Recreations in natural history, or, Popular sketches of British quadrupeds : describing their nature, habits and dispositions, and interspersed with original anecdotes, embellished with numerous engravings and woodcuts, from portraits of living animals, painted by the first masters / woodcuts by L. Clennel, and engravings after paintings by him.

Contributors

Clennell, Luke 1781-1840 (Wood-engraver)
Royal College of Physicians of London

Publication/Creation

London : W. Clarke, 1815.

Persistent URL

https://wellcomecollection.org/works/n8wvr45n

Provider

Royal College of Physicians

License and attribution

This material has been provided by This material has been provided by Royal College of Physicians, London. The original may be consulted at Royal College of Physicians, London. where the originals may be consulted.
This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

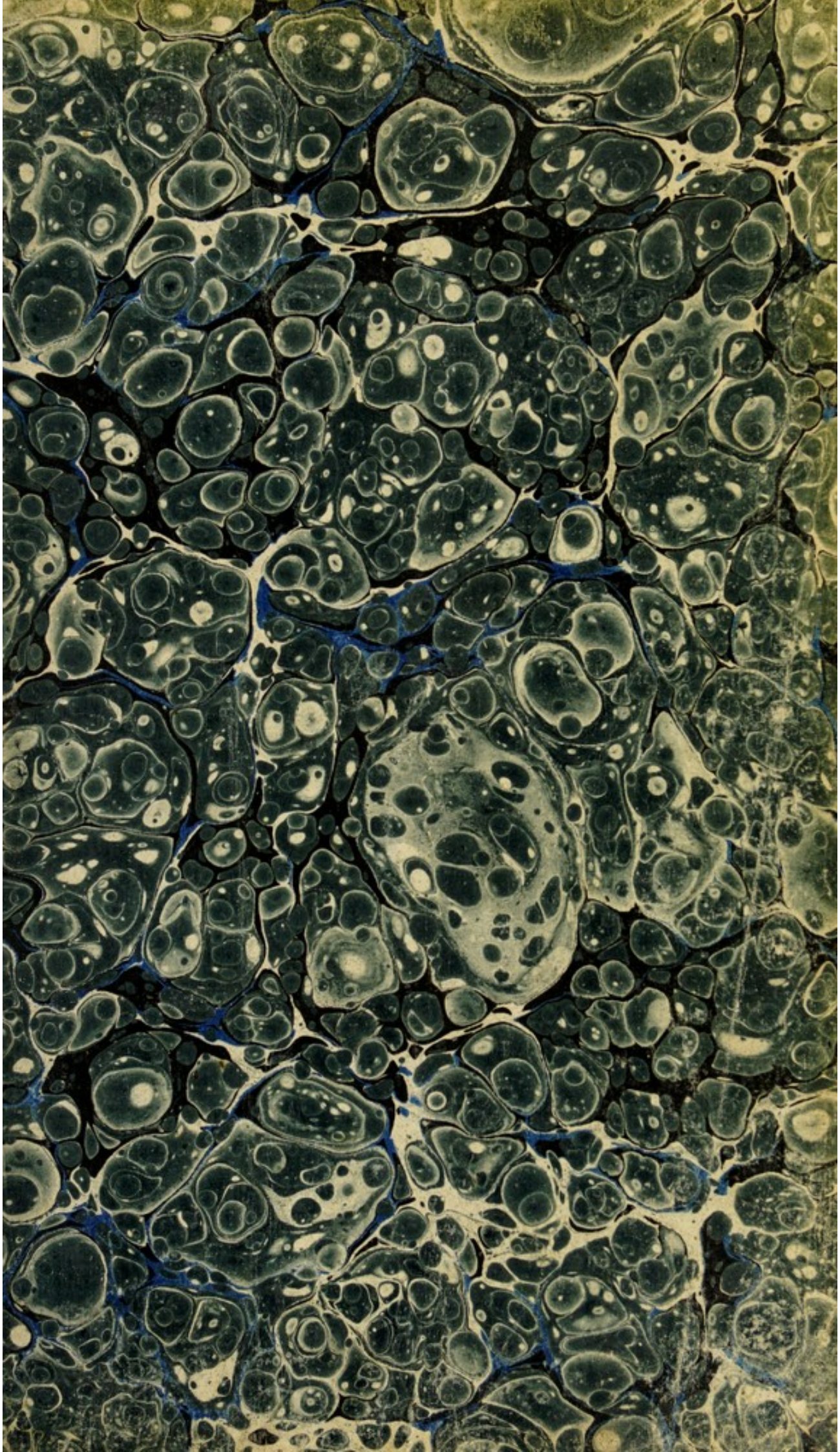
You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.

wellcome collection

Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
https://wellcomecollection.org

(a) D2/58-b-23 59





Digitized by the Internet Archive
in 2016

https://archive.org/details/b28039166



THE WILD BOAR.

RECREATIONS

IN

Natural History;

OR,

POPULAR SKETCHES

OF

BRITISH QUADRUPEDS:

DESCRIBING

THEIR NATURE, HABITS, AND DISPOSITIONS,

AND

INTERSPERSED WITH ORIGINAL ANECDOTES,

EMBELLISHED WITH

NUMEROUS ENGRAVINGS AND WOOD CUTS,

FROM PORTRAITS OF LIVING ANIMALS,

PAINTED BY THE FIRST MASTERS.

London:

PRINTED FOR THE PROPRIETORS;

AND PUBLISHED BY WILLIAM CLARKE, NEW BOND-STREET; A. MOLTENO, PALL-MALL; TAYLOR AND HESSEY, FLEET-STREET; J. M. RICHARDSON, CORNHILL; AND SHERWOOD, NEELY, AND JONES, PATERNOSTER-ROW.

1815.

ROYAL COLLEGE
6229

ROYAL COLLEGE OF PHYSICIANS
LIBRARY

CLASS	59
ACCN.	12514
SOURCE	
DATE	

T. Davison, Lombard-street,
Whitefriars, London.

Advertisement.

AS the present work is intended to furnish a store of *amusive reading*, rather than a historical and minute detail, we have not fettered our arrangement with the shackles of system, but have assorted our subjects in such a manner as is best suited to the nature of "RECREATIONS," or most capable of popular and pleasing illustration. In the INTRODUCTION, however, the different genera of British Quadrupeds are referred to the particular Orders, in the Linnæan classification, to which they respectively belong.

The various instinctive powers of quadrupeds have been the object of peculiar attention; and many *original* and well-authenticated anecdotes of this faculty have been occasionally introduced.

The EMBELLISHMENTS of this work will be found to possess very superior attractions: to the lover of rural sports, the *spirited fidelity* of the portraits (engraved from paintings of *living animals* by the first masters), will be their best recommendation; and

the *execution* of the plates will, we trust, be a sufficient passport to the notice and the praise of every amateur of *fine engraving*. Of the numerous WOOD CUTS with which our work is adorned, we need only say, that they are, without an exception, from the masterly hand of Mr. CLENNELL.

To the ingenuous YOUTH, desirous of acquiring useful knowledge on the most important subjects; to PARENTS, solicitous to teach the juvenile mind to "look through Nature up to Nature's God," this work is most respectfully offered; and to the NATURALIST it will be scarcely less acceptable, as an important manual of interesting facts illustrative of BRITISH ZOOLOGY.

LONDON,
January 31, 1815.

INTRODUCTION.

"No knowledge can be more pleasant to the soul than NATURAL HISTORY; none so satisfying, or that doth so feed the mind; in comparison of which, the study of words and phrases seemeth insipid and jejune; for words being but the images of t ings, to be given up wholly to their study, what is it but to verify the folly of Pygmalion, to fall in love with a statue, and neglect the reality! The treasures of nature are inexhaustible: there is enough for the most indefatigable industry, the happiest opportunities, the most prolix and undisturbed vacancies." RAY.

NATURAL History is, of all sciences, the most important and extensive. Its object is to observe and classify the various appearances of nature, as they present themselves spontaneously while undisturbed by the intervention of human art. The general phenomena of the universe, the wonders of the heavens, the form and structure of the earth, ANIMALS, vegetables, fossils, and inanimate bodies of all species, fall, therefore, under its observation.

Whatever can be discovered of any of these by an attentive survey, or by carefully watching those changes to which they are naturally subject, is recorded by the NATURALIST, in order that it may be added to the materials of some other science or art, or that it may enlarge the general experience of mankind. No sooner have we entered the world, than we begin to observe the appearances of nature; we attend to them in

infancy with eager curiosity: a considerable acquaintance with them is necessary to fit us for the business of life, when we advance to manhood; the operator in every art, and the votary of whatever science, must search in one department or another of Natural History for the materials of which every system of science is constructed; and the facts, by induction, from which the rules of every art are formed.

Of all the various classes of animated beings which the wide-spread map of Natural History offers to our view, that of QUADRUPEDS is, on many accounts, by far the most interesting. Their manners, habits, and peculiar economy—but above all, their important services to mankind, while they call forth our gratitude, should equally excite our curiosity. But it is not the province of this work to describe the almost countless quadrupeds which swarm in every part of the globe.

The "Recreations in Natural History" are confined (with one or two exceptions) to such animals alone as are *natives* of GREAT BRITAIN; a country which more than any other receives the greatest advantages from its natural breed of quadrupeds, unmixed with any beast that preys on man.

There is no point of rural economy in which the British nation more excels, than in the breeding of domestic animals; every species of which has been brought to a degree of excellence scarcely elsewhere to be met with. There are, according to Mr. Pennant, twenty genera of animals indigenous to Britain, from the horse down to the seal and bat. Of the principal of these we will take a brief survey.

That noble and useful animal, the HORSE, is found in England of many mingled breeds, while most other kingdoms

produce only one kind. Our race-horses descend from Arabian stallions, and the genealogy faintly extends to our hunters. The great strength and size of the English draught horses, are derived from those of Germany, Flanders, and Holstein; and other breeds have been so intermingled, that native horses may be found adapted to every purpose of pomp, pleasure, or utility. Those of Yorkshire are particularly celebrated for their spirit and beauty; and the grooms of that county are equally noted for their skill in the management of this valuable animal. It is somewhat remarkable, that while England excels all the European countries in various breeds of horses, yet veterinary schools are of recent institution.

The speed of flying Childers was computed at a mile in a minute; and such is the strength of a Yorkshire pack-horse, that he will usually carry four hundred and twenty pounds; nay, a mill-horse will support, for a short distance, a weight of nine hundred and ten pounds! Mr. Pennant observes, that though the British cavalry was remarkable even in the time of Julius Cæsar, yet we know not what was the primitive breed.

The indigenous breed of HORNED CATTLE is now only known to exist in Needwood Forest, in Staffordshire, and at Chillingham Castle, in Northumberland. They are long-legged, and wild like deer; of a pure white colour, with black muzzles, ears, and tails, and a stripe of the same hue along the back.

The breeds of our cattle are almost as various as those of our horses; those of Wales and Cornwall are small, while the Lincolnshire kind derive their great size from those of Holstein. In the north of England we find *kyloes*, so called from the district of Kyle, in Scotland; in the south, we find the elegant

breed of Guernsey, generally of a light brown colour, and of a small size, but remarkable for the richness of their milk. Of late years, Mr. Bakewell and others have brought the breeding of cattle and sheep to a regular system.

The number and value of SHEEP in England, may be judged from the ancient staple commodity of wool. Of this most useful animal, the several breeds are described in the course of this work;—those of Herefordshire, Devonshire, and the Cotswold downs, are noted for fine fleeces, while the Lincolnshire and Warwickshire kind are remarkable for the quantity. The Teesdale breed of the county of Durham, though lately neglected, continue to deserve their fame. The mutton of Wales is much esteemed;—the wool, though coarse, is yet employed in many useful and salutary manufactures. The Norfolk breed is remarkable for black faces and legs. Those of Leicestershire are very large, and without horns.

The most laudable exertions have, and still continue to be made by the Board of Agriculture, for the improvement of the English fleece.

The GOAT, an inhabitant of the rocks, has, even in Wales, begun to yield to the more useful sheep; that country being, like Scotland, more adapted to the woollen manufacture.

The breeds of SWINE are various and useful, and are distinctly enumerated in the body of this work, together with some hints for their better management.

Some of our breed of DOGS were celebrated even in Roman times. In the reign of Elizabeth, Dr. Caius enumerates sixteen denominations of English dogs. Some seem to be now extinct, and the bloodhound occurs only in Staffordshire. The terrier,

as the name implies, was used to force the burrowing animals from their holes; the harrier, akin to the foxhound, for hunting the hare. The greyhound was so called, as Caius informs us, because he was the first in degree among dogs. The tumbler of that author seems to be our lurcher.

The spaniels from Spain, as the name imports, were trained as starters, setters, and pointers, but the latter description is modern; the water-spaniel was used to recover the slaughtered game; the spaniel gentle, or comforter of Dr. Caius, is our lap-dog;—the shepherd's dog always displayed its docile qualities. The mastiff was employed in defending the house: to this species Mr. Pennant ascribes the bull-dog, an animal of surprising spirit and fierceness. The curs and mongrels are numerous, but the turnspit is now exploded. Of late the Newfoundland dog, of more useful and generous qualities, has, in some degree, supplanted the mastiff, and the spotted Dalmatian forms an additional attendant on our equipages.

The CAT is one of the most universal and most identic of animals, those of Angola excepted, with their white fleeces, and those of Russia, with a bluish fleece, and eyes of topaz.

Of our SAVAGE ANIMALS, the most fierce and destructive is the WILD CAT, found only in the most mountainous and woody parts of Britain. The Wolf has been long extinct, but the FOX abounds. It is sufficient to name the BADGER, the FITCHET, the MARTIN, the STOAT, the OTTER, SQUIRREL, DORMOUSE, RAT, and various kinds of MICE. The MOLE, URCHIN, and BAT, seem to become more rare:—the SEAL is chiefly found on the coasts of the Hebrides, and some other parts of the Scottish, Welch, and English coasts.

Of the DEER kind, which formerly abounded in the woody and mountainous districts, scarcely any are left in a wild state in the southern portion of the island; but the red deer and roe-buck still run in the forests of the Scottish Highlands. The fallow deer are confined to parks, of which a great number, belonging to the nobility and gentry, contribute to beautify the face of the country.

Having thus enumerated our principal indigenous quadrupeds, (for which we are partly indebted to Mr. Pinkerton's Zoology of England[1]) we shall offer a classification of them according to the system of Linnæus, preceded by some remarks on the general characters of the class MAMMALIA, including the four orders PRIMATES, FERÆ, GLIRES, PECORA, and BELLUÆ, to which may be referred the whole of our quadrupeds. None of the animals of the second Linnæan order, BRUTA, are natives of our islands.

The *Mammalia* are so named from their being provided with *mammæ*, or teats, for the purpose of suckling their young; which circumstance sufficiently distinguishes them from all other animals. They are also called *viviparous* quadrupeds, as producing perfectly formed living young; in opposition to what were formerly termed *oviparous*, or egg-producing quadrupeds, as tortoises, lizards, &c. The following are the general characters of the mammalia. They have warm and red blood. Their skeleton, as well as their internal organs, resemble, in a great degree, those of man. Their outward covering consists in general of hair, but in some few, the animal matter or sub-

[1] Modern Geography, 4to, vol. I. p. 129.

stance takes the form of distinct spines or quills, as in the porcupine and hedge-hog tribe. In other mammalia, the same substance is expanded into the appearance of very strong and broad scales, as in the quadrupeds of the genus manis or pangolin. In the armadilloes, instead of hair, we meet with strong bony zones or bands, forming a regular suit of armour, and securing the animal from all common injuries.

The *feet*, in the mammalia, are generally four in number, and furnished with separate toes or divisions, guarded by claws, more or less strong in the different tribes. In the monkeys, the feet have the appearance of hands; and the claws often bear a great resemblance to the human nails. In some tribes of mammalia, the feet are armed or shod with strong hoofs, either quite entire, or cloven or divided. In the *bat* tribe, the fore feet are drawn out into slender fingers of an immoderate length, and united by a common membrane or web. In *seals*, both the hind and fore feet are very strongly or widely webbed; and in the whales, there are in reality only two feet, the bones of which are inclosed in what are commonly called the fins, while the lobes of the tail, in some degree, answer the purpose of a pair of hind feet, but consist merely of strong muscles and tendons, without any internal joints or bones. The arms, or offensive and defensive weapons of the mammalia, besides the claws and teeth, are principally the horns, which are either perennial, or during the animal's life, or annual.

The teeth of the mammalia are of three kinds. 1. Front or cutting teeth, of a broad, compressed structure, designed for cutting their food. 2. Sharp, lengthened, or canine teeth, si-

tuated on each side the cutting teeth, and calculated for tearing and dividing the food. 3. Grinders, with broad angular tops, for comminuting or grinding the food. They are situated, as in the human subject, on each side the jaws. The teeth afford a principal character in forming the tribes and genera, or particular sets of quadrupeds:—for in some, the canine teeth are wanting; in others, the front teeth; and some few are totally destitute of any teeth. The tail, in quadrupeds, is formed by a continuation of the vertebræ or joints of the back-bone; and is, in some, of great length, and covered with very long hair: in others, very short; and in some few entirely wanting, as in the real or genuine apes.

The senses of the mammalia consist, as in man, of the organs of sight, hearing, tasting, and smelling, and the power of feeling; and in many of these animals, the organs are of greater acuteness or sensibility, than in man. The eyes, in some quadrupeds, are furnished with what is called a *nictitating* membrane, or semi-transparent guard, situated between the eyelids; and which can, at pleasure, be drawn over the ball of the eye, for additional defence. The nose, or organ of smelling, is more or less compressed and lengthened. In the elephant, it is extended in a most wonderful manner into a long and tubular proboscis, or trunk, at the top of which are placed the nostrils. The tongue is usually of a flattened and lengthened shape; sometimes, as in the cat or lion tribe, beset on its upper surface with small reversed spines. In some few, as in the ant-eater, it is of a cylindric shape, and lengthened into the form of a worm, and can be extended at the pleasure of the animal.

The teats or mammæ are found in all these animals, and, as before observed, gave rise to the Linnæan title of the whole class.

PRIMATES.

This is so entitled, as containing the chiefs of the creation. Its characters are, four front or cutting teeth above and below; and one canine or sharpened tooth on each side these. The feet are formed with a resemblance of hands, and the nails are more or less oval in shape. Most of the orders feed chiefly on vegetable substances.

The Bat is the only individual of this order which is an inhabitant of Great Britain. The primates, as apes, lemurs, and bats, are chiefly inhabitants of hot countries.

FERÆ.

This order contains the predacious quadrupeds or animals of prey, some of which are carnivorous, while others subsist principally on fruit, roots, and herbs. It includes Seals, Dogs, Cats, Weasels, Otters, Moles, Shrews, and Urchins. The front teeth, which are usually six both above and below, approach to a conic or pointed figure; the canine teeth are long, and the grinders not flattened at the top, but are of a sharpened form: the claws also, with which the feet are furnished, are sharp, and more or less curved in the different species. Seals differ very materially from the other animals of this order in being amphibious, and passing the greater part of their life in the sea. The toes have much the appearance of

fins. Moles, shrews, and urchins, are not carnivorous nor rapacious animals.

GLIRES.

The glires, or sleepers, from the Latin word *glis*, signifying an animal of the dormouse tribe, are, in general, animals of small size, but great activity: they include Rats, Squirrels, Dormice, and Hares. The principal character of the animals composing this order consists in a pair of very conspicuous, strong, and lengthened teeth, placed close together in the front of both jaws. They have no canine teeth, but are furnished with grinders on each side. Some of the glires live chiefly on grain, others on fruit and herbs, and others on the bark or tender branches of trees. All the British species of the glires have a covering of hair.

PECORA.

To this order belong Deer, Goats, Sheep, and Oxen. The leading character of the pecora is the total want of front teeth in the *upper* jaw. In the lower jaw there are six or eight front teeth: the grinders, or side teeth, are usually pretty numerous; and such of the pecora as are furnished with horns have no tusks, or canine teeth; which, on the contrary, are conspicuous in such as are not furnished with horns.

The pecora have the power of *rumination;* that is, of throwing up into the mouth at intervals a portion of the food which has been hastily swallowed, during their feeding, in order that it may undergo a more complete grinding by the teeth. This action is so conspicuous in cows, and other cattle, that

every one is perfectly acquainted with it. The stomach of the pecora is usually divided into four distinct cavities or bags; deer, however, have but three.

The fluid drunk by the camel and the lama is deposited in numerous cells, formed in the substance of their first and second stomachs, by strong bands of muscular fibres crossing each other; and the animal has the power of closing these cells, by the contraction of those fibres which form the mouth of the cavities, or of expelling the contained fluid, by putting the other portions of fibres in action. As all the food which the animal takes passes into the first stomach, the water of the cells in that part becomes turbid, but it remains perfectly pure in the second, travellers having, upon the greatest emergencies, killed the camel for the sake of the water. The muscular bands are particularly strong, and by drawing the third stomach to the œsophagus or gullet, the ruminated food is conveyed through the second without polluting the water in its cells.

All the pecora, or ruminants as they are often called, are *hoofed*; and in the major part, the hoof is divided into two principal parts, with the addition, in many, of two very small undivided hoofs or processes on each side, or rather behind the principal ones. In the *camel*, the sole, or part beneath the hoofs, is swelled into a kind of elastic pad, covered with an extremely strong, but flexible skin, admirably adapted for enabling the animal to travel over the dry and sandy deserts, which it is chiefly destined to inhabit. The whole order pecora, without an exception, feeds entirely on vegetable food.

BELLUÆ.

This last order includes Horses and Swine. The belluæ have obtuse front teeth; the feet are furnished with hoofs, in some whole or rounded, in others obscurely lobed or subdivided: their food is vegetable.



DEER.

THE arts of war and hunting, in uncivilized ages, constituted the sole employment of mankind; whose active and uncultivated minds were susceptible of no pleasures but such as procured exercise for their bodies, and charmed away the languor of reflection. In our own country hunting has ever been esteemed a favourite diversion; and, originally, beasts of chase ranged without control through the whole of Britain: they knew no other limits than the ocean.

Soon after the establishment of the heptarchy, chases were reserved by each sovereign for his own particular amusement; but as waste lands only were appropriated to this purpose, no individual received any injury from the restraint. On the acces-

sion of the Norman kings, however, the passion for hunting was carried to an unpardonable excess, and every civil right was involved in general ruin. Even in a superstitious age, the ardour for hunting was stronger than the considerations of religion: entire villages were destroyed, the most sacred edifices were thrown down, and the whole country was turned into one extensive waste. Of this, New Forest is an example; William the Conqueror, it is said, having demolished thirty-six churches, and seized upon a spot of ground fifty miles in circumference, when he made this forest. Sanguinary laws were enacted for the preservation of game; and in the reigns of William Rufus and Henry I. it was less criminal to commit murder than to destroy a beast of chase.

The hunting of deer was, in former times, the source of the most violent feuds, the barons being extremely jealous of any encroachments on their respective bounds. Hence the occasion of the fatal day of "Chevy Chase," a fact which, though recorded only in a ballad, may, from what we know of the manners of the times, be founded in truth. The great highland chieftains used to hunt with the magnificence of Eastern monarchs, assembling some thousands of their clans, who surrounded a great tract of country, and drove the deer to the spot where the chieftains were stationed, who shot them at their leisure.

To drive the deer with hound and horn
  Earl Percy took his way!
The child may rue, that is unborn,
  The hunting of that day!

The stout Earl of Northumberland
  A vow to God did make,
His pleasure in the Scottish woods
  Three summer's days to take,

With fifteen hundred bowmen bold,
All chosen men of might,
Who knew full well, in time of need,
To aim their shafts aright.

The hounds ran swiftly through the woods
The nimble deer to take;
And with their cries the hills and dales
An echo shrill did make.

The number of deer killed was very considerable, as we learn from the same interesting ballad that,

Long before high noon they had
An hundred fat bucks slain;
Then having dined, the drovers went
To rouse them up again.

As agriculture and the useful arts increased, vast tracts of land, before dedicated to hunting, became occupied by animals more useful to the community: very few chases now remain, and deer are almost confined to parks, of which England can boast more than any other kingdom in Europe. The four principal forests are New Forest, in Hampshire; Sherwood Forest, in Nottinghamshire; Dean Forest, in Gloucestershire; and Windsor Forest, in Buckinghamshire. There are sixty-nine forests in England, thirteen chases, and more than seven hundred and fifty parks.

Deer hold a conspicuous place among those innocent and peaceable animals which embellish the forests and animate the solitudes of nature. The easy elegance of their form, the lightness of their motions, and those large branches which seem rather

intended to ornament their heads than to contribute to their powers of defence, their magnitude, their strength, and their fleetness, all conspire to rank them among the first of quadrupeds, and the most worthy objects of human curiosity.

