on the fjälls. The female makes a very inartificial nest on marshy ground, on or near to a tussock. Her eggs, usually four in number, greatly resemble, in form and colour, those of the *S. major*, but are somewhat smaller. "The young Snipe," Sir Humphry Davy tells us, "soon become of an enormous size, being larger before they can fly than their parents. The old birds are exceedingly attached to their offspring, and if

one approaches the nest, make a loud and 'drumming' noise above the head, as if for the purpose of distracting the attention of the intruder."

The Common Snipe, according to Nilsson, first appears in Scania from the 15th to 20th March. The earliest comers, still in a state of moult, are males; the females appearing later. The autumnal migration commences about the middle of September, and by the end of October they have for the most part left the country. Kjærbölling also assigns the middle of March as the time of this bird's arrival in Denmark, and October as that of its departure from thence.

The Jack Snipe, or Judcock (*Half-enkel Beckasin*, or half-single snipe; *Rör-Snäppa*, or reed-snipe, Sw.; *Smaa-Bekkasin*, or little snipe, Norw.; *Stum Bekkasin*, or silent snipe, Danish; *Scolopax Gallinula*, Linn.) was very rare in the Ronnum country during the summer; and the like may be said to be the case at that season in all the more central and southern parts of Scandinavia; more so, possibly, however, in imagination than in reality, owing to this bird lying so close in the long grass as seldom to take wing unless one almost tramples on it. But in the autumn, during migration, it was numerous with us, and everywhere else in the south of Sweden, and probably of Norway also. In Denmark, spring and fall, it is common, and according to Kjærbölling, breeds there once in a time.

It arrives in Scania towards the end of March, either alone or in company with the Common Snipe, and the migration continues until the middle of April. The males are said to arrive first, the females not until eight days afterwards. In the autumn, it is the last of the *Scolopax* genus to leave the country, many remaining in the more southern parts of Sweden until the end of November or beginning of December; and if the season

prove unusually mild, stragglers occasionally winter there. On the 28th of February, 1858, indeed, I myself shot at a Jack Snipe that rose from a small open rill near the town of Wenersborg.

In the early part of the autumn this bird was much less plentiful in my neighbourhood than the Common Snipe; but as the season advanced, and the latter began to leave us, the Jacks became much more numerous; and even after the Common Snipe had all but disappeared, and the frosty nights had set in, they not unfrequently remained on our bogs until quite late in November, when I have shot many of them.

The geographical range of the Jack Snipe is very considerable, being found in almost all European countries; as also, according to Pennant, in Siberia. The Russian naturalists met with it in the vicinity of the Caucasus, and Colonel Sykes includes it amongst the birds of the Deccan. Strickland says it is abundant at Smyrna in the winter time.

The Jack Snipe is by far the smallest of the genus *Scolopax*, being little more indeed than half the size of the *S. Gallinago*; its length is about eight inches, expanse of wings fourteen inches, and weight two ounces. The female, Nilsson tells us, is less than the male.

The flight of this bird is straighter and less rapid than that of the Common Snipe, and it seldom flies to a distance of more than a few hundred paces before alighting. It seems to be the general belief that on rising from the ground it utters no cry whatever; and hence its Danish designation of *Stum Bekkasin*, or the silent snipe. But if I am not greatly mistaken, one does at times hear a slight sound of some kind proceed from the bird.

The Jack Snipe is quite as unsocial a bird as the *S. major*, being seldom met with otherwise than singly

or in pairs. Once in a time, it is true, three or four are found nearly together; but these constitute, I imagine, a family; or it may be the locality affords more than usual attractions. In other respects its habits would seem greatly to assimilate to those of the Common Snipe. "It feeds," says Sir Humphry Davy, "on smaller insects than the *S. Gallinago*: small white larvæ, such as are found in black bogs, are its favourable food; but I have generally found seeds in its stomach,—once hempseed, and always gravel."

Some few Jack Snipes nest, as said, in the midland and southern portions of Scandinavia, and a pair or two, there was every reason to suppose, at no very great distance from Ronnum.* But the great breeding-grounds of these birds, so far as Scandinavia is concerned, I believe to be amongst the Norwegian† and Lapland mountains, especially the latter—whence, of late years, very many of their eggs have been sent to this country—and often at an elevation of several thousand feet above the level of the sea.

According to Kjærbølling, the female makes her nest in a marsh, and lays four eggs, which are shorter and

* When duck-shooting two or three years ago on Kollands-Ö—a large island in the Wenern, thirty to forty miles to the north of Ronnum—I was informed by my companion, M. Teuckler, that the Jack Snipe most certainly nests there; that he has on several occasions shot the young birds when hardly able to fly, and with blood-feathers still in their wings; and that his dog has caught others.

† "In Southern Norway," so Professor Rasch writes me, "I have not found the Jack Snipe breeding; but doubtless such is the case, as I have shot it in Gulbrandsdalen during the first days of August. A few pairs are said to nest on the extensive *Fjeldmyr*, or alpine morass, between Fogstuen and Jerkin, on the Dovre-fjeld. According to M. Barth, it breeds in the Lofoden islands, and the Reverend M. Sommerfeldt observed it in East Finmark in 1857, where it nests in marshy ground, intersected by rivulets, in the willow region."

rounder, and less pear-shaped than those of the Dunlin (*Tringa alpina*); in colour they are grey olive-green, marked with brown spots and blotches, especially at the thicker ends.

With the breeding habits of the Jack Snipe, however, we (the public at least) are at present but little acquainted. We know not, for instance, if it be polygamous, or if it confines itself to a single partner; or whether the male, like some other birds, deserts the female when she is incubating, and whilst the chicks are young, and yet rejoins his family at an after-period. All that we know with certainty is (and for this I am indebted to Professor Rasch) that during the breeding season it "drums" when in the air, in manner of the Common Snipe, and, according to Mr. Dann, of the Solitary Snipe also.

Though, doubtless, many Jack Snipes nest in Scandinavia, yet the principal breeding-grounds of these birds, as also of the Woodcock and the Solitary Snipe, are, I imagine, in countries far to the eastward—in Finland, Russia, and Siberia. And I am confirmed in this opinion by a perusal of the accompanying memorandum, kindly furnished me by Mr. Thomas Carew Hunt, our late popular Consul at Stockholm, who previously resided for a long time in Russia:—"At Archangel, and all along the shores of the White Sea, the Woodcock, Solitary Snipe, and Jack Snipe, are common birds, differing in no respect from those of England and central Europe. All of them are migratory to Archangel, from the South in spring and the North in autumn, and appear to breed at great distances above Archangel, the latitude of which is $64^{\circ} 40' N$.

"The first bird met with in autumn is the Solitary Snipe, which is found during the latter part of August in dry pastures near marshes, and disappears with the first hard night-frosts in the latter part of September. The Sabine Snipe is found with it, but very rarely.

"The next visitor is the Woodcock, found, when the Solitary Snipe is disappearing, along the skirts of the forest, near pastures, where the birch, poplar, and mountain ash grow in a thick undergrowth in brushwood. They make but a short stay, if the cold increases rapidly, as it does in some years.

"A regular succession of night-frosts, that drives away the Woodcock, brings in the Common Snipe, which makes a short stay, and is succeeded by the Jack Snipe. Neither of these birds comes in the same numbers as the Woodcock and Solitary Snipe. The Jack Snipe remains until the first fall of snow.

"All these birds are found in the latter part of summer in and near the grass-lands west of the Kola Hills, as well as about Kola (lat. 68° N.), in the northern island of Nova Zembla, and along the banks of the river Mesen to the south of it."

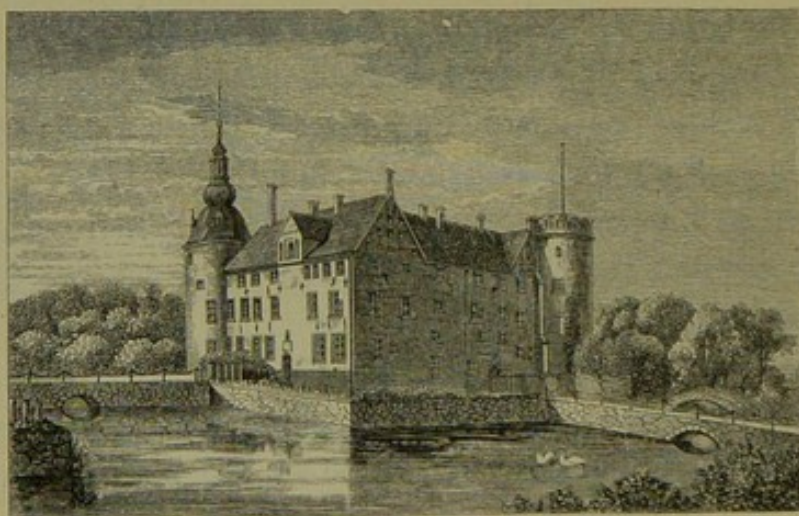
In Scandinavia, as said, some value is placed on the Solitary Snipe, but the Common and the Jack Snipe, from their diminutive size, and from their eatable qualities not being duly appreciated, are but little sought after, excepting for the sake of sport. A good many are, however, killed to the pointer, especially in the south of Sweden.

Speaking generally, the Snipe-shooting in the Peninsula, owing to the wooded nature of the country, is far from good; but there are localities where, if a man holds his gun straight, any number of these birds may be shot in a day. Even the bogs near to Ronnum are not to be despised; and had it been an object with me, I might readily have bagged 300 to 400 couple of Snipe in the course of the season. But it was seldom that I went in pursuit of those birds, and only once with deadly intent. On that occasion a friend and myself, in the course of a few hours, bagged thirty-four couple of Snipe,

together with several Ducks, &c.; and had not missing, instead of hitting, been the order of the day, the number might have been increased by at least one-third.

Near the town of Gothenburg there are also some good bogs, where I have had fair shooting. One day, and that a rather short one, I bagged, in addition to some Ducks, &c., upwards of thirty couple of the Common and the Solitary Snipe, for I then left the poor little Jack altogether unmolested; and on other occasions during the same season my sport was nearly equally good. But this was in the olden time, when Snipes were probably more plentiful than at present.

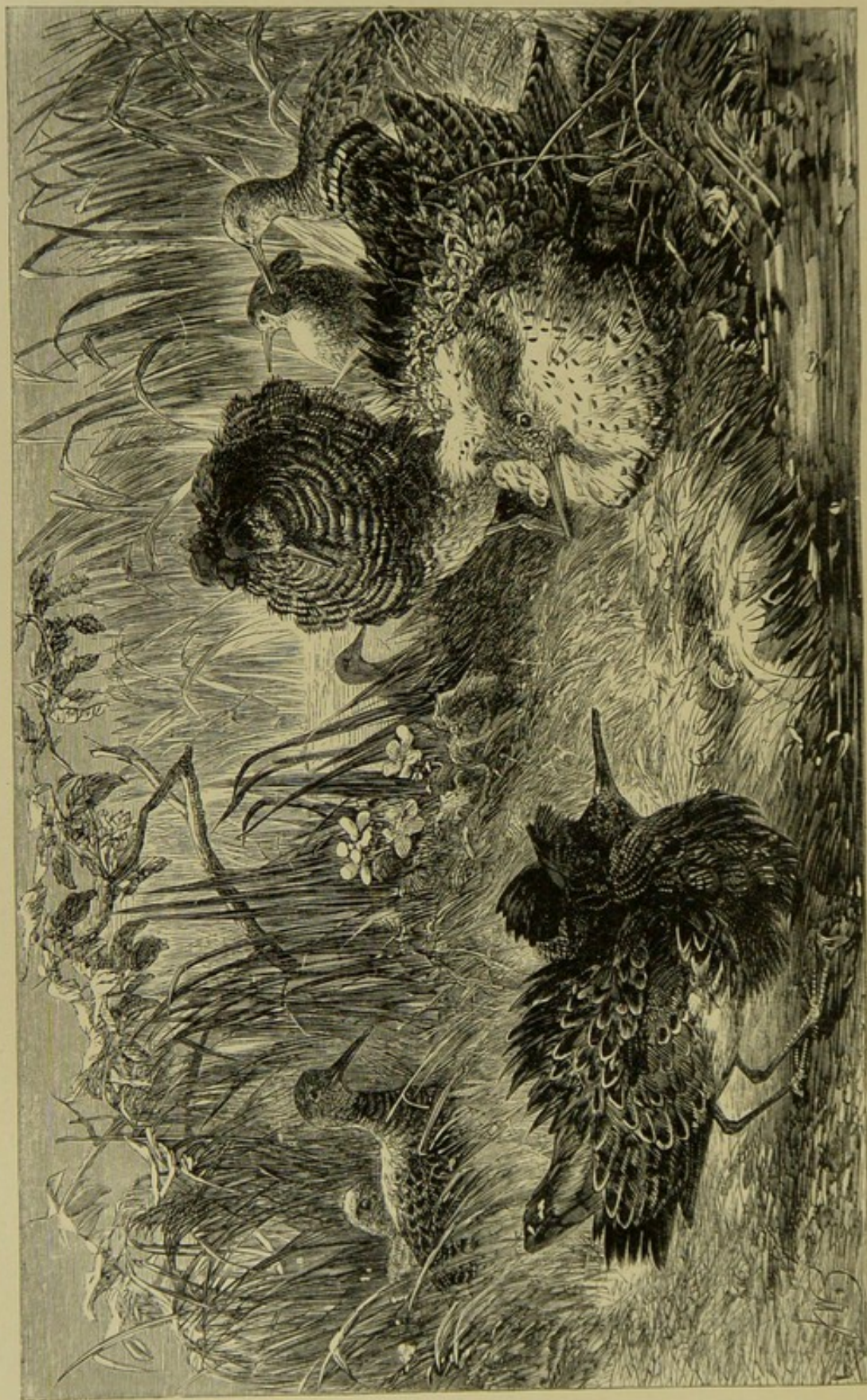
In South Wermland I have also met with tolerable Snipe-bogs; but being then in pursuit of other game, I did not give them a fair trial.



WIDTSKÖFLE.

In the province of Scania I have likewise seen some capital Snipe-bogs. The best, perhaps, are those near the baronial mansion of Widtsköfle, depicted above, where I was hospitably entertained, during the past autumn, by its owner, M. Stjernsvärd; but the Snipes were then for the most part gone, so that I did little execution.





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THE RUFF LER.

J. Wolff, del.

Some years ago, however, a party from thence bagged, between breakfast and dinner, fifty-seven couple of the Solitary and Common Snipe; and in 1850 Lieut. Carl von Qvanten and the Count Alfred Piper — so I was told by the latter—shot in one day about the like number; and of these also a considerable portion were Solitary Snipes.

Good Snipe-grounds in Scandinavia being something like legion, it is impossible for me to enumerate them. By all accounts the best are in the island of Gotland, where birds are very plentiful and the bogs boundless; but never having been there myself, I can, of course, only speak from hearsay, which is certainly good for very little.

After all, however, what is the Snipe-shooting in Scandinavia, as compared with that in our own fens, and in Ireland, where, during a *portion* of the winter 1821-2, I bagged to my own gun, independently of 207 couple of Woodcocks, and some other things, 655 couple of Snipe. With very few exceptions, these were all Common Snipe; for in those days I rarely shot at Jacks. Had I, as a rule, done so, the number specified above would very probably have been nearly doubled.

Though the Ruff does not come under the designation of a game bird, yet, as it is not seldom taken by certain Swedish sportsmen for a Snipe, and bagged as such, I venture to give the Ruff a place in this volume, the rather as my friend Mr. Wolf has favoured me with the annexed drawing, which very vividly depicts the peculiar habit of these birds.

The Ruff (*Brushane*, Sw.; *Bruushane*, Dan.; *Machetes pugnax*, Linn.) was a summer visitant to the Ronnum country, and a few, it was believed, bred in our marshes. This bird, at that season, is very generally distributed throughout Scandinavia, from Scania to Northern

Lapland, where, according to M. Malm, "it is very common on all the swampy fjäll-moors, as high up as the fir-tree grows." It is likewise numerous in the Danish islands. The females, Kjærbølling tells us, "arrive during the latter half of April, but the males not until a fortnight later. They are, however, the first to depart again, leaving early in August; but the females and the young remain somewhat longer."

The Ruff has been famous from time immemorial for its combative propensities, and in Sweden, as elsewhere, these birds have certain arenas where the champions settle their quarrels. "Their actions in fighting are very similar to those of a game-cock: the head is lowered, and the beak held in a horizontal direction; the ruff, and indeed every feather, more or less distended; the former sweeping the ground as a shield to defend the more tender parts; the auricles erected, and the tail partly spread,—upon the whole assuming a most ferocious aspect. When either can obtain a fair hold with the bill, a leap succeeds, accompanied by a stroke of the wing,—but they rarely injure each other."





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KRAMS - FOGGEL

M. Kortner del.

CHAPTER XVIII.

The Krams-Foglar — Their Migratory Habits. — The Dona-fångst. — The Ring-Dona. — The Bast-Dona. — The Bygel-Dona. — The Häng-Dona. — The Löp-Dona. — The Sprintel. — The Dona-Gång. — Artificial Berries. — Great Captures. — Shooting Krams-foglar.

BESIDES the birds coming under the denomination of game, and others of worth, such as some of the water fowl and waders, there are many smaller birds looked on by many as a delicacy, that collectively go under the name of *Krams-foglar*. The meaning of this term I could never exactly understand; but as the word *kram* implies a collection, or medley, of all sorts of things — so at least it is to be inferred from the huxter, or general dealer, being called a *kram-handlare* — and as the birds in question are commonly brought to market, without distinction of species, in small *knippor*, or bunches of half a score or more, it seems to me not improbable that hence has arisen their designation.

Under the above-named category are included all the Thrushes; viz., the Song-Thrush, the Missel-Thrush, the Redwing, the Ring-Ouzel, the Blackbird, the Fieldfare,

as also the Wax-wing, the Bullfinch, the Pine-Bullfinch, and in short almost every small bird that is eatable. Of these, as indeed of all other of the feathered tribe pertaining to the Northern Fauna, some account is given in my last work, "Scandinavian Adventures," and a further description of them here is, therefore, needless.

The "Krams-foglar" sell in the market at a fair price, more especially late in the autumn and in early winter, when game is usually both scarce and dear; and many people, as a consequence, devote much of their time to obtaining them, which is chiefly effected by means of *Donor*, or Snares. The *Dona-fångst*, as this method of capture is called, is, in parts of the Peninsula, more particularly in the south, carried on to a considerable extent, and this not only by individuals for a livelihood, but "by old sportsmen on their last legs, who pursue it as a pastime."

All, or nearly so, of the "Krams-foglar," are birds of passage. Before speaking of the different kinds of traps and snares used for their capture, it may, therefore, be desirable to say a few words regarding their migratory habits, as by these the arrangements of the fowler must necessarily be in degree guided; and I cannot do better, therefore, than quote the words of Ekström, who gives us information under this head, that is both curious and highly interesting.

"All birds that on the approach of winter leave Scandinavia for more southern climes," he says, "*sträcka*, or migrate, from the north and east to the south and west,* and in preference when the wind is from the west and south-west, seldom or never when it blows from the north and north-east. The several species of 'Krams-foglar,'

* This does not hold good as regards the Solitary Snipe, as will presently be seen, and it may be some other birds.

with perhaps a single exception, always journey during the night-time. Their *sträck-tåg*, or line of flight, lies for the most part over wooded districts. Large open plains, destitute of trees, they always avoid, unless these be so very extensive, that by not following them they would be led too much out of their proper course. The localities where the migratory birds temporarily alight, and remain for a longer or shorter period, cannot with certainty be pointed out. They always stop during the daytime at the spot over which they find themselves when morning dawns. The length of time they remain at each of these their resting-places, depends on the supply of food. If they find but little, they *sträcka* further so soon as night closes in. Should some fine and warm days occur, they stop awhile in the district where they alighted; but if the night be misty, one may be assured their flight will be renewed at once. Should the afternoon prove rainy, of which their instinct will have forewarned them, it is certain that those which arrived in the morning have flocked, and will remain, because birds never *sträcka* on the approach of wet weather. When it is calm, they are generally stationary, but when a westerly or south-westerly storm arises, one may be sure that *sträckning* is immediately resumed, and that in good earnest.

“Although these observations respecting the migratory flights of birds,” Ekström goes on to say, “especially such as point out the days on which particular attention ought to be paid to the ‘Donor,’ may not be without benefit to the fowler, it will be of much greater moment to him to know, and be able to select, the localities where his operations can be carried on to the greatest advantage. Large woods are not adapted to the purpose, because the birds are there more scattered; unless, indeed, it happens that the woods are bounded or intersected by some broad sheet of water, stretching east and west; for when

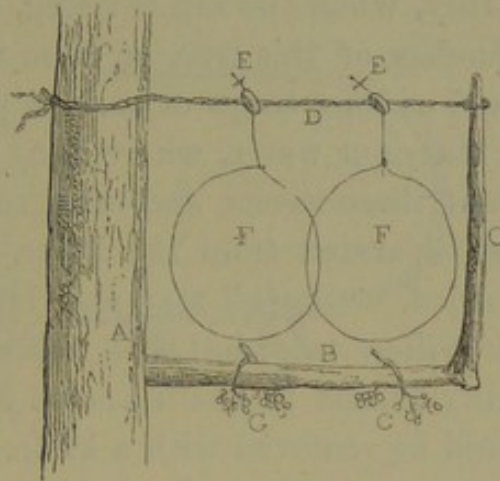
migratory birds, during the night-time, meet with a great lake, and cannot see the opposite shore, they, from being uncertain if daylight might not overtake them before reaching the land, will not venture to cross the water, but alight at once.

“The most favourable situations for the ‘Donor’ are three in number:—1st. The wooded borders of a large lake, more especially a *skogs-udde*, or wooded promontory, of no great width, that stretches out into the water. 2nd. —A *skogs-backe*, or wooded eminence, either in connection with, or at but a short distance from a large wood; and 3rdly—A deep and marshy valley, through which flows a stream or brook, but where, nevertheless, the cover is not too dense. In localities such as described, one commonly finds the Missel-Thrush in pine-woods; the Fieldfare amongst underwood, especially juniper; the Song-Thrush and the Blackbird in young wood, consisting either of pine or of deciduous trees, and the Redwing in half-grown woods of the latter.”

The *Dona-gång*—as the pathway by the sides of which the snares are set is called—should be situated in marshy ground, intersected by rills and water-courses. It ought to be in order by the month of August; that is to say, the underwood cleared away, and the lower twigs topped from off the trees to which it is intended to attach the “Donor.” The pathway ought to be as serpentine as the nature of the ground will admit of, and not too wide; a common forest track, which is frequently selected for the purpose, is sufficiently so. If practicable, three of the trees, but not more, on which it is meant to suspend the snares, should be visible at the same time.

The “Donor” are of different kinds, partly with regard to the species of bird they are intended to capture, and partly to the locality where they are placed. They go under the several denominations of Ring-Dona,

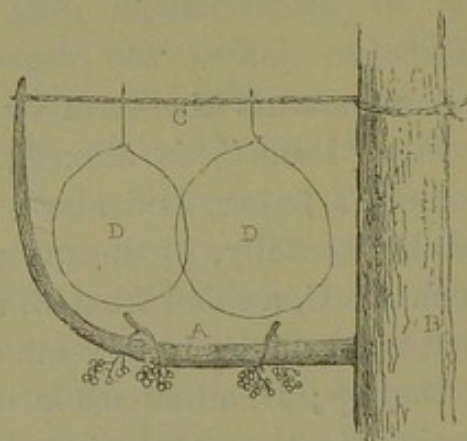
Bast-Dona, Bygel-Dona, Hång-Dona, Löp-Dona, and (three kinds of) Sprintel.



THE RING-DONA.

The letter A represents the stem or branch of the tree to which the "Dona" is affixed; B, a stick of the thickness of one's finger, and about eight inches in length, inserted horizontally, by means of an auger, in the tree or branch A; C, a shoot from B, and standing as near as may be at right angles to it, some six inches long, and notched at the top; D, a line made of *bast*, one end of which is attached to the shoot C, and the other (the strands separating) is tied in a bow-knot around the tree A; E E are rings (hence the name of this "Dona") cut from a year old elder-shoot, or other tree containing pith, that traverse on the "bast line" D, and to which the snares F F are secured by small slips of leather passed through their outer ends, and G G bunches of berries, to lure the bird, which are placed either upon, or suspended to, the horizontal stick B. In the latter case, the point of a knife is passed lengthwise through the wood, and the stalks introduced in the opening, which, of course, closes on them when the blade is withdrawn.

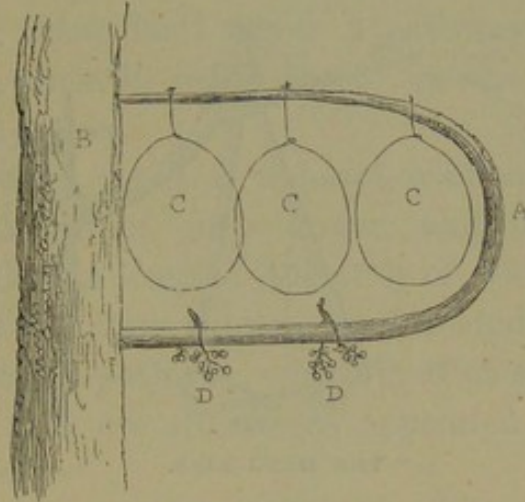
The "bast" spoken of, which is largely used in the construction of the "Donor," consists of the inner bark of the Lindentree, prepared in the following manner:—In the month of July, when the sap is rising, one takes from the larger branches of this tree, or from the stem of the young tree itself, as long strips of bark as possible. These are placed in stagnant water, where they are allowed to remain for about three weeks, and until such time as the outer bark has separated from the inner, when they are taken up and dried. "Bast" may also be prepared from the bark of the willow tree; but with this difference, that, prior to its being placed in the water to rot, the coarser parts of it should be removed with a knife.



THE BAST-DONA.

This is a simpler contrivance than the "Ring-Dona." Having found on the tree or branch B, to which it is purposed to affix the device, a shoot A, suitable for the purpose, one gradually bends it upwards in the form shown in the diagram, where it is secured by the "bast-line" C, which, from the tension, is always kept on the stretch. The Snares D D are fastened to this line by passing their outer and knotted ends through its strands;

and the berries that serve to entice the "Krams-foglar," are placed upon, or appended to A, in the manner shown.

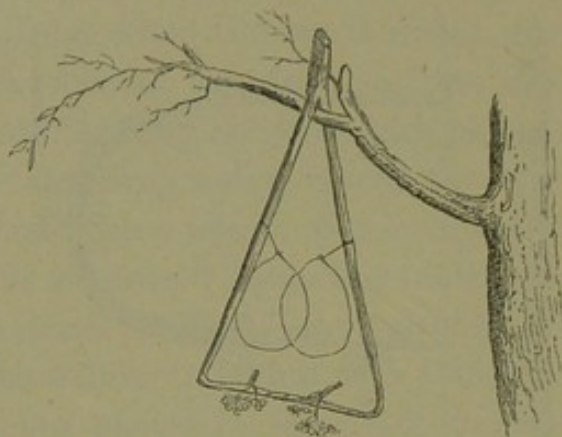


THE BYGEL-DONA.

This device is even more simple than the "Bast-Dona," and is in consequence in more general use. It consists of a hazel or other shoot A, free from knots, and about 15 inches in length, the ends of which, after it has been bent in the form shown in the sketch, are inserted, by means of an auger, in the tree or branch B. The Snares C C C are appended to the upper part of the bow, by passing their knotted ends through incisions made in the wood with a knife, and the berries D D are attached to the lower portion of the bow.

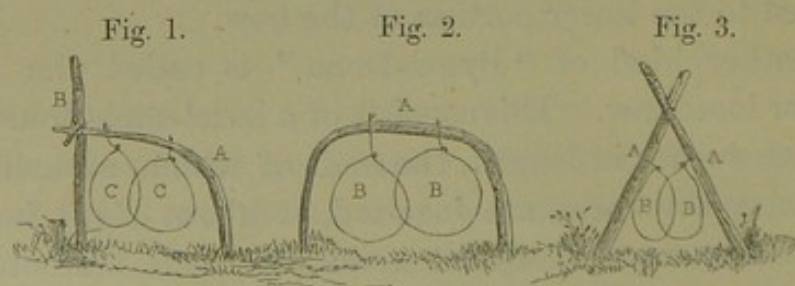
Another kind of "Bygel-Dona" is called the *Lös-Båge*, or loose bow. This consists of a hazel-shoot fourteen to fifteen inches in length, the ends of which, after it has been bent bow-form, are inserted, at about eight inches apart, in a small block of wood (the cleft half of the branch of a tree), nine to ten inches in length. This device has the advantage over those named, that it may be constructed in all its parts at home, and the necessity of working in the open air, and having one's fingers frozen, is thereby avoided; as also, that it is

removable at pleasure, and from the auger not being required, the tree in consequence escapes injury.



THE HÄNG-DONA.

This consists of a forked branch of birch, or other pliable tree, the prongs of which, after being doubled down, are interwoven with each other, and, if needs be, further secured by "bast," or the like. The snares and berries are attached to it as seen in the sketch. This device, as its name signifies, is suspended from the branch of a tree or bush, and is said to be the most destructive of all the "Donor," probably from the birds being less afraid of it than of the others.



THE LÖP-DONOR.

Of these devices, which, as the term denotes, are set on the ground, there are four different kinds, and three of

them are depicted above, the fourth being of a very similar nature to one of the others.

1st. (see fig. 1.) A represents a hazel-sapling, which, after being bent across a pathway, is secured to the upright stick B, with "bast" in the manner seen; and C C the snares.

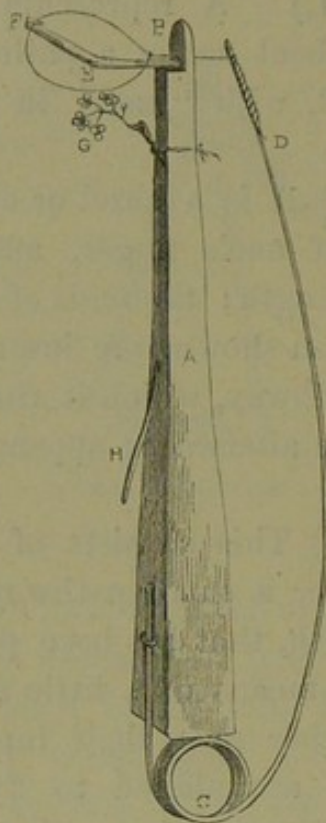
2nd. (see fig. 2.) A is a hazel or other pliable wand, of the thickness of one's finger, and from sixteen to eighteen inches in length; the ends of which, after it has been bent in the form shown, are inserted in the ground on each side of a pathway, which it thus spans, so to say. The snares B B are afterwards appended to the bow in the usual way.

3rd. (see fig. 3.) This consists of two sticks, A A, placed crosswise over a small pathway, or run, of about four inches in breadth, that has been previously prepared for the purpose by means of a little rake. These sticks are then tied together near their tops with "bast" or string, and snares are affixed to the upper part of them in such wise that they hang close together, and at about two inches from the ground.

The "Löp-Donor" are commonly placed amongst brushwood, frequented by thrushes and other birds that feed much on worms, &c. The small pathways, or runs, mentioned, should be raked every day, and afterwards sparingly strewn with mountain-ash berries, cranberries, and other berries, of which the "Kramsfoglar" are fond.

The sticks forming these devices, it is to be remarked, should be fixed securely in the ground, and the snares used be composed of five to six horse-hairs; because it not unfrequently happens that Woodcocks, and other large birds, get entangled within them. And if time permits, it is always desirable to erect small *Ris-Hag*, or fences of spruce, pine twigs, etc., on both sides of the

pathways in question, the better to lead the birds into the toils.



THE SPRINTEL.

This is, perhaps, the best of all the "Donor," but accuracy is requisite in its construction, and care needful in its management. A is a piece of wood six to seven inches in length; but its shape, provided it be not too clumsy, is not of much moment; C, a coil of wire of no great thickness, the outer end of which inclines upward, and forms the spring D; B, a deep notch at the upper part of A, in the angle of which is a small aperture made with a red-hot iron for the introduction of the snare F; E, the "giller pinne," its innermost end resting on the lower portion of the notch B, in which position it is retained by a double knot tied in the snare F; and G, berries placed immediately beneath the latter, to lure the

birds to their destruction. This device is attached to an upright stake, or to a bush or tree. But should it be considered preferable, one may insert a piece of wire H in the "sprintel" itself, thus forming a hook as it were whereby to suspend it.



SECOND KIND OF SPRINTEL.

A second kind of "Sprintel" is made out of the forked branch of a juniper bush. The smaller of the prongs forms the spring; but should this not be sufficiently pliable, it must be scraped with a knife, or otherwise the snare, when set at liberty, might cut off the bird's leg.

A still simpler sort of "Sprintel" consists of a hazel shoot of about two feet in length, which, when "uppgillrad," or set, forms a complete circle. This device is suspended from the branch of a tree or bush, but sufficiently near to the stem as not to be too much shaken by the wind; there should always be some twigs in its front to prevent its falling off.

Although the two last-named "Sprintlar" have the

merit of being very simple, easily constructed, and unattended with any kind of expense, they have the disadvantage of not lasting more than a single season, and often not so long. The weather, moreover, has too great an effect on the spring; for if wet, the latter becomes weak and slow to act, and if cold and dry, brittle and apt to snap asunder.

The "Donor" ought to be placed to the right and left of the path, at about six feet from the ground, and at a distance of from six to eight feet from each other; and if possible, matters should be so arranged that when a bird alights at the one "Dona," it should see others both before and behind it.

The fowler must be particularly careful that the snares hang evenly within the bow of the "Dona," and the one somewhat higher than the other. If they are found to be twisted, as is not unfrequently the case, during storms, or a change in the weather, he, whilst holding the knotted end of the snare in the right hand, draws it between the thumb and finger of the left, until it becomes quite straight. The "Ring-Dona" has in this respect an advantage over the others, that to right the snare when out of order it is only requisite to touch the "ring," when it immediately assumes its proper place.

To guard against the snares twisting, the "Dona," it should be remarked, is not unfrequently provided with a so-called *Vind-hår*, or wind-hair. This consists of one or more horse-hairs which, after being passed horizontally around the bow of the "Dona," are fastened to the tree or bush to which the latter is attached; and when, therefore, the snare is thus placed between the "wind-hairs," it cannot get out of its place.

For the "Dona-fångst," the fowler requires a goodly supply of snares. These should be of black horse-hair, taken in preference (as being tougher) from the tails of

horses rather than mares. To prevent the snares from twisting or "kinking," it is always desirable, prior to spinning the hair, to immerse it in warm water, and, after suspending a weight to the lower end of the hank, to place it on a peg to dry.

The fowler should also be provided with an ample supply of berries. Those of the mountain-ash (*Rönnbär*, Sw.; *Sorbus aucuparia*, Linn.) are the best; for, to say nothing of birds giving the preference to them, they hang better on the stalk, and keep longer than any others. But, failing these, the hawthorn; the *Ulfbär*, *i. e.*, wolf-berry (*Viburnum Opulus*, Linn.); the alder buckthorn (*Rhamnus Frangula*, Linn.); the bird-cherry tree (*Hägg*, Sw.; *Prunus Padus*, Linn.), with others, serve the purpose.

The mountain-ash berries should be plucked as soon as they are ripe, and have obtained their red colour, which, in Sweden, is usually the beginning of September. If allowed to remain longer on the tree, they drop off, and are useless. The berries should be gathered in dry and fine weather, and one should be careful that the several clusters remain entire, as also to remove all leaves. It is best to hang them up in a loft, or other airy situation, where they may gradually dry.

During certain years it happens that mountain-ash berries are very scarce; in Germany, therefore, they have hit upon a method of preparing artificial ones. Any kind of meal is kneaded with water into a hard dough, of which pills, so to say, are formed of the size of the berries in question; these, after having been perforated with a large needle, are placed in a warm oven to dry. They are then immersed in a strong dye, or varnish, of which cinnabar, grated very fine, forms a component part, and afterwards exposed in the open air and well dried for the second time. Subsequently, they are strung, like so many beads, on short pieces of thread prepared in a peculiar manner,

and so hard as to resemble silkworm-gut. Several of these threads are tied together, so as to form large or small clusters.

These artificial berries are used in precisely the same way as the natural ones; their value may not seem commensurate with the trouble of preparing them, but it must be remembered that, once ready, the labour is ended, for, if prepared with care, and yearly dipped in fresh dye, they may be used for several generations.

But even should the fowler be unprovided with either natural or artificial berries, he is not altogether without resources. On one occasion, when M. Ekström was thus situated, he "unravelled," he tells us, "an old red nightcap, and placed the knots formed out of its threads in the 'Donor,' which to a certain extent answered the purpose."

In the more central parts of Sweden the "Dona-fångst" commences in the beginning of September, the time somewhat depending on the early or late appearance of the night frosts. In the beginning of the season the "Donor" should be *vittjade*, or examined, twice in the course of the day, but when "sträckning" is at its height, at least three times, viz., at ten in the morning, about mid-day, and at four in the afternoon. For the most part, however, twice a day—in the fore and afternoon—is sufficient. It would never do to allow them to remain unexamined; for it must be evident to every one that when birds are captured, and are struggling in the snares, they cannot but scare away their comrades.

Another reason why the man should pay frequent visits to the "Dona - gång" is that some birds, more especially the Thrushes, are so cunning as never to alight on the "Dona" itself, but, whilst flying past it, pluck the berries from off the stalks. When it is observed that these unwelcome visitors are inclined thus to feed

for nothing, one must either remove the several clusters of berries to within the bow of the "Dona," and place additional snares outside of the latter, or lower the snares so that they hang opposite to the berries. When now the bird in its attempt to seize them flies either beneath or by the side of the "Dona," it is all but certain to be secured in the toils.

A third motive for the fowler to visit the "Dona-gång" is that, if left long unwatched, Jays and other birds of prey are pretty sure to find their way to the spot, and take the captives from out of the snares. On these occasions, therefore, he should never be without a loaded gun; neither should he neglect to provide himself with a goodly stock of berries, to replace those that have been consumed by the birds, or that have fallen from off the branches of themselves.

The "Dona-fångst" succeeds best in September, and the first half of October; subsequently, the captures diminish in number, and by the middle of November, when the snow falls, the fowler usually takes up his snares, and stows them away until the next season.

The slaughter thus committed amongst the "Krams-Foglar" is often very great. We read, for instance, that in the autumn of 1852 no less than 1,200 of these birds were taken on a small property, in Scania, of less than 300 acres in extent.

Various contrivances besides the "Donor" are also resorted to for the capture of the "Krams-Foglar," such as nets, bird-lime, &c.; and many, likewise, fall to the gun, especially late in the autumn, and during the winter, when, impelled by hunger, they often collect in large flocks near to the homestead, where are in general to be found several mountain-ash or other trees bearing berries. In parts of the country, indeed, these trees are planted for the purpose of luring the birds in the winter-time.

If the tree resorted to by the "Krams Foglar" be at a considerable distance from the homestead, the fowler not unfrequently constructs a sort of hut, within gunshot of it, where he patiently awaits their coming, which usually occurs either at daybreak, or in the evening, a little after sunset. He should fire, we are told, when they are just about to alight on the tree, or at the moment of their leaving it; for when once settled there they soon spread themselves amongst the branches. To guard against this happening, many pluck the berries from all the lowermost boughs, leaving only a certain number near to the crown of the tree.

Others, again, when all the berries on the tree are gone, or nearly so, have recourse to the clusters that they have stored away during the autumn; these they tie to a sort of bush, formed of twigs, which, after being attached to a long pole, is hoisted to a little above the tree-top. The "Krams Foglar" on their arrival generally alight on the bush in the first instance; and as they are commonly closely packed together, great slaughter may then be committed amongst them. It is on record, indeed, that on one occasion as many as fourteen fieldfares, and on another thirty-six wax-wings, were thus killed at a single discharge.

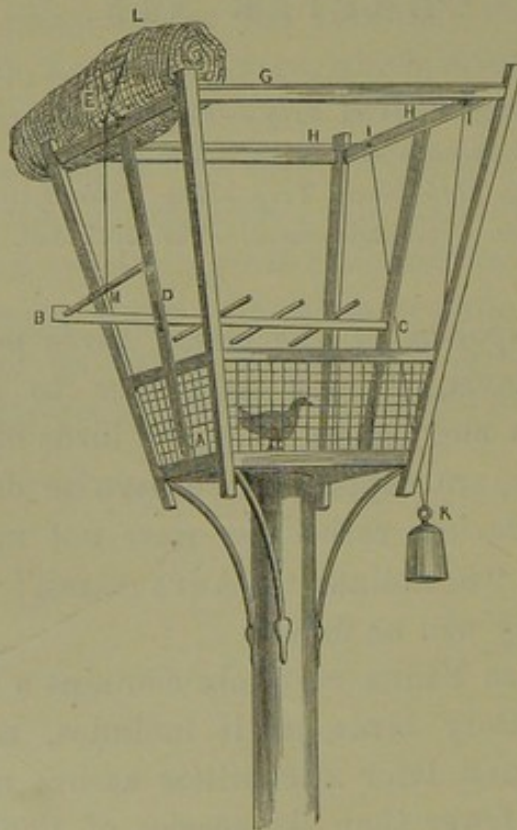
CHAPTER XIX.

Devices for Capturing Birds of Prey.—The Hök-Bur.—The Slag-Bur.—
The Bur med Släende Nät-Bågar.—The Bur med Drag-Nät.—The
Slag-Nät.—The Gyr-Falcon Trap.—The Tobbelyttor.—Owl *versus*
Hawk.—Snares.—Self-impalement.—The Ryck-Nät.

HAVING spoken of the Game Birds pertaining to Scandinavia, it may be proper to describe the numerous traps and snares by which birds of prey, their mortal enemies, are captured or otherwise destroyed; of such of the devices rather, as were not mentioned in my last work, "Scandinavian Adventures," wherein an account of many will be found.

The Northern Fauna certainly contains a most goodly array of predatory birds, as it includes, according to M. Svederus (and later authorities assure us there are still more), no fewer than six species of Eagles, four of Hawks, six of Falcons, one Kite, three of Buzzards, four of Diurnal Owls, four of Nocturnal Owls, and three of Horned Owls. To which may be added, as injurious birds, the Raven-Hooded Crow, and the Magpie.

To extirpate the birds of prey and four-footed vermin, which swarm everywhere in the Peninsula, would be an impossibility, but materially to diminish their numbers might be feasible enough, were the inhabitants seriously to put their shoulder to the wheel. Instead of so doing, however, they generally look on with the most perfect unconcern, let the destruction of game be ever so great. It is true that within the last few years they have begun to bestir themselves, both as to the preservation of game and the destruction of vermin; and if the new Game Laws be properly enforced — for hitherto they have been all but a dead letter—a material improvement will, no doubt, take place.

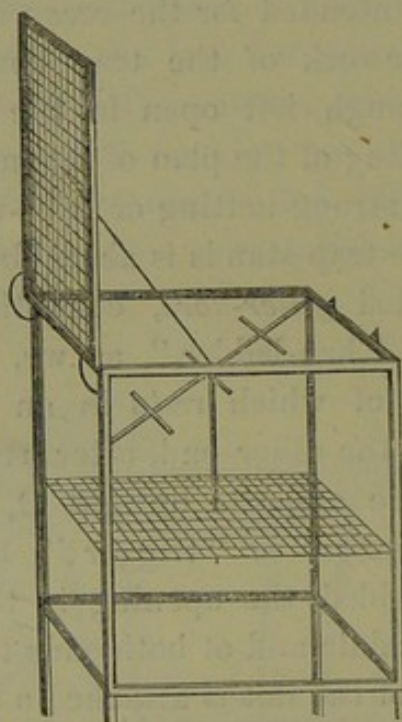


THE HÖK-BUR.

The trap most commonly used for the capture of Hawks, etc., is called the *Hök-Bur*, and to my personal

knowledge it is very successful. The height of this device, which is represented above as "gillrad," or set, is about four feet; the diameter of the upper part, from three to four feet, and, of the lower, less than two feet. It is in two compartments, a moveable wire-frame separating them; the lower one, which is twelve to fifteen inches in height, being intended for the reception of the decoy-bird. The framework of the trap consists of slips of wood which—though left open in the diagram for the better understanding of the plan of setting it—are covered over either with strong netting or wire-work. The stout post on which the trap stands is about four feet in height. B is the so-called *giller-kors*, consisting of a treble cross—a sort of "hen-ladder," as we, perhaps, should call it—one end of which rests in an aperture in the upright C, whilst the other end, after passing through an oblong hole in the opposite upright D, is supported by M the "giller-pinne," or "trigger;" E the net, that covers, when unfolded, the opening in the trap, which is fastened in the middle and at both ends to the cross piece F. To the front of the net is attached a slight metal rod, and to the sides of the net rings, which, when the trap is sprung, traverse on the metal rods G, G, in the manner of a curtain; L a stout wire, one end of which is fastened to the "giller-pinne" M, and the other to the metal bar in front of the net; H H, lines attached to the ends of the same metal rod, which after passing through the small apertures I I, in the front cross-piece, unite in K, a somewhat heavy weight, and A the small door by which the decoy-bird, is introduced into the trap. The colour of this, it should be remarked, is regulated by the locality. If the soil thereabouts be of a light colour, a dark plumaged bird is preferable; but if the contrary be the case, a white one. A Duck, a Hen, or a Pigeon, will answer the purpose equally well.

When now the Hawk sees, and makes his swoop on the decoy-bird, he necessarily displaces the "giller-kors," or "hen-ladder" B, on which the weight K descends, and in its fall draws the net E over the opening, and escape for the depredator is effectually cut off.

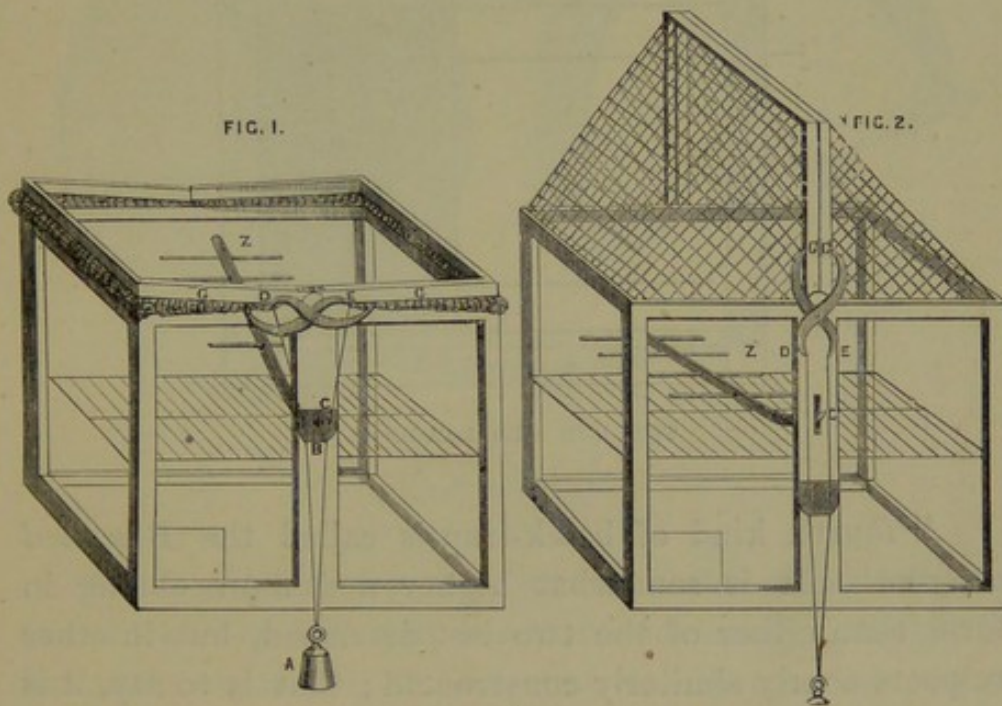


THE SLAG-BUR.

A second kind of Hawk-trap, also represented as "gillrad," or set, is called the *Slag-Bur*. It is about four feet in height, and the same in diameter. Its construction is similar to that of the "Hök-Bur" just spoken of, excepting that it is provided with a lid (which the latter is without). As with the "Hök-Bur," it stands on a post—or rather on four legs—about four feet high, which is placed in some open and exposed situation, that it may be seen from afar.

The manner of setting the "Slag-Bur"—which in principle is very similar to our Common Sparrow-trap,

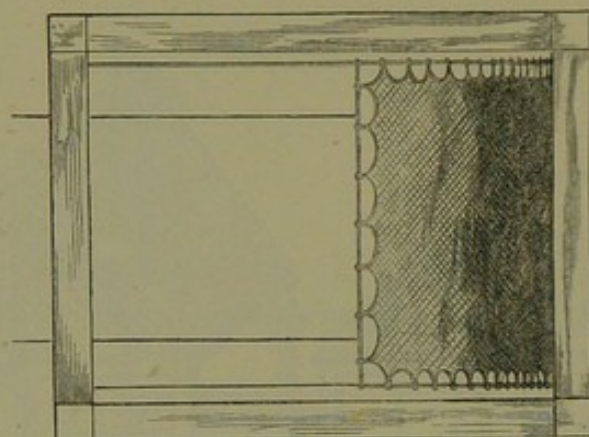
excepting that the lid is fully, instead of half, raised—is very simple, as seen in the above diagram. When the Hawk, in its endeavour to seize the decoy-bird, disturbs the “giller-kors,” or trigger, the lid, acted on by two strong circular springs at the back of the Bur, at once falls, and the interloper is made captive.



THE BUR MED SLÄENDE NÄT-BÅGAR.

A third device for the capture of hawks is called the “*Bur med slående nät-bågar*,” or trap with netted bows. The body of this trap, in regard to size and construction, differs but little from the “Slag-Bur” just spoken of; but the way in which it is “gillrad,” as seen in fig. 1, is very unlike. A is a heavy weight that, by means of a line and a knot, rests on B, a small angular block of wood. Z, the “giller-kors,” the outer end of which, after passing through one of the uprights, supports, by means of the notch, C, the block, B, and D E, the so-called *Vändarmar*, implements of iron that act on the

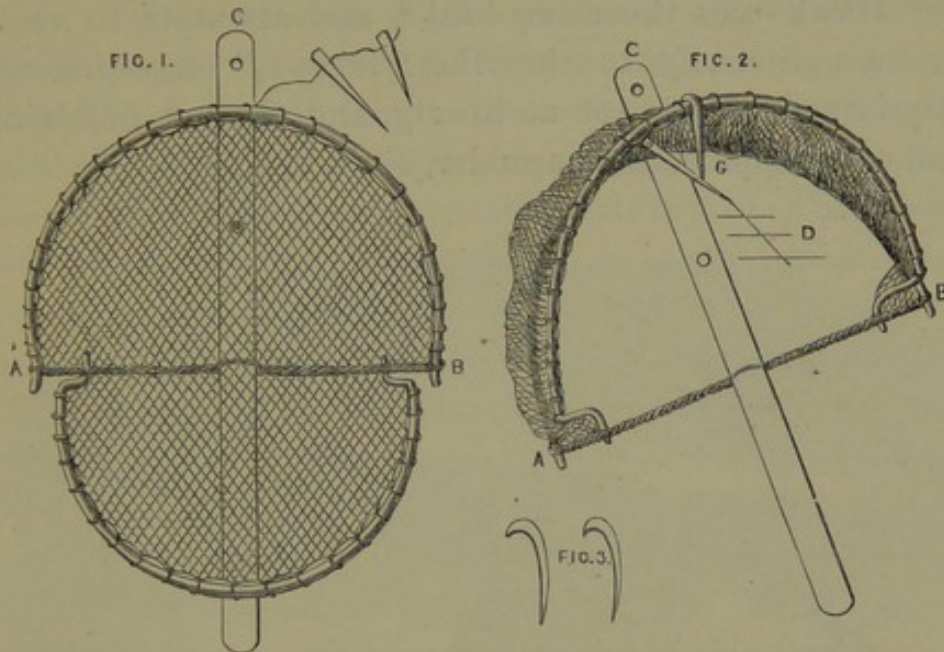
bows, G G, in the manner of shears. When, therefore, the hawk touches the "giller-kors," Z, this immediately falls from off the block, B; when the weight, K, descends, and the netted bows at once overlap the opening of the trap, as seen in fig. 2.



THE BUR MED DRAG-NÄT.

A fourth kind of hawk-trap is called the *Bur med drag-nät*. It is somewhat higher and more oblong in form than either of the two last described, but in other respects nearly similarly constructed; that is to say, it is in two compartments, and the framework is covered over with either coarse netting or wire-work. Instead of a lid or of bows, however, it is provided with a net traversing on metal rods, of which one is affixed to each side of the trap. It is "gillrad," or set, in somewhat the same manner as the "Hök-Bur" and the "Bur med slående nät-bågar" (see pages 260 and 263). The lines suspending the weight, after passing through the upper bars of the trap, are fastened to the metal rod attached to the front of the net; and when, therefore, the hawk disturbs the "giller pinne," the net, previously folded, is forthwith drawn over the opening, and the bird is made prisoner. But this trap is not equal to the "Bur med slående nät-bågar," owing to the capacity of its upper

chamber not being increased, like that device, by the trap being sprung.

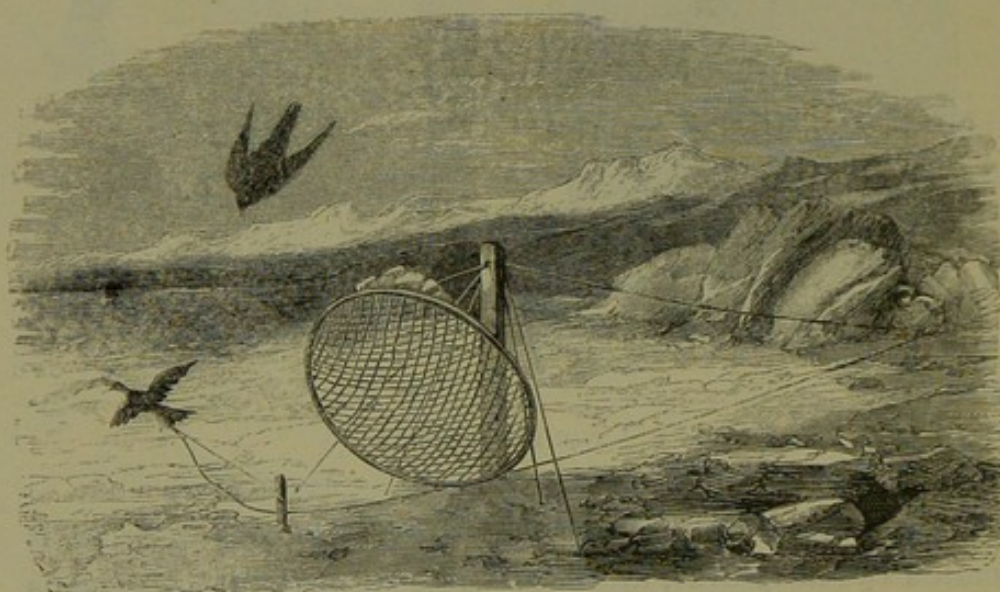


THE SLAG-NÄT.

Another device for the capture of the Hawk-tribe is called the *Slag-Nät*, and has these advantages, that it is but little expensive, and requires no other spring-power beyond a hard-twisted rope. It is made of stout twine, and attached to two half-circular hoops connected together by the rope A B, and is fastened crosswise to C, a long and narrow slip of wood. Distended, it measures some ten feet in length, by eight in breadth.

When the net is "gillrad," the lower bow is thrown back on the upper in the manner shown in fig. 2, in which position both the net and the "giller-kors" are retained by the hooked stick G; and to conceal the net from view, moss and grass are afterwards sprinkled over it. Usually the net is fastened to the ground by means of wooden pegs, shown at the head of fig. 1; but should it be placed on the bare rock, as is frequently the case, it is hooked on to iron pins (see fig. 3), sunk in the

rock for the purpose. The Hen, or Duck, that serves as lure, being protected from injury by a wire covering, is placed directly under the "giller-kors" D. When now the Hawk sees the decoy-bird,* and attempts to seize it, he necessarily touches the "trigger," on which the imprisoned bow is set at liberty, and the net unfolding and over-lapping the marauder, seals his fate.



THE GYR-FALCON TRAP.

Another invention for capturing the Hawk-tribe, more especially the *Gyr-Falcon*—one which, in the olden times,

* An artificial bird is preferable to a living one, as it is not then needful to look so constantly after the trap. The skin of some water-fowl answers best, being less affected by rain or damp; but it should be provided with the bill of a land bird, because the greater part of birds of prey prefer the latter. Before the skin is stuffed, however, it should be well manipulated; and if, in addition, a small spiral spring be placed in its neck, and others under its wings, it will become so flexible that the least breath of air will set it in motion, and birds of prey cannot but suppose it to be living. The colour of the decoy-bird, it is to be noticed, should form a marked contrast to the ground, as in that case it will often lure a hawk, soaring in the air, from an incredible distance.

was much practised both in Norway and Iceland, when falconry was the fashion—is represented above when “gillrad,” or set.

In the foreground of the sketch is shown a short wooden peg, to which a live Pigeon is tethered by a piece of string three feet in length, the bird being so far allowed its liberty that, by its flutterings, the attention of the Quarry may be the more readily attracted. About six feet behind the peg in question, is a stout post five feet high; against the base of it rests a circular net six feet in diameter, the top of which, to facilitate its fall, is loaded with stones. The upper line, or that supporting the net until the moment of capture, as also the lower line, the outer end of which is attached to the leg of the decoy-bird, are held by the fowler, who lies concealed in a so-called *Tobbehytte*,* a half underground hut constructed of loose stones, etc., at a distance of from one hundred to two hundred paces.

When the Gyr-Falcon espies the tethered Pigeon, he makes several gyrations in the air, to see that all is safe, and then swoops down upon it, and often with such force as to sever the head from the body. Afterwards, he usually leaves the bird for a while, and makes renewed gyrations to satisfy himself that no lurking foe is nigh, when he again descends to the earth, and drives his talons deep into its body. On seeing this, the fowler, with the lower line, pulls the dead Pigeon, together with the Falcon, who clings to his victim with death-like tenacity, under the net, and at the same instant lets go the upper line, or that supporting the net, on which the

* Corruption of the German word *Taubenhütte*, i. e., pigeon-hut, German and Dutch falconers being formerly in the habit of resorting to Scandinavia, particularly some parts of Norway, for the purpose of pursuing hawks, falcons, and other predatory birds.

latter at once falls to the ground, enveloping in its folds both the destroyer and the destroyed.

Hawks are also captured, we are told, by Owls trained to the purpose; for, owing to the animosity existing between day and night birds of prey, the Hawk, on descrying the Owl, usually attacks it; and when the Owl has grappled with the latter, the fowler, who is on the watch, covers both with a net prepared for the purpose.

Hawks, we are further informed, are taken in springes, fastened by means of a slip of leather to a Pigeon, which, after a long string has been tied to its leg, is set at liberty; for when the Hawk is in the act of pouncing on the bird, it gets its head in one or other of the snares, and presently falls helpless to the ground.

Hawks are also entrapped in the common flue-net, set in such wise as to form a little quadrangle a few feet in diameter. It is attached to sticks of considerable height, but with such slight materials as to give way at the merest touch. The decoy-bird is left at large in the little area, where, however, there is a sort of coop, in which it can take refuge on the coming of the enemy. The Hawk, seeing the fowl or duck, as the case may be, swoops down upon it, and experiences no difficulty in entering the little enclosure; but when it attempts returning to the upper air, the confined space prevents the proper use of its long wings, and, as a consequence, it presently comes in contact with the net, in the meshes of which it is presently wrapped up, so to say.

Another plan of making the Hawk captive—one recommended by M. Greiff—is to suspend a net on four sticks of about four feet in height, thus forming a sort of canopy, under which the decoy-bird is placed. But the net, he says, must be sufficiently large so as on all sides to reach to the ground, in order that access to the Hen or Duck can only be had from above. The material used for fastening

the net to the sticks, he further observes, must be very slight, so that on the coming of the Hawk it at once falls to the ground, and he, as a consequence, becomes entangled in its folds.

Another method of capturing these birds is to place a Duck or Hen in an open coop, and to fasten many long and sharp spikes about the latter ; for in making its swoop, the Hawk is unable to stay its rapid flight, and is therefore tolerably certain to be impaled on one or other of these murderous weapons.

Ravens, Crows, and Magpies are often taken in snares made of thin brass wire. These are set upon, and around, the carcase of a dead horse, or other animal (or on lumps of its flesh placed near at hand), laid out for the purpose, in some exposed situation ; for whilst the birds are feeding on the meat, some of them are pretty sure to get entangled in one or other of the numerous springes.

The birds named are also often taken in the so-called *Ryck-Nät*, or "Pull-net," which, in form and construction, is similar to the *Slag-Nät* described a few pages back ; but it should be of larger dimensions, because Ravens, Crows, etc., often congregate in numbers about the offal that serves as lure, and it is therefore desirable the whole of them should be covered by it. As the name of this net denotes, there is no "gillring" apparatus, but in lieu thereof, a long string is attached to the peg retaining the upper bow, which the fowler, who lies concealed at a distance, pulls away when he sees meet.

CHAPTER XX.

Wild Fowl.—Flapper Shooting.—Duck Shooting.—Remarkable Dog.—
Submersion.—The Punt-Gun.—The Skjut-ko.—The Crinoline.—
Curious Ruse.—Reynard's Manceuvre.—The Shooting-Tub.—The
Fogel-Ref. — The Lintu-Lauta. — The Wild Goose Snare. — The
Steel-Trap.

THE lakes and rivers of Scandinavia swarm with aquatic birds of one kind or another. Many different species bred in the vicinity of Ronnum, more especially in the great lake Wenern, which was close to my residence. Amongst the rest the Mallard, the Teal, the Golden Eye, the Widgeon, the Goosander, the Merganser, the Black-throated Diver, the Red-throated Diver, the Great Black-backed Gull, the Common Gull, the Common Tern, the Black Tern, and the Caspian Tern.

The Waders that nested with us were also numerous; amongst which may be named the Golden Plover, the Lapwing, the Common Snipe, and, as it was believed, the Solitary and the Jack Snipe; also the Ruff, the Oystercatcher, the Crane, the Water-Rail, the Spotted Crake, the Coot, the Dusky Sandpiper (rarely), the Green Sand-



M. Körner, del.

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Day & Son, Limited, Lond.

TEAL (MALE)

TEAL (FEMALE)

COMMON WILD DUCK (MALE & FEMALE)

SHELDRAKE

COMMON WILD DUCK (FEMALE)

PINTAIL (FEMALE)

PINTAIL (MALE)

SHOVELLER (MALE)



piper,* the Red-Shank, the Wood Sandpiper, the Common Sandpiper, the Ringed Plover, the Lesser Ringed Plover, and probably many others that have been overlooked. I may here mention as a somewhat singular circumstance that early in June, 1862, I shot a remarkably fine specimen of the Knot, in full nuptial dress, on a small island in the Wenern. Is it possible that this bird, the breeding habits of which seem entirely unknown to naturalists, had visited our district for the purpose of nesting?

Ronnum being situated on the banks of the River Gotha, the sole outlet of the Great Lake Wenern, and only distant, as the crow flies, some twenty miles from the western coast of Sweden, and consequently on the high road, so to say, of the migratory birds; we were moreover visited, during spring and fall, by almost every species of water-fowl that nests in high northern latitudes. Swans were very numerous, particularly during the autumn, and an odd one occasionally passed the winter in the rapids of the Gotha. Wild geese † were also very common in the fall of the year, especially on some low-lying lands, ten to fifteen miles to the north-east of Wenersborg, where they usually remained for several weeks. No later than last September I myself saw fully two hundred of these birds congregated in a

* The Green Sandpiper, it is now, I believe, pretty generally admitted, breeds at times, at least, in trees and in the old or deserted nests of other birds. I myself can testify to such being the fact, having on one occasion found its eggs, four in number, in an apparently new nest of a Thrush, built in a young spruce pine, at about four feet from the ground.

† A curious notion would seem to exist in parts of Scandinavia, in respect to these birds. "As on the breaking up of the frost in the spring," says Nordholm, when speaking of Helsingland, "swans and wild geese are always in company, and one much less in size than the other, it is the belief of many people that geese are no other than the young of swans."

large open field near the road-side, though in a locality, it is true, where they were protected.

Once in a while we had, besides, strange visitors from the ocean. On two occasions I have myself seen the Cormorant in the Wenern, and once the Razor-Bill. Instances are also on record of the Eider-Duck having been shot either in the Lake itself or in one of its numerous tributaries.

When one considers the swarms of ducks and other water-fowl that are bred in the inland waters of Sweden and Norway, the number killed seems comparatively small, which is probably in part owing to decoys being altogether unknown in the Peninsula. Very many, however, do fall to the gun, though most generally in the flapper state, or rather are then caught by the dogs, who, in the early part of the season, are the principal executioners. But the manner in which the flapper-jagt is usually conducted in Scandinavia will be best understood by what follows:—

“Duck-shooting,” says Ekström, “commences from eight to fourteen days before midsummer in lakes or rivers, the sides of which are fringed with reeds and rushes, and adjoining to which are wet pastures or morasses. If the reeds be thick, *skott-gator*, or shooting paths, are, at stated intervals, cut through them, and in each of these, or in natural openings in the reeds, a good ‘shot’ is posted prior to the commencement of the hunt. The whole party—several individuals usually taking part in the amusement—then move forward together, the land division marching abreast through the marsh, or meadow, as the case may be, and the other division, embarked in small punts, in a line with them. Should the water be so deep as to prevent the dogs from hunting properly, one end of a long and thin rope, to which bells are often attached, is fastened to the stern of the outermost of the punts, whilst

the other end is held by the jägare nearest to the strand. As the man and the punt move forward simultaneously, the reeds and grass are thus regularly swept, as it were; and if there be any skulkers they are sure to be driven forward to the "skott-gator," spoken of, where the gunners are stationed. Should there not be a "sufficient number of sportsmen to guard the several passes, nets, somewhat similar to those described for the capture of the forest birds, are made to supply their places. These, however, must not be set in a straight line, but zig-zag; and in such manner that one-third of the net stands above the surface of the water. When all matters are properly arranged, the sportsmen on shore, and in the punts, and also those stationed in the several 'skott-gator,' will be quite certain to get shots enough. This kind of jagt, however," Ekström adds in conclusion, "seldom proves very successful, unless the party be sufficiently numerous."

Again:—"Duck-shooting, with dogs trained for the purpose," says M. Greiff, "commonly begins before the greater part of the young ones are fully feathered. But it is a destructive sport, and of little benefit to the larder. People boast of having shot above a hundred ducks in a day, but they omit to mention that at least two-thirds of the number are not fit for eating."

Accidents not unfrequently happen at these great flapper-hunts; and no wonder, when one considers the inexperienced hands in which guns are often placed, and the very careless manner in which, speaking generally, Swedish sportsmen are accustomed to carry them.

"Several young gentlemen," says Ekström, "were one day engaged in a Duck-hunt, some being in punts and others wading through the marsh. The latter had not proceeded far when the dogs found a brood of flappers that at once took to the water. The youth next to the

strand immediately levelled his piece, and was in the act of discharging it; on observing which, the individual in the nearest punt sang out lustily, with an unnameable expletive: 'Don't you see I'm in the line of fire!' But this warning availed not, for an instant afterwards he received several shots in the face. When, however, he had in degree recovered from the effects of the unwelcome salute, he raised his gun to his cheek, which was streaming with blood, and cried out to the misdoer in a stentorian voice: 'I'll cure thee of shooting at people.' Seeing that the wounded man was in earnest, the unlucky wight who had caused the mischief ran off at his best pace, but had only proceeded a short distance when several leaden pellets were lodged in his heels. The smarting of the wound at once 'brought him up,' and caused him forthwith to deposit the most fleshy part of his person in the mud, where he drew his knees up to his chin, and with both hands seized hold of the soles of his feet. To the great amusement of the whole company, there he sat like a huge baboon, mumbling between his teeth that a bastinado was not a fit punishment for a Christian man, and shouting loudly for a doctor, to whom, in fact, he was shortly afterwards sent. It was soon ascertained, however, that his boots had suffered more than his legs, and that the services of a shoemaker were more required than those of a follower of Esculapius."

Though multitudes of ducks, &c., are slaughtered whilst in the flapper state, yet many others are shot when fully fledged, and in a sportsmanlike way, on their rising from the reed-beds. And admirable duck-shooting, in certain localities at least, is obtainable in almost all parts of both Sweden and Norway; but the best, probably, in Norrland, where, Nordholm tells us, "there is more wild fowl than in the rest of the Peninsula together;" and to judge from what I myself saw whilst there,

and the reports of others, such would really seem to be the case.

“All the lakes and rivers near the Gulf of Bothnia,” writes the Honourable Richard Hely-Hutchinson to me, “afford most excellent shooting. There you may see duck and mallard, with teal, in swarms. I have no recollection of my best day’s sport, but I certainly shot more waterfowl in one season than I ever killed before, or perhaps ever shall again, at least with the small gun.” And Mr. Richard Dann, who spent several summers at Qvickjock, in Lapland, wrote me to the same effect.

I, for my own part, never had any very extraordinary Duck-shooting in the Peninsula, though quite sufficiently good to satisfy me. When my tent was first pitched at Ronnum, ducks were tolerably abundant, both in the river Gotha, and in the numerous inlets of the Wenern; but at an after-period, owing to drainage, and the increase of gunners, their numbers fell off greatly; and duck-shooting being a rather favourite amusement of mine, I not unfrequently devoted a day to the purpose. It was not, however, until towards the end of July, when the young birds were for the greater part fully fledged, that I was accustomed to take the field. On the whole, my sport was very fair, as in the early part of the autumn I commonly bagged in the day from eight to twelve couple, and sometimes more, of mallard alone; and even when the season has been far advanced, say the middle of October, I have shot as many as seven and a half couple. On one occasion a friend and myself bagged in a single day twenty and a half couple of mallard; and in the four consecutive days that we were together sixty and odd couple, and all, as a rule, strong on the wing. Though I did not give up very much time to the sport, yet during my first season at Ronnum I shot to my own gun upwards of one hundred and fifty couple of wild fowl, of which fully

two-thirds were mallard, and the rest golden eye, teal, widgeon, &c.

Elsewhere in Sweden I have also had fair duck-shooting; as, for instance, on Kollands Ö, a large island in the Wenern, and on the so-called Wermlands Näs, where I have bagged in a day, in addition to other birds, as many as thirteen and a half couple of full-grown mallard.