Forest deer, though pasturing at large, seldom stray far from the walk where they are bred: and the keeper, who always wishes to prevent his own deer from travelling into the limits of their neighbours, encourages their fondness for home by feeding them, in winter, with holly, and other plants which they love; and browsing them, in summer, with the spray of ash. When he distributes his dole, he commonly makes a hollowing noise, to call his dispersed family together. In calm summer evenings, near a lodge, this noise may be heard resounding through the woods; and if the listener be not apprised of it, he will wonder, each evening, at its periodical exactness. Deer feed generally at night, or at early dawn, and retire in the day to the shelter of the woods: their morning retreat is thus beautifully described by the poet:

> The day pours in apace,
> And opens all the lawny prospect wide;
> The hazy woods, the mountain's misty top,
> Swell on the sight: while o'er the forest glade
> The wild deer trip; and often turning, gaze
> At early passengers.

All animals of the deer kind seem equally useful, though their flesh is by no means uniformly good. England is celebrated for the excellence of its venison; the flesh of the French fallow deer is much inferior, both in fatness and flavour, to that fed in our pastures. The uses to which the skin of the buck and the doe is

applied are well known; the horns of the stag are of great utility in mechanics, being compact, hard, and weighty; and, in common with the horns of the deer kind, make excellent handles for knives, and other implements. They abound also in the salt which is the basis of the spirit of hartshorn; and the remains, after the salts are extracted, being calcined, become a valuable astringent in fluxes, which is known by the name of burnt hartshorn. Besides these uses in mechanics and medicine, Gyraldus relates an instance of a Countess of Chester who kept milch hinds, and made cheese of their milk, some of which she presented to Archbishop Baldwin, in his itinerary through Wales, in the year 1188.

It is not until very recently that deer have been considered an object of husbandry; a practice which was first adopted by the EARL OF CLARENDON. As soon as the rutting season is over, or usually about the tenth of November, his lordship selects from the herd those deer which are weak, and would probably die in the winter, and keeps them in a small yard that has a shed on one side, and a net over the whole against pigeons, &c. the spot being warm and sheltered. Their horns are immediately sawn off; the place is well littered, and they are fed at a very small expense, on pea straw, hay, &c. the warmth supplying the place of better food. At times, during the winter, they have clover hay cut into chaff, and if they do not eat it well, a little salt is added. They have always plenty of water, and are kept perfectly clean; much attention being paid by the keeper to make himself familiar with them, that he may enter the place without disturbing them. The first week in March the deer are fed with oil-cake; about half a cake each day, with

chaff, which fattens them so quickly, that they are all gone in May. Before killing, some green meat is given them. A brace are sold for fifteen guineas; and a haunch usually weighs about twenty-four pounds. There are loop-holes in the fence, through which the deer are shot. By this practice, the great winter losses of deer in parks are prevented; and every animal which would be sacrificed to the severity of the season, or to accident, is converted to a great profit, as the expense of fattening is a mere trifle. The dung has also been used for manure [1].

We shall now describe the various species of deer found in Great Britain: they are the stag, or red deer (cervus elaphus); the fallow deer, (cervus dama); and the roe, (cervus capreolus).

THE STAG.

Stags, now generally termed red deer, are supposed to have been originally introduced into this country from France. This beautiful animal is still found in a state of nature in the highlands of Scotland, in Cumberland, in the forest of Exmoor, and in the woods on the banks of the river Tamar. In Ireland, among the mountains of Kerry, stags add greatly to the magnificent and romantic scenery of Killarney.

The stag differs, both in magnitude and in the conformation of its horns, from the fallow deer. The stag is much larger, and his horns are round; while those of the fallow kind are broad and palmated. The first year the stag has properly no horns, but only a kind of corneous excrescence, short, rough,

[1] Agricultural Report for the county of Hertford, p. 213.

and covered with a thin hairy skin; the second year, the horns are single and straight; the third year, they have two antlers; the fourth, three; the fifth, four; and the sixth, five. When arrived at the sixth year, the antlers do not always increase; and though the number may amount to six or seven on each side, the stag's age is then estimated rather from their size, and the thickness of the branch which sustains them, than from their number.

These horns, notwithstanding their magnitude, are shed annually, and succeeded by new ones. While young, nothing can be more tender or soft: and the creature, as if conscious of its imbecility, after shedding its former horns, instantly retires from the rest of the herd, and, concealing itself in solitudes and thickets, never ventures out for the sake of pasture but in the night-season. During this interval, which is usually about the latter end of February or the beginning of March, the new horns occasion a very considerable degree of irritation to the animal.

When the old horns are shed, the new ones do not immediately begin to appear; but the bones of the skull are then invested only with a transparent skin. This skin, however, soon becomes tumid, and forms an excrescence containing a considerable quantity of blood, and which gradually appears covered with a downy substance as soft as velvet, and nearly of the same colour with the rest of the animal's hair. This tumour daily protrudes from the point like the graft of a tree; and, rising by degrees from the head, shoots out the antlers on each side; so that in a few days, according to the condition of the animal, the whole head is completed. For some time, however, the horns are very soft, and covered with a sort of bark, which is merely a

continuation of the integument of the skull. This bark is velvety and downy, and every where furnished with blood-vessels, which supply the nascent horns with nourishment: as they creep along the sides of the branches their prints are marked over the whole surface; and, the larger the blood-vessels, the deeper those prints appear. Hence arise the inequalities on the surfaces of the horns of the deer kind, which we see furrowed all along the sides, the impressions diminishing towards the points, where the parts are as smooth and solid as ivory. When the whole head has attained its full growth, the extremities begin to acquire their solidity; the velvety covering, together with the blood-vessels, dry up, and then begin to fall; which process the animal itself accelerates, by rubbing its antlers against every tree that it approaches: and, in this manner, the whole external surface being gradually stripped off, the head at last acquires its complete hardness, expansion, and beauty.

If a stag be cut before it has attained its horns, they will not afterwards be produced; but if this operation be performed when its horns are in perfection, it will always retain these ornaments. Slender and insufficient nourishment also is said to retard the growth of horns.

When stags have cast their horns, they separate from each other, and seek the open parts of the country, continuing among coppices during the summer until the horns are renewed. About the end of August or beginning of September, they leave the thickets and return to the plains in search of the females, whom they court with a loud tremulous voice. At this season, their necks become remarkably turgid; they appear bold and furious; fly from one place to another; strike with their horns against

the trees, and every other opposing object; and continue restless and fierce till they have found the hinds.

In general the stag is a harmless, inoffensive animal; but at this season, when engaged in his seraglio, he may be heard roaring and bellowing about the forest, meditating revenge on his rival, whom he meets head to head, and foot to foot. While he is able with his antlers to parry the attack, he stands his ground; and if he happen to be of equal prowess with his rival, the conflict is obstinate. But a weak adversary soon feels the strength of his opponent. He cannot resist his push. His flanks give way; and he is presently driven off the field[1]. On these occasions, the old stags are generally the most successful, as they possess a greater degree of strength and courage than the young ones. This period lasts for about three weeks, during which time the stag scarcely either eats, sleeps, or rests; and at the end of this season, the creature, which was before very fat, sleek, and glossy, becomes lean, feeble, and timid. He now retires from the herd, in order to seek food and repose; he frequents the verge of his bounds; and selects the most nourishing pastures, where he continues till his strength is renovated.

The longevity of the stag, which became proverbial among the ancients, is, in some degree, a vulgar error: his age may be fixed at forty years, on the principle that animals live seven

[1] In passing through the forest at this time, if we see a stag at a distance, it will be better to avoid him by turning to the right or left; if we do not approach, he will not pursue. The oldest foresters, says Mr. Gilpin, do not remember an instance of voluntary mischief done by a stag at any time.

times the number of years that bring them to perfection, as this requires six to arrive at its maturity.

The colour of the English stag is generally red, or a reddish brown, with some black about the face, and a black list down the hinder-part of the neck, and between the shoulders. He has the most beautiful eye of any animal that is a native of this climate; and his senses of smelling and hearing are in no less perfection than that of vision. When in the least alarmed, he lifts his head, erects his ears, and stands for a few moments as if in a listening posture. Whenever he ventures on some unknown ground, or quits his native covert, he makes a pause at the skirt of the plain, in order to examine every object around him; after which he turns his face against the wind, for the purpose of discovering by his scent the approach of an enemy. If a person at some distance whistle, or call aloud, the stag immediately stops short in his slow-measured pace, and gazes on the intruder with a kind of awkward admiration; but, if the sagacious animal perceive neither dogs, nor any instruments of destruction levelled against him, he then proceeds forward without betraying the least fear. WALTER SCOTT's description of these various motions is truly picturesque: at the sound of the clanging hoof and horn—

> The antlered monarch of the waste
> Sprung from his heathery couch in haste;
> But, ere his fleet career he took,
> The dew-drops from his flanks he shook;
> Like crested leader, proud and high,
> Tossed his beamed frontlet to the sky;
> A moment gazed adown the dale,
> A moment snuffed the tainted gale,



DEER.

Published Aug.st 1.1814, by Wilkie, Nº 108 Strand, Strand.

A moment listened to the cry,
That thickened as the chase drew nigh;
Then, as the headmost foes appeared,
With one brave bound the copse he cleared.

Man, indeed, is not the enemy whom he seems most to apprehend: on the contrary, the sound of the shepherd's pipe inspires him with pleasure. Playford, in his Introduction to Music, corroborates this circumstance: "Myself, as I travelled some years since, near Royston, met a herd of stags, about twenty, on the road, following a bagpipe and violin: while the music played, they went forward; when it ceased, they all stood still; and in this manner they were brought out of Yorkshire to Hampton Court." Waller, and Beattie, in his "Minstrel," also allude to this particular.

The stag eats with great deliberation, and is very delicate in the choice of his pasture; and, when he has satisfied the calls of nature, he retires to the covert of some thicket, in order to chew the cud in security. This act he appears to perform with much greater difficulty than either the cow or the sheep; for the grass is not returned from the first stomach without much effort, and a kind of hiccup, which is extremely perceptible during the whole time of its continuance.

This animal seldom drinks in the winter season, and still less in the spring, while the plants are tender, and covered with the morning dew; but, in the heat of summer, and at a certain season, he is observed constantly to frequent rivers and lakes, as well to allay his thirst as to cool his ardour. He swims with great ease and strength, particularly when in good condition. The voice of the stag is stronger, louder, and more tremulous,

in proportion as he advances in age; and is sometimes even terrible. The cry of the hind, or female, is not so loud as that of the male, and is never excited but through apprehensions for the safety either of herself or her young; and it may perhaps be unnecessary to add, that she is destitute of horns, and is more feeble and unfit for hunting than the male. The time of gestation continues between eight and nine months; and she seldom produces more than one at a time.

The usual season of parturition is about May, or the beginning of June, during which time these creatures are very assiduous in concealing their young in the most obscure retreats. Nor is this a needless precaution, since they have to fear the attacks of almost every other animal. But, what appears extremely unnatural, the stag himself is also their avowed enemy; and the hind is obliged to exert all her industry in order to conceal her young from him, as one of their most dangerous assailants. At this season, therefore, the courage of the male seems to be transferred to the female; for she defends her offspring against her less formidable opponents by force. She has been known to strike a dog so violently with the spring of her fore feet, which are her weapons of offence, as to strip his skin from his flesh, and lay his side bare.

In England, the stag and the buck are hunted in a similar manner; the animals are driven from their retreats in some park, and followed through the open country. But those who pursue wild animals have a higher object, as well as a much greater variety, in the chase. The unfriendly returns which the stag meets in his distresses from all his former companions, are circumstances in his history well known to the naturalist, the

forester, and the huntsman. Our inimitable SHAKSPEARE has beautifully alluded to these interesting particulars, in the speech of the melancholy Jaques.

Of the wonderful leaps taken by the stag, when closely pursued, the following, which took place in New Forest, is thus recorded by that accurate observer, Mr. Gilpin[1]. In our way to Hounds-down (says this author) we rode past a celebrated spot, called the Deer-leap. Here a stag was once shot; which, in the agony of death, collecting his force, gave a bound which astonished those who saw it. It was immediately commemorated by two posts, which were fixed at the two extremities of the leap, where they still remain. The space between them is somewhat more than eighteen yards.

It is extremely dangerous to attempt to arrest the progress of a stag when hard pressed by the hunters. An animal in this situation, having just entered a thicket in New Forest, was opposed by a peasant, who foolishly, with his arms extended, attempted to turn him. The stag held his course, and darting one of his antlers into the man, carried him off some paces sticking upon his horn. A huntsman also, crossing a stag in the same imprudent manner, had a horse killed under him.

A stag, during his first year, is called a *calf*; and does not assume the name of a stag till his fifth; being known in the intermediate state by certain technical names which we consign to the memory of foresters. In his sixth year, he takes the respectable title of a *hart*. Besides this, he may still attain two higher degrees of honour; those of *hart-royal*, and of a *hart-royal proclaimed*.

[1] Forest Scenery, Vol. II. pp. 211, 212.

If he be hunted by the king, and escape; or have his life given him for the sport he has afforded; he becomes from that time a *hart-royal.*

If the stag be hunted out of the forest, and there escape, the king has sometimes honoured him with a royal proclamation; the purport of which is, to forbid any one to molest him, that he may have free liberty of returning to his forest. From that time he becomes a *hart-royal proclaimed.*

Manwood mentions a fact of this kind, which he found on record in the castle of Nottingham. It is dated in the time of Richard I., who having roused a hart in Sherwood Forest, pursued him as far as Barnsdale in Yorkshire, where the hart foiled and escaped his hounds. The king, in gratitude for the diversion he had received, ordered him immediately to be proclaimed at Tunhill, and at all the neighbouring towns. Hence the origin of *white-hart silver*, in the forest of Blackmore, in Dorsetshire. Some gentlemen, in the time of Henry III., having destroyed a white hart, which had given the king much diversion, (and which, it is probable, had been proclaimed), the king imposed a heavy fine on their stewards, an acknowledgment of which was paid into the exchequer so late as in the reign of Elizabeth; and this payment is still continued, according to Hutchins, in his History of Dorsetshire [1].

We have already alluded to the scarcity of red deer in England;—some further particulars, however, respecting the numbers once existing in New Forest, and Wolmer Forest, in Hampshire, may prove interesting to our readers.

In New Forest, says Mr. Gilpin, the breed of stags is greatly diminished. It is a rare thing now to meet them in the southern

[1] Gilpin's Forest Scenery, vol. II. pp. 274—276.

parts of it; though within the memory of man they were so numerous, that I have heard an old forester, pointing to the side of a hill, on Beaulieu Heath, say, he had seen them lying there in herds, like cows and horses. There are still, however, many in the northern parts of the forest, particularly about Boldre Wood and Burley Lodges; but, in general, the fallow-deer are more encouraged.

Towards the beginning of the last century, the red deer in Wolmer Forest amounted to about five hundred head, and made a stately appearance. An old keeper of the name of Adams, whose progenitors had enjoyed the head-keepership of Wolmer Forest, in succession, for more than a hundred years, assured Mr. White, that his father has often told him that Queen Anne, as she was journeying on the Portsmouth road, did not think the forest of Wolmer beneath her royal regard. For she came out of the great road at Liphook, which is just by, and reposing herself on a bank smoothed for that purpose, saw with great complacency and satisfaction the whole herd of red deer brought by the keepers along the vale before her. This spot lies about half-a-mile from Wolmer pond, and is still called Queen's Bank.

The number of these noble animals was, however, soon reduced by the *Waltham blacks*, or deer stealers; not more than fifty head remaining. In the time of the Duke of Cumberland, about the year 1736, his highness sent down a huntsman and six yeomen prickers, dressed in scarlet jackets laced with gold, and attended by the stag hounds, ordering them to take every deer in this forest alive, and convey them in carts to Windsor. In the course of the summer they caught every stag, some of which showed extraordinary diversion: but in the following winter, when the

hinds were also carried off, the finest chases were exhibited. I saw myself (continues Mr. White) one of the yeomen prickers single out a stag from the herd, and must confess that it was the most curious feat of activity I ever beheld. The exertions made by the horse and deer much exceeded all my expectations, though the former greatly excelled the latter in speed. When the devoted deer was separated from his companions, they gave him, by their watches, *law*, as they called it, for twenty minutes; when, sounding their horns, the stop-dogs were permitted to pursue, and a most gallant scene ensued.

Deer frequently make incursions into corn-fields, in order to devour the tender shoots on their first appearance above ground. The farmer burns fires all night to deter them; and commonly smears his ropes with tar, which he sets up as fences; throwing fetid substances in his nightly fires to disseminate the odours in the smoke.

The stag might be easily trained, like the rein-deer of Lapland, to draw a carriage, if we had not animals more proper for the purpose. The late Earl of Orford possessed two deer, which, by domestication, became manageable, were bitted, and drew a light curricle with great gentleness and expedition. In France, and in Germany also, according to the accounts of some naturalists, deer have submitted to be harnessed; in the latter country, six of these animals have been quite tractable to the bit and whip.

THE FALLOW DEER.

No country produces fallow deer in quantities equal to England; and in every other country they are in a state of nature,

and not subjected to the dominion of man. This animal and the stag are very nearly allied. Alike in shape, disposition, fleetness, timidity, and the superb furniture of their heads, it might naturally be conjectured that they associated together; and yet no two animals avoid each other with more rooted aversion.

As fallow deer are much smaller, so they are of a less robust and savage nature than those of the stag kind. They are bred in parks, where they are either kept for the purposes of hunting or luxury, their flesh being greatly preferable to that of any other animal. Their horns are broad and palmated at their extremities, pointing a little forwards, and branched on their hinder sides; they have two sharp and slender brow-antlers, and, above them, two small slender branches; but the horns of the stag are round in every part: in the one animal they are flatted and spread like the palm of the hand; and, in the other, they grow like a tree, every branch being shaped like the stem which supports it. The colour of the fallow deer is more various than that of the stag, and its tail is longer; but, in other respects, the affinity is very close. A variety of the fallow deer is now found in many of our parks. This animal is of a reddish-brown colour, and spotted with white, having a large branching head; it was first introduced from Bengal. The very deep brown sort, seen in many parts of this kingdom, were brought from Norway by king James I.

The head of the fallow deer is provided with two spiracula or breathing places, besides the nostrils. When deer are thirsty they plunge their noses, like some horses, very deep under water, while in the act of drinking, and continue them in that situation for a considerable time; but, to obviate any inconvenience, they can open two vents, one at the inner corner

of each eye, having a communication with the nose. This curious formation of the head is, no doubt, of singular service to beasts of chase, by affording them free respiration; the additional nostrils being thrown open when they are hard run. The antelope also has a long slit beneath each eye, which can be opened and shut at pleasure. On holding an orange to one (says Mr. Pennant), the creature made as much use of those orifices as of his nostrils, applying them to the fruit, and seeming to smell it through them [1].

Foresters apply various technical names to the fallow deer. The young one, in his first year, is called a *fawn;* in his second, a *pricket;* in his third, a *sorel;* in his fourth, a *sore;* and in his fifth, he takes the name of a *buck*. The female, in her first year, is called a *fawn;* in her second, a *teg;* and afterwards, a *doe*.

THE ROE.

This animal was formerly a native of Wales and the northern parts of England; but at present, the species exists only in the highlands of Scotland.

The roe-buck is one of the least of the deer kind known in our climate, being only about three feet in length, and not more than two and a half in height. The horns, which measure six or eight inches, are erect, round, and divided into three branches; the body is covered with very long hair, well adapted to the rigours of its mountainous retreats; the lower part of the hair is cinereous; near the extremities there is a narrow stripe of black;

[1] White's Nat. Hist. of Selborne, vol. I. p. 70.

and the points are yellow. The hair on the face is black, tipped with ash colour; the ears are long, their insides being of a pale yellow, and covered with long hair; the chest, belly, legs, and insides of the thighs, are a yellowish-white; the rump is perfectly white; and the tail is about an inch long. The figure of this little animal is very elegant, and its fleetness is equal to its beauty. It differs from the fallow deer in having round horns; from the stag, in the smallness of its size and the proportionable paucity of its antlers; and from every animal of the goat kind, in annually shedding its horns.

The female goes with young but five months and a half; and produces her fawn about the end of April or beginning of May. This peculiarity distinguishes the roe from all others of the deer kind, whose time of gestation continues for eight months and upwards. In this respect, this animal seems allied to the goat kind; though, as already observed, the discrimination between the two races is sufficiently distinct.

As the growth of the roe-buck, until his arrival at maturity, is much more rapid than that of the stag, so his life is proportionably curtailed. He seldom lives more than twelve or fifteen years; and, if kept in a state of domestic servitude, his existence is abridged to seven or eight. Being of a very delicate constitution, he requires variety of food, air, and exercise; and must be paired with a female, and kept in a park of considerable extent. This animal can easily be subdued, but never perfectly tamed. No arts can teach it familiarity with its feeder, much less to show any attachment to him; it always retains some portion of its natural wildness.

The voice of the roe-buck is neither so loud nor so frequent

as that of the stag. The young ones have a peculiar way of calling to the dams, which the hunters imitate with such exactness, as frequently to allure them to their destruction; and, in the spring of the year, they become as it were intoxicated with their food, which is supposed to ferment in their stomachs. During this time, according to Buffon, they do not know where they are going, and frequently approach flocks of cattle, and even the dwellings of man. In summer, they keep close under covert of the forests, and seldom venture out, except in very warm weather, to slake their thirst at some neighbouring stream. In general, however, they are satisfied with the morning dew, and rarely gratify their appetites at the expense of their safety; they also prefer the tender branches and buds of trees to corn or other vegetables. In some countries, the flesh of the roe-buck is esteemed a great luxury; and the hair and horns are considered valuable for different purposes in manufactures.





BADGER AND DOGS.

Published Dec.r 1.st 1820 by W. Clarke, New Bond Street.



THE BADGER.

Though speed and activity have been denied to the badger, yet nature has furnished it with most excellent offensive weapons. Few animals bite harder, or defend themselves with greater obstinacy. The badger is perfectly inoffensive, feeding on roots, fruits, grass, insects, and frogs; and does not destroy rabbits and lambs, as is usually reported: he is very tenacious of life, yet a small blow on the snout will prove mortal.

The common badger (ursus meles) is found in the most wild and uninclosed parts of Great Britain and Ireland. It has small eyes; short ears; a short thick neck; and very short and thick legs. The nose, chin, part of the cheeks, and the middle of the forehead, are white; the ears and eyes are encircled with

a pyramidal bead of black; the hair on the body is long and rough, of a yellowish-white at the roots, black in the middle, and cinereous at the points. The throat, breast, and belly, are black; and the tail, which is about six inches long, is covered with hair of the same colour with that on the body. The length of this animal is commonly two feet six inches from the nose to the insertion of the tail; and it weighs from twenty to thirty pounds. Immediately beneath the tail there is a narrow transverse orifice, opening into a sort of pouch, which exudes a white fetid substance. Its greatest age is from eight to twelve years.

In walking, the badger treads on its whole heel like the bear; and its legs being short, its belly seems to touch the ground: this is also occasioned by the length of its hair, which makes the creature appear more bulky than it really is. The badger seeks refuge in the most sequestered places, where he digs a deep hole with remarkable assiduity. He seems averse from the light, and seldom quits his retreat till the night season, when he steals from his subterraneous abode for the purpose of procuring subsistence. The legs being short and strong, and the claws stiff and horny, the badger burrows in the ground with the greatest facility. As he continues to bury himself, and to throw the earth behind him to a great distance, he forms a long winding cavern, at the bottom of which he remains in security. The fox being less expert in digging, frequently avails himself of the labours of the badger, and takes up his abode in the prepared den, driving away its former inhabitant.

When the badger is surprised by dogs at any great distance from his hole, he combats them with desperate resolution, falling on his back, and defending himself in that posture to the last ex-

tremity. He sleeps the greatest part of his time; by which means, without possessing a very voracious appetite, he always appears fat and plump, particularly in winter: he is also remarkable for cleanliness. The female breeds in summer, and generally produces three or four young ones at a time, which at first she nourishes with her own milk, and then gradually habituates them to such other food as she can procure. Though old badgers always continue savage and untractable, young ones are easily tamed, so as to play with the dogs, and follow their owners, like other domestic animals[1]. Being of a chilly nature, they are remarkably attached to a warm fire; this they often approach so closely, as to burn their feet, which do not readily heal.

The skin of the badger, with the hair on it, is used for pistol-furniture; and the highlanders make their pendant pouches of it: the hair is also made into brushes for softening the shades in painting. The hind-quarters of the badger are eaten in England, and the hams are considered of a better flavour than those taken from the hog. In China it is a common food, being often exposed to sale in the butchers' shops of Pekin. The fat was once much in request for ointments and salves.

The badger is called *brock*, *grey-pate*, and *grey*, in different parts of England. The male is named a *badger*, or *boar-pig*, and the female a *sow*.