The best shooting was always obtainable before the reeds and grass were cut, for afterwards the ducks, owing to the want of shelter, resorted, for the greater part, to the open water, and were there difficult to approach. Usually I shot from out of a small English duck-punt, presented to me by the late Sir Francis Sykes, which my man, with a long pole, propelled in all silence through the reeds and grass bordering the shore of the lake or river; and was thus often enabled to approach pretty near to the fowl before they became alarmed and took wing. But if, on the contrary, the water was too shallow for our little craft—and this was generally the case in the wet and tussocky marshes where the best sport was to be had—I was accustomed to beat them on foot, often up to my middle in water, in like manner as one would a covert, and thereby was pretty sure to flush all the ducks that were able to fly.

On these occasions, I was generally accompanied by a steady pointer; though it is not quite clear to me that a dog, be his breed what it may, is of use in Duck-shooting. It is true he will occasionally pick up a wounded bird that might otherwise escape, or one still unable to fly; but then it must be taken into consideration, that from the noise he unavoidably makes in the water, whether in following his master or whilst pursuing maimed Ducks, he not unfrequently flushes others that would probably have lain still until one came within gunshot of them. Dogs, moreover, that have been much in the

water, almost invariably suffer from deafness and rheumatism, or it may be from both ailments; and, as a consequence, are worn out before their proper time.

Besides, if the water be at all deep, not one dog in a thousand, whether pointer or retriever, can properly recover a wounded duck, or capture one that is unhurt. Such, nevertheless, are to be found. Many years ago, when at Haparanda, at the northern extremity of the Gulf of Bothnia, I was informed by the commandant, Captain Bergenstråle, that he then possessed a dog which assisted him to fully the half of his bag; for when the duck, whether wounded or not, dived to the bottom, he would immediately follow, often remaining under water a considerable time, and, on again coming to the surface, generally have the bird in his mouth. He was most successful, the Captain said, when the water was clear and the sun shining bright, being then better able to follow the movements of the quarry. The dog in question was, I understood, sixteen years old, which rendered his performances still more remarkable.

The number of old Mallard-Drakes shot by me during the autumn was very small; but this is of easy explanation. In the months of July and August, as is well known to sportsmen, these birds are in a state of moult,* and, for the most part, conceal themselves in the thickest rushes, where one may almost trample on them before they can be induced to move. Very frequently several lie near together, not for the sake of companionship, but from the nature of the locality. I was, indeed, assured by

* It is remarkable what a great change then takes place in the appearance of the old Mallard-Drake. His usual brilliant plumage has entirely vanished, and he has assumed so nearly the garb of the Duck, that were it not for his superior size, he might readily be mistaken for her. Few people, indeed, are at that time able to distinguish one from the other.

M. Kjällberg, the proprietor of Storberget, a fine estate on the eastern shores of the Wenern, that on one occasion when his people were cutting a wet meadow near to the house, they found in a patch of rough grass, dotted with bushes left for the purpose, upwards of sixty old Mallard-Drakes that had taken refuge there, and all of which were knocked on the head with sticks. The spoil, M. Kjällberg said, "filled a large sack."

Speaking of these birds reminds me of a singular incident that occurred to an acquaintance of mine, M. Backman, of Traneberg. He had taken in some high grass two young Ducks, one with each hand; and whilst holding them up before him, preparatory to wringing their necks, an old Mallard-Drake suddenly rushed between his legs, by closing which he secured him also.

The chief take-off to Duck-shooting is the number of maimed birds that escape. On one occasion, owing to the depth of the water and the tussocky nature of the marsh, I lost no less than six couple of Mallard out of twelve and a half couple that fell to the gun. To say nothing of leaving the poor creatures to perish miserably, the annoyance of losing prizes so nearly within one's grasp is exceedingly great. As with us in England, the belief is commonly entertained in Scandinavia, that Ducks, when wounded, dive to the bottom and attach themselves, by their bills, to weeds, where they remain until life is extinct. But unfortunately the opportunity was never afforded me of testing the truth of this singular notion.

At a later period of the autumn again, numbers of Ducks are shot *på drag*, or at flight-time. When the reeds are cut and stacked,* these birds, then strong on the

* In many parts of the country, where hay is scarce, reeds serve as provender for the cattle during the winter months.

wing, mostly pass the day in the more open parts of rivers and lakes, where they are very difficult of approach ; and it is not until towards evening that they repair to their feeding-grounds, often at a very considerable distance. Their line of flight is in most instances precisely the same, and this having been ascertained by the fowler, he—at dusk, or early morn, as the case may be—conceals himself in their path, and, as soon as they make their appearance, pours, from his ambush, a deadly volley amongst them.

When the season is still further advanced, numerous wild fowl—especially the Golden Eye, many of which pass the winter in the rapids of the Gotha, and other rivers—are lured within gunshot of the fowler by means of *Wettar*, or artificial decoy birds—a system of shooting occasionally practised by myself, though from the lack of sufficient patience not always successfully.

Though possessed of a gunning-punt, I had no punt-gun, or otherwise, it is probable, I might have done considerable execution with it ; for during migration, especially in the autumn, we were visited by large flocks of several species of wild fowl ; as also by numbers of both swans and geese. Indeed, with the exception of the late Mr. Richard Dann, whose residence, Tjölholmen, was on the west coast of Sweden, I never heard of any one in Scandinavia making use of a punt-gun ; and he, owing to the locality not being very favourable for the purpose, was not, I believe, very successful. But that great slaughter might be committed with this deadly weapon in the lakes and rivers of the Peninsula, may be inferred from the performances of Messrs. Hutchinson and Hodges, in the river Elbe, during the winter of 1848, where “in twenty days’ shooting with the punt-gun we bagged between us,” as Mr. Hutchinson himself wrote me, “1,175 head of web-footed fowl. The greatest number of birds killed

at any one shot was fifty-seven, consisting chiefly of Teal and the like."



THE SKJUT-KO.

Late in the autumn, when ducks, for the most part, are exceedingly wild and unapproachable in the usual way, the fowler resorts to various expedients to circumvent them. Sometimes he shelters himself behind a horse trained for the purpose, but at others ensconces himself in a so-called *Skjut-Ko*, or artificial cow, and in this disguise, as shown in the above sketch by Colonel Fritz von Dardel, he steals upon the birds.

"The 'Skjut-Ko' I myself made use of, and which answered admirably," says M. von Greiff, "consisted of hoops and splints covered with canvas, and afterwards painted brown, so as to resemble a cow. Being hollow, the sportsman crept into it, the gun forming one of the horns, and his feet the hind-legs of the animal. But as one must constantly go in a bent position, the fatigue is

great, and the device is, besides, difficult to transport when fences or other impediments intervene."

A simpler contrivance for getting within gun-shot of ducks is by means of a flat canvas screen, shaped and coloured to resemble a horse or a cow, and inside of which is a sufficiently strong wooden frame to retain it on the stretch. To the middle of the figure is attached a stick, which the sportsman affixes in the ground when he is desirous of halting. The screen is borne on the arm by a handle, an opening being left at the shoulder for the barrel of the gun.

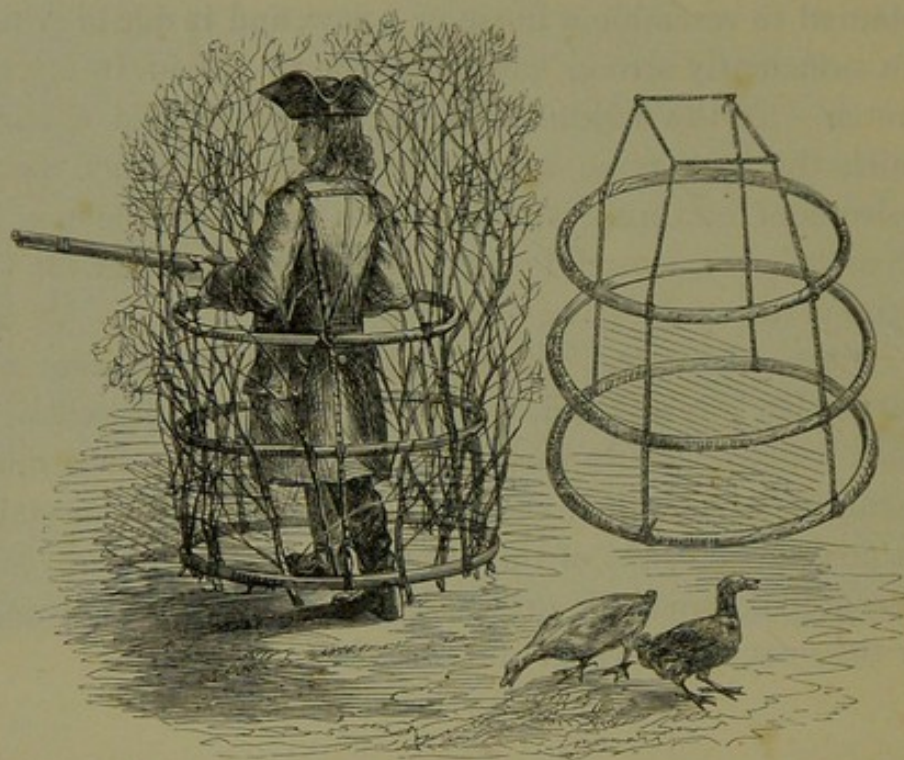
When, however, neither the Stalking-Horse nor "Skjut-Ko" is at hand, the fowler envelops himself with green boughs; but in this case, we are told, the face must be carefully concealed, because wild animals are especially alarmed at the sight of the human countenance. A loose covering of green or grey canvas, with small openings for the eyes, will answer the purpose.



THE FRENCH SKJUT-KO.

In France the plan of approaching geese, ducks, and other fowl, would seem to be somewhat similar to those

described; though, to judge by the above illustration, the French "Skjut-Ko" is a somewhat more manageable affair than that spoken of by M. Greiff.



THE CRINOLINE.

In France, again, they have another device for approaching wild fowl, the construction of which would seem to be very simple. The framework,* as seen in the annexed drawing, consists of three or four hoops, connected by lines, and is afterwards interlaced with green boughs,

* This device is most probably the origin of the ladies' crinoline. Both were meant to attract—in the one case geese, in the other men, whom it is to be supposed the ladies imagine to be equally silly. A graceful girl will always look well with or without adventitious contrivances, but if the dowagers of a certain age, and verging on embonpoint, who love thus to attire themselves, had the slightest idea of the ludicrous appearance which they thus accomplish, they would surely discard such a highly unbecoming incumbrance.

in such manner that the limbs of the gunner are left at full liberty, so that he can move about at pleasure.

Whether the sportsman adopts a veritable Stalking-Horse, a "Skjut-Ko," or a "Birnam Wood" disguise when endeavouring to steal on wild fowl, he must not, on any account, make directly towards them, but sideways, and as if about to pass them. His pace should be even; and so long as the eye of the Quarry is upon him, he should never halt except when about to fire.

But perhaps the most ingenious expedient adopted by the Northern Chasseurs to beguile wild fowl late in the autumn, is that spoken of by M. Bedoire, as practised by the workmen at the Iron Works of Gysinge and Söderfors. "During the autumn," says that gentleman, "ducks collect in large flocks on the neighbouring lakes and rivers, the strands of which are in general flat. The fowler, on observing the birds, walks as near to them as he can with safety, when, falling on his hands and knees, he makes his further approaches slowly and cautiously. In the meanwhile he causes his well-trained dog, who should be of a reddish colour, to gambol before him, which he effects by every now and then throwing the animal a crumb of bread that it catches in its mouth. The ducks, attracted by the antics of the dog, gradually approach the strand, and thus the man is often enabled to get sufficiently near them to fire with effect.

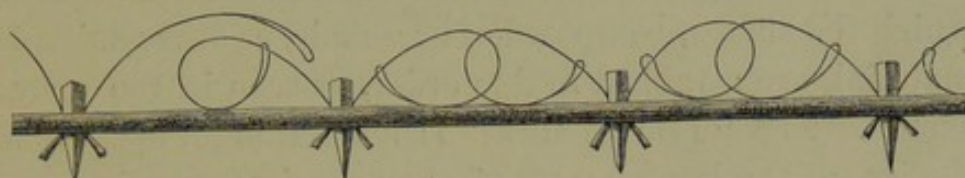
"According to the accounts of the men in question," M. Bedoire goes on to say, "it was from seeing the way in which the fox at times secures his prey that they were induced to adopt the plan spoken of, for that cunning animal in the autumn resorts to a similar ruse to capture young ducks. He then promenades near to the water's edge, sometimes vaulting high in air, and at others crawling on his belly, his brush in the while trailing along the ground. These manœuvres of his so excite the curiosity

and tickle the fancy of the ducklings, that they gradually swim towards him, occasionally so near, it is said, as actually to seize hold of his tail with their bills; but they usually pay dear for their temerity, for the wily fellow seizes his opportunity, and pounces on one or other of them. To this device of the fox," M. Bedoire continues, "I myself have been an eye-witness; and it was only last autumn that my bailiff shot one of these animals in the very act of beguiling young ducks in the manner described."

Another plan of circumventing ducks and, late in the autumn, one perhaps not altogether unknown in England, is thus described by M. Göbel, an ardent sportsman, and a good shot. "In the middle of the lake,* and in a thick cluster of reeds," he says, "I sank a capacious tub to within a few inches of the surface of the water, and secured it by stakes. After the tub had been bailed out, I seated myself on a stool at the bottom of it, provided with several guns. My man then rowed to and fro in the lake to disturb the fowl, and the better to effect this object was provided with a pistol which he discharged occasionally. The fowl, having no suspicion, flew round and about me in every direction, so that it was impossible for me to load quickly enough to give them all a salvo. But although I fired a number of shots during the autumn, my success was not commensurate. This was principally attributable to my view being very greatly obstructed by the reeds, which rose fully two feet above my head, and to the rapid flight of the fowl, so that I seldom obtained other than snap shots, of which it is probable that, on the average, not more than one in five took effect. But during the present season," he goes on

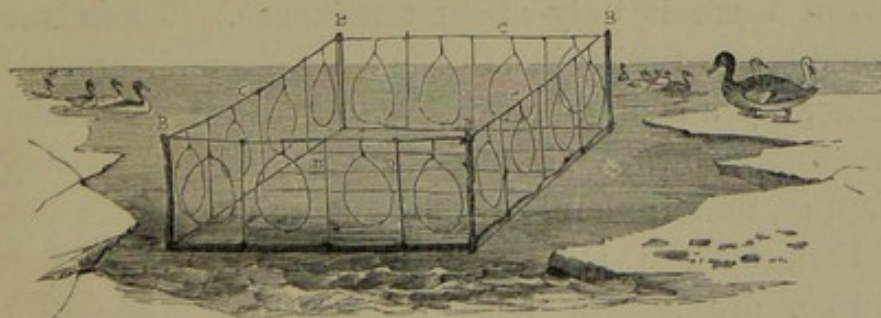
* Brosjön, in South Wermland, a great resort for wild fowl, where I myself have shot on several occasions, once in company with two friends, when, in the course of three to four hours, we bagged upwards of twenty couple of Mallard alone.

to say, "I have adopted a new system of 'jagt' with the great flocks of ducks. I load guns of large calibre with heavy shot, slugs in short, and row in a boat towards the fowl, and when they take wing, I fire into the thick of them, and for the most part several have fallen."



THE FOGEL-REF.

Many devices, besides those spoken of in my former works, are had recourse to in Scandinavia for the capture of water fowl. One is called the *Fogel-Ref*, and is thus described by Linnæus, in his "*Öländska Resa*," 1741, p. 203. "It consists of a very long line, to which are attached wooden pegs, at a distance of about three feet apart, to fasten it to the ground. On both sides of each peg is a black horsehair snare, twenty inches in length, and at its base a piece of a quill, to keep it in its proper position. The '*Fogel-Ref*' is placed along the shore, so that when ducks and other small fowl are making their way from the water to dry land they get entangled in it."



THE LINTU LAUTA.

In parts of Lapland the so-called *Lintu-Lauta*, a Finnish invention I believe, is in common use for the

capture of wild ducks and other fowl. It consists of a raft, so to say, constructed of plank ends, and about four feet square. B B are unbarked sticks, some twelve inches in height; C C a line passed through the upper part of these sticks, thus forming a kind of railing; D D other lines connecting the latter with the raft itself, and between which the snares, composed of horsehair, or other suitable material, are arranged in due order, as seen in the above sketch. The "Lintu-Lauta" is moored in an opening in the ice, at the breaking up of the frost in the spring, and baited with the roots and leaves of aquatic plants. In the attempts made by the hungry fowl to obtain access to these delicacies, very many are captured.

In Lapland, moreover, at the season in question, wild geese are often taken in snares as shown in the accompanying illustration. The locality where they are set, should in preference be a low and sandy *landtunga*, or neck of land, stretching out into a lake, of about fifty paces in length, by twenty to thirty in breadth. Around the more central parts of this spot the fowler constructs an artificial barrier. This consists of a number of *unbarked* sticks, of about the thickness of one's finger, placed zig-zag, at from ten to twelve feet apart, excepting at the several angles, however, where the space between them is only about ten inches. These sticks, at some ten to twelve inches from the ground, are linked together by a string, or thin *glödgad* wire.* The snares, from twenty to thirty in number, are placed at the angles spoken of, and are kept in their places by notches cut in the bark of the sticks. Broken straw, barley, and the like, are strewn both outside and inside of the barrier, but the greater portion within it. When the

* Wire that has been passed through the fire, as well for the purpose of discolouring it, as of rendering it more ductile.



M. Körner del.

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SNARING WILD GEESE IN LAPLAND.

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geese, who always in the first instance alight in the water, see the tempting fare before them, they land and make towards it. Presently, however, they are "brought up," as sailors say, by the wire or string, as the case may be; but instead of endeavouring to pass over or under it, they follow the obstruction to the first opening, where a snare is placed, which generally proves their bane.

The greatest destruction, however, made amongst wild geese, and other aquatic birds in Lapland, is during the moulting season. This usually begins in the middle of July, and continues for about three weeks; but its commencement and duration much depend on the state of the weather; for if the summer be cold and rainy, it begins later and lasts longer. Whilst moulting, the geese seldom frequent the great lakes, but resort chiefly to the numerous small tarns studding the face of that desolate country. In the night-time they are much in the water, but during the day generally ashore, and often at a considerable distance from the strand, seeking their food, or reposing amongst the tussocks in the neighbouring morasses. "During the moulting season," so we are told by Lieutenant F. Robson, "the Finnish *Ny-Byggare*, or squatters, as also the Lapps, get up regular hunts. Provided with several dogs, they proceed to the bogs where geese are known to resort, and which, although very wet and difficult to traverse, are not impassable. Fire-arms are needless, it being considered superfluous to waste powder and shot when the birds may be otherwise obtained, and the men, therefore, are only provided with stout sticks. When arrived at the scene of action, the dogs are slipped from their couplings, and start the birds, whose only means of escape is by reaching the nearest water. If they succeed in this, they commonly manage to get off; but should they not be so fortunate, the dogs soon come up with them, and by a bite in the head or neck presently put them out of their

misery. In the meanwhile the sportsman, with his stick, kills such as he falls in with. But as on these occasions the birds retreat very quickly, he would have much difficulty in overtaking them, if he did not, during the chase, proceed on the principle of never running directly after, but alongside of and past them, and as if not aware of their presence. In this case they, believing themselves unobserved, squat at once, and hide in the grass, where they remain entirely motionless, so that one may go directly up to the spot, and secure them with the hand. The wild geese often lie so close as to suffer themselves to be wounded and mangled by the dogs without giving the least signs of life; but swans, and even geese, will nevertheless, at times, place themselves on the defensive, for which reason large dogs are used. As these, however, only kill the birds, and are not taught to retrieve, it may easily happen that the sportsman, after the termination of the hunt, and when collecting the spoil, has great difficulty in finding it in the high and thick grass. The summer of 1827," he goes on to say, "was not a successful one; but during the preceding year the inhabitants of Killinge, in the parish of Gellivara, thus captured sixty wild geese, besides other fowl."

Again:—"When you meet with the large geese during the moulting season in the small mountain lakes," writes Læstadius, "and if a boat be not at hand, you may drive them to the shore either by throwing stones, or by swimming. In the year 1828, here in Karesuando upwards of one hundred wild geese were killed by several squatters, in a remote and sequestered tarn."

The reverend gentleman tells us further, that, "whilst moulting, the geese make long pedestrian excursions from one lake, or tarn, to another; and that in the autumn of 1821, a Lapp knocked five of these birds on the head at the summit of the well known fjäll, Sulitelma."





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TRAPPING WATER FOWL IN LAPLAND.

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In Lapland, moreover, during the spring of the year, numbers of water fowl of various kinds are taken in the common steel trap. This in form resembles that in use for the capture of the fox, but the jaws are smaller, and the manner of setting it is simpler. Near the mouth of rivulets and other small water-courses, the ice always melts first, and to the openings thus formed the fowl, which by this time have for the greater part arrived, instinctively resort. In these openings, and where the water is shallow, say fifteen inches in depth, the traps are set. Those intended for the capture of the Mallard, and other fowl that live principally on grasses and aquatic plants, are baited with the finer leaves of the *Ranunculus aquatilis*; whilst fowl like the Goosander, the Merganser, the Looms, &c., that subsist chiefly on the finny tribe, are lured by a small fish of the genus *Coregonus*; and as the birds last named are always diving in search of food, the temptation is irresistible, and they, in consequence, pay the penalty with their lives.

CHAPTER XXI.

Gothenburg.—Elfsborgs Castle.—Känsö.—Winga-Beacon.—Danneholm.—
Bohus Castle.—Siege of.—Skägge.—Bohus Smäll.—Devotion.—Ruse
de Guerre.—Kongelf.—Royal Courtesy.—The Bonfire.—Portends.—
The Vikingar.—Great Battle.—Heroic Action.—The Wizard's Death.
—Surrender of the Fortress.—Solskott.—Slavery.—Marstrand.—
The Paternosters.—The Church.—Golgotha.—The Harbour.—Carlsten
Castle.—Skärgård's Flotta.—The Lighthouse.—Convicts.

AT an after-period I left the Ronnum country and removed to Gothenburg, where, or in its immediate vicinity, I resided several years. This town, which, after the Dutch fashion, is everywhere intersected by canals, is situated on the river Gotha, at some twelve to fifteen miles from the sea. Formerly it was fortified and a place of strength, but at the present day little remains of the defences, excepting the broad and deep moat that surrounds it on the land side. Including the suburbs, it contains from 30,000 to 40,000 inhabitants, and, for its size, is perhaps one of the handsomest and best-built towns in Europe. Of late years it has been greatly improved and beautified; and a fine walk called the *Allé*, a mile or more

in length on the outside of the moat, and a Botanical Garden have been laid out for the recreation of the inhabitants. But its greatest boast is the number and extent of its well-endowed and well-conducted charitable institutions.



GOTHENBURG.

Gothenburg, in a mercantile point of view, is most flourishing; more so, probably, than any town in the north of Europe. At the present day a fourth of the staple products of Scandinavia — iron and wood — that are exported to foreign countries, go from thence. Its trade is greatly on the increase, and manufactories of various kinds are rising up on every hand. The vessels belonging to the port are numerous, and many of them are of a superior description. Since the repeal of our navigation laws, I should add, the number of British ships visiting Gothenburg has greatly increased. Ten to twelve years ago they averaged about one hundred, but now two hundred is much nearer the mark.

In olden times Gothenburg was a cheap place of residence, house rent being low, and the necessaries, not to say luxuries of life, procurable on very moderate terms; but owing to the price of everything having of late years doubled or even trebled, the reverse is now the case, and a man wishing to economize will do well to pitch his tent elsewhere.

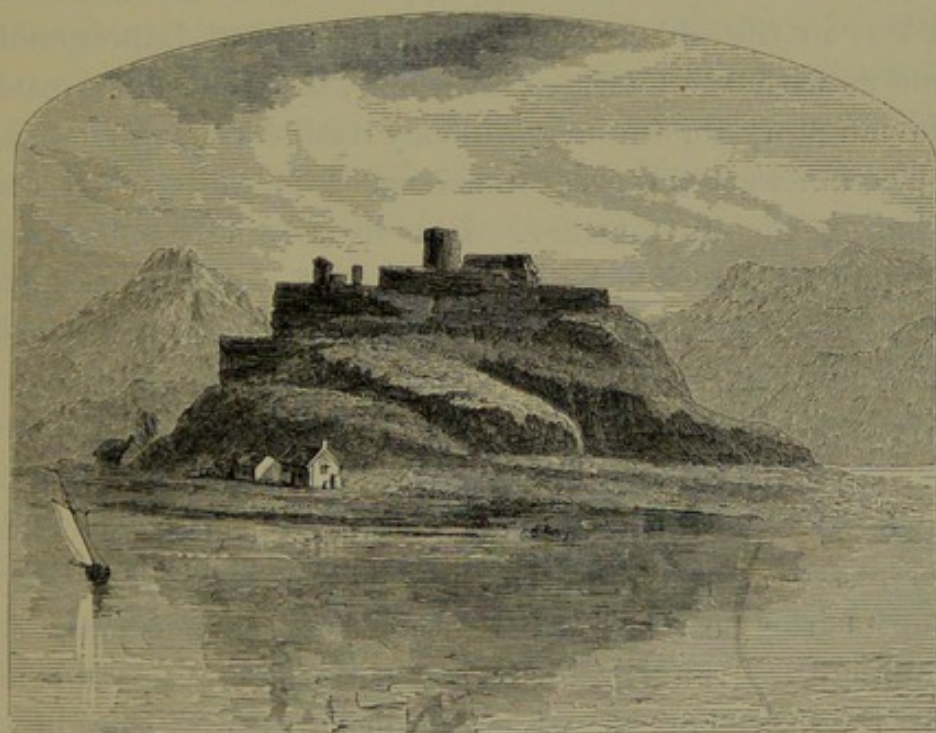
There are several objects deserving the traveller's attention in the vicinity of Gothenburg; amongst which may be enumerated Elfsborgs Castle, situated on an islet of the Gotha, at some five or six miles below the town. Formerly it was looked on as a place of strength, but as it is commanded by the hills on both sides of the river, and as cannon now carry somewhat further than in days of yore, it serves at present, I apprehend, little other purpose than as a receptacle for a number of misdoers who have been condemned to imprisonment for life. The remains of the ancient fortress of Elfsborg, which in years gone by was more than once a bone of contention between the Swedes and Danes, are on the main land and not very far distant from where the modern castle now stands.

Still farther down the river, and also on a rocky island, is Käsö, the well-known quarantine station for the port of Gothenburg. The Lazaretto and adjacent buildings, which are well and substantially constructed, stand at the very edge of the water, and there being in the back-ground a few trees and bushes, a somewhat unusual sight on this iron-bound and dreary-looking coast, the place has quite a snug and pretty appearance; and supposing the *détenu* not to be too strictly confined to the house, I can fancy that spending a few days here would not be attended with any very great discomfort.

Near to the outlet of the river Gotha, moreover, and likewise on a small rocky islet, stands Winga-Beacon, the light that has guided many a brave ship into the celebrated

Winga Sound, where during the great wars of the early part of the present century, our naval and mercantile fleets, numbering together hundreds, or even thousands, have often rode in safety.

Not far from thence, again, is Danneholm, which anciently formed the line of demarcation between the three northern kingdoms. Here the kings of Norway, Denmark, and Sweden not unfrequently held conference, and feasted together; and on these occasions, it is said, the table was so arranged that each monarch sat within his own dominions.



BOHUS CASTLE.

Bohus Castle, or rather its ruins, kindly sketched for me by Sir Thomas Maryon Wilson—which is situated near to the confluence of the Gotha with the Norra Elf, or northern river, and at some ten to twelve miles to the north of Gothenburg—is another object of interest. It dates as far back as the year 1310. “A murderer, who had contrived

to elude the hangman," so runs the legend, "had taken refuge on *Fästnings-Holm*, the island whereon the fortress is built, then covered with wood. One fine day a venerable old man appeared to the culprit, and directed him to proceed to Håkan, the then King of Norway, and to exhort his Majesty forthwith to build a fortress on the spot, with the assurance that if he could procure a dog strong enough to bear the corner-stone of the structure it should never be taken by the sword. The outlaw immediately undertook the commission, and the king, accepting the proffered terms, erected the stronghold." From its commanding position and massive walls, it was in the olden time considered all but impregnable, and as with the Castle of Elfsborg, is famous in Scandinavian story for the many bloody conflicts that have taken place amongst the great northern potentates when contending for its mastery. But it is said that "though frequently attacked by one or other of them, it has never yet, in accordance with the legend, been captured by actual force."

Some incidents relating to its several sieges are, perhaps, worth recording, that of 1566 more especially. Eric XIV., of Sweden, had entrusted the siege of this fortress—then in possession of the Danes—to Nils Boye, one of the best and most valiant of his generals. On the night of the 21st of March batteries were established on the hill Fontin, which is near to it. The heavy artillery consisted of 6 whole Catowers, 7 half Catowers, and several heavy Culverins. On the 23rd of March fire was opened with a salvo of 90 cannon-shot, which had the effect of knocking down the parapet of the outer wall. It was not, however, until after this salute that Boye summoned the governor—the brave Jens Ulfstam—to capitulate, which demand having been negatived, he kept up a terrible fire against the place.

It was calculated that during the first three days the Swedes sent the besieged 2,820 cannon balls. On the 25th of March the continued fire from the batteries had made a breach in Röda-torn, or the red tower, one of the three towers of the fortress; when eight companies, each consisting of 125 men, landed on the afternoon of that day on Fästnings-Holm in readiness to storm. At dawn on the following morning (the 26th of March) the batteries on Fontin were already vomiting death and destruction on the dilapidated tower, and soon greatly widened the breach. Sunrise was the signal for the troops to storm. On three several occasions the Swedes threw themselves with desperate fury into the open breach, and were as often driven back by the valiant garrison. After resting a while the trumpets sounded a renewal of the charge. This time, however, the Danes awaited not the coming of the assailants, but retreated from the walls, when the Swedes, rushing frantically forward, took possession of the tower. The conquerors, conceiving that Bohus was already won, unfurled their national banner, and wildly shouted — Victory! Victory! But at this moment a mine was sprung by the besieged, when Röda-torn, with 2,200 men, was blown, with a crash like thunder, into the air. The poor fellows, environed in fire and smoke, were carried to so great a height that their blackened bodies looked like so many crows; and whilst aloft, so runs the story, were heard to exclaim, in allusion to their late joyful cry, “God be gracious to us—we thanked Thee too soon for our triumph.”

The governor of the fortress, as it afterwards appeared, finding that he could no longer withstand the assailants, caused a large quantity of gunpowder to be placed in the vaults beneath the tower, which was ignited by an heroic man of the garrison, another Decius, who, receiving a promise in the name of the King that his

wife and children should be provided for, nobly volunteered to sacrifice his life for the good of his fatherland.

For the prosecution of the siege of Bohus, King Eric, we are told, had cast a wonderfully large cannon or mortar, "the mouth of which was so capacious that a cobbler could sit within it and mend shoes." From this extraordinary piece of ordnance, which bore the name of *Skägge*, great things were expected, as may be inferred from the following distich current at the time :

*"Naar 'Skägge' kommer til att gnägge
Saa rister baade muure og vegge ;"*

which may be rendered—

"When 'Skägge' begins to neigh,
Both walls and foundations shake."

Luckily for the Danes, his Swedish Majesty's kind intentions towards them were frustrated; for, owing to "Skägge's" great weight, it broke through the ice whilst being conveyed across the river Gotha, and sank to the bottom, where it is believed to be lying at the present day.

Even after the *Bohus-smäll*, as the terrible explosion that had caused such a fearful loss of life is called, other attempts were made, and continued until evening, to storm the castle; but the terror created by the recent catastrophe had so paralyzed every arm, that the Swedes at length retreated from the breach. The siege was, nevertheless, carried on for some time longer, though without vigour, and was finally raised on the 1st of May, 1566, after having lasted for 38 days.

At a subsequent period (1678) Bohus Castle, then in possession of the Swedes, was besieged by the Danes; and

the latter having succeeded in cutting off all communication between it and the Swedish army lying in the vicinity, the garrison was reduced to great straits for provisions, and the enemy in consequence congratulated themselves on the prospect of hunger soon compelling it to surrender. One fine day, however, it happened that an eagle, whilst flying over the Castle-yard, let fall from its talons a fine salmon that it had just captured in the neighbouring river. This "God-send" the besieged at once hoisted up on the walls of the fortress. They also took the hides of the cattle of various colours slaughtered during the siege, which they placed one after the other on the back of the only cow left them, and led her forth at intervals in sight of the enemy; thus making them believe they had still fish and meat in abundance. The ruse had the desired effect; for the Danes, imagining that the garrison were amply supplied with provisions, raised the siege and retreated.

The town of Kongelf, situated on the main land, and under the very guns of Bohus Castle, is of even still more ancient origin than the latter, mention being made of it in the "Sagas" of the sixth century. Though at the present day little better than a large village, and only famous for gingerbread said to be the best in the Peninsula, it was in former times a place of great repute, containing from 15,000 to 20,000 inhabitants, and carrying on a very considerable commerce with different countries. In a political point of view, it was also of importance, there being, according to tradition, a sort of compact between the Kings of Sweden, Norway, and Denmark that they should meet here every third year to settle any dispute that might arise amongst themselves or their subjects. Hence the town was called *Kungahall*, or *Kungasal*, signifying a dwelling, or Hall of Kings.

Affairs matrimonial were also, at times, arranged here between the Scandinavian potentates, though not always, as it would seem, with such courtesy as is practised at the present day. In the year 997, so we are informed, Olof Tryggweson, the famous king of Norway, the same who, some years previously, had by no very gentle means introduced Christianity into that country, was desirous, for political reasons, to form an alliance with Sigrid, commonly called *Storråda*, or the arrogant, the Dowager Queen of Sweden, then some fifty years of age. After sundry negotiations, by deputy, the high contracting parties agreed to meet in Kungahall, where for a time everything went on prosperously, and the marriage was finally settled. But "the course of true love never does run smooth," and the truth of the adage was exemplified in this instance; for when King Olof solicited his heathen bride to be baptized, the queen flatly refused to forego the faith of her kindred and country, but told him that he himself was fully at liberty to worship whatever God he pleased. When this question of faith was raised, Olof waxed very wroth, and forgetting all courtly manners and what was due to the sex, struck her majesty in the face with the glove he held in his hand, exclaiming, "Why should I marry thee, thou wizen-faced heathen beauty?"—"That blow shall one day cause thy death," replied the deeply insulted woman, and the threat was soon accomplished; for in the hopes of finding an opportunity to revenge herself, the despised Sigrid gave her hand shortly afterwards to the Danish king, Sven Tweskägg, or of the two-pointed beard. This monarch, in conjunction with her own son Olof Skötkonung,* the then reigning king of Sweden, and Jarl Eric, who, for political

* When a baby in arms, Olof was elected to the throne, and was therefore called *Skötkonung*, implying the Nurseling King.

reasons, had shortly before been expelled from Norway, treacherously, at her instigation, fell upon Olof Tryggweson, near to the island of Swoldern, when a murderous fight took place, in which the Norwegian king lost both crown and life. Sigrid was thus amply revenged. The victors divided the lands of the conquered between themselves, and the province of Bohus fell to the lot of the king of Sweden.

Though Queen Sigrid might have had just reason to complain of the brutal conduct of Olof Tryggweson, she herself was not immaculate. It is related that when pestered for her hand by a host of *Små-Kungar*, or petty kings, she, to get rid of her suitors, invited them to a banquet, and, when they were overcome with wine, caused fire to be set to the palace, where they were all consumed. During the catastrophe she is said to have exclaimed, "Thus will I treat all 'Små-Kungar' who presume to pay their addresses to me;" and hence her epithet of "Storråda."

But the glory of Kongelf, like all other sublunary things, was destined to pass away. This was in the year 1135, during the reign of King Harald Gille, said to be of Irish descent. "Extraordinary phenomena," we are informed, "preceded the coming evil. On the night of the first Sunday in Easter the inhabitants were roused out of their sleep by unearthly sounds, by a strange rustling in the air, and by noises resembling the marching of an immense host of armed men. Half-naked, as they were, the people rushed into the streets to ascertain what was the matter, but no one could discover the cause of alarm. The dogs howled and went mad, and those bitten by them went mad also. These tokens, which continued until Ascension Day, were believed to forebode some impending calamity; and many, in consequence, sold their property and removed elsewhere. Anders

Brunsson, the parson, used his utmost efforts to allay the panic. On Whitsunday he held a remarkable discourse to the people, telling them that instead of deserting the place they should take courage, be careful of fire, be constantly on the watch against the assaults of their enemies, and leave the rest to God; but his good counsels, as well as other warnings they received, were soon forgotten.

On St. Laurence's Day, however, when the greater portion of the townspeople were in church, hearing a sermon from Anders Brunsson, Einar, a brother of the latter, rushed into the sacred edifice with the astounding intelligence that innumerable vessels were rapidly approaching by both branches of the river, and that a large body of cavalry were crossing Brattås, a hill in the vicinity. Taken so completely by surprise, people knew not what to believe; but many thought it might be the King of Denmark, from whom no hostile attack was to be apprehended. They, nevertheless, armed themselves in all haste, and rushed down to the bridge, where their worst anticipations were realized; for Rettibur, king of the Wendians,* and his lieutenants Dunimits and Unibur, with a fleet of 250 war-galleys, carrying 11,000 men and 500 horses, was, in truth, at their very doors.

There were then lying near to the bridge eleven large ships, called *Östersjöfarare*, or such as traded to the Baltic. These the heathens attacked in the first instance. The townspeople defended themselves manfully, and the combat raged fiercely for a long time. Showers of javelins and arrows were poured on the assailants, as well from the beleaguered ships as the bridge itself, which was lined

* A people of piratical habits, settled on the southern coasts of the Baltic, and afterwards conquered by the Danish king Waldemar.

with armed men and it was not until after a very murderous fight, in which the Wendians lost upwards of 1,200 of their number, that they succeeded in getting possession of the vessels, as also of the town itself; for the inhabitants, finding they were unable to prevent their landing, or to meet them on equal terms on shore, retired with their valuables into the fortress, where Sæmund Husfreja and Asmund, his son, commanded, the greater part of the women and children seeking safety in the surrounding country.

The pirates, after plundering and burning the town, prepared to storm the fortress. Before the attack commenced, however, King Rettibur offered the besieged a free departure with their arms and valuables, if they would give up the place; but the heroic garrison replied with one voice, "they would rather die to the last man than receive favours from the heathen." The proffered terms being thus rejected, the pirates, incited by rage and the hope of booty, rushed like the waves of the sea against the walls of the place; but despair converted each of the defenders into a bulwark against the destructive torrent. All kinds of weapons then in use, such as the sword, the javelin, the bow, and the battle-axe, were had recourse to to repel the assailants. The slaughter was great, especially on the side of the Wendians, for each Christian man (the townspeople having the advantage of position) sent several of the unbaptized, according to the belief of the times, to the regions below.

Whilst the combat was raging, two friendly chieftains, Sigurd Gyrðarsson and Sigard, advanced, with 600 men, to the relief of the sorely-pressed fortress. But the former, seeing the number of the pirates, cowardly retreated with his 400 followers, his name execrated by his contemporaries and through all after-ages. Sigard, however, died on the field of honour, and his band of

200 fell in compact and beautiful order around the corpse of their much-loved lord.

Another instance of devotion worthy of record also occurred at this time. At the commencement of the fight at Kungahall, the wife of Parson Brunsson, together with other women, fled to the hamlet of Solberg with intelligence of the enemy's landing; and hence the news was soon spread over the surrounding country. When the *Härbud*, or war messenger, reached Skurberg, he found all the people at a *Gästabud*, or banquet. Amongst the guests was a young peasant named Ölfwer Stormund. On learning what had happened, he sprang to his feet; and seizing his helm, shield, and battle-axe, exclaimed, "Good men and true, let us hasten to the assistance of the townspeople, who are bravely risking their lives for our sakes. It is better to rid our fatherland of the heathen than to sit here getting drunk on ale!" But all refused, alleging they were sure to be slaughtered, and without their friends being benefited by their death. "Then, as none of you will accompany me," rejoined the heroic man, "I will go alone and cut down one or two of the enemy before I am killed myself." With these words he set off for the fortress alone, though followed in the distance by several of his friends, who were anxious to see how the adventure would terminate.

When the pirates observed Ölfwer approaching, eight of them rushed forward and attacked him. He, however, swung his battle-axe around his head with such force and dexterity as at one and the same blow, not only to cut the throat of the man behind him, but to "brain" the one in his front. The second time he lifted his formidable weapon two other heathens were also killed; and afterwards he made such good use of it as badly to wound the remaining four, and to cause them to take to flight. Though covered with wounds, he started in pursuit; and,

overtaking two of the men whom he had chased into a marsh, he slew them there. He himself also stuck fast in the mire; but his friends coming to his aid, helped him out and conveyed him home, where, after a time, he recovered from his wounds.

Whilst these events were passing, the assault of the pirates on the fortress was perseveringly continued, though now on less equal terms; for the regular weapons of the townspeople were all but exhausted, so that they had few others remaining than stones and staves; and, to enable them to prolong the combat, they were even obliged to split the latter in twain. The courage of the Christians, nevertheless, failed them not; and when the King of the Wendians offered, for the second time, to spare their lives, they replied only by blows.

Two of the enemy's greatest champions now fell. One was an archer whose shaft never failed; and no one could harm him, because his person was protected by the bucklers of two of his comrades. Sæmund Husfreja said, therefore, to his son Asmund, "We will both shoot at one and the same instant; thou shalt aim at the champion, and I at one of the shield-bearers." They did so; and when the man drew aside his buckler to guard himself, Asmund's arrow found its way between the two shields; and, hitting the champion in the forehead, passed out at his neck, so that he never drew his bow again.

The other champion was without any visible armour, and was bold enough to go up to the very gate of the fortress, where he slew a sentinel on guard; but, in spite of all the arrows directed against him, he escaped unhurt, and was therefore looked on as a *Trollkarl*, or sorcerer. When the parson, Anders Brunsson, saw this, he took a portion of the sacred fire from the altar; and, after blessing it, placed it within some soft down affixed to an oaken arrow. This he handed to Asmund, who forthwith

bent his bow and shot at the magician, who at once, and like a dog, fell dead to the ground. At this sight the heathen gnashed their teeth in rage, and howled like so many wolves, for the man was one of their greatest champions.

The attack now ceased for a time, and the chiefs of the Wendians took counsel together. They were at first undetermined how to act; and the besieged almost imagined they were about to retreat. One amongst the townspeople, however, who understood their language, at length heard the king say: "These people are hard to conquer, and we have already lost so many officers and men, that, even were we to get possession of all they own, it would have been better for us had we never come here. During the early part of the day they defended themselves with spears and arrows; afterwards they assaulted us with stones, and now they beat us like so many dogs with sticks; but from all this I draw the conclusion that their store of weapons begins to fail them; therefore let us with all our force once more renew the attack, and see how matters will go."

A fresh and equally desperate combat as the former then ensued; but the townspeople for a while remained unconquered. This last attack, however, sealed their fate; for their chief, Sæmund Husfreja, fell covered with wounds, and with him died all their hopes of deliverance. For the third time, and after the battle had lasted the whole of the day, King Rettibur promised them, not only their lives if they would surrender, but permission for every man to take away with him from the fortress as much as he could carry; and, as they had now no other resource, these terms were acceded to. But no sooner had the unsuspecting townspeople given themselves up to the enemy, than all the wounded and children were mercilessly put to death;

whilst the remainder of the men, as well as the women, were reserved for servitude.

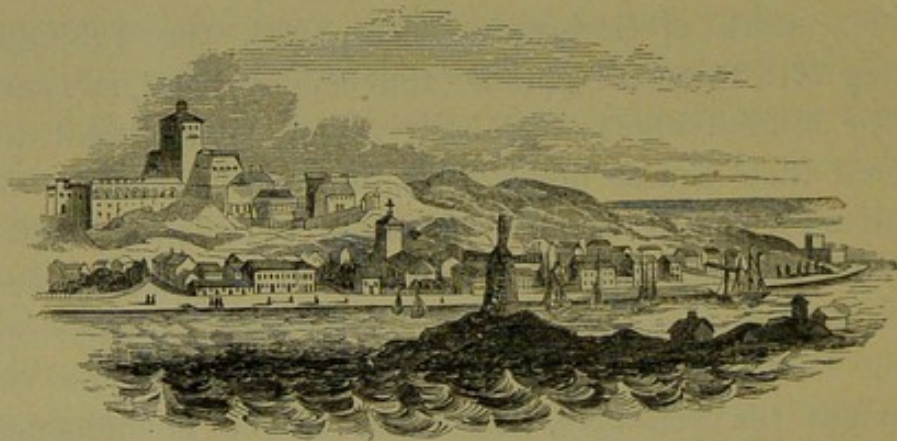
The palace was stripped of all its valuables, and the church sacrilegiously despoiled of the Holy Cross, &c. On the Wendian king entering the sacred edifice, it is said that, after looking around him in wonderment for some time, he, in like manner as Titus when in the Temple of Jerusalem, exclaimed, "The raising of this structure evidences much love to the God to whom it is dedicated, but to me it seems He was wroth with those whose duty it was to afford it protection."

The work of devastation completed, the Vikingar, taking with them the plunder they had amassed, and such of the inhabitants as had been spared, hoisted sail and steered their course homewards. About the time of St. Laurence's Day it is not unusual to experience what is called a *Solskott*, that is, a sudden and suffocating heat. Such occurred as the pirates were about departing. King Rettibur inquired of Parson Brunsson, who was amongst the prisoners, the cause of the phenomenon. The worthy man, either from design or conviction, replied that "it was a token of wrath on the part of the God of the Christians, because the Holy Cross was in the power of the unbaptized, and that even worse might happen." On hearing this, the heathens forthwith put him, together with the Cross, and other of his *Trolltyg*, or sorcery wares, as they called them, into a boat, which was pushed from vessel to vessel until it reached the shore.

The other captives were carried to Wendia, and but few of them ever lived to revisit their native country. The greater part ended their days in slavery, and those that were ransomed and returned home resembled men who had risen from their graves. The recollection of the horrid fate to which they had been subjected weighed like a curse

on their minds, so that they were never afterwards themselves again.

Thus fell Kungahall, the *herrliga*, or beautiful, as it was called, to rise no more to its former flourishing condition. But the capture of the place cost the victors dear, two-thirds of the heathen, as it is supposed, having fallen in the conflict. The immense assemblage of human bones recently found on the battle-ground, and which it is painful to state were sent to this country to enrich our fields, testify, indeed, to the great slaughter on the occasion.



MARSTRAND.

Marsrand, famous for its fortress, its capacious and excellent harbour, and its fine lighthouse, which is situated at about thirty (English) miles to the north-west of Gothenburg, is also deserving of the traveller's notice. Formerly, the rocky island on which the town is built was called *Måse-strand*, or the Sea-gulls' Strand, from the number of those birds frequenting it; but the derivation of its present name is wrapped in mystery; some saying it comes from *Mare*, the sea, but others, from the circumstance of a high-born maiden, who had been wrecked off the coast, having been drifted to land on the *mast* of the ill-fated vessel.

This catastrophe is said to have occurred on the

“Paternosters,” a most dangerous reef of rocks, several hundreds in number, lying in the open sea, at less than six (English) miles from Marstrand, which rocks, according to Parson Ödman, “are more perilous to sailors than either Scylla or Charybdis.” Before the erection of the present lighthouse, indeed, they were an open grave to mariners navigating this part of the Cattegat, and are supposed to have swallowed up more people than all the rest of the western coast of Sweden. In Catholic times, therefore, no one passed these much-dreaded rocks without saying his paternoster; and hence the name by which they are now designated.

The town of Marstrand stands near the water’s edge, and is of ancient origin, having been built by the famous Norwegian king Hakon Hakonson, in the early part of the 13th century. Formerly it was a place of considerable importance, and carried on a large trade, especially in herrings, of which at one period it exported about 50,000 lasts, or 600,000 barrels, annually. But its commerce is now nearly gone, and the inhabitants, reduced to a few hundreds in number, exist chiefly, I believe, on the money spent by bathers, who during the summer months resort to the place in numbers.

The church, also supposed to have been built in the 13th century, is of the Byzantine order, and was formerly dedicated to the Virgin Mary; and though sadly vandalized in modern times, is believed to be one of the best specimens remaining in the province of the architecture of the Middle Ages. Several fine monuments adorn the sacred edifice, and amongst the epitaphs is the following to the memory of the Governor, M. Wolberg von Tungel-felts, who died in 1747:—

“Den dygden fört till äran opp,
Här hvilar nu sin trötta kropp.

Han godt och ondt med Carl stod ut,
 Från Hjeltens kröning till dess slut,
 Till Seland och wid Fredrickshall.
 En trogen man uti sitt kall,
 Ulrica dyr han tjente sen ;
 Kung Fredrik ock af trohet ren.
 Gaf ärlig tjenst i krig och frid
 I stilla och orolig tid.
 Sen Gud och Kung han gaf hwar sitt,
 Och hjertans nöjd blef werlden qwitt."

Which may be thus translated :—

"That man whom virtue raised to honour,
 Here rests his wearied limbs.
 In good and bad fortune he stood by King Charles,
 From the hero's coronation to his death,
 In Zealand and at Fredrickshall.
 He proved himself in his calling a true man,
 Ulrica dear and King Frederick,
 He afterwards most faithfully served.
 Both in war and peace he honourably performed his duty,
 In quiet and in troublous times.
 To his God and his King he gave their due,
 And left the world with heart's content."

Another epitaph to the memory of Nils Bagge (1708)
 runs as follows :—

"Male pereat, insepultus jaceat, cum Juda partem habeat, si quis sepulcrum hoc violaverit."

Which may be rendered :—

"May he perish wretchedly ; may he lie unburied ; may he have his part with Judas, who violates this grave !"

At Marstrand, there is a hospital, though for a rather limited number of patients, I suspect. It is of pretty long standing, mention being made of it in the public

records so long ago as the early part of the 17th century. There is also a public school for the education of the poorer classes, but not always in the most flourishing condition, it would seem; for, as by the returns of 1844 the teachers were two, and the pupils nine in number, each pedagogue had, therefore, to instruct only four and a half "young ideas how to shoot." He must necessarily have had a somewhat easy time of it!

Amongst other lions of the place is St. Eric's Grotto, a cave of 24 feet in breadth and 30 feet in depth, where, when the enemy had possession of the town, several of the inhabitants are said to have taken refuge. And outside of this grotto, again, St. Eric's *Källa*, or spring, which even within the memory of man has been used as an *Offer-Källa*, or sacrificial well, offerings, in the shape of money, or pieces of metal, such as pins, needles, &c., having been thrown into it. A draught of the water was, moreover, considered a panacea for all kinds of disorders; and it was even supposed that to the individual who knew of this well and did not avail himself of its virtues, some misfortune would inevitably happen. So much for priestcraft!

Near to the town, the guide also points out to the traveller the *Galgberg*, or Gallows-hills, where, on the 4th June, 1706, a dreadful execution took place: "The sufferer," Parson Ödman charitably tells us, "was an advocate from Livonia, named Johan Henrich Schönheit, who as a warning to other ungodly people was *justly* condemned to death, for that he, as a blasphemer of God's holy word, had called the Sacrament of the Lord's Supper a priestly lie and invention. When his heretical and sacrilegious writings had been burnt before his face, his right hand was hewn off, and his tongue cut out, and afterwards he was beheaded. His body was burnt, and his hand and tongue were nailed to the post where

malefactors are bound whilst undergoing corporeal punishment."

The harbour formed by the island on which the town stands, and those of Koön and Klöfver, which adjoin it, securing it alike from the storms of the North Sea and the attack of enemies, is one of the best and most capacious on the western coast of Sweden. It consists of two parts, the *Coopvaerdie hamnen*, or that for the reception of merchant ships, which is about 600 feet in length, and between 30 and 40 in depth; and the *Örlogshamnen*, or man-of-war harbour, where the depth of water exceeds 40 feet, and the anchorage is infinitely more extended. There are two entrances to the harbour,—the northern channel, not admitting, with safety, vessels drawing more than 22 feet water, and the southern, which may be navigated by those of the very largest burthen.

Marstrand, or more properly Carlsten Castle, which stands on the plateau of the island, and immediately above the town, has, from its solid masonry and towering height, a most imposing appearance. Including the lighthouse at the top, it is 130 feet high, and nearly 300 feet above the level of the sea. The covered way leading to it has in places been hewn to the depth of 35 feet out of the solid rock. Of late years it has been greatly enlarged and strengthened, and can now, it is said, mount 400 guns, and contain a garrison of 5,000 men. It is well supplied with water, though somewhat brackish, by means of a well sunk within the walls.

The Swedes are justly proud of this noble fortress, which in the event of war may not improbably make a considerable figure in history. The Reverend M. Holmberg, the historian of the province of Bohus, when speaking of it, says:—"Carlsten, both from its commanding position, and the strength and solidity of its defences, may with justice be classed amongst the strongest places in Europe; and had

not modern inventions taught us the axiom that no walls are so stable or so lofty that they cannot be beaten down or surmounted, one might with safety call it impregnable. Nevertheless, whatever art and nature united can effect to counteract this fact, has in this instance been done. Regularly to besiege the castle would, in the opinion of experienced military men, be almost impracticable, because westerly storms, coupled with the numerous rocks, sunken and above water, that lie to the southward and westward, would prevent troops from effecting a lodgment on the island; and to land heavy ordnance there would at all times be an impossibility. But even supposing these objects accomplished, it would be totally impracticable to erect redoubts on sufficiently high ground as to batter the fortress to advantage, or to form defences for the men, owing to the almost total absence of soil on the rock. Were the enemy landed on the island of Koön, however, which is hardly to be imagined, they might certainly fire from thence at Carlsten; but then the land lies so low, as compared with the fortress, and the distance is so great, that the balls could effect but little against such massive and gigantic walls. But even admitting a breach to have been made, the worst would still remain, viz., to cross the harbour, and storm the commanding heights in the face of the many hundred port-holes vomiting forth death in every direction, and that without the slightest shelter for the assailants. We are here imagining the fortress being left altogether to its own resources. But as must always happen in war time, the assistance of the navy is to be calculated on, which would render the attempts of the foe hopeless. All these advantages have gained for Carlsten the appropriate designation of the Gibraltar of Sweden, and are a pledge that the Swedish flag, which from the Bastion-Minerva now proudly caresses the wind with its forked tongue, shall at all times wave over this the strongest of

northern fortresses. To the iron of the enemy," says the valorous parson in conclusion, "Carlsten will never succumb, and we are convinced that the saying as to gold being more perilous to Swedish might than steel, was for the last time exemplified when the three crowns (the arms of Sweden) were sold at Sweaborg."

Carlsten Castle was erected chiefly to render the harbour a secure refuge for the Swedish navy in case of war and disaster. At one time it was contemplated, I believe, to remove hither the *Skärgårds-flotta*, or flotilla of gunboats, pertaining to the western coast, then stationed at Gothenburg; and this as well for its greater security, as that in the winter-time it might be enabled, on an emergency, to proceed to sea, which, if lying in the river Gotha, would be difficult, if not impossible, owing to the great accumulation of ice. Objections were, however, made to the change, the most serious being that the ship-worm (*Teredo navalis*, Linn.) abounds to a remarkable degree in the Marstrand waters. I myself, indeed, have now in my possession a piece of wood taken from a vessel that had been wrecked there a year or two previously, that is perfectly honeycombed by these destructive creatures.

On the summit of the Castle, and at a height of about 300 feet above the sea-level, stands the celebrated beacon-light so well known to mariners navigating the Cattegat. It was first erected in 1781; and in 1836 was enlarged and converted into a light-house of the first rank. The apparatus is of English manufacture. The 16 parabolic reflectors, 4 of which are attached to each side of a square frame, are of (silver) plated copper, 21 inches in diameter, and the number of lamps is the same. It revolves in 8 minutes, and in that time gives out four brilliant lights, each lasting from 25 to 30 seconds, with equal intervals of darkness between them. Marstrand Light, which in clear weather can be seen at a very great distance, may be

readily distinguished from the lentical light on Winga, at the entrance of the Gotha River; as also from the light on Hällö—some twenty miles north of Marstrand—which revolves in 6 minutes; but it is sometimes mistaken for the Scaw Light, and is the cause, in consequence, of the greater part of the wrecks that take place on the “Paternosters.”

Some two hundred convicts, condemned to imprisonment for life, either for crimes of a dark dye, or offences often repeated, are confined in this fortress; and to the casual observer like myself, their fate is anything but an enviable one. “In the year 1844,” says M. Holmberg, who gives a very instructive and interesting account of these unhappy men, “their number was 179. The crimes for which they were convicted were as follows:—120 for theft (*stöld*), 8 for sacrilege (*kyrkostöld*), 16 for robbery with violence (*rån*), 11 for forgery (*förfalskningsbrott*), 1 for piracy (*sjöröfveri*), 3 for arson (*mordbrand*), 4 for murder (*mord*), 1 for intent to murder (*tillämnade mord*), 12 for manslaughter (*dråp*), 1 for child-murder (*barnamord*), 1 for insubordination (*subordinations-brott*), and one for violence to the judge whilst in the execution of his office. Eleven of the prisoners were between 21 and 25 years of age; 20 between 26 and 30, 63 between 31 and 40, 57 between 41 and 50, 22 between 51 and 55, and 3 between 61 and 70. Of these, 136 had been in Carlsten between 1 and 10 years, 36 between 11 and 20, and 7 had passed from 21 to 30 years of their miserable life in the fortress.

“The convicts are lodged in seven *hvalf*, or case-mates, each divided into two compartments. These are insufficiently lighted, ill-ventilated, and damp. This is more particularly the case with the small holes intended for the reception of such of the poor fellows that may happen to be sick. In the daytime they are confined

to two separate yards classed according to their behaviour. But so slight a classification has only, to a trifling extent, the good effect intended. The man guilty of theft or insubordination, for example, must of necessity consort with murderers and those who have committed crimes of a much more serious nature than himself. It is clear, therefore, that by such associations their reform is rendered impossible, and the punishments to which they are doomed, instead of making them better men, only tend to their further demoralization. Were a larger space set apart for the prisoners, and if they were classed according to their several crimes, the education they have received being, at the same time, taken into consideration, it would no doubt tend to their improvement, as also render it easier to maintain the requisite discipline amongst them.

“Each convict costs the State about £6 annually, for which outlay his labour at the fortifications is an equivalent. One hundred and sixteen of them, on the average, are thus employed throughout the year. In the summer, they work twelve hours in the day, but in the winter only five. Their treatment is as mild as circumstances and regard to their security admit of; that is, unless one adopts the modern notion, which inculcates the propriety of conciliating, or rather making much of rogues and banditti, who, more dangerous and untameable than wild beasts, are always ready without the slightest provocation—as the records of the fortress in too many instances show—to thrust the murderous steel into the heart of a fellow-man. The idea so generally entertained as to the severe lot of the prisoners in Carlsten is a bugbear; for they, in reality, enjoy every advantage that individuals in their circumstances can expect or hope for. The work is not more severe than free men of the labouring class would undertake for common wages; and if they are sick

or wounded, the doctor is at their side in an instant. Their food is both wholesome and abundant, and many peasants in the vicinity have not such good provisions. Neither do they want for society, such as it is; nor is there a dearth of amusement. They even manage to procure newspapers. If they are expert workmen, they can earn a good deal of money, which is deposited for their future use in the keeper's hands.

“Brandy is, of course, prohibited in the prison; but through the connivance of certain parties privileged to sell the convicts slops, &c., that pernicious liquor sometimes finds its way amongst them. It is difficult enough to keep them in order if sober, but when drunk, they become quite unmanageable, and know no bounds to their rage and insolence. Unless brought on themselves by their own misconduct, they are not subjected to harsh treatment. Should they be guilty of crime, they are punished, it is true, with blows of a stick (*prygel*), by imprisonment in a dark cell, or it may be are put in irons; but only in accordance with the sentence, after full investigation, of the *Slotts-Rätt*, a court composed of certain functionaries attached to the fortress. Although condemned to imprisonment for life, they have nevertheless good grounds to hope that if they conduct themselves with propriety, they will be pardoned after the lapse of eight to ten years. Their situation, therefore, is by no means so desperate as people generally imagine, especially when one considers that they consist of the very dregs of society. The insalubrity of their prison, and the insufficiency of clothing, is, with the exception of loss of liberty, all they have to complain of.

“Shut out from the world, the prisoners in this fortress have established a community amongst themselves—a Republic in the strongest sense of the word—which they support by the most stringent Draconic laws;

thus showing that the most lawless people cannot exist without laws of some kind. Each casemate elects a chief, who exercises great authority over his comrades. But even he, if deemed culpable, is equally subject to punishment with the rest. Equality is here fully carried out, and democratic institutions in the highest degree flourishing. We would respectfully submit them for the guidance of those who are desirous of gladdening our native country with a similar state reform. It is not needful to refer to Rome, Greece, Switzerland, or North America, as in the prison cell of Carlsten it is to be found in all its purity.

“Every offence, especially tale-bearing and theft, committed by a convict against his fellows, is punished with the so-called *Hvalf-straff*, or casemate punishment, than which nothing can be conceived more barbarous. It is always inflicted in the dead of the night, and consists in forcing the head of the culprit between his knees, whereby he assumes the shape of a ball; and when thus bound, and with his head downwards, he is suspended from a beam over the seat of the cloaca, in which terrible state he is left until the morning. A severe and long-continued cudgelling is generally added to the torture; and if, as occasionally happens, the miserable man dies in consequence, he is simply hung up by the neck in some corner of the prison, when it is given out that he has committed suicide. The convicts themselves have such a horror of the punishment in question—as has recently been exemplified—that to cause their removal to another prison they have committed crimes, such as wounding their officers with knives, to which the penalty of death is attached.

“What a picture of the debasement of human nature,” says M. Holmberg, in conclusion, “does a glimpse of the prison in question present. Behold the wretched beings

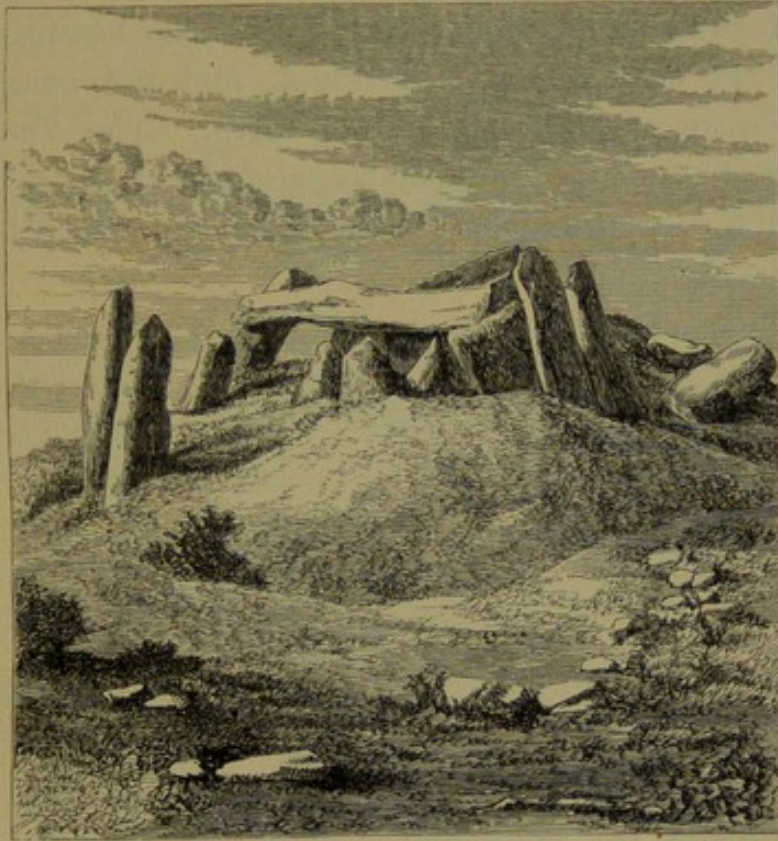
who are confined there with a recollection of a life steeped in crime; abhorred by every one, and hating every one. Behold the greater part, though at the height of their wretchedness, yet endeavouring by all means in their power to plunge, if it were possible, into a still deeper moral abyss; and in the dark corners of their dungeons staining themselves with vices at which humanity shudders. For these pitiable objects there has, nevertheless, been a time when evil was not their guiding star; and when they fell, did they at once fall to the depth of destruction in which they are now involved? May not bad education, ill-directed pursuits in early life, and the criminal laws which, in reality, counteract the design intended, have been equally the cause of their backslidings as the bias of their own wicked inclinations? And when once they have entered upon the evil path, what has been done to reform them? or what is doing at the present moment to save those whom it is still possible to snatch from destruction? The reply to these questions cannot, unhappily, be doubtful."

CHAPTER XXII.

Bohus-Län.—Classical Ground.—The Vikingar.—Their Exploits.—The Dyr-hus.—The Bauta-sten.—The Domare-Ring.—Hällristningar.—Their Antiquity.—Historical Documents.—The Elf-Gryta.

BOHUS-LÄN, the government in which the town of Gothenburg is situated, is perhaps the most classic portion of Scandinavia. Formerly, and prior to its forming an integral part of Sweden, it pertained to Norway or Denmark, and is remarkable in history as having been the scene of many bloody battles between the monarchs of these several countries, who all in turn contended for its sovereignty ; as also for having been the *Stamhåll*, *i. e.* head-quarters, of the *Vikingar*, or sea-kings, who a thousand or twelve hundred years ago made themselves so famous by their marauding expeditions. From hence and the adjoining islands, indeed, issued many of those formidable armaments which carried fire and sword to almost every known country in the world. To the antiquary, more especially, this province cannot but be deeply interesting. Ancient feudal castles, the abodes of these desperadoes, no longer exist, it is true, and even the ruins of the structures, which lie far between, are so

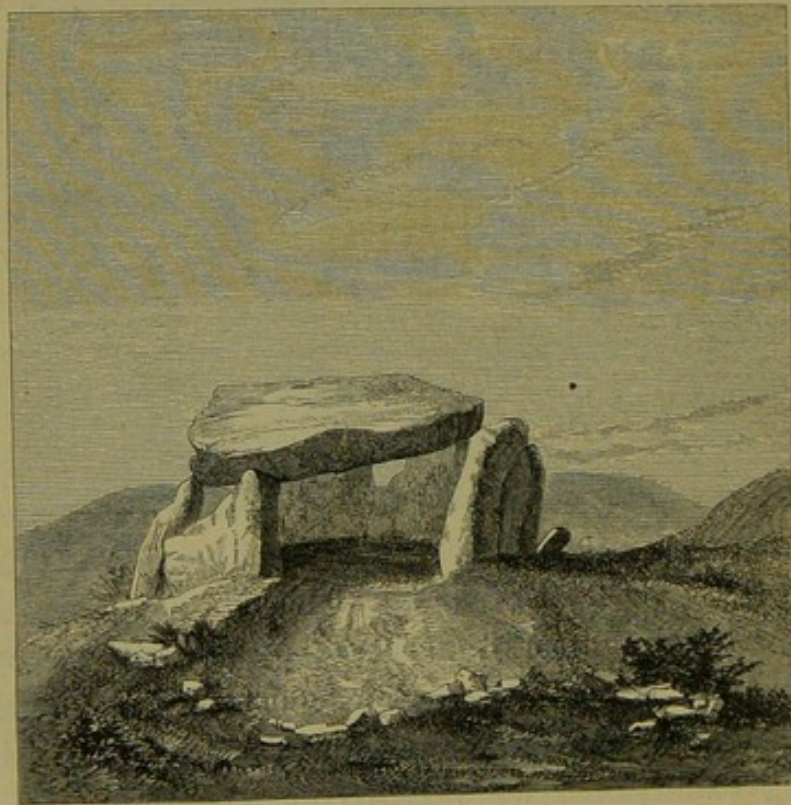
dilapidated and moss-grown as to be hardly recognizable ; but innumerable memorials of these celebrated men are nevertheless scattered over the face of the country.



DYR-HUS NEAR WRÅNGSTAD.

Amongst the most remarkable of the antiquities are the places of sepulture, or the depositories of the ashes of the illustrious dead, with which, during our little shooting excursions, we very frequently fell in. These go by various names. That depicted above is called a *Dyr-hus*, though for no other reason, as some will have it, than that at the present day cattle at times seek its shelter. It is situated on an oblong mount, 23 paces in length by 8 in breadth, near to Wrångstad, in the parish of Bottna. The *Tackhäll*, or roof-stone, which is somewhat uneven and about 10 feet long by 7 broad, rests in the middle on ten other stones, five on each side ;

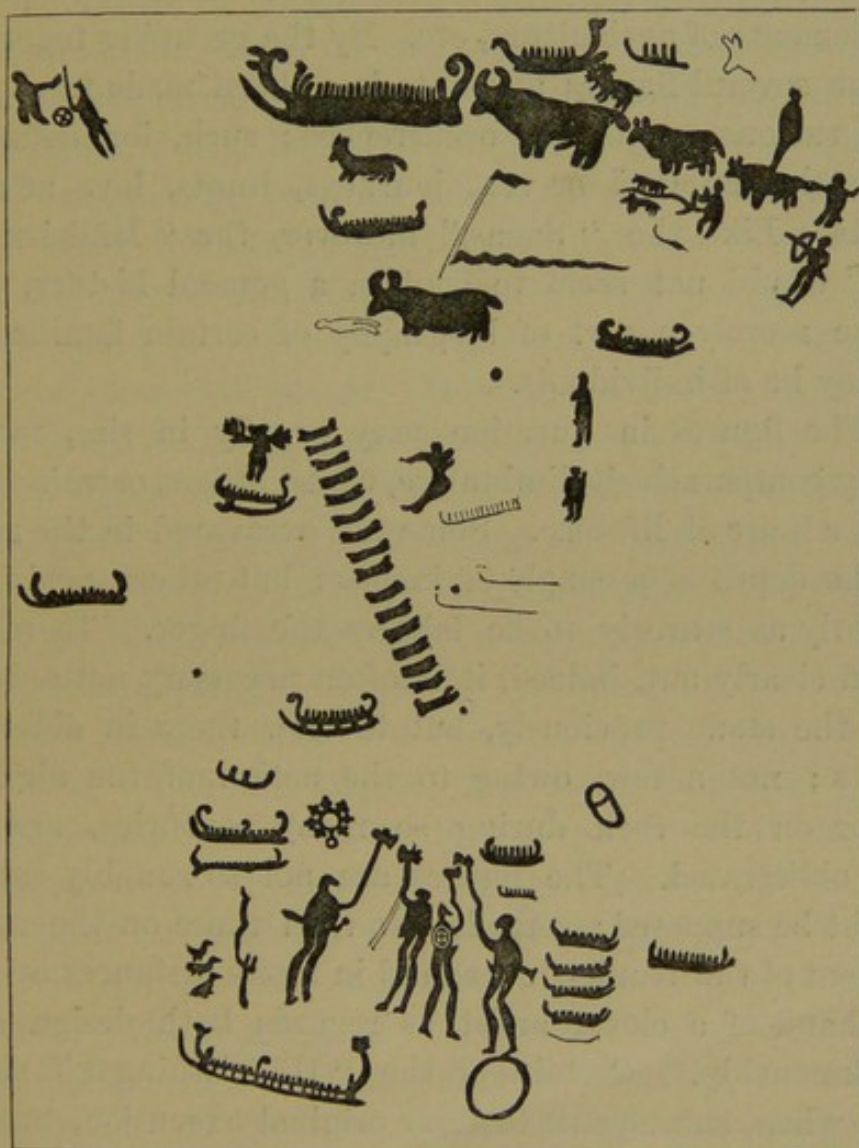
thus forming a roundish grotto, the height of which is 5 feet and breadth 6 feet. The openings between the side stones, which incline towards each other, are carefully filled up with smaller stones, the smooth edges of which face inwards; thus proving that the leaning position of the side stones is original, and not caused by the pressure of the surrounding earth. The *Tackhäll*, which rests on the highest of the stones, can, by a touch, be set in a rocking motion, which causes a dull and hollow sound in the cavity.