The mode of taking the badger, termed *sacking* (says Mr. Daniel), is conducted by moon-light, in the following manner: those who wish to take these animals proceed to stop the earths,

[1] A butcher in Newport Market, of the name of Wingrove, possessed a badger (1812) which followed him along the streets like a dog.

except one or two holes, while the badger is out at feed, and in the open burrows to place sacks, fastened with a drawing string to shut the sack, as soon as it is strained by the struggle of any thing within it. This done, two or three couples of hounds are thrown off at the distance of half-a-mile from the earth; and the badger, at the first opening of the hounds, takes homewards, and is soon caught.

Another method is by a pit-fall across their accustomed path, about five feet deep and four feet long, narrow at the top and bottom, and wide in the middle; and covered with small boughs or sticks, which retain their leaves. And, by the vicious and inhuman, the cruel practice of *baiting* the badger with terriers is eagerly pursued.





THE FOX.

This lively and crafty animal, like the wolf, appears to be pretty generally diffused throughout all the northern and temperate parts of the globe; occurring, with numerous varieties, as to shades of colour and gradations of size, in most parts of Europe, the north of Asia, and America. In the northern climates, says Buffon, are foxes of all colours; black, blue, grey, iron colour, silver-grey, white with yellow feet, white with black heads, white with the extremity of the tail black, reddish with the throat and belly entirely white, and lastly, some have a black line along the back, and crossed with another over the shoulders: the latter are larger than the other kinds, and have black throats. Some of these, however, are now regarded as perfectly distinct species.

The fox prepares for himself a convenient den or receptacle, in which he lies concealed during the greater part of the day. It is so contrived as to afford the best security to the inhabitant, by being situated under hard ground, the roots of trees, &c., and is, besides, furnished with proper outlets, through which he may escape in case of necessity. The manner in which he sometimes possesses himself of the badger's hole, we have already mentioned in our account of that animal.

He attempts his prey by cunning rather than by force: his scent is exquisite, so that he can perceive either his prey or his enemies at the distance of two or three hundred paces. Without opposing either the dogs or the shepherds, without attacking the flock, or alarming the village, he finds an easier way of subsistence, and gains by address what is denied to his strength or courage. Prudent, patient, and vigilant, he waits the opportunity of depredation, and varies his conduct on every occasion. In clear warm weather, the fox sometimes comes to bask in the sunshine, lying stretched out on some dry place, or near the stump of a tree. He is in motion, the whole night, in search of his prey:

> Stealing around and list'ning as he goes,
> If chance the cock, or stamm'ring capon crows,
> Or goose, or nodding duck, should darkling cry,
> As if apprized of lurking danger nigh.

The fox generally keeps his kennel at the edge of a wood, and yet within an easy journey of some farm-house or cottage: from thence he listens to the crowing of the cock, and the cackling of the domestic fowls; he scents them at a distance;



Engraved by T. Ranson from a Painting by J. Ferneli.

THE FOX.

Vide page 27.

Published Jan.ry 1825 by W. Darton, New Road, Lond.n

he seizes his opportunity, conceals his approaches, creeps slily along, attacks his prey, and seldom returns without his booty. If he gets into the farm-yard unmolested, he begins to despatch all the poultry without remorse; and, carrying off a part of the spoil, conceals it at some convenient distance, and then returns to the charge. In this manner, he brings them one by one, and thrusts them into the earth with his nose; and afterwards, at his leisure, covers them with loose earth: and thus they remain till the calls of hunger stimulate him to make another visit. The same arts are practised by him when he finds birds entangled in springes laid for them by the fowler; he very expertly liberates them from the snares, hides them for a few days, and knows exactly when and where to avail himself of this buried treasure. He is equally alert in seizing young hares and rabbits, before they have sufficient strength to escape from him; and, when the old ones are wounded and fatigued, he seldom fails to discover them in their moments of distress, and to render them his prey. He also searches for birds' nests; seizes the partridge while sitting; and destroys a large quantity of game.

Of the arts used by the fox to entrap his prey we have to record the following curious instance. An Essex farmer having suffered much from the depredations of this animal, determined to lay wait for the nightly thief. Accordingly, on a fine moonshine night, knowing the fox's track, he took his stand, and soon espied reynard padding along a hilly clover field, with a young goose slung across his neck, which he had stolen from the farm-yard. The gun was levelled, and the fate of the fox was almost instantly to be decided, when a hare, feeding in the clover, was discovered by reynard, a little on one side, and nearer to the

sportsman. The goose was now dropped, and the fox commenced the most curious anticks, rolling over and over on the ground, and jumping up in the air, but still getting nearer to the hare, who was quite unconscious of an enemy in the merry Andrew, who approached her but by almost imperceptible degrees. The fox being sufficiently near, at one enormous spring, made poor puss his prisoner; and, almost at the same instant, the owner of the stolen poultry shot the fox, and carried home the triple prize.

This rapacious animal is supposed to make considerable havoc among field mice; and it is said, that, like the cat, he plays with them for some time before he quite destroys them. He occasionally eats frogs, newts, snails, and insects. Several kinds of berries and fruit are also an acceptable food; he is particularly fond of grapes, and does much injury among vineyards. In vain does the poor hedge-hog roll itself up in a ball, to oppose him; this determined plunderer never desists from teazing the poor animal, till it is obliged to extend itself, when he instantly devours it. Wasps and wild bees are attacked with equal success: though at first they fly out on their invader, and actually oblige him to retire, their triumph is but short; for the fox, rolling himself on the ground, crushes such as stick to his skin; and then, by unremitted perseverance, and a repetition of the same expedient, he obliges them to abandon their combs, and eagerly devours both wax and honey.

When pressed by necessity, the fox will readily eat carrion, but prefers flesh in a rare state. I once (says Buffon) suspended on a tree, at the height of nine feet, some meat, bread, and bones. The foxes had been at severe exercise during the

night; for, next morning, the earth all around was beaten, by their jumping, as smooth as a barn floor. Those that reside near the sea-coast will, for want of other food, eat crabs, shrimps, muscles, and other shell-fish.

Of the common fox (canis vulpes) the three varieties which occur in Great Britain are, according to Mr. Pennant, the *grey-hound fox*, called in Wales, *milgi*, which is the largest, tallest, and boldest, and will attack a grown sheep: secondly, the *mastiff fox*, which is less, but more strongly built: and, lastly, the *cur fox*, or corgi, which is the kind before mentioned with a black tip to the tail; probably the canis alopex of Linnæus.

The fox has a broad head, a sharp snout, a flat forehead, obliquely seated eyes, of a hazel colour, very brilliant and expressive; sharp erect ears, a body well covered with hair, and a straight, bushy, and somewhat pointed tail, tipped with white. With this he frequently amuses himself, by endeavouring to catch as it turns round, and in cold weather wraps it round his nose. The general colour is a yellowish-red, or, more properly, yellow-brown.

The smell of the fox is proverbially offensive. It has been supposed to resemble that of the root of the crown-imperial (fritillaria imperialis); but the more accurate observation of Mr. Tyton attributes this singular property to the herb robert (geranium robertanum), which is so common on dry banks and under hedges.

The fox produces five or six young at a time (about March), breeding only once in a year, unless an accident happens to the first litter. If they are discovered or disturbed, the female will carry them, in her mouth, one at a time, to some more secret retreat; in this respect, imitating the cat and dog, which are

known to do the same. The cubs are brought forth blind, like puppies, and are of the darkest brown colour; they grow for eighteen months, and live thirteen or fourteen years.

The cry of the fox is a sharp, quick yell, often ending in a higher, stronger, and screaming kind of note, not unlike that of the peacock. In winter, during frost and snow, he yelps much, but in summer, he is almost entirely silent. His skin is furnished with a soft and warm fur; and is much used for muffs and linings for clothes. At Lausanne (says Pennant) are furriers who are in possession of between two and three thousand fox skins, all taken in one winter. The fur of the black fox is esteemed, in Russia, superior to that of the finest sable; and a single skin will sell for four hundred rubles. The inhabitants of some parts of the continent eat the flesh of the fox during the winter season.

Fox-hunting is no where pursued with so much ardour and intrepidity as in Great Britain; and our dogs and foxes are confessedly superior to those of any other country. The instant a fox finds he is pursued, he flies towards his hole, and finding it stopped, which is always carefully done before the hunt begins, he has recourse to his cunning and his speed for safety. If the fox, however, in the course of the chase, *runs to ground*, a little terrier, which is usually an associate in the sport, boldly ventures into his den to rouse him, and prevent his burrowing deeper under the earth. In the county of Caernarvon, fox-hunting is pursued on *foot*, on account of the mountainous nature of the country; the commonalty are, of course, enabled to participate in the pleasures of the chase, the only requisite being a leaping-pole, to aid the person in passing some of the numerous streams

and bogs which constantly present themselves in this wild and uncultivated district.

A fox chase occurred lately in Essex of a very singular description. The authenticity of the anecdote may be relied on. A gentleman, going over his grounds in the month of November, was accompanied by a favourite old English setter, and two greyhounds rather more than a year old. As he was breaking the latter for coursing, he was accustomed to beat the hedges; and in case the puppies lost a hare, the setter was of service in finding her again. While beating the *brow* of an old white thorn hedge, a fox *stole away*, but not unscented by the *setter*, who turned the animal into a long meadow. The greyhounds, at this time, though very far from being *broke*, and not in hand, instantly joined in the chase. The fox now distanced the setter, but was soon overtaken by the greyhounds, who compelled him to turn round, but did not venture to attack him; this gave time for the setter to come up, but the fox seemed nearly as much afraid of him, as the greyhounds were of the fox. In this manner the chase continued for some time; the fox running with all his speed from the setter, and the greyhounds turning him; until at last, poor reynard was compelled to meet the attack of the former, who, in a short time, laid the trophy of this uncommon victory at his master's feet.

Some curious incidents respecting the fox are mentioned by Mr. Daniel, in the supplemental volume to his "Rural Sports." At the Golden Bear Inn, Reading, a few years since, a fox had been taught to be in a wheel, and turn the jack. After some time he escaped, and regained his native woods. Here he met the fate common to his species; he was pursued by the hounds,

and in his flight ran through the town of Reading, and springing over a half-door of a kitchen, jumped into the wheel, and resumed his occupation, in the very place where he had formerly been brought up, and thus saved his life. A Mr. Salter, of Rickmansworth, had, in 1805, a fox that lay constantly in the kennel with his harriers; he was completely master of the feeding-yard, and would not suffer a hound to eat near him until he had satisfied himself.

It is a well-known fact, particularly in the north of England, that a dog and a fox will breed together. The fruits of this union are puppies, which bear a strong resemblance to the fox: they are much esteemed by farmers for driving cattle and for their expertness in destroying weasels, rats, and other vermin. These dogs bite keenly, and are very active and playful.





THE CAT.

Published Sept 1.1824 by W. Clarke, New Bond. Street.



THE DOMESTIC CAT.

The cat has long been taken under the protection of man, and its manners are greatly changed by education; yet it is often capricious in its resentments, and though not incapable of attachment, its fidelity is seldom to be relied on. An inadvertent tread on its tail cancels the obligations of years. Active, cleanly, delicate, and voluptuous, the cat is very fond of ease, and always makes choice of the softest of beds. Its natural disposition is not so mild and generous as that of the dog; and if offended, it will often boldly stand forward in its own defence. The cat will seldom commence a fray, but when roused, sometimes becomes a formidable opponent. When cats lie undisturbed on our hearths they exhibit many agreeable traits of character.

They have various modes of expressing their pleasurable sensations,—by purring, by spreading out and retracting their claws,—and by alternately putting down and raising their fore legs.

Cats are endued with the singular property of alighting on their feet whenever they happen to fall. Although they are not able to see objects in perfect darkness, yet they can perceive them with much less light than other animals; the pupils of the eye contracting or dilating, according to the degree of light by which they are affected.

Nothing can be more beautiful (to use the language of Dr. Shaw) than the experiment of setting a young cat, for the first time, before a looking-glass. The animal appears surprised and pleased with the resemblance, and makes several attempts at touching its new acquaintance; and, at length, finding its efforts fruitless, it looks behind the glass, and appears highly surprised at the absence of the figure: it again views itself; tries to touch with its foot; suddenly looking at intervals behind the glass: it then becomes more accurate in its observations, and begins, as it were, to make experiments, by stretching out its head, in different directions; and when it finds that these motions are answered in every respect by the figure in the glass, it seems, at length, to be convinced of the real nature of the image. The same is the case with the dog at an early age.

A kitten is one of the most playful and sportive of animals, and affords equal amusement to childhood and to age—to the rustic and to the man of learning. Her various anticks are thus pourtrayed in Miss Baillie's pleasing little poem of "The Kitten," inserted in the "English Minstrelsy."

The featest tumbler, stage-bedight,
To thee is but a clumsy wight,
Who every limb and sinew strains
To do what costs thee little pains,
For which, I trow, the gaping crowd
Requites him oft with plaudits loud.
But, stopped the while thy wanton play,
Applauses, too, *thy* feats repay:
For then, beneath some urchin's hand,
With modest pride thou tak'st thy stand,
While many a stroke of fondness glides
Along thy back and tabby sides.
Dilated swells thy glossy fur,
And loudly sings thy busy pur;
As, timing well the equal sound,
Thy clutching feet bepat the ground,
And all their harmless claws disclose,
Like prickles of an early rose;
While softly from thy whiskered cheek
Thy half-closed eyes peer mild and meek.
  But, not alone by cottage fire
Do rustics rude thy feats admire;
The learned sage, whose thoughts explore
The widest range of human lore,
Or, with unfettered fancy, fly
Through airy heights of poesy,
Pausing, smiles with altered air
To see thee climb his elbow chair,
Or, struggling on the mat below,
Hold warfare with his slippered toe.
The widowed dame, or lonely maid,
Who in the still, but cheerless shade
Of home unsocial, spends her age,
And rarely turns a lettered page;
Upon her hearth for thee lets fall
The rounded cork, or paper ball,
Nor chides thee on thy wicked watch
The ends of ravelled skein to catch,

But lets thee have thy wayward will,
Perplexing oft her sober skill.
Even he, whose mind of gloomy bent,
In lonely tower or prison pent,
Reviews the coil of former days,
And loathes the world and all its ways;
What time the lamp's unsteady gleam
Doth rouse him from his moody dream,
Feels, as thou gambol'st round his seat,
His heart with pride less fiercely beat,
And smiles, a link in thee to find
That joins him still to living kind.

Of the domestic cat (felis catus domesticus) the females vary considerably in colour; some are entirely black, others black and white, and others (tortoise-shell cats) are black, fulvous, and white. Many other variations also occur; but the males are nearly all marked with grey stripes. Immense sums have been given for a tortoise-shell male cat, which is esteemed a great rarity.

The cat goes fifty-six days with young, and seldom produces more than five or six at a time, and this two or three times in a year; she conceals her kittens from the male, lest he should devour them, as he is sometimes inclined; and, if apprehensive of being disturbed, will take them up in her mouth, and remove them one by one to a more secure retreat: even the female herself is sometimes known to eat her own young immediately after she has brought them forth. But, in general, the cat is remarkable for maternal tenderness; she feeds and suckles her young with extreme solicitude; and when they have strength enough to digest animal food, she catches and brings to them mice and small birds. When they are old enough to follow

her, she introduces them to the family in which she resides, and seems to bespeak protection for them, though it is seldom granted, further than to save one or two out of the number. Cats are often much affected by the loss of their kittens, and will pine after them, and refuse all food for a long time.

But it is not to her own offspring only that the cat will show kindness. In discharging the duties of a mother, if her own young are destroyed or removed, she will rear a supposititious brood. Mr. White mentions an instance of a cat bringing up a leveret, three young squirrels, and even of forming an attachment for a rat, which had accidentally been thrown under its protection. What is still more extraordinary, a reciprocal affection has been remarked between a cat and a pigeon; they were first observed together on the wall of a garden belonging to a gentleman at Putney. The pigeon was afterwards domesticated; and they continued from that time inseparable companions.

Cats have a natural aversion from water, and are particularly cautious of wetting their feet;—yet, so partial is this animal to fish, that it has been seen to plunge into a stream after a trout, and to lie in wait by the sides of ponds in expectation of its favourite food. The mouse is the cat's favourite game; but she will prey on rats, birds, bats, young hares, and rabbits, or whatever she can seize. Like all the cat tribe, she waits patiently for her prey, till her victim comes within her reach; when she bounds upon it, with unerring aim, and seldom suffers it to escape from her grasp:

Backward coiled, and crouching low,
With glaring eye-balls watch thy foe,
The housewife's spindle whirling round,
Or thread, or straw, that on the ground

Its shadow throws, by urchin sly
Held out to lure thy roving eye;
Then, onward stealing, fiercely spring
Upon the futile, faithless thing.
Now wheeling round, with bootless skill,
Thy bo-peep tail provokes thee still,
As oft beyond thy curving side
Its jetty tip is seen to glide;
Till, from thy centre starting far,
Thou sidelong rear'st, with rump in air,
Erected stiff, and gait awry,
Like madam in her tantrums high:
Though ne'er a madam of them all
Whose silken kirtle sweeps the hall,
More varied trick and whim displays,
To catch the admiring stranger's gaze.

Blades of grass are eaten by the cat as well as by the dog; the former is very fond of valerian (valeriana officinalis), and cat-thyme (teucrium marum); frequently rubbing itself against these plants, and exhibiting every sign of rapturous intoxication. It is very difficult to poison the cat; arsenic, corrosive sublimate, and other substances having totally failed. Cats soon become old, and ten or twelve years usually form the limit of their existence. This animal has been known to subsist for twenty-four days without food of any kind; and its proverbial character for tenacity of life still subjects it to the most incredible cruelties.

The cat is particularly attached to the place where it has been brought up; and, if carried elsewhere, will frequently return to its old habitation, though at many miles distant. A singular instance of this sort is mentioned by Mr. Daniel, on the authority of Sir William Scott. In 1810, a cat was carried by a lady from Edinburgh to Glasgow in a close carriage, and was carefully watched for two months; at the end of that

period, she produced two kittens, and was then left to her own discretion, which she employed by disappearing with her kittens. The Glasgow lady wrote to her friend at Edinburgh, deploring her loss, and puss was supposed to have sought some new abode; until about a fortnight after her non-appearance at Glasgow, her well known mew was heard at the door of her former mistress in Edinburgh, where she was discovered with her young offspring; they in the best condition, she being very thin and poor. It is clear she could only have carried one kitten at a time. The distance from Edinburgh to Glasgow is forty miles; so, in returning, she must have travelled one hundred and twenty; and her prudence must have suggested the mode of travelling in the night, with many other circumstances, for the safety of her kittens. When she was admitted to the door of her old habitation, she brought one kitten up in her mouth, and deposited it in the corner of the drawing-room, which she always occupied;—then returned for the *second*, and afterwards seated herself very composedly, without taking particular notice of any of the company present.

The fur of the cat is sleek and very glossy, and if rubbed with the hand, particularly in frosty weather, will emit electric sparks. In some countries, the skin forms a considerable article of commerce, and the flesh is esteemed an excellent food.

In the time of Hoel Dha, or Howel the Good, Prince of Wales, who died A. D. 948, it appears that cats were of considerable value, and consequently must have been scarce. The price of a kitten, before it could see, was fixed at a penny; till proof could be given of its having caught a mouse, at two-

pence; after which it was rated at fourpence, a very considerable sum in days when specie was so scarce. As a farther proof of the estimation in which these animals were held by the Cambrian prince, as well as of the simplicity of the times, it was declared, that if any should steal or kill the cat that guarded the prince's granary, the offender was to forfeit either a milch ewe, her fleece and lamb, or as much wheat as, when poured on the cat suspended by the tail, its head touching the floor, would form a heap high enough to cover the tip of the tail. Hence it may be inferred that cats were not originally indigenous to this island, and that it was thought necessary to make public regulations for the protection of the breed.

Cats are greatly admired by the Turks, and their prophet Mohammed was exceedingly fond of this animal. It is related, that being called up on some urgent business, he preferred cutting off the sleeve of his robe to waking the cat that lay upon it. Nothing more was necessary to bring these animals into high request. "A cat may even enter a mosque; it is caressed there as the favourite animal of the prophet; while the dog, that should dare appear in the temples, would pollute them with his presence, and would be punished with instant death. In ancient Egypt, cats were held in great veneration, but dogs in still more. In any house where a cat died a natural death (for no person killing a cat, even involuntarily, could escape capital punishment), the inhabitants shaved their eyelids only; but upon the death of a dog, they shaved their head. Cats were buried at Bubastis, a considerable city in lower Egypt. These honours and prerogatives were not merely matters of fancy; they had a great political end, the interest and subsistence of a whole people.

It was necessary to put under the protection of the law a species of animals, whose defence against the prodigious multitudes of rats and mice, with which Egypt is infested, was absolutely indispensable."

In our own country, a singular veneration has been paid to cats by old maids and bachelors; large sums of money have been expended upon them, and even legacies bequeathed to support them in every luxury, after the death of their passionate admirers. On the contrary, there are others, who cannot remain in the same apartment with a cat, and will even faint or fall into fits at the sight of one;—an antipathy generally derived from some accidental prejudice attained in early youth.

A writer in the Gentleman's Magazine affirms, that he had seen a cat attempt *suicide*, by throwing itself repeatedly, head foremost, from a high shelf on a stone floor, and although it did not accomplish its end, it bruised itself so much, that it was thought humane to drown it. This circumstance is highly curious and interesting, and will scarcely, perhaps, obtain belief, except among those who are conversant with the facts and phenomena of natural history. Animals, in many of their actions and pursuits, are very analogous to man, and the fact we have just related can convey no other impression but as being the result of a reasoning principle, which Mr. Locke, in some degree, allows them.

In corroboration of the above, Lord Kames in his History of Man (vol. ii. p. 17.) has the following passage: "In some animals, love of liberty is the ruling passion; some are easily trained, and submit readily without opposition. Examples of the latter are common: of the former take the following instance: a brood of stonechatters, taken from the nest, were in-

closed in a cage; the door was left open to give admission to the mother, and then was shut upon her. After many attempts, finding it impossible to get free, she first put her young to death, and then dashed out her own brains on the side of the cage."

In concluding our account of the common cat, we cannot forbear to mention one of its most singular and beautiful varieties, the Angora cat, a native of Egypt. This animal is thus described by M. Sonnini, in his Travels, translated by Dr. Hunter (vol. i. p. 290).

Long and silky hairs covered it entirely; its thick tail formed a magnificent plume, which the animal elevated, at pleasure, above its body. Not one spot, not one shade tarnished the dazzling white of its coat. Its nose, and the turn of its lips, were of a tender rose colour. Two large eyes sparkled in its rounded head, the one of which was a light yellow, and the other blue. This beautiful cat had still more of amability than of grace in its movements and in its attitudes. With the physiognomy of goodness, she possessed a gentleness truly interesting. You might treat her in what manner you pleased, never did her claws advance from her sheaths. Sensible to kindness, she licked the hand that caressed her, even that which tormented her. On a journey, she reposed tranquilly on your knees; there was no occasion to confine her; no noise whatever gave her the least disturbance, provided she was near me, or to some other person whom she had been in the habit of seeing.

In my solitary moments, she adhered to my side, interrupted me frequently in the midst of my labours or my meditations, by little caresses extremely affecting: she likewise followed me in

my walks. During my absence, she sought and called for me incessantly with the utmost inquietude; and if I was long in re-appearing, she quitted my apartment, and attached herself to the person of the house, for whom, next to me, she entertained the greatest affection. She recognised my voice, and seemed to find me again, each time, with increased satisfaction. Her advances were not oblique, her gait was frank, and her look as gentle as her character: she possessed, in a word, the nature of the most amiable dog, beneath the brilliant fur of a cat.

This animal was Sonnini's principal amusement for several years;—but the beautiful and interesting creature at length perished, after several days of suffering, its eyes being constantly fixed on its master.

THE WILD CAT.