DYR-HUS AT MASSLEBERG.

Another Dyr-hus, not far from Massleberg, parish of Skee, consists of a covering-stone, some 7 feet in length by nearly the same breadth, resting on six upright stones that inwardly have a smooth surface. The apartment thus formed is capacious and nearly circular. The entrance is from the north. Calcined remains of human beings have been found on the floor.

Then, again, a so-called *Bauta-sten*, at times covered with Runic inscriptions commemorative of some ancient hero or battle ; as also a *Domare-Ring*, or circle of large stones — one of which is depicted in “Scandinavian Adventures,”—are not of unfrequent occurrence.



HÄLLRISTNINGAR.

In Bohus-Län, especially in the more northern portions of the province, and near to the coast, one often meets with so-called *Hällristningar*, that is, figures cut in the face of hard granite or gneiss rocks, for the most part

in such as are gradually sloping and which have a smooth surface, owing to the action of the sea in past ages or to the dripping of water. Here are seen men, women, horses, oxen, cows, deer, dogs, birds, trees, serpents, ships—either with or without masts and sails,—boats, waggons, shields, swords, and other warlike weapons, implements of agriculture, etc. By the grouping together of the several figures attempts have been made to represent various events and occurrences ; such, for instance, as battles by land or sea, journeys, hunts, love affairs, feasts. Like the “Sagas,” however, the “Hällristningar” would not seem to contain a general history, but to be merely a sort of biography of certain families or it may be of individuals.

The figures in question vary greatly in size, many being comparatively diminutive, whilst others, occasionally at least, are of life-size. Some are excavated in the rock to the depth of a couple of inches ; but others, again, so slightly as scarcely to be felt by the finger. To make them clearly out, indeed, it is often necessary not only to wet the stone previously, but to view them in different lights ; not a few, owing to the action of the air and water on the rock during so many centuries, are all but obliterated. The figures are not so roughly cut as might be supposed ; some less so than those on the more ancient of the Runic-stones, and in many instances evince the hand of a clever artist, as regards both design and workmanship. Certain of the “Hällristningar” show that when, subsequent to their original execution, events worthy of record have occurred, additional groups have been added, and that on such occasions the artist has not unfrequently gone so carelessly to work in the insertion of the new figures as materially to injure those previously existing.

The annexed diagram is copied from a “Hällristning”

at Lissleberg, in the parish of Tanum, and is considered one of the most interesting in Bohus-Län, both in regard to the subject-matter and the execution. "It is cut in the northern face of a rather precipitous rock," says the late M. Holmberg, "but owing to the moss covering it was difficult to decipher. Several of the figures are obliterated, but they do not appear to have been of material consequence. Here are delineated agricultural implements, duels, interesting forms of warlike weapons, as for example, the bow and the battle-axe. But in this, as in other "Hällristningar," it cannot be determined with any degree of certainty whether the several occurrences stand in connection with each other or refer to different times and places. It seems, therefore, as if one ought to divide the picture into three several groups.

The upper one represents a hostile descent of the "Vikingar" attacking and killing the inhabitants—who are occupied in peaceful pursuits—and carrying away their property. One sees here how a bowman shoots a man who guides a plough drawn by two oxen or horses; as also how horned cattle are driven away to the armed vessels, of which the largest, from its ornamented prow and numerous crew, is evidently a so-called "Drak-skepp" or Dragon-ship. On the back of one of the oxen is further to be noted an unarmed man standing upright, and with only one leg; probably signifying a prisoner bound hand and foot. The smallest of the animals has on its head a comb-like ornament, the meaning of which it is hard to comprehend. If the wavy line in the midst of the group is symbolical of a serpent, it may imply the secrecy and prudence shown by the Vikingar in the execution of their achievement; but if the sea be meant, it is to be looked on as the course followed by the hero of the tale. In the left corner is seen a man armed with a sword, who has thrown down his shield, and is driving before him

another man smaller in stature, but with larger limbs, who defends himself with some cutting weapon. This is probably intended to designate the combat of the Vikingar with such of the inhabitants of the country as were able, on the spur of the moment, to make head against so unexpected an attack.

“The middle portion of the picture is occupied by sixteen boats formed in line, and, as it would seem, without crews. To the left again, and over a vessel that is manned, is seen a misshapen human figure with a pair of formless hands, like unto wings, probably betokening strength. This, beyond doubt, is a chieftain, who with his few ships vanquished a fleet drawn up in battle-array, consisting of as many vessels as the number of boats without crews. The figure to the right of the last named is evidently an unarmed man in a sitting posture, and possibly a prisoner.

“The lowermost group is one of the most striking of the ‘Hällristningar.’ Here, surrounded by ships, are seen four men, armed with axes, in combat with each other. Two of them have swords, and the beak-like projection on their faces shows that they wear helmets. At a distance the birds of war await the coming slaughter, that they may feast on the slain. The axes of the two men armed with swords are raised over those of their adversaries, implying that victory is on the side of the former; in further proof of which, the champion to the right has contemptuously cast to the ground his buckler,* whilst his antagonist retains his on his arm. The handsome ornament above the head of the champion to the left

* For a man thus to lay aside his shield during the fight was an act of bravado greatly admired by the old Northmen, and one not unfrequently displayed by warriors, who, when maddened by the din and roar of battle, would, with a weapon in each hand, rush headlong into the very thick of the enemy's ranks.

cannot be other than one to which, in our museums, it would not be difficult to find a counterpart. Here it undoubtedly signifies a decoration of great value (a *Dyrgríp*, as it was called) carried away as spoil from the battle. To judge by the axes, the combatants are Northmen and 'Vikings,' who have left their ships to settle the quarrel on shore. The two fleets are lying on each side of the combatants, but with their prows pointed in opposite directions. Two of the vessels belonging to that on the left have upright lines curved at the top, which possibly, though not probably, signify masts. The figure between the birds and the champions is not comprehensible; perhaps it means a tree."

Similar "Hällristningar" to those in question are found, though sparingly, elsewhere in Scandinavia, as also in other countries; but are nowhere so numerous as in Bohus-Län, where between three and four hundred have been already discovered, and many of which have been depicted by M. Holmberg. "The whole of them," he observes, "bear a striking resemblance to each other; and were it not for their number, and the distance between them, one might readily believe they were all executed by one and the same artist."

With the learned in Scandinavia it is a somewhat debateable point as to the period when the "Hällristningar" were executed; but M. Holmberg — perhaps the best authority on the subject — is clearly of opinion that it was during Heathen times, because neither Christian symbols, such as the Cross, nor trace of Runes, are to be found amongst them. He further believes that they date from between the seventh and tenth century; certainly not prior to the former period, as it was then that the marauding expeditions of the Sea-Kings, which form their chief subject, became a national pursuit; and that these extraordinary people became acquainted with the

South of Europe, as shown by several of the drawings, wherein are represented southern animals, such as the Turtle, the Camel, the Rhinoceros. "That the 'Hällristningar' relate to history," he goes on to say, "must be clear to the most casual observer, for one here sees the whole occurrence portrayed, occasionally in a kind of chronological order. No possible reason can be given for the supposition hazarded by some, that their subject-matter has been either invented or romanced. On the contrary, it is quite clear that events and incidents have been truly depicted by the artist after the manner of the age, and that they are therefore to be looked on as historical documents, and as such, constituting our earliest written chronicles — chronicles older than the Runic-stones, and distinguished from them in this; that the latter give us the names without the occurrences, but the former furnish us with the occurrences, and not the names. The 'Hällristningar' have already been called by me 'Sagas engraved in stone,' an expression I believe to be well chosen, because they have one and the same object; viz., to perpetuate the exploits of distinguished men. They treat of the heroes of the same people, and are so far contemporaneous, that the Hällristningar were cut about the same time as a great part of the events happened, which tradition afterwards romanced in the written Sagas."

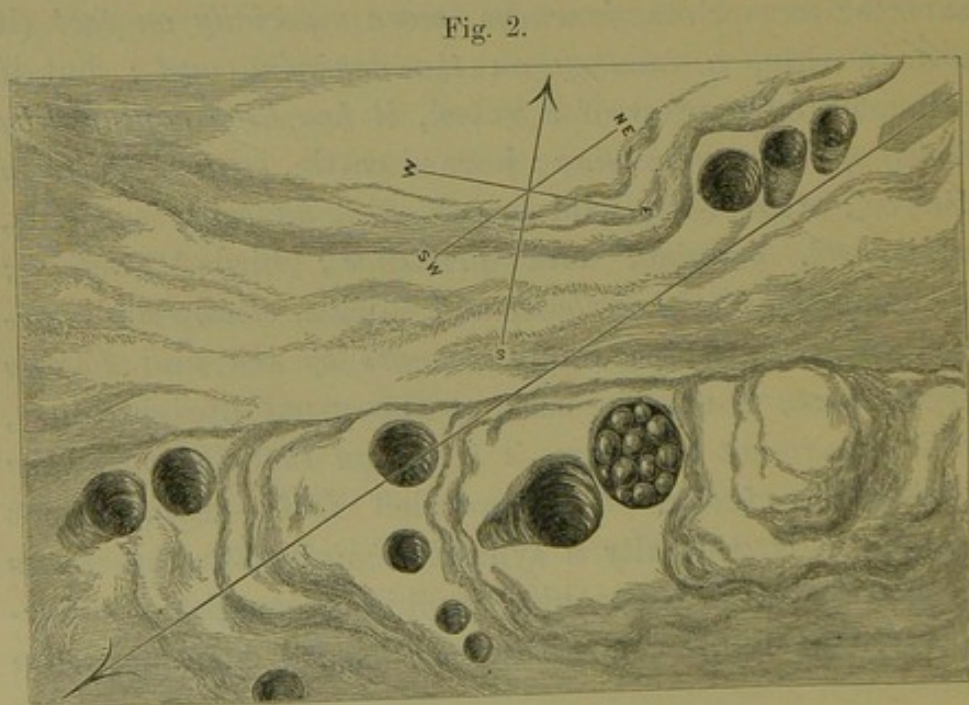
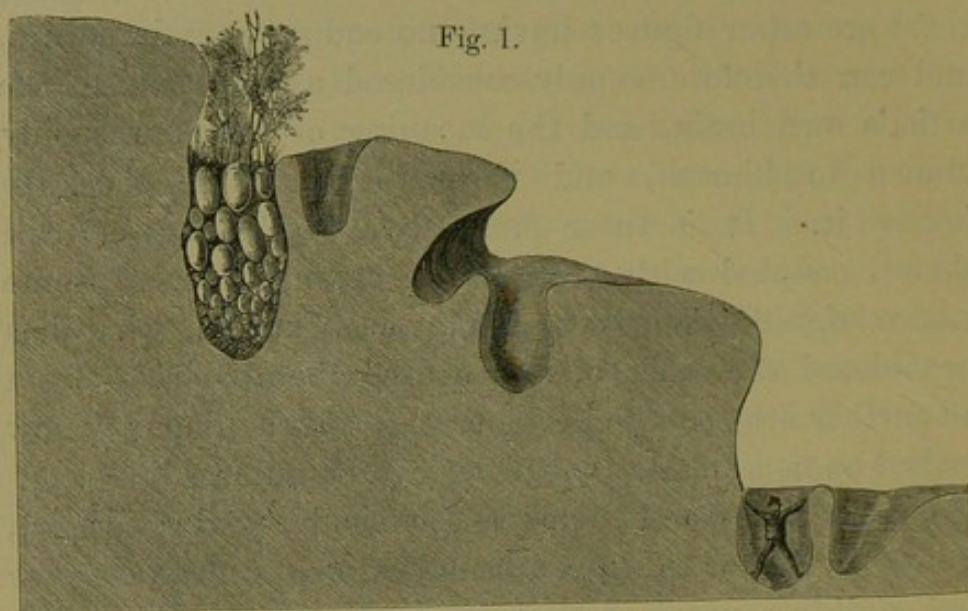
But although M. Holmberg looks on the "Hällristningar" as historical documents, it would be idle to attempt their regular interpretation: First, because the "Sagas" relating to the same events and occurrences have, in the course of ages, been forgotten, thus rendering it impossible to identify names, dates, and places; and secondly, because, amongst the symbolical figures, now pretty well understood, there are some so singularly placed (at Stängenäs, in Bohus-Län, for instance, where a ship is seen to rest on

a shield, and in the ship an animal holding a "*fot-sula*," or emblem of a "foot-print," in its mouth) to render it quite impossible even to guess their import. Then, again, there are other figures having no counterpart in nature, and can therefore be only considered as creations of the artist's own brain, and the meaning of which was only known to himself, and those to whom he chose to impart it. It is these fancy figures (if I may so call them), coupled with the strange arrangement of some whose signification is tolerably well known, that has bewildered the learned, and caused them to cease from all further attempts to decipher the Hällristningar, "now looked on as a puzzle that never can be guessed."

Large limbs and members (particularly *αἰδοῖα ἀνδρὸς*), it may be proper to state, are understood to mean *courage* and *virility*; upraised and unarmed hands, *fear*; *fot-sulor* or foot-prints, *journeys, more especially on foot* (if near a ship, *a landing on the enemy's coast*; but if attached to the prow of a vessel, *it has been captured by boarding*); horses, *riding*; horned cattle, *spoil taken from the foe*; stags, elks, wild beasts, &c., *hunting*; serpents, *witchcraft, cunning, and prudence*; birds,* *defeat*; weapons of attack, *combats*, and shields, *victory and martial renown*. Ships imply *voyages by sea* and *Viking expeditions*; if they be without the usual upright lines, which represent the crew, *it is a sign that the men have perished in battle*. The so-called *Håla*—a mere dot or point—is generally a symbol of unity of numbers, as in the ancient Mexican hieroglyphics; though not unfrequently it signifies misfortunes; as, for example, *when*

* Everywhere, when a battle is depicted, birds are invariably seen, in like manner as in the "Sagas," which, when describing a combat, always make mention of the Raven and the Eagle as *the guests of heroes and of the ensanguined field*.

placed beneath a flying arrow, an uplifted axe, or a falling and dying man.



THE ELF-GRYTOR.

Bohus-Län, moreover, is not destitute of natural curiosities, the most remarkable of which, perhaps, is the so-

called *Elf-Gryta*,* that one so frequently meets with in the more hilly parts of Western Scandinavia. Figure 1 is a section of a line of "Grytor" near to Surtur, a village eight or nine (English) miles to the north of Gothenburg; and figure 2 represents a bird's-eye view of the same.

The "Elf-Gryta" is a circular hole in the granite or gneiss rock, the sides of which are so smooth that one might suppose it had been turned with a lathe. Its shape varies from a spherical to a sharp ellipse; but the most common form is that of an egg with one end, say a third, lopped off; generally, the sharp end of the egg is downwards, but in some instances the thicker end. The size of the "Gryta" varies greatly, some being mere cavities in the face of the rock, whilst others, again, are of almost gigantic proportions. One near to Surtur is not less than 35 feet in depth, and 12 feet in diameter at its mouth, and it is probable there are others still larger. But from 5 to 6 feet in depth, by 2 to 3 in diameter, may be looked on as the average size.

The "Grytor" are commonly found in pairs. In this case the one to the north-east is invariably the most regularly formed, and the deepest; the other, or that to the south-west, shallower, and scooped out, often with a gutter running from it in the latter direction. When thus in pairs, the distance between the "Grytor" is generally from 10 to 12 inches. Sometimes the partition-wall is so eaten away that there is an opening between them, either above, or it may be about halfway down, in the shape of an oval aperture worn by the eddying waters. Two "Grytor" can never be found exactly alike, their shape altogether depending on the locality and the configuration of the surrounding rocks. Occasionally, the

* These go by various names in Sweden: *Elf-Grytor*, or Elves' caldrons; *Jätte-Grytor*, or Giants' caldrons, &c.

form is very irregular,—a mere curve in fact, hollowed out of the rock, and always facing to the south-west or north-west, but never to the north-east.

Such of the “Grytor” as have not been disturbed are usually filled to the brim with boulder-stones, soil, &c. Not unfrequently, indeed, one sees rank grass, bushes, and even trees growing as in a flower-pot, vegetation being facilitated by the moisture contained in them. The diagram to the extreme left of figure 1 shows the “Gryta” whilst in this state; the several “Grytor” to the right of it, after they have been cleared from refuse; and the figure to the extreme right the relative proportions between a man and the “Gryta.”

“I have excavated very many ‘Grytor,’” says my talented friend Mr. Alexander Keiller, of Gothenburg, to whom I am indebted for the accompanying drawings, as also for many others in my former works, “and shall endeavour to give a general description of their contents:—Take, for instance, a ‘Gryta’ 6 feet in diameter at the mouth, and 8 feet deep. The sod and earth (commonly from 12 to 18 inches in depth) being removed, the tops of large boulder-stones now present themselves, compactly embedded in gravel and sand; so hard, in fact, is the mass that there is the greatest difficulty in removing any part of it. When the gravel is so far got rid of that the boulder-stones become exposed, I blast the latter with gunpowder. Should the stones be egg-shaped, then the thicker end is constantly downwards.* The stones of the first tier are almost invariably the largest (there are exceptions, however, to this rule, inasmuch as I have found near the bottom of a ‘Gryta’

* “If the hopper of a mill be observed when grinding beans, it will be seen that the vibratory motion will arrange all the beans with their heaviest ends downwards; and the like is the case with the stones in question.”

a boulder so large as nearly to half fill it: such a stone is always much polished and nearly round); then, next to the sides of the 'Gryta,' stones of all sizes, and similar to them in shape. Near to the bottom of the 'Gryta,' again, are almost always found stones varying from 2 to 10 inches in diameter, worn away to nearly perfect spheres. Some, however, are egg-formed, or almost oval. As a general rule, the boulders are smaller, and the gravel and sand finer, towards the bottom. At the very bottom the sand is invariably worn to a fine powder. The 'Grytor' I am describing, it is my full belief, have never before been excavated. Everything proves they are in precisely the same state as the ice or glacier period of Sweden left them.

"It must be borne in mind that when the 'Grytor' were under formation, the surface of the rocks was also wearing away, so that they could never wear deeper than in a given ratio, depending on the wearing of the surface of the rocks above.

"It is now many years ago," Mr. Keiller further remarks, "that I first made acquaintance with the 'Elf-Grytor.' This was at Surtur. The formation of these very remarkable cavities struck me greatly, and I have since made them a study. Wherever I have travelled in Sweden, I have always been on the look-out for 'Grytor,' and carefully examined the localities; and I have now become so experienced that I can to a certainty point out not only where one is to be found, but state with tolerable accuracy its depth and diameter; as also whether it has been bored or worn, so to say, in the form of a right-hand or of a left-hand screw. If we observe the current of a river, we find that on the one side all the eddies and vortices are found in the direction of the stream; or, on one side right-hand eddies, and on the other left-hand eddies and vortices."

Mr. Keiller afterwards enters on a long dissertation as to the origin of the "Elf-Grytor," and elucidates his theory with numerous illustrations; but his account, now in my possession, interesting as it certainly is, is far too long for insertion in these pages. At a future time, however, should this work be favourably received by the public, and another edition be required, it may be that I shall give his valuable observations in a somewhat concise form.





M. Körner del

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Day & Son, Limited, Ltd.

CASPIAN TERN

COMMON TERN

RAZOR BILL

COMMON GULL

GREAT BLACK-BACKED GULL

COMMON CORMORANT

GANNET

CHAPTER XXIII.

The Skärgård.—Wild Scenery.—Inhabitants.—Aquatic Birds.—The Great Black-backed Gull.—The Common Gull.—The Caspian Tern.—The Black Tern.—The Mallard.—The Long-tailed Hareld.—Love has its pains.—The Eider Duck.

A *SKÄRGÅRD*, or belt of islands, girds, in many parts, both the eastern and western coasts of Scandinavia. Such is the case both to the north and south of the port of Gothenburg. Several of the islands are pretty large, but by far the greater portion inconsiderable in size; for the most part, indeed, mere *Skär*, or naked rocks (hence the term “Skärgård”) rising but little above the surface of the water, and frequently so diminutive as, in the distance, to look like the backs of whales, or other monsters of the deep. Islands and “skär” together, they are as the sands of the sea in number. “In places, large tunnels have been formed by the waves in the dark fronts of the rocks, through which the sea, during storms, rushes to and fro with a monotonous and sullen roar, harmonizing well with the shrill cry of the sea-mew, the sole requiem of the unburied bones of the shipwrecked mariner, scattered along the coast, and

a melancholy foreboding to the poor fisherman of some new disaster." In former times the larger of the islands were well wooded, and a few, such as Oroust, are partially so at the present day. But in general they are utterly destitute of arborous vegetation; though even on the most barren of them a few stunted bushes may occasionally be seen creeping forth from amongst the crevices of the rock. Some of the islands have a scanty population, consisting chiefly of fishermen and pilots, and are in patches cultivated; but for the most part they are only tenanted by the feathered tribe, and have, on the whole, a most sterile and desolate appearance.

With the exception of a few partridges, hares, and a Black-Cock or two on one or other of the larger islands, the sportsman will find but little in the shape of game in the Gothenburg and neighbouring "Skärgårdar"; but as a set-off he will meet with many kinds of water-fowl and waders, the species, however, varying greatly according to the season of the year.

Of the aquatic birds that bred with us, I may notice the following: — The Great Black-backed Gull; the Lesser Black-backed Gull; the Herring Gull; the Common Gull; the Common Tern; the Arctic Tern; the Caspian Tern (rarely); the Black Tern (only occasionally); Richardson's Skua; the Mallard; the Teal; the Wigeon (sparingly); the Sheldrake; the Eider-Duck; the Red-breasted Merganser; the Black Guillemot; the Black and the Red-throated Diver;* and I suspect the Cormorant and the Shag also, for on one particular part of the coast

* Naturalists would seem to entertain the notion that these birds only breed on the margin of fresh-water lakes; but such is not always the case, for I myself have found the nest of the Red-throated Diver on an island of the Gothenburg Skärgård, and Ekström tells us, when speaking of the birds of Oroust, that the Black-throated Diver breeds frequently in the inner Skärgård, meaning probably the bays and inlets of the mainland.

I used in the spring constantly to see numbers of those birds. As visitors may be enumerated the Gannet (rare); the Foolish or Common Guillemot; the Razor-bill (scarce); the Puffin (scarce); the Rotche or Little Auk (rare); the Smew (rare); the Red-necked Grebe; the Great Northern Diver (rare); the King Duck (rare); the Hooper or wild Swan; the Grey-lag Goose; the Bean Goose; the White-fronted Goose; the Brent Goose; the Shoveller (rare); the Pintail; the Scaup Duck; the Velvet Scoter; the Common Scoter; the Golden Eye; the Long-tailed Hareld; the Goosander;* and probably some others that have been omitted.

Several species of Waders also nested in our "Skär-gård;" as, for instance, the Oyster-catcher; the Turnstone; the Ringed Dottrel; the Little Ringed Dottrel; the Redshank; the Golden Plover; the Common Plover; and the Curlew. Whilst the Whimbrel, the Godwits, the

* A curious instance of the tenacity of life in this bird recently occurred at Falkenberg, celebrated for its salmon fishery. Whilst a young friend of mine was one fine afternoon taking a stroll with his gun on the banks of the river, he, at a bend of it, suddenly caught sight of a Goosander sailing about in all the freedom and majesty of unobserved solitude. Sheltered by trees and bushes, and gloating over his expectant prize, the eager sportsman crept stealthily to within gun-shot of the bird, when, not liking to shoot it cockney-fashion whilst sitting, he shouted loudly to disturb it. To his surprise, however, it did not take wing, and he therefore poured a volley into it, knocking out a quantity of feathers. But though so sorely wounded, and half lifted out of the water by the discharge, it still maintained its erect position, and a moment afterwards was swimming about as quietly and unconcernedly as before. Another barrel was discharged at the poor bird, and this time it was fairly knocked on its side amidst a second cloud of feathers. At this moment my young friend's ears were saluted with a ringing laugh from the other side of the river, and shortly after became aware that a cruel trap had been laid for him by a wicked carpenter, who had killed the bird the previous winter, and had stuffed it for a decoy. My friend has never since liked to be reminded of the wonderful tenacity of life in the Goosander.

Grey Plover, the Knot, the Purple Sandpiper, &c., were pretty common in our "Skärgård" and elsewhere on the western coast of Sweden, when on the way to or from their breeding-grounds in the far North.

In the Gothenburg and other of the Scandinavian "Skärgårdar," many of the birds enumerated fall to the gun, or are otherwise killed, more particularly during spring and autumn. But before speaking of the manner of their capture, it may be desirable for me to say a few words respecting two or three of the Gulls and Terns, which, subsequent to the publication of my last work, "Scandinavian Adventures," came much under my personal observation; as also in regard to the habits of some other birds, that with us were special objects of pursuit.

The Great Black-backed Gull (*Hafs-Trut*, Sw.; *Svartbak*, Norw.; *Larus marinus*, Linn.) was pretty common in our "Skärgård," as also in the Wenern, where many breed on the numerous rocky islets with which that magnificent lake is studded. The female lays from two to three eggs, nearly as large as those of a goose, of a grey-green, or olive-green colour, marked with brown-grey or ash-grey spots. This bird nests early, often in single pairs, but at times in small colonies; and during incubation, which lasts four weeks, male and female are said to sit alternately on the eggs. The young are grey for the first year, after which they change their plumage in a slight degree; but it is not until the second year that they assume the dress of the parents. Such, at least, I have observed to be the case with birds in confinement.

The Great Black-backed Gull, which, by the fishermen on the western coast of Sweden goes by the name of *Prosten*, or the parson, possibly from its lugubrious cry, and from its plumage somewhat resembling the attire of a clergyman when in full canonicals, would seem to be a

very voracious bird. Lieutenant Axel Geijer, indeed, assures me it at times feeds on the young of water fowl, and that on one occasion he himself knew it to destroy, in the course of a few days, nearly the whole of a brood of Golden-eyes, some two to three weeks old.

When taken young this bird is readily domesticated. I have had many in my possession that had the run of the yard, or the garden, as the case might be, and were fully as tame as barn-door fowls. Their wings were clipped; but a friend to whom I presented a pair allowed his their full liberty, and, as a consequence, they were often absent from home for days together. If hungry, however, they would return, and after making several gyrations over the homestead, alight on the roof of an outbuilding. When called to by their pet name, they would alight on the grass-plot in front of the house, where they ravenously fed on the offal of fish, or meat thrown to them. But though liberty has charms it has its ills also, as these poor birds experienced, for during one of their migratory excursions they were seen by a gunner, who, unaware of their being home-pets, shot them both.

Another of these birds, given by me to a youth in the town of Wenersborg, had, like those in my own possession, the run of the premises. For the most part its wings were kept clipped, but at times this precaution was neglected, when it would fly away, and for a while enjoy itself with its wild congeners, who were numerous thereabouts. During the autumn of 1860, it was supposed to have taken its final departure, nothing having been seen of it for a considerable time. One fine day, however, its owner observed a large bird soaring high above the town. At first he took it for a falcon, but on closer inspection made it out to be his missing favourite; and on calling to it by its name, it at once made a swoop downward and alighted in a crowded thoroughfare at his very feet. On

food, of which it seemed to have had but little during its absence, being offered the bird, the same was eagerly seized by it, when it allowed itself to be once more made prisoner.

When domesticated, the Great Black-backed Gull is very gluttonous, devouring everything that comes in its way. This was somewhat ludicrously exemplified in the case of a young one presented by me to a friend in Wermeland. The kitchen-maid had lost two napkins or dishcloths, for which ineffectual search was everywhere made. At length, however, she noticed something resembling a rag protruding from the bill of the bird in question, and taking hold of it, she, to her utter astonishment, drew forth, "hand over hand," from its gullet one of the missing napkins, which it had swallowed bodily. What became of the other napkin was never ascertained, though it was strongly suspected it had been previously bolted and digested by the Gull!

In an eatable point of view, many look on the Gull family as little better than carrion; but from personal experience I can testify that with even moderate cookery these birds, more especially when young, may be rendered very palatable; not exactly "king's meat," or a dish for a king, as the Swedish peasants say, but one that a hungry man can with pleasure discuss. The Dutch, like sensible people, duly appreciate Gulls; so at least may be inferred from the numbers one at times sees hanging to the rigging of their vessels.

Of the Common Gull (*Fisk-Måse*, Sw.; *Fisk-Maage*, Norw.; *Larus canus*, Linn.), which are numerous, both in the "Skärgård" and the Wenern, I have little to relate, other than that in a particular island of that lake, near to the so-called Wermelands-Näs, these birds are in the frequent habit of "treeing." On several occasions, indeed, I have myself seen them perched on the tops of

lofty pines, a habit that may possibly be common to them, but which never before came under my observation.

The Caspian Tern (*Skrän-Tärna*, *i. e.* screeching tern, Sw. ; *Rov-Terne*, Dan. ; *Sterna Caspia*, Pall.), the largest of the European Terns, was—owing to constant persecution—rare in the Gothenburg and neighbouring “Skär-gårdar,” and seldom met with there, excepting on the outermost of the islands. From what Nilsson says, one would be inclined to believe this bird altogether confines itself to the sea-coast. But if this be the Professor’s meaning he is under a mistake, because, to my personal knowledge, a dozen pairs at the least nest every summer in the Wenern.

According to Kjærbølling, the Caspian Tern is found in abundance on Sylt, an island lying off the western coast of Sleswig ; the inference to be drawn from which is that it is a social sort of bird, and fond of the society of its fellows. Such is not the case in the Wenern, at least, where we were never aware of more than a single pair nesting on the same small rocky islet, the place with us usually chosen by them for that purpose. Once in a time, it is true, a second pair might have its habitat in the near vicinity ; but, speaking generally, we found the several pairs miles and miles apart. With other birds they would seem to live on a more amicable footing, for I have on several occasions met with the nests of the Great Black-backed Gull and the Common Gull in the immediate vicinity of their own.

With us, the female made no nest whatever, but deposited her eggs, one to three in number, and yellowish-white in colour, marked with ash-grey and brown spots, in a small cavity, or indentation of the rock, and for the most part near to its loftiest point. During incubation, and afterwards, both male and female most jealously guard both eggs and young, more especially the latter ;

and when a person approaches the nest, they are very fearless, hovering around and about him, and uttering shrill and piercing cries. Hence their Swedish designation.

The young of this bird are readily reared and domesticated; but they require peculiar food and treatment. I once had two pairs, taken by myself in a distant part of the Wenern, which throve well until the setting in of the winter, when a sudden frost, for which due preparations had not been made, put a period to their existence.

The Black Tern (*Svart Tärna*, Sw.; *Sort Terne*, Dan.; *Sterna nigra*, Linn.), which northern naturalists would lead us to suppose is confined to the south of Sweden, was an occasional visitor to our "Skärgård. During the summer of 1858, which was a remarkably warm one indeed, it was not at all uncommon, both there and on the river Gotha. In the Wenern, as elsewhere said, I have also seen and shot this bird.

The Mallard (*Gräs-And*, or grass-duck, Sw.; *Stok-And*, Dan.; *Anas Boschas*, Linn.) was common during summer in one or other of the larger islands of the "Skärgård," and in the reed-beds of the Gotha, and Norra-Elf, as also throughout a large portion of Scandinavia, from the extreme south of Sweden to the Polar Circle. M. Wilhelm von Wright assumes Karesuando, in Swedish Lapland, as its limit to the north, but stragglers have been met with still higher up. If the winter be a mild one, a few of these birds winter in the rapids of the Gotha, and others of the more southern rivers. It is very common in Denmark, during the summer at least. Formerly, I entertained the notion, that the Mallard only nested in marshy places; but such is not the case, for of late years I have found it to breed in wooded localities, at a considerable distance from the water.

To judge by what follows, it would seem as if the habits of the Mallard in after-life are much dependent,

as with men, on the way in which they are reared. "At the Estate of Vissbo, in the province of Nerike," says the President M. af Robson, "several duck-eggs, together with some of her own, were placed under a white hen, and in due time a single duckling, a male, as it proved, was produced. He was reared in all amity with his foster-brothers and sisters and never attempted to accompany the other ducklings, of which there were more than one brood on the premises, that several times a day descended the hill near the house to the lake below, but constantly remained with the hens. He grew rapidly, became very fat, and at length could fly. For amusement, he was often thrown into the lake, but always made the best of his way to land, quacking loudly in the while, as if he had an aversion to the water, and forthwith waddled back to the hens. If when cast from the bridge it was to a height sufficient to spread his wings properly, he would take a pretty long sweep, whereby he was enabled to surmount the hill, when he flew directly into the poultry-yard. It was his daily practice cunningly to lead the hens to the confines of a grass-plot, or other small declivity, that he might pair with them,* and although he never succeeded in his attempts, they gave rise to all manner of curious scenes. He was not charged, however, with making love to his foster-mother, the old white hen, whom he followed everywhere, more especially to places where food was obtainable; and it was believed that the affection he

* Naturalists lay no little stress on the pairing of birds that are looked on as of different species; but to me it seems that too much is made of this matter. Even in a state of nature, strange misalliances are not so very uncommon, and when a bird is in confinement "everything is game that comes to his net." In one instance, as mentioned, a Capercali cock has been known to have a numerous family with a Turkey hen, and in another to make a desperate attempt to pair with a goose.

evinced towards her was duly reciprocated. His fate was sad; for one fine day the kitchen-maid, mistaking him for another, chopped off his head!"

Eggs, whether of the Mallard or other bird, are at times incubated in a strange way. "Whilst the shoemaker Defer, the carpenter Fäldin, and the son of the latter, were engaged in measuring some land on the shores of the Lake Hjelmars," so we are informed by M. Hamström, "they disturbed a wild duck from her nest, containing nine eggs, which Fäldin carried home, for the purpose of placing them under a hen. On his arrival there, however, and whilst making inquiries after a dry nurse, the eggs were laid on a bed, with a sheep-skin coverlid, on which a cat and her kittens, then some eight days old, had previously taken up their abode. This was on the 19th of May; after which time grimalkin and her progeny, the former for the most part, and the latter constantly, contrived to keep the eggs warm, and that without injuring, or even displacing, a single one.

"On Tuesday, the 27th of May, the first and second of the ducklings were hatched, when Mrs. Fäldin thought it most prudent to separate the otherwise well-behaved cat from her young step-children; who, nevertheless, were allowed to remain with their four-footed foster brethren. The following day Mrs. Fäldin's sensible and motherly care was crowned with a successful issue, for four more ducklings appeared, and all six found themselves well satisfied with the warmth they derived from the kittens. On Thursday, the 29th, a seventh egg was also vivified, the remaining two proving rotten.

"During the space of near a week Mrs. Fäldin was fortunate enough to retain all the seven alive. They drank milk like the kittens, and swam and disported themselves in a tub of water placed at hand for the purpose; the old cat looking on with great seeming satis-





M. Körner del.

GOLDEN EYE

SCAUP DUCK

TUFTED DUCK

EIDER (MALE)

London, Published by Day & Son, Limited, Gt. St. James's, and the Piccadilly W.C.

LONG TAILED HARLEQUIN (FEMALE)

LONG TAILED HARLEQUIN (MALE)

EIDER (FEMALE)

Day & Son, Limited, London

faction, and purred and gambolled about the vessel. Their food afterwards consisted of grits alone. But the best intentions are at times the cause of the greatest misfortunes; and so it happened in this instance. Mrs. Fäldin would treat her little favourites to some fresh grass. This was eaten by them with avidity; but in the space of three hours afterwards one and all of them died in convulsions, most probably in consequence of some poisonous plants being amongst the herbage. Mrs. Fäldin bewailed greatly over her progeny, which were always lively and joyous, and declared that from the moment of missing them their foster brothers, the kittens, suffered greatly both in health and spirits."

The Long-tailed Hareld (*Alfögel*, Sw. ; *Iis-And*, i. e. ice-duck, Norw. ; *Harelda glacialis*, Steph.), whose proper home is the Arctic regions—in Lapland, Iceland, Greenland, Spitsbergen, for instance—was very common during spring and fall in our "Skärgård." Once in a time, indeed, stragglers, probably wounded birds, were seen in the summer, but it is believed to nest only in the more northern parts of the Peninsula, and that nearly as high up as the North Cape itself. Some wintered with us, and many on the coasts of Denmark, in which country, according to Kjærbölling, it has been known to nidificate. It would appear to be a very hardy bird, and quite indifferent to cold, and that it is ice alone which causes it to migrate to more southern climes. "When the sea freezes during severe winters," says M. Wilhelm von Wright, speaking of the island of Oroust, "a large portion of these birds leave us, but some remain in the open water caused by strong currents. It seems even then unwilling to depart from the coast, for one finds it at such times in considerable numbers about the outermost of the islands—where, owing to the constant rise and falls of the waves, the ice is ground almost to powder—

labouring through the thick mass to the bottom in search of food." Nilsson tells us, moreover, that "even though the sea be for the greater part frozen over, and the cold intense, many pass the whole of the winter off the coast of Scania, in natural openings in the ice."

The plumage of this beautiful bird, which has a tail like a cock pheasant, varies very greatly according to age, sex, and season of the year; and it is remarkable that out of fifty specimens hardly two resemble each other. With its winter dress we in England are well acquainted, but as that which it puts on in the summer is not so generally known, it may be proper for me to describe it. The head, neck, wings, and upper part of the tail of the adult male are then black-brown; breast lighter brown; belly and under part of the tail white; sides beautifully greyish-white; sides of the head, in front of the eyes, red-grey; around the eyes a white ring, which is enlarged behind, and tapers in a point towards the nape of the neck; the long-pointed shoulder feathers black, with broad chestnut-brown edges; bill, feet, and irides the same as in the winter. The dress of the female does not vary so greatly in the summer as that of the male. Its head and neck are then quite black, most commonly interspersed with greyish-white feathers; throat white-grey; upper part of the breast greyish-brown; lower part somewhat lighter; back black-grey; shoulder feathers same colour, but with lighter, and most generally with reddish edges; belly and under part of the tail dirty white; upper part of the tail-feathers greyish-brown, with whitish-grey edges, the two in the middle a little longer than the rest.

The Hareld is a most restless bird, and perpetually in motion. It rarely happens that one sees it in a state of repose during the daytime. The flock—for several are almost always in company—swim pretty fast against the wind, and the individuals comprising it keep up a

sort of race with each other. Some are always diving, and as these remain long under water, and their comrades are going rapidly ahead in the while, they are of course a good way behind the rest on re-appearance at the surface. Immediately on coming up, they therefore take wing, and, flying over the backs of their comrades, resume their position in the ranks, or rather fly somewhat beyond their fellows, with the object, as it would seem, of being the foremost of the party. This frequently continues across the bay, or inlet, until the flock is "brought up" by the opposing shore, when they all generally take wing and move off elsewhere. There is but little doubt they are feeding at these times, which is the more probable from the water where they thus disport themselves being usually shallow, and the bottom studded with rocks, from whence they gather cockles, mussels, and periwinkles, which constitute the principal part of their sustenance. "Fair play is a jewel," according to the old saw; and so, perhaps, thinks the Hareld, for it would really appear as if it adopted the somewhat curious manœuvre mentioned, to prevent its companions from going over the ground beforehand.

Whilst pairing, which takes place in the beginning of April, and long before its departure for the far north, the Hareld is very noisy and clamorous. The males are constantly chasing the females, while they themselves are pursued by numerous rivals. "It has been remarked," says M. Ekström, "that certain of the females are much more courted than the rest, a practice at one time supposed to be confined to the human species. Frequently, indeed, one sees an individual surrounded by six or eight amorous males, the rest of the females looking on with great dissatisfaction. Pain as well as pleasure awaits on these *filles de joie*; for imagining that even though dead they will be equally courted as when alive,

the sportsman always picks them out from the rest, so that, when stuffed, they may serve to decoy their admirers within reach of the murderous gun."

The song, so to say, of the Hareld, is not unmusical; it is something like *Calloo*, the name by which this bird goes in the Orkney and Shetland Islands. Some people liken it to the notes of the clarionet, and though monotonous, it is very pleasing, especially when many join in the concert. The sprightliness of the bird, its being eternally on the move, and its wild and interesting cry, tend greatly to give life to the "Skärgård," which, without animated nature, would be desolation itself.

Though Swedish naturalists tell us that the Hareld rarely breeds on this side of the polar circle, there is good reason to believe that many nest in the morasses on the Dovre-field, and other mountain ranges of Norway, which are in a considerably lower latitude; but Lapland, more especially the north-eastern parts, is probably its chief resort during the summer months. It makes its appearance there about May, mostly in its dark summer plumage, which, indeed, it in great part assumes prior to leaving the sea-coast; and breeds in very great numbers in all the fresh-water lakes and tarns studding the face of that wild country.

The female makes her nest, which is lined with down, in marshy ground near water and amongst grass, or under leafy plants that afford some sort of shelter; and lays from five to seven eggs, somewhat smaller in size than those of the barn-door fowl, and of a pale green colour. When incubation commences, the males, which are not believed to pair until the second or third year, abandon their mates, and, like the eider and some other species of birds, collect together in flocks. As soon as the young can fly, the mother conducts them to their proper element, the sea; and in the early part of August she may be seen

with her brood in the bays and fiords of the more northern parts of the Norwegian coast. Subsequently, the several families flock, and take their flight gradually to the southward. In September and October they visited our "Skärgård."

When in salt-water, the Hareld feeds on marine insects, bivalve mollusks, and crustaceans; and whilst in the interior, during the breeding season, chiefly on aquatic plants. It would appear, however, to eat the latter from necessity rather than choice, for on its return to the sea in the autumn, it is usually in very poor condition. The feathers of the Hareld are much prized, and its down held next in estimation to that of the eider. The flesh, though somewhat fishy, may, by good management, be rendered palatable. The better plan is to skin the bird and scrape away the fat, then soak the body in water, or if in milk all the better, for a day or more, and afterwards pitchcock and roast it.

The Eider Duck (*Ejder-Gås*, *i. e.* eider-geese, Sw.; *Estegg*, Norw.; *Eder-And*, or eider-duck, Dan.; *Somateria mollissima*, Leach) is very common in the Baltic and on all the western coasts of Scandinavia, from Scania to the North Cape; but more especially on certain islands called *Fugel-Vass*, or bird preserves, on the north-west coast of Norway, where it is protected—which until the past year or two has not been the case elsewhere in the Peninsula—and where the eggs and down are only taken in very moderate quantities.

Ekström seems to think there are two kinds of Eider namely, the Common, and the so-called *Smal-näbbad*, or narrow-billed Eider spoken of by Brehm; and he is led to this conclusion from what Fabricius says of the habits of the Eider found on the coasts of Iceland, which would appear to differ materially from those of that bird frequenting the eastern "Skärgård" of Sweden.

It is, I believe, a commonly received opinion that the Eider in a wild state confines itself altogether to the ocean. But this would not seem always to be the case, for when, during the present autumn, I was staying with M. Strömberg at Sjöbohl, near Falkenberg, on the southwest coast of Sweden, I was assured by him that the Eider has been repeatedly shot in *Ramsjön*, a fresh-water lake, now partially drained, in the immediate vicinity of his house, and at a distance, as the crow flies, of some three (English) miles from the sea. He also assured me that the nest of this bird has not unfrequently been met with by himself and others in the extensive peat-bogs surrounding the lake.

Ramsjön, it should be remarked, lies some ten to twelve feet above the level of the sea, with which (excepting by means of a canal recently cut to carry off its superfluous waters) it has no communication whatever. Its waters, nevertheless, are said to be in some degree *brackish*, and when very low, a slight crust of *salt*, or of a substance resembling it, is observable on such parts of the bottom of the lake as are left dry.

The Eider, like the wild swan and the Long-tailed Hareld, does not seem in any way affected by cold, however great it may be, and unless the sea is entirely frozen over, remains on the coast during the whole winter. Even should it be driven from thence by the ice, it is not supposed to remove to any considerable distance, for as soon as the frost breaks up it immediately returns to its old haunts. Many winter in the Danish seas, where the climate is somewhat less severe. I myself, on one occasion, saw myriads of these birds about Christmas time in the Little Belt, or that separating Jutland from the island of Funen.

During the winter, the Eider keep together in very large flocks, composed as well of males as females, and at

that time are exceedingly shy. Towards the spring they separate in pairs, and in April were found in our "Skärgård," for the purpose of breeding. Until the female has deposited her eggs, the male is always in her company; but when incubation begins the males congregate, and one sees them in numbers floating, as it were, in the vicinity of the rocky islets where their mates are sitting. Subsequently, and when they begin to moult, which is in June, they keep more out at sea, and are then very difficult of approach.

The plumage of the old male Eider varies much, according to the season of the year. Towards the autumn he loses his brilliant dress, and becomes in great part black, and is, in fact, so altered in appearance as to be hardly recognizable. The female, on the contrary, retains her brown feathers all the year round, and little difference in plumage is observable in her.

During the daytime, the Eider, unless disturbed, spends fully as much of its time on land, or rather on the cold naked rocks, so common in the "Skärgård," as in the water, and as it would appear, in a state of repose. What may be the case in the winter, I know not, but in the summer it would seem always to pass the night on *terra firma*; for when boating by moonlight, we frequently started these birds from their roosting-places on the rocks, but never saw them on the water. If this be really the case, it would look as if the Eider, unlike most other birds of the Duck tribe, which obtain the greater part of their sustenance during the hours of darkness, feeds only in the daytime.

Excepting from actual necessity, the Eider very rarely flies to any considerable distance from water, its natural element. Even when proceeding from one bay to another, it will follow the indentations, however sinuous, of the coast, rather than cross a headland. We are told, indeed,

that as with several other oceanic birds, "if it accidentally loses sight of the sea, its powers of flight forsake it, and it will alight on the ground and look about in state of bewilderment, and at such times allow itself to be taken by the hand." When thus out of its latitude, it occasionally finds its way to very singular localities. Last autumn, when at Ellinge, in Scania, distant some twenty miles from the sea, the proprietor, Count Carl Düker, pointed out to me a small pond near the mansion, where some years before an Eider Duck had been shot by one of his people.

This bird feeds on crustaceans and marine insects, and some great authorities will have it on the finny tribe, as well. It may be so; but though on very many occasions we have known the Eider, when dead, to disgorge quantities of cockles, crabs, and some of these of considerable size, we were never aware of anything in the shape of a fish. I speak of it in the wild state, for when domesticated, it will eat almost anything. It obtains its food at the bottom; at times, it is said, at a depth of twenty fathoms. To this I cannot testify; but certain it is that, even when unmolested, it remains under water a very long time.

The weight of the male Eider, prior to pairing, and when in tolerable condition, averages near six pounds; that of the female about the same, or it may be somewhat more. The largest we ever killed did not weigh fully as much as seven pounds.

The female forms her nest of sea-weed, fresh grass, and other coarse materials, and often in very bleak and exposed situations. Most commonly it is placed near the water, but at times a long distance from thence, and high up—say a hundred feet or more—on some rocky islet. She lines it with a quantity of the soft and elastic down from her own body; and at the end of April, or beginning of May, lays from five to six eggs, of a pale green colour,

the size of those of a goose. It happens occasionally, we are told, that two or three females deposit their eggs in the same nest, and in company sit amicably upon them. To this point I cannot speak from actual observation; but having frequently seen more than one female with the same young brood, gives some countenance to the notion. In those parts of Scandinavia where this bird is protected, it is said to be so tame as to nest not only in the boat-houses, but in the very huts of the fishermen, and whilst sitting, to allow of being handled by them. Such domesticity, however, was not found in our Skärgård, where it was subject to constant persecution. In most instances, indeed, the old bird took wing when one was at all near the nest, leaving the eggs or the chicks, as the case might be, to their fate.

Bishop Pontoppidan gives a somewhat curious account of the proceedings of the Eider during the breeding season. "If the first five eggs are stole away," he says, "then the bird lays again, but only three eggs, and in another nest; if these are lost, then she lays one more. Four weeks the mother sits alone on the eggs, and the cock stands watching underneath in the water, so that if any human creature, or beast of prey, approaches, he gives her notice by crying *hu, hu*; and then she covers her eggs with moss and down, which he keeps ready prepared, and comes down to her mate in the water. But he does not receive her very kindly; and if her eggs are lost by any accident, he gives her many blows with his wings, which she must take patiently; and after this he entirely deserts her, and she is obliged to join the flock of her kind under the same disgrace."

It is generally supposed that so soon as the young ones are out of the shell, the mother conducts them to the water; some say, however, that they remain in the nest twenty-four hours afterwards, and until they have

acquired strength. But this I doubt, considering that the delay, if there be any, arises from the eggs not being all hatched, as is frequently the case, at one and the same time. From the considerable elevation at which the nest is occasionally placed, and the broken nature of the ground, it is hard to conceive how she ever gets them down to the water, it being quite certain that without aid of some kind they could never of themselves find their way there; but how their transit is effected appears somewhat of a mystery. I was assured, however, by a very respectable man, the keeper of the lighthouse at Winga, that he himself had often seen the old bird thus occupied. "She threw the chicks over her neck, as a fox would a goose," such were his very words, "and thus carried them to their own element."

It is generally believed in Scandinavia that when her progeny are in jeopardy, the mother, as is said of the Merganser, takes them on her back, and, either swimming or diving, thus conveys them to a place of security; but this is probably a fallacy. It is true that when the body of the old bird is submerged, which is always the case when danger threatens, and the brood are collected about her, it looks as if they were in the situation described, but in reality, I take it, they are in the act of swimming, and not resting on her. If such were the case, they must, of necessity, hold fast by their bills, which they clearly never do, their heads being always quite erect.

The Eider Duck is readily domesticated, as I can state from experience, having myself reared several. When in confinement they feed freely on worms, shell-fish, and the like; on almost everything, in short, that is given to them.

In parts of Norway the down of the Eider forms a valuable article of commerce. That obtained from the nest, which is plucked by the bird itself from her own

body, is reported to be very superior to that from the dead bird. If taken from the latter, it should be in the winter or early spring, for in the summer and autumn, when the Eider moults, the down becomes so mixed up with blood-feathers as to be of little worth. It is stated by English naturalists, I observe, that each Eider's nest produces half a pound of down ! If several birds be contributors to the same nest, this, by possibility, is the case, but individually it can hardly be, for the utmost quantity we could ever obtain from any one bird in full plumage little exceeded half an ounce.

Though Scandinavia sends some little eider-down to market, yet Iceland and Greenland, according to Kjærbölling, contribute very much more. "Every nest," he says, "contains about the sixth of a pound of down ; and supposing that from each of these countries alone about 6,000 pounds are annually exported, it will be seen that this is taken from 72,000 nests. As at least three-fourths of the quantity comes from Greenland, and as the Greenlanders seldom allow the eggs to remain in the nest, even when half-hatched, and kill the Eider at all seasons and under all circumstances, it is inexplicable that the decrease in the number of these birds is not very considerably greater than it is."

In Sweden and Norway the flesh of the Eider is looked on as coarse, fishy, and nearly uneatable. All the birds killed by us, nevertheless, went into the "pot," and were far from unpalatable—to poor people like ourselves at least, who had not always the opportunity of enjoying a good dinner.

CHAPTER XXIV.

Shooting in the "Skärgård."—Eider-Duck Shooting.—The Author's Boat.
—The Bivouac.—Touch and Go.—A disagreeable Swim.—The Wettar.
—Diving Powers of Water Fowl.—The Fogel-Nät.—Its Origin.—
How to use it.—Its Destructiveness.—The Ratlines.—Underwater
Shambles.—Duck or Die.—Bird Clouds.—The Eagles' Feast.

THE usual plan of shooting water fowl in the Gothenburg and neighbouring "Skärgårdar"—one often adopted by ourselves—is out of a small sailing boat. Should it be calm, or the wind adverse, little, it is true, is to be done; but if, on the contrary, the breeze is fresh and fair, so that without losing time in tacking, you can bear down directly on the birds—several species of which are generally in view—tolerable sport is always obtainable; and were a man to fire at all birds within range, the powder-horn would soon be emptied. But even if you confine yourself to such as are of some value, a pretty good bag is always to be calculated on.

With us, as said, the Eider-Duck was a favourite object of pursuit, for not only are its feathers valuable, but from its large size it proves, in every sense of the word, "a valuable acquisition to the larder." When chasing this bird in a sailing boat, one should always endeavour to obtain the weather gauge, as on taking wing it almost invariably flies to windward; and the harder it blows the greater the chance one has of a shot; but then,





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EIDER DUCK SHOOTING.

as a set-off, the spray that, in rough weather, dashes over the boat, is exceedingly inconvenient to both the gunner and the gun. From the thickness of the Eider's feathers, more particularly in winter and spring, when this bird is in full plumage, it takes a great deal to bring it down, and large shot are consequently requisite. Of Eider alone, nevertheless, a young friend and myself have thus not unfrequently bagged from eight to ten in a day, and during one particular season (including a few killed by other means) close upon a hundred of these birds.

The Long-tailed Hareld, the Sheldrake, the Merganser, and many other species of aquatic birds, as well as waders, often fell to our guns, so that the spoil, if not always considerable, was at least varied, which to my notion adds much to the pleasure of a day's shooting. With us, moreover, few or none of the birds bagged were thrown away, for such of them as were considered uneatable were in most instances stuffed and added to our little Natural History collection.

The accompanying illustration, by M. Körner, faithfully represents the nature of the Gothenburg "Skär-gård," and the way in which we were accustomed to bear down on Eider and other fowl. From stem to stern our little craft was less than sixteen feet in length, but she was, nevertheless, a tolerably good "sea boat," a needful quality, as we were often exposed to very tempestuous weather. But though so small, she was perhaps better adapted to the purpose than one of a larger size, for let the water be ever so shallow, or the passage between the rocks and islets ever so confined, we could still sail with impunity almost anywhere. And even if she struck on a sunken rock, as not unfrequently happened, no great harm was done, for by jumping into the water and giving her a shove, she was in general soon afloat and away again. Not so with a large boat, for in the event of her being

stranded, especially on a lee shore, she would probably stick fast for a while at least, which, to say nothing of peril to life and limb, would be very disagreeable. But in a small boat like ours, there should never be more than two individuals, one sitting aft to steer and manœuvre her, and the other forward with at least two guns. A third person is always in the way. For the more ready handling of the craft when thus shooting sea fowl, a single sprit-sail is perhaps best; a foresail, or jib, is not only inconvenient to manage when putting about in a hurry, but by obstructing the sight of the sportsman, is much in the way. Small as was our boat, we must nevertheless have sailed some thousands of miles in her; and this not only in the Gothenburg and other "Skärgårdar," but in the open sea; occasionally, indeed, to a distance of from fifty to eighty miles from home.



THE BIVOUAC.

During the spring and summer months many were the pleasant trips we thus made in the "Skärgård,"

where the scenery is striking for its desolation, though enlivened somewhat by the cries of the Seagull, the Long-tailed Hareld, the Eider, and others of the feathered tribe. Indeed, if the weather be genial, what with fishing, fowling, collecting eggs and specimens of rare birds, and a bathe now and then, a man can hardly spend a summer day more agreeably than amongst the islands. On these occasions we seldom troubled ourselves to look out for night quarters, but at dusk made for the nearest islet, and with a stone for a pillow, and the sky for our canopy, slept, as depicted above, on the naked rock. Usually we were provided with a coverlid of some kind or other; and as we generally had coffee and a sufficiency of eatables with us, the night was commonly passed in tolerable comfort.

My most constant companion on these occasions was Charles John Anderson, the now celebrated African traveller, then a youth in his teens, and who even at that early age showed the determined spirit of enterprise and accurate observation of nature in all her varieties, which have been since so fully displayed in his daring career as a geographical discoverer and naturalist. His deeds, so well known through his works, "Lake N'gami" and the "Okovango River," have established his fame; and I am happy to say that he is about adding to his reputation by the publication of a beautifully illuminated work on the Avi-Fauna of South-Western Africa, which Messrs. Day & Son are to bring out in their best style.

Once, however, when we were bivouacking in the "Skärgård," a mishap had well nigh befallen us, or rather our boat. The shades of evening having set in, we, as usual, landed on the lee side of a small island, and after securely mooring, as we imagined, our little craft, and partaking of an ample supper—the gun and the fishing-rod having added to our scanty stores—we crept under the

blankets, and consigned ourselves to repose. An hour or two afterwards, it came on to blow hard, and what was worse, to rain heavily; and having no shelter whatever, we were soon in a very unenviable condition. But a still greater evil threatened, for a little past dawn I was suddenly awakened from a broken slumber by hearing my attendant exclaim, "She's gone, Sir! she's gone!" And sure enough she was gone, for on turning my eyes seawards, I, to my great mortification, saw our little boat, at some distance from the shore, careering helplessly on the waves, which were fast driving her towards the rocks on the opposite side of the bay. On these the sea was breaking heavily, and had she reached them she must inevitably have been dashed to pieces. It appeared that though the wind was off the land, the swell had chafed the rope by which the boat was moored, and caused it to part. The mast, with furled sail, was standing, and with the exception of some trifling articles that we had taken on shore, everything belonging to us, guns and stores included, were on board of her. Matters did, indeed, look black. Time admitted not of my reaching her by swimming, which I should otherwise have attempted. As luck would have it, however, there was a fisherman's hut—observed by us on the preceding evening—at no great distance; so running thither at our best pace, we jumped into the man's boat and pulled with all haste for our own, which we happily succeeded in reaching as she was on the point of being stranded. She had a double escape, for whilst drifting across the bay in question, she slightly touched, as we ourselves saw, on a sunken rock whereon was much surf, and on which had she fairly struck, she would certainly have been wrecked. On this very rock, indeed, as the fisherman afterwards told us, a boat containing seven peasant girls who were on their way to a neighbouring market, was capsized a few years previously,

when, lamentable to relate, all the poor creatures found a watery grave!

In two other instances, when in pursuit of wild fowl in the great lake Wenern, our boat, from being insufficiently secured, drifted away from rocky islets where we had landed without any person on board; but both happened in the daytime, and the mishaps having been timely observed, I was enabled, by swimming, to recover the craft. In the first instance the distance was very trivial, but in the second considerable, and the risk something, for had I not succeeded in reaching her, which was problematical, as the wind was carrying her fast from the land, my fate would have been sealed.

Provided the weather be fine, and the stores landed, no great harm could possibly be done were your boat thus to drift away altogether, for sooner or later you would be pretty sure to be picked up by a fisherman or vessel; but if, on the contrary, the weather were tempestuous and inclement, and all the provisions and extra clothing on board, it would be, to say the least, exceedingly unpleasant, and might not improbably lead to most serious consequences. Bearing all this in mind, we were afterwards doubly careful, before retiring to rest, to see well after our "ground tackle."

On another occasion—and this was also in the Wenern, where the seas, from being shorter, are even more dangerous than in the ocean itself—our little craft was in considerable jeopardy. We had moored her at eventide to the northern or lee side of a rocky islet, but had hardly lain down to rest when the wind suddenly veered to the opposite point of the compass, and blew with great violence. The water thereabouts was shallow, and studded with sunken rocks, so that it was next to impossible in the darkness to remove the boat elsewhere, and she, as a consequence, was fully exposed to the fury of the

storm. Most fortunately, however, she was anchored to a perfectly smooth and gradually shelving rock, so that as the waves increased, myself and boy—I having no other attendant—were by degrees enabled to draw her higher and higher up the rock, and somewhat beyond their reach; and though full of water, and sadly knocked about, she happily escaped with but little injury—outwardly at least—beyond the partial loss of her keel; and as the weather on the following day proved fine, we were therefore enabled to continue our voyage.

To proceed. Another plan of shooting water fowl in the Gothenburg and others of the Scandinavian “Skärgårdar,”—one which we ourselves also occasionally adopted—is by the aid of the so-called “*Wettar*,” or artificial decoy-birds. These consist either of such as are stuffed—as, for example, the Eider, the Long-tailed Hareld, the Black Scoter, the Merganser—or of blocks of wood so fashioned and painted as to resemble them. Each *Wette* is attached, in a squatting posture, to a small oval-shaped piece of board or cork. Spring and autumn, the former especially, are the proper seasons to bring these devices into play, as from the fowl being then pairing, and the females on the look-out for nesting-places, they are of course very much more in motion.

In the daytime the Eider, the Long-tailed Hareld, and other diving birds, keep much to the innermost “Skärgård,” and to the bays and inlets of the mainland, where the water is shallower, and the facility of obtaining food greater in consequence; but they pass the night, for the most part, on the outermost of the islands or on small isolated rocks, rising little above the surface in the open sea beyond. During these their morning and evening flights to and from their feeding-grounds, they almost invariably pursue the same course. This is noted by the fowler, who at the first break



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SHOOTING TO DECOY BIRDS.



of day, or towards dusk, anchors his "Wettar" by means of pieces of string and small stones, within easy gun-shot of some headland or other that the fowl are in the habit of passing; and if it blows from off the shore at the time, it is all the better, because they generally fly against the wind. A flotilla of six to eight "Wettar," if good of their kind, and well grouped, and if there be a ripple on the water, have, whilst rocking to and fro on the waves, an exceedingly pretty and natural appearance; but to me a rather melancholy one, for though apparently full of animation, one well knows that, as with the life-like human figures in Madame Tussaud's wonderful collection, they "sleep the sleep that knows no waking."

Subsequently the fowler, who should be provided with at least two guns, and, in preference, such as will carry heavy charges, conceals himself on shore behind a boulder, or should natural cover be wanting, he constructs a sort of screen out of boughs, and there patiently awaits the coming of the birds. A boat is indispensable on these occasions, as well to enable the man to moor the "Wettar" as to gather up the slain when the cannonade commences; but it should be hidden in some neighbouring creek, so as not to alarm the fowl. A second boat, to be rowed or sailed to and fro in the vicinity of the ambush, to keep the fowl on the move, is of great advantage.

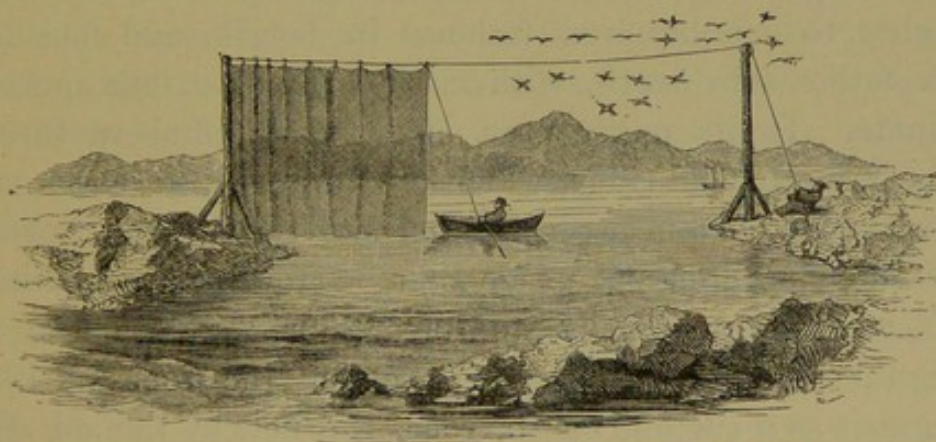
Usually the fowler is not kept long on the look-out. So soon, indeed, as it is well day-light, or even previously, the amorous notes of the male Eider, which to my ears are far from unpleasing, and the wild song of the Long-tailed Hareld, may be heard in the offing; and presently afterwards the fowl themselves, singly or in pairs, or it may be in flocks, are seen to make towards the mainland. Should they sight the "Wettar," they for the most part diverge from their course and "fälla," or alight, immediately near to or amongst them. The slaughter now

begins. Some people consider it best to fire whilst the birds are still on the wing, whilst others prefer waiting until they are fairly in the water. In this case, however, it should not be at the moment when they make their first plunge, their bodies then being so deeply immersed that little besides their heads and necks are visible, and the chances of the shot taking fatal effect are, in consequence, greatly reduced. Oddly enough, fowl, especially the Long-tailed Hareld, are but little alarmed at the report of the gun; and it frequently happens that a second flock makes its appearance immediately afterwards. Hence the saying of the old "Skärgård" shooters:—"Alfogeln fäller bäst i krut-rök," the meaning of which is that the Long-tailed Hareld stoops best to the "Wettar," whilst the smoke from the recent discharge still hangs over the water. When a bird is killed, it is best to pick it up at once, for if allowed to remain—to say nothing of its frightening others—it may be drifted by currents, or the wind, to a distance, and lost altogether; but if only slightly wounded, it is hardly worth while sending the boat in pursuit, for the diving powers of most kinds of water fowl are such that the chase will probably prove a failure.

Calm weather, and a heavy and lowering atmosphere, are most favourable for shooting fowl to the "Wettar;" and if these be well placed, and birds plentiful, that man must be a very bungler who does not make a good "bag." It was said, indeed, of an individual residing near the town of Marstrand that he had thus killed as many as three hundred Eider-Ducks, besides other fowl, in the course of a single season!

The sport in question is an exciting one; the rather, as from the many varieties of fowl frequenting the "Skärgård," one knows not what bird will next make its appearance. But it has its drawbacks; for, unless the

weather be genial, a sportsman, whilst lying on the watch, suffers somewhat from cold ; and if birds be scarce, or the wind high, he may often have to wait long before opportunity offers of discharging his gun. The great drawback, however, to shooting sea fowl, whether it be with "Wettar," or from a sailing boat in the way recently spoken of, is, that unless they be killed outright, one loses, on the average, fully a third of those that fall to the gun. Times out of number have I pursued wounded Eider for long distances, but in most instances without success ; for, on coming to the surface to respire, they seldom permitted more than the bill to appear above water ; and in blowing weather so small an object is not discernible at any considerable distance.



THE FOGEL-NÄT.

The gun, as shown, performs its part on the Scandinavian coasts in the destruction of aquatic birds ; but other contrivances are also resorted to during spring and autumn to effect that object. One, called the "Fogel-Nät," or bird-net, was formerly in very general use in the Baltic "Skärgårdar" ; but at the present day, owing to the comparative scarcity of fowl, it is in great measure, I believe, laid aside — that is, as regards the Swedish

islands; for on those pertaining to Finland, it is said that recourse is frequently had to it.

This engine—of which a good idea may be formed from the above sketch—is of very ancient origin, having been used in Tartary and Siberia from time immemorial. The Samoyedes are believed to have introduced it into the countries bordering on the White Sea, from whence it probably came to Sweden, where it has been known for many centuries. The ancient *Jagt-Stadgar*, or laws relating to the chase, mention the use of this device as one of the privileges of the inhabitants of the “Skärgårdar”; and before the invention of gunpowder it was probably the principal means by which the feathered riches of the islands were made available.

The “Fogel-Nät,” made of stout twine, is from eighty to one hundred fathoms in length, and four to six fathoms in depth, with meshes three to four inches square. To its upper part, at intervals of about three feet, are attached rings, which are threaded, so to say, on a rope stretched between two posts of some thirty feet in height, placed on each side of a narrow strait or sound where fowl are known to have their *drag*, or line of flight. As the rings traverse on the rope in like manner as a curtain on its rods, the net, by the aid of a pulley, can be either folded up or distended with the greatest facility: but however “taut” the rope be drawn, the net will still “belly” a little, particularly if the space over which it spreads be very great.

This net is more especially designed for the capture of the Long-tailed Hareld, the Velvet Duck, and the Eider, their flight being rapid and heedless, and seldom more than from six to eight feet above the water. It is not every kind of fowl, however, that can be taken by this means. Some fly high, and are more on their guard, discovering the danger in time to avoid it; whilst the

flight of others, again—such as the Gull tribe—is so heavy and slow, that they cannot but be aware of and shun the net.

As with the “Wettar,” the best time for the “Fogel-Nät” is either soon after dawn, or towards dusk in the evening, fowl being then not only more in motion, but less able to perceive the toils. As said, they usually fly against the wind, which should blow from the land if the net be used in the morning; but if in the evening, from the sea: otherwise, little will be accomplished. When there is a ripple on the water, the chances of success are the greatest. Stormy weather is very unfavourable for the purpose.