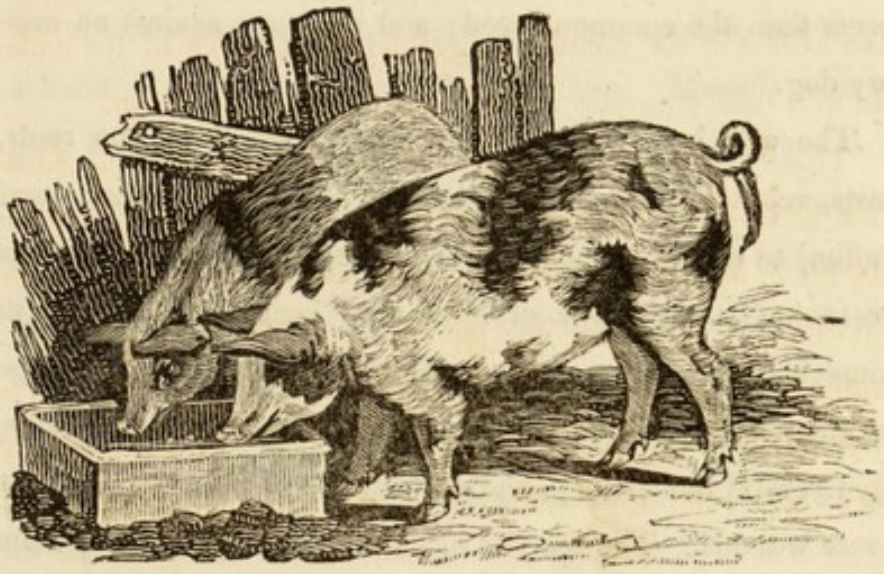
In this country, the wild cat (felis catus ferus) is the largest and most destructive beast of prey extant, if we except the fox. It was formerly abundant in our forests, and was considered a beast of chase, as appears by a charter of Richard II. to the abbot of Peterborough, which grants him permission to hunt the hare, fox, and wild cat. This animal is now become rare in Britain, and is chiefly found in the mountainous districts of Scotland and Ireland, and occasionally among the woods that border the lakes in Cumberland and Westmoreland. They are taken in traps, or by shooting.

The colour of the wild cat is commonly a pale yellowish-grey, with dusky stripes and variegations: it measures four, or almost five feet in length, from the muzzle to the end of the

tail: it is more robust, and possessed of far greater strength and spirit than the domestic animal. The head is larger, the face flatter; and the teeth and claws are more formidable. It multiplies as fast as the common cat; and the females of the latter will quit their domestic mates and unite with the former.

This "British tiger" prefers woods in mountainous situations, and preys on birds and the smaller quadrupeds, such as rats, mice, bats, and squirrels; it also pursues rabbits and hares, makes great havoc among poultry, and will even kill young lambs, kids, and fawns. It is dangerous in chasing wild cats to wound them slightly, for they defend themselves with great spirit, attack the dogs with fury, and even fasten on the sportsman.





SWINE.

The stock or original of the domestic hog, the wild boar, was once common in the forests of England, and is said, with its mate, to have been procured from Germany at the expense of Charles I. who stocked New Forest with these animals; but they were destroyed in the civil wars. The wild boar was also introduced into other forests in Hampshire some years back, but this animal and its descendants were soon killed by the surrounding inhabitants, who lived in continual terror of their ferocious neighbours.

In New Forest, a breed of hogs is still found, commonly called forest pigs, which have about them several of the characteristic marks of the wild boar. These are broad shoulders; a high

crest; and thick, bristly mane, which he erects on any alarm. His hinder parts are light and thin; his ears are short and erect; and his colour either black or darkly brindled. He is much fiercer than the common breed; and will turn against an ordinary dog.

The wild boar (sus aper) inhabits woods, living on roots, masts, acorns, &c.; and sometimes it has been observed (says Buffon) to devour horseflesh left in the woods, and the skin of the roebuck: the claws of birds have been also found in its stomach. It is, in general, considerably smaller than the domestic hog; but its tusks are superior in length and size, being often several inches long, and are capable of inflicting the most severe wounds. The females of this tribe generally bring from four to ten or twelve young ones at a litter.

The hunting of the wild boar is the favourite, but dangerous, amusement of the nobles, in some parts of Germany and Poland; more on account of the ferocity, than the fleetness, of the animal which is pursued. Wild boars (observes the eminent naturalist just quoted) which have not passed their third year, are called by the hunters, beasts of company; because, previously to this age, they do not separate, but follow their common parent. They never wander alone till they have acquired sufficient strength to resist the attacks of the wolf. These animals, when they are young, form a kind of flock, and it is upon this that their safety depends. When attacked, the largest and strongest front the enemy, and by pressing all round against the weaker, force them into the centre. Domestic hogs are also observed to defend themselves in a similar manner.

The wild boar is hunted with dogs, or killed by surprise

during the night, when the moon shines. As he flies slowly, leaves a strong odour behind him, and defends himself against the dogs, and often wounds them dangerously, fine hunting dogs are unnecessary, and would have their nose spoiled, and acquire a habit of moving slowly by hunting him. Mastiffs with very little training are sufficient. The oldest boars, which are known by the track of their feet, should alone be hunted: a young boar of three years old is difficult to be attacked, because he runs very far without stopping; but the old boars do not run far, allow the dogs to come near, and often stop to repel them. During the day the boar commonly keeps in his soil, which is in the most sequestered part of the woods, and comes out by night in quest of food; and in summer, when the grain is ripe, it is easy to surprise him among the cultivated fields, which he frequents every night.

In France, the savage wild boar was destroyed and rooted out, with the more savage feudal laws. Mr. Tattersal, immediately before the Revolution, brought home with him from Chantilly a young boar and sow of the genuine wild species. Such, indeed, was the fierceness of these animals and their progeny, that a visitor venturing down the yard at midnight without a guide, escaped very narrowly from their attacks, by leaping over a fence equal in height to a five-barred gate.

Swine unite those distinctions by which other quadrupeds are separated, and seem, in some particulars, to form an intermediate link between the whole-footed and the cloven-footed animals; and in others, between the cloven-footed and the digitated. They resemble the horse kind in the length of their heads, in having only a single stomach, and in the number of their teeth.

In their cloven feet, and the position of the intestines, they bear some similitude to the cow; and in their numerous progeny, and their occasional appetite for flesh, they resemble the claw-footed or digitated animals.

THE COMMON HOG.

A RUDE and brutal character has been proverbially attached to the swinish tribe: their habits are gross; and such is their gluttony, that they devour every thing indiscriminately. But though the hog be the most impure and filthy of animals, its sordidness is useful, as it swallows with avidity refuse and offal of every kind, which would otherwise become a nuisance, and be productive of the worst effects. Notwithstanding this general character for gluttony, the hog is not indiscriminate in the choice of his food, for he eats 72 species of vegetables, and rejects 171.

The common hog (sus scrofa domesticus) will live until twenty, and even thirty years of age: and the old writers aver, that the boar continues to grow to the end of life. But few opportunities of ascertaining their longevity occur, as it is neither profitable nor convenient to keep this turbulent animal to the full extent of its time. A neighbour of Mr. White's, in Hampshire, kept a half-bred Bantam sow, who was as thick as she was long, and whose belly swept on the ground, till she was advanced to her seventeenth year; at which period she showed some tokens of age by the decay of her teeth, and the decline of her fertility. For about ten years this prolific mother produced two litters in the year, of about ten at a time, and once above

twenty at a litter; but, as there were nearly double the number of pigs to that of teats, many died. At the age of about fifteen her litters began to be reduced to four or five; and such a litter she exhibited when in her fatting pen. At a moderate computation she was allowed to have been the fruitful mother of three hundred pigs: a prodigious instance of fecundity in so large a quadruped! She was killed in the spring of 1775[1].

The sow brings forth after a gestation of four months; and the middle of January, and the middle of July, are generally considered the most advantageous pigging seasons, because young weaned pigs are more sensible of the cold than those which suck, and there is little to dread on that score in the middle of March, when the January pigs are weaned. At the time of parturition, it is of great consequence that no other swine should be near the sows, since, in that case, the pigs would most probably be destroyed as they fall. If the sow show the unnatural desire of devouring her own progeny, she is either muzzled or her snout is fast strapped for several days, care being taken to attend her meals. Some try the experiment of anointing the pigs with a pomade of train oil and common aloes.

Both the roots and leaves of hemlock are poisonous to swine; but henbane, according to Dr. Mead, is beneficial and nutritive to them. An instance occurred in Kent, in 1764, of eleven pigs being stung to death by bees.

An excellent food is provided for hogs kept on the borders of forests, in the season of autumn, by acorns and beech nuts, both of which are termed *mast*. This period commences about the end of September, and lasts for six weeks. The method of

[1] Nat. Hist. of Selborne, Vol. II. p. 9.

treating hogs at this season of migration, in New Forest, is very curious, and is thus related in Mr. Gilpin's "Forest Scenery."

The first step the swineherd takes is to investigate some close sheltered part of the forest where there is a conveniency of water, and plenty of oak or beech mast; the former of which he prefers, when he can have it in abundance. He fixes next on some spreading tree, round the bole of which he wattles a slight, circular fence of the dimensions he wants; and covering it roughly with boughs and sods, he fills it plentifully with straw or fern. Having made this preparation, he collects his colony among the farmers, and will get together, perhaps, a herd of five or six hundred hogs. Having driven them to their destined habitation, he gives them a plentiful supper of acorns or beech mast, which he had already provided, sounding his horn during the repast. He then turns them into the litter, where, after a long journey, and a hearty meal, they sleep deliciously.

The next morning he suffers them to look around them, shows them the pool or stream where they may occasionally drink, leaves them to pick up the offals of the last night's meal; and, as evening draws on, gives them another plentiful repast under the neighbouring trees, which rain acorns upon them for an hour together, at the sound of his horn: he then sends them again to sleep.

The following day he is perhaps at the pains of procuring them another meal, with music playing as usual. He then leaves them a little more to themselves, having an eye, however, on their evening hours. But as their bellies are full, they seldom wander far from home, retiring commonly very orderly, and early to bed.

After this he throws his sty open, and leaves them to cater for themselves; and from henceforward has little more trouble with them, during the whole time of their migration. Now and then, in calm weather, when mast falls sparingly, he calls them perhaps together, by the music of his horn, to a gratuitous meal; but in general they need little attention, returning regularly home at night, though they often wander in the day two or three miles from their sty. There are experienced leaders in all herds, which have spent this roving life before; and can instruct their juniors in the method of it. By this management the herd is carried home to their respective owners in such condition, that a little dry meat will soon fatten them.

Bloomfield has prettily described the feeding of swine in a forest:—

> From oak to oak they run with eager haste,
> And, wrangling, share the first delicious taste
> Of fallen acorns; yet but thinly found,
> Till the strong gale has shook them to the ground,
> It comes; and roaring woods obedient wave:
> Their home, well pleased, the joint adventurers leave.
> The trudging sow leads forth her numerous young,
> Playful, and white, and clean, the briars among;
> Till briars and thorns increasing, fence them round,
> Where last year's mouldering leaves bestrew the ground;
> And o'er their heads, loud lashed by furious squalls,
> Bright from their cups, the rattling treasure falls.
> Hot, thirsty food; whence doubly sweet and cool
> The welcome margin of some rush-grown pool.

Among the various articles of live stock, few are more profitable than swine, while the number kept on a farm is proportioned to the quantity of offal on the premises: especially as

the attendance they require is, when compared with that of others, very trifling; and the benefit arising from their dung more than counterbalances the expense of such attendance. One hundred pounds, it is averred, laid out in swine, will return a greater profit than the same sum invested in any other kind of live stock.

The characteristic marks of a good hog are, depth of carcass, lateral extension, breadth of the loin and breast, proportional length, and moderate shortness of the legs. The substance of the gammons and fore arms is also a great essential. The vigour of the animal's constitution will be generally in proportion to the capaciousness of the loin and breast: the legs will be properly extended, and he will have a bold and firm footing on the ground; to which, however, it is further necessary that his claws be upright, even and sound. A good hog may have a coarse, long, ugly head and ear; yet a short, handsome, sprightly head, with light, pointed, pendulous ears, of moderate size, are pleasing to the view, and may sometimes have a favourable effect in the market.

For head and ears the Oxford, or rather smaller Berkshire pigs, are good models; and for true shape, the improved Shropshire, Hereford, and Gloucester. The form of the ear, and the quality of the hair, are leading marks of distinction. The pendulous or lop-ear, and harsh hair, generally indicate large size and the thickest skin. Erect or prick-eared pigs are of smaller size, and quicker feeders. If colour deserve any consideration (observes Mr. Lawrence, in his excellent Treatise on Cattle), I should prefer the light and sandy and yellow-spotted; at least such skins appear far the most delicate when the animal is



Engraved by S.J. wedgwood from a Painting by J. Clarke.

SWINE.

Published Nov. 1st 1824 by W. Clarke New Bond Street.

dead. Our best bred pigs are often thick-skinned, but such skin is tender, gelatinous, shining, easy to masticate even in the shape of roasted crackling, and very nutritious: but to eat the crackling of thin-skinned pork, case-hardened by the action of fire, requires teeth almost equal to the division of block-tin.

The health of swine is to be estimated by their cheerfulness, by the gloss upon their coats, and their skin being whole and free from any eruption. It is an extremely unfavourable sign when the head is hung down, the snout approaching the earth like a fifth leg, and when the flanks heave and are hollow. If pigs *bark* on being alarmed, it is an excellent sign of sound health and good keep.

The chief counties in England for breeding pigs are Shropshire, Herefordshire, Gloucestershire, Wiltshire, Berkshire, Hants, Northamptonshire, Leicestershire, Lincolnshire, Norfolk, Suffolk and Essex. The inland, north-west, and north-east districts, have generally bred the largest swine. We shall briefly enumerate the productions of the principal counties, as given by Mr. Lawrence[1].

1. *Shropshire.*—The standard colour of this breed is white or brinded; and, anterior to the late improvement, they might be looked upon as nearly as possible the original large breed of England. They have been much improved, within the last fifteen years, by the Berkshire cross.

2. *Herefordshire.*—This is a variety of the preceding, or an intermixture which cannot now be traced. There may be found in this breed many individuals of the truest form; and they are

[1] Treatise on Cattle, pp. 437—442.

among the most profitable bacon hogs that we have. They have been lately crossed with the Berkshire.

3. *Wiltshire.*—Of late years this breed has been crossed with the *pug* and the Berkshire. This new is smaller than the old breed, and darker in colour; some are spotted, with round carcasses, and a handsome pug face; others have prick ears.

4. *Berkshire* has been, perhaps for centuries, famous for its breed of pigs, and at this day has lost none of its pristine reputation. The old breed is completely worn out. The present breed may be reckoned in the third class in point of size, excellent in all respects, but particularly as a cross for heavy, slow breeding sorts.

5. *Hants.*—The goodness of the Hampshire hog is proverbial; greater or quicker proof has never been observed in any breed.

6. *Suffolk.*—The small, delicate, white pigs of this county have been long in estimation. Some of the Suffolks are very handsome, and very regularly shaped.

The *Chinese* breed, long well known in this country, is an admirable cross for fineness of bone and quick feeding. Its colour is in general black, though often white, tawny, or reddish and brown; of a small size, with a thick neck, short legs, and a thick, close, and well made body. It is one of the most profitable sorts in this island; the flesh is delicate, and it fattens kindly on very indifferent food.

In the management of swine, of whatever breed or variety, it is highly necessary that they should be well *ringed*, to prevent them from breaking into corn-fields. Instead of this operation some have substituted the following mode. It consists simply



AN AGED BOAR.

in shaving or paring off, with a razor or sharp knife, the gristles on the tops of the noses of young pigs; the place soon heals over, and they are thus rendered incapable of that destructive rooting, or turning up of the ground, which farmers find so detrimental to sward land.

In the vicinity of London, vast numbers of hogs are annually fattened with grains from the distilleries: such pork, however, does not take the salt so readily as the flesh of those pigs which have been fed with more substantial food, and been driven to the market from a considerable distance.

The short lives usually granted to pigs, almost prevent us from forming an opinion as to their sagacity; yet the various accounts which all have heard of "learned pigs," and of the occasional docility of this animal, give it some claim in this respect. The most remarkable instance of sagacity perhaps ever recorded is of a black sow belonging to Sir H. P. St. John Mildmay, which was actually broke in by his game-keeper, Toomer, to find game, back, and stand, nearly as well as a pointer. The biography of this animal is so very curious and interesting, that we shall extract the whole of it from "Mr. Bingley's Memoirs of British Quadrupeds."

This sow, which was a thin, long-legged animal (one of the ugliest of the New Forest breed), when very young, took a great partiality to some pointer puppies that Toomer, then under keeper of Broomy Lodge, in the New Forest, was breaking. It played and often came to feed with them. From this circumstance it occurred to Toomer (to use his own expression), that having broken many a dog as obstinate as a pig, he would try if he could not also succeed in breaking a pig. The little animal

would often go out with the puppies to some distance from home; and he enticed it farther by a sort of pudding made of barley meal, which he carried in one of his pockets. The other he filled with stones, which he threw at the pig whenever she misbehaved, as he was not able to catch and correct her in the same manner that he did his dogs. He informed Sir Henry Mildmay, who furnished Mr. Bingley with this narrative, that he found the animal very tractable, and that he soon taught her what he wished, by this mode of reward and punishment.

Sir Henry Mildmay says, that he has frequently seen her out with Toomer, when she quartered her ground as regularly as any pointer, stood when she came on game (having an excellent nose), and backed the dogs as well as he ever saw a pointer. When she came on the cold scent of game, she slackened her trot, and gradually dropt her ears and tail till she was certain, and then fell down on her knees. So staunch was she, that she would frequently remain five minutes and upwards on her point. As soon as the game rose, she always returned to Toomer, grunting very loudly for her reward of pudding, if it was not immediately given to her. When Toomer died, his widow sent the pig to Sir Henry Mildmay, who kept it for three years, but never used it, except for the purpose of occasionally amusing his friends.

In doing this, a fowl was put into a cabbage-net, and hidden among the fern in some part of the park; and the extraordinary animal never failed to point it, in the manner above described. Sir Henry was at length obliged to part with this sow, from a circumstance as singular as the other occurrences of her life. A great number of lambs had been lost, nearly as soon as they were dropped, and a person being sent to watch the flock, the

animal was detected in the very act of devouring a lamb. This carnivorous propensity was ascribed to her having been accustomed to feed with the dogs, and to eat the flesh on which they were fed. Sir Henry sent her back to Mrs. Toomer, who sold her to Mr. Sykes, of Brookwood, in New Forest, where she died the usual death of a pig, and was converted into bacon.

Of the tractability of hogs, Mr. Daniel mentions the following novel instance. In October 1811, a man who holds a farm near St. Albans, entered the town mounted on a small car, drawn by four large hogs, and made the tour of the market-place three or four times, at a brisk trot. He then went into the Wool-pack yard, had his swinish cattle regularly unharnessed, and taken into a stable together, where they were regaled with a trough full of beans and wash. The animals had not been more than six months in training. In Minorca, hogs are frequently seen yoked to the plough, in company with an ass or cow, and are found very serviceable.

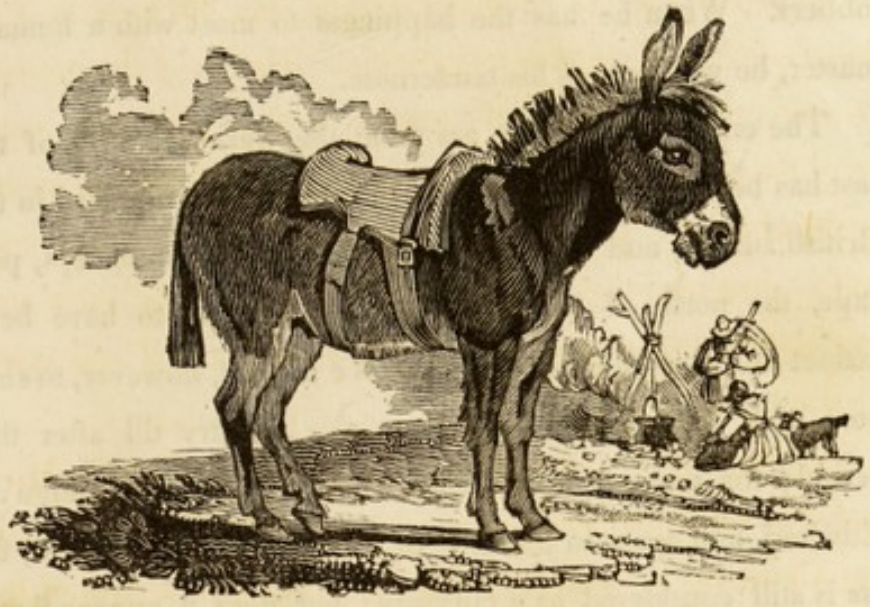
Pork, of all other flesh-meat, is best adapted to curing and preservation with salt, and has the additional merit of never cloying the appetite; for it appears that men will subsist longer upon that diet, without desire of change, than upon any other flesh. In various parts of the country, the labourers, and even the farmers themselves, very rarely taste, or desire to taste, any other. The consumption of this article in the navy is very great. More than 300 swine weekly, or 15,000 a year, are brought to Smithfield market for sale. The superior delicacy and luxurious flavour of young milk-fed pork are well known: and brawn, which is a manufacture of hog's flesh peculiar to England, is a feast for an epicure.

Though the living hog may possess few agreeable qualities,

his value is universally allowed when dead. The lard, or fat, is applicable to various purposes, both culinary and medicinal. The blood, intestines, feet, and tongue, are all used in the kitchen; though the first is indigestible. The fat of the bowels and web, which differs from common lard, is preferably employed for greasing the axles of wheels. The bristles are made into brushes and pencils, and are employed as shoemakers' needles: hog's bristles are also used for manure: the skins are manufactured into sieves; and, in China, are tanned and converted into shoes.

Swine's flesh is reckoned unclean by the Jewish and Mohammedan laws, touching it being considered a defilement: and many Christians are also prejudiced even against the sight of it. The Chinese are excessively fond of pork.





THE ASS.

In point of size, of strength, and beauty, the varieties of this species, like other domestic animals, have undergone many changes, and differ considerably from each other. Those of the eastern parts of the world, who continue to enjoy the advantages of a climate entirely congenial with their nature, are still observed to possess nearly all that activity, that energetic spirit, and beauty of appearance, which characterise this animal in a state of independent wildness; they present a race of beings, in almost every respect, the reverse of those abject creatures, their degenerate offspring, which we are daily accustomed to see employed in the meanest acts of servitude. It is the misfortune of this quadruped, that its value is overlooked in the superior

qualities of the horse, and that, in this country more especially, he falls to the lot of the lowest rustics, and the most barbarous jobbers. When he has the happiness to meet with a humane master, he well repays his tenderness.

The emigration of the ass from the warm climates of the east has been very slow; and though it is now naturalized in the British islands, and is found in every part of them, except, perhaps, the north of Scotland, the breed seems to have been extinct in the reign of Elizabeth. We are not, however, to suppose, that they were unknown in this country till after that period; for mention is made of them so early as the reign of Ethelred, and again in the time of Henry III. In Sweden, the ass is still considered as a curiosity; nor does it appear that it has been introduced into Norway.

The ass, in its wild state, is naturally swift, fierce, and formidable; and it is remarkable that, in their native pastures, they will not suffer a horse to appear within their limits:—when tamed, however, this animal presents a very different picture. The moment its original liberty is lost, it seems to relinquish every claim to independence, and assumes a meekness and submission even humbler than its servile situation. It is the most patient of all domestic quadrupeds, and suffers with constancy, if not with courage, all the ill-treatment which cruelty and caprice undeservedly inflict. "'Tis an animal (observes the benevolent Sterne) I cannot bear to strike—there is a patient endurance of sufferings, wrote so unaffectedly in his looks and carriage, which pleads so mightily for him, that it always disarms me; and to that degree, that I do not like to speak unkindly to him; on the contrary, meet him where I will, whether in town or



ASSES.

country, in cart or under panniers—whether in liberty or bondage—I have ever something civil to say to him; and surely never is my imagination so busy as in framing his responses from the etchings of his countenance."

The common ass (equus asinus domesticus) is, like the horse, three or four years in growing, and lives also like him, twenty-five or thirty years: it is said the female lives longer than the male; but perhaps this happens from their being often pregnant, and at those times having some care taken of them, instead of which, the males are constantly worn out with fatigue and blows. The she-ass brings forth in the twelfth month; and displays the most determined resolution in defence of her young. Asses sleep less than horses, and do not lie down to sleep, except when they are exceedingly tired. In general, the health of this animal is much better than that of the horse; he is delicate, and not nearly so subject to maladies. Of all animals that are covered with hair, it is believed that the ass is the least subject to vermin; this, however, is altogether erroneous, as it is infested with a species peculiar to itself, and hence termed pediculus asini.

Extreme temperance, with regard to the quantity, as well as the quality, of his provisions, is a striking feature in the character of the ass. He is satisfied with the most neglected weeds, making his humble repast on what the horse, the cow, and the sheep refuse. A handful of hay, a piece of bread, or some stale greens, are eagerly devoured; he will also eat thistles and briers, and is very fond of the plantain. Though indifferent about food, this animal is peculiarly delicate in its drink. It seems afraid of wetting its feet, and even, when loaded, will

turn aside to avoid the dirty parts of the road: it never rolls in the mud, and is naturally cleanly in its habits.

The ass is reckoned superior in picturesque beauty to the horse; and among all the tribes of animals, there is not, perhaps, one more ornamental in landscape. Berghem bears full testimony to its truth. In his pictures, the ass makes often the most distinguished figure: and that excellent landscape painter, Mr. Gainsborough, it is said, generally kept this animal by him, that he might have it always at hand to introduce in various attitudes into his pictures.