The “Fogel-Nät” being set, the fowler, holding in his hand the end of the rope to which it is appended, stations himself behind one of the uprights spoken of, and patiently awaits the coming of the birds. If these are few in number, and in compact order, he, just as they are in the act of striking the net, lets go the rope “by the run,” when both birds and net fall together into the water; but should the flock, on the contrary, be numerous and scattered, he eases the rope gradually, so that not even the rearmost ranks can escape capture. By the mere act of striking against the net, the fowl are more or less entangled in the meshes; but in their endeavours, by diving or otherwise, to recover their liberty, they usually become inextricably fixed in the toils. The net is seldom dropped into the water for one or two birds, it being thought better to allow stragglers to escape, than for so trifling a booty to lose the chance of making prisoners of a whole flock which may be approaching at the very moment. It is said that if the rope be not slackened when the fowl come in contact with the net, they are pretty sure, however strong it may be, not only to pass clean through it, but to carry

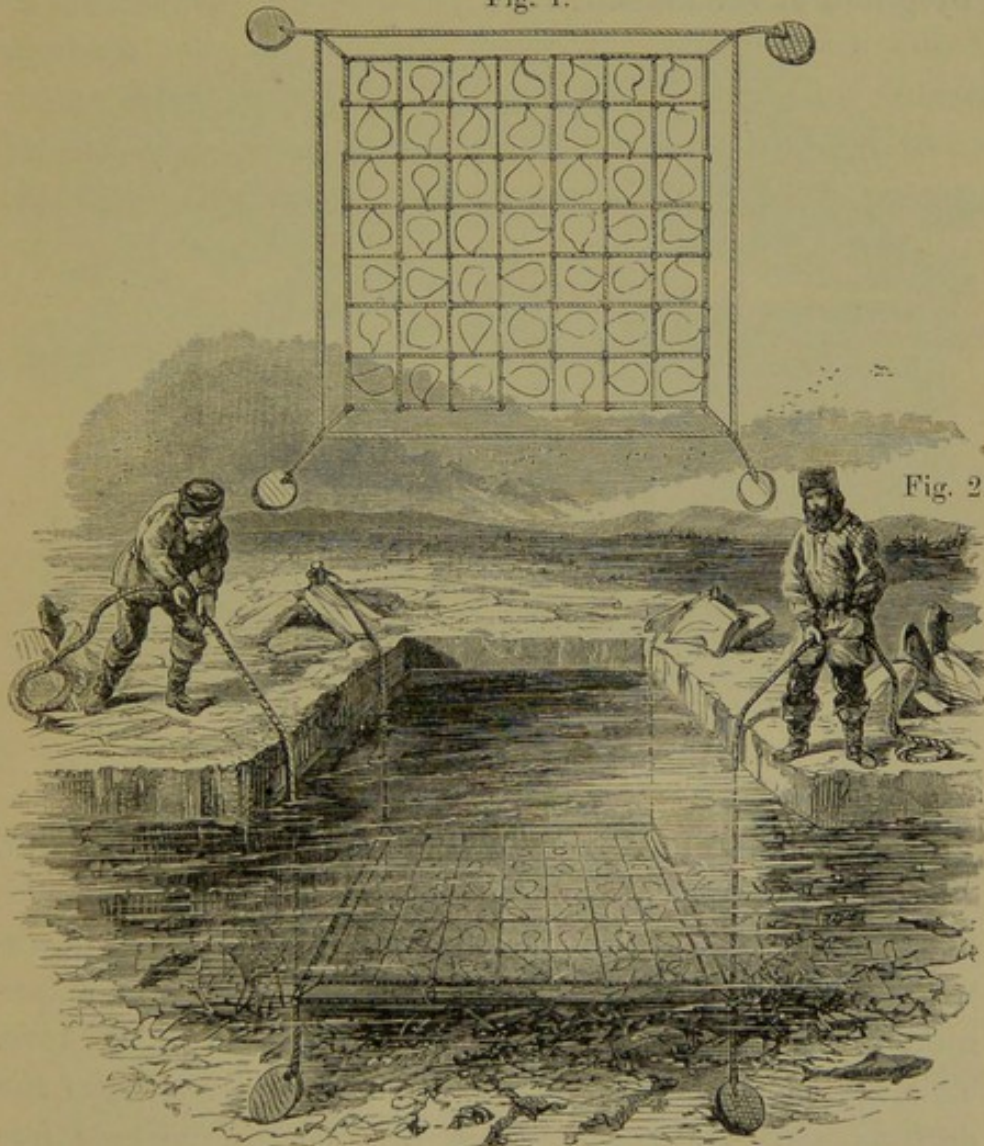
away with them several of the meshes:—"On these occasions, you cannot observe that the net has in the slightest degree impeded the progress of the birds, which shoot through it like a bullet; and are only made aware of their presence by a slight vibration, and by a dull sound resembling the twang of a bow-string."

If full daylight, it happens that one or other of the flocks of fowl perceive the net in sufficient time to avoid it. As they, however, for the most part, keep to the middle of the strait, or sound, over which it is set; and as several species—the Eider and the Long-tailed Hareld more especially—seldom or never in their flight cross the smallest headland, there is no fear of their outflanking it. Nor will they fly over it: and if, therefore, they do escape, it is by wheeling about and retracing their course. Though this net is more particularly intended for the capture of the birds specified, it happens that others—such as the Widgeon, the Tufted Duck, the Common Scoter, the Merganser, and the Razor-bill, are taken by its means. The last-named is a rather "troublesome customer." Its flight is so very rapid, that a net capable of holding an Eider, a much larger bird, is often broken by it; and when a prisoner, moreover, it defends itself gallantly, and will often take a piece of flesh out of the hand incautiously laid on it whilst in the meshes. Great, at times, is the havoc committed by the "Fogel-Nät." We read, indeed, of one hundred couple and upwards of the Long-tailed Hareld having been taken at a single haul, so to say, of this very destructive engine.

In the winter-time, again, such of the fowl as pass that inclement season on the more southern coasts of Scandinavia, are subject to much persecution; for when compelled by hunger to resort to "*Wakar*," or openings in the ice, caused by currents or otherwise, they are slaughtered by various expedients in great numbers.

Nets, for instance, are set in these openings for such birds as obtain their food by diving, and probably but few of those that alight in the open water escape with their lives. It is recorded that near to the town of Helsingborg, in Scania, more than three hundred fowl of one kind or another were some years ago thus captured in a single night.

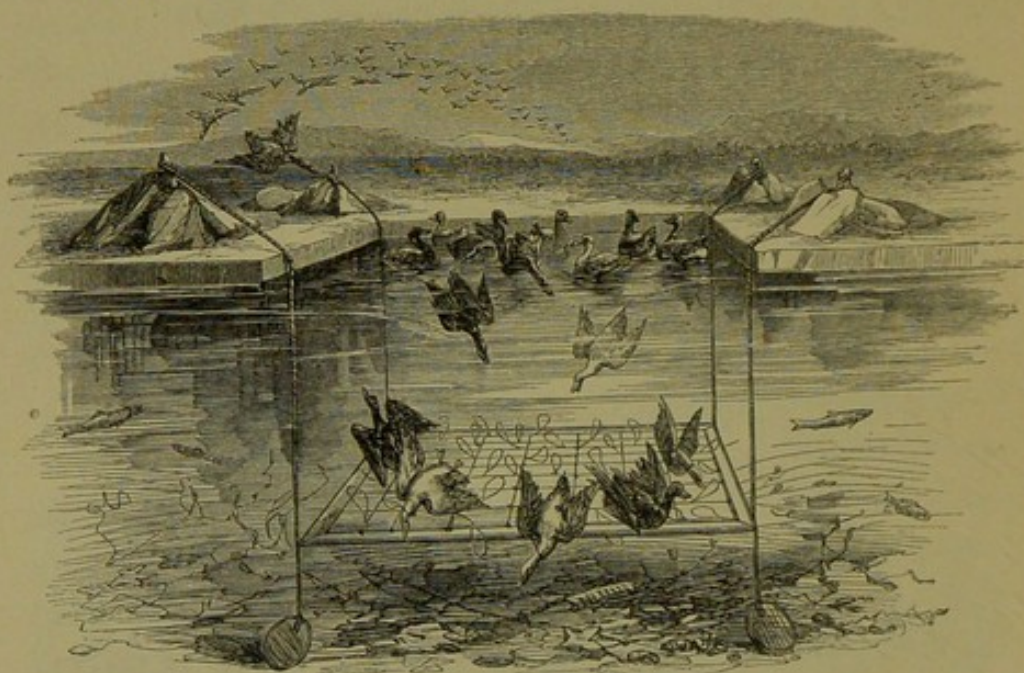
Fig. 1.



THE RATLINES.

At other times snares are substituted for nets in the "Wakar," or it may be in square holes that are cut in the

ice for the express purpose. In this case a "rope-frame" (see fig. 1), constructed somewhat in the manner of a ship's "ratlines," and to each compartment of which several fine wire-springes are attached, is sunk horizontally in the aperture in question to within some three feet of the bottom; the operation being effected (see fig. 2) either by means of long poles, or ropes weighted at the ends.



UNDERWATER SHAMBLES.

When, therefore, the fowl observe the open water, wherein, perhaps, are placed several "Wettar" or artificial birds, to allure them, they alight, and diving downwards in search of sustenance, presently become entangled in one or other of the snares, as depicted above. This device is visited several times in the course of the day, as well for the purpose of keeping the hole free from ice as to secure the prisoners, the greater number of whom are made during the night. These, at times, are said to be so numerous as to require one or more sledges for their removal.

Another common plan of circumventing water fowl in the winter-time is for the fowler to conceal himself behind a sort of "screen," constructed of blocks of ice, in the near vicinity of a "Wak," and to shoot them on their arrival. Sometimes he makes use of "Wettar"; but in general they are little needed, for when the birds are half famished, the open water alone is a sufficient inducement. We read of an individual in the Gulf of Bothnia who during one particular winter thus killed, exclusive of other fowl, so many of the Long-tailed Hareld in one and the same "Wak," that their feathers alone weighed upwards of sixty pounds, and occasionally as many as from twenty to thirty at a single discharge!



DUCK OR DIE.

We are told, moreover, that in some of the Scandinavian "Skärgårdar" neither the gun, the "Wettar," the

“Fogel-Nät,” nor the “Ratlines” are had recourse to in the winter for the capture of wild fowl, that object being effected by more simple and primitive means. A “screen” is constructed of ice-blocks near to a “Wak” (on the side next the shore) frequented by birds that obtain their food by diving. Two men, each armed with a long pole, lie in ambush at some little distance from the opening; and when they observe a considerable number of fowl congregated, they, on hands and knees, creep stealthily up to the “screen” in question. On reaching the latter, they suddenly and simultaneously rise from their recumbent position, staff in hand, and, uttering loud cries, rush forward to the “Wak.” Some few of the fowl may take wing, but the greater part are so intimidated by the sudden and uproarious attack as to be incapable of so doing, and therefore resort to the equally ready expedient of diving. But they are soon compelled to come again to the surface to breathe, on which their persecutors mercilessly knock them on the head with their weapons; and thus, in the course of a few minutes, the greater part of a flock are destroyed. By this most murderous system several hundreds of such fowl as procure their subsistence at the bottom are at times slaughtered in the course of a day.

The quantity of aquatic birds—such as Widgeon, Golden-eye, and Long-tailed Hareld—that at times congregate in “Wakar,” and other openings in the ice, is enormous. When in the winter of 1853, which was a severe one, Mr. Alexander Keiller in an “ice-boat” was crossing the Great Belt, then entirely frozen over, with the exception of a very narrow channel in the middle, he saw such multitudes of fowl as filled him with astonishment:—“Billions,” said he, “would give no idea of their numbers; and when they took wing it was not simultaneously, but in succession, like unto clouds of



J. Wolf, del.

THE BIRD CLOUD.

To face page 370.



dust that arise on a highway when swept by a whirlwind. Owing to their being so closely packed together, it would have been impossible for the whole of them to have flown up at once ; and when they were all fairly on the wing, they literally darkened the air. The open channel spoken of was fringed with the dead and the dying. Many had perished from starvation, whilst not a few, owing to their helpless condition, had been killed with sticks. Others, again, had been destroyed by birds of prey, more especially eagles, several of which were seen perched on hummocks of ice gorged with the blood of their victims."

CHAPTER XXV.

The Otter.—Its Habits.—Its Prey.—Its Partiality for Water Fowl.—Value of its Skin.—Easily domesticated.—Caters for itself.—Caters for others.—Mode of Hunting it.—Otter Nets.—Otter shooting by Moonlight.—The Tramp-Sax.—Otter Traps.—The Pansar-Nät.—The Keiller Otter-Trap.

THE Common Otter (*Utter*, Sw.; *Odder*, Norw.; *Lutra vulgaris*, Desm.) is frequently met with in the Gothenburg and other of the Scandinavian "Skärgårdar," both eastern and western, as also on the shores of the mainland, where they are rocky and precipitous. It is likewise common in the lakes and rivers of the interior, from Scania to at least as high up as Southern Lapland; but is said to be more numerous in salt than in fresh water. Some will have it that there are two species in the Peninsula, viz., the so-called "*Skär-Utter*," *i. e.* that found on the sea-coast, which is said to be the lighter in colour and the smallest, and the "*Flod-Utter*," *i. e.* river-otter, or that frequenting the inland waters; but this seems more than problematical.

Be this as it may, however, the length of a full-grown Scandinavian male Otter is, from nose to tail, about



M. K. L. ser. del.

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THE COMMON OTTER.

Day & Son, Limited, Lith.



four feet, and weight from twenty to thirty pounds. The female is somewhat smaller. It is reputed to possess a quick sight, but dull olfactory nerves ; and although water would seem to be its proper element, it can, on occasions, make considerable pedestrian excursions. Some assert that it has been known to ascend trees : not an impossible feat it may be, but to my notions a somewhat improbable one.

We are further told that its skin in the dark emits so strong a phosphoric light that the gunner, when on the watch, has no difficulty in detecting its presence. This may be the case ; but although on several occasions, when netting fish in the night-time, we ourselves have heard this animal's somewhat plaintive call-note apparently close to the boat, we were never able to discover its whereabouts.

According to some authorities, the Otter is a great wanderer. They tell us, for instance, that it spends the summer months in the lakes and rivers of the interior, where it rears its young ; but that on the approach of winter it leaves the fresh water and proceeds to the coast, and there passes that inclement season ; that during its wanderings it is seldom alone, both parents and cubs being generally in company ; that the family party steer a pretty direct course from river to river, and from lake to lake, though they are often very many miles apart, and the intervening country is mountainous and rugged ; that they journey in the night-time, and have their appointed halting-places, frequently in the crevices of rocks and far away from water, where they secrete themselves during the daytime.

That Otters dwelling in rivers and lakes near the sea often proceed there on the approach of winter, I can well understand ; but that the migration should be anything like general cannot possibly be the case, because during all seasons of the year, to my personal knowledge, these

animals are everywhere found in the far interior. It is certain, however, that when the brooks and rivulets are sheeted with ice, and that the fish have retired to the deeps, the Otter not unfrequently seeks other and larger streams where the water is open or partially so. Very often, indeed, when the snow has been loose and deep, have I met with his track far away from water; and as he at such times makes no use whatever of his hind legs, but trails them after him sledge fashion—whereby the prints of his fore feet are obliterated—one would almost suppose, from the look of his “*spår*,” that instead of being his own work, a log of wood, or something similar, had been dragged through the forest.

The Otter seeks its prey for the most part at night. During the day it generally lies concealed under the bank of a river or lake, or it may be in the cleft of a rock at some distance from water. Its food chiefly consists of fish,* cray-fish, water rats, and the like, and in the spring season, of eggs† and young water fowl. The old birds at times are also its victims. Three or four winters ago an acquaintance of mine, when shooting in a tributary of the river Gotha, killed a fine male Smew—a rare bird on the western coast of Sweden—which fell into the stream, then partially frozen over; and whilst he was pondering on the best means of securing his prize, an Otter rose to the surface and bore it away in its jaws. Beckman, the fisherman mentioned in the note, assured me, moreover,

* That the Otter is a very unwelcome guest in a fishpond every one knows, for if left undisturbed it will soon make a clean sweep of everything in the water. In Sweden it is said that if finely pulverized slag or scoræ from the iron forge be strewed on the banks of the pond, he will never come near it.

† Beckman, a fisherman at Storberget on the Wenern, is my authority for this statement. His conclusions were drawn from having often found particles of duck-egg shells in the droppings of the Otter.

that he himself saw one of these animals drag an old Mallard under the water.

Some may have doubts of the Otter preying on adult water fowl, but what follows must go far to convince even the most incredulous that such is the fact. "In the beautiful gardens and pleasure-grounds at Stuttgart"—so we read in the well-known "*Forst-und Jagd Zeitung*"—"where the public derive the greatest possible enjoyment that nature, embellished by art, can afford, are several artificial ponds and lakes well stocked with fish, and inhabited by many water fowl, both tame and wild, which nest in numbers in sheds skilfully constructed for the purpose either on the islands studding the several pieces of water or on the shore itself. Even swans, both domesticated and in a wild state, breed here. During the summer of 1824, and for seven weeks together, the eggs in the nests of the fowl, as well in those on the islets as the mainland, were constantly broken and sucked; the ducklings and goslings rapidly disappeared, and yet neither their bones nor their feathers could be discovered. Equally unsuccessful was the search after the remains of the fish. Not so, however, as regarded the other inhabitants of the waters, as from two to seven old ducks were daily found, of which only the heads and necks were eaten. Geese and swans, moreover, which the depredator had been unable to master, were wounded, and soon died in consequence. During all this time not the slightest clue could be found to the culprit. The individuals who had the superintendence of the fowl, were unanimously of opinion that a fox or marten must have been the author of the mischief.

"One moonlight night, about nine o'clock, the head gardener, M. Bosch, proceeded alone to the spot where all these spoliations had occurred, in the hopes of detecting the robber. From nine to twelve the birds were in a

constant state of alarm and agitation, flying and swimming hither and thither, and at times uttering piercing cries, making it quite evident that, though unseen, the foe was near at hand. This was more especially the case with the young wild ducks, which would not settle down to rest until they had taken refuge on the dry land. It was nevertheless impossible to detect the cause of their uneasiness, or the reason why they would not pass the night on the water. M. Bosch attempted, ineffectually, to drive them back into their proper element, but they carefully avoided it, and sought shelter with the guard at the gate. A little after one o'clock a wild duck flew up, quacking loudly, and settled again very near to M. Bosch. Presently he remarked a slight streak or ripple, unattended with the slightest noise, on the placid surface of the lake; and though the motion was more rapid, it resembled that of a large fish progressing through the water. As soon as the Duck saw the ripple in question approaching, it hurriedly took wing and flew away. The ripple came nearer and nearer to M. Bosch, who, armed with a trusty gun, at length levelled and fired. After the shot, however, nothing was to be seen, and presently the water was as still as before. M. Bosch subsequently procured a boat, and rowed to the spot at which he had aimed, and with his ramrod searched the bottom of the pool. Presently he felt something soft, and after two or three ineffectual attempts, succeeded in bringing to the surface an enormous Otter, measuring four feet from head to tail, and weighing twenty-three pounds, which was afterwards stuffed, and is now in the Museum at Stuttgart. From this time forward all depredations ceased among the water fowl."

In the southern parts of Scandinavia the Otter pairs in February, but in the northern in March. The period of gestation with the female is nine weeks. The cubs

are from two to four in number, and, according to Ekström, at first grey (Bechstein says, nearly black, but subsequently lighter year by year), which colour gradually, though early, turns to a more or less clear dark-brown. The mother feeds them for awhile in the lair prior to taking them abroad and teaching them to cater for themselves. They follow her in her wanderings during the whole of the summer.

The flesh of the Otter, though it may be eaten, is not over palatable; the less so should any fat adhere to it, as in that case it tastes like stale salted fish. The better plan of preparing it is, after removing the fat, and soaking the flesh in water for a day or two, to roast it and eat it with pepper and other strong spices.*

The skin of this animal is valuable. In certain districts of Sweden it is sold by measure, every six inches of its length—the tail, after being doubled, counting with the rest—producing from one to two riksdollars, or as many shillings. On the more northern parts of the Norwegian coast, and in Swedish Norrland, where a large number of Otters are annually captured, their skins constitute a considerable article of export. Formerly they produced a good price—say near one pound sterling each—but at the present day are procurable on much more reasonable terms.

Though the Otter is by nature of a shy and savage disposition, yet, if taken young and kindly treated, it soon becomes as tame as many other domesticated animals. It attaches itself to its master, and shows not the slightest disposition to escape. Indeed, when on a visit

* In Catholic countries, where flesh is forbidden during Lent and other fasts, people look on the Otter as so nearly allied to fish as to eat it with a perfectly safe conscience. In Egypt, in ancient times, this animal was worshipped.

some years ago to the distinguished Swedish naturalist M. Ekström, I myself saw an Otter at the Parsonage that, in like manner with a cat or dog, had the run of the house, and more than once during the night-time I heard it at my bed-room door. It had also free access to the garden, in which was a pond, where it often disported. It would allow itself to be handled by those with whom it was acquainted, and to one of the dogs on the premises it was said to evince a particular attachment. This Otter had been captured when quite young, and at the time I speak of was upwards of a year old.

Many other instances are on record of the extreme docility of the Otter. M. Boje tells us, for instance, that "the proprietor of Kråkø, in Norway, had one, taken when quite young and brought up by hand, that had become a perfect *hus-djur*, or house-animal. In the daytime it slept under a wood pile, but of an evening was the constant companion of the great yard-dog. When in a room it would leap over seats and tables. Nothing was given it in the house, and it was therefore obliged to fish for itself in the lake."

Again : "Whilst a party were shooting young Ducks at Jacobsberg, in Södermanland, the property of M. Watt-rang," says the President M. af Robson, "a pointer bitch came to her master carefully bearing in her mouth a very small living Otter cub. It was carried home and reared, but had no opportunity of resorting to the water. It became perfectly tame, and gladly followed its owner everywhere. It would eat almost anything, and expressed special pleasure if offered tea ; but if, whilst lapping the liquid, it was handled or caressed, it would *fräsa*, or hiss fiercely. It was particularly cleanly in its habits, and always relieved nature in a certain spittoon ; and whenever this was presented to it, as for the sake of fun was often the case, it was always ready to make a

fresh contribution. The most remarkable circumstance relating to this animal was, that it evinced a sort of aversion, or rather hatred, at being cast into the water. It happened often enough, nevertheless, that when following a party on the bridge at Jacobsberg, some one unperceived would place his foot behind it and push it into the river. When thus treated it would show its displeasure by a kind of blowing or hissing, and at once make for the shore; and for the remainder of the day it was generally very shy, and would spit like a cat if any one attempted to take hold of or caress it. When five years old, a sad mishap befell the poor creature. A fresh gardener, under the impression that it was a wild Otter, wilfully destroyed it; and to make the matter worse, the man afterwards applied to M. Wattrang for a reward 'for knocking the hard-lived beast on the head.' "

The Otter may soon be taught not only to cater for itself, but for its owner. Olaus Magnus tells us that formerly the Norwegian gentry not unfrequently kept these animals in their kitchens for the express purpose of supplying the household with fish. In later times, indeed, one reads of many Otters thus regularly trained. "Some years since," says the Baron Hårleman, "I witnessed with much pleasure the performances of one near Kungsholms-bro (that is, the bridge leading to the island of Kungsholm) in Stockholm. Within a short space of time it dived down frequently, and on each occasion came to the surface with a fine fish, which it carried to its master."

Captain Sven Littorin speaks of a similarly well-educated Otter that had been reared from a tender age by a peasant, and was in the man's possession for several years. "It fulfilled," says he, "the duties of a regular fisherman to its owner, and would often proceed to the river, where it captured quantities of large fish, salmon

amongst the rest, which it brought untouched to the house, contenting itself with the refuse alone. Its master was thus never without fish at any season of the year, and in consequence sold his nets and other tackle, thinking them needless now that he had so skilful a fisherman. From motives of jealousy, however, the poor animal was at length treacherously destroyed."

We are told of another Otter, belonging to a Polish nobleman, "which like a dog guarded the stable and carriage-house, proceeded to the lake and captured fish when ordered, and afterwards conveyed it home to its owner. It also accompanied the dogs on shooting excursions, and brought to land such of the Ducks as fell into the water."

We further read that a peasant in Scania, named Bengt Nilsson, had some years ago a tame Otter that daily supplied his family with fish. By its means, moreover, he was enabled to capture wild Otters:—"Near the house was a mill, and on both sides of the mill a high *vall*, or embankment, so that the Otter in question was unable to come up into the mill-dam itself. To enable it to do so, the peasant made a little 'lock,' or doorway, in one of the flood-gates near the edge of the water, through which he on several occasions lured the animal; and when it at last became accustomed to go to the 'lock,' this was so arranged by the man that when touched by the Otter, it could easily go out, but not return. Beneath the 'lock' the peasant placed a large box or chest, somewhat resembling those used for the capture of eels; and many wild Otters from the mill-dam accompanied the tame one into it, and were made prisoners."

On one occasion I myself reared an Otter cub, and had the animal in my possession about a year. But as I was then living near the banks of a navigable river, and

fearing, in consequence, that if at large it might fall into the hands of the Philistines, I never ventured to give it its liberty. The animal was kept in an outhouse, and constantly supplied with a large tub of water. Its food, consisting chiefly of fish, was thrown into this tub, and was brought up by it from the bottom. If the temperature was moderate, it seemed fond of disporting in its bath; but in very severe weather it appeared just as well pleased to nestle in some dry straw placed in a corner of the shed, where it would coil itself up in the manner of a dog, and pass much of its time in sleep.

The Otter is captured in various ways in Scandinavia. Many are hunted to the death, though not, as in England, with a pack of hounds, but in a quiet sort of way. These hunts usually take place in the winter, at which time, as said, the animal is accustomed to take long pedestrian excursions; for when there is snow on the ground, it is always easy to ascertain, in degree at least, its whereabouts. A trained dog is needful for the purpose, though any cur that has courage, and takes kindly to the water, answers well enough; and if when young he has aided in the destruction of one or two Otters, his education is nearly complete. The beast emits a strong and rank odour, so that the dog does not readily lose its trail, and when thoroughly up to his business, will be able to indicate its place of retreat, even though the ice under which it is lying be five or six inches in thickness. When the *Spår* is found — and one generally knows pretty well where to look for it, for the Otter year after year keeps to the same track — the hunter, with his dog in a leash, and accompanied by a man bearing a woodman's axe, an ice-axe, and an *Utter-gadd*, or Otter-spear, the shaft of which is about six feet in length, starts in pursuit either on *Skidor* or on foot. If the track be

quite fresh, it happens not unfrequently that the animal is overtaken before reaching the water, or other place of refuge, in which case it is quickly knocked on the head, or otherwise despatched. Should it, however, have crept into the cleft of a rock, the dog is slipped from his couplings; and as the beast is much more readily dislodged from its retreat than either the badger or the fox, he most commonly soon succeeds in driving it from thence. If a river be close at hand, one should keep watch near the bank, as the Otter, when ousted from its lair, always makes for the water. But if it cannot be induced to leave the rock, or that you are unable by the removal of stones or by digging to compel it to do so, the dog ought again to be tied up, and you must lie in ambush until dusk, when it is sure of its own free-will to quit its retreat. Should it be too dark to shoot when it comes forth, the dog must be once more released, when the affair is generally soon over, because, provided the ground be pretty level, and the start tolerably fair, it cannot run so fast that a man may not overtake it.

But if the Otter has taken to an unfrozen stream, one ought first to make a circuit of its outlet, to be assured it is still there, and afterwards carefully search its banks; and if the dog knows his business, he will presently find out the beast's hiding-place. If it be a mere brook in which it has made its lair, the better plan of dislodging it is to dam up the stream below; for when the water has risen so high that it can no longer obtain air, it must of necessity "bolt." In this case, however, it is always needful to place bushes across the stream at some little distance *above* the dam in question, as otherwise, when the water has driven it from its retreat, it may dive up stream instead of down, and not come to the surface to breathe until out of gunshot. Should matters be properly arranged, the animal must be

singularly fortunate if on making its appearance it be not either shot or speared.

Not unfrequently the Otter-hunter makes use of a net made of fine twine, with meshes of about two inches square. It is somewhat in the form of a sack, and of about the like breadth and depth as the stream or brook where it is used. Its depth is considerable, and it gradually tapers towards the extremity, or bag, at the end of which is a large float in the shape of a cross or of a half-moon. The mouth of the net is provided with a *telning*, or line, the under part of which is weighted with leads or stones, and to the upper are attached corks, or in lieu thereof oval pieces of birch bark or some light wood. About the middle of the net, again, is a second and still stouter line threading the several meshes, by means of which the "bag" itself can be closed at pleasure. The net is placed across the stream; and when the man who keeps watch over it sees the "float" carried under water he knows the enemy is within the toils, and on pulling the line last mentioned the prize is secured as in a lady's reticule. Even should the river or brook be frozen over, the net may be used to advantage. One man guards it whilst his companion, starting from *above*, thumps the ice with a billet of wood in his progress *downwards*; and when he has succeeded in rousing the Otter from its lair, he drives it before him until enveloped in the toils.

In the winter the Otter not unfrequently secretes itself during the daytime under the so-called *landkallen*; that is, the ice formed on the shores of lakes or rivers at the first setting in of the frost when the water is usually pretty high, but which ice, when the latter subsequently recedes, is often quite hollow beneath, being merely supported by loose stones, whereon it may chance to rest. When in such a situation the dog has

discovered the Otter's retreat, the ice should be broken on both sides of the spot, and indeed at the same instant of time; and if there be no opening between the "Landkallen" and the water, the beast is pretty certain to be destroyed.

The surest plan, however, of circumventing the Otter in the winter is to shoot it by moonlight. For this purpose the gunner ascertains in the daytime the holes in the ice where it is accustomed to resort, which are readily known by its "spår" and by the fish bones strewed near to them, and at dusk lies in ambush for the beast. He must be careful, however, not to fire until it comes fairly upon the ice; for if only wounded, the chances are that it will crawl to the aperture, and in all probability be lost to him. To shoot at an Otter in open water, unless shallow, is next to useless, for even if killed outright, it most commonly sinks at once to the bottom.

In the pairing season the Otter is frequently shot by *Läck*, or imitating the animal's call-note, a long-drawn sort of whistle. Many persons for this purpose make use of the *Hjerp-Pipa*, described at page 119, the implement by which the Hazel Hen is beguiled.

During the summer months, again, the following plan, said to be a successful one, is adopted in Scandinavia to shoot the Otter. A trimmer, or night-line, baited with a pike or a large roach, is set in a river or brook known to be frequented by it. When the beast sees and has seized the fish, it lands and devours it, leaving its remains, together with the hook and line, on the bank. After this expedient has been practised two or three times, the gunner, at night-fall, conceals himself near to the spot where the Otter is thus accustomed to make its repast, and it seldom happens that he has to wait long before it makes its appearance with the baited fish, and if he then holds the gun straight, its fate is quickly decided.

Sometimes, moreover, the Otter is captured on the trimmer itself. Once, when M. Prytz was taking up a *Lång-Ref*, or night-line, to which several hundred hooks were as usual attached, he found a large Otter on one of them that made a desperate resistance, and which he had the greatest possible difficulty in getting into the boat. Though M. Prytz is a tall man, the beast, he assured me, reached, when held up before him, from his face to the ground.

The Otter, as said, is often speared, and now and then, as it would seem, unpremeditatedly. Once, when crossing the river near Gothenburg, the boatman mentioned his having had a little adventure on the preceding afternoon. Whilst spearing eels near the high reed-beds fringing the stream, he struck his weapon into what, from its violent struggles, he imagined to be an immense pike, or other fish; but on bringing his prize to the surface he was startled to find that instead of one of the finny tribe he had impaled what he at first almost thought to be the old gentleman himself, but what he presently made out to be an immense Otter. Instead, however, of drawing the animal to the side of the boat, and then knocking it on the head, as he readily might have done, he, to get rid of what he looked on as an "awkward customer," designedly jerked the spear from out of its body, the weapon bringing away with it the poor beast's tail and a portion of the skin of its hind-quarters, which the man carried home to his wife as a trophy.

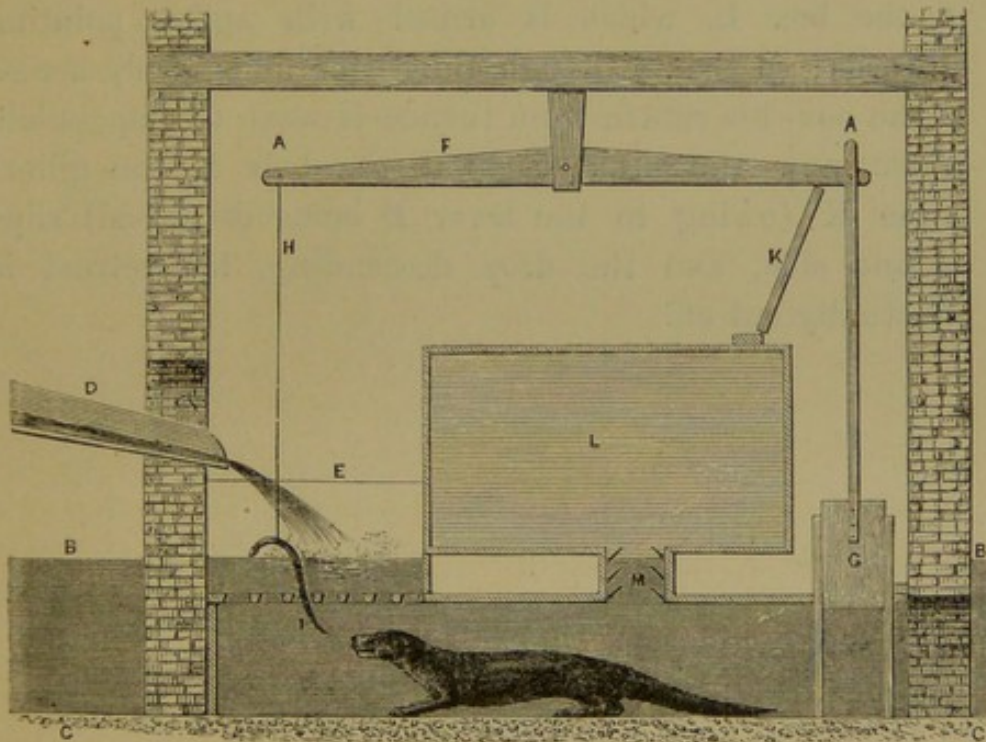
Traps of various kinds are also had recourse to for the capture of the Otter. That in most general use is in principle the same as the common fox-trap. But to one of the jaws there must be fastened a thin piece of iron filed saw-fashion, the teeth of which ought to be at least half an inch in length, for if this precaution be not adopted the animal will quickly contrive to extricate itself from

the toils. The trap is placed on a flat stone by the side of a river or lake that the Otter, by its droppings, &c., is known to resort to. A fish serves as bait, but in default thereof a frog, which in the winter time is always procurable in the mud at the bottom of a *källa*, or spring. To guard against the trap rusting, and to remove the taint of the hand, it must be "*vittrad*," or rubbed over with a composition of unsalted butter, goose fat, or hog's lard, to which, when melted, is added pounded valerian-root or bruised castoreum, and when "*gillrad*," or set, it should be covered over with aquatic plants, such as are to be found at the bottom of the stream. To prevent the beast from carrying away the trap, it is necessary to secure it with a line, or chain, to a stone, or to a tree growing near the bank.

The so-called *Tramp-Sax*, or treading trap—such as is used in Lapland for the capture of the wolf and the glutton—is, however, considered preferable to that just spoken of. It is, as said, provided with a "foot-board"; and though a bait can be affixed to the latter, it is for the most part set unbaited in the "run" of the animal, and merely covered over with grass. At other times it is placed at the bottom of a "*källa*," to which the beast is in the habit of resorting in search of frogs, which it digs up with its fore-paws from out of the mud. It should, however, be set before the lakes begin to freeze, for the Otter never more than once in the year visits such as are lying in its route.

The *Pansar-Nät*, or armour-net, is a device by which the Otter may be taken alive and uninjured. It differs from the common fox-trap in that the jaws are two or three times larger, and that to each jaw is attached a bag or net of chain-work; a fish is used for bait, and, instead of the usual "*vittring*," the trap is rubbed over with the entrails of fish.

The Otter is also frequently taken in the *Fall-Stock*, which is in principle the same as that used for the capture of the Capercali; but the upper and lower blocks should be heavier, and both armed with long iron spikes placed from one to two inches apart. It should be constructed of old materials, especially of wood that has long lain in the water, for such as is fresh cut is apt to catch the eye of the beast. This device is set either on land, in the run of the animal, or in the stream itself, where the water is so shallow as not to obstruct the action of the down-fall or drop.



THE KEILLER OTTER-TRAP.

But perhaps the best and most ingenious device for the capture of the Otter is that adopted by Mr. Keiller on the river Save, near Gothenburg, the nature of which, by the aid of the above diagram, will be very readily understood:—

A A represents the longitudinal section of the eel-

house; B B, the water-line above; C C, the water-line below; D, the mill-race or spout; E, the eel-box, some two feet square, and grated at the bottom to retain the eels, immediately beneath the spout D, and nearly on a level with the upper water-line B B; F, the lever; G, the drop or down-fall; H, the line to which is appended the eel I, that serves as bait, and the tail of which, as will be observed, protrudes through the grating of the eel-box; K, the *giller-pinne*, or trigger; L, the box for the reception of the Otter, in which, rather than drown, he always takes refuge on finding himself imprisoned; M, the funnel, so to say, leading from the water to the box L, which is armed with spikes pointing upwards; so that although the Otter finds ready access to the box, his return from thence is next to impossible. When now the beast tugs at the bait I, the *giller-pinne* K (owing to the lever F being disturbed) slips on one side, and the drop descending, his retreat is effectually cut off.





W. Bennett del.

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THE COMMON SEAL

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CHAPTER XXVI.

Seals.—The Common Seal.—Its Love of Music.—Its Disposition.—Its Sagacity. — Its Breeding Habits. — Its Domestic Habits. — The Marbled or Ringed Seal. — Love for its Offspring. — Inhabits Fresh-water Lakes. — The Grey Seal. — Its Migratory Habits. — Great Pedestrian Feat.

WHILST cruising amongst the islands off the coast, we not unfrequently met with Seals; less frequently, however, near Gothenburg, where boats and vessels were constantly passing, than at a distance from home, those animals being there less subject to disturbance and molestation.

Swedish and Norwegian naturalists include six species in their Fauna; viz., the Common, or Spotted Seal; the Marbled, or Ringed Seal; the Grey Seal; the Harp, or Greenland Seal; the Great Bearded Seal; and the Hooded or Crested Seal.

The Common Seal (*Spräcklig Skäl*, *Vikare-Skül*, Sw.; *Steen-Kobbe*, Norw.; *Phoca vitulina*, Linn.), which is so generally distributed in the seas of the more northern parts of Europe, was, with us, the most numerous of the family. It is common, likewise, on all the western coasts

of Scandinavia, from the Sound to far beyond the Polar Circle ; as also in the Baltic, and in the gulfs of Bothnia and Finland. Though confined to the sea, so far as the Peninsula is concerned, it would seem to thrive well in fresh water, it not unfrequently being met with near Kongelf, situate ten to twelve (English) miles above Gothenburg, where many have been shot. It has been seen, indeed, as high up the river Gotha as Lilla Edet, distant some forty or fifty miles from the sea ; and farther it cannot proceed, owing to the cataracts at that place.

Its usual length is from five to six feet, and weight about two hundred pounds ; but at times, so old seal-hunters assure me, it attains to a very much larger size. M. Gustaf Holmers estimates its blubber alone at from one hundred and twenty to one hundred and forty pounds ; but this in the winter, when it is usually excessively fat ; for during the heats of summer, at which time it is said to eat but sparingly and to become lean, it has but little. It never congregates in any considerable numbers ; more than a few, indeed, are seldom seen together ; neither is it often met with far from land, but confines itself mostly to the fjords and inlets on the coast. Hence is derived its Swedish name of *Vikare*, or Bay Seal ; and owing to its frequent habit of reposing on rocks, its Norwegian designation of *Steen-Kobbe*, or Rock Seal.

The Common Seal—and the following remarks as to its habits apply nearly equally to other Seals—is an admirable swimmer, and, like the Shark, often seizes its prey when on its back. It is also an excellent diver, and can remain under water a very long time. We read, for instance, of one of these animals “struggling in the folds of a net for more than five-and-twenty minutes, without performing a single respiration, and yet being alive when brought to the surface.”

The way in which it ascends a rock, if at all precipitous,

is somewhat curious. It follows the swell of the sea to the rock, and on the wave breaking allows itself to be lifted some height up the face of it, to which, with its fore paws crossed, it then clings with great apparent tenacity. In this situation it remains stationary until another and larger wave carries it still farther up the rock, when it forms a second lodgment; and thus it continues to advance until sufficiently high up the rock to be enabled to draw its heavy and clumsy hind quarters to its purposed place of repose.

Its sense of hearing is very acute, and that even when under water. Hence a whistle from the seal-hunter often brings it to the surface. Music seems to have peculiar charms for this animal. "During a residence of some years in one of the Hebrides," says Mr. Lizars, "I had many opportunities of witnessing this peculiarity, and, in fact, could call forth its manifestation at pleasure. In walking along the shore in the calm of a summer afternoon, a few notes of my flute would bring half a score of them within thirty or forty yards of me, and there they would swim about, with their heads above water, like so many black dogs, evidently delighted with the sounds. For half an hour, or, indeed, for any length of time I chose, I could fix them to the spot; and when I moved along the water's edge, they would follow me with eagerness, like the dolphins who, it is said, attended Arion, as if anxious to prolong the enjoyment. I have frequently witnessed the same effect when out on a boat excursion. The sound of the flute, or of a common fife, blown by one of the boatmen, was no sooner heard, than half a dozen would start up within a few yards, wheeling round us as long as the music played, and disappearing, one after another, when it ceased."

Its sense of smell is also exceedingly acute. Old seal-hunters have assured me it can wind a man from an in-

credible distance, and that its cunning in evading the enemy is past belief. And if its taste is to be judged of by the keenness with which it relishes its food, few animals possess the sense in greater perfection. "The mouth of the greatest gourmand," says M. F. Cuvier, "never waters more at the prospect of a rich repast than that of the Seal when in expectation of its common sustenance. A copious saliva fills and flows from its mouth during deglutition, and not less so the moment the Seal perceives its prey."

In disposition it is mild and confiding, and if left unmolested, would seem rather to court the society of man than to dread his presence. Professor Trail, when speaking of an islet in the Orkneys, called the *Holm of Papa Westray*, for a long time the favourite resort of numerous Seals, which had become unusually tame, owing to the protection afforded them by the owner of the property, says: "On visiting this spot in 1833, I found the Seals exhibited their wonted confidence in those who approached their protected haunts. Several of them swam abreast of our party (six to eight in number) as we walked along the beach, and did not in general keep farther off than thirty to forty yards. When we turned, so did they; and when we re-entered our boat, they followed it in the narrow channel that divides Holm from the Island of Papa."

Again, "Whilst I and my pupils," says Mr. Dunbar, when speaking of the island in question, "were bathing, as was our custom, in the bosom of a beautiful bay, named 'Seal Bay,' from the circumstance of its being a favourite resort of theirs, numbers of those creatures invariably made their appearance, especially if the weather was calm and sunny and the sea smooth, crowding around us at the distance of a few yards, and looking as if they had some kind of notion that we were of the same species, or, at least, genus, with themselves. The gambols

in the water of my playful companions, and their noise and merriment, seemed to our imagination to excite the Seals, and to make them course round us with greater rapidity and animation. At the same time, the slightest attempt on our part to act on the offensive, by throwing at them a stone or shell, was the signal for their instantaneous disappearance; each, as it vanished, leaving the surface of the water beautifully figured with a wavy succession of concentric circles."

Its food consists for the most part of fish, mollusks, and crustaceans; as also of marine vegetables. Stones, at times of considerable size, are often found in its stomach. Their presence has caused some speculation amongst the learned. The general impression seems to be that they are intentionally swallowed by the Seal to allay the pangs of hunger, caused by long fasting. But there are those who imagine they have got accidentally down the animal's gullet when seizing its prey at the bottom.

Even in the winter time, when the sea is frozen over, the Seal caters equally as well for itself as in the open water during summer. Air being, however, needful to its existence, it must of necessity come at times to the surface to breathe. For this purpose, and independently of larger cavities, named *brunnar*, or wells, by which it ascends on the ice, either for rest or to suckle its young, it forms within its "beat," so to say, several small apertures in the ice, called *Blås-hål*, meaning breathing-holes, which enable it to respire at pleasure; and these it keeps open the whole winter. When the ice is thick, and the aperture in question fully developed, it resembles in form a beehive, and is as even and circular as if turned in a lathe. The upper part of it is only capacious enough to permit the animal to raise its muzzle, or at most its head, above the ice; whilst beneath it is sufficiently large to admit of its whole body. As the

spring advances, however, the "Blås-hål" becomes so roomy as to admit of the animal's creeping up on the ice; and of a warm day, when the sun is shining bright, it may often be seen basking in its rays at the edge of the aperture. It is the popular belief that the "Blås-hål" is made by the breath of the Seal; as, also, that let the thickness of the ice be what it may, it can form one at pleasure. But this is surely fiction. The probability is that the perforation is made by the Seal at the setting in of the winter, when the ice is quite thin, and that from the subsequent daily application of its teeth and claws, the hole is not only kept open, but finally assumes the singular shape mentioned.

The Common Seal, according to E. Rosted (a high authority in the last century as regards the Phocidæ), "pairs in September, when connexion mostly takes place on a rock, the animals in the while embracing each other with their flippers. They then congregate in considerable numbers. The males fight desperately amongst themselves, and one often sees them leap a fathom or more out of the water, and then dive head foremost, which also happens when they expect bad weather."

The female, M. Wilhelm von Wright tells us—and there is no better authority, he having long studied the habits of Seals—brings forth about midsummer, but has never more than a single young one (German and English naturalists say occasionally two), which almost immediately after birth takes to the water. The mother, with her fore paws, assists it on to some low-lying rock, where she gives it suck. Cneiff says this is only for about a week, but Ekström extends the period of lactation to the middle of August.*

* "It is a commonly received opinion," the celebrated Dr. Samuel Odman relates, "that every time the female thus gives nourishment to her offspring it increases a pound in weight."

The cubs of most species of Seals when born are covered with a sort of wool, which they retain for some time, and then gradually assume their proper hairy dress. Not so with the cub of the Common Seal; for whilst still in the mother's womb, it sheds its first woolly covering, and when ushered into the world has acquired its second or proper dress. This curious fact, of which, so far as I am aware, English naturalists make no mention, was perfectly well known a century or more ago to old seal-hunters. Rosted says, indeed, that if one closely examines the cub immediately after birth, a portion of its first woolly dress will always be seen lying loose on the hair of the second, which statement has recently been fully corroborated by M. Wilhelm von Wright, who states that "on opening females killed just prior to parturition, I have invariably found the first dress of the young one lying alongside of it in the foetus."

The Common Seal is readily domesticated, and shows much acuteness and intelligence, as must be evident to every one who has seen the animals in the Zoological Gardens. It, in short, becomes as much attached to its master as a dog, and, like that faithful creature, will caress the hand that feeds and fondles it. We read of a Seal, for instance, that was so tame as "to lie alongside of the fire amongst the dogs; bathed in the sea, and returned to the house;" and of another, a young one, of about two and a half feet in length, that "sucked one's fingers readily, and was fond of cow's milk, which it greedily drank. When thrown into the sea, it speedily returned to the shore. Its favourite position was the kitchen hearth, the stone of which was elevated about four inches above the floor, and it generally laid itself so close to the embers of a peat fire burning on the hearth, that its fur was often singed. If carried to any other part of the kitchen, it speedily found its way back to the hearth-

stone, moving by means of its fore feet, and moaning most piteously."

Again, "I have lately had occasion," says M. F. Cuvier, "to observe one of these animals which displayed much intellectual power. It did punctually what it was ordered. If desired to raise itself on its hind legs, and to take a staff in its hand, it did so. At its keeper's bidding it would likewise lie down on its right side or on its left, and would, moreover, tumble head over heels. It would give you either of its paws when desired, and would extend its sweet lips to favour you with a kiss. It complied immediately with the wishes of its owner, to whom it seemed to be particularly attached."

The Marbled Seal (*Ringlad Skäl*, or ringed seal, Sw.; *P. discolor* (Auct.); *Calocephalus discolor*, F. Cuvier; *P. annulata*, Nilss.). This species would not appear to be an inhabitant of our Skärgård, or of those in the vicinity. We are told, at least, by M. Wilhelm von Wright, that he never met with it there. But it is represented as pretty common in both the Sound and the Baltic. Though it has long been known to the northern seal-hunters as a distinct species, under the name of *Morunge*—under which designation Dr. S. Ödman gave a good description of it as far back as 1784—yet M. Cuvier was the first, I believe, to specifically distinguish it from the true *P. vitulina*, to which it bears some resemblance. Its most distinctive characteristics, as its Swedish name denotes, are the ring-like marks on its body. It is the smallest of the *Phocaceæ* inhabiting the Scandinavian waters, its length being usually from three to four feet, and never, I believe, exceeding four and a half feet.

Its habits are, in many respects, similar to those of the Common Seal. Many never congregate together, but they are generally met with either singly or in pairs. It is often seen reposing on rocks, and it keeps near to the



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THE MARBLED OR RINGED SEAL.

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shore, nearer even than the Common Seal; and although living on social terms with the latter, in whose company it is often met with, it would seem to shun the society of the Grey Seal, of which presently. The breeding habits of the Common and the Marbled Seal, however, differ very widely. The Common Seal, as shown, calves about midsummer, whereas the Marbled Seal brings forth her young in the depth of winter, and when the sea is sheeted with ice. Then, again, the cub of the Common Seal, when born, has on its second, or hairy dress, and takes to the water almost immediately afterwards; whilst the cub of the Marbled Seal, on the contrary, is, at its birth, clad in its first or woolly coat; and it is not until after acquiring its second, or hairy one, that the mother allows it to leave the ice, and follow her into the water, where it soon learns to cater for itself. It then much resembles its dam in appearance, the white rings being clearly discernible; and it keeps company with her during the greater part of the ensuing summer.

The affection displayed by this Seal to its offspring is remarkable. "When the gunner approaches it," says S. Ödman, "it is a pleasure to see how carefully she takes it in her mouth and carries it to a safer piece of ice, where she deposits it, and afterwards swims round and about the spot. Other Seals, to escape their pursuers, have always recourse to diving; but the mother when carrying her young never resorts to this expedient; nor does she ever lay the cub in the water."

The Marbled Seal is a great enemy to the fisherman, as well from chasing the fish from their usual haunts, as from destroying and plundering his nets. It is said, indeed, that in the course of a single night one of these Seals will rob a net of the whole of its contents. It is somewhat migratory in its habits, and the least shy of all the Scandinavian Seals.

Like the Common Seal, it is readily domesticated. Of one that was for some time in the Jardin de Plantes, at Paris, M. F. Cuvier makes the following observations:—“Except some monkeys, I have never known any wild animal which was more easily tamed, or attached itself more strongly. When it first came, it endeavoured to escape when I wished to touch it; but in a very few days all its apprehensions vanished. It had discovered my intentions, and rather desired my caresses than feared them. It was in the same enclosure with two small dogs, which amused themselves by frequently mounting on its back, with barking and even biting it; and although their sports and the vivacity of the attending movements were little in harmony with its own actions and habits, yet it appreciated their motives, and seemed pleased with them. It never offered any other retaliation than slight blows with its paws, the object of which was to encourage rather than repress the liberties taken. If the puppies escaped from the enclosure, the Seal endeavoured to follow them, notwithstanding the difficulty it experienced in creeping along the ground, which was covered with stones and rubbish. When the weather was cold, the three animals huddled closely and kindly together, that they might contribute to their mutual warmth.”

The Marbled Seal, Nilsson tells us, inhabits the Ladoga in Russia, and the Saimen in Finland, to which great lakes it finds its way from the Gulf of Finland; and it is a variety of this Seal, the Professor believes, that is found in the Lake Baikal, in Siberia, a specimen from whence is now in the Lund Museum. “It is remarkable, however,” he proceeds to say, that “in the last-named lake it is of a grey-brown colour; in the Ladoga, black; and in the Saimen, blackish with white rings.

From what has been stated in regard to the size and habits of the Marbled Seal, may we not infer that it is





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THE GREY SEAL.

identical with the Rough or Bristled Seal of Pennant (*P. hispida*, Schreb.; *P. foetida*, Fabr.)? "This species," Fabricius tells us, "usually measures only four feet in length, and very seldom exceeds four and a half, with a perpendicular height of ten inches. It scarcely ever frequents the high seas, but delights in retired bays, and in the neighbourhood of the ice on the coast, from which, especially when old, it very unwillingly departs. The period of gestation is eight months, and the young are brought forth in February, on the fixed ice, its proper haunt. Here it has a hole, not so much for breathing as for fishing, near which it remains solitary, rarely in pairs. It is the most incautious of the Seals, both in the water and on the ice. Whilst asleep on the wave, it is sometimes pounced on by the eagle and borne to the shore."

And may not the Marbled Seal be identical with the *Bodack*, or *Old Man*, of the Hebrides, which Mr. Wilson thus describes:—"It is much the least of the Seals with which I am acquainted, and, indeed, so small that for a long time I entertained the notion (contrary to the firm opinion of the natives) that it was the young of the Common Seal. This view, however, I consider erroneous, for they are not even the size of a Seal three months old of the common kind. Besides, they are frequently killed of this size with grey beards and decayed teeth. I have frequently noticed that when on shore, on the same rock with other Seals, they do not lie near them, but a little way apart. They are but few in number, and I cannot recollect of seeing any two of them together. They are not, however, at all so shy as the Common Seal, nor so solitary as the *Tapvaist*, or Great Seal."

The Grey Seal (*Grå Skål*, Sw.; *Phoca Grypus*, Fabr.; *Halichærus Grypus*, Nilss.) was comparatively scarce in our Skärgård, as also, as it would seem, on the western coast of Scandinavia; but in the Baltic it is by all

accounts very common ; in parts of that sea, indeed, almost the only species of the Phocaceæ. Though occasionally met with in bays and inlets, it keeps for the most part to the outermost islands of the Skärgård, or to the wide ocean beyond. It attains to a large size. M. Wilhelm von Wright assured me that he himself on one occasion shot a specimen nine feet in length, and weighing close upon five hundred pounds; and I have heard of others still larger. When fat, its blubber alone is estimated at from two hundred to two hundred and fifty pounds. Its usual colour, as its name denotes, is grey, but at times its skin has somewhat of a yellowish tinge. It is believed to attain a considerable age—say twenty years and upwards. According to Cneiff, it sheds its hair in the spring, and to facilitate the operation, rubs itself against the edge of the ice, or against a stone, should the ice have disappeared. Even should it somewhat resemble the Common Seal in size and colour, as is at times the case, it may always be readily distinguished from the latter by the greater length of its claws and the superior breadth of its muzzle.

The Grey Seal pairs about midsummer, and usually on an isolated rock far from the shore. Towards the end of February the female brings forth her young—always a single one—on the ice, and often during the most intense cold. The cub when born is, like the Marbled Seal, covered with a sort of wool, which for eight days afterwards is quite white; but subsequently, and by degrees, it puts on its proper dress. The first change observable is in the head and fore legs, which after a fortnight become blackish-grey. The cub, until some time subsequent to its birth, will not venture into the water, but remains on the ice, where, when hungry, it, by its cries, makes its wants known to its dam, who then proceeds to the spot and suckles it; and should danger

threaten her offspring, she, like the Marbled Seal, takes it in her mouth, and carries it to a place of security. Unlike the cub of the Common Seal, which, as said, is active and lively, and repairs to the water almost immediately after birth, that of the Grey Seal, in the early part of its existence, is stupid and heavy, and several weeks elapse before it is capable of following its mother and providing food for itself. But it is of quick growth, so that at the age of six months it has attained upwards of three feet in length, and its body will then yield a very considerable quantity of oil.

The Grey Seal is gregarious, and, in the Baltic at least, is often found in herds of many hundreds. But it is not supposed to live on very amicable terms with its congeners. We are told, indeed, that when these are proceeding one way the Grey Seal steers its course in an opposite direction; though this may be, as surmised, in consequence of their breeding at different seasons.

Its habits are somewhat migratory. At the approach of winter vast numbers leave their usual haunts in the Baltic, and make for the more northern parts of the Gulf of Bothnia, as some suppose because the ice is there thicker, and the chance of its breaking up therefore less; but in the spring they again return to the southward. It happens at times, however, that, owing to tempests, the ice breaks up before the cubs (numbers of these animals breed in the Gulf) are sufficiently strong to undertake the journey. In this case, if there be many congregated on the same spot, each individual is desirous, for its greater security, to mount on to the largest of the "floes" in sight; but there being seldom room for the whole company, a terrible battle usually ensues; during which they with claws and teeth cruelly maltreat each other, and in the while snarl and growl like so many dogs. The noise and uproar on such occasions are very great indeed, and if

it be calm and the wind favourable, may be heard, it is said, at the distance of seven (English) miles. The fearful howlings of wolves that have been wandering in search of prey, but who, owing to the disruption of the ice, now find themselves on an isolated floe, driven hither and thither by the winds and waves, not unfrequently add to the horrid concert.

It is said that in the spring the Grey Seal does not delay its departure from the more northern parts of the gulf, even if the ice be not altogether broken up, but traverses its surface until it meets with open water, and that, too, in a perfectly straight line, neither islands nor headlands causing it to deviate in the slightest degree from its track. When such a seal, called a *Gångare*, or Wanderer, is met with by the hunter, as not unfrequently happens, it usually pays the forfeit of its life. We read, for instance, in a Swedish newspaper, under date of the 3rd May, 1858, that "two pilots, who had agreed to celebrate the Easter holidays together, set off homewards on the ice. Before starting, they had provided themselves with a sufficiency of drinkables and eatables for the journey, and amongst the rest with a *kalf-bog*, or shoulder of veal, which one of them carried in his hand. Arrived at a neck of land jutting out into the gulf, which it was necessary for them to cross, they observed a large Seal slowly making its way on the ice, and directly against the wind—as is customary with these animals—which they quickly despatched with the 'kalf-bog.' The poor creature was both wearied and frozen, and it was believed had thus progressed on the ice for very many miles, as no open water could be observed by the men for a very long distance."

That Seals should thus make extended journeys on the ice one can partly understand, because the comparative smoothness of its surface must necessarily render the task somewhat easy; but that they should wander far and wide

on *terra firma*, traversing in their course forests, and all kinds of broken ground, as what follows will show is at times the case, one has difficulty in comprehending. "During the winter of 1829," so we read in the *Jägare Förbundets Tidskrift* of 1832—and the truth of the story is certified by the signature of several most respectable individuals—"a young Grey Seal took to the land from the Skärgård, near the village of Grönö, and, striking into the forest in a southerly direction, passed, in its way, the hamlets of Sund and Wahnäs, the church and iron-forge of Leufsta, and the hamlets of Elinge and Fåhlandbo. Near the last-named place it met with a small river, then hard frozen over. This it followed for a while, but was unable to find an opening in the ice. It then took to the forest in a south-westerly direction to the Flo lakes, in the parish of Tegelsmora, where it was also unsuccessful in obtaining access to water. Hence it proceeded south-east, crossing in its progress the Lake Wika, in the parish of Film, on the opposite side of which it again entered the forest, and finally reached the hamlet of Andersbo, situated about three (English) miles from Dannemora (the celebrated iron-mines), where it was overtaken by its pursuers and killed. The peregrinations of this Seal are believed to have occupied nearly a week, it being, as is imagined, without nourishment of any kind; and during which period it must have gone over at least thirty (English) miles of country. The ground, however, it should be remarked, was then covered with a foot and a half, or more, of newly-fallen snow, which, no doubt, very greatly facilitated the animal's movements."

CHAPTER XXVII.

The Harp or Greenland Seal.—How hunted.—The Clapper Hunt.—
The Bearded or Great Seal.—Its Habitat.—The Hooded or Crested
Seal.—Its Habits.—How Utilized.

THE Harp or Greenland Seal (*Grönlands Skäl*, Sw.; *P. Grænländica*, Müll.; *P. dorsata*, Pall.). This species, though included in their Fauna, seems little known to Scandinavian zoologists. There is, however, a specimen of it in the Stockholm Museum that was captured on the coast of Finmark; and as Leem, in his description of that province, speaks of it by more than one Lappish name—applicable, probably, to its several ages—it may with safety be inferred that formerly, at least, it was no stranger there. The learned say, moreover, that, as the young of the Greenland Seal are frequently known to make long excursions from the Arctic regions, their proper home, and are occasionally met with as far south as Great Britain, the presumption therefore is, that they not unfrequently visit the Scandinavian coasts also; but, from bearing no very distinguishing



M. KIRBY, del.

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THE GREENLAND SEAL.



mark at that very early age, they, in consequence, escape observation.

Crantz, the missionary, tells us that this Seal, when full grown, is almost wholly of a light grey colour, with a black marking on the back like two half-moons. He states, further, that its appearance varies greatly, according to age. Soon after birth it is quite white and woolly; in the first year cream-coloured; in the second, grey; in the third, marked with stripes; in the fourth, spotted; and in the fifth it wears its half-moons as the sign of its maturity; as also that it attains a length of nearly nine feet. The oil extracted from this Seal is said to be in greater quantities than from any other pertaining to the northern regions.

"In Greenland," says Fabricius, "this species of Seal occurs in great numbers in the deep bays and mouths of rivers. Twice a year the herds leave the coast; first in March, returning in May; and again in June, reappearing in September. They bring forth their young in spring, having one, or rarely two, at a birth, which they suckle on fragments of ice far from the shore. They never ascend the fixed ice, but live and sleep near the floating islands in vast herds. Among these they are sometimes seen swimming in great numbers, having one for their leader,* who seems to act as sentinel for the security of the whole. They devour all the more common kind of fish, having a preference for the Arctic salmon, and not refusing shell-fish. When engaged in feeding, and when one comes to the surface to breathe, he raises his head

* "During their migrations," says S. Ödman, when speaking of Iceland and of the Wade Seal, "the herd swims in the form of a triangle, the apex of which is led by an individual who therefore bears the name of 'Seal King;' and the hunter marks well the course that this their leader takes when the troop is separated, because the rest of the Seals always collect about him."

only above water, and, without changing his place, quickly dives down again. They seldom appear solitary upon the wave, principally swimming and fishing underneath, occasionally raising their heads when devouring larger prey. They swim in a variety of ways; sometimes on their backs, often on their sides, occasionally whirling about as if to amuse themselves. They frequently sleep on the surface of the water, and upon the whole are regarded as incautious, especially when on the ice."

Crantz, after telling us that the Seal in question "is careless and stupid, and the only one which the Greenlander, when quite alone, will venture to attack," goes on to say:—"This he does in his *Kajak*, which is shaped like a weaver's shuttle. Thus equipped, away he goes with as high a conceit of himself as any Mr. Captain in his ship. When he espies the Seal, he tries to surprise it unawares, with the wind and sun at his back, that he may not be heard or seen. He makes hastily, but softly towards it, till he reaches within four or six fathoms. He then takes hold of the oar in his left hand, and the harpoon with his right, and so away he throws it at the Seal. The moment the instrument is fixed, the Greenlander must throw the attached buoy into the water on the same side that the Seal dives, for that he does instantly like a dart. The Seal often draws the buoy along with it under water, and it so wearies itself, that it must come up again in about a quarter of an hour, to take breath. The Greenlander now hastes to smite it with his long lance; thus he keeps darting at it till it is quite spent, when he kills it outright with his small lance; lastly, he blows it up like a bladder, that it may swim the more easily after his '*Kajak*.' In this exercise he is exposed to the most and greatest danger of his life; for if the line should entangle itself, as it easily may in its sudden and violent motion, or if it should catch hold of the '*Kajak*,' or of an oar,

or the hand, or even the neck, as it sometimes does in windy weather, or if the Seal should turn suddenly to the other side of the boat, it cannot be otherwise than the 'Kajak' must be overturned, and drawn down under water. On such desperate occasions the poor Greenlanders stand in need of all his art to disentangle himself from the string, and raise himself up from under water several times successively. Nay, when he imagines himself to be out of all danger, and comes too near the dying Seal, it may still attack him; and a female Seal that has young, instead of flying the field, will sometimes fly at its pursuer in the most vehement rage, and do him a mischief or bite a hole in his 'Kajak,' that he must sink."

The Greenlanders, Crantz informs us further, also capture this, as well as other species of Seal, by what is called the Clapper Hunt, which is prosecuted by numbers in concert. "As the natives are ever on the watch, so soon as they discover a herd driven, usually by stormy weather, into some creek or inlet, they endeavour to cut off their retreat, and frighten them under water by shouting, clapping, and throwing stones. As, however, they must speedily come to the surface to respire, they persecute them again till they are tired, and at last are obliged to stay so long above water, that they are surrounded and killed by long and short lances. During this hunt we have a fine opportunity of seeing the agility of the Greenlanders, or, if I may call it so, their hussar manœuvres. When the Seal rises out of the water, they all fly upon him as if they had wings, with a desperate noise; the poor creature is forced to dive again directly, and the moment he does, they disperse again as fast as they came, and every one gives heed to his post, to see where it will start up again, which is an uncertain thing, and is commonly three-fourths of a mile from the former spot. If the Seal has a good broad water, three or four leagues

each way, it can keep the sportsmen in play a couple of hours before it is so spent that they can surround and kill it. If in its fright it retreats to land, it is welcomed with sticks and stones by the women and children, and presently pursued by the men in the rear."

The Greenland Seal has many enemies besides man. Among the rest, the Polar Bear, which, as seen in the annexed drawing, often preys on such of them that it finds reposing on an ice-field.

In the ocean itself, again, the more formidable species of whales are perpetually making bloody and successful war upon this Seal. "These whale-hunts," Rosted tells us, "are frequently taken advantage of by the Greenlanders, and when the Seals are hemmed in by the whales, they join in the pursuit, and come in for a large share of the booty." Then, again, the Grampus frequently destroys the Greenland Seal. It is, indeed, said, that if the monster sees one of these animals basking on a small "floe," he will either use his best endeavours to overturn the latter, or, with his powerful fins, beat the creature from off its resting-place into the water, where it becomes an easy prey to the pursuer.

The Bearded or Great Seal (*Haf-Ert Skäl*, Sw.; *P. barbata*, Fabr.) has also found a place in the Scandinavian Fauna; partly, as it would seem, on the authority of Rosted, who represents it as making its appearance at times on the north-western coast of Norway, and partly because the people of Helgeland say that in the winter a large Seal, resembling an old man, with a grey bushy beard, is occasionally visible thereabouts. A specimen (a young one) of what is believed to be this species is now in the Museum at Lund, and it is from this specimen, as I have reason to believe, that the annexed drawing was taken by the late M. Körner.

This species is the largest of the northern Seals,



M. Körner, del.

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WHITE BEAR AND GREENLAND SEAL.







M. Köpcke, del.

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GREAT OR BEARDED SEAL.

attaining, Fabricius tells us, to ten feet in length, and the young of the second year to six and a half feet. Rosted describes it as being as large as an ox, and says that when the animal is full grown and fat its blubber alone weighs from seven to nine "vog," that is, if I mistake not, from 270 to 350 pounds English.

According to Fabricius, the head of this Seal is long, and its forehead peculiarly prominent; the muzzle very large, and the lips loose; the hairs of its whiskers long, numerous, horny, flexible, smooth, white, and curled at the point; the external opening of the ear larger than in most other species, but without any auricle; eyes large, and the pupil round and black, iris brown. The fore paw is more free than in the Common Seal; the shape also is peculiar, approximating somewhat to that of the human hand, having the middle finger the longest, and the thumb nearly as short as the little finger; the body long and robust, and the back somewhat elevated: the skin is thick. The hide of the young is supplied with soft hairs, somewhat woolly underneath, which are deciduous, and but thinly scattered over the adult. The colour varies according to the age. The young have a dusky colour, and are white underneath; the old acquire a deep dark colour—Crantz says black, and Baron Cuvier "grey, sometimes brown above, with a longitudinal streak of black, forming a cross on the chautrin."

The Bearded Seal, Fabricius further tells us, frequents the high seas round Greenland, especially delighting in the floating fragments of ice; that it resorts to land principally in the spring, and is then found amongst the retired islets. It is said to keep much to the deeper parts of the ocean, and to be never met with in herds, but to wander about in pairs or alone. When in the water, it is easily recognized from its head and back protruding high above the surface; and from its numerous strong

whiskers and glaring eyes, it has at such times a very wild and savage look. It is said to breed in February or March, and that the female has never more than a single calf at a time. This, at its birth, as is the case in most other species of Seals, has a wool-like covering, which is described by Thienemann as of a yellowish colour, but by Fabricius as blue-grey, and about the stomach as white (*lividus ventre albo*).

Though the Bearded Seal is represented as a timid and cautious animal, it is nevertheless very curious, and often thereby gets itself into difficulties, as, for the purpose of examining the boat of the hunter, it will approach so near it as to be easily reached with the gun or even the harpoon. It is highly esteemed by the Greenlander; for though it does not yield much oil, yet its lard is looked on by him as most delicious. It was from the skin of this Seal and the Walrus, we are told, that the ancient Scandinavians formed their ropes and cables, called by them *svardr* and *svardreip*, which were so strong that the united efforts of sixty men were unable to break them.

The Hooded or Crested Seal (*Blås-Skäl*, or bladder-seal; *Klappmytsa*, Sw.; *Phoca cristata*, Gmel.; *Cystophora cristata*, Erxl.) is likewise an occasional visitor to the more northern of the Scandinavian coasts, where it commonly goes by the name of *Kik-Nebb*, or *Kabbuts-Kobbe*, meaning the capped seal; but by the Lapps is called *Arjor*, or *Fatte-Nuorjo*, that is the stomach-seal, because those people liken its head and muzzle to the stomach of a rein-deer. On the coast of Nordland (Norway) its singular look has given rise, amongst the fishermen and others, to many superstitious and fabulous stories. *Klakkekallen*, the name by which he is there known, appears, according to these men, in the form of a large and hairy black man, with fingers so grown together as to resemble fins, and having a cap on his head. He is rarely seen, they say, but affirm



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THE HOODED OR CRESTED SEAL.

W. Körner, del.



that during tempests he is sometimes driven on the rocks and perishes. The account given by the fishermen to Bishop Gunnerus, when on a visitation to those parts in 1770, is somewhat similar. They described "Klakkekallen" to be as large as an ox, with long brown hair on the body, two hands with the fingers united, very short arms, and wearing a cap. He was occasionally seen, they said, standing bolt upright in the sea, and with his face towards the wind.

Once in a time this Seal would seem to have made its appearance on the more southern coasts of the Peninsula, for we read in "Holberg's History of Denmark" that "in December, 1549, there was captured in the Sound, near the town of Malmö, a fish of unheard-of size and most remarkable shape. It had a head like unto that of a man, and on the top of it a crown resembling a monk's cowl. The King, Christian III., caused this fish to be preserved, and sent a drawing of it to the Emperor Charles in Spain."

The Hooded Seal, according to Sir Charles Giesecke—and his statement is corroborated by Scoresby—attains a length of from ten to twelve feet, but Fabricius says only nine. The Arctic regions are its proper home, more especially the coasts of Greenland and Spitzbergen. It also visits Iceland. Fabricius tells us "it is only found on the southern parts of Greenland, and delights in the high seas, visiting the land chiefly in April, May, and June." According to Crantz, "they are found mostly on great ice-islands, where they sleep in an unguarded manner. They are found in great numbers in Davis Straits, where they regularly make two voyages a year, and remain from the month of September to the month of March. They then depart to bring forth their young and return with them in the month of June, when they

are very lean and exhausted. They set off a second time in July, and proceed to the north, where they probably find plenty of nourishment, as they return in excellent condition in September. They also frequent the northern shores of America."

According to Fabricius, the Hooded Seal barks and whines like a dog, is polygamous, and during the pairing season the males fight desperately amongst themselves, inflicting deep wounds with both claws and teeth. The female brings forth on the ice, and, as it is believed, in the end of April or beginning of May.

This is one of the Seals, I believe, which, when fish fail the whalers, is most sought after by them, and herds of many hundreds, and it may be thousands, are often seen congregated on the ice, when the sailors slaughter vast numbers with heavy bludgeons, shod with iron. Usually they make little or no resistance, being bewildered by the sudden onset; "but at times, on being wounded, the animal grows fierce and turns on its assailant, and being defended by its hood from the stunning effects of a blow on the snout, will inflict severe wounds on the person by whom it is attacked."

The Hooded Seal is greatly prized by the natives. The skins of the young are converted into dresses for the women; their great boats and their houses are covered with those of the aged. The teeth are used to head their hunting-spears, and the stomachs are converted into fishing buoys.

CHAPTER XXVIII.

Seal-hunting.—The Skäl-Sten.—A Drowsy Phoca.—The Stånd-Nät.—The Ligg-Nät.—The Skäl-Kista.—The Seal-Hook.—The Skräckta.—The Skäl-Jern.—Persson's Adventures.—Sealing-Expeditions by Water.—Sailing on the Ice.—The Seal-Camp.—Attacking it.—Cruel Expedient.—Sealing-Expeditions by Land.—Perils attending Seal-hunting.—Utility of the Seal.—Its Medical Properties.

WHEN Christianity was first preached to the Esquimaux by the missionaries, who depicted to them in glowing terms the pleasures and delights of the regions above, men, women, and children, we are told, started to their feet, exclaiming, "Tell us, are Seals plentiful in Heaven?" That the thoughts of this simple-minded people should be wholly engrossed on Seals is, however, little to be wondered at, as on these animals their very existence almost entirely depends. In making this quotation, however, I do not mean to imply that the Scandinavians set so high a value on the Phoca as the Greenlanders; but for commercial and other purposes it is still held in considerable estimation, and various expedients are resorted to by them to effect its capture.

Many fall to the gun during both winter and summer; and for the most part to rifles of large calibre, say

carrying two-ounce balls, and weighing from twenty to twenty-five pounds; with one at least of which, as also a second rifle of ten to twelve pounds weight, the hunter is usually provided. Not a few Seals, however, are killed to the common shot-gun charged with slugs, which, if the animal be young and the distance short, is thought to be equally efficacious. Occasionally they are killed in the open water, when following in the wake of a boat;* but as little more than the head of the animal is usually visible, and then only for a very short time, the chances of hitting, especially if the sea be rough, are somewhat small.



THE SKÄL-STEN.

For the most part, however, Seals are shot whilst reposing on the so-called "*Skäl-Sten*," or seal-stone, as depicted above; that is, a small isolated rock, rising but

* It is said elsewhere that if one whistles when Seals are in the near vicinity of the boat, they may be induced to approach it. The like effect, Samuel Ödman tells us, is produced should the craft be painted red.

little above the surface of the water, to which these animals are in the habit of resorting, more especially after storms, and when wearied of buffeting with the waves. On this stone the Seal usually passes the night, creeping on to it about sunset, and remaining there until some time after daylight, when it again betakes itself to the sea in search of food.

Owing, in part, probably, to the persecution to which the Seal is subjected on the Scandinavian coast, it is usually exceedingly shy and circumspect. In mounting the "Skäl-Sten,"* therefore, it is accustomed, with its face turned towards the land, and with its body partially out of the water, to reconnoitre the vicinity; and when it does ascend the stone, it is usually on the shore side, so that, without turning round, which, from the conformation of the animal's body, would be a somewhat tedious operation, it may be in readiness to plunge into the open sea at a moment's notice.

The most favourable hours for shooting the Seal on the "Skäl-Sten" are before sunrise, about noon, and towards evening. The grey of the morning is perhaps the best, for the animal then seems sluggish and loth to leave its quarters. Should danger threaten, it presents a very singular appearance, for with head erect it peers about in all directions, and, in the gloom, looks for all the world like a huge nondescript bird. But it is not always easy to get within shot; and great management is requisite on the part of the gunner in making his approaches, almost as great, in short, as when one is stalking Red Deer or Rein-deer. Embarked in his little skiff, the man must take advantage of neighbouring rocks, islets, or other cover, and

* These "Skäl Stenar," which are well known to the fishermen and others on the coast, were formerly protected by law, "to give encouragement to a commerce beneficial to the inhabitants of the Skärgård."

should the sun be shining—the beams of which dazzle the eyes of the Seal—he must, if possible, have his back to it.* But of all things he should be minded to keep under the lee of the animal, for if it once get scent of him—and its sense of smelling is by all accounts wonderful—it will be off at once; and as it always lies nigh to the edge of the “Skäl-Sten,” a single movement of its flippers carries it into the water.

Should the hunter succeed in getting within gunshot of the Seal, and that from its position the choice rests with himself, he aims either at the head, the neck, or the breast, which are said to be its most vulnerable parts. But unless the animal be killed outright, as not often happens, it for the most part flounders into the sea, and is generally lost to the man; for unless very fat, which in the summer time is rarely the case, it for the most part sinks at once to the bottom, and if the water thereabouts be deep, serves only as food for fishes. To guard, as far as may be, against this contingency, the hunter forthwith anchors the small buoy with which he is always provided, near the spot (usually indicated by its blood)†

* The hunter, to conceal his movements, not unfrequently erects a sort of “screen” out of an old sail, or what not, on a rock, or islet, near the “Skäl-Sten,” and when the Seal has crept on to the latter, he, taking advantage of the “screen,” is enabled, without much difficulty, to get within range of the animal.

† Blomqvist, an old and successful seal-hunter on the west coast of Sweden, tells me that even after it has disappeared (provided the depth is not greater than three or four fathoms) a small quiet-cent circle, caused by the oily matter which has exuded from the animal’s body, is always observable immediately above the spot where the carcase lies; and that should this little circle be carried away by the wind and waves, a similar one will presently supply its place. Blomqvist tells me further, that if a Seal has, the instant after inhaling, received its death-wound, when its lungs in consequence are full of air, it will not sink for some little time afterwards; but if, on the contrary, just subsequent to exhaling, it goes down almost

where the animal went down. This point gained, he has recourse to his *Skäl-kikare*,* or seal telescope, and narrowly scans the bottom, which, unless the water be thick, is clearly discernible at a depth of from six to eight fathoms; and when he has descried the object of his search—a matter of the less difficulty, as the belly of the seal, which is of a light colour, usually lies uppermost when the animal is dead—he, by means of a grappling iron with which he is likewise equipped, forthwith hauls it into his boat.

Sometimes, M. Holmers tell us, the seal is shot when reposing on the rocks during the night-time, for it is then less afraid, and will allow a person to approach very close. To enable the hunter to take a better aim, however, he runs a line with a piece of chalk (a thin slip of wood, nine inches in length, having been previously affixed to the fore part of the barrel) from “breech” to “sight.” At times, moreover, as we learn from the same writer, the Seal is lured within gun-shot by means of “*Läckning*,” or imitating its call-note. This plan succeeds best during the pairing season. The hunter proceeds to the part of the *Skärgård* where these animals are known to con-

at once. Hence it is an object to fire at the animal the moment its head appears above the surface.

* Of these implements there are two kinds. One is trumpet-shaped, and somewhat resembles those for reconnoitring oyster-beds. It is from two to six feet in length, according to fancy; the smaller end, or that which one looks through, is an inch or so in diameter, and open; but the lower, which is glazed, and to which a sufficient weight is attached for sinking the implement in the water up to the middle, is some seven or eight inches wide. The other kind of “*Skäl-Kikare*” consists of a wooden frame—square or circular, is immaterial—of a foot or so in depth, and of a capacity sufficient to admit the head wholly or in part. The upper portion is of course open; but the lower, or that inserted in the water, is provided with a piece of glass. A common water bucket, glazed at the bottom, will in act answer the purpose perfectly well.

gregate, and where their disagreeable cries, resembling somewhat the grunt of a pig, may be heard in every direction. Having ascertained their whereabouts, he rows to the spot and conceals himself behind a stone or otherwise. Here for a time he remains silent, but after the lapse of an hour or so, commences to "call," when the animals, which, alarmed at his first appearance, had retreated, begin to return and to collect about him. The work of destruction now commences, and as the seals swim to and fro near his ambush, with their heads well out of the water, an expert shot may often kill several before the rest finally disperse. The weather ought to be pretty calm, otherwise the seals will not hear his "Läck;" and the wind should be from the land, for, if in the opposite direction, they would be instantly aware of his presence, and make a precipitate retreat.

Once in a time, when the sea is quite calm, the Seal is met with fast asleep on the surface in a bolt-upright position, and with the half of its body out of the water. These drowsy gentlemen have occasionally given rise to scenes of a rather ludicrous character. "A tenant of mine," says M. Holmers, when speaking of the Gulf of Bothnia, "started early one fine December morning, in a small skiff, in search of seals. A huge fellow was soon observed by him lying motionless on the water. He advanced silently and cautiously towards it, hugging himself in the belief that, under the favourable circumstances, he would soon be enabled to claim it as his own. When, however, he had approached near the animal, which exhibited no signs whatever of life, he surmised naturally enough that it must have been wounded shortly before by a brother sportsman, and was then quite dead. Congratulating himself on his good fortune in thus, without trouble or expenditure of ammunition, obtaining possession of so rich a prize, he, without further ceremony, rowed right

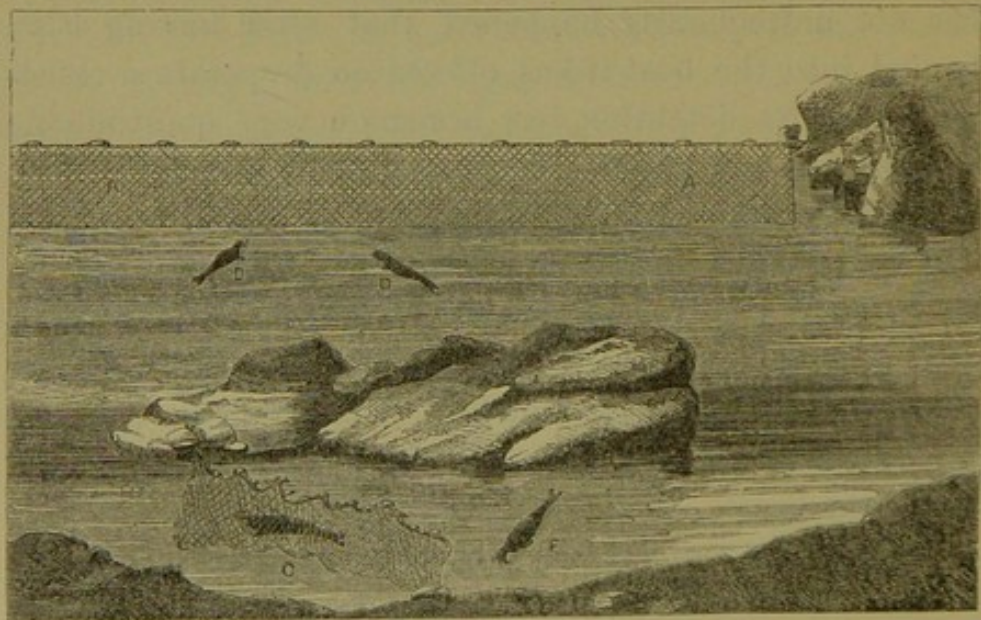
up to the beast and seized it by the fore paw, with the intention of first turning it on its back and then hauling it into the boat. In this matter, however, he calculated without ‘mine host,’ for the Phoca, whose immobility had simply arisen from a deep slumber, but from which this unceremonious treatment had aroused it, made so desperate a plunge downwards, as not only to free itself from the imagined captor, but to deluge him and all his pertainings with water. The man was not a little crest-fallen, whilst his vexation was the greater, because he at the time had two loaded guns in the boat, and, had he taken common precautions, he might not only have avoided the mortification of being outwitted, but would to a certainty have bagged the animal.”

The seal bites exceedingly hard, and unless you are quite certain that life is extinct, great caution is needful in handling it. Even when apparently defunct it will at times revive and cause the hunter no little trouble. It has not unfrequently happened that after having been hauled into the boat it has offered so desperate a resistance that its detention has become a very questionable matter. A well-known seal-hunter on the western coast of Sweden, named Jacob Johanson, a fine, determined looking fellow, assured me, indeed, that on one occasion he himself had a very severe hand-to-hand encounter with a huge grey seal, and that it was only by having recourse to *his own teeth* (his knife not being at hand at the moment) that he was enabled to overcome and retain the beast.

Samuel Ödman tells a somewhat similar story. “A peasant in my neighbourhood had some years ago,” he says, “hauled a large wounded seal into his boat, but after a time the animal came to itself, and commenced attacking him. The man defended himself with the oars, with which he dealt it many severe blows, though with so

little effect, that the seal not only made itself master of them, but compelled him to flee for shelter to the fore part of the craft; and even this would have proved an insufficient shelter had not assistance been at hand.

Seals, even if unwounded, would appear at times to be dangerous. "There are many rocks in the Skärgård," writes Carl Knutberg, under date of 1755, "on which these animals may be seen daily, occasionally as many as fifteen together, where they fight desperately amongst themselves. It is not advisable presumptuously to attack such a troop, amongst which may be some of the size of a large horse. It is said that some years ago two men rowed to a *Skäl-Berg*, or seal rock, situated near to Hernösand (Gulf of Bothnia), for the purpose of shooting seals, but they were so set upon, whilst in the boat, by these animals that even with the aid of a spear and an axe they had difficulty in escaping with life."



THE STAND-NÄT.

Seals, more especially the Common and the Marbled Seal, are also frequently taken in nets. That in most

general use is called the *Stand-Nät*, or fixed net, a kind of flue, the nature of which will be readily understood by the above drawing, taken from M. Rosted. A A represents the net when set; DD two young seals making their approaches towards it, and who, the worthy parson naïvely remarks, "if they do not turn back, will presently be made prisoners;" C a seal already in the toils; and F another seal who, seeing his comrade "in a difficulty," is about to beat a hurried retreat. This net, made of stout twine, is from ten to fifteen fathoms in length, two to three fathoms in depth, according to the locality and depth of the water, with meshes five to six inches square, just sufficient, in short, to admit the head of the seal. It has an upper *Telning*, or cork line, to which, however, in lieu of corks, is attached a number of *Flakor*, or oval-shaped pieces of *charred* wood, each about twelve inches in length, and two in thickness.* But it has no lower "Telning," or head-line, partly because, if there were, the net, during the struggles of the seal, would be apt to fasten to the bottom, and partly because it would be a hindrance to the proper entanglement of the animal in the meshes.

The "Stand-Nät" (or it may be nets, several being occasionally fastened together) is most commonly set near a "Skäl-Sten," though at others across a narrow strait, leading to a bay or inlet of the sea that is resorted to by seals. The way of setting it varies. Generally, however, its innermost end is secured by means of a stout rope to a heavy stone, or to sea-weed, on the "Skäl-Sten" itself, whilst its outermost end has no other fastening than

* In lieu of these, people at times substitute straight wooden pins, about a foot in length, which are secured to the "Telning" by the middle only; and as soon, therefore, as the net is disturbed by the seal, these pins fasten in the meshes, and the animal, in consequence, becomes so wrapped up, that extraction becomes a matter of greatly increased difficulty.

a small stone of just sufficient weight to keep it in its place, that is, sunk in the deep water beyond. At other times the reverse is the case. The inner end of the net is attached to the "Skäl-Sten" by a mere thread, whilst its outer extremity is secured to the bottom by a heavy stone. In either case the inner or outer end of the net is left in a measure free, so that when the seal strikes it, the meshes on all sides may more readily collapse about the animal, and the more violently it struggles the more inextricably will it be fixed in the toils.

The "Stånd-Nät" is usually set in the evening, and taken up again at a pretty early hour on the following day. If placed near a "Skäl-Sten" it should be to leeward, because the seal usually mounts the stone on the weather-side at night, and in the morning takes to the water in the opposite direction. The chances, therefore, are that in making its plunge into the sea, more especially if its movements be quickened by a blank shot, which is often fired for the purpose, it will be made captive.

It occasionally happens that the seal is taken in the net of an evening when about to mount the "Skäl-Sten," as prior to so doing it is in the frequent habit of making several circuits round the stone for the purpose of ascertaining if all be safe, and should it not observe the net, it runs its head into one or other of the meshes.

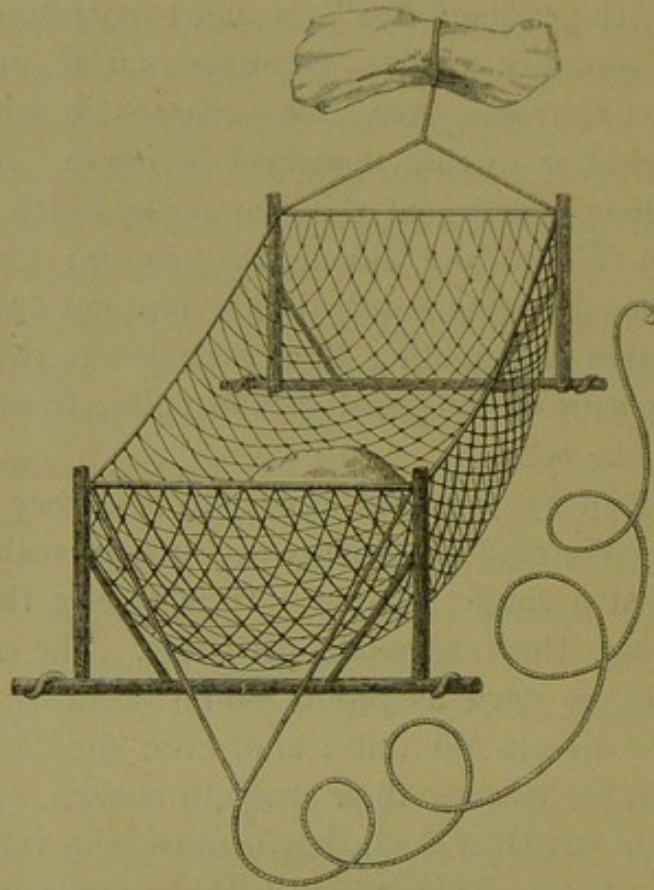
The "Stånd-Nät," it should be observed, ought not to be set unless the weather be fine, for if the wind and waves beat on the rock, seals will not take up their night quarters there. To lure these animals into the net, various expedients are resorted to. Bright lights, as is known, greatly excite their curiosity. A fire is therefore made on the shore, or on a rock, in rear of the "Skäl-Sten," which has the effect of attracting them to the spot; and as a further inducement, their olfactory nerves are tickled

by the fumes of bones and other strong-scented substances, which are cast into the flames. At other times *Kutar*, or seal-cubs, are tied to a line within the net, the cries of which often attract old ones.

Though the "Stånd-Nät" is most commonly used during the summer months, recourse is had to it also when the sea is frozen over. The manner in which it is then set is similar to that described by me in "Northern Sports," when speaking of the manner in which fish are captured in Wermeland during the winter; viz., small circular holes at stated intervals are first cut in the ice, and afterwards the hauling lines attached to the net are passed, by means of long and forked poles, from the one aperture to the other.

The "Stånd-Nät" would appear to be a very destructive engine. We read of as many as fourteen seals having been taken at a single "haul." It is chiefly the young ones, however, that are made prisoners. The old ones, let the night be dark as pitch, would seem by scent or otherwise to discern the toils; and, even should they get entangled in the meshes, their strength is such, especially in the case of the Grey Seal, that it must be a very strong net to retain them within its folds. Ödman tells us, indeed, that they at times carry away the net altogether. "A man of my acquaintance," he goes on to say, "related to me that he once captured an old seal with portions of ten different nets attached to its body, which was, however, finally secured in the eleventh. On flaying the animal, a part of one of the nets was found to have grown into the skin, and a considerable portion of the others were in a state of decomposition." When within the folds of the net, the struggles of the seal are most violent, and as it constantly endeavours to "go ahead," never to retrace its course, it soon becomes so entangled that the captor has difficulty in disengaging it. What with the animal's great

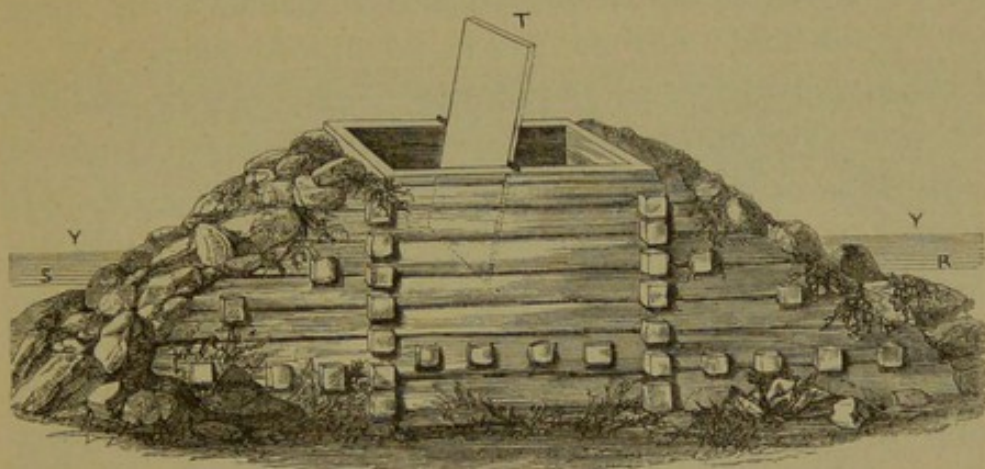
exertions, however, in its endeavours to escape, and the want of air, it soon becomes exhausted, and when taken out of the water is often found quite dead.



THE LIGG-NÄT.

Another kind of net for the capture of seals is called the *Ligg-Nät*, which is thus described by Linnæus:—"It is attached to two wooden frames, one at each end, which are secured to the bottom of a 'Skäl-Sten.' To the upper bar of the innermost of the frames is fastened a long line reaching to the shore. When one pulls at this line, the net is brought to the surface, but when the line is slackened, it sinks to the bottom. The net, whilst there, is altogether unseen, and the seal, unsuspecting of danger, creeps up, therefore, on to

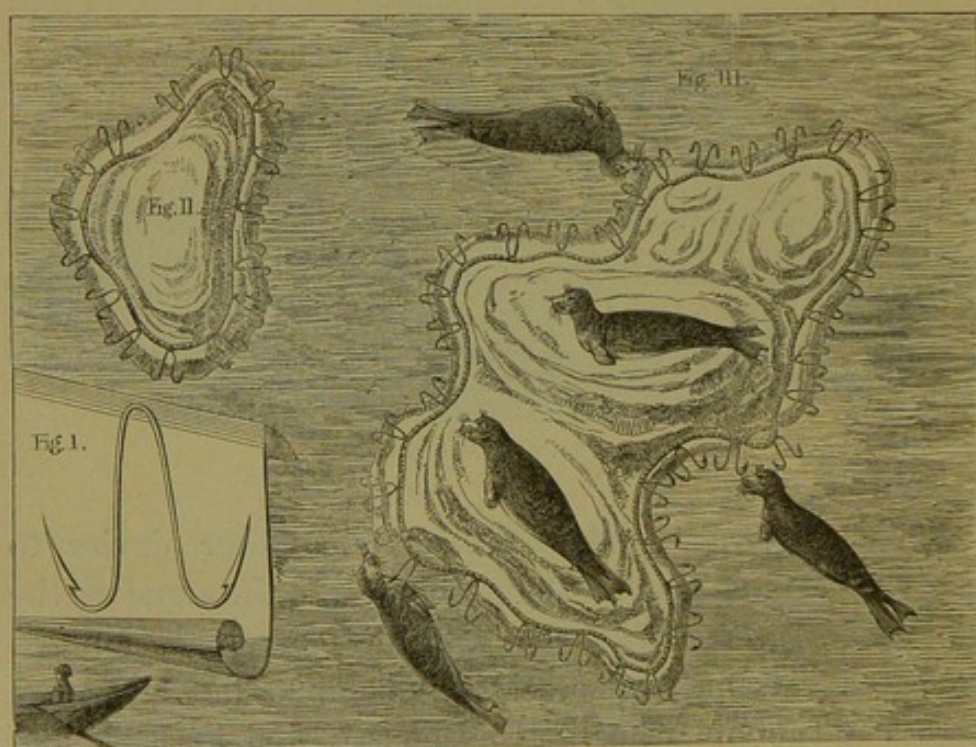
the "Skäl-Sten." When the peasant sees that it is asleep, he pulls gently at the line, which brings the net to the surface, and surrounds the stone in the manner of a quadrangular fence. The animal, on awakening from its slumbers, casts itself headlong into the water, but cannot extricate itself from the toils before the man, with his harpoon or other implement of destruction, reaches the spot and puts an end to its existence."



THE SKÄL-KISTA.

The *Skäl-Kista*, or seal-box, is another device to capture these animals. In principle it is the same as the so-called *Watten-Giller*, the expedient commonly adopted to catch rats and mice, viz., a "balance board," placed across a tub of water. It is constructed of logs, and square in form, as seen in the above diagram, and is sunk in the water up to the letter Y. Large stones are afterwards heaped up around and about it, especially at both ends, so as to make it resemble a "Skäl-Sten" as much as possible. The trap-door T consists of an oblong flat stone, or of plank ends, and swings on an iron bar, the extremities of which rest on the side-walls of the "Skäl-Kista" itself. To prevent the trap-door T from falling too low there is a spring or stop, so that on the pressure ceasing it at once resumes its horizontal position. This device, as

will be readily understood, is covered with sea-weed, and when, therefore, the seal, tired of contending with the waves, seeks in all innocence to rest its wearied limbs on what it takes to be a rock, the trap-door T swings on its axle, and the yawning gulf beneath presently receives the poor animal; and as the aperture through which it falls is at once closed again, the trap is in readiness to receive others of its comrades who may allow themselves to be similarly beguiled.

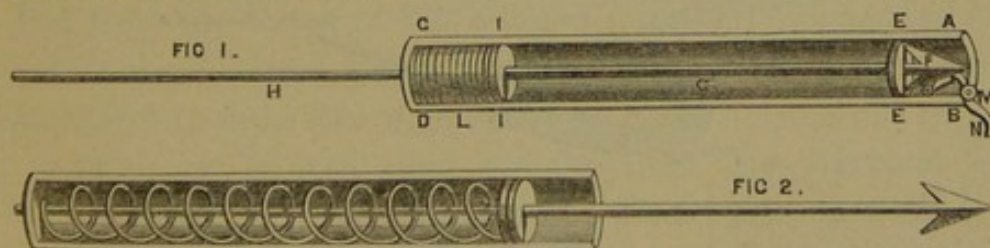


THE SEAL-HOOK.

In certain parts of the Norwegian coast, and probably elsewhere in Scandinavia, seals are captured by means of barbed hooks, in the manner depicted above. Fig. 1 shows the hook used for the purpose. These, Rosted tells us, should be made of tough iron or steel of at least the thickness of one's finger, with shanks some eighteen inches in length. They must necessarily be large to penetrate the *flesh*, as, if only lodged in the skin or

blubber, they would be apt, during the struggles of the animals, to lose their hold. Fig. 2, the "Skäl-Sten," with the hooks duly arranged about it. The horse-hair or hempen line, to which they are fastened by a half-hitch, or otherwise, ought to be pretty stout, and of sufficient length to encompass the stone, to which both of its ends are secured. Fig. 3, a "Skäl-Sten" with several seals upon it, some reposing in imagined security, whilst others again are evidently in considerable tribulation.

The hooks should be placed on the "Skäl-Sten," we are told, at low water, though only in moderate weather; for if it be stormy, seals do not willingly repair to the stone. The latter ought to be reconnoitred with a telescope at half ebb on the following tide. If any of these animals are then observed to be lying on it, a blank shot (when the boat has approached sufficiently near) should be discharged, which will at once arouse them from their slumbers, and cause them to plunge headlong into the sea, in their progress to which one or more of the company are commonly "brought up by the run;" for though, when ascending the "Skäl-Sten," they are not in the slightest degree impeded by the hooks, which point upwards, and are, moreover, slightly covered with seaweed, yet in their passage to the water they can hardly pass them unscathed.

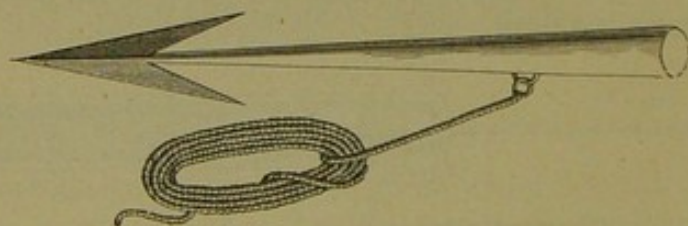


THE SKRÄCKTA.

Among other expedients adopted in Scandinavia for the destruction of seals is the so-called *Skräckta*, which fig. 1

represents when "gillrad," or set. A B C D is a round tube, made of thick sheet-iron, two feet in length and two and a half inches in diameter, with two fixed heads (*bottnar*), one at the lower end, and the other, E E, near the upper. F G H, the harpoon with its square iron shaft, the upper portion of which is one-third thicker than the lower. I, a circular plate of iron (*bricka*) screwed to the middle of the latter, and so fitted as to work freely up and down the tube itself. L, a strong spiral spring that propels the harpoon; and M N, the *smällare*, or trigger, which is confined in its place by an indentation at the head of the weapon. Fig. 2 shows the "Skräckta" after the trigger M N has been touched, and the spiral spring set at liberty.

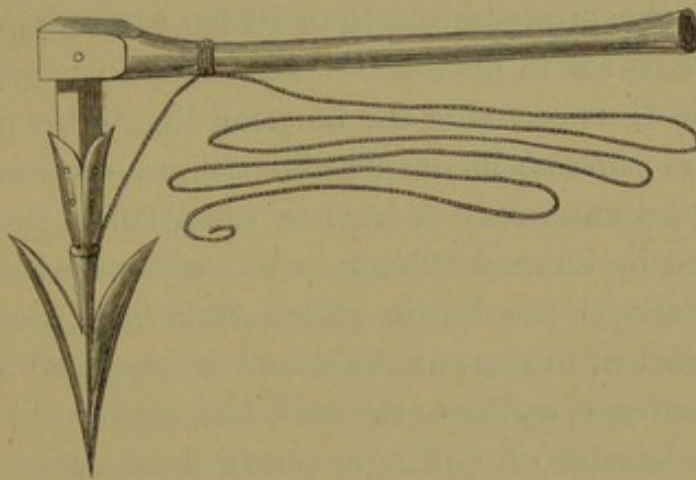
Several of these destructive engines are inserted, by the aid of an auger, in a "Skäl-Sten," known to be the resort of seals; and after being "gillrad," which is effected by means of a stick shod with iron, they are lightly covered with sea-weed. When now the seal creeps up on the stone, and comes in contact with the "smällare," the harpoon is released from confinement, and lodged in the body of the unfortunate animal.



THE SKÄL-JERN.

Many seals are also killed in Scandinavia with the *Skäl-jern*, or harpoon, the form of which varies somewhat. Its head is of iron or steel, and usually from eight to ten

inches in length ; near its base there is a small hole or a ring, whereto is fastened a line of the thickness of one's little finger, and from ten to twelve fathoms long. The shaft, removeable at pleasure, is of wood, and about eight feet in length, but is only inserted in the socket when the weapon is about to be brought into play ; at other times it serves as a staff to assist the hunter during his progress over weak ice, or to dispatch such seals as may chance to fall in his way.



LINNÆUS' SKÄL-JERN.

A second form of "Skäl-jern," as shown above, is spoken of by Linnæus, who describes the shaft as three feet in length and somewhat less in thickness than a man's wrist. But from the shape of this weapon it is pretty clear that it can only be used when you are immediately near the seal, and then in like manner as an axe.

It is in winter time chiefly that the harpoon is made use of. Armed with it, and with a white shirt drawn over his usual dress, that he may the less attract the eye of the seal, the hunter steals upon it whilst sleeping at the edge of the ice, or he keeps watch near the "Blås-hål," spoken of at page 393, and when the animal comes to the aperture to respire, he transfixes it with his deadly weapon.

On receiving the wound, it plunges downwards, carrying with it, however, only the barbed iron, the shaft remaining in the man's hand. But the seal is presently "brought up" again by the line spoken of (whereto is attached a swivel), the inner end of which is tied to the hunter's left wrist. The battle is often severe and protracted, in which the man "plays" the beast in the same way as the fisherman a salmon. It usually ends, however, in the seal's discomfiture, for when at length it is compelled to come to the surface to breathe, it is presently destroyed, either by the hunter himself, or by his comrade, whom he may have called to his aid.*

But in thus securing the harpoon line to his own arm, the hunter runs no inconsiderable risk, as has been proved on many occasions. A rather remarkable instance is mentioned by Samuel Ödman, who, when speaking of a certain rock in the Baltic, called *Skäl-Berg*, well known as the resort of numerous seals, and access to which is not at all times easy, owing to the surf, &c., says:—"A peasant from the hamlet of Gillinge, plunged his spear into the body of a very large seal; as usual, the line fastened to the weapon was tied to the man's arm, and as the animal had the advantage of falling ground, it drew its assailant down the rock into the sea. Happily the seal was unable to dive

* According to Crantz, the Greenlander destroys the seal at the *Bläs-hål* in much the same manner as in Scandinavia. "He seats himself on a stool near the aperture, resting his feet meanwhile on a board to keep them from being chilled. When the animal makes its appearance, he plunges his harpoon into its body, and afterwards kills it at his leisure. The Samoyedes, Pallas tells us, have a very ingenious way of circumventing the Phoca on its resorting to the 'Bläs-hål.' They place several boards, nailed together, and to which a rope is affixed, near the aperture, and afterwards conceal themselves behind a neighbouring 'hummock;' when the seals have left the water, and lie down to bask on the ice, they draw the boards in question over the hole to prevent their return, and then despatch their victims."

to any great depth, and when it was compelled to come to the surface to respire, the poor fellow found some relief. Thus the game continued for a while, sometimes the head of the man, and at others that of the seal, appearing above water, until at length the boat with his companions arrived, when an end was presently put to the unequal contest."

Even if the harpoon line be fastened to the boat, instead of the hunter's arm, which is frequently the case, his life is at times thereby jeopardized; so at least it would seem by the following story, which several years ago ran the round of the Swedish newspapers:—"In one of the small islands of the Dalarö Skärgård (lat. 59°)," says the narrator, "there resided, in the year 1832, a very celebrated seal-hunter named Anders Persson, who every spring earned a certain sum of money by the capture of seals amongst the ice-fields of the Baltic. Though frequently exposed to imminent danger, he nevertheless considered death was never so near at hand as when on a sealing-expedition in the vicinity of his own Skärgård. At the outermost part of these islands is a rock, where seals are accustomed to resort, and to which he and his neighbours often proceeded for the purpose of shooting those animals. The voyage is usually made in a little boat that will carry at the most two persons. The men on these occasions are provided with a rifle of large calibre, and a 'Skäl-jern,' the long line attached to which is secured to the stem of the craft. Thus equipped, Persson started off alone in his little skiff for the rock in question, and when arrived within a short distance, he descried, by the aid of his telescope, a huge seal lying on the upper part of it. Under cover of a projecting crag, he so directed his course as to be concealed from the view of the animal. On reaching the rock, the old man moored his boat to a large detached stone, repeating to himself the old adage—'Secure thy horse

well, but thy boat still better.' Afterwards he crept, rifle in hand, within range of the Phoca, which surpassed in size any he had before seen, and lodged a bullet in its body. The wounded animal, apparently in the agonies of death, rolled down the face of the rock to the shelf below. The old man, with the agility of youth, hastened back to his boat, unmoored her, and leaving his gun on the rock, proceeded to the spot where the seal was lying. On his arrival there he found to his great surprise that the animal had partially recovered, and was in the very act of plunging into the water; but sufficient time was still left him to drive his spear deep into its body. The next instant, and quickened, as it appeared, by the anguish of its fresh wound, the seal, with the rapidity of an arrow, dived down, and directed its course seaward. Before Persson could properly collect his senses, the line, fastened, as said, to the stem of the boat, was run out, and the craft in full career for the open sea, and as it was very small, it was consequently in momentary danger of being drawn under water. Persson had therefore no other alternative than to throw himself into the 'stern sheets,' whereby she was kept on something like an even keel. The voyage might be likened to that of a 'dragon ship' (as the galleys of the famous Vikingar, or sea-kings, were called), 'quick and straight out to sea.' The water on both sides of the skiff was white with foam, and the waves threatened every instant to swallow her up. Already she was a (Swedish) mile in the open sea, and Persson, in his fright, imagined she was approaching Reval, on the opposite coast. Most gladly would he have severed the line, and thus lost both seal and harpoon, had he not feared that, the instant he left his place in the aft part of the boat, she would have gone to the bottom. At length, however, the seal somewhat slackened its speed, and now that the danger of

being swamped was over, the old man began to look about him, when he found to his great joy that the beast was making for the identical rock from whence it had shortly before taken its departure, and on reaching which it crept slowly to the very spot where it had received its wound. Persson now unfastened the harpoon line, and rowed his boat to the place where his gun lay, with which, having reloaded it, he soon put an end to the miseries of the monster. Every time the old man related this adventure he took off his cap in thankfulness to Providence for his miraculous escape; and after remaining silent for some time, he said:—‘That seal produced me a whole barrel of oil.’”

In the Baltic, more especially in the Gulf of Bothnia, the hunters, during winter, often club together and make long sealing expeditions, lasting frequently many weeks, or, it may be, two or three months. Several boats usually keep company, so that, in the event of one being jeopardized, the others may be ready to render assistance; and in most instances the several crews agree among themselves to share alike in the spoil.

The boat used for the purpose is eight fathoms in length from stem to stern, and, though constructed of light materials, is strongly put together. The keel is shod with iron, that it may be the more readily drawn on the ice, as must of necessity often happen. It is provided with mast, sail, cable, &c., as also with one or more *snipor*, or punts, which are sharp at both ends, so that they can be rowed either way, and are so small and light that two men can not only draw one where they please, but carry it on their shoulders. The boat itself has usually a crew of eight men, the most experienced of whom takes the command. It is provisioned for several weeks, the food being of the simplest kind; consisting of bread baked to the consistency of biscuit, butter, cheese, dried or

salted fish, and meat. Brandy, as may be supposed, is not forgotten, but the chief beverage of the men is the brackish water of the gulf; disagreeable enough to the taste, it is true, though somewhat improved by the introduction of a little meal. Their supply of firewood is very scanty; partly that more room may be left for stowage, and partly that the craft may not be overloaded. The fuel, in short, is not more than sufficient to cook their provisions; and, as the men have nothing but the sails to protect them from the weather, they in consequence suffer greatly at times from the cold. They are clad chiefly in coats or cloaks made of calf-skin, with the hairy side out; these, as well as their other habiliments, are of a white colour, so that they may the less attract the notice of the seals. Each man has a change of clothes, so that, in the event of immersion in the water, he may have other things to put on. Such as are wet they dry by sleeping on them. A goodly supply of fire-arms, ammunition, harpoons, &c., and a telescope form part of the outfit; as also in most instances one or two well-trained dogs, in preference white in colour; for these can wind the seals from a very long distance—a Swedish mile, that is, nearly seven English miles, it is said—and are, therefore, often enabled to render the men invaluable service.

The time of departure having arrived, which is generally in February, the boat is drawn to the edge of the fixed ice, when it is forthwith launched into the open water. If, however, the sea thereabouts be sheeted with such thick virgin ice as to render it difficult and laborious for the men to force her through it, they draw the craft, or, it may be, sail her until such times as they come to the open water—a mode of proceeding often adopted by them on the great ice-fields that they happen to meet with during the voyage.

To draw the boat on the ice is a somewhat laborious

and tedious operation. To render the task easier, they are, therefore, accustomed from time to time to deposit the heavier portion of the stores on the ice; and, after proceeding a short distance farther, to return and fetch them in *kälkar*, or hand-sledges. But the several stages, so to say, are very short, seldom exceeding an English mile, the men being fearful that a sudden disruption of the ice, as frequently happens, might separate them from their baggage.

Their mode of proceeding when "under sail" on the ice is somewhat curious. Two men, with their hands on the lee gun-wale, run alongside of the boat to prevent her capsizing; whilst the skipper, holding by the outer end of the *ås*—as a long pole fixed across the craft is called, and which answers the purpose of a rudder—steers and steadies her. If, however, the boat be simply drawn on the ice, then the services of the skipper only are required, the rest of the crew having, meantime, ample employment at the hauling-lines.

When at length the boat is fairly afloat, the men navigate her as best they can amongst the numerous ice-fields that are drifting in every direction about the gulf. Some of these are miles and miles in extent; and when, from storms, several have packed one above the other, regular icebergs—often many fathoms in height—are formed. During the winter these "floes" and ice-fields are pretty sound and secure; but, as the spring advances, they become full of holes and fissures. In these the seals, more especially the *P. Grypus*, often congregate in large numbers—at times, it is said, in droves of several hundreds. Such an assemblage is called a *Skäl-Läger*, or seal-encampment. Here one sees the old males, and the females with their cubs, lying huddled together indiscriminately. Immediately near to a "Läger" is always open water, in the shape of so-called *Brunnar*, or wells,

or of an aperture formed by the disruption of the ice, to which these animals constantly resort, either for the purpose of bathing or of procuring food. At a small "Läger" each adult has, it is said, its own particular "Brunn," but at a large "Läger" five or six individuals make use of the same.

When now the adventurers come to an ice-field, on which there is reason to suppose there may be a "Läger," they secure the boat as best they may, and, if it be practicable, to leeward of it, as well for their own greater security, in the event of a storm arising, as to prevent the seals from getting wind of them. Should the ice-field, or floe, be comparatively small, the whole crew, with the exception of a single individual left to guard the boat, proceed in a body to search it; but if, on the contrary, it be of great extent, two men are sent out to reconnoitre. These are provisioned for a day or two, and provided, moreover, with a "Snipa," as well to enable them to cross any chasm in the ice they may meet with, as to visit the ice-bergs that are drifting past. But even if unprovided with a skiff, they are not altogether helpless; for, on coming to a fissure in the ice, they with their axes, or otherwise, will detach a portion of the ice on which they themselves are standing; and on this fragile raft, by the aid of their harpoon-shafts, cross over the opening. And when it is needful to their safety, as at times happens, that they should ascertain the set of the current, they drop a small piece of bread in a hole they themselves cut in the ice for the purpose, the motion of which at once shows its proper direction.

When the "Läger" is found—and for its discovery they are mostly indebted either to the telescope, which enables them to scan distant objects, or to the dogs, who can often wind the seals from afar—the whole party proceed in the boat as near the scene of action as possible.

Should there be neither "Brunnar" nor other open water near the "Läger," as is at times the case, the adventurers take few or no precautions; but, rushing into the midst of the drove, they with their harpoon-shafts, or with clubs, slaughter the poor creatures without mercy. The blow, it is said, should not be dealt on the snout, as is the usual practice, for, though it may occasion insensibility for a time, the animal often revives, and, if there be no one to intercept its retreat, may get off altogether; but on the neck, which causes almost immediate death. The old males are very savage, and not unfrequently turn on their assailants, whom they threaten with both claws and teeth. In this case caution is needful; for, unless a man gets out of the way of the infuriated creature, he runs the risk of receiving an ugly wound. When the seal thus charges, the man, at times, throws down his leathern gauntlet, which occupies its attention, and in the while he knocks it on the head.

If, however, there should be "Brunnar," or other open water, near the "Läger," which would, of course, render the retreat of the seals comparatively easy, the hunters, rather than hazard an open attack, resort to the like ruse as the Greenlanders, viz., they, whilst crawling on their bellies towards the "Läger," imitate the cries of the animals, somewhat resembling, as said, those of a pig, and keep constantly lifting up their feet and knocking them together, so as to make it appear they belonged to the fraternity. Thus they are generally enabled to get, unsuspected, within gun shot of the "Läger," when they discharge their heavy rifles into the midst of the herd, and commonly with deadly effect. Should the weather be calm, the seals for the most part, on hearing the report of the guns, make at once for the water; but if they are fighting amongst themselves, whence arises a great noise and uproar, and that the wind be high, they seem hardly to

notice the shots, and it not unfrequently happens that a large portion of them at least remain on the spot, in which case the volley is repeated a second, or even a third time. The firing having ceased, the hunters rush forward to the "Läger," and with their clubs put not only the wounded out of their misery, but mercilessly slaughter the cubs; for these, rather than take to the water before the time appointed by nature (which, as regards the *P. Grypus*, the chief object of pursuit, is, as said, not until some weeks after their birth), will lie perfectly quiet, and unresistingly allow themselves to be knocked on the head.

Though many seals are thus usually killed at the "Läger," still the larger portion of the drove, of the old ones at least, generally contrive to reach the open water in safety. Such of the females, however, as have left cubs behind them, as also seals that were absent from the spot when the onslaught took place, often, subsequently, show themselves at the "Brunnar," in which case they are either shot or transfixed with the harpoon. To induce the mothers to return to the open water, the hunters resort to a most barbarous contrivance, viz., they affix a living cub to the lowermost branch of a triangular hook, attached to the end of a long line, and then lower it into the "Brunn." The piteous cries and convulsive movements of the poor tortured creature soon attract its dam to the spot, and in her affectionate solicitude to release her progeny, she embraces it, and, as a consequence, is herself impaled on the barbed iron, when both are brought up to the surface together!

This cruel expedient, by which the cub is innocently made to contribute to the destruction of its parent, is adopted chiefly with the Grey Seal. Not, however, from any feeling of compunction as regards other species, but simply because the cub of the Marbled Seal is not always procurable, and that of the Common Seal,

owing to its taking to the water soon after birth, is seldom captured alive. With the Common Seal, therefore, the order of things is reversed:—for, when the *mother* is shot, and the cub for the time has escaped under the ice, *her* hind quarters are suspended over the aperture, which tempting bait soon attracts her offspring to the surface again, when its death is quickly compassed.

The hunters, when on their sealing expeditions, not unfrequently fall in with the so-called "*Gångare*," or wandering seals, spoken of some pages back. Such I mean as, when the ice in the Gulf has not broken up at the usual time, nevertheless do not delay their departure for the south, but traverse its surface until they meet with open water. If the seals be far from the latter, when met with by these men, great destruction is committed amongst them. The poor creatures, at such times, from seeing no means of escape, scramble about in all directions, during which time their assailants manage to kill so many as to be enabled to load their "*kälkar*"—occasionally, indeed, for the second or even the third time—before the retreat of the remainder is secured.

On ordinary occasions the flesh of the slaughtered seals is saved by the hunters; but when they are very successful, only the blubber and skins. If all goes well, the expedition usually lasts from five to six weeks; but under adverse circumstances—whether from dearth of seals, or storm—two or three months may elapse before the boats return home, when a general division of the spoil takes place.

As shown, the men engaged in these sealing expeditions are necessarily exposed to many and great hardships. To say nothing of scanty fare, they must, of course, suffer much from the inclemency of the weather. They likewise run great personal risks, as well those consequent on navigating the ocean in an open boat in the winter time, as from

icebergs, which during gales of wind threaten every instant to overwhelm their fragile barks. Not unfrequently, moreover, when exploring extensive ice-fields, in search of seals, and when distant from their boats, they are overtaken by thick weather, or snow-storms, which render their situation perilous in the extreme. It is on record, indeed, that during one particular season the crews of no fewer than fifteen boats from the parish of Wora alone thus perished miserably, or were engulfed in the waves!

In the winter time the seal-hunter also makes extended excursions on the fixed ice,—that firmly attached to the land; or on some enormous “floe,” that after having been driven hither and thither by the waves has at length made a lodgment on the shore. Several individuals, provisioned for a few days, and well provided with guns and harpoons, usually join company on these occasions. The seals are commonly found lying at the very edge of the fixed ice, or on the drifted “floe,” as the case may be, and often in herds of a hundred or more; but if the ice does not extend very far from land, the animals, the old ones at least, are exceedingly wary and difficult of approach, and on the slightest appearance of danger, such as the sight of a man, or of a boat, or even the cries of birds which denote peril, at once plunge headlong into the sea. They are said, indeed, to be so afraid of the land, that if when resting on an ice-field it drifts to within even a gun-shot of the shore, they will at once desert it, and move off elsewhere. The success of the hunters, nevertheless, is often very considerable. It is recorded, in a Swedish newspaper of the 30th March, 1860, that during the preceding week a party of men from the hamlet of Norrboda had “clubbed to death upwards of two hundred seals.”

These sealing-expeditions by land, so to say, as well as

those by sea, are no child's play. When, for instance, there is a shift of wind, and, as a consequence, a sudden separation of the ice on which they are embarked from the shore, the peril is great in the extreme. Even should the men have previously succeeded in making large captures, they are instantly obliged to relinquish the fruits of their labours, and to flee for their lives; and if it does so chance that the "floe" on which the poor fellows are located is driven into the wide open ocean, as too frequently happens, few situations can be conceived more terrible; for thinly clad, and ill provisioned, they have little other to anticipate than death by cold or starvation, or a watery grave! At the present moment there are two pictures in the church of Fårö, the island where our fleet "coaled," when in the Baltic during the late Russian war, portraying the perilous situation in which the poor seal-hunters are at times placed. One of these pictures, Linnæus tells us, "is descriptive of the adventures of fifteen men belonging to the island of Wårö, who, in the spring of 1603, went on an expedition on the ice to capture seals. Whilst thus engaged the ice separated near the shore, and the whole of them were carried out to sea on the detached 'floe.' When passing Sandö, three of the number leaped on to another 'floe,' and fortunately succeeded in reaching that place. The other men were compelled to follow the ice and the wind into the wild sea; but through the protection of the Almighty the whole of them, after a voyage of fourteen days on the 'floe,' came to the Stockholm 'Skärgård,' although during the time they had no other provisions than raw seal flesh. The other picture represents two Islanders on a 'floe,' who were also driven out to sea, but on the third day were rescued from their terrible position."

Although the sealing expeditions, whether by land or sea, described in these pages, are attended by almost

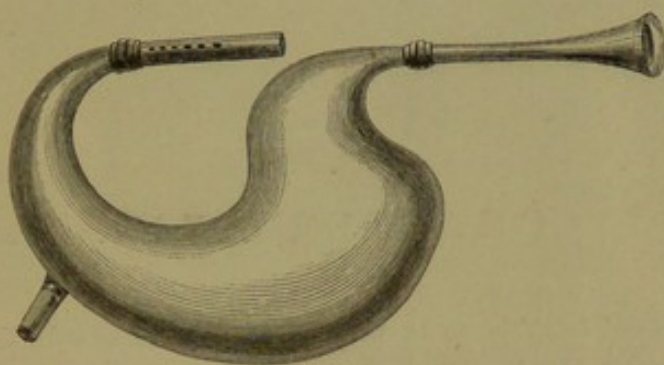
unheard-of hardships and perils, yet by the Finns and others they are looked on as highly interesting and exciting. "It is a playing with the dangers of the sea," says a gifted Swedish writer, "and an endurance of labour and fatigue that reminds one of the hardihood and martial exploits of the old sea-kings."

The seal is of considerable value to its captor. The skins of the adults of the larger species, we are told, are tanned and used as a substitute for leather, whilst those of the smaller are converted into various articles of clothing, as also into boots; and if the skin has not been previously prepared, a little pulverised bark is placed within them, which, when acted on by the warmth and moisture of the foot, tans them to a certain extent. Trunks and cushions are also covered with the skins of these animals. The Finns, moreover, not unfrequently attach a slip of the skin to the under part of their *Skidor*, or snow-skates, which, though being no impediment when ascending a hill, yet effectually prevents a retrograde movement.

The blubber, which even on a Marbled Seal, the smallest of the *Phocæ*, is some two fingers in thickness, is for the most part salted, and used by the common people in lieu of butter; or else it is boiled down into oil, in which state it serves various purposes, such as to supply them with light, and to grease their fishing-boots, as also the cattle, during the great heats of summer, when they are pestered by insects.

The flesh, which is darker in colour than that of most other animals, is eaten both salted and fresh, and by some with great gusto; that of the young of the Common or Marbled seal is, by certain individuals, considered equal to lamb. And though the seal feeds chiefly on the finny tribe, neither its flesh or blubber has the least fishy taste. The "flippers," when pickled, are

reckoned a delicacy; and the blood is made into *plat*, a kind of black pudding. Even the entrails are at times saved, and after being chopped small and boiled are eaten by the Finns and Lapps; otherwise they are dried, and given to the pigs in winter time.



THE BAGPIPE.

The stomach of the seal is used for various purposes. Linnæus tells us, indeed, that in certain parts of Sweden it is converted into a *bag-pipe*, as represented above; from the idea, possibly, that as the seal, when living, is so charmed with music, dulcet sounds might be extracted from its body after death. Be this as it may, I feel assured my Scottish friends will be delighted to learn that their own "heaven-born" instrument may be constructed out of such very simple materials.

The medicinal properties of the seal, Rosted tells us, are very great, more especially preparations from its blood and lungs, which are, he says, something like panaceas for almost all kinds of disorders.

CHAPTER XXIX.

The Walrus.—Resemblance to both Man and Horse.—Is Gregarious.—
A Sleeping Herd.—Food of the Walrus.—Its Courage.—Maternal
Affection.—Chase by Land.—Chase by Water.—How Harpooned.
—Daring of the Harpooner.—The Captain's Experience.—Value
of the Walrus.

THE Walrus, Sea Horse, or Morse (*Hvalross*, Sw.; *Rosmar*, Norw.; *Morsk*, Lapp.; *Trichechus Rosmarus*, Linn.), has found a place in the Scandinavian Fauna. Although at the present day this animal is very rarely seen on the coasts of the Peninsula, yet in olden times it would almost seem to have been a resident, or at least a pretty constant visitant, there being good reason to believe it was regularly hunted by the ancient Northmen for its skin and tusks, the value of which were perfectly well understood even in their day.

The proper home of the walrus is the Polar regions, where it is found almost everywhere; not, it is true, in the same abundance as formerly, "war to the knife" having for centuries been carried on against it, but still in considerable numbers. In southern latitudes it is seldom observed, and the instances are few and far between of its visiting the British Isles.



M. Körner del.

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THE WALRUS.

Day & Son, Limited, Lith.



Scientifically to describe so well-known an animal as the walrus would be waste of time, the rather as it is so well depicted in the annexed drawing; but it may be proper to state that its usual length is from twelve to fifteen feet. At times, according to Baron Cuvier and others, it attains not far from twenty; and the girth of its huge body is nearly as much. Some specimens seen by Captain M'Clure were estimated by him to weigh 35 cwt. Its colour varies greatly. According to Fabricius, the young are black; they then become brown, and gradually paler, till in old age they are quite white. What with the relatively small head of the creature, its thick muzzle, and its formidable tusks pointing downwards, it has altogether a most strange appearance.

"When walruses were near the boat," says Professor B. M. Keilhau, of Christiania, who visited Cherry Island and Spitzbergen in 1827 and 1828, and whom I have the greater pleasure in quoting, from his writings being but little known to the British public, "they turned their heads half round towards us, and showed their large brown eyes, which seemed inflamed, owing to the number of large veins intersecting them. In their looks, combined with the way in which their heads and necks were carried, there was a direct likeness to the horse, fully justifying their being named after that animal."

Others, again, say that prior to the development of the animal's tusks, which is not, I believe until its second year, it, when rearing its head above the surface, and gazing about, bears no slight resemblance to that of a man, and may not improbably have given rise to the fabulous stories of mermen and mermaids. Scoresby, indeed, says, "I have myself seen a sea-horse in such a position, and under such circumstances, that it required very little stretch of imagination to mistake it for a human being—so like, indeed, was it, that the surgeon

of the ship actually reported to me his having seen a man with his head just appearing above the surface of the water."

The motions of the walrus on shore, for which its limbs would seem little adapted, are slow and clumsy. "Their gait," Martens tells us, "is a kind of jerking; they can make considerable springs, and can advance pretty rapidly, with the help of their teeth. When they continue on land they nevertheless appear to be—and to a great extent certainly are—sluggish brutes." If, however, the animal be in the water, its proper element, and for which its organs are beautifully fitted, all its members have free scope, and work to the admiration of those who behold them. Whether descending into the depths of the sea, or swimming along its surface, its members are perfectly suited for their exigencies. Hence Zorgdrager states, "It is just as difficult to follow the walrus with boats in rowing as it is to follow the whale itself."

The walrus is gregarious, and would seem to be in a remarkable degree social. We hear little of these animals in solitude or single pairs, but united together in numbers; often, indeed, in immense droves. Lord Shulldham, in his interesting account of this animal, and when speaking of the Magdalen Islands, in the Gulf of St. Lawrence, says that in former times they used to collect there in herds of from 7,000 to 8,000. Captain Cook also relates having met with herds of many hundreds together, "whose roaring and braying was so loud that in the night, or in foggy weather, they gave us notice of the vicinity of the ice before we could see it."

This crowding together on land of so many awkward and noisy creatures frequently gives rise to singular spectacles. "The moment the first is ashore, so as to lie dry, it will not stir till another comes and forces

it forward, by striking it with its great teeth; this one is served in the same manner by the next, and so on in succession till the whole are landed, tumbling over one another, and forcing the foremost for the sake of quiet to remove farther up."

When the walruses are thus congregated, and for the most part asleep, some are always on the watch, who, on the approach of danger, arouse those next to them, and the alarm being thus gradually communicated, the whole herd is presently awakened. An indescribable tumult then ensues. Each individual will be the first in the water; but as they all lie huddled together, extrication from the mass is a matter of difficulty. They become angry, bite, and fight with their tusks, so that a terrible noise arises; they at the same time shriek and roar fearfully. When, however, they have succeeded in getting free, they scramble or roll forward to the edge of the ice, whence they throw themselves headlong into the sea.

A herd of walruses reposing on the shore must be a strange sight. "I followed the margin of the plateau," says M. Keilhau, "and soon came to an indentation in the rock, at the bottom of which, and at about one hundred feet below me, was a little inlet of the sea, and a narrow strip of land, stretching from the water's edge to the foot of the nearly perpendicular cliff. On this strip I noticed a large heap of grey and reddish-brown sack-shaped masses, that bore some resemblance to so many sleeping pigs of an astounding size. I had not quite determined within myself their identity before I became aware of a large grey body moving about in the inlet in question, immediately beneath the surface of the water. Presently, however, it reared its head, and I then saw it was a walrus, with its two-feet-long tusks. In the heap just spoken of were a half-score of these animals. One or other of them now lifted up its

head also, and made diverse movements that it might change its position. There was something disgusting in the look of the group; when the naked, round masses of fat, on which scarcely an outward limb was to be distinguished, interlaced themselves, so to say, with each other, one could readily fancy them to be a cluster of gigantic worms. The almost inanimate appearance of these sea monsters, which for several days together can lie motionless in the same place, together with their clumsy and so to speak chaotic form, would seem to give certain bold inquirers some ground for looking upon them as merely animals in embryo. And I do not doubt that philosophers who venture to speculate on the origin of the human species, and who believe that mankind, once inhabitants of the ocean, have by an insect-like metamorphosis been developed out of forms similar in type to the cetaceous mammals which are akin to fishes, would, if they had beheld what I did shuddering, feel satisfied that their theory was still further strengthened."

Naturalists seem not to have altogether agreed as to what constitutes the food of the walrus; some authorities, Schreber amongst the rest, affirming that it is not at all carnivorous. But the evidence is strong to the contrary; Scoresby having found in its stomach shrimps, a kind of cray-fish, and the remains of young seals. That it feeds largely on certain sea-weeds, such as the *Fucus digitatus*, has, by dissection, been ascertained beyond doubt. This the animal severs with its tusks from the spot where they grow; and whilst so occupied, according to Professor Lovén, who visited Spitzbergen some years ago, "stands perpendicular in the water, with its head directed downwards."

The walrus, like the seal, seems capable of enduring long abstinence. Lord Shuldham states that "it is in the habit of crawling up the shore, in a convenient

landing-place, and, if the weather be fine, of remaining sometimes fourteen days without food of any kind, but that on the first appearance of rain it retreats to the water with precipitation ;” and, as with the seals, it has been observed to discharge from its stomach considerable quantities of stones, at times of a large size.

The walrus is said to be monogamous, and its pairing season the months of May and June, at which time these animals collect in large herds, and take long wanderings to the more southern parts of their zone. The female produces in early spring, either on the shore or the ice, and commonly a single cub, never more than two. She is most tender of her offspring, and guards them with the greatest possible care. “Mothers with cubs,” says M. Keilhau, when describing a walrus-hunt, “often swam past us. With the fore part of the body the parent was accustomed to press the cub under her, and at the same time to give it, as a sort of warning, one or more gentle thrusts with her tusks.” And the regard the parent evinces towards her progeny is, by all accounts, fully reciprocated on its part.

The walrus is very fearless, and pays no attention to a boat, except as an object of curiosity ; and even after having been ineffectually struck with the harpoon whilst in the water, will often afford the man an opportunity of repeating the attempt. If left unmolested, it is a peaceful and harmless creature, living in amity with its fellows, and interfering but little with its congeners ; nevertheless, it is no coward, and when attacked can behave with cool courage and bravery. “If a blow be struck with a spear,” says Zorgdrager, “it must instantly be withdrawn to prevent the animal from securing it, and with it wounding the assailant, as sometimes happens. When severely wounded itself, it becomes very furious, striking from one side to another with its teeth, and breaking the

weapons with which it is attacked ; and at last, burning with rage, it places its head between its paws, and allows itself to tumble into the sea."

It not only can effect much in self-defence, but is also at times willing to lend efficient help to its associates, and thus combining, they become formidable and dangerous foes. "When I wounded one," writes Martens, "others speedily surrounded the boat, and whilst some endeavoured to pierce it with their tusks, others raised themselves out of the water, and did everything they could to board it." Sir Edward Parry, who encountered these animals in the Fox's Channel, tells us again—"We saw about two hundred piled, as usual, over each other, on the loose drift ice. A boat's crew from the *Fury* and *Hecla* proceeded to the attack, but these gallant amphibia, some with their cubs mounted on their backs, made a most desperate resistance, and one of them tore the planks of a boat in two or three pieces. Three only were killed." Captain Phipps, afterwards Lord Mulgrave, who met with these creatures during his attempted voyage to the North Pole, in 1773, testifies to the same effect: "When near the north of Spitzbergen," he says, "two officers engaged in an encounter with a walrus, from which they came off with little honour. The animal being alone, was wounded in the first instance, but on plunging into the deep, he obtained a reinforcement of his fellows, who made a united attack upon the boat, wresting an oar from one of the men, and had nearly upset her, when another boat came to their assistance."

At times the walrus becomes the assailant, which is probably owing to its having been previously subject to molestations. Captain Beechy describes an attack made on his boat in Magdalen Bay by a drove of these animals. "They surrounded the craft, and attempted to tear the planks asunder with their formidable tusks ;

and the wounds inflicted on them served only to increase their ferocity.”*

Mothers, when their offspring are in peril, are especially courageous. “The female,” says Captain Cook, “will defend her young to the very last, and at the expense of her own life, whether in the water or on the ice. Nor will the calf quit the dam, though she be dead ; so that if you kill one, you are sure of the other.” And during the third voyage of the great navigator, when the *Resolution* and *Discovery* were returning from Behring’s Straits, it is mentioned :—“In the afternoon we hoisted out the boats, and sent them in pursuit of the sea-horses that surrounded us. Our people were more successful than they had been before, returning with three large ones and one young. The gentlemen who went in this party were witnesses of several instances of parental affection in these animals. On the approach of our boat towards the ice, they all took their cubs under their fins, and endeavoured to escape with them into the sea. Several whose young were killed and wounded, and were left floating on the surface, rose again and carried them down, sometimes just as our people were going to take them into the boat ; and they might be traced bearing them to a great distance in the water, which was coloured with their blood. We afterwards observed them bringing them up at times above the surface, as if for air, and again diving under it with a dreadful bellowing. The female, in particular, whose young had been destroyed and taken into the boat, became so enraged that she attacked the cutter, and struck her tusks through the bottom of it.”

The walrus is readily domesticated. A young one

* When people are thus furiously assailed by walruses, the best defence is said to be sea sand, which, being thrown into their eyes, occasions partial blindness, and obliges them to disperse.

was, some few years ago, exhibited in London, and eventually, I believe, found its way to the Zoological Gardens. Bær mentions having seen one in St. Petersburg that was fed on oat-grit porridge, in which were inserted slices of yellow turnips and other vegetables; and Edward Worst, that "he saw one in England which was three months old, that had been brought from Nova Zembla. Every day it was put into water for a short time, but it always seemed happy to return to dry ground. It was about the size of a calf, and could open and shut its nostrils at pleasure. It grunted like a wild boar, and sometimes cried with a strong, deep voice. It was fed with wild oats or millet, which it rather sucked in than masticated. It was not without difficulty that it approached its master, but it attempted to follow him, especially when it had the prospect of receiving nourishment at his hands."

The chase of the walrus, which is of great antiquity, is conducted both by sea and land, the weapons used consisting, for the most part, of the harpoon and the lance. Guns, unless loaded with small shot to blind the animal, are not found very destructive, as, owing to the thickness and toughness of the hide, and the mass of blubber, even a rifle-ball takes but little effect.

On land the destruction of the walrus must, at times, be great. "After the herd has made some little advance from the sea," says Lord Shuldham, when speaking of the Magdalen Islands, "the hunters, armed with a sharp spear, under cover of the night, and with the assistance of good dogs trained for the purpose, endeavour to disperse them. This attack in the Gulf of St. Lawrence is called a 'cut,' and is in general looked upon as a most dangerous adventure, it being impossible to drive them as you will, and difficult to avoid them; but as, during the darkness, they do not know their way to the sea, many

fall victims. The aim is usually made at the throat and breast, and in this manner 1,500 to 1,600 have been killed in a 'cut.'"

The greatest number of walruses slaughtered is probably on ice-fields, or in the open sea, where they are harpooned by the natives in much the same manner as whales; but the Greenlanders are said to entertain so wholesome a dread of this animal as seldom to venture on attacking it unless they are several in company. Their usual manner of proceeding is first to harpoon the creature, and then to allow it to swim about with an inflated bladder—attached by a line to the weapon—until it be wearied, and then to dispatch it with their lances. But even under these circumstances the victory is not always easily gained; for when the walrus is roused, he often fights a hard battle. "In striking the animal," Zorgdrager remarks, "it is needful to make a selection. Accordingly the hunters aim at the eye, which obliges the walrus to turn its head, and then the fatal blow is directed to the throat."

Professor Keilhau's experiences in the Arctic regions with these animals were somewhat to the like effect. "The day," he says, "was appropriated to hunting walruses, which either lay in heaps on detached pieces of ice, or swam in large droves amongst them. With the usual weapons, harpoons and spears, thirteen in all were killed, partly on the ice and partly in the open water. The first walrus slain was lying asleep on a piece of ice some ells in extent. The boat was rowed silently and cautiously up to the floe, which the harpooner stepped on to, and plunged his weapon into the body of the animal, and then, with the detached shaft in his hand, he sprang back to the boat. On receiving the wound the walrus rose up and floundered into the sea. The man holding the harpoon line instantly 'payed off'

the latter; but when the speed of the animal slackened he hauled it in again—all in accordance with the creature's movements under water, and its greater or less resistance. After some minutes it came to the surface in front of the boat, when the harpooner instantly plunged his spear into its breast. A reeking stream of blood spouted from the wound, and with a convulsive movement the walrus again dived downwards. Once more it came up, snorted wildly, and frantically assailed with its tusks the edge of a piece of floating ice; whereupon one of the rowers, armed with a spear, leaped on to the floe, when the battle was soon finished.

“The last hunt was the most striking of all. Two gigantic walruses were observed reposing on a piece of ice. When the boat was laid alongside the ‘floe,’ the animals raised themselves up on their short, half-reflected forefeet; and whilst the harpooner was making towards them they presented, from the elevation of their curved necks, and the full exposure of their free and arched chests, a venerable and very imposing appearance. Notwithstanding the recumbent position of the hinder parts of their bodies, their heads were at least as high as that of the man, who boldly advanced and drove a spear into each of them. With the iron in their bosoms, they remained for a second or two immoveable, and looked down upon their fearless assailant, who rapidly retreated. The people now rushed forward and stabbed them with their lances, on which both threw themselves into the water. One of them received a thrust in the gullet, its mouth being open at the time, but at the same instant the weapon of one of the men damaged the harpoon-line, which broke, and the animal escaped us. The sight was now fearful, for when at some little distance, the wounded walrus that we still had fast again came to the surface, a stream of blood gushed forth into the air from its

uplifted and gaping jaws. Swimming straight away from us, it was soon lost to view, and we could only see its bloody tracks. At length, however, the boat overtook the poor creature, when an end was presently put to its misery.

"Ordinarily on these occasions," the Professor continues, "the harpooner alone is armed; the rowers having enough to do to retard, as far as may be, the progress of the boat, which the walrus drags after him by means of the line. It is always needful to guard against the animal, after it has dived, from coming up to the surface, either under or alongside of the boat, as it has sufficient strength to capsize even a ship's boat. I myself, indeed, have seen a boat the bottom of which a walrus had severed right across with its fearful tusks; and only last summer the mate of a Flensburg vessel was, in this very locality, dragged out of a boat by a wounded walrus, and perished miserably. A skilful harpooner, nevertheless, is not afraid of engaging in combat with more than one of these animals at the same time. Once we rowed right in amongst a drove of fifteen walruses that were swimming in the open water. Two of the number were speared in rapid succession, and with this team (*forspand*) the boat flew away with the rapidity of an arrow. About ten minutes elapsed before the contest was ended. The remainder of the drove kept in the vicinity, and grouped themselves immediately alongside of their beleaguered comrades, on whom they stared with a look expressive of curiosity and wonder; but they did not attempt to assist them, as is said to be frequently the case under similar circumstances."

The captain in whose ship M. Keilhau made the voyage to the Arctic regions had previously passed two winters (1825-6 and 1826-7) on Cherry Island, chiefly for the purpose of walrus-hunting, and from him the

Professor learned the following particulars:—In the month of September, 1825, this man and seven others were conveyed there from Hammerfest; and on the very day of their arrival killed eighteen walruses. Those animals were then very numerous, and up to the end of the year, the party were very successful. One day during Christmas week they slaughtered upwards of seventy. This was by moonlight, or rather by the light afforded by the Aurora borealis, for in the depth of winter day had entirely ceased. Indeed, it was only at noon, and in clear weather, that a little twilight was perceptible.