When young, the ass possesses a great degree of sprightliness and beauty; but it soon loses those agreeable qualities, and becomes slow, stupid, and frequently obstinate. Its only ardour, which is extreme, is shown for its mate: in other respects, it is rather the passive instrument of our will, than the architect of its own destiny. Yet it shows a partiality for its owner, by whom it is too often abused: it scents him at a considerable distance, distinguishes him from others in a crowd, and seems to know the roads he has passed, and the place where he sojourns. When overloaded, it shows its sense of injury, by hanging down its head and flapping its ears; and, when too hard pressed, it opens its mouth, and draws back its lips with a ghastly grin. If blinded, it will remain motionless, however easy it might be to remove the impediments that hinder its sight. It walks, trots, and gallops, like a horse; but, though it sets out very freely, it is soon tired, and requires to be managed with some address to make it proceed. Ill usage only confirms its obstinacy; neither the whip nor the cudgel can make it move, when it has once become sullen: but this does not arise from

ASSES.

any defect in its constitution and temper, for it is capable of being trained with the same facility as some other quadrupeds; and several animals of this kind have been rendered sufficiently sagacious and active to be exhibited as public spectacles.

The soil and temperature of England are both well adapted to the nature of the ass; and great improvements might be made in the breed. Some gentlemen, by introducing the Spanish stallion, have effected a considerable change in the character of the common ass. The finest breed of asses, in the known world, is to be found in Spain: they are large, strong, elegant, and stately animals, often fifteen hands or more in height; and sometimes selling for as much as a hundred guineas each.

It appears, from actual experiment, that these useful animals may be employed to great advantage in drawing waggons and other carriages. Thus, the Earl of Egremont, in the year 1800, formed a team, consisting of six male asses, and, during nine months, he found them of great service. They brought one chaldron and a quarter of coals twice a day, in a waggon, from the canal to his lordship's house at Petworth, which shows a great degree of strength, not to be expected from them. They were gentle and docile: during winter they had no oats, nor any other hay than the bands of the trusses cousumed by horses, but lived on furze and holly. Mr. Worthington worked a team of four asses at plough, yoked two abreast, driven in hand, with reins, by the ploughman, and found that they were masters of the labour required from two common farmer's horses of a slight kind. Mr. W. esteemed an acre a good day's work; but in cross ploughing they would do more: at such work two asses were sometimes enough, and two were also sufficient in turning

the furrow at potatoe planting. The soil on which these animals were employed was a loamy stone brash, of middling but varying depth, and tenacious rather than light.

The union of the ass and the horse produces that hybrid animal termed a mule: and, in New Forest, the breed is much encouraged, a great number of asses being kept to promote it.

Various useful purposes are accomplished by the skin of the ass: it is extremely hard and very elastic, and serves to cover drums, make parchment, and leaves for pocket-books, when burnished over in a peculiar manner. The skin also, well tanned, makes excellent shoes; the flesh is eaten in several countries; and the milk is esteemed a sovereign remedy in hectic complaints, and in all cases of debility.





THE SQUIRREL.

Squirrels are remarkable for the liveliness of their disposition, the celerity of their motions, and the general beauty and neatness of their appearance. This elegant animal inhabits woods, and lives entirely on vegetable food. It is cleanly, active, and industrious; its eyes are sparkling, and its whole physiognomy is marked with expression. The squirrel seldom descends to the ground, except during a storm; but continues leaping, from one branch of a tree to another, "shelling his nuts at liberty."

His activity and feats of dexterity are very amusing. On extraordinary occasions, when he is agitated by love or anger, his muscles acquire tenfold elasticity. He descends a tree in a

rapid spiral, as quick as thought—darts up another in an opposite direction—flings himself from tree to tree, with amazing exactness, and pursues his mate, or his rival, among the mazy branches of an oak, with a velocity that eludes the sight.

The common squirrel (sciurus vulgaris) is of a bright reddish brown colour, except on the breast and belly, which are nearly white: these colours are brightest in summer, and, on the approach of winter, change to a greyer, or browner tinge; sometimes a variety is seen in England with a milk-white tail. Their young are generally three or four in number, and are produced about the middle of summer, or sometimes earlier. The squirrel, when in pain, utters a sharp piercing cry, and expresses its pleasurable sensations by a sound not unlike the purring of a cat; when much irritated, he makes a growling noise. His long and bushy tail serves to protect him from the rays of the sun; and, when extended, assists him greatly in taking those prodigious leaps from tree to tree, which afford us so much amusement.

The nest of the squirrel is generally placed among the large branches of a tree, where they begin to fork off into small ones. After selecting the particular spot, the animal begins, with great judgment, to level the foundation as far as it is able, and then collecting moss, twigs, and dry leaves, it forms them into a mass sufficiently strong to resist the most violent storm. The entrance, by an aperture at the top, is just sufficient to admit the animal, and is so contrived that the rain is excluded by means of a canopy.

It never leaves its food to chance; but, in summer and autumn, secures in the hollow of some tree its magazine of



Engraved by J. Barrow, from a Painting by L. Gerard.

SQUIRRELS.

Published Dec.r 1.1820 by W. Darly New Bond Street.

nuts, providently looking forward to the dreary season which shall strip the forests both of their fruits and foliage. These winter stores are never touched except when the animal is unable to go abroad in search of new supplies. Thus a single tree serves both for a retreat and a store-house; and, without quitting it during the winter, the squirrel possesses all the comforts that its nature is capable of receiving. In the summer, it feeds on young buds and shoots, particularly those of the fir and pine.

Besides depositing a large quantity of acorns in hollow trees, the squirrel has been observed to bury them in the ground; and may thus be said to plant most of those oaks which are called *spontaneous*. As it is probable that his memory is not sufficiently retentive to enable him to remember the spots in which he deposits every acorn, the industrious little fellow no doubt loses a few every year. These few spring up, and are destined to supply the place of the parent tree. Thus is Britain, in some measure, indebted to the industry and bad memory of a squirrel for her pride, her glory, and her very existence!

The squirrel makes its principal excursions by night, and shows the greatest activity in the spring: lying quiet in the heat of the day, as if the powerful rays of the sun were disagreeable. Like every other creature it has its enemies. The squirrel is hunted by boys, who go into the woods, and make a shouting noise to stupify it; and the martin not only plunders it of its young, but sometimes takes possession of its nest. The vigilance of the squirrel is extreme: if the tree in which it lodges be only touched at the bottom, it immediately takes the alarm and flies off to another, thus proceeding from tree to tree, it has been

said, at the distance even of forty feet. If obliged to descend, it runs up the side of another tree with surprising agility, and will take the rounds of a forest by means impracticable to any other quadruped.

Though naturally wild and timid, the squirrel is soon reconciled to confinement, and becomes very docile and frolicsome. The beauty of its form, and the vivacity of its motions, together with the various amusing tricks which it acquires, render it a great favourite with young persons. It is very fond of warmth, and will creep into the pocket or bosom of the person to whom it is attached; notwithstanding this familiarity, it will, if provoked, bite keenly the hand that feeds it.





THE HEDGEHOG.

No animal is more formidable in its appearance than the hedgehog: enveloped in its spinous armour, it defies all the attacks of its enemies; the cat, the weasel, the ferret, and the martin soon decline the combat; and even the dog is often foiled: in attempting to bite, he more frequently receives than gives a wound;—few dogs, indeed, will contend with it, except such as are trained to the sport; and these becoming enraged by the wounds they receive from its prickles, at last oblige it to unfold itself, and it then soon falls a victim to their fury. The hedgehog, though armed at a thousand points, is perfectly harmless, unless provoked;—it never invades, but merely repels the intruder.

It is not uncommon in the cultivated districts of Great Britain and Ireland; and is generally found in small thickets, in hedges, or in ditches covered with bushes, making a hole about six or eight inches deep, which it lines with moss, grass, or leaves. It feeds, principally, on the roots of vegetables; but it also eats worms, as well as beetles, and other insects. It wanders about chiefly by night, and during the day conceals itself in its hole. When disturbed, the hedgehog rolls itself up into a globular form, and thus presents to its adversary an invulnerable ball of prickles. From this state scarcely any thing but cold water will disengage it; if thrown into the water, the hedgehog swims with ease.

The common hedgehog (erinaceus Europæus) measures about eleven inches from the nose to the tip of the tail, which is about an inch in length. Its colour is generally of a greyish brown, and the head, back, and sides are covered with sharp pointed prickles, about an inch long. It produces four or five young at a birth, which are soon covered with prickles like those of the parent animal, but shorter and weaker. The young, like puppies, are born blind; and are not able to contract themselves into a ball, as they do, for self-defence, when full grown, as the curious muscle that enables the creature to roll itself up is not arrived at its full tone and firmness.

During the winter, the hedgehog is supposed to continue in a state of torpidity. It forms a deep and warm retreat with leaves and moss, and is thus secure from the rigours of the most piercing frost; and at the return of spring recommences its wanderings. It is sometimes so completely encircled with herbage as to resemble a ball of dried leaves; but when taken out and

placed before the fire, it soon recovers from its state of torpidity.

This animal has been accused of sucking cows and wounding their udders; Mr. Pennant, however, denies this, and observes that its mouth is by far too small to admit of this practice; while other naturalists assert that they have seen evident marks of its attempts, and that it has an instinctive taste for this pursuit. The notion is yet prevalent in many places. The hedgehog is also accused of robbing gardens and orchards of their fruit, by first shaking down the apples, &c. and then sticking them on its spines, and thus conveying away the pillage. Aldrovandus relates this circumstance, who tells us that it practices this method of transporting grapes, during the vintage. This last complaint, however, is perhaps without much foundation. If kept in a garden, they never attempt to climb trees, nor to stick fallen fruit on their spines, but only take their food with their mouth. Mr. White noticed the manner in which they eat the roots of the plaintain. With their upper jaw, which is much larger than the lower, they bore under the plant, and gnaw the root off upwards, leaving the tuft of leaves untouched. In this respect, they are serviceable, as they destroy a troublesome weed; and though they are too frequently ill-treated by wanton folly, they are in their several habits so perfectly innoxious, that they rather deserve protection than annoyance.

The hedgehog is frequently introduced into houses for the purpose of expelling those troublesome insects the blattæ, or cockroaches, which it pursues with avidity, and is very fond of. Among the Calmuc Tartars, it is kept instead of a cat, and, in some respects, answers the same purpose. Tame hedgehogs

have been taught various amusing feats, and at Paris, a showman was accustomed to carry about a box full of them. The landlord of the Angel Inn, at Felton, Northumberland, a few years since, kept a hedgehog which answered to the name of Tom, and which performed all the duties of a turnspit. It ran about the house familiarly, and exhibited the most astonishing docility. At Ludlow, two of these animals followed their master along the street, like dogs.

The hedgehog is an article of food in some places, and is said to be best in the month of August; they are usually roasted: the ancients used the skin for a clothes-brush; and, on the continent, calves are muzzled with it, when they are weaned.





THE DOG.

Of all the beasts that graze the lawn, or hunt the forest, a dog is the only animal that, leaving his fellows, attempts to cultivate the friendship of man. To man he looks, in all his necessities, with a speaking eye for assistance; exerts for him all the little service in his power, with cheerfulness and pleasure; for him bears famine and fatigue with patience and resignation. No injuries can abate his fidelity;—no distress induce him to forsake his benefactor. Studious to please, and fearing to offend, he is still a humble, stedfast, dependant; and, in him alone, fawning is not flattery.

This animal actually forgets the bad treatment he receives from man, and retains a long remembrance of favours. It is no

matter that he has a hard and cruel master, who instead of giving him food, strikes and torments him; far from taking the smallest vengeance on him, he has not even the thought of leaving him; and after seeking with risk some miserable food, he turns to follow him. If he has committed a fault, he comes to crouch at his master's feet, and to implore his clemency; but if he be not fortunate enough to obtain it, he submits without murmuring to chastisement, and the next instant humbly licks the hand that punished him, recovers his gaiety, ceases his complaint, shows himself more obedient than formerly, runs at the voice, waits the orders of his master with an ear attentive and pricked up, flies on the first signal, guesses on the slightest motion of the eye his inclinations, and executes them punctually.

Does he lose his master? he groans, he howls in the most doleful manner, and gets no repose till he finds him; he discovers his track, often pursues his steps to the distance of many miles, and finds him out in the midst of the greatest crowd. And, in journeys, what services do dogs render us? a single one is of more consequence to our safety than ten domestics; he allows no person to come near the baggage, or the apartments, and still less the person of his master; and watches carefully over every thing that belongs to him or is near him.

In the savage state of the dog, his irritable and ferocious character renders him a dangerous enemy to other animals, but when domesticated, his grand object appears to be to please his employers, and to convert to their service his courage, his swiftness, and all his striking and valuable instincts. His vigilance over whatever is committed to his charge is connected with a courage in defence of it, arising even to rage. His suspicions

are perpetually alive: his inferences with respect to the just grounds of apprehension are astonishingly judicious and correct, and he not only sounds the tocsin of alarm to the whole family by which he is employed as a sentinel, but darts on a supposed culprit with a vigour and intrepidity which generally overwhelm the power of resistance.

By the assistance of the dog, man has reduced the other animals to slavery. Dangerous and ferocious beasts are hunted down by its means. By conciliating among the various animals by which he was surrounded, those, which at the same time that they abound in energies are also capable of affection and obedience, man has been enabled to oppose and destroy others with which he would have been able to establish no compromise, whose ferocity is untameable, and whose power is connected only with ravage and desolation.

The training of the dog was, probably, one of the first objects of the attention of man, and aided him extremely, in subduing the earth to his unmolested government.

British dogs were, in early times, justly prized as excelling those of any other country; as in swiftness, the grey-hound; in speed and perseverance, the fox-hound; in steadiness, other hounds and beagles; in boldness, the terrier; in sagacity, the setter; in activity, the spaniel; and in an invincible ardour, the bull-dog, whose spirit can be quelled only by death. The different and inherent qualities of our dogs are not to be matched in other nations; those in Europe do justice to their superiority, adopting our terms and names, and thankfully receiving them as a choice present. It is a remarkable fact, however, that almost every kind of British dog degenerates in foreign climates.

Before we proceed to notice the principal varieties of dogs, naturalized among us, we shall give some general characteristic anecdotes of this interesting race.

The care of the dog in directing the steps of the blind is a circumstance deserving of particular notice. Mr. Ray informs us, that a blind beggar was thus led through the streets of Rome, by a middle-sized dog, which, besides conducting his master in safety, learned to distinguish the streets and the houses where he was accustomed to receive alms. He regularly stopped at every door where he had formerly been successful, and when the beggar began his petition, the poor animal lay down to rest. No sooner, however, was the blind man denied relief, or served, than the dog rose of his own accord, and, without order or sign, proceeded to the next house where charity had usually been bestowed. I have observed, says Ray, not without pleasure and surprise, that when a piece of money was thrown from a window, the dog would search for it, take it up in his mouth, and place it in his master's hat. Even when victuals were thrown down, the animal would not taste it, unless he received it from the hand of his owner. These truly valuable services are beautifully and pathetically alluded to, by Headley, in his "Beggar's Dog:—"

When winter wet with rain my trembling beard,
My falling tear he felt, my groan he heard;
When my grey locks at night the wild wind rent,
Like withered moss upon a monument,
What could he more, against the pitiless storm
He lent his little aid to keep me warm?

Even now, as parting with his latest breath,
He feels the thrilling gasp of coming death,
With all that fond fidelity of face,
That marks the features of his honest race,
His half-uplifted eye, in vain, he moves,
And gasps to lick the helpless hand he loves.

Of capability of instruction, the dog exhibits daily instances;—it will be sufficient to mention a few of the more remarkable. Mr. Smellie, in his admirable "Philosophy of Natural History," relates the following curious anecdote of a grocer's dog at Edinburgh. A man whose business it was to sell penny pies in the street with a bell, happened one day to treat this dog with a pie. Next time he heard the pieman's bell he ran up to him, and seizing him by the coat, would not suffer him to pass. The pieman understanding what the dog wanted, showed him a penny, and pointed to the dog's master, who was standing at the door, and observing this curious transaction. The dog immediately quitted his hold, and began to supplicate his master, who, putting a penny in his mouth, the creature instantly delivered it to the pieman, and received his pie. This traffic, it seems, was daily carried on for several months.

Instances have occurred of a dog being taught to go to market with money, and carry home provisions in safety. Some years ago, the keeper of a turnpike-gate had trained his dog to go to a neighbouring town for any small articles he wanted. A note mentioning the things was tied round the dog's neck, and in the same manner, the purchases were returned, and brought to the master, with the utmost punctuality.

At a French convent, before the revolution, twenty paupers were daily relieved, at a certain hour, on ringing a bell, by means of a machine which turned round in the wall, and neither allowed the giver nor the receiver to be seen. A dog, belonging to the convent, had frequently attended the paupers, and sometimes came in for a few scraps. One day, however, having obtained very little, after the pensioners were all gone, he took the pull in his mouth, and rang the bell, when a portion of victuals was immediately produced to him. This stratagem he repeated several times; but the cook, finding that there were twenty-one claimants instead of twenty, determined to discover the imposition. He lay concealed, saw the paupers regularly apply, and served, and the cunning dog then ringing for his dinner. The joke pleased; and, as a reward for his ingenuity, the dog was permitted to ring the bell every day, when he obtained a mess of broken victuals for his pains.

The imitative powers of the dog have furnished innumerable curious and interesting anecdotes. A Florentine nobleman possessed a dog which would attend his table, change his plates, and carry his wine to him in a glass placed on a salver without spilling a drop. It would also hold the stirrup in his teeth, while its master was mounting his horse.

It is related by the illustrious Leibnitz, that a Saxon peasant was in possession of a dog of the middling size, and about three years of age. The peasant's son perceiving accidentally, as he imagined, some resemblance in its sounds to those of the human voice, attempted to teach it to speak. By the perseverance of the lad, the dog acquired the power, we are told, of pronouncing about thirty words. It would, however, only exercise

this extraordinary faculty with reluctance, the words being first spoken, always by the preceptor, and then echoed by the pupil. The circumstance is attested by Leibnitz, who himself heard it speak, and was communicated by him in a memoir, to the Royal Academy of France.

In the theatre of Marcellus, what many will consider more probable, but what is still extraordinary, is mentioned to have occurred by Plutarch. A dog was here exhibited, who excelled in various dances of great complication and difficulty, and represented also the effects of disease and pain upon the frame, in all the contortions of countenance and writhings of the body from the first access, to that paroxysm, which often immediately precedes dissolution. Having thus apparently expired in agony, he would suffer himself to be carried about motionless, as in a state of death, and after a sufficient continuance of the jest, he would burst upon the spectators with an animation and sportiveness, which formed a very interesting conclusion of the curious interlude, by which the animal seemed to enjoy the success of his scenic efforts, and to be delighted with the admiration, which was liberally and universally bestowed upon him.

The dancing dogs which performed, some time since, at one of our minor theatres, showed the wonderful effects of education upon this animal. After storming a fort, and practising various other feats with the address of veterans, one of the dogs was brought in as a deserter; was shot, and carried off as dead. Another feigned lameness, and showed symptoms of pain, but afterwards recovered, and sported about apparently with great joy.

Besides exhibiting a thousand amusing tricks, dogs are

trained to the most useful services. In Holland, says Mr. Pratt, there is not an idle dog to be seen. They may be observed in harness at all parts of the Hague, and some other towns, tugging at barrows, and little carts, with their tongues almost sweeping the ground, and their poor hearts almost ready to beat through their sides: frequently three, five, and sometimes six abreast, carrying men and merchandize, with the speed of little horses.

Between the Hague gate and Scheveling, at all hours of the day, an incredible number are seen loaded with fish and men, under the burden of which they run off at a long trot, and sometimes (when driven by young men or boys) at full gallop, the whole mile and a half, which is the distance from gate to gate; nor, on their return, are they suffered to come empty, being filled not only with the men or boys, but with such commodities as cannot be had at the village. In the middle of summer these poor brutes are urged beyond their power, till they have dropped on the road to gather strength. This, however, is seldom the case, except they have the misfortune to fall under the management of boys; for the Dutch are far from being cruel to their domestic dumb animals. It is but justice, however, to the Dutch, to state, that though these dogs labour hard during the week, the sabbath is to them a complete day of rest, and they may be seen lying outstretched and happy at their masters' doors, or basking in the sun, or in the shade in profound tranquillity. An example this, worthy of imitation in England, as it respects that noble and useful animal the horse.

Dogs are employed in draught, in several countries. Some Kamschatkan dogs are said by Captain King to have performed a journey of 270 miles in four days, carrying a courier with

despatches; their fidelity, however, is not highly praised, and not seldom do they plague their masters, with their malignant stratagems. The sledges are usually drawn by five dogs (though more are added, according to circumstances), and will readily carry three persons, with their baggage, fifty or even sixty English miles a day. In Greenland, also, dogs are used to transport the natives over their almost interminable deserts of snow and ice.

Of the mutual affection of dogs, several instances are related. A dog being left at an inn at St. Albans, till his master returned from London, and being seized by a large dog belonging to the house, went silently away, but soon returned with a friend, both larger and stronger than the dog which had ill treated him, when they both fell on the aggressor, and worried him severely. A large dog seeing a small one, that was following a cart from Kelso, carried by the current of the Tweed, in spite of all its efforts to bear up against the stream, after watching its motions attentively, plunged voluntarily into the river, and seizing the tired animal by the neck, brought it safely to land.

Two dogs kept by Mr. Sandford, of Shrewsbury, had been companions for many years; from age one died, and from his death, the survivor manifested an extraordinary degree of restless anxiety, searching all their former haunts for his old associate, and refusing every sort of food, till at the end of ten days he expired.

Of their attachment and kindness to other animals, many well authenticated instances might be mentioned. One of the most remarkable is given by Mr. Taylor in his excellent little work entitled "The General Character of the Dog." A servant of a gentleman at Manchester had taken out two coach-

horses to water at a large stone trough, accompanied by a dog, who had for a long time exhibited a marked attachment to one of the horses. The dog was attacked by a large mastiff, and in danger of being much worried, when the horse (his friend), which was led by the servant, with a halter, suddenly broke loose from him, and went to the place where the dogs were fighting, and with a kick of one of his heels, struck the mastiff from the other dog, into a cooper's cellar opposite; and having thus rescued his companion, returned quietly with him to drink at the conduit.

A gentleman, well known to the writer, witnessed a most singular act of kindness in a greyhound bitch, towards a cat and her kittens. TWINK had long shown a partiality for this cat, and when basking before the fire, would suffer the cat to lie upon her: if the bitch was tied up at her kennel, she was generally attended by puss. The latter having kittened in a barn about thirty yards from the house, brought out her young family, and endeavoured to convey them across the yard, but her progress being arrested by a hollow drain for water, about four feet wide, she exhibited strong symptoms of distress. These did not pass unobserved by Twink; having attentively considered the situation of poor puss, she walked through the water, and carefully taking up the kittens, in her mouth, one by one, laid them without injury in a dry place, on the side next the house. The cat now followed, and expressed her gratitude in the most extravagant manner, standing on her hind legs, purring, and licking the face of the greyhound. Twink was not less pleased, and showed her satisfaction much in the same way.

The fidelity of the dog is so universally known and appreciated, that it were a waste of time to dwell on this admirable

quality, or to recite any of those numberless and familiar anecdotes which occur to the recollection, and solicit the observation, of every one. The following examples, however, may form a pleasing illustration of our subject; particularly the first, as it exhibits the power of a brute over the heart of that remorseless, but now, we hope, innocuous tyrant, BUONAPARTE. It is related by Miss Williams, in her "Sketches of the French Republic."

At the moment when the ranks of the Imperialists were broken, at the famous battle of Castiglione, and the heat of the pursuit was in proportion to the obstinacy of the contest, Buonaparte coming to the spot where the thickest of the combat had taken place, where French and Austrians lay strewed in horrible profusion, he perceived one living object amid those piles of corpses, which was a little Barbet dog. The faithful creature stood with his two forefeet fixed on the breast of an Austrian officer; his long ears hung over his eyes, which were rivetted on those of his dead master. The tumult seemed neither to distract the attention nor change the attitude of the mourner, absorbed by the object to which he clung. Buonaparte, struck with the spectacle, stopped his horse, called his attendants around him, and pointed out the subject of his speculation.

The dog (said Buonaparte), as if he had known my voice, removed his eyes from his master, and throwing them on me for a moment, resumed his former posture; but in that momentary look there was a mute eloquence beyond the power of language; it was a reproach, with all the poignancy of bitterness. Buonaparte felt the appeal; he construed the upbraidings of the animal into a comprehensive demand of mercy; the sentiment

was irresistible; it put to flight every harsh and hostile feeling: Buonaparte gave orders to stop the carnage instantly.