But after the commencement of the new year the walruses became much scarcer; partly owing to the numbers destroyed, and partly because the remainder began to shun the place. This was in measure attributable to the numerous skinned carcasses of those animals that had been thrown into the sea, and subsequently cast up on the shore. As the season advanced, indeed, the captures daily diminished, and in March ceased altogether. On the 23rd July, when a vessel came from Hammerfest to carry home the party, the spoil consisted of 677 walruses, the skins of three polar bears, and about thirty blue foxes, as also some eider-down. During the whole time that these eight men remained on Cherry Island, not one of them was ill; and the winter appears to have been one of the mildest.

The following winter, or that of 1826-7, was a very severe one, accompanied by great snow-falls. From October to March the weather was so cold as often to compel the men to remain for eight days together within their hut, which it was hardly possible to keep sufficiently warm. This, however, was less attributable to a high degree of cold than to the suffocating keenness the air had acquired in its progress across the sea, and which rendered it impossible for them, at times, to remain out





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WALRUS AND POLAR BEAR.

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of doors. Even in November the sea was already frozen over, and when shortly afterwards a tempest broke up the fixed ice, there came an immense quantity of drift ice from the north, which in the course of a couple of days froze together with the broken fragments of ice previously existing. The polar bears clambered on to the roof of their hut, and seven were shot close to the door. In other respects the booty was moderate, for during northerly winds, which were the prevailing ones, the walruses were lying under Spitzbergen, where they found better shelter.

The walrus has many enemies besides man. On land, the polar bear, with which at times it is said to have dreadful conflicts, as depicted in the accompanying drawing by Mr. Wolf; and at sea, the swordfish, and the more formidable species of whales, make bloody and often successful war against it.

It is valuable to its captor. By the natives of the Arctic regions its flesh and blubber is much esteemed; and even our own mariners, as we learn from Captain Cook and other celebrated navigators, do not altogether despise it. Its hide, which is from one to two inches in thickness, is used for a variety of purposes. Its oil, estimated by Zordrager at half a ton, is considered more valuable than that of the whale; and its ivory, owing to greater whiteness and density, is looked on as superior to that of the elephant. The Greenlanders, and others, convert it into their most important hunting weapons, as also into tools and implements for domestic uses; and in almost all civilized nations it is extensively applied for the invaluable object of giving teeth to the toothless.

CHAPTER XXX.

THE SCANDINAVIAN SALT-WATER FISHES.—The Bysse.—The Weevers.—
The Surmulletts.—The Gurnards.—The Cotti.—The King-Fishes.—
The Great Sea-Adder.—The Maigre.—The Sea-Breams.—The
Mackerel.—The Tunnies.—The Scad.—The Opah.—The Vaagmaer.
—The Mulletts.—The Blennies.—The Sea-Wolf.—The Gobies—And
other Acanthopterygious Fishes allied to them.

DURING our boating excursions in the Skärgård we occasionally enjoyed a little sea fishing. Whiting, haddock, codling, &c., were tolerably abundant, and, in the season, mackerel and gar-fish also. Having always a line in the boat, we, in calm weather, usually came to an anchor, and in the course of two or three hours could generally kill fish enough not only to supply a good meal—which, there being a pan on board, was prepared at once—but to salt down for future occasions.

The Rev. Johan Ödman, the author of an interesting history of Bohus-Län, who flourished about a century ago, tells us in his quaint way:—"The sea and waters more greatly abound with the animal kingdom than the other elements. There are fish great and small, whales of

an enormous size, sharks, porpoises, polypi, and thousands of others besides; also four-footed animals, such as seals, sea-cows, walruses, turtles, &c., to say nothing of several kinds of *Hafs-Troll*,* some of which, syrens for instance, resemble human beings. In addition to all these there are in the ocean innumerable other creatures, such as oysters, mussels, periwinkles, crabs and lobsters, so that the sea would appear to be richer than the earth, and amongst the greatest of God's miracles known to us."

As, however, the worthy divine does not specify the several species of fish found on the western coast of Sweden, of which Bohus-Län forms a considerable portion, I subjoin, for the information of the ichthyologist, a concise account of them, as well as all others pertaining to the Marine Fauna of the Peninsula, the fresh-water fishes having been already treated of in my last work, "Scandinavian Adventures."

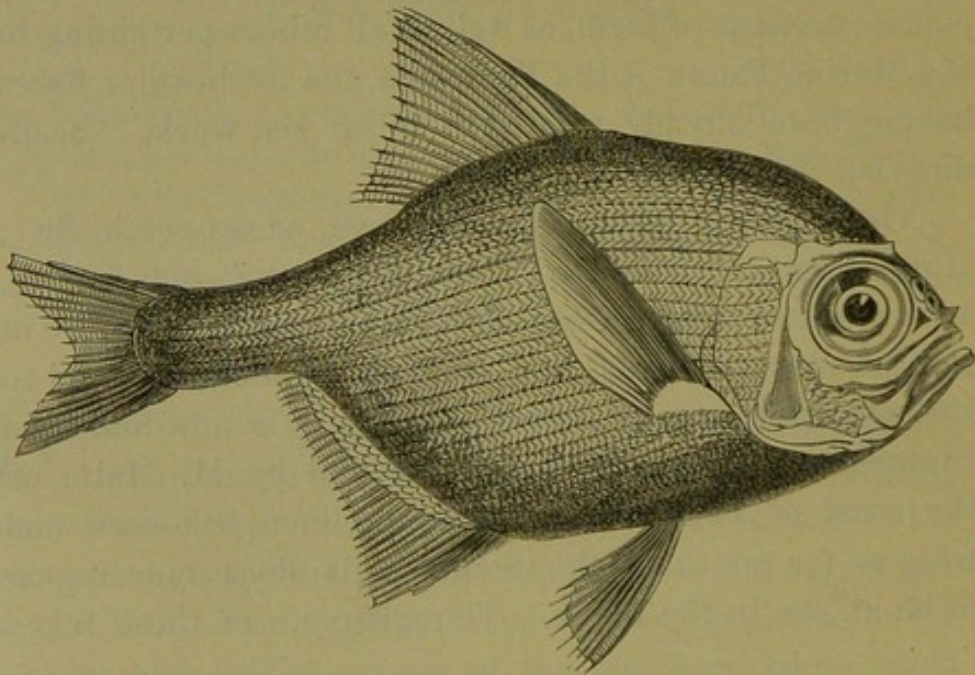
The Common Basse (*Hafs-Abborre*, or sea-perch, Sw.; *Almindelig* [*i. e.* common] *Bars*, Dan.†; *Perca Labrax*, Linn.), whose proper home is the Mediterranean, is rare in the Scandinavian seas, and seemingly almost confined to the southern coast of Norway, where it is now and then captured. It has recently been found by M. Malm off the coast of Bohus. A single specimen has been met with as far south as the Sound. It does not appear to be known in the Baltic. Though none of those taken

* Evil spirits that, according to the belief of the ancient Northerners, inhabit the vasty deeps, and an account of which, as also of other Scandinavian superstitions, I may some day submit to the public.

† Where known to me, I have given the Norwegian names to the several fishes (and the like may be said of the birds), though this has not always been practicable, owing to there being, so far as I am aware, no Natural History of Norway published to which reference might be made. In lieu of the Norwegian names, I have in many instances given them in Danish, by which, although the written language of Norway, they may not, however, be popularly known in that country.

in the Scandinavian waters much exceed fourteen inches in length, they attain at times in other seas a length of three feet, and a weight of twenty pounds.

The *Polyprion cernium*, Cuv. & Val., which belongs to the Mediterranean and the Atlantic, has only in one instance been captured off the coast of Norway, near Bergen (lat. $60\frac{1}{2}^{\circ}$), and at a depth of one hundred fathoms. Farther to the north it has not been identified. Though the individual in question only measured twenty-one inches, this fish is said to reach five or six feet in length, and a weight of one hundred pounds. By all accounts it is very voracious. Its flesh is described as white and palatable.



BERYX BOREALIS.

The *Beryx borealis*, von Düben & Korén (in "Kongliga Vetenskaps-Akademiens Handlingar," *i. e.* Transactions of the Royal [Swedish] Academy of Sciences, 1844, p. 33, tab. ii., figs. 1, 2, from whence the accompanying illustration is taken.) A specimen of this fish, reported to be the only one known, was captured in 1839 on the

Norwegian coast near Bergen, in the museum of which town it is now preserved. The colour of both body and fins, when first taken out of the water, was bright red, and the sides and belly were very beautifully tinged like silver. The head was armed with six spines. Length twelve inches, and depth four inches and a half.

Dr. Günther, our celebrated ichthyologist, who has kindly examined my drawing, is of opinion, I should remark, that this fish is a stray specimen of *Beryx decadactylus*, of Madeira.

The Great Weever, or Sting-bull (*Fjärsing*, Sw.; *Fjæsing*, Dan.; *Trachinus Draco*, Linn.). The accompanying illustration by M. Wilhelm von Wright was taken, as he assured me, from the fish whilst alive in a tub of water. It is pretty common in the Bohus Skärgård, and on the whole of the western coast of Sweden, as also on that of southern Norway; but its limits to the northward would not seem to be very accurately ascertained. Occasionally it is taken in the lower parts of the Baltic. So far as known, it is the only one of the genus *Trachinus* inhabiting the Scandinavian seas, for though the Lesser Weever (*T. vipera*, Cuv. & Val.) has found a place in the Northern fauna, it does not appear to have been fully identified on the shores of either Sweden or Norway. The usual length of the great weever is from nine to twelve inches, but it attains to fifteen inches. It spawns in the beginning of summer, when it approaches nearer the shore, and is then more abundant than ordinarily. Its flesh is said to be good, but, probably from prejudice, is not eaten by the fishermen.

The great weever, like the herring, is a very capricious fish. At one period it abounds on a particular line of coast, and then all at once deserts it wholly or in great part, though perhaps to return again in increased num-

bers after the lapse of several years. The inhabitants of Lesö (one of the Danish islands) entertain the singular notion that there is enmity between the great weever and the gar-fish (*Belone vulgaris*, Cuv.), and that when the former appear in large shoals on their favourite feeding-grounds, the others are driven away; and as the gar-fish are a marketable commodity, and the great weever all but valueless, the advent of the latter is by these men looked upon with great disfavour. The usual habitat of the great weever is moderately deep water, where the bottom consists of sand, in which it is said this fish at times so buries itself that only the eyes and mouth appear, and in this position it preys on such small fish and crustaceans as chance to approach its lurking-place.

The sharp spines of the first dorsal fin of the great weever are considered by the Scandinavian fishermen to be equally poisonous as the fangs of the viper. These men say, moreover, that when this fish is hauled into the boat, it savagely snaps at their naked legs, &c. Hence they greatly fear it, and always use their best endeavours to get rid of it as quickly as possible; and their fears are not altogether groundless, for the wounds it inflicts are occasionally most serious,* and instances are not wanting of their proving fatal. The plan of treatment,

* Doctor Ratzky of Halmstad, in an official report to the Swedish College of Health, relates the following incident:—"A tall and stout-built fisherman from the parish of Eftra, fifty-five years of age, was brought into the hospital on the 26th August, 1832, having been stung by a great weever in the middle finger, which immediately caused excessive pain. Within an hour afterwards his arm, head, and chest became swollen, and the man continued to suffer excruciating torture. Difficulty of breathing, palpitation of the heart, headache, and a constant inclination to vomit supervened. Several small pustules appeared on his arm; anxiety and distress of mind added to his bodily pain; the wound became very offensive, and gangrenous, &c. &c. The patient was unable to leave the hospital until the 26th September."



W. W. Wright del.

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THE GREAT WEEVER.

Day & Son (Limited) Lith.



as recommended by the faculty, is to lay the wound open with a knife, and then to pour on it a continuous stream of cold water from a height until the heat and inflammation have subsided. But the Bohus fishermen, Ekström tells us, have a sovereign remedy of their own, and one universally had recourse to, viz., "to rip up the belly of the offending fish, which the unfortunate patient is forthwith made to swallow."

The Striped Surmullet (*Gulstrimmig Mullus*, Sw.; *Gulstribed Mulle*, Dan.; *Mullus Surmuletus*, Linn.), a fish common to the Mediterranean, is scarce, not only in our Skärgård, but in the Scandinavian seas generally, to the more southern of which it would seem to be confined. One does not, at least, hear of its being taken higher up than the Christiania Fjord. According to Kröyer—the most painstaking, observant, and accurate of all the ichthyologists whose works have come under my notice—it is occasionally met with in the lower parts of the Baltic. Its usual length with us is ten to twelve inches, but elsewhere it reaches a much larger size. In Sweden, as in other countries, this fish is highly valued for the table.

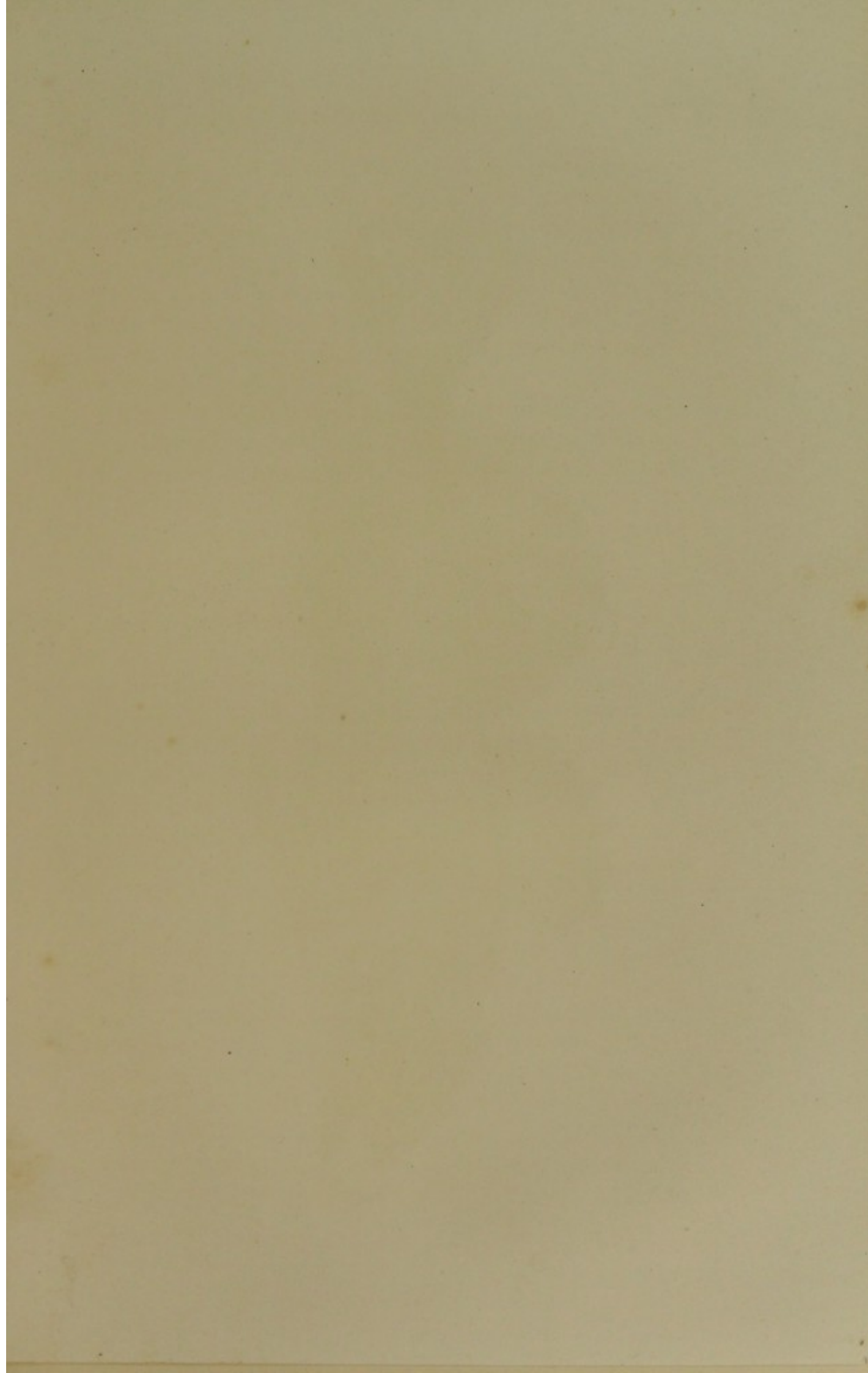
The Red Surmullet (*M. barbatus*, Linn.) is altogether unknown on the Scandinavian coasts; neither is it recognised by Danish naturalists.

The Grey Gurnard (*Vanlig Gnodning*, Knorrhane, Sw.; *Gnorr*, Norw.; *Graa Knur*, Dan.; *Trigla Gurnardus*, Linn.) is common in the Bohus Skärgård, and on the whole coast of western Scandinavia, from the Sound to beyond the Polar Circle. It is also an inhabitant of the Baltic, as high up at least as the province of Blekinge. Its usual length on the Swedish and Norwegian shores is from twelve to fourteen inches, seldom sixteen, but in other countries it seems to attain to a much larger size. It is believed to spawn about Midsummer. Its flesh

is good, and said to resemble that of the mackerel. The Swedish designation of *Knorrhane* or *Knorrtupp*, that is, murmuring or purring cock, is derived from the circumstance that when taken out of the water, it emits a sort of loud purr. This arises from the gill-covers being closely pressed together whilst the air that filled the cavity of the gills forces its way through them. The same sound, though less loud, is also observed in some other fishes, and from the like cause; but owing to the want of lungs and larynx, no sound answering to that of the higher order of vertebrata can possibly proceed from fish. In some parts of Sweden, particularly in Bohus-Län, the name of this fish is *Knot*, and it is remarkable that the Irish name, according to Yarrell, is *Knoud*, or *Nowd*. The Danish local designations, *Knoding* and *Gnoding*, seemingly from the same root, are no doubt diminutive forms, as Codling of Cod, &c.

Bloch's Gurnard (*Gnoding med Ryggfen-fläck*, that is, gurnard with spotted dorsal fin, Sw.; *Trigla Blochii*, Yarr.), smaller than the foregoing in size, is also pretty common in the Scandinavian seas, and specimens from both the Bohus Skärgård and the Sound are now in the Lund Museum. Little or nothing seems to be known of its breeding or other habits. It is not very many years since this fish found a place in the Northern fauna, and even at the present day ichthyologists would seem to entertain doubts as to the propriety of classing it as a species. Formerly it was, I believe, looked on as the young of the *Trigla Gurnardus*.

The Sappherine Gurnard (*Stor-fenad Gnoding*, or, great-finned gurnard, Sw.; *Röd Knur*, Dan.; *T. Hirundo*, Linn.) is the least numerous of the genus, as regards the Peninsula. In our Skärgård it was quite rare, but is, nevertheless, occasionally met with on the western coast, from the Sound to the Lofoden Islands, about lat. 68°,





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THE SEA-SCORPION.

or possibly still farther north. It is larger than the grey gurnard, attaining now and then a length of one and a half, or it may be two feet. It is said to spawn in July. "The young of this species, so far as I am aware," Nilsson remarks, "have never been found. They are probably dissimilar in appearance to the adults, and a description of them has perhaps been given under some other designation."

M. Malm describes, in the Transactions of "Scandinavian Naturalists," 1865, a new species of *Trigla*, under the name of *T. nigripes*, Malm—most nearly allied, he says, to *T. poeciloptera*, Cuv. & Val., and *T. lineata*, Linn., Yarrell—of which only one specimen has been found in the Bohus Skärgård.

The *Cottus poecilopus*, Heck. (*Sten-Simpa med fläckiga Bukfenor*, or, stone-simpa with spotted ventrals, Sw.), which is so like the *C. Gobio*, or River Bull-head, as to be hard to distinguish, was unknown on the western coast; but specimens have occasionally been taken in the eastern Skärgård, near Stockholm, where the water is brackish. Professor Sundevall, who was the first, I believe, to identify this fish in the Baltic, imagines it to be not uncommon in that sea.

The Sea-Scorpion, or Father-Lasher, of Jenyns [not Yarrell] (*Ulk, Röt-Simpa*, Sw.; *Almindelig* (*i. e.* common) *Ulk*, Dan.; *Cottus Scorpius*, Linn.), is about the most common of the genus in the waters of the Peninsula. On the eastern coast it is found as high up as the Gulf of Bothnia, and on the western as far as North Cape. It is confined solely to salt water, and would seem to be somewhat migratory in its habits. For years together these fish abound in certain localities, when all at once their numbers very greatly decrease, and it may not be until after the lapse of a long period that they revisit their old haunts. In the Baltic and Cattegat the usual length of

the Sea-Scorpion is from eight to ten inches; but on the coast of Norway it reaches a somewhat larger size. Bloch, indeed, tells us it has there been known to attain a length of four feet, though this is evidently a mistake, arising probably from his having confounded the *Lophius piscatorius* with this fish. The male is much smaller and more slenderly shaped than the female; and there is, also, great difference in colour, so that the fishermen sometimes imagine them to be different species. It is very difficult for any one who has not seen this fish during the spawning season, when its hues are the brightest, to conceive to himself the admixture of brilliant colours with which it, in other respects so ill-favoured, is at that time adorned. The reader, however, may form some idea of its beauty by reference to the annexed drawing by M. Wilhelm von Wright, faithfully taken from the living fish.

Its food during the summer consists chiefly of the smaller kinds of fish; but in the winter, when these fall short, it lives on crustaceans and molluscs. Few fishes can compete with it in voracity. It is on record that three roach, each nearly four inches in length, were found in the stomach of an individual only nine inches long. And its stupidity, or rather, perhaps, boldness, is on a par with its rapacity, for we are told that if it be poked with a stick when in the water, it will only make a slight movement forward, and then presently come to a standstill. It is further said, that if captured by the line (as frequently happens when fishing for codlings, &c.), and a portion of its fins be cut away to mark it, and afterwards thrown back into the water, it will frequently take the very same hook a few minutes subsequently, and once more be ready to undergo the like operation. The spawning season with the Sea-Scorpion is in December; but even towards the end of October it approaches

the shore, especially if sandy and studded with knots of sea-weed, grass, &c. Males and females are then together, but the latter preponderate in something like the proportion of ten to one; and they moreover go nearer to the shore than the males, who, indeed, are seldom seen on the spawning-ground. Hence it would appear as if the ova were impregnated prior to their deposit, and that connection between the sexes takes place in the deeps. The saw-like points on the inner side of the pectoral and ventral fins of the male would seem to be intended for grasping the female during the act of coition. How soon the roe is matured is difficult, if not impossible, to say, as it is deposited only shortly before ice is formed near the shore. It is not believed to breed until it reaches the length of six inches. Such at least is to be inferred from fish of a smaller size not being found on the spawning-ground. The young are thought to be of quick growth. The flesh of the Sea-Scorpion always retains a disagreeable taste. The male is looked on by the fishermen as poisonous, and is never eaten by them, but when captured is at once thrown back into the sea. The females are, however, usually eaten by the poorer classes, who find the truth of the old saw, "When no other fish are to be had, the Sea-Scorpion is the best." The liver is considered a delicacy. Throughout Denmark, Krøyer tells us, this fish is detested by the fishermen, "who evince their hatred by enlarging with a knife the already wide mouth with which Nature has provided it."

The Four-spined Father-Lasher (*Dwerg-Simpa*, or dwarf-simpa, Sw.; *Langtorned Ulk*, Dan.; *C. bubalis*, Euphras.) is pretty common both on the coast of Bohus and that of Norway. Formerly it was not supposed to inhabit the Baltic, but of late years specimens have not unfrequently been met with on the eastern shores of Sweden. It confines itself solely to salt water and, with

the exception of the River Bull-head (*C. Gobio*), is the smallest of the genus *Cottus*, its usual length being from four to five inches. The sexes differ somewhat in form and colour. As with the Sea-Scorpion, the male is rather less than the female; and in appearance, manner of feeding, &c., it assimilates closely to that fish. It lives chiefly on small crustaceans. Kröyer found its stomach full of a species of *Idotea*. According to Ekström and B. Fries, this fish spawns at the end of November and in December, but Kröyer supposes somewhat earlier. "At this time," we are told, "nature has lavished on it colours so surpassingly beautiful, that it is impossible sufficiently to admire or for the pencil to delineate them." Excepting as bait, the fishermen set little store on this fish, and either throw it away or give it to the pigs.

The *Cottus tricuspis*, Reinh. (*Taggrenig Simpa*, Sw.; implying that the *preoperculum* is armed with branched spines). This rare fish was not known in our Skärgård, but has been taken on the northern and north-western coasts of Norway. It is described as from eight to nine inches in length, and is said much to resemble in form the Sea-Scorpion, though the body is more tapering and the head shorter in proportion.

The Four-horned Cottus (*Horn-Simpa*, Sw.; *C. quadricornis*, Linn.). This fish was unknown to us on the western coast, but it is found in the Baltic, as far south at least as the island of Gotland, and as high up as the Gulf of Bothnia. It is distinguished as a species by the rough tubercles on its head, and hence its name. Pallas was of opinion that these warty excrescences were confined to adults, and wanting in those of less than nine inches in length; but Swedish ichthyologists, though admitting that the warts are not apparent in very young fish, conceive that they shoot forth at a much earlier period, and instance having seen specimens only three

inches long in which the warts were tolerably well developed. The usual length of this fish is about ten inches, though now and then met with still larger. Formerly it was looked on as pertaining solely to salt water, but this, or a variety of it, is now found to inhabit the Wetteren, and probably also others of the Scandinavian lakes. Its colours are much duller than in the *C. Scorpius* and *C. bubalis*, and tend to render it still more unprepossessing in appearance. As with both these species, the sexes are readily distinguished by a different conformation of the body, &c. The food of the *C. quadricornis* consists chiefly of crustaceans, especially the large *Idotea Entomon*, with which its stomach is oftentimes found filled; as also of molluscs and insects, but seldom small fish. It spawns in November and December. For the table it is considered the best of all the fishes of this genus, and though the flesh has a peculiar odour, not agreeable to every one, it may be converted, we are told, into a most palatable dish. The liver is more particularly prized. In Stockholm this fish is looked upon as a great dainty, and when exposed for sale in the market is "always skinned and decapitated."

The *Icelus furciger*, Malm, of which a single specimen, as it is supposed, has been captured in the Bohus Skärgård, is by M. Malm stated to be a new species of *Icelus*, which several authors have made a sub-genus of *Cottus*.

The Armed Bull-head (*Skägg-Simpa*, or, bearded simpa, Sw.; *Aspidophorus cataphractus*, Linn.) was found in our Skärgård, and elsewhere on the western coast of both Sweden and Norway. It inhabits besides the more southern portions of the Baltic. Its usual length is from six to seven inches, and it haunts sandy and grassy bottoms. In appearance and manner of living it much resembles the *Cotti*. This fish spawns in April and May, which, Nilsson remarks, "is somewhat singular, as the

greater part of the Cotti do not breed until autumn or winter." It would appear to be very prolific, Kröyer having found no less than 3,000 eggs in one that was two inches and a half in length, and these were of the size of small shot. Its flesh is white and well-tasted.

Two small Greenland species of the genus *Aspidophorus*, the *A. decagonus*, Bloch, and the *A. monopterygius*, Bloch, Swedish naturalists believe may not improbably be found on the northern coast of Scandinavia, though up to this time not identified.

The Bergylt or Norway Haddock (*Kungs-Fisk*, or, king-fish; *Röd-Fisk*, or, red-fish, Sw.; *Uer*, *Ouger*, Norw.; *Sebastes Norvegicus*, Cuv.), which frequents high latitudes, is somewhat scarce in the Bohus Skärgård and on the western coast of Sweden, but on that of Norway it is by all accounts tolerably common. It is said to attain a length of three feet, and is seldom met with excepting at a depth of from eighty to one hundred fathoms, where the bottom is rocky. It is believed to go in large shoals. But little is known of its breeding and other habits. Its flesh is white and firm, and is held in high estimation by the inhabitants.

Though the Bergylt lives habitually in very deep water, it would appear to be greatly affected by sudden convulsions of nature, as after tempests these fish are often met with in large numbers lying dead or dying on the shore, or floating on the surface of the water, and for the most part with their eyes started from the sockets and their stomachs protruding through the mouth. A similar effect is produced in them when drawn up rapidly by the line from a great depth. This phenomenon, which has puzzled many, is thus accounted for by the learned:—"This fish," they say, "which usually lives at the depth of 100 fathoms or more, is there constantly exposed to an enormous pressure, for which its whole organization is

adapted, whereby all the gases in its body are greatly compressed. When now it chances to meet with one of those strong oceanic under-currents that periodically, after the ebb and flow of the sea, cause the water at the bottom to rush upwards, thereby forming great eddies, it is rapidly borne to the surface, and the pressure being taken off, the air in the swimming-bladder and other parts of the body consequently forces the eyes from their sockets and the stomach through its mouth."

The *S. viviparus*, Kröyer (*Liten Kungs-Fisk*, i. e. little king-fish, Sw.), is more common than the foregoing in the Bohus Skärgård, but only occasionally visits the Sound. Its limits to the northward seem not at present ascertained. Its usual length in the Cattegat is said to be from eight to ten inches. Little is at present known of its manner of living; but that it is a voracious fish is to be inferred from the eagerness with which it seizes bait. As with some other fishes, there is reason to believe that intimate connection takes place between the sexes. Although Kröyer assumes the *S. viviparus* to be a distinct species, and is supported in this view by Ekström, Nilsson, I should remark, does not agree with them, stating that after careful examination and comparison he has come to the conclusion that it is no other than the young of the *S. Norvegicus*, or a smaller form of it, which, from inhabiting bays and less deep water, has, like the herring, become stunted in its growth. This matter, however, the learned must settle amongst themselves.

The *S. dactylopterus*, Delaroche; *S. imperialis*, Cuv. (*Blå-munt Kungs-Fisk*, or, blue-mouthed king-fish, Sw.; *Skjær-Uer*, Norw. [Bergen]). This species, which is common in the Mediterranean, has not hitherto been identified, so far as known, in the Bohus Skärgård or elsewhere on the Swedish coast; but on that of Norway, as high up as

Helgeland (lat. 65° to 66°), it is not uncommon, and is said to remain there all the year round. Krøyer surmises it to be intermediate in size between the *S. Norvegicus* and the *S. viviparus*. It is found at a depth of 100 to 120 fathoms where the bottom is rocky.

The Fifteen-spined Stickleback, or Great Sea-Adder (*Tång-Spigg*, Sw.; *Tang-Snarre*, Dan.; *Spinachia vulgaris*, Cuv.), though less common than the ten-spined (which, with others of the *Gasterostei*, is fully spoken of in my last work, "Scandinavian Adventures"), is found everywhere on the coasts of Scandinavia, as well in the North Sea as in the Baltic, and confines itself altogether to salt water. It runs from five to six inches, but at times exceeds seven. Its chief resorts are grassy bottoms amongst seaweed, and hence its Swedish and Danish names. Except during the spawning season, which Krøyer supposes to be in the month of June, it seldom seeks the shallows. It is never eaten, but either boiled down into oil or converted into manure. At the village of Mölle, in Scania, it is called the *Wäder-fisk*, or, weather-fish, and is made use of to foretell the coming wind. For this purpose the dry body of the fish is suspended horizontally by a thread attached from its back to a rafter of the fisherman's hut, and from the quarter to which its head points it is firmly believed the wind will come.

The Maigre (*Hafs-Gös*, Sw.; *Sciæna Aquila*, Cuv. & Val.), whose proper home is the more southern parts of the Mediterranean, has only in one instance been identified in the Scandinavian seas. This was in 1852, when a specimen, five feet in length, and weighing seventy-two pounds, having become entangled amongst the weeds on the coast of Scania, was caught with boat-hooks and slaughtered by the fishermen, and is now preserved in the Lund Museum.

The Common Sea-Bream (*Pagell med fläck*, or, with spots, Sw.; *Pagellus centrodontus*, Cuv.). This species, which more abounds in the Mediterranean than elsewhere, and which may at once be distinguished in the adult by the large black spot on the shoulder, has been occasionally taken off the western coasts of both Sweden and Norway, and mostly in the summer time. According to Kröyer, two specimens have also been met with on the Danish shores (one of them nineteen inches in length), both of which are now in the Copenhagen Museum. Little seems to be known in the North of the breeding or other habits of this fish.

The Black Sea-Bream (*Grå Hafs-Ruda*, or, grey sea-crucian, Sw.; *Cantharus griseus*, Cuv. & Val.), which is chiefly met with in the more southern parts of the Atlantic, is also now and then captured in the Scandinavian seas, as well in the Christiania Fjord as on the southern coast of Sweden, a specimen from whence, sixteen inches in length, is now in the Lund Museum.

Ray's Sea-Bream (*Silfver-grå Hafs-Braxen*, or, silver-grey sea-bream, Sw.; *Brama Rayi*, Cuv. & Val.). The proper home of this fish is the Mediterranean, in parts of which sea it is very numerous. It is somewhat rare on the coasts of Sweden and Norway; some few have, however, been captured there, one amongst the number in the Bohus Skärgård, another on the coast of Scania, but for the most part they have been cast on shore during severe storms, in one instance as far north as Bergen. Kröyer speaks also of three that within the space of thirty years had been thus stranded on the shores of Zealand, two of which were about twenty inches in length, and on the authority of Faber, of another that was taken off the coast of Pomerania in the autumn of the year 1826.

The *Pterycombus Brama*, B. Fries. The only known

specimen of this remarkable fish, which greatly resembles the *Brama Rayi*, was captured in the vicinity of Hammerfest (situated not far from the North Cape), in 1832, and brought down from thence by a sea captain. It is now preserved in the Stockholm Museum.

The Common Mackerel (*Makrill*, Sw.; *Makrel*, Norw. and Dan.; *Scomber Scombrus*, Linn.) is very plentiful during summer in the Bohus Skärgård, as also on the western coasts of both Sweden and Norway. Kröyer tells us that lat. 64° may be considered its northern limits, but M. Lovén seems to have met with stray specimens much farther north. It is also found, though it would appear only occasionally, in the Baltic, but never so high, I believe, as the Gulf of Bothnia. Its usual length is from twelve to fifteen inches, but it has been known to reach even two feet. It is somewhat migratory in its habits. Some surmise its proper home to be the Atlantic, and others the Arctic seas, but the learned in Denmark and Sweden are inclined to believe that its wanderings do not extend farther than from the deeps of the North Sea, where it winters, to the neighbouring coast, where it spawns. Be this as it may, their first appearance in the spring (usually the early part of May) is off the coast of Norway, and a few days afterwards they reach the Cattegat. The smaller shoals are said to be the first to enter the Skärgård, and the larger follow at an after-period. "During these their migrations," says Ekström, "they always swim near the surface, and in preference shape their course where the current is strongest, and always against the wind, especially if blowing hard. The approach of the shoal is observable from a considerable distance, owing to the water being in a state of turmoil. The fishermen furthermore say, that in the night-time, especially if very dark, the bodies of these fish give forth a sort of phosphorescent light, which may be seen from

afar. Their stay on the coast is of some duration, and it is not until September or October that they take their departure for the deeps."

Harmless as the Mackerel is in appearance, it is said to be dangerous for the swimmer to get amongst a shoal. In two several instances, after having swum unattended far out to sea, I have been told by the lookers-on that I had exposed myself to considerable risk. How far there may really be danger on such occasions I know not; but cases are said to be on record of individuals having been beset by these voracious fish, and reduced to something like mincemeat.

If we are to believe the fishermen, the Mackerel passes the winter months half buried in the mud at the bottom of the sea, where, indeed, they assert having speared it, and that it is then *quite blind*; moreover, that on its first appearance on the coast in early spring, the thick *film*, which then covers its eyes, prevents it from distinctly seeing the bait. Ekström and others, however, treat this reputed blindness of the Mackerel as a fable, and say that the reason the fish does not bite equally freely in the spring as afterwards, is less attributable to the film in question than to want of appetite owing to excessive fatness. To the same cause they partly ascribe the film itself, for this as soon as the fish becomes lean—which happens soon after its arrival on the coast—disappears altogether or becomes thinner; but when again the spawning season is over, and the Mackerel regains flesh, the film once more thickens, and by the time the fish retires to its winter quarters, is just as thick as in early spring.

The Mackerel spawns towards the end of June, but little seems to be known regarding its "Lek." It is a most prolific fish, as may be inferred from the immensity of the shoals and the abundance of the ova, zoologists having counted between 500,000 and 600,000 in a

single female. The young are of quick growth, but are believed to be incapable of breeding until they have attained a length of ten inches; for in fish of less size the milt and roe are not found to be matured. In Sweden, as in England, the Mackerel is highly esteemed for culinary purposes, and is eaten either fresh, boiled in salt water, salted, or smoked. The taste is very delicious, and comes nearer to that of the Salmon than any other fish.

The Spanish Mackerel (*S. Colias*, Gmel.) has as yet not been identified in these seas, although it is thought probable it may have been overlooked.

The Common Tunny (*Makrill-Störje*,* *Thon-Fisk*, Sw.; *Makrel-Störje*, *Springer*, Norw.; *Scomber Thynnus*, Linn.; *Thynnus vulgaris*, Cuv.), which claims the Mediterranean as its proper habitat, is somewhat rare in the Bohus Skärgård, and elsewhere on the western coast of Sweden; but on that of Norway it would seem to be more common. Ström, indeed, relates that in the district of Söndmör (about lat. 62°), into the fjords of which the Tunny drives the herrings in the summer, a single man is in the habit of killing from ten to fifteen in the course of the season. The highest northern range of this species would seem to be lat. 64°, or perhaps somewhat higher. It is also occasionally met with in the more southern parts of the Baltic. The Tunnies captured in the Scandinavian seas have mostly been pretty large, varying in length from eight to ten feet; but in more genial climes it measures, we are told, fifteen feet, and weighs as much as 1,800 pounds.

A new species of Tunny—as stated in the Proceedings of the Royal Academy of Sciences, Stockholm, 1863—has

* The word *Störje*, or *Större* (implying larger), as applied to this and some other Norwegian fishes, “appears,” says Professor Sundevall, “only to be used as an addition to another name, and to a species not often met with, to prevent the two from going by one and the same appellation.”

recently been added to the Scandinavian fauna; viz., the *T. Thunnina*, Cuv. & Val., of which a single specimen, two feet nine inches long, and weighing twenty-two pounds (the only one, it is said, ever before identified north of the Mediterranean), was caught near Malmö, in Scania, in 1857.

The work just quoted also records the addition of another fish, nearly allied to the Tunnies, to the same fauna; viz., the Plain Bonito (*Auxis vulgaris*, Cuv. & Val.), an individual, seventeen inches in length, having been captured off the coast of Scania, in 1863; it is now in the Lund Museum.

The Sword-fish (*Svärd-Fisk*, Sw.; *Sværd-Fisk*, Norw. and Dan.; *Xiphias Gladius*, Linn.), which almost competes with the Tunny in size, and whose home is also in the Mediterranean, is rare in the Bohus Skärgård and on the western coast of Norway. But on the more southern shores of Sweden, as also in the Danish seas, it is not so very uncommon. Occasionally, also, it finds its way to the lower parts of the Baltic, to the coasts of Mecklenburg, Pomerania, and Prussia. According to Nilsson, "it avoids rocky shores, confining itself chiefly to such as are low and sandy." The largest of the specimens that have been captured, or stranded, on the Scandinavian coasts measured a little more than ten feet from the tail to the extremity of the sword.

The Scad, or Horse Mackerel (*Tagg-Makrill*, *i. e.* spined mackerel, Sw.; *Stökker*, *i. e.* pricker, Dan.; *Caranx Trachurus*, Cuv.), a fish properly belonging to more southern waters, is not rare in the Bohus Skärgård and elsewhere on the western coast, from the Sound to the southern portion of Norway. Krøyer considers its range to the northward to be about the 60°. It is not thought to inhabit the Baltic. Its usual length would seem to be about one foot, but individuals have been found

that have attained seventeen inches in length. Swedish ichthyologists tell us the Scad is seldom met with otherwise than alone, or nearly so; but Krøyer says that, some years ago, a Danish fisherman, to his own knowledge, captured so many one autumn, that they were sold by the score. "A sufficient proof," the Professor adds, "that they do not, as asserted, always appear singly in the Cattegat."

Of the breeding habits of this fish, little or nothing is known in Sweden; but Krøyer tells us he has every reason to believe it spawns at the end of May or beginning of June, that is, about the same time as the Common Mackerel. He states, further, that from the young of the Scad being not unfrequently captured in Swedish and Danish waters during the autumn, at which time they are from four to five inches in length, taken in connection with the period of the year when the parent fish carry on their "Lek," no other conclusion can be come to than that it deposits its roe in the Cattegat. The flesh of the Scad, which somewhat resembles that of the Mackerel, but is drier and more bony, is in no great repute in Scandinavia as an article of food.

The Opah, or King-fish (*Glans-Fisk*, *i. e.* shining fish, Sw.; *Laxe-Størje*, Norw.; *Lampris guttatus*, Retz.), whose proper habitat is believed to be the European portion of the Atlantic, especially its more northern parts, is very rare in the Scandinavian seas; it has, nevertheless, been taken, though very sparingly, along the whole line of coast from the Sound to near the North Cape, which would seem to be about its limits to the northward and eastward. It has been long known in Norway, Peder Claussen, who flourished more than two centuries ago, having mentioned it as frequenting all the northern and western coasts of that country. None of the specimens of this fish that have hitherto been captured in the Scandinavian waters

have, so far as is recorded, much exceeded three feet in length, but it attains a much greater size. Mention, indeed, is made of one captured on the Scottish coast measuring five feet, and weighing 154 pounds. Nothing seems to be known regarding the breeding or other habits of this beautiful and rare fish. But this is not surprising, as it is believed to confine itself almost solely to the deeps; and we, in consequence, seldom make its acquaintance, unless it be cast on shore by storms; nor has any one as yet, I believe, seen the young of the Opah.

The Vaagmaer, or Deal Fish (*Sölv-Qveite*, *i. e.* silvery holibut, Norw.; *Trachipterus Bogmarus*, Cuv. & Val.). This singular fish, whose proper home would seem to be the northern seas, is occasionally met with on the coasts of Finmark, but never elsewhere as regards Scandinavia. It is, however, considered rare, and is only seen, I believe, during the autumn, when it is either captured in the herring-nets or washed ashore during storms. At other times it is supposed to live in the deeps. In one instance, Kröyer tells us, it has been met with on the coast of Jutland, between the town of Frederikshavn and the Scaw. It swims in the same manner as the Flounder, and when at the bottom, always lies on its left side like that fish. The Vaagmaer attains a great size, six to ten feet in length, it is said. According to the fishermen, it is, when alive, excessively obese and rounded on the sides, but the fat is of such a liquid and oily nature that it runs out of the fish as soon as dead, making him appear flat and attenuated. The Vaagmaer is sometimes seen by the fishermen when lying at the bottom of the sea in several fathoms water, when it looks like so much burnished silver. On these occasions the men sink a so-called *dragg* (such as is used to recover the bodies of dead seals), and affix it to the fish—which is the more readily accomplished owing to its swimming badly, and

being far from quick in its movements—when they haul it into the boat.

Nilsson, I should remark, does not consider the fish in question identical with the Iceland specimen described and figured by Yarrell. The two sides are, the Professor says, different. The pupil of the eye is vertically oval; the pectorals are differently placed; and the rays in the long dorsal fin are 160; and he has therefore described it as specifically distinct, under the name of *Trachypterus arcticus*, Nilss.

The *Gymnetrus Grillii*, Lindroth (*Sild-Konge*, or, herring-king, Norw.), has as yet only been met with on the northern and western coasts of Norway, and that even less seldom than the Vaagmaer, to which it would seem to be nearly allied, though smaller in proportion to its length. Five undoubted specimens of this curious fish were taken towards the end of the last century in the Norwegian seas, and all were of a large size; one of them measuring no less than forty-two feet in length! This had imprisoned itself between two piles forming part of an old pier in the Bergen Fjord, in 1791. Only a single specimen, and that much mutilated, seems to have been preserved. The fish was cast ashore on the island of Hitteren, off Drontheim (driven there, it was supposed, by a shark or other monster of the deep), about fifty-five years ago, and was afterwards sent to the Stockholm Museum by Dr. Lindroth. According to his description, taken from the fresh fish, it was shaped as a sword-blade, thin, and tapering towards the tail. Its length was eighteen feet, depth fourteen inches, and thickness (at the most) three inches and a half. It weighed 180 pounds. The colour was silvery grey; body covered with small excrescences; head compressed and small; each ventral consisted of a single ray of five feet in length, rounded at the root. The dorsal fin extended along the whole back,

being at the greatest height, which was near the head, six inches; in the middle four, and less towards the tail, with 406 rays. The tail fin was broken off. Of the breeding and other habits of this fish nothing whatever seems to be known.

The Grey or Common Mullet (*Grå Multe*, or, grey mullet, Sw.; *Almindelig* [*i. e.* common] *Multe*, Dan.; *Mugil Capito*, Cuv.) is scarce in the Bohus Skärgård (Ekström having met with only four specimens during his long residence there), as also elsewhere on the western coast of Sweden. On that of Norway it would seem to be more common, especially in the vicinity of Bergen, where we are told it is a *stånd-fisk*, or, stationary fish; that is, one met with all the year round.

The Thick-lipped Grey Mullet (*Tjock-läppad Multe*, Sw.; *Tyk-læbed Multe*, Dan.; *M. Chelo*, Cuv.) is also, according to Ekström, an inhabitant of our Skärgård, though now, he says, less frequent than formerly. Occasionally one or both of the species named (for the matter seems not quite clear) find their way into the Sound and the Danish waters. Valenciennes, indeed, informs us on the authority of Fischer and Georgi that these fish are met with in the Baltic, on the coast of Livonia. But Kröyer conceives there must be some error in this statement, and that some large species of carp, such as the *Cyprinus Idus* or the *C. Jeses*, has been mistaken for it. On the south-west coast of Norway, however, the Thick-lipped Mullet would appear to be pretty common, and to remain at all seasons of the year. It is said to spawn about Midsummer. This fish, Dr. Günther says, is not identical with the Mediterranean *M. Chelo*, Cuv., but a separate species, for which he has proposed the name of *M. septentrionalis*. Kröyer inclines also to think that they are specifically distinct.

The Shanny (*Pholis lævis*, Flem.; *Blennius Pholis*,

Linn.) has hitherto only been found near Bergen, whence specimens have been sent to the Stockholm and Lund Museums. But as this fish has been captured off the island of Heligoland, both Nilsson and Kröyer seem to think it has probably been overlooked in the intermediate seas. It is said never to exceed six inches in length, and to spawn in June. It is so tenacious of life as to have been known to live for thirty hours in a box without water. It is even asserted that if put in a damp place, or amongst wet grass, it will exist for days together.

The Crested or Yarrell's Blenny (*Tång-Snärla*, Sw.; *Blenniops Galerita*, Nilss.; *Blennius Yarrellii*, Valenc.) has been found in the Bohus Skärgård by M. Malm. On the western coast of Norway, in the vicinity of Bergen at least, it would not seem to be very rare. As yet this fish has not obtained a place in the Danish fauna. Nothing seems to be known of its habits.

The *Lumpenus maculatus*, B. Fries (*Trubb-stjertad Lång-barn*, or, blunt-tailed ling's-child, Sw.). This little fish, useless to the fisherman, but of value to the ichthyologist, was first discovered, in 1835, by Professor B. Fries in the Bohus Skärgård, where it appears not to be very scarce, as every subsequent year it has been found there in the months of October, November, and December. Though not at present identified in other localities, there can be little doubt that this fish (which is an inhabitant of the Greenland seas) exists elsewhere on the western coast of Scandinavia. From its small size, seldom exceeding six to seven inches in length, and from the shape of its body, somewhat resembling that of the Ling (*Långa*, Sw.), it has obtained amongst the fishermen, the above designation of *Lång-barn*. It is somewhat solitary in its habits, never being observed in shoals, and seldom more than an odd one being taken in the nets. With the exception of the spawning season, when it approaches the shore,

it would appear to live chiefly in deep water. Its food is said to consist of crustaceans and other small animals living at the bottom; nevertheless the stomachs of these fish are generally empty at the time of capture. It is said to spawn late in the autumn, and Swedish naturalists seem to think that they regularly pair. It is very hard-lived; and if the water be changed daily, will exist for a long time in a small tub or other vessel. When thus imprisoned, it keeps for the most part at the bottom, its body always straight, and its pectoral fins extended, so that it rests as it were on their extreme points, which to a certain extent have a digital appearance, and act as feet during its slow creeping-like progression.

The *Lumpenus nebulosus*, B. Fries (*Spets-stjertad Lång-barn*, or, sharp-tailed ling's-child, Sw.), has only in one instance, I believe, been captured in the Bohus Skärgård, but on several occasions in the neighbouring Christiania Fjord. On the western and northern coasts of Norway, however, it is much more common, but nowhere plentiful. In appearance this fish, also an inhabitant of the Arctic seas, differs but little from the *L. maculatus*, excepting in the shape of its tail, and in superior size; for though usually of from nine to ten inches in length, it measures at times nearly a foot. It is said to spawn about Christmas.

The Spotted Gunnel, or Butterfish (*Tejste-Fisk*, Sw.; *Gunnellus vulgaris*, Flem.), is common on the western coast of both Sweden and Norway, from Finmark to the Sound; and is also found in the more southern parts of the Baltic. This fish supplies the chief sustenance for the Black Guillemot, or *Tejste*, and hence its Swedish name. From its peculiar shape it is also called the *Svärd-Fisk*, or sword-fish. In the Scandinavian waters its usual length is from six to nine inches. One seldom sees it stretched out at full length, but commonly more or less coiled up.

This explains why it is so often found in empty mussel-shells brought up from the bottom. It spawns at the end of October, or it may be somewhat later. It is most tenacious of life, and will survive long when out of its native element.

The Viviparous Blenny, or Eel-Pout (*Kussa*, *Ålkussa*, Sw.; *Zoarces viviparus*, Cuv.), is likewise common, both on the eastern and western shores of Scandinavia, as high up as the vicinity of the North Cape. Its usual length is from ten to twelve inches, but at times it attains sixteen or more. The female is generally larger than the male. From olden times this fish has been known to produce living young ones, which circumstance, and its resemblance to the eel, gave rise to the notion that it was its parent. To this very day the German and Danish popular names, *Aalmutter* and *Aalemoder*, signify the mother of the eel, and the Swedish appellation, *Ålkussa*, has a similar meaning. From its favourite resorts being stony bottoms covered with *Tång*, a kind of seaweed, taken in connection with its somewhat resembling the *Lake*, or *Burbot*, it also goes by the name of the *Tång-Lake*. It is found everywhere, but sparsely, and seldom many together. Its food consists chiefly of molluscs, crustaceans, etc., as also of small fishes. Its flesh is firm and white, and in taste not unlike that of the eel; but in many places is not eaten, owing to the green colour of the bones.

The Viviparous Blenny breeds at no particular time. At almost all seasons of the year, at least, one meets with females ready to produce, and at the same time others whose ova are still diminutive. It is in December and January, however, that one most commonly finds parturient females. This faculty of bringing forth living young ones leads to the supposition that actual coitus takes place between the sexes, and that the eggs are impregnated whilst still in the body of the parent. The

fecundity of this fish is great. Ekström dissected a female twelve inches and a half in length, which contained 196 young, each one inch and a half long; of these 75 were loose in the ventral cavity, and the rest enclosed in the foetal sac. In another female, thirteen inches in length, the young numbered 262. The Viviparous Blenny would seem to be capable of propagating its species at an early period, as ova have been found in some six inches in length. The males are less common than the females.

The Sea Wolf (*Haf-katt*, i.e. sea-cat, Sw.; *Anarrhichas Lupus*, Linn.), which would seem to belong to high northern latitudes, is found everywhere on the western coast of Scandinavia, from near the North Cape to the Sound; occasionally also, according to Krøyer, in the more southern parts of the Baltic. In Iceland, where it is represented as abounding, it is described by Fabricius and others, as of migratory habits; but this character can hardly apply to it as regards Scandinavia, where it is caught all the year round, though sparingly. According to Swedish and Danish zoologists, it attains four feet and upwards in length, but our English authorities, probably with some exaggeration, say six to eight feet. Its spawning season would appear to be May and June, when more are captured than at other periods.

Many wonderful stories of the Sea Wolf have been handed down to us from ancient times, when, in consequence of its ferocious cat-like-looking head and formidable teeth, it was greatly feared. "Terrible as the shark," says Hollberg, "he is a fearful destroyer of the finny tribe, amongst which he commits equally great ravages as the wolf, whose name he bears, amongst the poor defenceless herds."

The generic name *Anarrhichas*, signifying climber, it should be observed, was first applied by Gesner, in consequence of the prevalent belief that this fish was in the

habit of clambering up cliffs, etc. ; and the specific designation of *Lupus* was retained by Linnæus in remembrance of its old name *Lupus marinus*, or Sea Wolf, under which it was generally known and dreaded. The real fact is that the Sea Wolf, instead of being a regular "Thalabar," is one of the most innocuous of fishes, living chiefly on crustaceans, mussels, cockles, sea-urchins, and sea-stars. A large portion of these are affixed to the sides of rocks, and to detach, and afterwards to crush them, its long, pointed, and crooked front teeth are admirably adapted. To be convinced of this being the case, you have only to examine the remarkable formation of its teeth, masticatory muscles, and short and closely united jaws, which do not admit of the extension that is characteristic of predatory fishes proper. The organization of its mouth shows it, on the contrary, to be an animal that lives on hard substances, which must be crushed prior to being swallowed. It is difficult to conceive a crushing-machine more suitable than the jaws of this fish, where reducing hard substances into small particles is not required. The wonderful power with which the jaws act becomes apparent on opening the stomach, where pieces of hard-shelled mussels are found in abundance. Though the Sea Wolf is in the main harmless, yet it must be admitted that it is sometimes taken by the same hook on which another fish had previously fastened, so that it cannot be altogether exempted from attacking and devouring the piscatory tribe.

Although the Sea Wolf has a very unprepossessing appearance and disagreeable odour, it is eaten by the Bohus fishermen, more especially the liver, which is considered quite a dainty. In some localities, prior to being brought to market, the front part of its head, in a line with the eyes, is cut away ; not, however, as English naturalists would seem to imagine, for the purpose of

diminishing its unsavoury smell, but, as I take it, from some superstitious feeling of a somewhat similar kind to that which prompts the Swedish sportsman (as mentioned in the "Field Sports of the North of Europe") to decapitate the hare before bringing it into the house.

Of the genus *Gobius*, eight species are identified by Swedish ichthyologists as more or less common on the coasts of Scandinavia, viz. :—

1. The Black Goby (*Svart Smörbult*, Sw. ; *Sort Kutling*, Dan. ; *G. niger*, Linn.) is pretty abundant in the North Sea and the Baltic, especially on rocky shores, for on those that are sandy it seems not to thrive. On the western coast it attains six inches in length, but on the eastern, where the water is brackish, seldom more than three inches.

2. The Freckled or Spotted Goby (*Hvitaktig Smörbult*, or, whitish goby, Sw. ; *Hvid Kutling*, Dan. ; *G. minutus*, Gmel.) would also seem to be common in all the Scandinavian seas, but never grows so large in the Baltic as on the west coast. The specific name, *minutus*, has been given in reference to the size of this fish as compared with the *G. niger* only, for, next to the latter, it is about the largest of the genus, as recognized in the Peninsula.

3. The Slender Goby (*Spets - stjertad Smörbult*, or, sharp-tailed goby, Sw. ; *G. gracilis*, Jenyns) is very rare in the Scandinavian seas. Only a single specimen, indeed, seems hitherto to have been captured, and that at Gullmars Fjord, in the Bohus Skärgård. It is now preserved in the Stockholm Museum.

4. The Double-spotted Goby (*Sju-strålig Smörbult*, or, seven-rayed goby, Sw. ; *Topletted Kutling*, Dan. ; *G. Ruthensparri*, Euphras. ; *G. bipunctatus*, Yarr.).—This species is abundant in the Cattegat and North Sea, and high up on the western coast of Norway.

5. *Gobius Nilssonii*, von Düben & Korén (*Två-*

strålig Smörbult, or, two-rayed goby, Sw.), which may be distinguished at once from any other species by the anterior dorsal fin with two rays only, and by the posterior dorsal as well as the anal fin having twenty level rays. Of this fish several specimens have been taken, in summer as well as in winter, off the west coast of Norway, in some thirty fathoms water. When brought up (in a sort of trawl-net), they were found embedded in the stalks of *Tång* (*Fucus*), or in the empty nests of the *Chaetopterus Norvegicus*. Their length was $1\frac{1}{4}$ to $1\frac{2}{3}$ inches, and from appearance they were very young, full-grown specimens not having as yet been captured.

6. *Gobius Stuvitzii*, von Düben & Korén (*Fem-strålig Smörbult*, or, five-rayed goby, Sw.), is perhaps identical with the White Goby (*G. albus*, Parn., Yarr.), though M. Malm is of a different opinion. M. Stuvitz obtained several of these fish near Bergen, in the month of December; they were $1\frac{1}{4}$ to $1\frac{2}{3}$ inches in length, and, from their bodies being quite transparent, there was every reason to believe that they were very young. Irregular rows of dark spots were noticeable on the bodies of this, as well as the last-mentioned species.

7. *Gobius albus*, Parnell, Yarrell, has been found by M. Malm, he says, in the Bohus Skärgård.

8. *Gobius pictus*, Malm. Of this fish specimens have been taken, in 1852 and 1861, on both occasions in the Bohus Skärgård by M. Malm, who describes it as nearly allied to *G. minutus*.

Kröyer admits but three of the above-named species in the Danish fauna, viz., the *G. niger*, the *G. Ruthensparri*, and the *G. minutus*; but he has added one of his own (*G. microps*, Kröy.), which is, however, founded on a single specimen, and which, he says, stands in close relation to the *G. minutus*.





W. von Wright del.

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THE GEMMEOUS DRAGONET.

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CHAPTER XXXI.

The Dragonets.—The Common Angler.—The Wrasses.—The Gar-Fish.—The Smelts.—The Herring.—The Sprat.—The Pilchard.—The Anchovy.—The Cod and others of the Gadi.—The Hake.—The Lings.—The Rocklings.—The Torsk.—The Forked Beards—And other Acanthopterygious and Malacopterygious Fishes allied to them.

THE Gemmeous Dragonet (*Vanlig Sjö-kock*, Sw.; *Callionymus Lyra*, Linn.), so called from its brilliant colours, of which some idea may be formed by the accompanying illustration taken from the living fish by M. Wilhelm von Wright, was found, though sparingly, in our Skärgård, as also on the western coast, from the Sound to Drontheim, lat. 63°. According to Linnæus, it is also met with in the Baltic, but Kröyer seems doubtful on this point. From its extraordinarily high dorsal fin, suggesting the idea that the same use can be made of it by the fish as by a bird of its wings, the fishermen on the coast of Bohus, and that of Norway, call it the *Flyg-fisk*, or flying-fish. The male is considerably larger than the female, measuring, when full grown, from ten to twelve inches in length, whereas the latter seldom attains more than

eight or nine. It is nowhere found in numbers together, thereby giving reason to suppose it lives alone or in pairs. From the shape of its body it would seem to be slow in its movements, and of a sluggish disposition, with which supposition all we know of its habits agrees. It dwells in deep water, probably where the bottom is soft, and only comes near the shore on the approach of the breeding season. Both from its conformation and manner of living, Swedish ichthyologists imagine it to live in monogamy. It is said to be very tenacious of life, and to exist very long out of the water. Its food consists of such small prey as it can secure. One commonly finds in its stomach several kinds of small crustacea and univalve testacea, large quantities of the crushed shells of these animals, closely packed together, being often found in the thin intestinal canal. Its flesh is white and palatable; but being included amongst fishes tabooed by the fishermen, it is not sought after, and, when accidentally captured by nets or otherwise, is usually cast overboard.

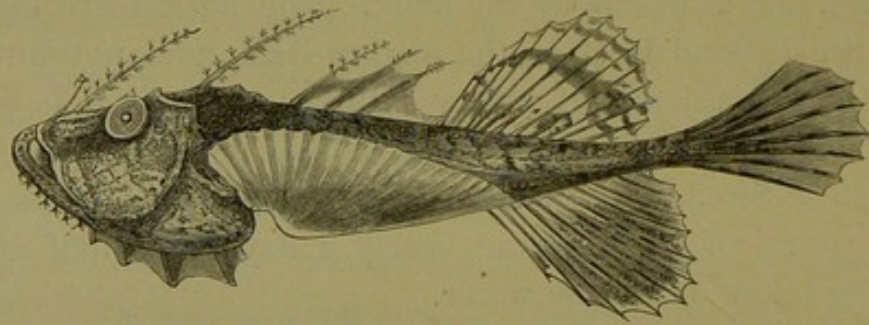
The *Callionymus maculatus*, Rafin. (*Fläckig Sjö-kock*, or, spotted dragonet, Sw.), pretty common in its proper home, the Mediterranean, is very rare in the Scandinavian seas, only two specimens having hitherto been taken, viz., one in the Sound in 1830, and the other in the Bohus Skärgård, in 1836; both were males, the females not having as yet been met with. It does not appear to be the same species as that depicted and described by Yarrell, under the name of the Sordid Dragonet (*C. Dracunculus*, Linn.). It is much smaller than the *C. Lyra*, probably not much exceeding six inches in length. The habits of both would seem to be very similar.

The Common Angler, Fishing Frog, or Sea Devil (*Vanlig Marulk*, Sw.; *Paddefisk*, Norw.; *Hav-taske*, i.e. sea-purse, Dan.; *Lophius piscatorius*, Linn.), was not uncommon in our Skärgård, and on the western coast of

Scandinavia, from the Sound to the North Cape, but I am not sure of its having been identified in the Baltic. According to Kröyer, it attains a length of six feet, with a mouth of such extraordinary capacity as to take in substances of the size of a bushel basket. For the most part it lives at the bottom, and often at a very great depth, where it lies concealed amongst seaweeds, which it much resembles in colour. Here it sets in motion its tendrils, not unlike worms in appearance, and thus lures the holibut and other fish that habitually live at the bottom, when they are quickly swallowed up by the creature. Hence by the ancients, it was called *Rana piscatrix*, or fishing frog. Little or nothing seems known regarding the breeding habits of this fish. It is only occasionally captured; sometimes in nets along with other fishes, and at others by the hook. The largest are taken on the Jutland Reef in the Skager-Rack, and not unfrequently at a depth of ninety fathoms. Its flesh is said to be palatable, but, from prejudice, is seldom if ever eaten in Sweden. It is very hard-lived, and instances are on record of its surviving nearly a day and a half after being taken out of the water.

The fishermen entertain many curious superstitions regarding the Common Angler. Amongst the rest, that should it be captured by a vessel engaged in the "deep-sea fishery," some one of the crew is, in consequence, "*feg*," or doomed to die shortly. They, therefore, seldom take it on board, but for the most part sever the line, and let it go away with the hook. Otherwise, when they have hauled it up to the surface of the water, they cast a heavy stone into its distended and capacious jaws, and allow it, thus ballasted, to sink to the bottom. Hence the largest specimens, which are always taken far out to sea, are seldom or never brought to land, so as to serve the purposes of science.

Besides man, it has other foes. Krøyer relates that when on one occasion, a fisherman of his acquaintance was about to row to land, he observed an immense shark—probably a specimen of the *Scymnus borealis*, Scoresby—floundering on the surface of the water. The men (for there were several in the boat) rowed close up to the monster, without its attempting to get out of the way, and one of them was bold enough to strike it on the head with an oar, the only weapon at hand, which rendered it senseless. Afterwards they towed it ashore, and on ripping open its belly, found, to their astonishment, within it a very large Sea Devil, the bulk and the struggles of which had, doubtlessly, reduced the Shark to the helpless state in which it was found.

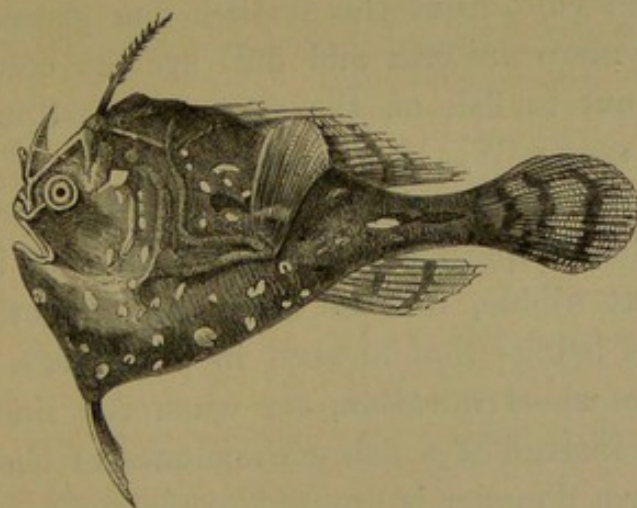


THE LOPHIUS EURYPTERUS.

The *Lophius eurypterus*, von Düben & Korén, is very rare in the Scandinavian seas, only three specimens having as yet been obtained, and all on the west coast of Norway. No mention is made by Swedish ichthyologists of its inhabiting the Baltic, nor does Krøyer include it amongst the Danish fishes. This diminutive species (neither of the specimens spoken of exceeding four inches in length) may, it is said, always be distinguished by the large pectorals, much more broad than long, and the ventrals spread out like a fan, with six rays. But after

all, it is perhaps doubtful if this fish, as a separate species, really exists, for Dr. Günther, to whom I have submitted the above drawing, taken from the Transactions of the Royal Academy of Sciences, Stockholm, 1844, Fig. 2, pronounces it to be no other than the young of the Common Angler.

The *Batrachus borealis*, Nilss., which in many respects resembles the Common Angler (and which Nilsson surmises may be identical with the *Gadus Tau*, Bloch; *Batrachus Conspicillum*, Valenc.), has been added to the Scandinavian fauna from a single specimen, eight inches in length, said to have been taken in the Cattegat near Kullen. But it has lately been questioned whether this fish be really entitled to this distinction, it being reported that the specimen alluded to, now in the Lund Museum, instead of having been captured on the Swedish coast, was purchased from the captain of an American ship!



THE CHIRONECTES ARCTICUS.

The *Chironectes arcticus*, von Düben & Korén. Only a single specimen of this fish, and that less than two inches in length, has as yet been met with off the Scan-

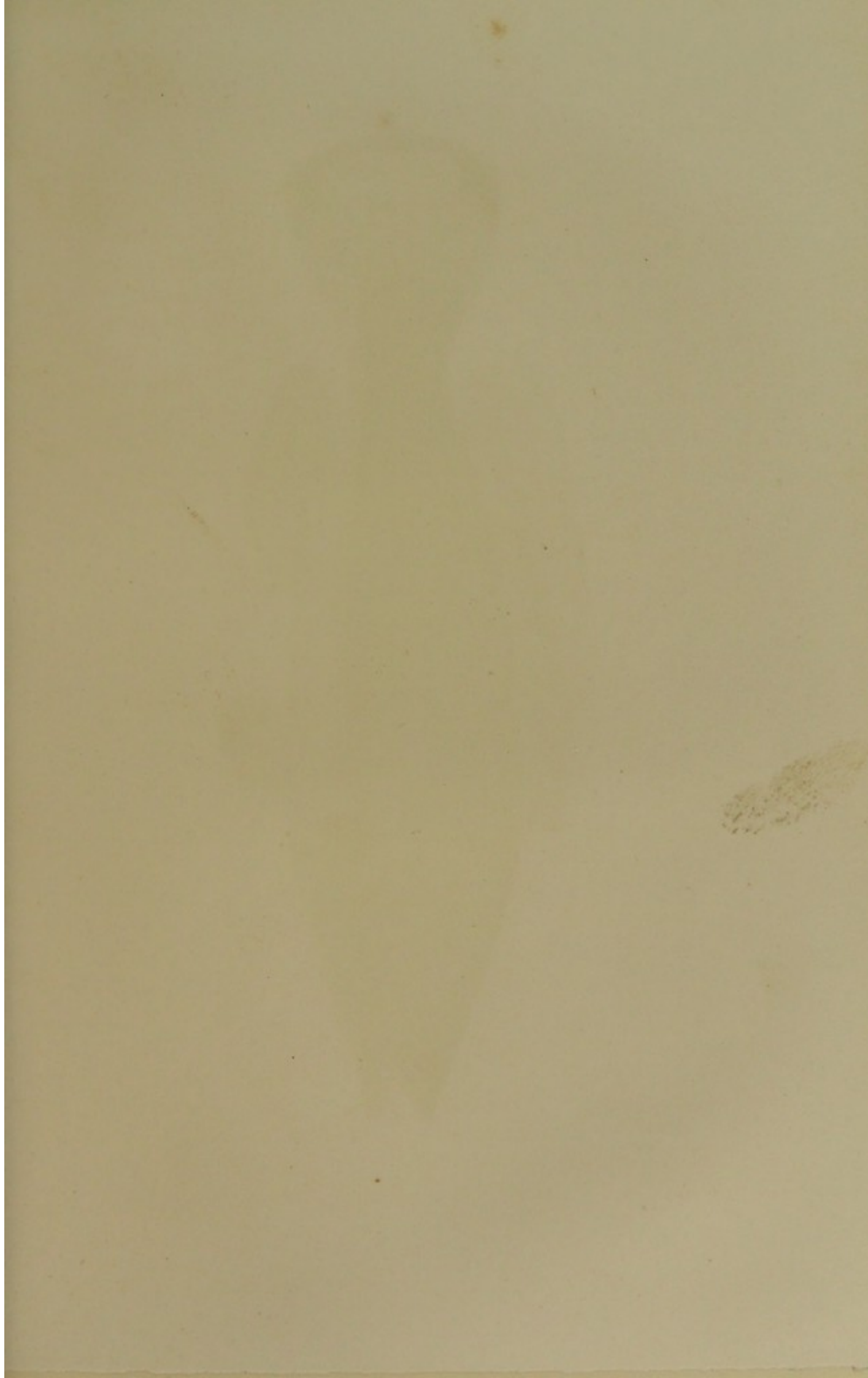
dinavian coast. This was taken in a hoop-net amongst a quantity of *Lodda* (*Osmerus arcticus*) in 1826, by M. Brodtkorb, near Vardöehuus in Finmark, and forwarded from thence to the Bergen Museum. But as fishes of the genus to which this one belongs are generally supposed to confine themselves exclusively to tropical seas, where they for the most part live in mid-ocean, amongst *Sargassum*, and other large floating sea-weeds, the presumption is that the specimen in question had been carried to the coast of Norway by that branch of the Gulf Stream which runs across the Atlantic towards Iceland and Norway. Dr. Günther is, indeed, of opinion that this fish is nothing but a stray example of *Antennarius marmoratus*, indigenous to tropical seas.

We now come to the genus *Labrus*, of which that distinguished naturalist, Ekström, truly says:—"Amongst the sea fishes none can compete with them in regard to beauty. They are in this respect a marked exception to the general rule, that the farther one proceeds to the North the more uniform and dull are the colours. He that rows out to fish on the western coast, and for the first time sees a Wrasse recently taken out of the water, may therefore readily imagine himself transported as if by magic to a tropical climate, and waits with impatience for the next nibble, that he may behold another of the paradoxical beings that abound in these seas. But the illusion is of short duration, for when the line is again hauled in, instead of a fish with colours of the rainbow, a codfish or a flounder is brought to the surface."

Of this genus, the six following species are all that are at present acknowledged by Scandinavian ichthyologists.

The Ballan Wrasse (*Berg-gylta*,* Sw. and Norw.;

* The Swedish name *gylta*, and the Norwegian *gylte*, are derived from the word *galt*, i. e. boar; and the Norwegian fishermen are supposed first





Wm. Woodhead

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THE BLUE-STRIPED WRASSE.

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Labrus maculatus, Bloch) was common in our Skärgård, as also on the western coast of Norway, as high up at least as Bergen. Occasionally it has been met with as far south as the Sound, but never, I believe, in the Baltic. It is only an inhabitant of salt water, of which the upper portion at any rate of that sea can hardly be said to consist. As with the Ruff and the Common Buzzard amongst birds, not two of them are alike. Its usual length is from twelve to fifteen inches, but it attains as much as eighteen, and a weight of from three to three and a half pounds. Its favourite resort—as its English name, “Rock Fish,” denotes—is stony ground. Its usual food is small fishes, crustaceans, and molluscs. It is believed to spawn in the spring, say in April and May. Its flesh is white and firm, and though somewhat luscious, is well-tasted; but it is little valued on the Bohus coast, and seldom eaten, except by the poorer classes, and then not until after it has been split open, and dried in the sun. Hence it is not much sought after by the fishermen.

About the year 1810, a sort of pestilence is said to have raged amongst the Ballan Wrasses, so that great numbers were found dead on the surface of the water. For several years afterwards these fish were only occasionally seen by the fishermen, but in course of time they became as numerous as heretofore.

The Blue-striped or Cook Wrasse (*Blå-snultra*, *Blå-gylta*, Sw.; *Röd-næb*, i.e. red-beak, Norw.; *L. mixtus*, Linn.; *L. dispar*, B. Fries). This fish, so truly depicted in the annexed life-like drawing by M. Wilhelm von Wright, was also found in our Skärgård, and likewise on the western coast of Norway, as high up as lat. 63°; but less commonly than the last-named species. It does not,

to have applied it from some fancied resemblance between the porcine snout and the corresponding part of these fish.

however, go so far south as the Sound, and is unknown in the Baltic. Its usual length is from twelve to fourteen inches. The male is somewhat smaller than the female. The most striking difference between them is, however, in the colour, that of the male being in the main blue, whilst the female is red, or nearly so. This great variance in the hues of the sexes has caused them to be classed by several English and other ichthyologists as separate species, the male as the *L. caeruleus*, Ascan., and the female as the *L. carneus*, Ascan. But careful observations of Ekström and others have satisfactorily proved that they are one and the same fish.

The food of the Blue-striped Wrasse is supposed to be similar to that of the *L. maculatus*. Professor C. J. Sundevall, one of the best zoologists in Sweden, and of European reputation, found in the stomach of a female, twelve inches in length, the remains of several different species of crustaceans, and a nearly whole *Portunus*, one inch in breadth; as also some scales, fins, and vertebræ of small fishes. But little seems to be known regarding its breeding habits. The authority just named, however, tells us, that as the ovisacs of the above-mentioned female only contained small and newly-formed ova, evidencing they had recently been emptied, he arrived at the conclusion that the spawning season must occur prior to midsummer. The flesh of this fish, like that of its congeners, is not in repute with the fishermen, who therefore take but little pains to capture it.

The Gilt Head, or Golden Maid (*Skär-Rone*, Sw.; *Sort-øjed* [*i. e.* black-eyed] *Saug-gylte*, Dan.; *L. Melops*, Linn.; *Crenilabrus Melops*, Cuv.), is pretty common in the Bohus Skärgård, though it would seem in great degree confined to certain localities. It is likewise pretty common along the whole of the western coast of both Sweden and Norway, from the Sound up to at least the

62° lat. It is said to inhabit the more southern portion of the Baltic. Its usual length is from eight to nine inches, but it has been known to attain as much as ten. Kröyer mentions having found females with mature roe at the beginning of July, and on the 5th of that month he examined a male with *flydende* (all but fluid) milt; consequently, he looks upon it as certain that this fish spawns in July.

Speaking of the breeding habits of this fish, the Professor says:—"It has been related to me by an altogether trustworthy person, a distinguished savant, and one who, though not a professed zoologist, is greatly interested in the Northern fauna, that on a summer's day about noon, and whilst standing on a low bridge, looking down into the clear water beneath, his attention was attracted by two of these small Wrasses, which came forth from under some sea-weeds, where they had previously hidden themselves. At first they swam rapidly round in a small circle, the one close behind, and as if in pursuit of the other; but presently they came into immediate contact, *venter contra ventrem*. In this position they remained for a short time, when they separated, and, as before, concealed themselves under the weeds. This, however, was for but a little time, when they again appeared, and the like ceremony was once more gone through. From what my informant relates—and he and others watched their proceedings for upwards of an hour—it appears to me that when these fishes were close together, they were in the act of pairing, and that the fructification of the ova of the female then took place, which is the more likely from what we know of the organs of generation of both sexes. It also strikes me as more than probable, that during the intervals that the female remained concealed under the weeds, she took the opportunity of depositing her already fertilized roe, and after-

wards came forth again, that a fresh impregnation might take place."

Jago's Gold Sinny (*Berg* [*i. e.* rock]-*Snultra*, Sw.; *Karudse*, Norw. and Dan.; *L. rupestris*, Linn.; *Ctenolabrus rupestris*, Valenc.), which, according to Ekström, forms a kind of connecting link between the *Labrus* and *Ctenolabrus* of Cuvier, is the most common of this family, not only in the Bohus Skärgård, but on the western coast of Sweden and Norway, from the Sound to near the North Cape. According to Kröyer, it is also found in the Baltic. It is one of the smallest of the Swedish Wrasses, its usual length not being more than from four to five inches, though it attains at times to seven. Its habits are said to assimilate much with those of the *L. Melops*, in whose company it is often found. This is the only one of these fishes that goes close to the shore, being often seen near boat and fishing stations, as also up the mouths of rivers, which it is said to ascend at times for a considerable distance. Unless it be to seize its prey, it is believed never to keep to the bottom; nor to appear near the surface except for that purpose, but to remain some two or three feet beneath, and this even during mid-winter; as is proved by the fact of several of these fish having been found on the 12th January, in the stomach of the Glaucous Gull, a bird that never dives, and which could not, therefore, have brought it up from a greater depth than that reached by its bill. The food of this fish consists exclusively of the smaller kinds of crustaceans, molluscs, and fishes. It is believed to spawn in July; Kröyer having in that month found the roe of the female fully matured. As with other of the Wrasses, its flesh is held somewhat in contempt by the fishermen.

The Small-mouthed Wrasse, or Rock Cook (*Små-Munt* [*i. e.* small-mouthed] *Snultra*, Sw.; *L. exoletus*, Linn.; *Acantholabrus exoletus*, Valenc.), is the least common of

the Wrasses in the Bohus Skärgård, as also on the western coast of Norway, where it is found as high up as Söndmör (lat. 62°). It does not seem to find its way so far south as the Sound, much less to the Baltic. It is the smallest of the family, its usual length being some four inches, and hitherto it has not been met with much exceeding five and a half inches. It appears to keep farther from the land than the rest of the Wrasses, but in other respects its habits greatly resemble theirs. Nothing seems to be known to Northern zoologists in regard to its breeding.

The Rainbow Wrasse (*Julis vulgaris*, Flem., Cuv. & Valenc.). This beautiful little fish, whose proper home is the Mediterranean, and of which, by Yarrell's account, only a single specimen has been found on the English coast, has not yet found a place in Nilsson's "Scandinavian Fauna," but Kröyer includes it amongst the Danish fishes, though not altogether confident as to its identity with the above-named species.

The Common Gar-Fish, or Sea-Pike (*Näbb-Gädda*, i.e. beaked pike, Sw.; *Horn-Fisk*, or horned fish, Norw. and Dan.; *Belone vulgaris*, Cuv.), was during May and June, its breeding season, exceedingly abundant in the Bohus Skärgård, as it is elsewhere on the western coast of the Peninsula, from the Sound to at least as high up as Drontheim; and also in the southern and more midland portion of the Baltic. Whilst the spawning lasts, these fish keep in comparatively shoal water, but at its conclusion in the end of June they retire to the deeps; such of them at least as have not proceeded farther than the Cattegat, for those which spawn in the Baltic do not return from thence until the end of August or beginning of September, when, instead of being lean, as is the case on their arrival in the spring, they are, to use the fisherman's expression, as "fat as butter." It is a common belief in the south of Sweden, that when the Gar-Fish are unusually

numerous in the spring, there will be a drought during the ensuing summer, and that the succeeding year is sure to prove a dear one. The usual length of this fish is from two feet to two feet six inches. Kröyer says it attains three feet, and a weight of two pounds.

The Gar-Fish, which during spring and early summer are brought to the Gothenburg and other markets in enormous numbers, are captured in various ways, some by the hook, but for the most part by nets of some kind or other. One plan of beguiling them, as related to me by Baron Cederström, struck me as somewhat singular. During the spawning season, as known, they may often be seen in immense numbers gambolling, as it were, on the surface of the water. This being observed by the fisherman, he loads his boat with stones, and rowing to the near vicinity of the shoals, spreads his net around and about it. He then casts the stones amongst the fish, who, terrified at the unexpected onset, rush hither and thither in every direction, and not a few, as a consequence, into the toils. In this way the man perseveres until such times as the shoal is entirely dispersed, or that he has succeeded in fully freighting his little craft.

The Gar-Fish has many persecutors. Fishermen in the Sound assert that, in the spring, the Seals lie on the watch for them at the island of Hven, in the Sound; and that, on the return of the fish from the Baltic during early autumn, the Common Tunny drives them under the land, where they would otherwise never go. The Gar-Fish, according to Kröyer, is, moreover, sadly pestered by parasitical worms, the *Ascaris Acus* being found in the ventral cavity, the *Echinorhynchus angustatus* and *E. Pristis*, *Scolex polymorphus*, and *Botriocephalus Belones*, Duj., in the intestinal canal, and the *Distoma gibbosum* infesting the stomach. On the gills the *Heteracanthus pedatus* and *H. sagittatus*, Dies., have also been observed.

The Saury Pike, or Skipper (*Makrill-Gädda*, Sw.; *Makrel-Gjedde*, Dan., both meaning mackerel-pike; *Scomberesox Camperi*, Lacep.). Of this fish one specimen has lately been taken off the Swedish coast, in the Sound, near Malmö. It has also once been captured near Christiania, in Norway. Kröyer mentions, on the authority of Reinhardt, two instances of its being met with off the Danish coast in the Sound. Both of the last-named specimens, as also one from the south of Iceland, are now in the Copenhagen Museum. This fish bears a considerable resemblance to the common Gar-Fish, but the dorsal and anal fins are divided into small finlets, as in the Mackerel. Length, fourteen to fifteen inches; weight, about half a pound.

Of the *Salmonidæ*, regarding which, as it strikes me, naturalists, both at home and abroad, still seem very much in the dark, I spoke pretty fully in my last book; that is, of the several species that more or less inhabit the inland waters of the Peninsula. I there made mention of the Smelt, which fish, as shown, thrives just as well in fresh as in salt water; of two species of Charr; of the Salmon; of the Salmon Trout; of the Bull Trout; of the Common Trout; and of two large species of Lake Trout. I also described six several species of the *Coregoni* that came under my personal observation, all of which, as well as the two large Lake Trout just spoken of, will be found beautifully and faithfully depicted in "Scandinavian Adventures."* But only two or three of these fishes have

* Dr. Günther, in his recent work, "Catalogue of the Fishes of the British Museum," vol. vi. p. 189, has, I observe, characterized the drawing of one of the *Coregoni*, the *Löf-sik*, Sw., as being "not good." Such may be the fact; but if so, it is somewhat singular, because one and all of them were depicted by Mr. Alexander Fussell, one of our first artists, from large and fresh specimens preserved in spirits; and that, moreover, in my own room, and under the eye of the late Mr. Yarrell, the eminent naturalist, who was capable, it is to be presumed, to judge of their correctness.

I ventured to name specifically, leaving that difficult and delicate task to other and wiser heads than my own. I have therefore now only to mention the few remaining Salmonidæ, which belong exclusively to salt-water.

The *Osmerus arcticus*, Fabr. (*Lodda*, Sw.; *Lodde*, Norw.; *Lodna*, Icelandic), * whose proper home would seem to be the Arctic seas, is not so uncommon on the coast of Helgeland (about 65°). Occasionally it is also met with as far south as Bergen (lat. 60° 30'), and has even been taken in the Christiania Fjord. Though Krøyer thinks it probable that it may at times visit the shores of Denmark, it has not hitherto been identified there. In size and appearance it is not so very unlike the Common Smelt (*O. Eperlanus*), though rather smaller. The chief difference between them consists in the latter having large canine teeth in front of the vomer and on the tongue; with the adipose fin of greater height than length; while the *Lodda* has no canine teeth, and its adipose fin is of greater length than height. Like the Common Smelt, it emits a strong cucumber odour, which is said to be so very attractive to fishes of prey that, by a Royal ordinance of 1786, people engaged in the Cod-fishery off the Lofoden Islands were forbidden to use it as bait for Cod, Ling, &c.; because, owing to its scarcity, all could not procure it, and therefore could not share alike.

The Hebridal Smelt (*Mindre Silfver-Fisk*, i. e. lesser silver-fish, Sw.; *Osmerus Hebridicus*, Yarr.; *Argentina Hebridica*, Nilss.) has hitherto only been taken in the Christiania Fjord, where it would not appear to be very rare, but at not a less depth than from twelve to fifteen fathoms. It is there known under the name of *Ström-sild*, or stream-herring, from the young of this

* The Icelandic and Scandinavian names (implying hirsute or shaggy) are derived from the peculiar position of some of the scales forming longitudinal bands along the sides of the *male* fish.

species being in the habit, at certain seasons, of going up the mouth of rivers. Nilsson, who is my authority for the preceding, is of opinion that, though not yet observed, it inhabits other of the Scandinavian seas, especially those on the coast of Bohus-Län. He further states the length of this fish to be from rather less than seven inches to a maximum of nine inches. Kröyer, on the other hand, says its length is from one and a half to two feet, and that it is met with on the coast of Norway as high up as Stadt (lat. 62°). Both quote *Osmerus Hebridicus*, Yarr., as synonym, though the latter objects to Yarrell's description as being incomplete and superficial, and his wood-cut unsatisfactory. He also finds fault with Yarrell for not being acquainted with the description of this fish already given, and to his stating it to be new. If ever there was a case of doctors differing, it is surely this; and out of the meshes of this entangled web, I see no other extrication than by supposing Kröyer to look upon the *Osmerus Hebridicus* and the *Argentina Silus*, which I am about to describe, as one and the same fish; whilst Nilsson, on the contrary, classes them as different species.

The *Argentina Silus*, Nilss. (*Större Silfver-Fisk*, i. e. greater silver-fish, Sw.; *Gul-lax*, or yellow salmon, Norw.), is described by Nilsson as attaining a length of one and a half to two feet, and as being peculiarly a salt-water species, never ascending rivers. It resembles the Common Smelt, but is always distinguishable by the dorsal fin being placed before the ventrals. It frequents the western coast of Norway, particularly to the south and north of Bergen (about lat. 60°), where it lives, during the summer, at a depth of eighty to one hundred fathoms, in company with the Bergylt (*Sebastes Norvegicus*, Cuv.). It is then occasionally caught on lines laid for that fish, the bait being mostly a kind of mussel (*Mytilus edulis*), or a bit of fish. Towards autumn it approaches the coast, or

shallows. Like the Salmon, it is thought to be gifted with an enormous power of digestion, there being seldom anything else found in its stomach than pieces of seaweed and clay, swallowed together with the molluscs on which it has preyed. It spawns probably during spring or autumn, as it then approaches shallow water.

The *Nordisk Prick-Fisk*, Sw. (*Scopelus borealis*, Nilss.; *Maurolicus Mülleri*, Kröy.), is not uncommon on the western coast of Norway, more especially in the vicinity of Bergen. It has also been met with in the Cattegat, and occasionally near Gothenburg, but hitherto appears not to have been found in the Danish seas. This brilliant little fish would rarely seem to exceed two inches in length. Of its habits, breeding or otherwise, little seems at present known. It is not within my province to say if this fish is identical with the Argentine, or Sheppy Argentine, of English authors, or with *Scopelus Humboldtii*, Cuv.

The *Scopelus glacialis*, Reinh. (*Ströms Prick-Fisk*, Sw.), has hitherto only been taken in a single instance in the Scandinavian seas, which was near Söndmör (lat. 62°), in western Norway. Several specimens are now in the Copenhagen Museum from Northern Greenland, where it would seem to be scarce. Its habits, I imagine, are quite unknown.

The *Sternoptyx Olfersii*, Cuv. (*Olfers Platt-Fisk*, Sw.), though a tropical fish, has recently found a place in the Scandinavian fauna; two specimens having been met with in the Norwegian seas, most probably carried thither by the Gulf Stream. One of them was cast ashore near Ranen fjord, in Helgeland, and is now in the Bergen Museum; and a drawing of the other, which was captured on the coast of Nordland, is in the same repository. From various circumstances there is every reason to believe this fish dwells at a great depth.

The Common Herring (*Sill*, Sw.; *Sild*, Norw. and Dan.; *Clupea Harengus*, Linn.) was, during the season, pretty common in our Skärgård, and elsewhere in the Scandinavian seas, both eastern and western. But on the several coasts of the Peninsula it varies so greatly in form and size (those on the north-west coast of Norway, called the *Gråbens-Sill*, the largest of the Scandinavian Herrings, attaining fourteen or fifteen inches in length, or it may be more, while the *Strömming*, which inhabit the Baltic, and are the smallest, rarely exceed eight to nine inches) as to cause many people to doubt their being one and the same species. But naturalists tell us such is the fact, and that the very great difference observable amongst these fish is solely attributable to locality and food, and to the greater or lesser saltiness of the water they inhabit.

Formerly the idea was pretty generally entertained that the great Polar Basin was the proper habitat of the Herring, and that from thence annually issued, in like manner as a swarm of bees from their hive, the immense shoals that in the summer visit the western shores of Europe, and which, when procreation is over, return again to their icy home. But this notion, so far at least as Scandinavia is concerned, is altogether exploded, the prevalent idea now appearing to be that these fishes, instead of being world-wide wanderers, never travel far; that those, for instance, which spawn on the shores of the Baltic never leave that sea, and those which, for the same purpose, visit the western coasts of the Peninsula, winter either in the Cattegat or in the deeps of the North Sea. And this view of the matter is strengthened by the fact that the Herrings on the several coasts, differing more or less in appearance and size as they do, never intermingle, each colony, so to say, having its own appointed station. It is, moreover, the generally received opinion that these

fishes, like migratory birds, always resort in the breeding season to the place of their birth. This, however, can hardly be the case, there being abundant evidence to prove that even without assignable cause they frequently shift their quarters, and for a very lengthened period, as I shall hereafter have occasion to show, betake themselves elsewhere.

The Herring, as regards the Scandinavian seas, breeds at very different seasons. On one part of the coast it spawns, we are told, in May and June, on another about midsummer, on a third in the autumn, say September and October, and on a fourth at mid-winter. It is said that when the Norwegian fisherman expects the arrival of these fish he mounts a lofty eminence and keeps a sharp look-out seawards; he is thus enabled, even when at many miles' distance, to discern the approach of the *Sill-flotta*, or herring-fleet, as it is called. This is always followed by hundreds of whales, which spout water, in the form of steam, high up in the air, so that, according to these men, "*hafsytan står som en tåga*," the meaning of which is that a curtain or wall of mist bounds the horizon. Others again liken the scene to a vast number of smoking chimneys. When the shoal has approached pretty near the coast, the whales form a half-circle beyond them, and swim to and fro. The herrings then separate, and proceed within the islands of the Skärgård, at which time they stand closely packed together from the surface of the sea to the very bottom; and after the spawning is over the water is actually discoloured with the milt from the males.

Formerly the Swedish herring fisheries were the largest and most productive in Europe, but at the present day, owing to the fish having in great measure deserted the coast, they have dwindled into comparative insignificance.

The Sprat (*Skarp-sill*; *Hvass-buk*, i. e. sharp-belly, Sw.; *Brisling*, Norw. and Dan.; *Clupea Sprattus* [Linn.?], Nilss.) was also common in our Skärgård, though less so than the Herring; and elsewhere on the western coast, from the extreme south of Sweden to at least as high up as Drontheim, in Norway. As yet its limits to the northward seem not fully ascertained. It is also pretty common in the Baltic to 60° of latitude, which would appear to be about its northern boundary as regards that sea. The usual length of this fish, according to Kröyer, is from four to five inches. Like its congener, the Herring, it swims in shoals. It is said to "lek" at somewhat different periods; on the west coast in July and August, but in the Baltic in October and November.

The *C. Schoneveldii*, Kröyer, though not acknowledged by Swedish ichthyologists, is included in the Danish fauna. It is found, according to Kröyer, in the Sound, in Isefjord (in the island of Zealand), and in some of the Jutlandic fjords, though not, so far as he is aware, on the coast of Norway. He describes it as about the same size as the Sprat, but as having a smaller head, greater body-height, and a sharper belly than that fish. Nilsson, however, does not consider it as a distinct species, but as merely a variety of *C. Sprattus*.

The Pilchard (*C. Pilchardus*, Bloch). Until very lately, only a single specimen of this fish had been captured in the Scandinavian seas. This was in 1849, near Kullen, in the upper part of the Sound. It was a female of about ten inches in length, and her roe was in a mature state. But within the past year or so, M. Malm has identified a second example in the Bohus Skärgård.

The Twaite Shad (*Stam-sill*, Sw.; *Stam-sild*, Norw. and Dan.; *Alosa Finta*, Cuv.) is somewhat scarce in the Bohus Skärgård and on the western coasts of Sweden and Norway, where it has been taken as high up as Bergen.

Occasionally it is also met with in the more southern portion of the Baltic. It is generally found alone, though at times in small shoals. Its usual length is from fourteen to sixteen inches, but it attains, I believe, to somewhat more. It spawns in June and July, for which purpose it proceeds some distance up rivers, though properly a sea fish.

The Anchovy (*Ansjovis*, Sw.; *Engraulis Encrasicolus*, Linn.), whose proper home is the Mediterranean, is rare with us, and elsewhere on the western coasts of both Sweden and Norway, where it has been captured as high up as Bergen. Some few have been taken, I believe, as far south as the Sound, but hitherto it does not seem to have found its way into the Baltic. Of the habits of this fish, whose usual length is from five to six inches, Northern naturalists are apparently altogether in the dark.

The Common Cod (*Vanlig Torsk*, Sw.; *Almindelig Torsk*, Dan., both meaning common cod; *Gadus Morrhua*, *Gadus Callarias*, Linn.) was common in our Skärgård, and everywhere else on the western coast, from the Sound to the North Cape; as also in the Baltic, where, however, it is of a much smaller size. Formerly it was supposed there were two or more species, but Swedish and Danish naturalists are now agreed, I believe, that they are one and the same fish, and that the great difference observable between them in regard to size and appearance solely depends on age, locality, and food. Ekström is, moreover, of opinion that the name *Morrhua*, which was applied to the adults, should be altogether done away with, and that of *Callarias*, which was applied to the younger, should, as the proper one, be alone retained.

The usual length of this fish is from two to four feet; but Kröyer tells us he was assured by fishermen at the Lofoden Islands that "they have taken them as long as a

tall man fully six feet high." They keep much in shoals, and in preference, as it would seem, where the bottom is rocky. The smaller fish hold more to the shore, but the adults, excepting in the breeding season, when they approach somewhat nearer the land, confine themselves almost exclusively to the deeps.

For the most part the Cod lives at the bottom ; but such is not always the case ; for Kröyer tells us that "during the summer heats these fish often disport themselves on the surface of the water, and at times lie still there. One may then, as I myself can testify from personal experience, row the boat close up to the fish and strike it with an oar or other weapon, and even take it with the hand when stunned by the blow. A fisherman has assured me that on a fine and calm summer day he saw, in the Great Belt, thousands of these fish thus lying on the surface of the sea."

As a rule, the Cod holds to salt water, but it would not seem, nevertheless, to be altogether inimical to fresh. I am informed, at least, by M. Prytz that on the 13th October, 1865, when he was trolling for pike in the river Gotha, opposite Gothenburg, where the water is quite fresh, he caught, with a bleak, a fine cod nearly seven pounds in weight.

The Common Cod feeds on worms, crustaceans, small fish, and on almost anything, in short, that comes in its way. According to Kröyer, "it is indisputably one of the most voracious of the finny tribe. It not unfrequently bites at the hook to possess itself of a very inconsiderable prize, notwithstanding its stomach is already filled with plaice, whittings, haddocks, &c. One often captures a cod so gorged that the half of the fish it has swallowed, but which the stomach itself could not contain, remains fast in its throat. Even during the spawning season it does not lose its appetite ; as a proof

of which I found, when at the Lofoden Islands, in an immense cod of four feet and a half in length, no less than three other cod fish of the usual size, say some thirty inches in length.

“ In consequence of its voracity,” the Professor goes on to say, “ one readily perceives that it is not fastidious in its food, but swallows almost everything it meets with ; and it is said that when digestible substances are not to be had, even such as merely serve to fill its stomach. One therefore finds in the latter not only seaweed, but gravel and stones ; and at the end of the spawning season, when it is famished and debilitated, this might almost be called the normal state of things. Sometimes the stones are so large that they would seem to cause the fish much inconvenience, if not death. In the stomach of a very lean cod of two pounds (equal to $2\frac{1}{2}$ lb. avoirdupois) in weight, taken in the Sound in October 1837, I found several stones, of which the largest was a particularly sharp and angular flint, of fourteen lines in length and eight in breadth, which it is hardly conceivable could have passed through the intestinal canal. It is therefore not at all unusual to meet with cod fish whose stomach and intestinal canal are in a diseased state, perforated by sharp substances, indurated and covered with great numbers of knots and excrescences, all of which would seem to have their origin in the extreme greediness of the fish. Nevertheless, I will not take it for proved that the Cod swallows stones and similar substances for the purpose of staying its hunger, it not being impossible that these may get down its throat when seizing at the bottom the various small animals on which it preys. Small cod fish, which live amongst *Laminariæ*, appear to feed in preference on small crustaceans ; and hence the fish may acquire its colour and good flavour.”

Krøyer, when speaking of the Lofoden Islands, tells us,

moreover :—"The fishermen here are exceedingly particular in the selection of the Cod for their own eating. No gourmand can be more critical than they are. They overlook the whole of the captives, and not satisfied with the outward appearance of the fish, make deep incisions in the bodies of the individuals set apart. The colour of the flesh decides their choice ; and the greener it is the better the fish is supposed to be. Many of these men," the Professor adds, "affirm with confidence that the Cod go through a kind of cycle, in regard to the increase and decrease of their fatness ; so that for a certain number of years (three or four, I believe), and until such time as they have attained their culminating point, they become fatter and fatter, but afterwards, for an equally long period, gradually waste away."

The spawning season of this fish, Ekström tells us, varies considerably. "In those parts of the North Sea, as for example the Lofoden Islands, where the Cod are found in the greatest abundance and of the largest size, they, towards the end of the year, congregate at the edge of the several 'banks,' where the water is from forty-five to eighty fathoms in depth, and in such inconceivable numbers that these localities have obtained amongst the fishermen the designation of '*Fisk-berg*,' literally fish-mountains. Here they lie so closely packed, one above the other (the females, who are in a separate shoal from the males, being always uppermost), that the sounding-lead will not at times, it is said, penetrate the mass. On the first arrival of the fish their milt and roe are hard, but shortly afterwards they become soft and fluid. When this occurs, the '*Lek*' commences, and is carried on in shallower water, where the bottom is overgrown with weeds (which is not the case in the deeps), amongst which the females deposit their ova. The farther north these fish dwell, the sooner the Lek com-

mences. The adult fish, which spawn in from twenty to thirty fathoms of water, begin early in the month of January, but the young, in the more southern localities at least, as for instance in the Bohus Skärgård, delay the process until May. One may therefore assume the spawning season with the Cod to extend from December to June, in accordance with their respective ages, the state of the weather, and the locality."

The Cod is most prolific, zoologists having counted upwards of 9,000,000 eggs in a single female, which extraordinary fecundity, combined with the fact of their breeding at an early age (as proved by mature roe having been found in a female only a foot in length), accounts for their incalculable numbers. The growth of the fry is said to be very rapid.

The Cod is captured in various ways in the Scandinavian seas, chiefly by the "long line," but at times, in the comparative shallows, by nets. In the Bohus Skärgård, moreover, and the like may probably be the case elsewhere, it is not unfrequently speared, both by day and night. On one occasion I myself saw two fishermen land with several of these fish, weighing from four to six pounds each, which they had thus captured. The Cod is speared, so they told me, in some two fathoms water, near the land, and whilst lying partially hid under *tång* and other marine plants.

In Sweden there can hardly be said to be any "deep-sea fisheries." The Government have of late years, it is true, offered premiums to those engaged in them, though but few have hitherto availed themselves of the proffered advantages. But in Norway the case is different, there being in that country several establishments of the kind. The chief one is at the Lofoden Islands, where, during the spawning season, we are told, 3,500 boats assemble, each with a crew of six or upwards. This fishery alone, there-

fore, gives occupation to some 20,000 men, and the captures are said to amount to about 16,000,000 cod fish annually.

The Haddock (*Kolja*, Sw.; *Hyse*, Norw.; *Kuller*, Dan.; *Gadus Aeglefinus*, Linn.) was likewise very common with us, and elsewhere on the whole of the western coast of Scandinavia. Very few, however, find their way into the Baltic, probably in consequence of not thriving so well in brackish water as the Cod, and those few confine themselves to the more southern portion of that sea. Though this fish appears to move about a good deal—for in places where captured one day in abundance, it is not perhaps to be found the next—yet it is not thought to be a great wanderer, but to restrict itself chiefly to the locality where it was bred. Its usual length is from one to two feet, but the fishermen affirm that it attains three feet and upwards, and a weight of thirteen or fourteen pounds. It is a social fish, keeping in larger or smaller shoals, and for the most part in pretty deep water. It feeds on crustaceans, worms, and small fish, and when the young herrings enter the Skärgård, it is amongst their most persistent pursuers. Its breeding habits are not altogether known, some saying that it spawns at the end of December, but others, not until February is well advanced. Its flesh is firm and delicate, and held in considerable estimation by all classes, more especially by the fishermen, to whom it not only serves as food, but is highly prized by them as bait for the Cod and Ling.

The Bib, or Pout (*Bred-Torsk*, or broad-cod, Sw.; *Gadus luscus*, Linn.), has only twice been captured in the Scandinavian waters. In the first instance at Fiskebäckskil, in November, 1836, which specimen is preserved in the Stockholm Museum; and in the second case in the Gothenburg Skärgård by M. Malm, who believes it

to be a new species, and has figured it as such; but Nilsson seems to consider it as a mere variety of the Bib. Hitherto this fish does not appear to have been met with on the coasts of Denmark. Nothing is known of its habits.

The Poor, or Power Cod (*Glys-Torsk*, *Glys-Kolja*, Sw.; *Kolje*, Norw.; *Gadus minutus*, Linn.), is pretty common in the Bohus Skärgård and the Cattegat, as also on the coast of Norway, as far up at least as Bergen; but in the Sound it is somewhat rare, and though Bloch tells us it inhabits the Baltic, yet Swedish and Danish naturalists are altogether disbelievers on that point. It is the smallest of the genus *Gadus*, its usual length being from six to eight inches, and seldom exceeding ten. Its chief resorts are deep water, where the bottom is sandy, and in the near vicinity of precipitous, rocky ground. According to the fishermen, it remains in much the same locality all the year round. It lives on small prey, chiefly crustaceans—such as *Idotea*, *Gammarus*, &c.—and molluscs. Little seems known of its breeding habits. Swedish ichthyologists imagine that it holds its Lek in the spring, but Danish authorities say June. Its flesh, in Sweden at least, is not much esteemed, but in Norway is said to be better liked.

The Common Whiting (*Hvitling*, Sw.; *Wittling*, Norw.; *Hvidling*, Dan.; *Gadus Merlangus*, Linn.) was very common with us, and elsewhere on the western coast, as high up, according to Kröyer, as the near vicinity of the North Cape itself. It is also an inhabitant of the more southern portion of the Baltic. Though properly speaking a sea-fish, it would not seem inimical to fresh water. I myself, at least, have known numbers to be taken with the rod and line from one of the Gothenburg bridges, where the water is altogether free from salt. Its usual length is from eight to fourteen inches, but it

attains twenty and upwards. A sandy bottom seems to be its place of resort. During the summer, one usually finds it in from twelve to sixteen fathoms water, but in the autumn it approaches nearer the shore. It is not gregarious, strictly speaking, for, even during the breeding season, it never assembles in regular shoals, so at least say Swedish naturalists; but the Danish are at variance with them on this point. Neither is it a great traveller, but is believed to dwell the whole year round not far from where it is bred. It is reputed to be a most voracious feeder, and a special enemy of the young herrings. It spawns early in spring, say March and April, but Northern zoologists appear to know very little in regard to where it deposits its roe, &c.

The young fry make their appearance early in summer, when, if the fishermen are to be credited, they collect in numbers beneath the great Sea-Nettles (*Medusa capillata*), with which the ocean abounds, seeking shelter, apparently, between its long filiform tentacles. This story is strengthened by the fact that during the summer the fry is never found near the shore, and that one then sees young whiting, of from four to five inches in length, remain by the hour together under the Medusæ, following them in their slow progressive movements, which seems to imply a certain degree of acquaintance and intimacy between them. Possibly, however, the small whittings in question feed on the marine *Hyperinæ* that attach themselves to the glutinous tentacles of the creatures, or it may be seek protection from larger fish that shun the Medusæ. Be this as it may, from their being so constantly observed together the fishermen draw the sagacious conclusion that the young whittings are *stiftade*, or bred, in the Medusæ, and that, so long as they are small, the latter serve as their *ammor*, or wet-nurses.

The Whiting is, in every sense of the word, a godsend

to the poor fishermen residing in the Scandinavian Skär-gårdar, for let the weather be ever so bad, these fish may always be captured amongst the islands, and the men and their families can therefore never stand in need of a meal. Their capture, moreover, gives ample occupation, not only to the aged and infirm, but to women and children, whole boat-loads of whom are often seen to be thus employed. The Whiting, in Scandinavia, as in other countries, is in considerable request for the table.

The *Gadus Poutassou*, Risso (*Kolmule-Hvitling*, Sw.; *Kulmule*, *Kolmun*, Norw., in both languages meaning black-mouth), whose proper home is said to be the Mediterranean, is by no means rare in the Christiania Fjord, and on the western coast of Norway, but seems not to have been identified either in the Sound or in the Baltic; neither is mention made of it by Krøyer as being an inhabitant of the Danish seas. This fish, whose usual length is from ten to eighteen inches, has the general characters of the Common Whiting, but the lower jaw projects beyond the upper, the back is darker, and the eye nearly double the size of that in the Common Whiting. It is said to be a *Stånd-fisk*, or one that is stationary in the Scandinavian seas all the year round. According to the Bergen fishermen, it is often found at a depth of from eighty to one hundred fathoms, and never goes into shallow water. Risso, who was the first, I believe, to describe it, informs us that it spawns early in the spring; but Northern ichthyologists are unacquainted with its breeding and other habits. Its flesh, though somewhat flabby, is said to be well-flavoured.

The Pollack (*Blank-sej*, Sw.; *Lyr-Torsk*, Sw. & Norw.*;

* The Norwegian designation, according to Pontoppidan, is *Lysse*, which may not improbably be of the same root as the Scotch name *Lythe*, about the origin of which Yarrell is unable to afford positive information.

Lubbe, Dan.; *Gadus Pollachius*, Linn.) was common in the Bohus Skärgård and Cattegat, as also on the Norwegian coast, fully as high up as Söndmör, lat. 62°. But in the Sound it would seem to be somewhat scarce; and the like is the case as regards the Baltic, to the more southern parts of which it is, I believe, confined. Its usual length is from eighteen to twenty-four inches, but it attains to upwards of three feet. Though often met with alone, or in small companies, it at times goes in large shoals. Kröyer mentions having been present, on the 16th May, 1834, near Fredericia, in Jutland, when from six hundred to seven hundred of these fish were taken at a single haul of the net. Its food consists chiefly of small fishes, such as the launces, the gobies, or the young of larger fish.

Like the Whiting, it commits great havoc amongst the young herrings, called by the fishermen *Sill-mör*, to seize which it often comes up to the surface. During these attacks of the Pollack, one sees whole swarms of herrings leap out of the water to avoid their enemies, who, in their turn, vault equally high to secure their prey. From the noise thereby created, and the turmoil in the water, the fishermen are made aware of the approach of the Pollack, and on casting out their nets, are always sure of a good capture. So long as the herrings remain on the coast, the Pollack stays, but on the herrings retiring to the deep, the Pollack also disappears. One, nevertheless, meets with young individuals during the whole autumn near the shore, but these are never taken in the same numbers as the adults during the summer months.

Little is known to Northern naturalists regarding the breeding habits of this fish; but it would appear to spawn in the early part of summer, Kröyer having found the eggs of the female greatly developed at the end of May; and he therefore questions the accuracy of B. Fries'

statement, that it spawns at the same time as the Common Whiting, namely, in March and April; as also that of Couch, quoted by Yarrell, that the Pollack sheds its roe in the winter. Its flesh seems to be the least valued of all the Gadi, that is in Sweden; but in Denmark, as well as in France and England, it seems to be rather liked.

Nilsson notices another kind of Pollack, called by him the *Gadus Esmarkii*, Nilss., that is common, he says, in the Christiania Fjord, and there goes by the name of *Öien-paal*. This small fish, whose length seldom exceeds six to eight inches, and which was first recognized as a species by Professor Esmark, might be easily mistaken for the young of the Pollack, but for the presence of the small beard, the shorter head, and the larger eyes and scales. Nothing is known respecting its habits.

The Coal-Fish* (*Grå-sej*, Sw.; *Sej*, *Graa-sej*, Danish; *Gadus carbonarius* [old fish?], *G. virens* [young fish?], Linn.), whose proper home would seem to be the Arctic seas, is common in the Bohus Skärgård and Cattegat, and also all along the Norwegian coast up the North Cape; but it is said to be somewhat scarce in the Sound; and though Kröyer admits that some few enter the Baltic, he altogether gainsays Yarrell's statement as to their being plentiful there. It attains to a large size, three feet and upwards. Kröyer speaks of having seen an individual three feet eight inches in length. The adult fish hold most to the deeps, where the bottom is rocky; but the young resort greatly to bays and inlets, the water there being comparatively shallow. In their habits, also, the old and the young differ widely; the former assimilating more to the Cod, whilst those of the latter are more akin to the Mackerel; for in the summer they seldom keep to the bottom, but for the most part in mid-water, following

* The *Green Cod* of Pennant and Yarrell is not recognized by Northern naturalists, they considering it as no other than the young of the Coal-Fish.

the coast in large shoals, especially where there are currents, and frequently disporting themselves on the surface, making in the while high leaps into the air. According to Ekström, the Coal-Fish, in the Cattegat, spawns at the end of March or beginning of April; but the Norwegian fishermen say mid-winter, the accuracy of which statement Krøyer seems to doubt. The fry soon appear in shoal water, near the shore, where they remain during the summer, but at the approach of winter retire to the deeps. The flesh of the adults is little prized. When salted and smoked, however, in which state it is exported to foreign countries under the name of *Stock-fish*, it forms a valuable article of commerce.

The Hake (*Kummel*, Sw.; *Lysing*, *Berg-lax*, Norw.; *Kulmule*, *i.e.* black-mouth, Dan.; *Merluccius vulgaris*, Flem.) is common in the Bohus Skärgård and Cattegat, as also on the Norwegian coast, as high up at least as the Polar Circle. But it is scarce on the more southern shores of Sweden; and would seem unknown in the Baltic. Its usual length with us was from two to three feet, but it often attains four feet and upwards. By Swedish and Danish naturalists it is looked on as a *Hafs-fisk*, or deep-sea fish, *i.e.* as properly belonging to the deeps, and seldom entering the Skärgård. Of the adults I speak, for the young ones are found amongst the islands all the year round. It always keeps near the bottom, and during the greater part of the year is either spread or in small companies, following the herring and mackerel shoals, but on the approach of the breeding season collects in large numbers at the "*Lek-ställe*," or spawning-ground. It is looked on as an inferior fish, especially when captured on a muddy bottom, but if on stony or hard ground, is somewhat more palatable. When salted and dried, it is nevertheless nearly as good as cod.

Except during the breeding season, when its appetite

would appear to fail, it is an exceedingly voracious fish and is readily taken by the hook. It lives chiefly on other fish, and is said to bite asunder even more than it devours. It is also related that when the line is about to be drawn out of the water, it disgorges everything previously swallowed, for the purpose, as the fishermen believe, of making itself lighter. Its excessive rapacity has probably given rise to the story told by Ström, that, "On a certain occasion no fewer than three hakes were captured on one and the same hook, which found its way through their several bellies as the fish were gorged by each other in succession."

According to Professor Sundevall, the Hake spawns in the end of July, or beginning of August. The fishermen say there is only a single locality in the whole of the Cattegat where these fish congregate in any great numbers for that purpose, and which, in consequence, is called "*Kummel-grund*," or hake-bank. The spot in question, which is of very limited extent, consists of sand and small stones, and the depth of water is from sixteen to twenty-four feet. Here in the season hundreds of boats, each usually containing a crew of three men, may often be seen collected. The baits used are mackerel and herring; and if the hakes be abundant the vessel may be loaded, we are told, "in the course of the forenoon."

The Hake is a very capricious fish. According to Hollberg, they were so abundant in the Cattegat about the year 1780, that more were captured than could be converted to use. Afterwards they became very scarce, but from 1801 to 1808 they once more appeared in tolerable plenty, and several hundred barrels were salted. Again they became rare, so much so, that it was not until after the lapse of several years that he was enabled to procure a specimen for scientific purposes. About the year 1830, they were once more pretty common; but

since then their numbers have been on the decrease. "This fluctuation," says Professor Sundevall, "much resembles the so-called periodical visits of the herrings, and not improbably arises from similar causes. The Hake has but few spawning-places, probably only one, in the Cattegat; and it may be that, like many other species of fish, it is wedded to the spot to which it is accustomed. But when molested during its Lek (and in consequence of its great voracity, it is easily captured, either before or after spawning), it may readily happen that a sufficient number of adults do not remain, in which case the fish will naturally become scarce, until such times as the fishermen having abandoned the place of capture as being no longer productive, a new generation supplies the place of those destroyed."

The Ling (*Långa*, Sw.; *Lange*, Norw. and Danish; *Lota Molva*, Cuv.; *Molva vulgaris*, Nilss.), whose proper home is supposed to be in the Atlantic and North Sea, is common in the Bohus Skärgård and Cattegat, as also on the western coasts of both Denmark and Norway, up to and beyond the North Cape. But it is somewhat rare in the Sound (Kröyer, indeed, has never heard of it either there or in the Belts), from whence only very small specimens have been obtained. In the Baltic it is altogether unknown. Its usual length is from three to four feet, but it attains five or six, and a weight of sixty pounds. The adult fish confine themselves almost altogether to the open sea, where they are captured at a depth of from 100 to 400 fathoms, but the younger hold nearer the shore. Some imagine that the Ling, as with the Cod, keep in large shoals, but Ekström and Kröyer say, that with the exception, perhaps, of the spawning season, these fish live much spread. It is reported to be most voracious, very large fishes, chiefly flat-fishes and cod, being often found in its stomach. Its breeding habits are

very imperfectly known to Northern naturalists; Nilsson says it spawns in March, but Ekström and Kröyer in June. Then again, we are told it deposits its roe amongst *tång* and other weeds at the bottom of the sea, which supposition (this fish holding its Lek in the deeps) Ekström imagines to be mere guess-work. Its flesh, when fresh, is much prized for the table; as also its liver, which the fishermen in our Skärgård convert into a dish called *stamp*, somewhat resembling "stirabout" in appearance, which they eat with much relish. Few fishes, it is probable, are troubled with so many diseases as the Ling. To say nothing of worms, which are almost always seen in its intestines, its liver is not seldom found to be for the greater part eaten away. At times, moreover, it is liable to a cutaneous disorder—a sort of scab, that is very uncommon in other fishes. It is captured in much the same manner as the Cod, with the line and the "long line." The best fishing-ground was said to be at some distance to the north-west of the Scaw.

Nilsson, it should be observed, has recently added another Ling, the *Molva Abyssorum*, Nilss. (*Byrke-lange*, Norw.), to the Scandinavian fauna. It is found, he says, on the coast of Norway, from about 60° up to Helgeland, and he describes it as very similar in appearance to the Common Ling; but it may be distinguished from the latter by the lower jaw being the longest, the eyes larger, and the body much more tapering to the tail. The habits of the two, the Professor further tells us, are widely different; the Common Ling, as a rule, always holding to the deeps, whilst the *M. Abyssorum*, on the contrary, is never taken far out at sea, but in such bays and inlets on the coast as are of considerable depth, with a muddy bottom. The flesh of this fish, he adds, is more delicate and better than that of the Common Ling.

The Three-bearded Rockling (*Tre-tömmad Skär-långa*,

i. e. three-reined coast-ling, Sw.; *Steen-lange*, *i. e.* rock-ling, Norw.; *Motella vulgaris*, Cuv.; *M. tricirrata*, Nilss.) has not hitherto been identified in the Bohus Skärgård, or the Cattegat; but on the western coast of Norway it is met with sparingly. As yet it has not found a place in the Danish fauna. Usually it is from twelve to sixteen inches in length. Its favourite resorts are said to be in somewhat shallow water, where the bottom is rocky and overgrown with weeds, amongst which its movements are represented as quick and lively. But of its habits, whether breeding or otherwise, little or nothing seems known to Northern naturalists, who, however, imagine it to spawn early in the spring.

The Four-bearded Rockling (*Fyr*[4]-*tömmad Skär-långa*, Sw.; *Fire-traaded Hav-kvabbe*, *i. e.* four-threaded sea-burbot, Dan.; *M. Cimbria*, Struss., Linn.) was with us rare, but is not uncommon on the western coast, from the extreme north of Norway to the Sound, in which, as well as in the Great and Little Belts, according to Krøyer, it is more numerous than elsewhere in the Danish seas. On one occasion, at least, it has been captured in the Baltic, near Kiel. Its usual length is stated by several ichthyologists to be about twelve inches, that is something less than that of the *M. vulgaris*. But little seems known regarding the habits of this fish.

The Five-bearded Rockling (*Fem*[5]-*tömmad Skär-långa*; *Sjö-vessla*, *i. e.* sea-weasel, Sw.; *Tang-Brosme*, *i. e.* sea-wrack torsk, Norw.; *Fem*[5]-*traaded Hav-kvabbe*, Dan.; *M. Mustela*, Jen.) was common with us, and is more or less so, Nilsson tells us, on the western coast of Norway; but this Krøyer would seem to doubt altogether, having himself never met with it there, or heard of an individual having been captured since the time of Ström, who flourished a hundred years ago. It does not appear, however, to find its way as far south as the Sound, much

less into the Baltic. Its common length is said to be from nine to eleven inches. As with the two species of *Motella* named, the learned in Scandinavia seem to know nothing of the breeding and other habits of this fish.

The Silvery Gade (*Motella argenteola*, Yarr.) is also included in the Scandinavian fauna, larger and smaller specimens having been taken by F. von Düben, off Grip, an island near Christiansund, on the western coast of Norway (lat. 63°), in August, 1843. This fish, about two inches in length, represents in miniature the *M. vulgaris*, from which, however, both Yarrell and Nilsson agree that it may be readily distinguished by the conformation of the head and the colour of the body.—Jenyns and Yarrell's Mackerel Midge (*M. glauca*, Jen.) is by Nilsson considered to be identical with the *M. argenteola*, Yarr., while Kröyer, on the other hand, surmises it may be the young of *M. Mustela*.

The Torsk, or Tusk (*Lubb*, Sw.; *Brosme*, Norw.; *Brosmius vulgaris*, Cuv.), which is considered by naturalists as a Northern fish, was somewhat scarce in our Skärgård. The northern Cattegat would, indeed, seem to be about its limit to the southward; it is never met with in the Sound or in the Baltic; but on the western coast of Norway, up to the North Cape itself, it is pretty common. Its usual length is from two feet and a half to three feet, but at times it is still larger. The adults are seldom met with, excepting at a great depth, say from sixty to one hundred fathoms, with a rocky bottom; but the younger approach nearer to the shore. It would seem to be a social fish, being generally found in shoals, though not so large as those of others of the *Gadus* family. The precise nature of its food is not known; but it takes the hook freely when baited with mussels (*Mytilus modiolus*, Müll.). It is believed to spawn in April. Its flesh is considered coarse and ill-flavoured.

This fish, like the Bergylt, or Norway Haddock (*Sebastes Norvegicus*), and others that habitually dwell in great depths, is, as already mentioned, so affected by sudden tempests as often to be found in large numbers dead and dying on the surface of the water; the greater portion with their eyes started from the sockets, and the stomach protruding through the mouth. Hence, in parts of Norway, a sudden tempest is called by the fishermen *Brosme-för*, or torsk-tempest. In parenthesis I may mention that once, when I was crossing the Cattegat in a sailing-packet during a very severe winter, we fell in with hundreds and hundreds of *ling* floating dead on the surface of the sea, then in great part covered with drift ice, and many of which we secured and ate. There being no mark of violence on their bodies, I was utterly at a loss to account for this phenomenon, and it was not until of late years that I have been enlightened on the subject.

The Great Forked Beard (*Vanlig Bartel*, Sw.; *Phycis furcatus*, Flem.), which is found in the Mediterranean, has not yet been identified in the Bohus Skärgård or in the Cattegat, but is occasionally met with on the western coast of Norway, where it attains to a length of from eighteen inches to two feet, and is captured along with the Cod. In the Danish seas and in the Baltic it has not been recognized. Its habits seem quite unknown to Northern naturalists.

The Lesser Forked Beard, or Tadpole-Fish (*Svart Padd-Torsk*, literally, black toad-cod; *Smed*, or blacksmith, Sw.; *Sten-Brosme*, i. e. rock-torsk, Norw.; *Raniceps trifurcatus*, Flem.), is not uncommon in the Bohus Skärgård and the Cattegat, or on the western coast, from the Sound to at least as far north as Söndmör (lat. 62°). According to Kröyer, it has also been met with in the Baltic. It is usually from nine to twelve

inches in length, and is not believed to exceed a foot. Little seems known of its habits; but Professor B. Fries imagines that it lives for the most part in comparatively shallow water amongst seaweeds. Its food consists of various kinds of marine animals—crustaceans, molluscs, sea-urchins, and sea-stars—of which one finds the remains in its stomach. Its flesh is white and good, but from the slimy and unsightly appearance of the fish it is for the most part looked down upon by the fishermen, and seldom brought to market.

The *Macrourus Strömii*, Sundevall (*Macrourus Norvegicus*, Nilss.; *Ströms' Sko-läst*, i. e. Ström's shoe-last, Sw.), a Northern fish, though unknown in our Skärgård, has been captured in one instance on the Jutland Reef. On the western coast of Norway, from its southern extremity to the North Cape, however, it is not so very uncommon, and is there known by the name of *Sko-läst*. Its usual length is from two feet and a half to three feet. It is a deep-sea fish, and is often taken in from 80 to 120 fathoms, for the most part in deep fjords near precipitous cliffs, but at times at a distance from land. Of its breeding and other habits Northern naturalists seem in entire ignorance.

The *Macrourus rupestris*, Bloch (*Fabricius' Sko-läst*, Sw.), also a Northern fish, has only on one occasion been identified in the Scandinavian seas. This was in 1839, at Hammerfest, not far from the North Cape, and in the following year Professor Sundevall gave a description of it, in the "Transactions of the Royal Academy of Sciences," under the name of *M. Fabricii*.

CHAPTER XXXII.

The Common Plaice.—The Flounder.—The Common and other Dabs.—The Pole.—The Holibut.—The Turbot.—The Brill.—The Topknots.—The Whiff.—The Sole.—The Bimaculated and other Suckers.—The Conger Eel.—The Launces.—The Pipe-Fishes.—The Short Sun-Fish.—The Common Sturgeon.—The Sea Monster.—The Dog-Fishes.—The Sharks.—The Skates.—The Rays.—The Sea Lamprey.—The Myxine.—The Lancelet—And other Malacopterygious and Plagiostomous Fishes allied to them.

I NOW come to the Flat-fishes, which, it is to be observed, number fewer in the Scandinavian seas than in those of Britain. In the former only thirteen species have hitherto been identified, whilst our own fauna includes as many as eighteen.

The Common Plaice (*Röd-spätta*, or red-spot, Sw.; *Röd-spætte*, Dan.; *Platessa vulgaris*, Flem.) was common with us and in the Cattegat; as it also is on the whole of the western coast, from the North Cape to the Sound. It is likewise pretty common in the southern parts of the Baltic. Nilsson says it is found in this sea as high up as Stockholm; but Ekström imagines another species of flounder, the *P. Flesus*, has been mistaken for it. Its usual length is from ten to fourteen inches, but it attains a length of three feet, and a weight of eight pounds. From the sleek and comfortable appearance of this monster

fish, Fabricius tells us, it is called by the inhabitants *Prest-flynder*, or parson's flounder, which designation, he further informs us, "is not unfrequently applied to old ladies who have little other to recommend them than their fat and unwieldiness." The Common Plaice spawns in spring. The smaller fish are esteemed for the table, both on account of their taste and as being easy of digestion; they are said to be in best condition from the end of May to the beginning of July; but the larger ones are seldom eaten until dried and salted. They are taken by both lines and nets of various kinds on the coast of Jutland—where they would seem to be more numerous and larger than elsewhere—chiefly in the drag-net; and "when one thousand or one thousand one hundred are captured at a single haul," Olavius observes, "it is looked on as good fishing."

In the more southern portion of the Baltic, near Abekås in Scania, I should observe, they occasionally capture a flounder, which the fishermen call *Horunge*, literally bastard, as it is supposed by them to be a hybrid between the *P. vulgaris* and the *P. Flesus*. Nilsson, however, considers it a local variety of the former, and has therefore named it the *Fjäll-taggit Röd-spätta*, or the spiny-scaled plaice (*varietas Baltica*).

The Flounder (*Skrubb-Skädda*, Sw.; *Skrubbe*, Dan.; *P. Flesus*, Linn.) was also common both in our Skärgård and on the western coast, as high up, according to Nilsson, as the North Cape; but Kröyer says he is unable to follow it further than Drontheim. It is also common in the Baltic, where its range seems to be much more extended than that of the common plaice, it being by all accounts an inhabitant of the Gulf of Bothnia. With us its ordinary length was from eight to twelve inches, but it attains to fifteen inches and upwards. The spawning season with this fish is in the spring.

In our Skärgård it was captured both by the line and the net; and in shallow water it was not unfrequently speared. When the surface of the sea is ruffled, the fisherman at times pours a little train-oil on it, which causes it to become smooth as glass, and the man is in consequence enabled to see whatever object lies at the bottom. For the table it is looked upon as a much inferior fish to the plaice.

The Flounder would seem to thrive nearly equally well in fresh as in salt water. Some years ago Sir Thomas Maryon Wilson introduced a number of these fish into a large piece of water on his estate at Searles, in Sussex, which, when I was last there, throve remarkably well, and may be still living, for all I know to the contrary.

The Common Dab (*Sand-Skädda*, *Slätt-Flundra*, Sw.; *Sand-Flynder*, Norw.; *Slætte*, *Ising*, Dan.; *P. Limanda*, Flem.) was likewise common with us, and elsewhere on the western coast to and beyond the North Cape. It is also common in the Baltic, as high up as the Stockholm Skärgård and the Gulf of Finland. Its usual length is from ten to eleven inches, and seldom much exceeds a foot. Its food consists of small crustaceans and other marine animals. The stomachs of several dissected by Professor Sundevall were found filled with small *Idoteæ*, as also pieces of *Annelides*, and branches of small *Algæ* (*Ceramium*, *Fuci*). The spawning season with this fish is in early summer, say May or June, or somewhat later than that of the two species named. The young are supposed to be of slow growth. Sundevall imagines they do not arrive at maturity until their third or fourth year. In Sweden this fish would appear to be esteemed for the table; but in Denmark—in Copenhagen at least—Krøyer tells us it is but little cared for.

The Lemon Dab, or Smooth Dab (*Berg-Skädda*, or rock-flounder; *Pludder-mun*, or thick-lipped flounder,

Sw.; *Sand-Flynder*, or sand-flounder, Norw.; *Mare-Flynder*, Dan.*; *P. microcephalus*, Flem.) was less common in our Skärgård than the several species named; and the like would seem to be the case elsewhere on the western coast, where it is met with from the Sound to at least as high up as Bergen (lat. $60\frac{1}{2}^{\circ}$). Kröyer, indeed, imagines that as it is an Icelandic fish, its range to the northward is probably much more extended. Ekström tells us it is not an inhabitant of the Baltic; but Boie, on the contrary, that it is met with at Kiel. Its usual length is from ten to twelve inches, and Kröyer does not recollect seeing specimens exceeding fifteen or sixteen inches, which he says may be considered its maximum. Its favourite resorts are stony ground; and hence *Berg-Skädda*, the name by which it is best known to the fishermen. English naturalists tell us it spawns in May, and Nilsson, in July; Kröyer, from careful examination of its sexual organs, is inclined to believe it does not deposit its ova until late in the autumn or early winter. Its flesh is valued, being considered equal to that of the common plaice.

The Sandnecker, or Long Rough Dab (*Ler-Skädda*; *Ler-Flundra*, or clay-flounder, Sw.; *Haaising*, or shark-dab, Dan.; *P. limandoides*, Jen.), which would seem to be somewhat rare in the British seas, is common in the Bohus Skärgård, and elsewhere on the western coasts of both Sweden and Norway, where it ranges up to Tromsö (lat. $69\frac{1}{2}^{\circ}$), and probably still higher. In the Danish seas and the Sound it is also pretty common. But if found in the Baltic, which seems doubtful, it certainly does not penetrate very far into that sea. Its usual length is from ten to eleven inches, though at times it

* The Danish name, signifying Mary-flounder, reminds one of the designation, *Mary-Sole*, given to this fish in Devonshire. Another local name under which it is known in Denmark, *Smör-Flynder*, i. e. butter-flounder, is an equivalent to the English appellation of *Smear-Dab*.

reaches thirteen or fourteen. Its food consists of crustaceans and other marine animals, possibly also of small fish. Professor Sundevall has found shrimps (*Palæmon*, *Mysis*) in its stomach; and Kröyer, species of *Ophiura*, as well as bivalve molluscs (*Cardium*, *Tellina*, &c.), and of fishes, *Gobius minutus*. In the summer, like some of its congeners, its resorts are in comparatively shallow water, but during winter it is met with at times at a depth of thirty fathoms. Nilsson and others believe this fish to spawn in May and June, but Kröyer, not until mid-winter. He draws this conclusion from having in the month of September found the ovisacs of the female tolerably developed. This fish is, we are told, always lean, and for the table is looked on as much inferior to most of the other species of flounder.

The Pole, or Craig Fluke (*Svart-fenad Skädda*, or black-finned flounder, Sw.; *Skjær-ising*, or rock-dab, Dan.; *P. saxicola*, Fab.; *P. Pola*, Cuv.), the least numerous of the Scandinavian flounders, is somewhat rare in the Bohus Skärgård; as also on the more southern parts of the western coast of Sweden, the Sound included. In the Baltic it has not hitherto been recognized; and the same is the case on the western shores of Norway, though, from being an Icelandic fish, Kröyer entertains little doubt of its being found there. Its usual length is from sixteen to eighteen inches, but is said to attain to two feet. "Excepting that, as its Danish name denotes, it keeps to a rocky bottom, its habits," Kröyer remarks, "are altogether unknown to us. At times it is captured together with the Plaice in five to eight fathoms water. It is not tenacious of life, as proved by the fishermen never bringing it alive to Copenhagen. I have not been able to procure the young of this species—of such I speak as were less than twelve inches in length. Notwithstanding, the adults are taken the whole year round, and it would therefore seem as if

they did not seek the coast in like manner as the young of other flounders." The period at which this fish deposits its roe is rather unsettled. Kröyer, however, says:—"On the 22nd July I found in a female seventeen inches in length, the lobes containing the roe to be nearly eight inches long, and the roe itself appeared ready for shedding. I therefore came to the conclusion that it spawns in the beginning of August." This statement of the Professor is in accordance with what the Swedish fishermen have told Nilsson. The Pole is held in estimation for culinary purposes, many thinking it equal to the Sole.

The Holibut (*Hälle-Flundra*,* Sw.; *Hælle-Flynder*, (Dan. and) Norw., *Krejte*, Norw.; *Hippoglossus vulgaris*, Flem.), a Northern fish, and the largest of the flounders, is common in the Bohus Skärgård and the Cattegat; but it becomes scarcer and scarcer as one follows the Swedish coast to the southward, so that comparatively few find their way into the Sound, and rarely if ever into the Baltic. On the western coast of Denmark, and the Duchies of Slesvig and Holstein down to Heligoland, as also along the whole coast of Norway up to the North Cape itself, this fish is common. Its usual length with us was from three to four feet, and weight thirty to forty pounds; but individuals of from one hundred to one hundred and fifty or even two hundred pounds were not so very unusual: we read, indeed, of perfect monsters. Kröyer tells us, for instance, that he himself dissected a holibut caught on the Norwegian coast that was seven feet in length, and, though terribly out of condition, weighed three hundred

* The prefix *Hälle*, says Nilsson, is derived from the word *hällir* (holes), meaning such parts of the bottom, where springs of fresh water well up, they being the favourite resort of this fish; but Kröyer thinks, with Schonevelde, the word may be taken from the size of the fish, *Græcorum exemplo, qui, quæ magna sunt, nonnunquam sacra dicunt*, being the large and (therefore) holy fish, which may also give the clue to the English name of *holibut*.

and forty-four Danish pounds, or three hundred and eighty English ; and Nilsson, that he was informed by a fisherman exposing one of these fish weighing two hundred pounds for sale in the Lund market, that during the preceding summer he had taken a specimen off the island of Wäderö, in the Bohus Skärgård, that weighed seven hundred and twenty Swedish pounds, or six hundred and seventy-five English ! Olafsen, in his "Iceland Journey," relates, moreover, that during his stay in Iceland, he saw a Holibut ten feet long ; and Fabricius speaks of another of the like size. It is a deep-sea fish, and, as a rule, keeps much farther from the shore than any other of the flounders : it is believed to thrive best where the bottom consists of mud and clay. Its food consists partly of large shell-fish, such as lobsters, and the great crab (*Platycarcinus Pagurus*), &c., and partly of such fish as habitually dwell at the bottom. According to the fishermen, it is specially fond of the Sea Wolf ; they judge so, because when the latter is fast to the "long line," the Holibut frequently carries it bodily off.

It is said to be amongst the most voracious of fishes. Kröyer states that in the stomach of the monster, just spoken of, he found three cod fish, each three feet in length, the aggregate weight of which could not have been less than forty pounds. The Professor tells us further, that he was informed by a fisherman in the northern part of the Cattegat, that during the preceding year Holibuts had in two several instances gorged the lead with which soundings are taken. One of the fish escaped, but the other was captured. Olafsen also relates many remarkable instances of this fish's excessive greediness ; amongst the rest, that wood, iron, and even lumps of ice have been found in its stomach.

Nothing certain seems known as to the breeding habits of the Holibut, some imagining it to spawn at Christmas

and others from June to August. Kröyer is of the latter way of thinking, because one then finds these fish in shallow water, and near to the mouths of rivers.

For the most part it is taken by the hand-line, or the "long line," and at a depth of from sixty to a hundred fathoms; Ström says from three hundred to five hundred. It bites very freely, especially if the bait be a suitable one, and the sun shining brightly, to enable the fish to see it the better. It is remarkable, Kröyer observes, that "though the Holibut is, properly speaking, a deep-sea fish, it is at times met with in five or six, or it may be in as little as four, fathoms water: a circumstance of which the fisherman is not slow to take advantage; for, on espying it whilst at the bottom, he harpoons it in a fashion of his own." In Sweden, as also in Denmark, the Holibut is held in much esteem for the table; but in Norway, we are told, opinion is somewhat divided as to its merits, some looking on it as a delicacy, whilst others rather despise it. The head and fins, which are particularly fat, are the parts most prized. In the Bohus Skärgård this fish is often converted into a palatable soup, called *Raf*, or *Räkling*; but how prepared I know not. When brought to market, a purchaser can seldom be found for the entire fish, and for the most part, therefore, it is cut up into slices, and sold by the pound.

The Turbot (*Pigg-Hvar*,* thorny or prickly hvar, Sw.; *Pig-Varre*, Dan.; *Rhombus maximus*, Linn.), which, next to the Holibut, is the largest of the Flounders, was somewhat scarce in our Skärgård. So it is to be inferred at least, from the very scanty supply of these fish brought to the Gothenburg market, one of the best in the North of

* Also *Pigg-Hvarf*; in Danish also *Pig-Verre*. Respecting the origin of this old Gothic name, *Hvar*, *Varre*, &c., Northern naturalists are unable to give us any information.

Europe; and this would seem to be generally the case in the Scandinavian seas, both eastern and western, all of which it inhabits. In the Baltic, it does not appear to go much higher up than the 61st or 62nd degree of latitude; and on the Norwegian coast, Kröyer states his inability to trace it farther than *Stadt* (lat. 62°). Its usual weight with us was ten to twelve pounds, but from twenty to twenty-five is not very uncommon; by the fishermen's account, indeed, it is occasionally taken of forty and upwards. It keeps for the most part to the bottom, in preference where sandy; and goes much nearer to the shore than the Holibut. English authorities tell us this fish is occasionally seen at or near the surface of the water, but I am not aware of this peculiarity having come under the notice of Northern naturalists. Its food consists of crustaceans, small fish, and marine animals.

Kröyer describes this fish as very tenacious of life:—"When our fishermen in the Cattegat," he says, "capture a large Turbot and cannot at once find a purchaser, they tie a line to its tail, or pass it through the mouth and gills, and fasten it to a stone, or to a post, on the shore, and even though the water be very shallow, the fish will live a long time, provided the weather be not too warm. The way in which it is conveyed in the 'well' of a vessel puts it to a still harder proof. After a line has been passed, as mentioned, through its mouth and gills, it is suspended in a perpendicular position to one of the deck-beams, that it may not, by coming in contact with other fish, injure them with its prickles." Swedish naturalists assign May as the month in which it spawns; but Kröyer imagines the time to be August; the fry, some two inches in length, having been found by the Danish fishermen in the earlier part of the year. It is for the most part captured by the hook, but will not willingly, they say, take a stale bait. A living one is

considered the best of all. This fish is highly esteemed; and in both Sweden and Denmark "takes the same place at the table as the pheasant amongst birds."

The Brill (*Slätt-Hvar*, Sw.; *Slæt-Varre*, Dan.; both meaning the smooth brill; *R. vulgaris*, Cuv.) was, like the Turbot, somewhat scarce in the Bohus Skärgård; but would seem to be common enough farther to the southward, on the coasts of both Sweden and Jutland, as also in the Baltic where, however, its range is more limited than that of the *R. maximus*. As yet, it has not been identified on the western shores of Norway; but it is supposed to be found there up to at least 61° or 62° of latitude. Its usual weight in the Scandinavian seas is five or six pounds, but Krøyer makes mention of one weighing fifteen that came under his notice. Its food and manner of living are similar to those of the Turbot. Nilsson believes it spawns towards the end of May, but Krøyer, having found the lobes with clearly-developed, although small, roe at the beginning of November, as also in the same state in the commencement of May, thinks the spawning season is a matter that requires future elucidation. It is valued for the table, though in a much less degree than the Turbot.

Müller's Topknot (*Luden Hvar*, Sw.; *Laaden Varre* [both implying hirsute or shaggy], Dan.; *R. hirtus*, Abildg.) has not yet been identified, so far as I am aware, in the Bohus Skärgård, but is met with, though sparingly, in the more southern parts of the Cattegat down to the Sound; but I know not if it be an inhabitant of the Baltic. It is also found on the western coast of Norway, up to or beyond Bergen (latitude 60½°), from whence specimens have been received. Its usual length is from four to five inches, and it probably never attains to more than eight or nine. Nothing is known to Northern naturalists regarding its breeding or other habits. Little value is set on this fish;

and when it chances to become fastened in the net with other fishes, it is mostly thrown away.

Bloch's Topknot (*R. punctatus*, Yarr.), it should be observed, has not as yet been met with in the Scandinavian seas. It may always be distinguished from Müller's Topknot by the elongated first ray of the dorsal fin, by both sides of the body being rough, by the large eyes, and the separation between the ventral and anal fins.

The Whiff (*Stor-munt Hvar*, or large-mouthed hvar, Sw.; *R. Megastoma*, Donovan.) has not hitherto been met with, either in the Bohus Skärgård, or elsewhere on the Swedish coast; but it is not uncommon on the western coast of Norway, at Glesvär (lat. 60°) and Bergen ($60\frac{1}{2}^{\circ}$), where it is called *Sjaa-kjeft* and *Glas-flynder*, respectively, both names being applied by reason of its thin and transparent appearance. It is said to remain in the Norwegian seas all the year round, at a depth of from eighty to a hundred fathoms, and to spawn in April or May.