Some years ago, a young man, making a solitary tour in Cumberland, lost his way among the mountains, and di d on the top of the mountain Helvellyn. His faithful dog watched his body for six weeks, and would suffer nothing to approach it, until, exhausted by hunger and cold, he at length resigned his breath, by the side of his master, and there the bodies remained till "the mountain-wind wasted the tenantless clay." This affecting incident is the subject of a beautiful little poem by WALTER SCOTT, from which we extract these exquisite lines:

Dark green was the spot mid the brown mountain heather,
Where the pilgrim of nature lay stretched in decay,
Like the corse of an outcast, abandoned to weather,
Till the mountain-wind wasted the tenantless clay.
Yet not quite forsaken, though lonely extended,
For, faithful in death, his mute favourite attended,
The much-loved remains of his master defended,
And chased the wild-fox and the raven away.

How long didst thou think that his silence was slumber?
When the wind waved his garments, how oft didst thou start?
How many long days and long nights didst thou number,
Ere he faded before thee,—the friend of thy heart?
And oh! was it meet, that no requiem read o'er him,
No mother to weep, and no friend to deplore him,
And thou, little guardian, alone stretched before him,
Unhonoured, the pilgrim from life should depart?

The sagacity of the dog is evinced by a variety of singular

and amusing examples. Two mentioned by Mr. Lackington, in his "Life," are sufficiently ludicrous, and, we think, by no means improbable. Mr. C. Hughes, a son of Thespis, had a wig which generally hung on a peg in one of his rooms. To accommodate a brother player, he one day lent the wig to him; and, some time after, called on his friend. Mr. Hughes had his dog with him, and the man happened to have the borrowed wig on his head. After some conversation, they parted; but the dog remained behind, and stood, for some time, looking the man full in his face, then, making a sudden spring, he leaped on his shoulders, seized the wig, and ran off with it as fast as he could, and, having reached his home, with the prey in his teeth, endeavoured, by jumping, to hang it up in its usual place. The same dog one day, passing through a field in the skirts of Dartmouth, where a washerwoman had hung out her linen to dry, stopped, and surveyed one particular shirt with attention; then seizing it, he dragged it away, through the dirt, to his master, whose property it happened to be.

Another instance may be cited as corroborative of those just related. In October 1800, a young man going into a place of public entertainment at Paris, was told that his dog could not be permitted to enter, and he was accordingly left with the guard at the door. The young man had scarcely entered the lobby, when his watch was stolen. He returned to the guard, and begged that his dog might be admitted, as through his means, he might discover the thief: the dog was suffered to accompany his master, who intimated to the animal that he had lost something; the dog set out immediately in quest of the strayed article, and fastened on the thief, whose guilt on search-

ing him was made apparent. The fellow had no less than six watches in his pocket, which being laid before the dog, he distinguished his master's, took it up by the string and bore it to him in safety.

The instinct exhibited by the dog in returning home from places to which it has been carried, has given rise to some of the most curious and wonderful anecdotes recorded of this useful animal. The following are mentioned by Mr. Daniel.

A Danish dog was given by a gentleman at Wivenhoe, to the captain of a collier, who carried the dog on board his vessel to Sunderland; but soon after his arrival there, the dog was lost; —it had returned to its old master in Essex. The late Colonel Hardy was sent for express to Bath, a favourite spaniel bitch accompanying him in his own travelling chaise, which he never quitted till he arrived there: after remaining four days, he left the spaniel at Bath, and returned to his house at Springfield in Essex, with equal expedition. Upon the third day after his return, the bitch was at Springfield, though the distance between that place and Bath is 140 miles, and she had to pass through London, where she had never been but in her passage through it, shut up in a carriage.

Notwithstanding all the amiable qualities we have yet detailed of the dog, by far the most important property remains to be noticed. The dog may truly be named the "life-saving" animal; and although this last quality may be said to be the result of his sagacity and fidelity, it surely deserves a distinct compartment in that roll which humbly attempts to emblazon his virtues. The following unparalleled example of sagacity and attachment in a dog, must at once excite our admiration and esteem;

from it, the hard-hearted may take a lesson of humanity, and the benevolent man may humble himself, when he finds that his kindest actions are equalled by the christian-like efforts of a dog. It is recorded in the Monthly Magazine for April, 1802.

The glens which intersect the Grampian mountains are chiefly inhabited by shepherds; and the pastures, over which each flock is permitted to range, extend many miles in every direction. The shepherd never has a view of his whole flock at once, except when they are collected for the purpose of sale or shearing. His occupation is to make daily excursions to the different extremities of his pastures in succession; and to turn back, by means of his dog, any stragglers that may be approaching the boundaries of his neighbours. In one of these excursions, a shepherd happened to carry along with him one of his children, an infant about three years old. This is a usual practice among the Highlanders, who accustom their children from the earliest infancy to endure the rigours of the climate. After traversing his pastures for some time, attended by his dog, the shepherd found himself under the necessity of ascending a summit at some distance, to have a more extensive view of his range. As the ascent was too fatiguing for the child, he left him on a small plain at the bottom, with strict injunctions not to stir from it till his return. Scarcely, however, had he gained the summit, when the horizon was suddenly darkened by one of those impenetrable mists, which frequently descend so rapidly amidst these mountains as, in the space of a few minutes, almost to turn day into night.

The anxious father instantly hastened back to find his child; but, owing to the unusual darkness and his own trepidation, he

unfortunately missed his way in the descent. After a fruitless search of many hours among the dangerous morasses and cataracts, with which these mountains abound, he was at length overtaken by night. Still wandering on without knowing whither, he at length came to the verge of the mist; and, by the light of the moon, discovered that he had reached the bottom of his valley, and was now within a short distance of his cottage. To renew the search that night was equally fruitless and dangerous. He was therefore obliged to return to his cottage, having lost both his child and his dog, who had attended him faithfully for years.

Next morning, by day-break, the shepherd, accompanied by a band of his neighbours, set out in quest of his child; but after a day spent in fruitless fatigue, he was at last compelled, by the approach of night, to descend from the mountain. On returning to his cottage, he found that the dog, which he had lost the day before, had been home, and on receiving a piece of cake had instantly gone off again. For several successive days the shepherd renewed the search for his child; and still, on returning home at evening disappointed to his cottage, he found that the dog had been home, and, on receiving his usual allowance of cake, had instantly disappeared. Struck with this singular circumstance, he remained at home one day; and when the dog, as usual, departed with his piece of cake, he resolved to follow him, and find out the cause of his strange procedure.

The dog led the way to a cataract, at some distance from the spot where the shepherd had left his child. The banks of the cataract almost joined at the top, yet separated by an abyss of immense depth, presented that appearance which so often

astonishes and appals the traveller who frequents the Grampian mountains. Down one of these rugged and almost perpendicular descents, the dog began, without hesitation, to make his way, and at last entered a cave, the mouth of which was almost upon a level with the torrent. The shepherd with difficulty followed: but on entering, what were his emotions, when he beheld his infant eating, with much satisfaction, the cake which the dog had just brought him; while the faithful animal stood by, eyeing his young charge with the utmost complacence!

From the situation in which the child was found, it appears that he had wandered to the brink of the precipice, and then either fallen or scrambled down till he reached the cave; which the dread of the torrent had afterwards prevented him from quitting. The dog, by means of his scent, had traced the child to the spot; and afterwards prevented him from starving by giving up to him his own daily allowance. He appears never to have quitted the child by night or day, except when it was necessary to go for its food; and then he was always seen running at full speed to and from the cottage. (See Monthly Mag. vol. xiii. part i. p. 211.)

The most valuable lives have been preserved by this faithful animal: men intoxicated, and sleeping on the snow, have been roused to a sense of their danger, by the barking and scratching of this (almost rational) quadruped; a person falling into the water beneath some ice, a dog has gone in quest of assistance, and has almost forcibly dragged a person to the spot; a waterman sleeping in his boat, which broke from her moorings, was carried by the tide under a west-country barge, but his faithful dog, seeing the boat begin to fill, awakened his master by paw-

ing his face, and pulling the collar of his coat; and thus saved him from inevitable destruction.

The discovery of robbers, and the prevention of murder, have been repeatedly effected by the sagacity of the dog. Anecdotes of this sort are, indeed, so numerous, and so well attested, that we deem it quite unnecessary to detail them. The admirer and the friend of the canine race will meet with an ample and interesting selection, in "Taylor's Character of the Dog," already mentioned.

In addition to the various qualities and habits of the dog (canis familiaris) already enumerated, it may be added, from Linnæus, that he suffers no one to strike his master; runs before him in a journey, passing frequently backward and forward over the same ground; on coming to cross-ways, he stops and looks back; will find out what has been dropt; is vigilant by night; announces the coming of strangers; and guards any goods committed to his charge. He drives the cattle home from the field; keeps herds and flocks within bounds, and protects them from wild beasts.

By means of his acute sense of smelling, he points out the game to the sportsman, and brings the birds that are shot to his master. He will turn a spit; sits up, and begs at table; and, when he has committed a theft, he slinks away, with his tail between his legs. He eats enviously, with oblique eyes; his stomach digests bones; strives to be master among his fellows at home; is an enemy to beggars, and attacks strangers without provocation. He is fond of licking wounds; howls at certain notes of music; gives himself an emetic by eating grass; is afflicted with tape-worms; spreads his madness; and grows

deaf and blind with age. He eats flesh, carrion, and farinaceous substances, but not greens, except when boiled; drinks by lapping, and is fond of rolling on carrion and dung. His scent is exquisite; he goes obliquely; foams and hangs out his tongue when hot, but seldom sweats. When about to lie down, he often turns round; even in his sleep he has a quick sense of hearing, and frequently dreams. He is considered as unclean by the Mohammedans, and is driven from their houses; yet the same people establish hospitals for dogs, and allow them a daily portion of food.

Dogs are commonly brought forth blind; the two eyelids are not simply glued together, but shut up with a membrane, which is torn off, as soon as the muscles of the upper eyelids acquire strength sufficient to overcome this obstacle to vision, which generally happens the tenth or twelfth day. In less than two months they learn to use all their senses; their growth is rapid, and they soon gain strength. The female goes with young about nine weeks or sixty-three days, but never less than sixty; she produces six, seven, and sometimes twelve puppies, and generally has more at the subsequent litters than she has at the first.

The usual life of dogs is from ten to fourteen years. His age may be discovered by his teeth; when young, they are white, sharp, and pointed; as he increases in years, they become black, blunt, and unequal; it may likewise be known by the hair, which turns grey on the muzzle, front, and round the eyes. The dog will breed with the wolf and the fox; and the issue of this union will breed not only with other wolves and foxes, but also among themselves. Some further particulars respecting

the dog will be noticed at the close of this article; we shall now proceed to mention the principal varieties of British dogs.

THE SHEPHERD'S DOG.

The wild dogs which exist in America and in other parts of the world are, most probably, descended from the wolf. To this primitive race, the animal which approaches nearest is the shepherd's dog; the breed of which is preserved in the greatest purity, in the northern parts of Scotland. Notwithstanding his ugliness, and his wild melancholy aspect, the shepherd's dog (canis domesticus) is superior to every other in the exercise of his instinctive powers. He is born, as it were, fully trained; guided solely by natural powers, to the keeping of flocks he applies himself spontaneously with the greatest care and success. In large tracts of land, appropriated to the feeding of sheep and other cattle, immense flocks may be seen ranging over those extensive wilds, seemingly without control; but their watchful guardian, the dog, under the direction of the shepherd, prevents them from straggling, and leads them from one part of their pasture to another, suffering no stranger to intrude. In the absence of the herdsman, the dog keeps the flock together, and at the well known signal, though the distance may be great, conducts them to his master in safety.

A remarkable conformation of the feet may be observed in the shepherd's dog. All of them have one, sometimes two superfluous toes; they are, apparently, without muscles, and dangle at the hind part of the leg, more like an unnatural excrescence than a necessary part of the animal.

Of the *fidelity* of the shepherd's dog, many striking instances are recorded: he has been known to remain for several days watching and protecting the flock, during the accidental absence of his master, and would sooner die than quit his charge. He possesses also the amiable qualities of other dogs; a most remarkable example of which we have mentioned in our general character of the canine race.

Somewhat allied to this species, is the cur dog, a trusty and useful servant to the farmer and grazier. They are larger, stronger, and fiercer than the shepherd's dog, and their hair is smoother and shorter. These animals are chiefly employed in driving cattle, and in the north of England are called *coally dogs*. This race is now so generally used, and so much attention is paid to the breeding of it, that Mr. Bewick (whose description we have copied) considers it as a permanent kind.

THE BULL-DOG.

This variety (canis familiaris molossus) is, as well as the mastiff, almost peculiar to England, and since bull-baiting, that opprobrium to a civilized nation, has been on the decline, the breed is becoming more scarce. The bull-dog has a large thick head; a short nose; the under jaw is shorter than the upper; and he has altogether a fierce and unpleasing appearance. The courage of this animal in attacking the bull is well known; its fury in seizing, and its invincible obstinacy in maintaining its hold, are equally wonderful.

It is very dangerous to approach the bull-dog without precaution, as he frequently bites without giving any notice by barking.

THE MASTIFF.

THE mastiff (canis familiaris Anglicus) is larger and stronger than the bull-dog; its aspect is sullen, and its bark terrific. Yet he commands respect rather than excites terror, unless when his duty comes in competition with his good-nature. The mastiff, in its pure and unmixed state, is now rarely to be met with; the generality of dogs distinguished by that name being compounded of the bull-dog, the Dutch mastiff, and the ban-dog, which latter variety is smaller, more active and vigilant than the mastiff, but not so powerful.

The mastiff is generally employed to guard our yards, and will frequently suffer a stranger to come within his province, and will peaceably accompany him as long as he forbears to touch any thing; but the moment he attempts to lay hold of any article on the premises, or wishes to leave the place, the animal begins to growl, and convinces him that he must neither steal nor depart. He seldom, however, uses violence unless resisted; and even in that case he will vanquish, but not injure the intruder, holding him down for hours, without biting, unless he is earlier relieved.

Notwithstanding the ferocity of the mastiff's disposition, a bitch of this species has been known to give suck to two lambs, the ewe being lost, and the bitch having been deprived of her puppies.

Of the mastiff's courage, Stow relates an extraordinary instance, in his account of the combat of three mastiffs and a lion, in the presence of King James I. One of the dogs being put

into the den, was speedily disabled by the lion; the second was treated in the same manner; but the third being put in, immediately seized the lion by the lip, and held him for a considerable time; till being severely torn by his claws, the dog was obliged to quit his hold. The lion, greatly exhausted by the conflict, took a leap over the dogs, and fled into the interior of his den. Two of the dogs soon died of their wounds, but the last survived this furious conflict.

From a circumstance related by Mr. Bewick, it would appear that the mastiff is perfectly conscious of his superior strength, and that he will sometimes chastise the impertinence of an inferior with great dignity. A large dog of this kind, belonging to a gentleman who resided at Heaton, near Newcastle, being teased by the barking of a mongrel, took it up in his mouth, by the back, and, with great composure, dropped it over the quay into the river, without taking any other revenge on an adversary so contemptible.

In the time of the Roman emperors, British mastiffs were in such repute, that an officer was appointed to superintend the breed of this dog and prepare it for the combats of the Roman amphitheatre.

THE HOUND.

With this animal (canis familiaris sagax) may be ranked the harrier, and the fox-hound. The former is employed in hunting the hare, and the latter, which is stronger and fleeter, for the chase of the fox.

There are several kinds of harriers, (as an ingenious writer on British Natural History has justly observed,) each of which is said to have its excellence, according, perhaps, to the country in which it is employed; or, in some instances, according only to the whim or fancy of the owner. That denominated the *Southern Hound* is very slow, but will hold out a chase for many hours. Its cry is deep and fine; and the whole pack generally keep well together, from the nearly equal speed of the dogs. In open countries, where there is good riding, a kind is preferred that is fleet, have sharp noses, narrow ears, deep chests, with thin shoulders, and show a quarter cross of the fox-hound.

Beagles are nimble and vigorous, pursue the hare with impetuosity, give her no time to double, and, if the scent lies high, will easily run down two brace before dinner. They are not, however, always to be depended on; and they are said to require the constant discipline of the whip, and to be perpetually hunted, in order to make a good pack.

A perfect harrier should be of the middle size, and should have a broad, rather than a round back. His nose should be large, having wide nostrils; his chest deep and capacious; his fillets great and high; his haunches large, and hams straight. The feet should be round, the soles hard and dry, and the claws large. The ears should be wide, thin, and more than sharp: the eyes full, forehead prominent, and the upper lip thick, and deeper than the lower jaw.

THE FOX-HOUND.

In England, the utmost attention is paid to the breeding, education, and maintenance of this animal; and its value has, in consequence, greatly increased. A pack of favourite hounds has fetched the enormous sum of one thousand guineas.

Hounds to look well should be nearly of a size; their colour is not an object, except as it regards beauty. Height and shape are more important. The legs of a hound should be perfectly straight; his feet round, and not too large; his shoulders should lie back; his breast rather wide than narrow; his chest deep; his back broad; his neck thin; his head small; his tail thick and bushy, and which if he carries well, will add to his comeliness. Though a small head is mentioned as one of the requisites of a fox-hound, this regards beauty only, for large headed hounds are not at all inferior in goodness. As it would exceed the limits of this work to enter into detail on the breed, management, and keep of fox-hounds, we refer our readers to the first volume of Mr. Daniel's "Rural Sports," where they will find abundant information on the subject.

Of the long continued speed and astonishing exertions of fox-hounds we have many instances. The most extraordinary, perhaps, that ever occurred, is mentioned by Mr. Daniel, in the Supplement to his "Rural Sports." On the eighth of June 1808, near Dunkeld, in Perthshire, a fox and a hound were seen on the high road, proceeding at a slow trotting pace. The dog was about fifty yards behind the fox: and each was so

fatigued as not to gain upon the other. A countryman very easily caught the fox by running, and both the fox and the dog were taken to a gentleman's house in the neighbourhood, where the fox died; and it was afterwards ascertained that the hound belonged to the Duke of Gordon, and that the fox was started on the morning of the king's birth-day, on the top of those hills called Mona-liadh, which separate Badenoch from Fort Augustus. From this it appeared that the chase lasted four days, and that the distance travelled from the place where the fox was unkennelled, to the spot where it was caught, without making any allowance for doubles, crosses, and tergiversations, and as the crow flies, exceeded seventy miles.

The notes of hounds have a wonderful influence upon horses accustomed to the chase; two animals which had just performed a stage in a mail, have been known, at hearing the cry of the hounds, to start after them, with their harness on, and follow the chase till the last.

BLOOMFIELD has sketched an interesting and characteristic portrait of the fox-hound, in the following beautiful apostrophe:

Poor faithful TROUNCER! thou canst lead no more;
All thy fatigues and all thy triumphs o'er!
Triumphs of worth, whose long excelling fame
Was still to follow true the hunted game;
Beneath enormous oaks, Britannia's boast,
In thick, impenetrable coverts lost,
When the warm pack in fault'ring silence stood,
Thine was the note that roused the list'ning wood,
Rekindling every joy, with tenfold force,
Through all the mazes of the tainted course.
Still foremost thou, the dashing stream to cross,
And tempt along the animated horse;

Foremost o'er fen or level mead to pass,
And sweep the show'ring dew-drops from the grass;
Then bright emerging from the mist below,
To climb the woodland hill's exulting brow.
Each sportsman heard the tidings with a sigh,
When death's cold touch had stopt his tuneful cry;
And though high deeds and fair exalted praise,
In memory lived, and flowed in rustic lays,
Short was the strain of monumental woe:
"*Foxes rejoice! here buried lies your foe!*"

THE IRISH GREYHOUND.

This animal is the largest of the dog kind, and is rarely to be found in Ireland, a large number having been purchased and sent to Poland. They are indeed, now, seldom to be found in any part of the world; Buffon says that he never saw but one in France.

These dogs were, probably, first imported into Ireland by the Danes, who possessed that kingdom for a long time. They were originally used for the chase of the wolf, but on the extirpation of that animal, kept only for show.

The Irish greyhound (canis familiaris Hibernicus) is usually about three feet high, of a white or cinnamon hue, and resembling a greyhound in shape, but more robust; it is of a gentle disposition, but from its strength superior in combat to the mastiff or bull-dog. It is equally unserviceable for hunting either the stag, the fox, or the hare. The Marquis of Sligo is said to possess the only remaining dogs of this breed in Ireland.

THE COMMON GREYHOUND.

THE greyhound (canis familiaris grajus) is the swiftest of all the canine race; but as it does not possess the faculty of scent, it follows only by the sight.

In ancient times, the greyhound was considered as a very valuable present, especially by the ladies, with whom it seems to have been a great favourite. Greyhounds were frequently received by King John, as payment instead of money, for the renewal of grants, fines, and forfeitures belonging to the crown: this monarch seems to have been very partial to the greyhound. A fine paid A. D. 1203, mentions five hundred marks, ten horses, and ten leashes of greyhounds; another in 1210, one swift running horse and six greyhounds. By the laws of King Canute, it was enacted, that no person, under the degree of a gentleman, should presume to keep this animal.

Greyhounds were used, in former times, to course the deer, the fox, and the hare. The two former are not now coursed; the reader will find an account of a curious fox-chase by two young greyhounds, in our sketch of that animal.

In a hilly country the greyhound would be superior to a first-rate horse in swiftness. A brace of greyhounds have been known to run four miles in twelve minutes; and even when coupled together have chased and killed a hare. Of their ardour and velocity many uncommon instances are recorded. Mr. Daniel mentions the following. In 1811, as the hounds of John Bean, Esq. of Clapham, were running a hare hard in view on the

Downs, near Crowlink, Sussex, the animal, to escape her pursuers, ran over the cliff, and was dashed to pieces. Five couple of the dogs unluckily followed, and shared the same fate.

A perfectly formed greyhound, according to the old couplet, was—

Headed like a snake;
Necked like a drake;
Backed like a beam;
Sided like a bream;
Tailed like a rat;
And footed like a cat.

The Scottish Highland greyhound was a powerful, fierce-looking dog; strong and muscular; and much used by the chieftains of that country in their magnificent hunting parties. The gaze-hound was formerly much used for hunting, and though it pursued only by the eye, would select the fattest deer, pursue, and kill it.

The Italian greyhound is a small, delicate animal, of exquisite shape, but not common in England, our climate being too severe for this elegant dog.

An interesting tradition respecting the greyhound is related by the Rev. W. Bingley in his "North Wales" (vol. i. p. 363).

Llewelyn the Great, Prince of Wales, is said to have had a hunting seat at Beddgelert, near Snowdon. Among many other greyhounds, he possessed one, a present from his father in law, King John, so noted for excellence in hunting, that his fame was transmitted to posterity in four Welsh lines, which have been thus translated:

The remains of famed Gelert, so faithful and good,
The bounds of the cantred conceal,
Whenever the doe or the stag he pursued,
His master was sure of a meal.

During the absence of the family, tradition says, a wolf entered the house; and Llewelyn, who first returned, was met at the door by his favourite dog, which came out, covered with blood, to salute his master on his arrival. The prince, alarmed, ran into the nursery, and found his child's cradle overturned, and the ground flowing with blood. In this moment of his terror, imagining that the dog had killed the child, he plunged his sword into his body, and laid him dead upon the spot. But, on turning up the cradle, he found his boy alive, and sleeping by the side of the dead wolf. This circumstance had such an effect on the mind of the prince, that he erected a tomb over the faithful dog's grave; on the spot where afterwards the parish church was built, called, from this incident, Bedd Gêlert, or *The Grave of Gêlert*. From this story was derived a very common Welsh proverb; "I repent as much as the man who slew his greyhound." Some very beautiful lines on this subject, written by the Honourable W. R. Spencer, are inserted in Mr. Bingley's tour.

THE LURCHER.

THE lurcher (canis familiaris laniarius) does not trust to his scent, or his speed, but seizes his prey chiefly by stratagem. If it comes into a warren, it deceives the rabbit, by seeming to

attend to some other object, till the animal is within reach, which it then takes with a sudden spring. The lurcher is nearly related to the terrier; there are two sorts, one whose hair is thick set, and the other with long and harsh hair. It is shorter than the greyhound, and its limbs are stronger.

THE TERRIER.

The terrier (canis familiaris terrarius) is a small rough kind of hound, with a most acute smell, and is the natural enemy of rats, mice, weasels, and other vermin. He possesses so much courage, as to attack even the badger; nor can the most resolute opposition daunt his ardour. He is likewise employed to drive the fox from his hole; and is therefore a peculiar favourite with sportsmen, and in high estimation, as a domestic companion.

A spotted variety of the terrier kind, marked with white, tan-colour, and black, has lately been introduced into some parts of this kingdom; and, as they are far from being numerous at present, they are proportionably valued. Indeed, they possess many agreeable qualities; they have all the spirit of sporting dogs, all the attachment of the most faithful of the kind, and all the elegance of the lap-dog.

That the terrier is susceptible of many of the passions that agitate mankind, and has no small share of address, will be manifest from the following anecdote. A Staffordshire gentleman used to come twice a year to town, on horseback, accompanied by his terrier; but for fear of losing it in the metropolis, he always left it in the care of his landlady, at St. Alban's. Once,

however, the house-dog of the inn and the terrier guest having a quarrel, the latter was so much over-matched, that it was with difficulty he could crawl out of the yard, and for a week no one knew what was become of him. He then returned, and brought with him a larger dog than that by which he had been beaten, when both of them fell upon the former victor, and bit him most unmercifully, leaving him half dead. The terrier and his friend again disappeared; and as all this happened while the gentleman was in London, when he called in his way home, at St. Alban's, he had the mortification to hear the above particulars, and gave up his dog for lost. On arriving at his home, however, he found his terrier safe; and, on inquiry into circumstances, was informed, that he had returned upon his being first missed from St. Alban's, and had coaxed away the great house-dog, with which he proceeded to avenge the injuries he had received, and then came home in quiet with his companion.

A singular instance of ferocity and affection in a terrier bitch is mentioned by Mr. Daniel. A fox having been run to earth near Sudbury, in Suffolk, by Mr. Daniel's hounds, the terriers were lost. It was soon, however, resolved to dig out the fox, and a couple of terriers were employed for this purpose. After a considerable labour, the hunted fox was got out; but one of the terriers having again entered the earth, a bitch fox was taken out, and the terrier killed two cubs in the earth. Three others, saved from her fury, were given to the owner of the bitch, who said he should make her suckle them. Mr. Daniel afterwards bought the terrier, with the cubs which she had fostered, and which she continued to suckle till they were

able to shift for themselves. What adds to the singularity is, the terrier's whelp was nearly five weeks old, and the cubs could but just see, when this exchange of progeny was made. (Rural Sports, vol. i. p. 123.)

Major General Bonham, governor of Surinam, had in December 1813, a wiry-haired Scotch terrier bitch, which having lost her puppies, was then suckling a kitten, a marmoset monkey, and a lamb; sometimes separately, sometimes together. No art whatever had been used; the kitten first attached itself, then the monkey, and lastly the lamb, which had lost the ewe.

Although the terrier possesses the power of maintaining the same pace for a long continuance, yet speed is not one of its peculiar properties. An extraordinary instance, however, is recorded by Mr. Daniel, where the dog, which was very small, for a wager against time, ran the first mile in two minutes, the second in four, the third in six, the fourth in eight, and the fifth and sixth in eighteen minutes. He afterwards ran the same distance (six miles) in thirty-two minutes. (Rural Sports, vol. i. p. 513.)

From the great sagacity of the terrier, he is usually employed to direct the steps of the blind, which he does with the utmost patience; and at the well known conclusion of the mournful song, or at the chink of money, this faithful conductor again commences his career.

A gentleman having dropped a guinea in a tavern, his sagacious terrier took it up unnoticed in his mouth, carried it home, and as his owner was undressing to go to bed, dropped it into his shoe.

THE BLOOD HOUND.

The blood hound (canis familiaris sanguinarius) and, in Scotland, called the sleut-hound, is a most beautifully formed animal. It is of a reddish brown or tan colour, and taller and larger than the hound; it is also far superior to every other kind in activity, speed, and sagacity. The blood hound never barks except during the chase.

This dog being remarkable for the fineness of its scent, was much valued by our ancestors, being frequently employed to recover game that had escaped wounded from the hunter; or that had been killed or stolen out of the forest. When the thief or murderer had fled, this useful creature would trace him through the most secret recesses, however great the distance. The acuteness of its smell is so extraordinary, that it has traced a man to the distance of seven miles, along a much frequented highway, and through several market towns to the very upper room in which he was taking refreshment.

Some few of these dogs are still kept in the royal forests, to pursue deer that have been previously wounded by a shot to draw blood, the scent of which enables them to follow with the most unerring steadiness. They are sometimes used to discover deer stealers, whom they trace by the blood of their wounded victims.

In the beginning of the sixteenth century, the Spaniards employed these dogs in America, to hunt the almost naked and unarmed Indians, that they might compel them to discover the situation of the gold mines. Not many years since the blood-

THE POINTER.

hound was used in Jamaica, for the purpose of finding out the ambuscades of the Maroons.

THE POINTER.

The pointer (canis familiaris avicularis) is of Spanish extraction, and was unknown to our ancestors. The sense of smell is very delicate in the large Spanish pointer, but he is not able to endure so much fatigue as the English pointer. This country has long been celebrated for its dogs of this kind, the greatest attention being paid in breaking and training them to the sport.

The pointer should be of a middle size, well made, light and strong. A small pointer, though excellent, can be of little service in thick high stubble, among turnips or heath; and the feet of a large heavy dog are too apt to flay in hunting.

Such is the steadiness of this dog, that one belonging to Colonel Thornton actually kept his *point* for more than an hour, while an artist was taking a sketch of him in that attitude.

A very extraordinary instance of the pointer's sagacity is mentioned by Deane in his "Future Life of Brutes." A sportsman on returning from his day's diversion, was accustomed to discharge his piece at magpies, crows, &c. The dog always kept behind at a little distance, that he might not frighten the birds. On one occasion, however, a magpie, perched in the top of a large oak, escaped the sportsman's notice. The dog, ever attentive to his master's pleasures, peeped into the tree himself and espied the party-coloured bird, upon which he ran to his master, who was some yards from the place, took hold of the

tail of his coat, and gave it a smart pull with his teeth. The gentleman, in surprise, turned about to see what was the matter, when the dog immediately trotted back to the tree, and showed him the bird, which was very soon despatched.

THE SETTER.

THE uses of this valuable dog are too well known to be expatiated upon. His scent is exquisite, his feet durable, and he is, generally speaking, to be preferred to the pointer, in countries where there is plenty of water, as he cannot endure heat or thirst for so long a period as the pointer. Of the stoutness of the setter, (canis familiaris index) Mr. Elwes mentioned a decisive proof: a setter of the breed from which he was so celebrated, following him to London, hunted all the fields adjoining the road, through a distance of sixty miles. John Dudley, Duke of Northumberland, is said to have been the first that broke a setting dog to the net, about the year 1553.

SOMERVILLE has the following beautiful lines on this dog:—

When Autumn smiles all beauteous in decay,
And paints each chequered grove with various hues,
My setter ranges in the new shorn fields,
His nose in air erect; from ridge to ridge
Panting he bounds, his quartered ground divides
In equal intervals, nor careless leaves
One inch untried: at length the tainted gales
His nostrils wide inhale; quick joy elates
His beating heart, which, awed by discipline
Severe, he dares not run, but cautious creeps,
Low-cow'ring, step by step; at last attains

His proper distance ; there he stops at once,
And points with his instinctive nose upon
The trembling prey.—

THE NEWFOUNDLAND DOG.

These faithful and sagacious animals, which are now commonly used to guard our houses, instead of the mastiff, were originally brought from Newfoundland, where they are much employed by the settlers, in bringing down wood in sledges, from the interior parts of the country to the sea coast. Their strength is very great, and their docility is not less so. They are web-footed, and therefore calculated to swim with great facility, and in consequence of this they have saved numbers from a watery grave. Nor is it only their masters that they will endeavour to assist ; they seem to have a natural disposition to rescue from the water, whatever or whosoever is in danger of suffering.

In the summer of 1792, a gentleman was bathing at Portsmouth, in one of the machines ; and being unacquainted with the steepness of the shore, and no swimmer, he was soon out of his depth. His danger was not perceived by the person whose business it was to attend him, and it is probable he might have perished, had not a Newfoundland dog, standing on the shore, providentally seen the accident, and swam to his assistance. He dragged him to the beach in a state of insensibility, and it was sometime before he recovered. The gentleman purchased his preserver at a great price, and considered him as the most valuable property he had.

A volume might be filled with an account of the lives saved by this valuable animal. Persons bathing, and suddenly seized

with the cramp, have been rescued from their perilous situation by the exertions of a Newfoundland dog. We shall conclude with a striking instance of extreme sagacity and fidelity of this dog, as cited by Mr. Bewick. During a violent storm, in the year 1789, a ship, belonging to Newcastle, was lost near Yarmouth, and nothing escaped alive, except a Newfoundland dog, who swam ashore with the captain's pocket-book in his mouth. He landed amidst a concourse of people, whom the catastrophe had assembled together, several of whom in vain attempted to rob him of his prize. The sagacious animal, as if conscious of the importance of the charge, which perhaps was intrusted to him by his perishing master, at length having selected a person who seemed worthy of his confidence, leaped in a fawning manner upon him, and delivered the book to him. This duty discharged, he returned to the place where he had landed, and anxiously watched and seized every article that was driven ashore from the wreck.

Lord Byron has paid an affectionate tribute to the memory of this animal, in his "Inscription for a monument of a Newfoundland dog, at Newstead Abbey:"—

When some proud son of man returns to earth,
Unknown to glory, but upheld by birth,
The sculptor's art exhausts the pomp of woe,
And storied urns record who rests below;
When all is done, upon the tomb is seen,
Not what he was, but what he should have been;
But the poor dog, in life the firmest friend,
The first to welcome, foremost to defend;
Whose honest heart is still his master's own,
Who labours, fights, lives, breathes for him alone,
Unhonoured falls.——

THE SPANIEL.

THE WATER-DOG.

This animal (canis familiaris aquaticus) swims with singular activity and ease, and is very fond of the water; hence it is very useful to the sportsman, in fetching any bird that is shot and may have fallen into it.

The water-dog has a long and shaggy coat, which frequently grows over his eyes. The form of the large water spaniel, or finder, is very elegant: its hair is beautifully curled, and its whole aspect is mild and sagacious. It is chiefly used in discovering the haunts of wild ducks, and other water-fowl. The small water spaniel is similar to it in form, habits, and disposition.

THE SPANIEL.

This dog (canis familiaris extrarius) takes its name of hispaniolus or spaniel, from the country whence we originally derived the breed. It is now so completely naturalized in Great Britain, that it may be considered a British animal. Dogs of this kind vary in size, from the setting dogs to the springing spaniels, and some of the small lap-dogs. The Blenheim breed, a beautifully marked variety, is perhaps the most fashionable, at present, for dogs of pleasure. They are frequently sold from three to ten guineas each; but it may be reasonably supposed that fancy gives them such a value.

Spaniels are affectionate, playful creatures, but possess no very marked character. They are not destitute, however, of sagacity. Some years ago, a gentleman presented a little fa-

vourite spaniel to a friend going on the continent. The dog was carried to Brussels; and, after a few days, disappeared. His new master, in the first letter he wroteto England, mentioned, with regret, the loss of the dog to his former master, who had scarcely read it, before he heard a scratching at the street door. On opening it, the very identical little dog was ready to obtain admission. It had found its way in safety, by some conveyance that never could be accounted for, from Brussels, and travelled almost as quick as the mail.

King Charles's breed, as they are called, are distinguished by being of a black colour, with a black palate. For this breed, Charles II. was celebrated; and so partial was he to it, that he generally came to the Council Board accompanied with a favourite spaniel. His successor, James II., had a similar attachment; and it is reported of him by Bishop Burnet, that being once in a dangerous storm at sea, and compelled to quit the ship, in order to save his life, he vociferated with impassioned accents, as his principal concern, "save the dogs and Colonel Churchill."

Of the sagacity of the spaniel, a most pleasing instance is found in Cowper's Poems; this narrative it would be a crime to melt down into tame prose, we give it therefore in the simple beauty of the original. Although the "dog and the water lily" may be familiar to most of our readers, it may be new to some, and cannot fail of being agreeable to all:

The morn was shady, and soft airs
  Swept Ouse's silent tide;
When, 'scaped from literary cares,
  I wandered on its side.

My Spaniel, prettiest of his race,
And high in pedigree :
Two nymphs adorned with every grace,
That spaniel found for me.

Now wantoned lost in flags and reeds,
Now starting into sight ;
Pursued the swallow o'er the meads,
With scarce a slower flight.

It was the time when Ouse displayed
Its lilies newly blown,
Their beauties I intent surveyed,
And one I wished my own.

With care extended far I sought
To steer it close to land ;
But still the prize, though nearly caught,
Escaped my eager hand.

Beau marked my unsuccessful pains,
With fixed considerate face,
And puzzling sat his puppy brains
To comprehend the case.

But with a chirrup, clear and strong,
Dispersing all his dream,
I thence withdrew, and followed long
The winding of the stream.

My ramble finished, I returned,
Beau trotting far before,
The floating wreath again discerned,
And, plunging, left the shore.

I saw him with that lily cropped,
Impatient swim to meet
My quick approach, and soon he dropped
The treasure at my feet.

Charmed with the sight, the world, I cried,
Shall hear of this thy deed;
My dog shall mortify the pride
Of man's superior breed.

But chief myself I will enjoin,
Awake at duty's call,
To show a love as prompt as thine,
To Him who gives me all.

Of maternal kindness in the spaniel, we have to record a singular example, where the partition between instinct and reason seems to have been very slight indeed. A favourite bitch had three puppies, two of which were strong and healthy, but the third was very weakly; as often as the latter attempted to suck, it was driven away by the two others, and scarcely received any sustenance: at last the mother determined on the following expedient to save the life of her offspring. Whenever the sickly puppy showed any desire to suck, she immediately took it in her mouth and ran into the family sitting room, as if to seek the protection of the females, and there suckled her puppy in safety. This act of maternal kindness was performed for a great length of time, and concluded in rendering the object of it strong and healthy.

Of the spaniel's fidelity numerous anecdotes have been told. There is one, however, so touching, so interesting, and so admirably narrated by Mr. Pratt, that we cannot withhold it from our readers, although it has been quoted by almost every late writer on the dog.

A few days before the overthrow of the sanguinary Robespierre, a revolutionary tribunal, in one of the departments of

the North, had condemned Monsieur R. an ancient magistrate, and a most estimable man, on a pretence of finding him guilty of a conspiracy. This gentleman had a water spaniel, at that time about twelve years old, which had been brought up by him, and had scarce ever quitted his side. Monsieur R. was cast into prison: his family were dispersed by the system of terror; some had taken flight; others, like himself, were arrested and carried to distant gaols; his domestics were dismissed; his house was destroyed; his friends, from necessity or fear, abandoned him, to conceal themselves.—In the silence of a living tomb he was left to pine in thought, under the iron scourge of a tyrant, whose respite from blood was but to gain by delay some additional horror; and who, if he extended life to those whom his wantonness had proscribed, even until death became a prayer, it was only to tantalize them with the blessing of murder, when he imagined he could more effectually torture them with the curse of existence.

This faithful dog, however, was with him when he was first seized, but was refused admission into prison: he was seen to return often to the door, but found it shut. He took refuge with a neighbour of his late master who received him. But that posterity may judge clearly of the times in which Frenchmen existed at that period, it must be added, that this man received the poor dog tremblingly, and in secret, lest his humanity for not his enemy's, but his friend's dog, should bring him to the scaffold. Every day, at the same hour, the dog returned to the door of the prison, but was still refused admittance. He, however, uniformly passed some time there. Such unremitting fidelity at last won even the porter of the prison, and the dog

was at length allowed to enter. His joy at seeing his master was unbounded; his master's was not less; it was difficult to separate them: but the honest gaoler, fearing for himself, carried the dog out of the prison, and he returned to his place of retreat. The next morning, however, he again came back, and repeated his visit for some weeks; and once on each day was regularly admitted by the humane gaoler. The poor dog licked the hand of his master, looked at him again, again licked his hand, and after a few mornings, feeling assured of readmission, departed at the call of the gaoler. When the day of receiving sentence arrived, notwithstanding the crowd, which curiosity, love, and fear, collected around a public execution; notwithstanding the guards which jealous power, conscious of its deserts, stations around, the dog penetrated into the hall, and couched himself between the legs of the unhappy man, whom he was about to lose for ever.

The fatal hour of execution arrives with the morning; the prison opens, the unfortunate man passes out; his dog receives him at the threshold! His faithful dog alone, among the thousands that revered and loved him, dared, even under the eye of the tyrant, to own a dying friend! He clings to his hand undaunted. "Alas! that hand will never more be spread upon thy caressing head, poor dog!" exclaimed the condemned.—The axe falls!—the master dies!—but the tender adherent cannot leave the body: he walks round the corse; the earth receives it, and the mourner spreads himself on the grave. On that cold pillow he passed the first night, the next day, and the second night: the neighbour, meantime, unhappy at not seeing his protegé, searches for him; and guessing the asylum he had

chosen, steals forth by night, and finding him as described, caresses and brings him back. The good man tries every gentle way, that kindness could devise, to make him eat. But a short time afterwards, the dog, escaping, regained his favourite place. O man, give faith to a sacred truth! Three months passed away; during every morning of which the mourner returned to his loving protector, merely to receive his food, and then retired to the ashes of his dead master! and each day he was more sad, more meagre, and more languishing.

His protector, at length, endeavoured to wean him. He first tied, then chained him; but what manacle is there that can ultimately triumph over nature? He broke, or bit through his bonds; again escaped;—again returned to the grave, and never quitted it more! It was in vain that all kind means were used once more to bring him back. Even the humane gaoler assisted to take him food, but he would eat no longer: for four and twenty hours he was absolutely observed to employ—Oh force of genuine love!—his weakened limbs, digging up the earth that separated him from the being he had served. Affection gave him strength, but his efforts were too vehement for his power: his whole frame became convulsed; he shrieked in his struggles; his attached and generous heart gave way, and he breathed his last gasp with his last look at the grave, as if he knew he had found, and again should be permitted to associate with, his master.

THE TURNSPIT.

The breed of the turnspit (canis familiaris vertagus) will probably be extinct in Britain, in less than a century. It is a

bold, vigilant, and spirited little dog, and is generally long-bodied, with short crooked legs; its tail is curled on its back, and it is frequently spotted with black. On the continent, this dog is still much used to run in a wheel, for the purpose of turning meat that is roasting; but a more easy and expeditious mode of cookery having been long resorted to in our own country, his services are in little request. The sufferings of the turnspit are thus noticed by GAY :—

> The dinner must be dished at one:
> Where's this vexatious turnspit gone?
> Unless the skulking cur is caught,
> The sirloin's spoiled, and I'm in fault.
> With all the fury of a cook
> Her cooler kitchen Nan forsook;
> The broomstick o'er her head she waves,
> She fumes, she stamps, she puffs, she raves;
> The sneaking cur before her flies,
> She whistles, calls, fair speech she tries;
> These nought avail; her choler burns,
> The fist and cudgel threat by turns;
> With hasty steps she presses near,
> He slinks aloof and howls with fear.

IN concluding the natural history of British dogs, it may, perhaps, be expected, that some account should be given of the various diseases to which they are incident; but as neither the limits, nor the plan of the present work, permit us to enter into detail on this subject, we shall confine our attention to a few useful remarks on the *hydrophobia*; a disease, the melancholy effects of which are so frequently exhibited to our notice;

referring our readers to those works which treat expressly on canine disorders, and more particularly to Mr. Daniel's often quoted, and justly esteemed, "Rural Sports."

The general name of hydrophobia which is given to this disease is considered, by Dr. Mosely, as incorrect; he divides it into three stages: 1. *Hydrophobia*, or the dread of water. 2. *Discataposis*, or difficulty in swallowing, and choaking. 3. *Rabies*, or convulsion, attended with spitting and foaming at the mouth.

In a prize dissertation on *Rabies* by Mr. Gillman, the progress of this dreadful malady is so ably delineated, that we shall make no apology for presenting it to our readers in the words of the ingenious author. An attention to the hints contained in it may prevent many dreadful calamities.

The animal always shows some marked deviation from his accustomed habits; a symptom, which ought to be particularly regarded. In lap-dogs, some strange peculiarities have been observed; as the picking up of different little objects, such as paper, thread, straw, &c. or any thing which may happen to be presented to their notice. They have sometimes been perceived to eat their own excrements, and lap their own urine; these last, perhaps, are the strongest proofs of rabies, and should put us very much upon our guard, as this depraved appetite seems peculiarly to denote the complaint. Still, however, in this stage of the disease, they seldom attack any one, unless provoked to it.

It must be remembered, that though a dog's temper remains meek, and frequently continues so during the whole of the disease, yet he is easily alarmed. He often preserves the

same obedience to his master, and shows the same degree of attachment, but still he is extremely irritable, and always treacherous, suffering any one to fondle him, and then suddenly snaps or bites, with almost the least apparent provocation. As the malady goes forward, his eyes sometimes become inflamed, and a purulent discharge issues from the lids. The larynx, in some cases, has been known to become so much swelled, as to render him incapable of barking. This sign by sportsmen has been noted, and termed dumb madness. When deprived of this power, he makes a dismal howl, which is so well known, that when once heard it cannot be mistaken; nevertheless this is not a universal symptom. The incipient stage of this disease has been marked by many writers with the loss of appetite, indifference, listlessness, and melancholy; but these cannot be relied on, and attend many other complaints to which dogs are liable. Neither have they the least dread of fluids, and frequently eat voraciously.

As the disease advances, the animal becomes extremely impatient, and has an inordinate desire to gnaw every thing around him. He is now seized with a more than usual antipathy to cats. When chained, or confined, he makes the greatest efforts to break loose; and, if successful, he wanders about, seeking other creatures to bite, but more particularly some of his own species. From a bite in this particular stage of the disorder, the consequences are most to be dreaded, and the greatest care should be taken to avoid him. It has been a generally received opinion, that he moves not out of his road to bite any one: but this apparent indifference never takes place till he is nearly spent by the distemper, and becomes incapable

of the effort; for, while he is most active, he is industriously seeking for different objects to bite, to which his attention seems solely directed. It has been before remarked, that he does not avoid water, and frequently laps it greedily: still at this period of the disease he is often without the power of swallowing it. Another, and not an unfrequent attendant of the disorder, is inflammation of the bowels.

At this last crisis all the preceding symptoms are aggravated; he now becomes extremely feeble; his jaw drops as if paralysed, and the saliva runs from his mouth; he wanders or rather staggers about, with scarcely the power of biting, and, exhausted by the disorder, dies generally on the fourth or fifth day from its commencement.

Every one should avoid familiarity with strange dogs, and never trust or fondle any dog when he has deviated from his general appearances or habits, or is out of health.

When a person is bitten, the dog should be confined for *ten days*, and not killed immediately, as is too often practised, in order that a correct judgment may be formed of the case.

Dr. Percival advises all persons the *moment* they receive the bite of a rabid animal, to apply to the first spring, brook, pool, or ditch; and, as water is generally within our reach, the wound may be easily cleansed. This he urges to be diligently persevered in, till a surgeon arrive to excise the parts.

Much might be done to prevent the direful *effects* of canine madness, if the practice of *worming* were generally introduced. Pliny recommends the worming of dogs, and from his time to the present it has most deservedly had its advocates. Very strong proofs have been adduced of its utility, nor is it natural

to imagine, so easy and effective an operation would have been omitted, had not more virtue been attributed to it than it really possesses. The absolute *prevention* of madness was said to be the consequence; the fact is, that taking out the worm does not annihilate the disorder, but certainly hinders the dog seized with it from injuring either man or beast.

A late author asserts that he had three dogs that were wormed, bitten by mad dogs at three several periods, yet, notwithstanding they all died mad, they did not bite nor do any mischief. Mr. Daniel also notices three very striking instances to the same effect.





THE COMMON OTTER.

The otter swims with great ease and readiness, both on the surface of the water and below it. This animal, however, does not continue immersed for a long time together, but occasionally puts its nose above water to take in a supply of fresh air. It is not, properly speaking amphibious, for it lives on land in burrows or dens, in the banks of lakes or rivers, and here the females produce and nourish their young. The otter is, in general, a solitary animal, and seldom more than a pair are seen together. It feeds, principally, on fish, and the peculiar situation of its brilliant eyes, which enables it to see every thing *above* it, adds greatly to the extent of its depredations in

fish-ponds and streams. Otters which inhabit maritime situations often visit the ocean, and intermix with seals in the pursuit of sea-fish.

In very hard weather, when its natural sort of food fails, the otter (lutra vulgaris) will kill lambs, sucking pigs, and poultry, and will frequently infest the rabbit warren. Mr. Daniel mentions an instance of two gentlemen who were shooting at Pilton in Devonshire, when the pointer suddenly stood at some brakes, and a large otter bursting out, the dog seized it, but being severely bitten, was soon obliged to quit his hold. After driving the otter about for some time, in a turnip-field, it was killed by blows upon the head. This animal was found at the distance of five miles from any pond or river that could supply it with fish.

The females go with young about nine weeks, and produce usually about four or five, in March. When six weeks old, they are driven from the nest by their dam, and sent to procure food for themselves. Otters' cubs have been suckled and reared by bitches.