The *Rhombus Cardina*, B. Fries (*Små-Hvar*, or little hvar, Sw.), was exceedingly rare in the Bohus Skärgård, and hitherto has not been met with elsewhere in the Scandinavian seas. Couch, our eminent ichthyologist, says of this fish:—"There cannot be a doubt that the name *R. Cardina*, given to it by Swedish authors, is misapplied, as it bears little likeness to the species thus named by Cuvier. I have, therefore, assigned to it the name of 'Ekström's Top-knot.'" And in describing this new species, of which, I believe, only a single specimen has been met with in England, he remarks:—"Both eyes are nearer the snout than in *R. hirtus*, Yarr.; on the cheeks the scales are regular and plainly visible, while they are not discerned in the *R. hirtus*; the pectoral is longer and more pointed, and the uncoloured side, as well as the cheeks, is covered with ciliated scales, which is not the case in *R. hirtus*."

Another species of *Rhombus* has also been recently added to the Scandinavian fauna by M. Malm, called the *R. soleæformis*, Malm, by whose account it is not very rare in the Bohus Skärgård. It is described by him as somewhat resembling the *R. Megastoma*, but is, amongst other characteristics, at once distinguished by fewer and larger scales.

The Common Sole (*Tunga*, *Såla*, Sw.; *Tunge*, Dan.; *Solea vulgaris*, Cuv.) was tolerably common in the Bohus Skärgård, and elsewhere on the western coasts of both Sweden and Denmark; as also on that of Norway up to about Stadt, lat. 62°, beyond which Kröyer has been unable to follow it. It is an inhabitant of the Baltic, but does not seem to penetrate very deep into that sea. Its usual length is from twelve to sixteen inches, and seldom attains to more than twenty. Its food and manner of living are similar to those of the Flounders. Moderately deep water, with a sandy bottom, is its favourite resort during the summer; but, on the approach of winter, it retires farther from the shore. It is said to thrive nearly equally well in fresh as salt water, being often met with, not only at the mouths of, but far up, rivers. According to Ekström, it spawns in May and June. Formerly it seems to have been more numerous in the Scandinavian seas than at present. Kröyer tells us that some forty years ago no fewer than sixteen hundred of these fish were on one occasion captured at a single haul of the net near to Hesselöen, in the Southern Cattegat. It is highly valued for the table, where it always appears fried—"a boiled sole," according to Ekström, "would be as great an anomaly as a roasted turbot."

The Bimaculated Sucker (*Trå-fläckad Dubbel-sugare*, or the two-spotted double-sucker, Sw.; *Lepidogaster bimaculatus*, Flem.), which rarely attains to a length of three inches, has not hitherto been identified in the Bohus

Skärgård, or elsewhere in the Swedish seas; but on the western coast of Norway it would not appear to be rare. It dwells at the bottom, usually at the depth of about thirty fathoms, and for the most part with its mouth attached to a stone or an empty mussel-shell, and hence is seldom secured, except in the *skrapa*, a kind of dredge, used by zoologists to bring up small marine animals. In this way the Baron von Düben, who was the first to add it to the Scandinavian fauna, captured on one occasion five of these fish in the shell of a *Cyprina Islandica*. When taken out of the water, it at once fixes itself to the hand, or to the side of the vessel on which it is placed; and, if removed by force, will forthwith attach itself to the first object that offers. Its adhesive powers continue, it is said, even after death. It has been observed that the globes of its eyes protrude in an extraordinary manner, and may be moved independently of one another. When, therefore, it has fastened itself to a stone, or what not, it can with facility watch the movements of its enemies, without changing the position of its head. Nothing farther seems known to Northern naturalists in regard to its habits.

The Lump Sucker (*Sten-bit*, or stone-biter (male), *Qvabbso* (female), Sw.; *Rogn-Kexe*, Norw.; *Hav-padde*, or sea-toad, Dan.; *Cyclopterus Lumpus*, Linn.) was common with us, and along the whole of the western coast of both Sweden and Norway up to the North Cape. It is also pretty common in parts of the Baltic. Its usual length is from a foot to a foot and a half, and weight four to seven pounds, but it attains a somewhat greater size. The female is considerably larger than the male. As with the Bimaculated Sucker, its power of adhesion is great. It is said, indeed, that if, when captured, it be placed in a bucket of water, it will affix itself so firmly to the bottom that, on taking it by the tail, the bucket,

with its contents, may be lifted from the ground without the fish relinquishing its hold. It lives at the bottom, preferring it where stony, and for the greater part of the year in the deeps. It would seem to live in monogamy; for, during the spawning season, which occurs in the spring, the male and female are always seen together; and, when she has deposited her ova, usually in rocky ground, and at only a few feet beneath the surface of the water, he, after fructifying the eggs, keeps immediately over them (many, indeed, imagine they are hatched by him), and guards them from every foe with the utmost courage. Should he be disturbed by the presence of a person, he retreats but a short distance, looking back constantly in the while, and shortly returns to his post. Even the well-armed Sea Wolf is said to hazard its life if it approaches the nest of the Lump Sucker; for this creature, notwithstanding the smallness of its teeth, is capable of affixing itself to the neck of its adversary and inflicting a mortal wound. The flesh of the female is, we are told, flabby, and little eaten, but that of the male is by some looked on as a delicacy, especially when dressed in the manner of the Burbot (*Lota vulgaris*), which in flavour it somewhat resembles. The ova, being of a large size, of a reddish-brown colour, and very numerous, are taken up from the bottom in a peculiar kind of dredge, and afterwards salted and eaten as Caviar. They are used as bait, moreover, by the fishermen.

The Unctuous Sucker, or Sea-snail (*Större Lump-Fisk*, or greater lump-fish, Sw.; *Almindelig Ring-bug*, or common ring-belly, Dan.; *Liparis vulgaris*, Flem., *L. barbatus*, Ekström), is rare in the Scandinavian seas; and hitherto has only been identified, I believe, on the eastern coast of Sweden, where, in about lat. 58°, some few specimens have been taken. Its usual size would seem to be from three to five inches, but it is said to

attain to six or seven. According to Ekström, it spawns in March. Little or nothing is known of its habits.

Montague's Sucking-fish (*Mindre Lump-Fisk*, or lesser lump-fish, Sw.; *Montague's Ring-bug*, Dan.; *Liparis Montagui*, Yarr.) was scarce in our Skärgård, as is also the case on the western coasts of both Sweden and Norway, where it ranges as high up as Bergen, and most probably still farther to the northward. Hitherto it does not appear to have been identified in the Baltic. It is smaller than the *L. vulgaris*, seldom exceeding three inches in length. Its habits are believed to be similar to those of its congeners. According to Kröyer, it spawns in May.

Of the fresh-water Eels mention is made in "Scandinavian Adventures," and it therefore only remains for me to speak of the Conger Eel (*Hafs-Ål*, Sw.; *Hav-Aal*, Dan., both implying sea-eel; *Anguilla Conger*, Linn.), which confines itself altogether, I believe, to the ocean. This fish was scarce with us, as is the case, indeed, in all the Scandinavian seas, both eastern and western. Its usual length is from five to six feet, and weight fifteen to twenty pounds, but it attains at times a much larger size. Specimens have been taken in the Skager-Rack (the "Sleeve") nine feet in length, and weighing sixty pounds. It is supposed to spawn in December and January. Its flesh, though eaten, is much inferior to that of the Common Eel.

The Wide-mouthed Launce, or Sand Eel (*Hvit-Tobis*, or white tobis, Sw.; *Sil*, Norw.; *Tobis*, Dan.; *Ammodytes Tobi*, Linn.), was tolerably common in our Skärgård and everywhere else in the Scandinavian seas: on the western coast, from the North Cape to the Sound, and on the eastern, as high up, at least, as Stockholm. Its usual length is from six to seven inches, but it attains to twelve or thirteen, the larger ones being called *Tobis-kung*, i. e. tobis king. During the summer months, when it is

thought to spawn, it approaches the shore, but passes the winter far from thence, as evidenced by the fact of its often being found in the stomachs of the Cod and other fish that habitually dwell in the deeps. Its food consists of small crustaceans, marine animals, &c. It is said to be very voracious. Nilsson found in the stomach of an individual twelve and a half inches in length a whole fish of the same species that was six and a quarter inches long, the tail of which stood up in its gorge. In its stomach, moreover, were the bones of another fish.

The Small-mouthed or Sand Launce (*Blå-Tobis*, or blue tobis, Sw.; *Sand-grævling*, or sand-digger, Dan.; *A. Lancea*, Cuv.) was only found, according to Ekström, in the more southern portion of the Bohus Skärgård; but on all the other coasts (if at all sandy, at least) of the Peninsula it would seem to be pretty common. As in almost all places, however, this fish and the preceding go by one and the same name, that of *Tobis*, it is difficult to define the exact habitat of each. For a long time, indeed, the two were considered to be one and the same fish. But, to say nothing of the inferior size of the *A. Lancea*, which rarely exceeds seven inches in length, it may readily be distinguished from the *A. Tobianus* by the lower jaw being shorter in proportion, and by the dorsal fin commencing a little nearer the head, in a line over the middle of the pectoral fin. The Small-mouthed Launce spawns in August, that is, at a somewhat later period than that assigned to the Wide-mouthed Launce. In other respects their habits are very similar.

In certain parts of the Peninsula many Launces, especially of the smaller species, are taken in nets during the summer. This is more particularly the case at Cimbritshamn, on the south-eastern coast of Sweden, where something like a regular fishery is then carried on; and of the extent of which some idea may be formed from the

Parson's share of the spoil, amounting to six barrels of dried fish. The breast, or centre of the nets, consists, Professor Sundevall tells us, of a white sheet, the brightness reflected from which, by the rays of the sun, opposite whereto it is always placed, attracts the Launces within the toils; and when the net has been drawn near the shore, and the fish begin to bury themselves in the sand, they are routed from thence by a sort of rake. Those captured are for the most part dried, and stored away for winter provender.

The Great Pipe-Fish (*Stor Kant-Nål*, or great-edged needle; *Stor Tang-Naal*, or great fucus-needle, Dan.; *Syngnathus Acus*, Linn.) has not hitherto been found either in the Baltic, or on the western coast of Sweden. So at least we are told by Nilsson, but Kröyer assures us it is occasionally captured both in the Cattegat and the Sound. Be this as it may, both of the above-named authors agree in saying it is not uncommon on the western coast of Norway, as high up as Bergen, or even Drontheim (Kröyer). Its usual size is from twelve to sixteen inches, but it attains to eighteen.

The peculiar formation of the sexual organs of this fish, and others of the family, and the manner in which the ova of the females are fructified, had for ages been a puzzle to the learned, but at length Yarrell, on the authority of the late Mr. Walcott, cleared up the mystery in "British Fishes," wherein he says:—"The male differs from the female in the belly from the vent to the tail fin being much broader, and in having for about two-thirds of its length two soft flaps, which fold together and form a false belly (or pouch). They breed in the summer; the females casting their roe into the false belly of the male." Prior, however, to this singular fact having been communicated to the English public, Ekström (when speaking of the *S. Typhle*, of which presently), had, in

1831, made the like discovery, as also, that the male not only hatches the ova entrusted to his care by the female, but during the growth of the fry performs towards them all the affectionate duties of a mother. He further tells us, that these fish spawn in deep water in the month of May. "Shortly before that time the leaf-shaped flaps, closing the male's pouch, swell, the opening itself becomes more and more filled with a white, clear, and thick mucus, which serves as a bed for the ova, possibly also, as food for the newly hatched young ones. These, when born, embed themselves in the mucus, which diminishes proportionally with their growth; so that by the time they are enabled of themselves to move about in the water, little or none of it remains. Most likely actual congress takes place between the pair, during which the female deposits her ova in the male's pouch, where it is retained by the flaps in question, whilst he overspreads it with his milt. The ova, which lie in rows, are large as compared with the size of the fish. When first deposited they are yellow, but whiten gradually, and at length become clear as water, with a small dark yellow spot, which, when the egg is about to be excluded, blackens, and clearly shows the embryo. One day in July," he goes on to say, "when I was present at the drawing of a net in the Skärgård, a male, with fully developed young in its pouch, was captured. With some stones I immediately made a little pond at the edge of the water, in which the fish was placed. After swimming backwards and forwards a short time, it, by a downward movement of its tail, opened the pouch, out of which the young, one after the other, crept, and swam close under and on both sides of their father, though always keeping near the pouch. When, however, I attempted to take hold of the old fish, it made a sudden upward movement of its body (bending it bow-form), on which the young

ones immediately crept back into the pouch, and the flaps closed upon them. I repeated this experiment several times, and always with the same result."

The *S. rostellatus*, Gyllenstjerna, Nilss. (*S. Typhle*, Malm; *Liten Kant-Nål*, or little edged-needle, Sw.), has lately been added to the Scandinavian fauna as a new species (?). According to M. Malm's account, it would not appear to be so very uncommon in the Bohus Skärgård. This little fish, the length of which seldom exceeds six inches, might, we are told, be readily mistaken for the young of the great Pipe-Fish, but the head is shorter than the dorsal fin, and the number of lateral plates from the gill-cover to the anus is invariably sixteen, instead of twenty or twenty-one.

The Deep-nosed Pipe-Fish [Yarrell], or Lesser Pipe-Fish [Jenyns], (*Bred-näbbad* [*i. e.* broad-nosed] *Kant-Nål*, Sw.; *Liden* [*i. e.* little] *Tang-Naal*, Dan.; *S. Typhle*, Linn.; *S. Acus*, Ekström) is very common in the Bohus Skärgård, more so, indeed, than any of the family, as also in all the other Scandinavian seas, both eastern and western. Its usual length is from nine to ten inches, and seldom exceeds twelve. Except during the spawning season, which would appear to continue for two or three months, and at which time it retires to the deeps, it lives for the most part in comparatively shallow water, amongst sea-weeds and grasses. For the table it is valueless.

The Snake Pipe-Fish (*Stor Hafs-Nål*, or great sea-needle, Sw.; *Snippe*, Dan.; *S. æquoreus*, Linn.) was less common in our Skärgård, and elsewhere on the western coast of Sweden and Norway, where it ranges up to, or beyond, Söndmör (lat. 62°). It does not appear to have been identified in the Baltic. Its usual length is from sixteen to eighteen inches, but it is said to attain to near two feet. Nilsson, I should observe, considers Yarrell's Æquoreal Pipe-Fish (*S. æquoreus*, Linn., Yarr.) to be the

female, and his Snake Pipe-Fish (*S. anguineus*, Jen., Yarr.) the male and young female of this fish. Kröyer also thinks there is a mistake either in Yarrell's illustration or description of the two fishes.

The Straight-nosed Pipe-Fish (*Liten* [*i. e.* little] *Hafs-Nål*, Sw.; *Stor Næb-Snog*, or great beaked-snake, Dan.; *S. Ophidion*, Linn.) was common with us; as also elsewhere on the western coast of Sweden (in Norway it has not, to my knowledge, been recognized) and in the Baltic, where it is said to range as high up as the Gulf of Bothnia. Its usual length is from six to eight inches, and it seldom reaches more than nine or ten.

The Worm Pipe-Fish* (*Krum-nosad* [*i. e.* crooked-nose] *Hafs-Nål*, Sw.; *Liden* [*i. e.*, little] *Næb-Snog*, Dan.; *S. lumbriciformis*, Yarr.) was scarce with us, and elsewhere on the western coast of both Sweden and Norway, where, however, Kröyer has met with it as high up as Bergen (lat. $60\frac{1}{2}^{\circ}$). In the Baltic it would not seem to have been identified. Its usual length is said to be from five to six inches. Nothing is known as to its manner of living, though its breeding habits are supposed to be similar to those of the *S. Acus*, and others of the class.

The Short Sun-Fish (*Klump-Fisk*, or lumpy fish, Sw. and Dan.; *Orthogoriscus Mola*, Schneid.), whose proper home would appear to be the Atlantic, was very rare in our Skärgård, and everywhere else in the Scandinavian seas. The few that have been identified have for the most part been cast ashore during storms, and all, moreover, were small, the largest not exceeding two feet in length; but in other seas we hear of this fish attaining a weight of from four to five hundred pounds. It is believed to dwell in the deeps, but nothing seems known of its breeding or other habits.

* Of Yarrell, not of Jenyns, whose Worm Pipe-Fish (*S. lumbriciformis*, Jen.) is the Straight-nosed Pipe-Fish of Yarrell.

The Common Sturgeon (*Stör*,* Sw. and Dan.; *Störje*, Norw.; *Acipenser Sturio*, Linn.) was found with us, and on the whole of the western coast, from Finmark to the Sound, as also in the more southern portion of the Baltic, but is seemingly very scarce everywhere. Certainly it was so in our Skärgård, for it was only once in a time that one saw it exposed for sale in the Gothenburg fish market. Those taken in the Scandinavian seas are small, the usual length being from four to six feet, and I never heard of one exceeding eight. Elsewhere this fish attains a much larger size. In the river Oder, Kröyer tells us, fish of from ten to twelve feet in length are not so uncommon, and Bloch speaks of one in the river Elbe measuring eighteen feet. It would seem to thrive well in fresh water, it having occasionally been captured at Lilla Edet, on the river Gotha, which is at a distance of forty to fifty miles from the sea.

The *A. Lichtensteinii*, Bloch, is by Nilsson considered to be the young of this fish, while *A. latirostris*, Parn., Yarrell, is looked upon by the Professor as another variety, the snout, according to him, decreasing with the age of the fish. To this latter variety, he says, belongs a specimen (at one time thought to be *A. Huso*) caught in Bråviken (a large fjord of the Baltic), in 1853, as well as two or three others taken in the Baltic and the Sound. Kröyer speaks hesitatingly of a new species, *A. hospitus*, Kröy., founded upon only an imperfect specimen caught in the Sound.

The Sea Monster, or Northern Chimæra (*Haf-Mus*, Sw.; *Hav-Mus*, Dan. [both implying sea-mouse]; *Hav-kat* [*i. e.* sea-cat], Norw.; *Chimæra monstrosa*, Linn.), whose proper home is the Northern seas, was not uncommon with us and in the Cattegat, as also on the

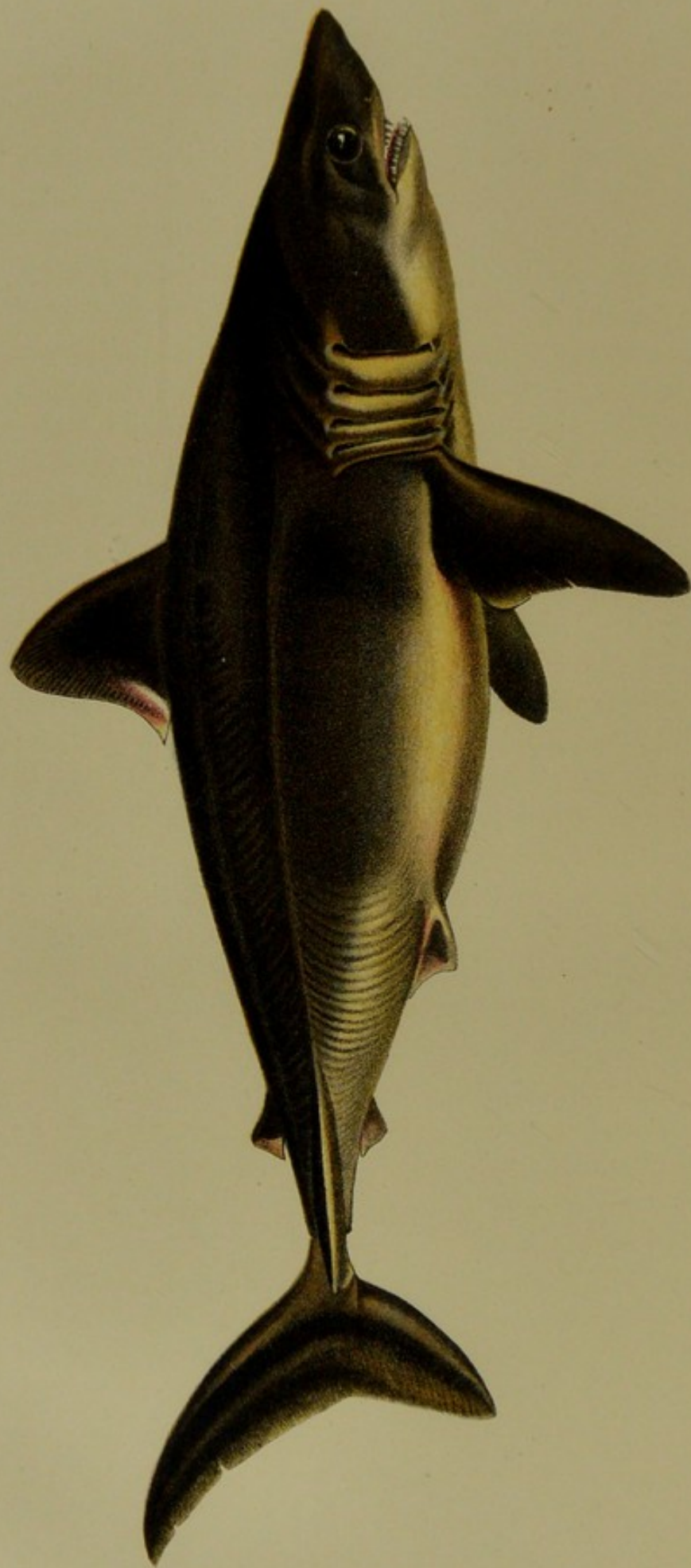
* This word has greatly puzzled etymologists, some deriving it from the Greek *στῆρα*, others from the Spanish province Asturias, while others again will have it to come from a Slavic origin.

western coast of Norway, where it ranges at least as high up as the Lofoden Islands. But it is only occasionally met with as far south as the Sound, and, by all accounts, is altogether unknown in the Baltic. Its usual length with us was about two feet and a half, and its weight five to six pounds; but it attains a somewhat greater size. Nilsson mentions that in 1822 a sort of pestilence raged amongst these fishes in the Bohus Skärgård, which carried off great numbers, and since that time the fishermen report they have become much scarcer. Northern naturalists seem but little acquainted with its breeding or other habits. It is frequently taken by people when fishing for haddock, the hook baited with the common salt-water mussel (*Mytilus edulis*), and generally at a depth of from forty to sixty fathoms, where the bottom is stony; as also on the "long-line" set for cod and ling, in from eighty to one hundred fathoms, with mackerel or haddock for bait. The Sea Monster is not eaten, but great store is set on its liver from the quantity of oil it contains, more, Krøyer says, than that of any other fish with which he is acquainted. The oil is not only useful for many household purposes, but is held in high estimation for the extraordinary medicinal properties it is believed to possess.

We now come to the Sharks, of which nine species are included in the Scandinavian fauna, viz.:—

The Small-spotted Dog-Fish (*Små-fläckig Dogg-Fisk*, literal translation of the English, Sw.; *Smaa-plætted Rød-Haj*, i. e. small-spotted red-shark, Dan.; *Squalus Canicula*, Linn.) was scarce with us and elsewhere on the western coasts of Sweden and Norway, where its limits to the northward seem but imperfectly known. It is not an inhabitant of the Baltic; but few, indeed, find their way so far south as the Sound, and on the western coast of Denmark, according to Krøyer, it has not yet been identified. It is about the smallest of the sharks, its





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THE PORBEAGLE SHARK.

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usual length being from two feet to two and a half, though at times it attains three feet and upwards. The female, as with others of the *Squalus* family, is larger than the male. It is useless for the table, and is only eaten, if at all, by the lower classes. But its liver, like that of other sharks, is valuable from the quantity of oil it produces.

The Large-spotted Dog-Fish (*S. Catulus*, Linn.), which, Jenyns has a strong suspicion, is identical with the *S. Canicula*, has not hitherto been recognized in the Scandinavian seas; but Northern naturalists seem to think it not at all improbable that it may have been overlooked. It is said to attain a somewhat larger size than the species preceding.

The Black-mouthed or Eyed Dog-Fish (*Ringlad* [*i. e.* ringed] *Dogg-Fisk*, Sw.; *Haaggjæle*, Norw.; *S. annulatus*, Nilss.; *Scyllium melanostomum*, Bonap.), a well-known Mediterranean fish, is rare in the Bohus Skärgård, and elsewhere on the western coast of Sweden; and in the Baltic it is unknown. But on the north-west coast of Norway, where it is found as high up, at least, as Drontheim, it would not seem to be so uncommon. Its length, Nilsson tells us, is two feet and upwards, but neither he nor other Northern naturalists give us any information as to its habits.

The Porbeagle Shark (*Hå-Brand*, Sw.; *Haa-Mær*, Norw. and Dan.; *S. Cornubicus*, Faber) was not so uncommon with us, or on other parts of the western coasts of Sweden and Norway, from near the North Cape to the Sound. It is also said to inhabit the more southern portion of the Baltic. Usually its length is from five to eight feet, but it not unfrequently attains nine and upwards. Krøyer says he was informed by some fishermen, but he vouches not for the truth of the story, that they on one occasion captured a fish of this species upwards of ten

feet in length, its weight being about five hundred pounds Danish, which is somewhat more than English.

"This fish," whose English name is derived from its supposed habit of hunting in company, "emits," Professor Sundevall informs us, "even in a still greater degree than any other of the family, a most disagreeable and somewhat peculiar odour, more especially from its openings; and this uncleanness, which is common to all the sharks, is the origin of the name *Squalus* (from *Squalor*, Lat.*). Of its breeding habits," he goes on to say, "little is known beyond the fact that—as is the case with all the sharks, excepting those on which both dorsal fins are placed behind the ventrals (*Scyllium*, Cuv.), which are oviparous—it brings forth its progeny alive. The young one described by Ström was taken out of the mother 'during the summer,' which makes it probable that this fish pairs in the spring."

The Porbeagle is seldom captured on the Swedish coast otherwise than in the herring or other net, which it often very seriously damages. The fishermen all agree in saying that this shark, when taken by the hook, is less lively than any other of the family, and "hangs sleepy and dead on the line." When hauled on board the boat, it is generally laid across the gunwale; and after the liver, the only valuable part, has been extracted, the fish is usually cast back into the sea.

The Common Tope (*Hå-Störje*,† *Grå-Haj*, or grey-

* Couch, I observe, says it is derived from the Greek word σκύλλω, to skin or flay; perhaps because the prickly covering of the skin rendering this fish difficult to handle; but it must be observed, that the word *Squalus* was applied by Pliny to the Skate or Ray, and certainly not to the sharks.

† "The name of *Hå*," says Professor Sundevall, "which in Scania, Bohus-Län, the whole of Norway (*Haa*), Iceland (*Há*), as also, according to Yarrell, in the Orkney Islands (*Hoe*), is applied to the Picked Dog-Fish—

shark, Sw. ; *Blaa-Haj*, or blue-shark, Dan. ; *S. Galeus*, Linn.), whose proper home is said to be the Mediterranean, was scarce in the Bohus Skärgård, and elsewhere on the western coast of Sweden : few, indeed, find their way so far south as the Sound, and none would appear to enter the Baltic. But “on the western coast of Jutland, and on the Danish side of the Cattegat,” according to Kröyer, “this fish is quite common during the summer.” As yet, it does not appear to have been identified on the western coast of Norway. Its usual length in the Scandinavian seas is about three feet, and five feet is the largest recorded to have been captured ; but in other seas it attains to six feet and upwards. It is said to be fond of the society of its fellows, as also that the living young ones, thirty to forty in number, are excluded from the female in May or June, and at one and the same time.

The Basking Shark (*Brygde*, Sw. ; *Brygde*, *Brugde*, Norw. and Dan. ; *S. maximus* [Linn. ?], Gunner.) has never been identified in the Bohus Skärgård, or anywhere in the Swedish seas ; but on the north-western coast of Norway it is by no means uncommon. It is by far the largest of the Scandinavian sharks. Our own naturalists speak of its attaining from thirty to thirty-six feet in length ; but if ancient records are to be believed, it equals, if not exceeds, the whale in size. The learned Bishop Gunnerus, who flourished a century ago, and who is considered a

of which presently—is, in fact, the generic name for the sharks, the Swedish and Danish forms being *Haj*, and the Dutch *Haai*.” This word, with some addition, is by most Gothic nations used for others of the Squalidæ, as for example, *Hå-Brand*, *Haa-Mær*, *Haa-Kjærring*, *Haa-Kal*, *Haa-Störje*, the last-named appellation being derived, it is supposed, either from its head, or rather snout, greatly resembling that of the Common Sturgeon (*Störje*, Norw. and locally Swed.), or—as a matter of distinction, as said in a note, page 476—owing to its being of a superior size to some other fishes.

good authority as regards the Squalidæ, informs us, for instance, "on the information of persons of unquestionable veracity," that on the coast of Nordland one was captured seventy-two feet in length, the liver alone of which filled fifteen tunnor, or barrels; and another one hundred and eight feet in length, whose liver filled twenty-four tunnor.* It is possible, however, that at the present day such monsters no longer exist, as, owing to the constant war carried on against the species, time does not admit of their arriving at maturity. Though this fish is of such enormous dimensions, it would seem by all accounts to be perfectly harmless and peaceably inclined; and, unlike the greater part of its congeners, who are voracity itself, and prey on all kinds of animals, whether living or dead, that come within their reach, it feeds solely, as it is believed, on molluscs, crustaceans, and the like. Not even the remains of fish have been found in its stomach.

On the north-west coast of Norway there is something like a regular fishery—and it has been carried on for more than a century—for the Basking Shark. The boats used for the purpose are from thirty-six to forty feet in length, and each has a crew of four men, who are amply provided with harpoons and other implements of destruction. The fishing season usually commences in the beginning of August, when they cruise to and fro on such parts of the coast as are known to be the favourite haunts of the fish in question; and when they see one lying listlessly on the surface, as is its frequent habit (hence its English name) the harpooner, after the boat has approached it as nearly as possible, drives his weapon

* The tunna holds about twenty-six of our gallons. Ten to twelve tunnor of liver are considered to be equivalent to six to eight tunnor of oil. At this rate, consequently, the last-mentioned fish must have furnished its captors with 380 to 400 gallons of oil.

deep into its body. Subsequently operations are carried on in a similar manner as when the whale is the object of attack. If the creature be lean, it at times can hold out for a whole day; but if it be fat, three or four hours usually suffice to tire it out, when it is hauled alongside the boat. Its tail is then partially severed to prevent its struggles, and afterwards it is stabbed with lances until quite dead. It is now turned over in the water, so that its belly lies uppermost, when it is secured by a rope to the mast. One of the men, provided with a long and sharp knife, then makes an incision in the fish sufficiently large to introduce his arm, upon which he severs the ligaments by which the liver is attached to the body. Finally the belly is ripped up, on which the liver floats to the surface, in like manner as a huge feather-bed, when the rope by which the fish is secured to the boat must be instantly severed, or the latter would be carried to the bottom with the creature.

The Greenland Shark (*Hå-skerding*, Sw.; *Haa-skjærding*, *Haa-kjærring*, Norw.; *Hav-kal* [from the Icelandic *Há-kall*], Dan.; *S. borealis*, Scoresby), whose proper home is the Arctic seas, into which it is said to penetrate deeper than any of its congeners, is somewhat scarce in the Bohus Skärgård and Cattegat. It is but rarely that it finds its way as far south as the Sound, and never, I believe, into the Baltic. But on the western coast of Norway, up to the North Cape itself, it is by no means uncommon. Next to the *S. maximus*, it is the largest of the sharks frequenting the Scandinavian seas. Its usual length is from twelve to fifteen feet, but, according to Bishop Gunnerus, it attains as much as twenty-five feet. Its senses of smell and hearing are very acute; and it is said that, though habitually dwelling in the deeps, which it seldom quits except in pursuit of prey, even the voices of men will bring it to the surface. Hence

the Greenlanders, when fishing where the depth is great, as we are told by Fabricius, are very cautious of speaking loud for fear the monster should make its appearance, in which case, to say nothing of the fish in whose capture they are engaged being scared from the spot, they are at times obliged to flee to the nearest shore to secure their own personal safety.

This shark is said to be the most voracious of the family, a perfect marine tiger in short, and devours almost everything, whether living or dead, that it comes across. Bishop Gunnerus relates that on one occasion a whole reindeer, that had probably fallen from the cliffs during a snow-storm, was found in its stomach ;—and on another, the entire carcass of a great or bearded seal (*Phoca barbata*), the largest of the Scandinavian Phocæ, together with fourteen fishes ! Fabricius tells us, moreover, that the stomach of a shark of this species, measuring fourteen feet in length, that he himself opened, contained no fewer than eight codfish, a ling measuring four feet, the head of an immense holibut, and several large lumps of whale blubber. Scoresby, our celebrated navigator, gives us to understand that this shark will not molest people. Such is not the notion of the Scandinavians, who assert that the creature makes quick work of a man, should he unfortunately come in its way. It is on record, indeed, that some years ago a boat containing two fishermen was capsized near Bergen ; some little time afterwards a Greenland shark was captured in whose stomach was found half of the body of one of the unhappy fellows, which was recognized by his disconsolate widow from the clothes he wore.

According to Fabricius, this fish spawns in July and August. The immature eggs, which are of the size of those of a barn-door fowl, are, he tells us, so numerous as to fill half a barrel.

On parts of the Norwegian coast, this and other sharks are taken in considerable numbers by the hook. That used for the purpose is large and strong; attached to it is a swivel and a short chain, to prevent the monster from severing the line with its teeth. A lump of bacon, meat, or seal's-flesh, which is looked on as the most alluring of all, serves as bait. To collect the sharks to the part of the deep fjord where it is purposed to fish for them, a quantity of offal of all kinds, inclosed in a sort of crate, is some days previously sunk to the bottom, the scent of which, when it begins to rot, attracts the creatures to the spot. Afterwards the crate is drawn up, and the baited hook substituted in its stead. When the shark seizes the bait, the fisherman either secures the line to the gunwale of the boat, which in consequence is often drawn down to the water's edge, or he attaches to the end of it an empty cask that floats on the water. The shark, on finding itself fast to the hook (and the like is usually the case with its congeners), almost immediately commences rolling itself round and round on the line, in the hopes, possibly, of thereby breaking it; but after a time it becomes exhausted by its struggles, when it is hauled to the surface. Prior, however, to being taken on board the boat, it is knocked on the head with an iron-shod bludgeon, always at hand for the purpose.

This shark, like the *S. maximus*, is chiefly sought after for its liver, which in an adult fish produces, it is said, no less than about forty gallons of oil. In parts of Norway, however, its flesh, according to Bishop Gunnerus, after being prepared in like manner with the holibut as *Rav* or *Rekling*, is often eaten by the poorer classes of people.

The Picked Dog-Fish (*Pigg-Haj*, Sw.; *Pig-Haa*,*

* The appellation of *Pigg*, or *Pig*, signifying a spike, is no doubt derived from the same origin as the English, this fish having a spine in

Norw. ; *Pig-Haj*, Dan. ; *S. Acanthias*, Linn.) was common in our Skärgård, the most so, probably, of all the sharks. This is likewise the case along the whole western coast of both Sweden and Norway, from the North Cape to the Sound. Off the north-west coast of Jutland, according to Kröyer, it is also very abundant, and once in a time is said to have found its way into the Baltic. Its usual length in the Scandinavian seas is about two feet and a half, and it seldom or never attains more than three feet. Its resorts are in less deep water than the most of its congeners. It is rarely met with on rocky ground, but confines itself almost solely to localities where the bottom is soft and miry. It is gregarious, and in the spring especially goes in immense shoals. It is most voracious, feeding on marine animals and fish ; and should the latter be too large to swallow entire, it bites them in two. It is a great enemy to the herrings, following them everywhere ; and in Norway, Ekström tells us, one often hears of shoals of the latter being regularly beleaguered by these rapacious fishes.

The Picked Dog-Fish, as with some other sharks, is viviparous ; but Northern naturalists are not very well acquainted with its breeding habits. The prevailing opinion seems to be that these fish pair in August and September, and that the greater portion of the females bring forth in May and June, and the remainder during the summer. Professor Sundevall thinks it probable the young are born in quick succession after each other, and not at shorter or longer intervals, as would appear to be the general impression. He has come to this conclusion from finding the young in all the females he has opened

advance of each of its two dorsal fins. Its other names are *Hå-fisk* (used, though less frequently, almost everywhere) ; *Hafr*, or *Haafur*, in Iceland (Olafsen, Faber) ; *Haavur* in the Faroe Islands (Landt) ; *Hå-katt*, or *Haj-katt*, in Scania.

of the same size, and equally developed in every way. He is further of opinion that the female does not produce more than about ten young ones; and in this he is partly corroborated by the fishermen, who have assured him they seldom find in her stomach at the same time more than five or six that are *full-grodda*, or fully grown.

Couch, when speaking of the Picked Dog-Fish, says:—"Such is the strength of instinct, that little creatures, not exceeding six inches in length, may be found in company with the larger and stronger, following 'schulls' of fish, on which at the time it is impossible they should be able to prey." The fishermen in the Bohus Skärgård, and elsewhere, assert, on the contrary, that the young, so far from accompanying the old ones in their predatory excursions, always confine themselves to shoal water, and keep to the bottom, where many are captured during the autumn by the line. Believing in the correctness of these men's statements, Swedish and Danish naturalists rather smile at this "*tirade*," as they call it, of our celebrated ichthyologist. The gravid female, when hauled into the boat, is not unfrequently, in its death struggles, taken in labour; and the learned therefore surmise that it is the young thus prematurely ushered into the world that have given rise to the fiction in question.

This fish is taken in various ways in Scandinavia. At times in nets, called *Hå-garn*, constructed expressly for the purpose; and at others on lines and in nets laid out for other fish. Occasionally they are captured in enormous numbers. "One morning," says Krøyer, "I was present near Agger, in Jutland (lat. 56° 47'), when the fishermen drew their nets on shore filled almost exclusively with the picked dog-fish. From the best calculation I was able to make, not less than eleven thousand were taken at this fishing-station alone during the preceding night." When the Picked Dog-Fish are congregated in numbers they give

great trouble and annoyance to the fishermen, both by plundering and by destroying their nets and carrying off such fish as have fastened on the hook.

In Bohus-Län, during the fifteenth century, a regular fishery was carried on for the capture of these fish, which, owing to the diminution in their number, at length ceased. Peder Clausen, who flourished soon after the period in question, when speaking of this matter, says:—"As this fish was known to be very fond of human flesh, numbers of people, especially such as were fat and fleshy, were murdered and cut into bits, which were then used as bait." To this circumstance, coupled with the fact that the inhabitants were accustomed to fish on Sundays, the worthy man attributed the absence of the Picked Dog-Fish from the coast.

The flesh of this species of shark is perfectly white, and free from the disagreeable odour common to the larger kinds. It is said to be tolerably palatable, and in Bohus-Län and elsewhere is eaten both fresh and salted and dried, in which latter state it at times forms an article of commerce. "When during the summer time it has remained undressed for several days," says Professor Sundevall, "it emits a very strong and uncommonly distinct smell of ammonia, and that, moreover, without one's perceiving the rotten odour usually accompanying half-putrid meat. It at the same time gives forth a very strong phosphorescent light."

The *S. Spinax*, Linn. (*Blå-kexa*, Sw.; *Sort-Haa*, Norw.; *Sort-Haj*, Dan., both meaning black-shark), is common in the Bohus Skärgård and in the northern portion of the Cattegat, as also on the western coast of Norway as high up certainly as Drontheim. It is somewhat questionable, however, if its range in that direction is much more extended, as Krøyer did not meet with it at the Lofoden Islands; nor has it hitherto been identified, I believe,

in Iceland. But its range to the south is much more limited; for even in the more southern parts of the Cattegat * it is a rare visitor, and as yet has not been met with in the Sound, much less in the Baltic. This fish is generally understood to be identical with the *S. niger*, Bonap., a Mediterranean fish; but if so, why should it not visit the British seas, where it would appear not to have been hitherto recognized? It is the smallest of the Scandinavian sharks. Its usual length with us is from twelve to fourteen inches, and it seldom attains to more than eighteen. As with the Picked Dog-Fish, it keeps in shoals, and for the most part to the deeps where the bottom is muddy. Little seems known to Northern naturalists as to what constitutes its food and its habits, beyond the fact that it brings forth its young alive, and, as it is supposed, at various seasons. It is said to be very hard-lived. Bishop Gunnerus relates that, even when its liver and entrails have been taken out, it has been known to "*spille paa bordet*," that is, to dance on the table. Its flesh is not eaten: we are, indeed, told by Ascanius that on the Norwegian coast it is looked on as poisonous. But the oil extracted from its liver is not only valuable in itself, but is supposed to possess medicinal virtues.

The Sea Fox, or Thresher (*S. Vulpes*, Gmel.), has not found a place in either the Swedish or Danish faunas; but Kröyer says he has been credibly informed that some

* "Though the width of the Cattegat between the Scaw and the Swedish coast is but small, say between forty and fifty (English) miles," Kröyer remarks, "yet this inconsiderable distance shows not unimportant modifications in zoological geography, in consequence of the Cattegat sinking or falling considerably towards the East. This is exemplified as regards the *S. Spinax* and the *S. Galeus*. The former, a Northern fish, is frequent, as just shown, on the Norwegian side of the Cattegat, but scarce on the Danish; whereas the latter, a Southern fish, is, as mentioned, pretty common on the Danish, but rare on the Swedish side."

twenty years ago a fish answering to it in every respect was cast on shore during a violent storm on the western coast of Jutland.

Of the Skate family, which, according to Yarrell, numbers seventeen species in the British seas, only seven have hitherto been identified in those of Scandinavia, viz. :—

The Common Skate (*Slätt-Rocka*, or smooth skate, Sw. ; *Plett-Rocke*, or spotted skate, Norw. ; *Skade*, Dan. ; *Raja Batis*, Linn.) is common in the Bohus Skärgård, and more or less so elsewhere on the western coasts of both Sweden and Norway, from the Sound to somewhat beyond the Polar Circle. With the exception of the *R. radiata*, its range in this direction is more extended than that of the Rays. Off the western coast of Jutland it is also common, but has not hitherto been identified in the Baltic. It is the largest of the family inhabiting the Scandinavian seas, and, as with its congeners, the female is of superior size to the male. On the Swedish coast its usual length is from three to five feet, but on that of Norway it attains to much more. Kröyer says he himself has there seen individuals seven to eight feet long, which he judged must have weighed two hundred pounds. In the Stockholm Museum is preserved the egg-shell, or "sea purse" as it is called, of what is believed to be this skate, that was brought up from the deeps, measuring thirteen inches in length by five and a half in breadth, clearly showing that the fish by which it was deposited must have been of gigantic dimensions. As a rule, it lives in the deeps, but at certain seasons approaches the shore. It is very voracious, and spares nothing that comes in its way. Flat-fishes and various species of *Gadus* constitute its chief nourishment ; but it also feeds on crustaceans, particularly the larger ones. As its movements are slow, it would seem rather to lie on the watch for its prey than to pursue it.

According to Krøyer, "it pairs in April and May. Contrary to its usual habit, it then comes up to the surface. At Hjerting, on the west coast of Jutland (lat. $55^{\circ} 30'$), they tell me that of a calm and mild evening a considerable number of these fish may be seen in the bay floating on the water, and might then be readily captured even with a common boat-hook. Several males are said to follow one female, and whilst in the act of pairing, the sexes are very securely attached to each other. The female commences depositing her eggs in May, and is supposed to continue till September, as only a couple of eggs are matured at a time. The lobes are of a fine sea-green colour, and of a considerable size. The young of upwards of two feet in length that are captured in the Cattegat in June and beginning of July are, in my opinion, bred in the spring of the same year. The appendages of a male of this size are not more than one inch long; and even when the fish has attained a length of five feet, it is not sufficiently developed to enable it to propagate its species. The appendages of the old male are of such an extraordinary size as to give one the idea that it is furnished with three tails."

With us in England the common skate is, according to Yarrell, held in estimation; but such is not the case in Scandinavia, where by the better classes it is somewhat despised. It is eaten, however, by the peasants, but for the most part when salted and dried.

A very singular notion regarding this and other skates formerly prevailed amongst the Danish fishermen, viz., that they keep watch over the bodies of the drowned, and guard them against the attack of other fishes.

The Long-nosed Skate (*Plogjerns-Rocka*, or plough-share skate, Sw.; *R. Vomer*, B. Fries; ? *R. oxyrhynchus*, Linn.) is rare in the Bohus Skärgård, but is not unfrequently taken during summer with the "long-line" on the

Jutland Reef in the Skager-Rack. Elsewhere in the Scandinavian seas it has not hitherto been identified. It is believed to attain a very large size. Those captured in Swedish waters, it is true, have not exceeded five feet in length, but none of them, as there is reason to believe, had arrived at maturity. This fish lives generally in deep water ; but with its breeding and other habits Northern naturalists are but little acquainted.

The Sharp-nosed or White Ray (*Blågarns-Rocka*, Sw. ; *Hvid-Rocke*, or white skate, Dan. ; *R. lintea*, B. Fries) was likewise rare with us and on the western coast of Norway, where, however, as yet, it has not been recognized much higher up than Stavanger (lat. 59°). In the southern portion of the Cattegat, and in the Sound, as also in the Baltic, it would appear to be entirely unknown. The fishermen in the Bohus Skärgård say this species may be readily distinguished from others of the family by the paleness or whiteness of its colour, resembling *Blågarn*, or unbleached yarn ; and hence its Swedish appellation. Yarrell informs us that it has been taken, off the coast of Northumberland, seven feet nine inches in length and eight feet three inches in breadth, and adds that it is the largest of the British rays ; for though in length and breadth it may not exceed the common skate, its superior thickness renders it heavier. But such giants, or anything approaching them in size, have not hitherto been heard of in the Scandinavian seas. This fish confines itself for the most part to the deeps. Kröyer mentions that the specimens brought under his notice in Norway, all young ones of about three feet in length, were captured in fully one hundred fathoms water. "The adults," he goes on to say, "only approach the coast during summer and autumn, but the young, on the contrary, are met with near the shore all the year round." Little or nothing is known of the habits of this fish.





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THE THORNBACK.

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The Shagreen Ray, so called from the rough shark-like texture of the skin (*Näbb-Rocka*, or beaked ray, Sw.; *Neb-Skade*, or beaked skate, Norw.; *Gjöge-Rocke*, or cuckoo-ray, Dan.; *R. fullonica*, Linn.), a southern species it would seem, was scarce with us, as also on the western coast of Norway, where it ranges up to Drontheim Fjord, or it may be somewhat beyond. Once in a time it is met with in the southern Cattegat, but hitherto it does not appear to have been identified either in the Sound or the Baltic. It is unknown, according to Kröyer, in the Danish seas. Pennant tells us it attains to a like size as the common skate; but those hitherto found in the Scandinavian waters appear not to have exceeded three to four feet in length. It dwells for the most part in the deeps, where it is captured on the "long-line" in from fifty to one hundred fathoms, or perhaps more. Its food and habits are very imperfectly known to Northern naturalists.

The Thornback (*Knagg-Rocka*, or knotted ray, Sw.; *Söm-Rocke*, or nailed ray, Dan.; *R. clavata*, Linn.), a southern fish, I believe, for we read of its being abundant in the Mediterranean and on the coasts of the Crimea, is common in the Bohus Skärgård and on the western coast from the northern portion of the Sound upwards; but its limits to the north seem not to be ascertained, though they are not very extended, it is to be presumed, because this fish is not thought to inhabit the seas of either Iceland or Greenland. Its usual length with us is from two to three feet, which it seldom exceeds. The female, as with other of the rays, somewhat surpasses the male in size. Moderately deep water with a sandy bottom would seem to be its favourite resort. According to Ekström, it is a *Stånd-fisk*, or stationary fish, that is, one confining itself pretty much to the same locality all the year round. "Its 'Lek,' " he says, "commences in

June and July, and continues for a long time. From observations made by the late Professor B. Fries, it seems probable that the egg is not vivified until after being produced by the female, and that she only deposits a single one at a time, with some interval between each. The 'egg'—oblong-square in form, with a short projection at each corner—is protected by a thin leather-like covering of a grey-brown colour. The fishermen say the fry is of slow growth."

The Thornback is captured by the line and in nets. "Its flesh," says Ekström, "is considered very inferior, being white and flabby, and having a disagreeable and insipid taste. It is seldom or never eaten fresh by the inhabitants of the Bohus Skärgård, but, after being salted and dried, is disposed of to the peasants in the surrounding country, who prepare it as *Lut-fish*"—a very singular and favourite dish, which is peculiar to Sweden, I think, but which space does not admit of my describing. Kröyer speaks equally unfavourably of the eatable qualities of this fish, which is remarkable, as Yarrell and others say that in England it is prized for the table.

The Starry Ray (*Klo-Rocka*, or claw-ray, Sw.; *Tærbe*, Dan.; *R. radiata*, Donovan.), a northern fish, and rare, as it would seem, in England, is captured occasionally in the Bohus Skärgård. It is also found along the whole western coast of both Sweden and Norway, from the North Cape to the entrance of the Baltic, into which, it is imagined, some few find their way. It is the smallest of the Scandinavian rays. Kröyer says that out of the great number he has seen not one exceeded eighteen inches in length, and he is of opinion that it does not attain to any considerable size; but Nilsson speaks of a specimen that came under his notice which measured twenty-one inches. According to Kröyer, "it dwells in shallower water than any other of our rays,

though with reference to the season. Early in the spring, say in March, it goes up in the shallows, where it appears to remain the greater part of the summer, and does not return to the deeps until the setting in of the winter. Of all its congeners, it seems most capable of enduring brackish water, as evidenced by its being so frequently met with in the Sound, and in the Great and Little Belts. In its stomach I have found several kinds of crustaceans, belonging to the genera *Palaemon*, *Hippolyte*, *Crangon*, &c.; various sorts of worms, especially Nereids; as also the remains of small fish, but the species were not distinguishable."

The breeding habits of this fish are not exactly known. It is thought, however, that the females deposit their eggs, or rather "purses," in shoal water throughout the summer, and that the young first appear late in the autumn. This inference is drawn because during the winter one occasionally finds young ones of from three to five inches in length near the shore.

The Sting Ray (*Spjut-Rocka*, or spear-ray, Sw.; *Pil-Rocke*, i. e. arrow (tailed) ray, Dan.; *R. Pastinaca*, Linn.), so named from its spine being capable of inflicting a severe wound, though not a poisonous one, has only in one instance been identified in the Scandinavian seas. This was some twenty years ago, near Kullen, on the coast of Scania. The specimen was a small one, measuring only fifteen inches; but in its proper home, believed to be the Mediterranean, this fish attains to a much larger size. Northern naturalists, I should observe, are quite puzzled to understand from whence Yarrell obtained the extraordinary information that the sting ray ranges to a high degree of north latitude on the coast of Norway.

The Sea Lamprey (*Hafs-Nejonögon*, or the sea nine-eyes; *Sugare*, or sucker, Sw.; *Har-Negenöjen*, or sea

nine-eyes, Dan.; *Petromyzon marinus*, Linn.) was found with us, and on the whole of the western coast of both Sweden and Norway, from beyond the Polar Circle to the Sound; as also in the more southern parts of the Baltic; but it is somewhat scarce everywhere. Pennant speaks of its attaining to the thickness of a man's arm, and a weight of five or six pounds, but I have no idea of its ever having been taken in the Scandinavian seas at all approaching to that size. It is said to be very hard-lived. Hofman relates that he has seen it exist for nearly a whole day out of the water, and exposed, besides, to a bright sun. It spawns in early summer, and for that purpose, although a salt-water fish, ascends rivers, often to a considerable distance. Its powers of suction are great. To prevent being carried away by currents, or for other causes, it often affixes itself to a stone; and hence its popular name of "Stone-Sucker." It also sucks itself fast—for the most part to the belly—of the fish on which it purposes to prey, and with its sharp teeth eats itself into the flesh. The fishermen in the Bohus Skärgård say that it more especially attacks the Ray family, and that they occasionally draw up one of these fishes with a sea lamprey attached to it, though more frequently they only see the wounds it has inflicted. Bishop Gunnerus tells us, moreover, that at times numbers of lampreys fasten themselves to the body of the Great Basking Shark, and do not quit their hold of the creature until they have compassed its death. Though the flesh of the sea lamprey is in reality good, yet in Sweden it is little prized. On the greater part of the Danish coast, Kröyer tells us, it is looked on as poisonous, and when the fish is accidentally captured, it is usually cast back into the sea. Of the Lampern, or River Lamprey (*P. fluviatilis*, Linn.), a full description is given in the "Scandinavian Adventures."

The Myxine, or Glutinous Hag (*Pir-ål*, Sw.; *Sleep-mark*, or slime-worm, Norw.; *Slim-aal*, or slime-eel, Dan.; *Myxine glutinosa*, Linn.), was very common with us, and on the western coast, from the Sound to beyond the Polar Circle; but hitherto it has not found its way into the Baltic. From its peculiar structure and apparent want of eyes, Linnæus and others were led to class it with the worms, and it was not until after dissections, and published descriptions, that its true relation to the lampreys was acknowledged. Its usual length is from twelve to fourteen inches, but it attains to fifteen or sixteen. It dwells, for the most part, in the deep—say from twenty to fifty fathoms—and in preference where the bottom, to which it always confines itself, is muddy. It appears to be a very inert fish. “Those taken alive and placed in a tub of salt water,” says Professor Sundevall, “lie for the most part extended to their full length at the bottom of the vessel. When disturbed they swim in the manner of the eel, but with less vigour. If placed in fresh water, they die almost as rapidly as if in spirits.”

It does not prey on living animals like the sea lamprey, but only on such as are defunct, and on almost anything, the human corpse not excepted, that comes in its way. And of dead fishes it finds abundance in the nets and on the lines of the fishermen when, owing to stress of weather, they have remained unexamined for a day or two. It is believed to enter the fish by the mouth, and after eating its fill, to make its exit through the anus; and it often happens that the men, on taking up their gear, find nothing remaining of the fish but the bones and the skin, which, instead of flesh, is filled with myxines. Professor Sundevall relates that in a dead haddock that had only been placed in the water a few hours he found near twenty of these singular creatures, buried several inches in its flesh. The myxine, in conse-

quence of this its destructive habit, is mortally hated by the fishermen, and with them probably originated the opprobrious name of hag, by which it is known to us in England. The quantity of glutinous matter that exudes from the body of this fish is past belief. It is said that if a myxine be placed in a vessel containing a cubic foot of water, the liquid will, in the course of two or three hours, become impregnated with so thick a slime that it can be drawn out in threads, or lifted up at the end of a stick in like manner as a rag. Even if this experiment be repeated three to four times in succession, a similar result will follow. "This slime, like all other slime," says Sundevall, "is composed of fine globules, which, when the mass is distended, may be drawn out into spiral threads: it would appear to be tougher or more glutinous than any other kind of slime."

The myxine is oviparous. "One always finds in the full-grown female," says Sundevall, "about twelve eggs which are larger and altogether differently shaped from the rest. They are oblong, and of three times greater length than breadth, and are quite opaque; and when they are deposited by her, twelve more of the smaller eggs would seem to assume the oblong shape and commence to increase in growth, &c. The Professor gives us many other very interesting particulars respecting the breeding habits of this fish, but they are too long for insertion in these pages. Its spawning season seems unknown to Northern ichthyologists; but Kröyer is inclined to believe it is not confined to any particular time of the year. Neither Sundevall nor Kröyer, both of whom have carefully studied the habits of this fish, have been able to find any individuals that they could with certainty assume to be males. Kröyer considers the fact that the young fry have never, in Danish waters, been found of a less length than nine inches, to be an "enigmatical circumstance."

The Lancelet (*Lansett-Fisk*, *i. e.* lancet-fish, Sw.; *Lancetdanned Travlemund*, *i. e.* lancet-formed fibre-mouth, Dan.; *Branchiostoma lubricum*, Costa; *Amphioxus lanceolatus*, Yarr.), which was first noticed in 1774 by Pallas, who looked on it as a worm, and as such classed it under the name of *Lumbricus lanceolatus*, is not so very uncommon in the Bohus Skärgård and the Cattegat, though elsewhere in the Scandinavian seas it has not, I believe, been hitherto identified. To judge by Yarrell's figure, which he says is of life size, it must be fully three inches long; but Kröyer seems to think that on the Jutland coast at least it does not attain to more than two. It dwells on a sandy bottom, but in a depth of water which varies considerably, being at times found in ten to twelve fathoms, and at others near the shore. It is said that if this fish be placed in a tub of salt-water, with sand at the bottom, it will either lie still for hours together, as if dead, or it will so embed itself in the sand that only the upper part of its body remains visible; if disturbed, it becomes lively, and casts itself hither and thither, or it swims about the tub with a worm-like lateral motion. Its food is believed to consist of microscopic animals. Little or nothing is known to Northern naturalists respecting the habits of this very singular little fish.

CHAPTER XXXIII.

The Swedish Herring-Fisheries, Past and Present. — Superstitions. — Enormous Takes.—The Herrings desert the Coast.—Reasons assigned for their Disappearance.—These Reasons gainsaid by the Fishermen. —Speculations on the Subject.—Loss attendant on the Absence of the Fish.—Demoralized State of the Fishermen.

AS mentioned in a recent chapter, the Swedish herring-fisheries were at one time the largest and most flourishing in Europe, but owing to the disappearance of the fish from the coast for the past sixty or eighty years, they have dwindled down to almost insignificance; and at the present day there is little to remind one of them but the curing-houses and other buildings, now in a state of wrack and ruin, in which operations used to be carried on. The subjoined short account of the fisheries in question—the chief of which were in the Bohus Skärgård—may not be without interest, both to those connected with similar establishments and to the naturalist.

Though for ages previously herrings had been most plentiful, yet during the first half of the sixteenth

century—beyond which it is needless to go back—they, in great measure, deserted the coast. In 1556, however, there was a *Land-stötning*, as it is called; that is, the fish having emerged from the deeps—their usual place of resort—appeared in incalculable numbers in the Skärgård, and this continued until 1587, a space of thirty-one years, when they for the most part once more absented themselves.



SWEDISH FISHERMEN.

During the period of glut (from 1556 to 1587), the fisheries are described as having been more productive than at any other on record. We learn from the old chronicles, indeed, that for the space of fifty or sixty miles the shores of the main land and the adjacent islands were studded with curing and salting houses, many of them two or three stories high, and inhabited by vast multitudes of people who had congregated there from various and distant parts, and whose sole occupation

was in connection with the fisheries; that "herrings were then so very abundant that thousands of ships came annually from Denmark, Germany, Friesland, Holland, England, and France, to purchase the fish, of which sufficient were always found for them to carry away to their own or other countries." And this would not seem to be a very exaggerated account, as from the small town of Marstrand alone no less than six hundred thousand tunnor, or some two million four hundred thousand bushels, were yearly exported.

The disappearance of the fish from the coast in 1587, which reduced many people to penury and misery, was, according to the belief of the age, foreboded by the capture of a herring, the queen of the family as it was supposed, of such enormous size, that two men could with difficulty carry it suspended on a pole! But idle as is the story, it is only on a par with that related by Peder Clausen, viz., that when in ancient times a like sudden disappearance of the herrings had occurred, the people sagely attributed their absence to *trolldom*, or witchcraft, believing that the sorcerer, to effect his object, had thrown into the sea a so-called "copper horse," one of the implements of his nefarious trade.

From 1587, the concluding year of the glut, to 1660, a space of seventy-three years, the herrings only appeared in small numbers on the Bohus coast; but in 1660 there was another "Land-stötning," though not comparable to that of 1556. But as during the recent dearth of fish most of the people connected with the fisheries had departed to their distant homes, and the curing-houses had fallen into decay, few besides the inhabitants of the province were enabled to avail themselves of the opportunity, and these men, having now the fish all to themselves, so to say, soon became comparatively wealthy. The war in Norway in 1675 (Bohus-Län then forming a

part of that kingdom) nearly put an end to the fishery for that time.

Subsequently the fish appeared at intervals on the coast, especially in the year 1727; but there being a want of people, as also of the proper fishing gear, to enable them to take advantage of the opportunity, no very great captures were made.

In 1747 there was again a "Land-stötning," though much less abundant than that of 1556, and the same continued until 1808, when the fish once more departed. In this while, a space of sixty-one years, the fisheries were prosecuted with great ardour and success, and to the great gain of those engaged in them. Herrings were so very plentiful during one particular year, that a tunna, or four bushels, could be purchased on the spot for two skillings, or a half-penny of our money; and though the fish were converted to all manner of purposes, people hardly knew what to do with them. Subsequently, however, to 1799 and up to 1808, when the herrings left the coast, the fisheries were less remunerative, which was attributed as well to a diminution in the number of the fish, as to their appearing at a later and more inconvenient season of the year for their capture. During the earlier years of the glut in question, the great "take" was at an end by Christmas, but now the fishery only commenced shortly before that time. It is true that *Is-notar*, or ice-nets, were made use of, but without much success, probably from ignorance of the proper manner of handling them. A large portion of such of the captured fish as were not exported were boiled down into oil. Others were salted, smoked, dried, prepared as pilchards, &c., and not a few consumed in the country itself. One year, when the herrings were unusually numerous, it was calculated that not less than 2,938,000 barrels were taken; and as each

barrel is supposed to contain about one thousand fish, the aggregate would be something like 2,938,000,000 of herrings!

During the glut we are now speaking of (1747 to 1808), the Bohus fisheries were looked on as a second El Dorado; and as the government gave encouragement to settlers, every nook and cranny, both on the islands and on the coasts of the main land, were soon, as of old, dotted with buildings of one kind or another. Indeed, when the fisheries were in their glory, it was computed that, independently of the inhabitants themselves, fifty thousand strangers at the least took part in them.

In 1808, as shown, the herrings once more left the coast, and have never since revisited it in any considerable numbers; as a consequence, the extensive curing-houses, which subsequent to the "Land-stötning" of 1747 had again risen up as if by magic, soon disappeared altogether or fell into a state of dilapidation and decay, and many individuals who had invested their all in the fisheries were reduced to want.

The absence of the herrings from the Skärgård for the past fifty or sixty years has given rise to a great deal of speculation. Few questions, indeed, have been more discussed. The reasons assigned by Swedish naturalists and others, who were deputed by the government to investigate the cause of the disappearance of the fish, were many and weighty. Amongst the rest—"The noise and uproar in the Skärgård when the fisheries were flourishing, caused by the tens of thousands of congregated people, which noise in calm weather, or when the wind was off the land, might be heard miles and miles out at sea; the enormous quantity of refuse of all kinds cast out from the curing and boiling-houses into the sea, which, on sinking, destroyed all submarine vegetation, and masses of which, resembling floating islands and emitting a dreadful

stench, might at times be met with far away from land;* the very great destruction of the fry and lesser fish, owing to the small size of the meshes of the nets customary in the Skärgård; and lastly the use of the *Wad*, a drag-net of gigantic proportions, which, sweeping the bottom, proved destructive to all the grass and other plants, amongst which herrings are accustomed to spawn."

The "Wad," I should observe in parenthesis, was from one hundred and twenty to one hundred and fifty fathoms in length, and from twelve to fifteen fathoms in depth, with hauling lines four to five hundred fathoms long. It was cast into the water as far from land as practicable, so as to enclose the greatest possible number of fish, and was drawn to the beach by means of windlasses. Three boats and fourteen to fifteen men were required to manage one of these enormous nets. Under favourable circumstances, upwards of two thousand barrels (about eight thousand bushels) of herrings were taken at a single haul. There were usually twelve to eighteen individuals to a "Wad," the most intelligent of whom, the *Wad-kung*, or king, as he was called, took the command. Sometimes several of these *Wad-lag*, or companies, made common cause, and by uniting their several nets were thus enabled altogether to block up the entrance of a bay or inlet, in which case the fish were landed in nets of smaller dimensions. But covetousness often gets the better of prudence; for it frequently happened that the net inclosed such a multitude of herrings that the men were unable to draw it on shore; and from the fish being packed together in dense masses, they presently died, and were left to rot at the bottom of

* Though more than half a century has since elapsed, the places where this filth deposited itself in any considerable quantity are still quite visible, and by the fishermen are called *Död-bottnar*, or dead spots.

the sea : millions were thus annually lost to every one. And the evil ended not here ; for the localities where this useless destruction took place were usually deserted by the herrings for a long time afterwards.

The fishermen and others interested, however, saw the matter in a somewhat different light from the deputies, they contending that, so far from the noxious matter cast from the curing-houses into the sea being injurious to the fish, as asserted, it was, in reality, in the highest degree beneficial, affording them nutritious and wholesome food. They further contended that the capture of the smaller herrings, called *Lott-Sill*, was in no degree hurtful to the fishery (as assumed by the deputies), they being of a totally different species from the larger herrings ; that the proper home of these smaller fish are the Arctic regions, from whence they were chased by whales, sharks, seals, &c., to the shores of Europe, and that their destruction, in however great numbers, could not therefore have any possible connection with the non-appearance of late years of the larger herrings, or those for which the fisheries were carried on.

But leaving the merits of their story out of the question, these men, by M. Holmberg's account, would not appear to have been the most intelligent in the world. "Many of them," he says, "were hardly aware that fish spawn at all ; and some, on being questioned as to the cause of the smaller herrings (*Lott-Sill*) having neither roe nor milt, replied, 'They did not breed like other fish, but were *stiftade af vår Herre hcart treilje år* ;' that is, 'were created by Providence every third year.' Others varied the story somewhat, their notion being that 'the *Lott-Sill* were quickened in the sea every month out of a green substance that flourished on the surface, and hence it was altogether impossible to diminish the breed.' "

Though the reasons assigned by the learned and others for the absence of the herrings from the Bohus coast are plausible enough, they are not altogether satisfactory to my mind. One or more of the nuisances complained of—such as casting the offal of the curing-houses into the sea, and the noise in the Skärgård—may not improbably have deterred the fish from entering inlets near to the shore, but they do not sufficiently account for their altogether absenting themselves from the coast. The cause for this, as it seems to me, must be sought elsewhere. The Herring, as known, is a most capricious fish, seldom remaining long in any one place. There is scarcely a fishing station, indeed, around the British Isles that has not experienced the great variation both as to time and numbers in their visits, and that without any assignable reason. Their present absence from the coast of Bohus is rather owing, it seems to me, to some hidden law of nature, of which we shall possibly be for ever in ignorance, than to the causes alleged. Doctor M'Culloch, one of our best authorities, takes a somewhat similar view of the subject. He says : — “ Ordinary philosophy is never content unless it can find a solution for everything, and is satisfied for this reason with imaginary ones. Thus in Long Island, one of the Hebrides, it was asserted the herrings had been driven away by the manufacture of kelp, some imaginary coincidence having been found between their disappearance and the establishment of that business. But the kelp fire did not drive them away from other shores, which they frequent and abandon without regard to this work. It has been a still more favourite and popular fancy that they were driven away by the firing of guns ; and hence this is not allowed during the fishing season. A gun has scarcely been fired on the Western Islands or on the west coast since the days of Oliver Cromwell, yet they have changed

their places many times in that interval. In a similar manner, and with equal truth, it was said they had been driven from the Baltic by the battle of Copenhagen. It is amusing to see how old theories are revived. This is a very ancient Highland hypothesis, with the necessary modification. Before the days of guns and gunpowder, the Highlanders held that they quitted the coasts where blood had been shed; and thus is ancient philosophy renovated. Steam-boats are now supposed to be the culprits, since a reason must be found: to prove their effects, Loch Fine, visited by a steam-boat daily, is now their favourite haunt, and they have deserted other lochs where steam-boats have never yet smoked."

Taking all things into consideration, therefore, and as the Herring has on many previous occasions absented itself for years and years together from the Bohus coast, it seems to me not at all improbable that the inhabitants will some fine day be rejoiced by another "Land-stötning" of these fish.

The disappearance of the herrings from the Bohus Skärgård for more than half a century has been attended with considerable loss, not only to those interested in the fisheries, but to the mercantile community at large. In other respects the country itself has probably been a gainer by the absence of the fish. Great injury was in the first place done by the fisheries to agriculture; for when there was a "Land-stötning," the men cast aside their farming implements, and leaving the women to till the ground—an occupation considered beneath their dignity—they hastened to seek their fortunes in what was then looked on as a mine of wealth. As a consequence, the soil was soon ruined, and years were required before it recovered itself. Speaking generally, moreover, men once engaged in the fisheries lost their previous habits of industry and economy, and were never afterwards

able to settle down to their old occupations. It is true that whilst matters went on prosperously they gained with ease a great deal of money ; but, as usually happens in similar cases, it was as quickly spent. They lived, so to say, only for the day, leaving the morrow to take care of itself. Many, therefore, owing to their dissipated manner of living, were necessitated to borrow, and that not only on the security of the fish then in the Skärgård, but on the anticipated "Land-stötning" of the following year ! The consequence was, that if the herrings did not then make their appearance, houses, boats, nets, clothes, —in short, all they were possessed of—were sold to satisfy their creditors, and the last days of these men were therefore worse than the first.

Then again, when the fish deserted the coast for years together, which, as shown, was not of unfrequent occurrence, the great mass of people in the Skärgård were left without occupation or profitable employment of any kind, and consequently suffered much. It is said, indeed, that, though some sixty years have now elapsed since the herrings took their departure, many families have not yet fully recovered from the want and misery to which they were then reduced.

But the worst of all was the very demoralized state of the dwellers in the Skärgård during the continuance of the fishery. Peder Clausen, when speaking of the great glut of 1556 to 1587, says :—"None led such ungodly lives as these '*Strandsittare*,' or squatters, for drunkenness and brawls, as well as other great wickednesses, were of constant occurrence amongst them." And in another place :—"The great thanklessness shown by the people to God, and the way in which they have abused His many bounteous gifts, as also their ungodly and dissolute lives, were no doubt the cause of the disappearance of the herrings." The author of "*Den Norske So*," or the

Norwegian Sow (a publication deriving its name from a hog of unnatural form—a perfect monster, in short—that existed in the province of Aggerhuus in 1581, and the advent of which was looked on by the superstitious as the precursor of God's vengeance for the sins of the people), when speaking of the same glut, testifies to the like effect, and even in stronger language. During the last successful fishery—that from 1747 to 1808—matters, instead of improving, would appear, by the testimony of M. Holmberg, to have been still worse. He writes:—“The vagabond life led by the people in the Skärgård exceeded all belief—blasphemy, outrages, immorality of all kinds, and scenes of beastly drunkenness, were going on all day. From morning to evening the fishermen and others were seen staggering about in their houses, in their boats, and on the piers erected for the protection of the latter; whilst the nights were devoted to debaucheries of the worst description. This was, however, the less surprising, as the people of both sexes thus congregated together consisted for the most part of the very dregs of society; and as there was no police to keep them under control, one can therefore hardly wonder at the inhabitants of the province saying, as they now do, ‘*Gud låte Sillen aldrig komma igen* ;’ that is, ‘We hope to God the herrings will never return.’”

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