According to Mr. Pennant, the otter constructs its own den, and always makes the entrance of its hole under water, working upward to the surface of the earth, where it forms a minute orifice for the admission of air. He adds, that the more effectually to conceal its retreat, the animal always contrives to make this little air-hole in the middle of some thick bush. Mr. Bingley, however, asserts, that he adopts as the place of his residence any hole convenient for his purpose, which he finds under the roots of trees, or in the clefts of rocks near the water, and that the track to the den is often

trodden like a common pathway, the entrance being strewed with the fragments of putrid fish.

Although the otter is a cunning, and, at the same time, an exceedingly ferocious animal, it may, if caught while young, be rendered as docile and domestic as a dog. Numerous instances are mentioned of this circumstance, which is no doubt familiar to many of our readers. It will sleep in the same room or bed with its master, and, if properly trained, is found very useful in catching fish.

The young otter is, for some little while, to be fed on milk or soup, and to have no animal food of any kind given to it. Bread is recommended afterwards as a substitute for these; and with this it must have the heads of fishes. As soon as it has formed an attachment to the person who feeds it, which will always take place in the course of a short time, its education should commence; for the particulars of which we refer to Mr. Bingley's Memoirs of British Quadrupeds, p. 198.

The hunting of the otter was formerly considered an excellent sport in this country; and hounds were often kept solely for that purpose. The sportsmen divided, and went some on each side of the river, beating, in their progress, the banks and sedges with dogs. If there was an otter in that quarter, the print of his feet, technically called his *seal*, was soon to be seen in the mud. Each hunter was armed with a spear, to attack the animal when he *vented*, or came to the surface to breathe.

> See, there he drives along!
> Th' ascending bubbles mark his gloomy way.
> Quick fix the nets, and cut off his retreat
> Into the shelt'ring deeps. Ah, there he *vents!*

> The pack lunge headlong, and protended spears
> Menace destruction.
>
> SOMERVILLE.

The otter is only to be caught by means of an unbaited trap; for he is so delicate in his feeding as to reject every kind of bait. Once, however, an instance occurred to the contrary. A gentleman trolling for pike, an otter darted from his hole, and seized the bait, and after a long contest the animal was drawn to the shore, quite exhausted.

The flesh of the otter has a fishy and muddy flavour, and is used by the Romish church on maigre days. Its fur is valuable at all times of the year, except about midsummer.





THE GOAT.

On the frightful precipices of the majestic Snowdon, the goat may be seen in its native state, bounding from crag to crag with fearless intrepidity; leaping and dancing on spots where the pedestrian would tread with the utmost caution, and where "to look" would be "to topple down headlong" from the perilous height. Goats were once more than commonly abundant in North Wales, but the mischief done by them in barking young plantations has occasioned nearly the extirpation of the race, and they are now to be found chiefly in the fastnesses and recesses of the mountains. Goats are found in abundance in many parts of Ireland and in the Highlands of

Scotland, but those of Wales are superior in size, and are generally of a white colour.

Animals of the goat kind are distinguished from sheep, not only by their covering, which varies with climate, but also by their horns, which are hollow, annulated, and gently inclining backwards. They seem to prefer retired mountainous situations, and have a rank smell, particularly the males, which are always honoured with most venerable beards.

The common domestic goat (capra ægagrus hircus) is found in most parts of the world; being able to endure, without inconvenience, the extremes both of heat and cold. But its value is overlooked, because the sheep so far exceeds it, in utility to man—just as the ass is of little consequence, because it is superseded by the horse.

Viewed, however, in every possible light, the goat seems better adapted for the independent life it enjoys than the sheep. It is naturally more lively, and possesses more animal instinct: it more readily attaches itself to man, and appears sensible of his caresses: it is also stronger, swifter, more courageous, more playful, more capricious, and more vagrant than the sheep. Though not averse from society, it is with difficulty confined to a flock: it loves to stray from its companions, and to choose its own pastures. It delights in climbing the ridges of houses and precipices, and never seems so happy as when, to our apprehension, it is on the very verge of destruction. Nature, indeed, has in some measure fitted this animal for traversing declivities with security; its hoofs are hollow underneath, and their edges are sharp, which render its footing secure on the steepest ridges. When two of them are yoked together,

GOATS.

they will take the most hazardous leaps with such perfect uniformity, that they seldom miscarry, or disappoint each other.

As goats are hardy, and easily sustained, they generally fall to the lot of the poor, who have no pastures to support more delicate animals. They prefer the neglected wilds to cultivated fields: the heathy mountain, the shrubby rock, the tops of boughs, or the bark of trees, furnish their favourite food. They are equally regardless of heat and cold, storms or calm weather; and, under every external circumstance, preserve the vivacity of their disposition, and spend their time in capricious frolics.

The female goat produces two or three at a time: she goes with young five months, and frequently breeds twice a year.

The milk of the she goat is sweet and restorative, and well adapted to stomachs whose digestive powers are weakened. It is not liable to coagulate, like that of the cow; and from the peculiarity of the animal's food, it has a flavour which is grateful to most palates. Goat's whey, as it is called, is frequently drunk, in the Highlands of Scotland, by persons resorting to that country on purpose; and it is often found more salutary than any medicine, in consumptive cases.

In several parts, indeed, both of Ireland and Scotland, goats constitute the principal wealth of the poor natives. Their beds are made with their skins; their milk furnishes a simple aliment, besides what is converted into butter and cheese; and their flesh, when they can afford to eat it, particularly that of the kid, is a delicacy fit for an epicure.

Thus, even in the wildest solitudes, Providence has dispensed its blessings and its comforts. In those mountainous

retreats where the landscape presents only a scene of rocks, heath, and desolation, the simple inhabitants have their herds of goats, which furnish their feasts and enjoyments. These animals require but little care in any season; and their milk and their flesh are sufficient to satisfy those who are unacquainted with greater luxuries. Indeed, goats should never be withdrawn from the solitudes in which they delight. They are extremely injurious to young plantations.

In various respects, this quadruped contributes to the necessities of human life. Though the flesh of the full-grown animal is by no means comparable to mutton, it is certainly not to be despised. The value of the milk has already been noticed. The suet is made into candles; from the hair perukes and even cloth is manufactured; and the skin and horns are applicable to numerous purposes.

A singular instance of credulity is to be found in the celebrated Buffon's description of the goat, who asserts that the teats of the females are sucked by the viper and the goat-sucker; an allegation which Sonnini has very unaccountably allowed to stand, without either confirmation or contradiction.

The Arabs are remarkable for the various feats of dexterity which they teach the goat to perform. An amusing instance of this kind is mentioned by Dr. Clarke[1]. "Upon our road to Bethlehem," says he, "we met an Arab with a goat, which he led about the country to exhibit, in order to gain a livelihood for itself and its owner. He had taught this animal, while he accompanied its movements with a song, to mount

[1] Travels in the Holy Land, vol. ii. p. 606.

upon little cylindrical blocks of wood, placed successivelyone above the other, and in shape resembling the dice-boxes belonging to a backgammon table. In this manner, the goat stood, first upon the top of one cylinder, then upon the top of two, and afterwards of three, four, five, and six, until it remained balanced upon the summit of them all, elevated several feet from the ground, and with its four feet collected upon a single point, without throwing down the disjointed fabric whereon it stood.

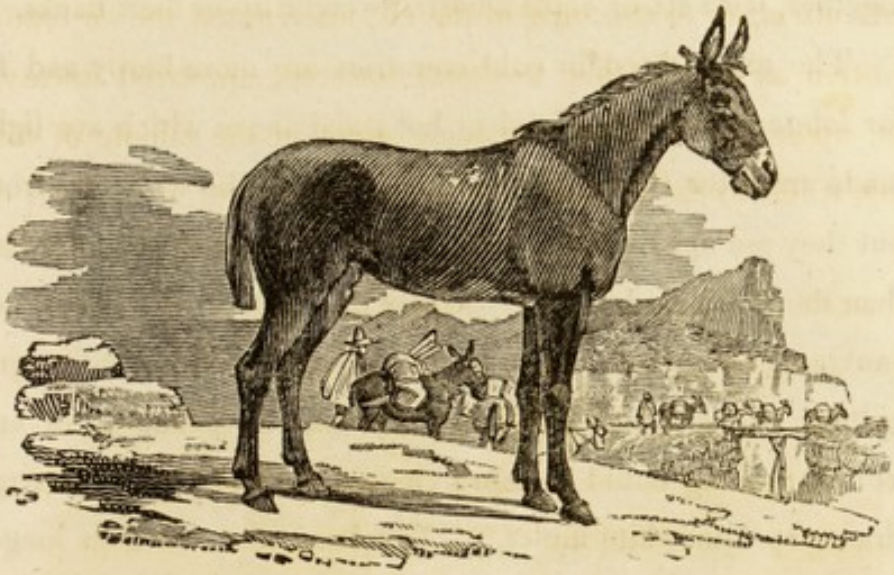
"This practice is very ancient, and is noticed by Sandys (Travels, p. 126), who says, 'I have seen them make both dogs and goates to set their foure feet on a little turned pillar of wood, about a foot high, and no broader at the end than the palm of a hand: climing from one to two set on the top of one another; and so to the third and fourth; and there turne about as often as their masters would bid them.' Nothing (continues Dr. Clarke) can show more strikingly the tenacious footing possessed by this quadruped upon the jutty points and crags of rocks; and the circumstance of its ability to remain thus poised may render its appearance less surprising, as it is sometimes seen in the Alps, and all mountainous countries, with hardly any place for its feet upon the sides, and by the brink of most tremendous precipices.[1]

"The diameter of the upper cylinder, on which the four

[1] Gray has well described the attitude of this animal, when he says, (Letters, p. 375), "On the cliffs above hung a few goats; one of them danced and scratched an ear with its hind foot, in a place where I would not have stood stock still for all beneath the moon."

feet of the goat ultimately remained until the Arab had ended his ditty, was only two inches; and the length of each cylinder was six inches. The most curious part of the performance occurred afterwards; for the Arab, to convince us of the animal's attention to the turn of the air, interrupted the *da capo:* as often as he did this, the goat tottered, appeared uneasy, and, upon his becoming suddenly silent in the middle of his song, it fell to the ground."





THE MULE.

NATURE, which preserves the form of each animal uncontaminated, has rendered this hardy offspring of the horse and the ass generally incapable of reproducing its species. In hot countries, mules have been sometimes known to bring forth young, but instances of this kind are very rare in Great Britain.

This useful animal (equus asinus mulus) will live about thirty years, and is very healthy. Mules are chiefly used in rocky and stony countries, as about the Alps and Pyrenees, great numbers of them being kept in these places: they are usually black, and are strong, well-limbed, and large, being mostly bred out of fine Spanish mares. These animals are sometimes fifteen or sixteen hands high, and the best of them

are worth forty or fifty pounds a-piece. No creatures are so proper for large burthens, and none so sure-footed. They are much stronger for draught than English horses, and are often as thick set as our dray-horses: they will travel for several months together, with six or eight hundred weight upon their backs.

The mules bred in cold countries are more hardy and fit for labour than those bred in hot; and those which are light made are fitter for riding than horses, as to the walk and trot; but they are apt to gallop rough, though these do it much less than the short made ones. Mules might be bred to great advantage in England, and would be found serviceable in agriculture on light soils; and as they may be procured of any colour, nothing could be more elegant than to have a carriage drawn by four white mules. Their hardiness and their longevity are strong recommendations. In winter, straw is their only food; and we are informed by Mr. Skey, that two working mules in Shropshire had reached the age of seventy years each; they perform a deal of work when only two years of age, and are fit for use at three, although they do not arrive at full perfection till some years afterwards.

The best mules are produced from a foreign he-ass and a mare; in Spain they will give fifty or sixty pounds for a fine he-ass for this purpose. In the breeding of these animals, mares that are of a very large breed and well made should be employed. They should be young, full of life, large barrelled, but small limbed, with a head of a moderate size, and a good forehead. It is found of advantage to have the foals, from the time of their being dropped, often handled, to make them gentle; it prevents their hurting themselves by skittishness and

sudden frights, and they are more easily broken at the proper age, and soon become docile and harmless, having nothing of that viciousness which is so commonly complained of in those animals. They may be broken at three years old, but should never be permitted to do much hard work till four; as they are thus secured from being hurt by hard labour till they have acquired strength enough to bear it without injury.

Mules have been much employed, both in ancient and modern times. The Roman ladies had equipages drawn by mules, as appears from the medals of Julia and Agrippina. And at this day, in Spain, the coaches of the nobility, and even of princes, are usually drawn by mules. M. de Thou, first president of the parliament, had the fourth coach in France, in 1585, till which time every body rode to court, parliament, &c. on mules. It is much valued also for the saddle, and for drawing carriages in Portugal, Italy, and the East, and in the warmer parts of America. In the West Indies, much of the labour on the plantations is performed by these animals.

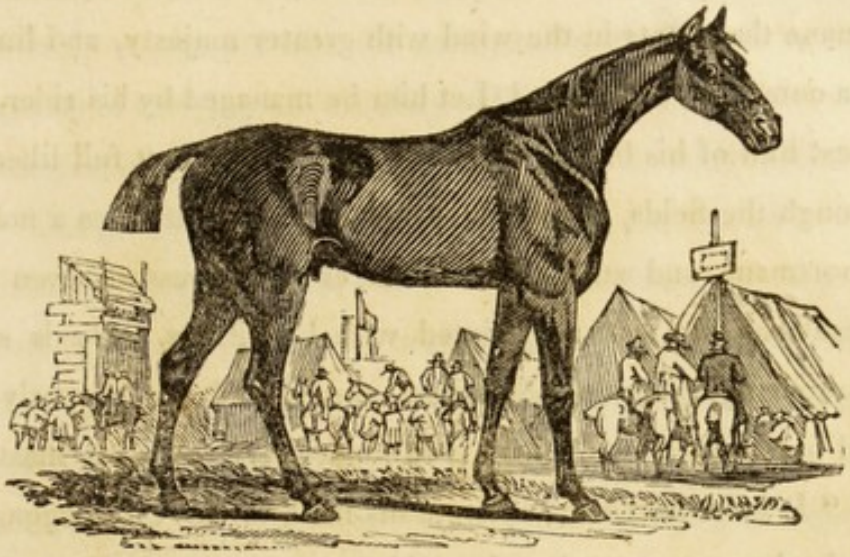
In travelling a mountainous country, the mule far excels the horse: hence in Spain, among the Pyrenees, and on the Alps, the services of this animal are highly estimated, as it will tread with the utmost security where a horse can hardly stand. Their manner of descending the most frightful precipices is truly wonderful. When they come to the edge of one of these deep declivities, they stop, without being checked, and continue unmoved by any application of the spur. They now place their fore feet in a posture as if they were stopping themselves; they then also put their hind feet together, but a little forward, as if in the act of lying down. In this attitude,

having taken as it were a survey of the road, they slide down with the swiftness of a meteor; but if the rider give the least check to the mule, they both unavoidably perish. Their address in this rapid descent is very astonishing; for, in their swiftest motion, when they seem to have lost all government of themselves, they follow exactly the different windings of the road, as if they had previously settled in their minds the route they were to follow, and taken every precaution for their safety.





THE HACKNEY.



THE HORSE.

THE horse, to the eye of science, is the most beautiful of all fourfooted animals; superior to all in symmetry of body, in speed, and in general utility to mankind. "If custom (observes an eloquent writer) had not dignified the lion with the title of King of Beasts, reason would confer it on the horse. The lion is nothing less than the king of animals; he is rather their tyrant, since he is only capable of devouring or inspiring them with terror: on the contrary, the horse is never injurious to other creatures, either in their persons or properties: he discovers nothing that can expose him to the least aversion; he possesses no bad quality, and enjoys all those that are amiable.

"Of all animals the horse has the finest shape, is the most

noble in his inclinations, the most liberal of his services, and the most frugal in his food. Cast your eyes on all the rest: Do you see one whose head discloses so much beauty and gracefulness? Can we discover any eyes that sparkle with more fire? Where do we behold a more stately chest, a lovelier body, a mane that floats in the wind with greater majesty, and limbs of a completer flexibility? Let him be managed by his rider, or divest him of his bridle, and suffer him to range at full liberty, through the fields, you will observe in all his attitudes a noble deportment, and an air which makes an impression even on those who are least acquainted with his virtues. He is still more engaging in his inclinations, and indeed can properly be said to have but one, which is to render service to his master.

"Is he required to cultivate his land, or carry his baggage? He is always prepared, and would sooner sink under the weight of his labour than decline them. Is he to bear his master himself? He seems sensible of the honour, he studies how to please him, and, at the least signal, varies his pace; is always ready to slacken, redouble, or precipitate it, when he is acquainted with his rider's will. Neither the length of the journey nor the unevenness of the way, nor ditches, nor rivers the most rapid can discourage him; he springs through every obstacle, and as a bird whose career no impediment can check."

The horse was made subservient to the will of man in the earliest times, and therefore the use of this animal is probably almost coeval with mankind. From two passages in the Bible (Gen. l. 9. Exod. xiv. 9.) in which chariots and horsemen are named together, there is little doubt that the use of chariots and the art of riding were introduced about the same time, the

latter being somewhat prior to the former; and Egypt seems to have been the country to which mankind are indebted for the equestrian art, though the precise time at which it was first practised cannot be so easily ascertained. It is certain, however, that when Jacob came into Egypt, he found the inhabitants perfectly acquainted with the horse, and using it in the two-fold capacity of carrying and drawing. Hence it was conveyed to the Ethiopians, Arabs, Indians, and other neighbouring nations.

The genus of the horse (equus caballus) varies with soil and climate; horses of warm climes and dry soils are of the truest proportion, the finest skin, and the most generous spirit; of course the fleetest and fittest for the saddle. As we approach the north, the animal is more robust, and possesses very little symmetry of shape:—it is coarse-haired, hardy, and slow, fitted for draught and the more laborious purposes of life. The species will thrive, with proper care, in all habitable countries, but will succeed best under the temperate zones, and upon fruitful and graminiferous soils.

The easiest method (observes Mr. Lawrence) is to divide the genus of horses into two original and distinct species or creations; the fine and speedy, and the coarse and slow. To these original sources, all varieties whatever may be traced; and the various intermediate degrees may also be influenced, in some measure, by soil and climate; but it does not appear probable, either in theory or by analogies which might be adduced, that any length of time, or change of soil, could convert the delicate, silk-haired, flat-boned courser of the southern countries, into the coarse, clumsy, round-made cart-horse of the north of Europe.

The original countries of the two opposite races are the mountainous part of Arabia and the lowlands of Belgium in Europe. Arabia is the oldest breeding country in the world; having been known to possess a pure and unmixed race of horses for thousands of years; and the experience both of ancient and modern times has proved them to be of superior form and qualification to all other horses. In the very early ages, the breed of Arabian horses was sought and dispersed over almost all Asia and Africa, and thence to the southern parts of Europe; in more modern times, they have been introduced further north, particularly into this country, and from that source has originated that race of blood horses for which England is so celebrated.

Arabia is still distinguished for the excellence of its horses, and the address of its inhabitants in riding them. The horses are bred for sale; and there is a considerable revenue arising from those that are sent out of the country, the tax being about ten pounds sterling for each horse. These people are scrupulously exact in preserving the pedigree of their horses for several ages; so that they know their parentage, alliances, and genealogy, distinguishing each breed by different appellations, and dividing the whole into three classes.

The first class is called *noble*, being the most pure and ancient, without any mixture on the side of the sires or dams. The second class is composed of horses whose race though ancient has been mixed with plebeian blood, either on the male or female side, which nevertheless is deemed noble, but misallied. The last class comprehends the common horses, which are sold at a low price; but the two former sorts are extremely

dear, the lowest priced mares of the first class being worth five hundred French crowns, and some fetching even four, five, or six thousand livres. When the mare drops her foal, a certificate is drawn up and signed in the presence of a magistrate, and this voucher is given with the animal like the deed of an estate when it is sold.

To the Arab, the horse is as dear as his own children; and the constant intercourse, arising from living in the same tent with their owner and his family, creates a familiarity that could not otherwise be effected, and a tractability that arises only from the kindest usage. They are the fleetest animals of the desert, and are so well trained as to stop in their most rapid course by the slightest check of the rider. Unaccustomed to the spur, the least touch with the foot sets them again in motion; and so obedient are they to the rider's will, as to be directed in their course merely by the motion of a switch. They form the principal riches of many of the Arab tribes, who use them both in the chase and in their plundering expeditions. In the day-time they are generally kept saddled at the door of the tent, prepared for any excursion their master may take. They never carry heavy burthens, nor are employed on long journeys. Their constant food, except in spring, when they get a little grass, is barley, which they are suffered to eat only during the night. The Arab, his wife, and children, always lie in the same apartment with the mare and foal, who, instead of injuring, suffer the children to rest on their bodies and necks without in the least incommoding them: the gentle animals even seem afraid to move lest they should hurt them. They never beat or correct their horses, but always treat

them with the utmost kindness: they talk to and reason with them.

The whole stock of a poor Arabian of the desert consisted of a mare; this the French consul at Saïd offered to purchase, with an intention to send her to Louis the Fourteenth. The Arab, pressed by want, hesitated a long time, but at length consented, on condition of receiving a very considerable sum of money, which he named. The consul wrote to France for permission to close the bargain, and having obtained it, sent immediately to the Arab the information. The man, so poor as to possess only a miserable rag, a covering for his body, arrived with his magnificent courser. He dismounted, and looking first at the gold, and then steadfastly at his mare, heaved a deep sigh :—"To whom is it (he exclaimed) that I am going to yield thee up? To Europeans! who will tie thee close, who will beat thee, who will render thee miserable! Return with me, my beauty! my jewel! and rejoice the hearts of my children!"—As he pronounced the last words, he sprang upon her back, and was out of sight almost in a moment. What an amiable and affecting sensibility in a man, who, in the midst of distress, could prefer all the disasters attendant on poverty, rather than surrender the animal that he had long fostered in his tent, and had been the child of his bosom, to what he supposed inevitable misery! The temptation even of riches, and an effectual relief from poverty, had not sufficient allurements to induce him to so cruel an act.

The horses of the Bedouin Arabs, whose lives (says Sonnini) are spent in traversing the scorching sands, are able, notwithstanding the fervency of the sun, and the suffocating heat

of the soil over which they pass, to travel three days without drinking, and are contented with a few handsful of dried bean given once in twenty-four hours. From the hardness of their labour and diet, they are, of course, very lean; yet they preserve incomparable vigour and courage [1].

The faithful D'Arvieux (as cited by Dr. Clarke [2]) has preserved the address of an Arab to his mare, as delivered in his own presence; and this, more eloquent than whole pages of descriptive information, presents us with a striking picture of Arab manners. The man's name was Ibrahim; being poor, he had been under the necessity of allowing a merchant of Rama to become partner with him in the possession of this animal. The mare was called *Touisa* (according to our method of pronouncing, *Louisa*); her pedigree could be traced from public records, both on the side of sire and dam, for five hundred years prior to her birth; and her price was three hundred pounds; an enormous sum in that country.

Ibrahim (continues this author) went frequently to Rama, to inquire news of that mare which he dearly loved. I have many a time had the pleasure to see him weep with tenderness the while he was kissing and caressing her. He would embrace her; would wipe her eyes with his handkerchief; would rub her with his shirt sleeves; would give her a thousand benedictions, during whole hours that he would remain talking to her. "*My eyes,*" would he say to her, "*my soul, my heart, must I be so unfortunate as to have thee sold to so many masters, and not to keep thee myself? I am poor, my antelope! Thou*

[1] See Bingley's Animal Biography, vol. I. p. 489. third edition.
[2] Travels, vol. II. p. 493.

knowest it well, my darling! I brought thee up in my dwelling, as my child; I did never beat nor chide thee; I caressed thee in the fondest manner. God preserve thee, my beloved! Thou art beautiful! Thou art sweet! Thou art lovely! God defend thee from envious eyes!"

Chateaubriand, whose account accords in some measure with what we have already stated, says[1], the Arab horses are treated, according to the purity of their blood, with more or less honour, but always with extreme severity. They are never put under shelter, but exposed to the most intense heat of the sun, tied by all four legs to stakes, driven in the ground, so that they cannot stir. The saddle is never taken from their backs; they frequently drink but once, and have only one feed of barley, in twenty-four hours. This rigid treatment, so far from wearing them out, gives them sobriety, patience, and speed. I have often admired (says our author) an Arabian steed thus tied down to the burning sand, his hair loosely flowing, his head bowed between his legs to find a little shade, and stealing with his wild eye an oblique glance at his master. Release his legs from the shackles, spring upon his back, and you will immediately recognize the original of the picture delineated by Job:— "Hast thou given the horse strength? Hast thou clothed his neck with thunder? Canst thou make him afraid as a grasshopper? The glory of his nostrils is terrible. He paweth in the valley, and rejoiceth in his strength: he goeth out to meet the armed men: he mocketh at fear, and is not affrighted; neither turneth he back from the sword. The quiver rattleth against him, the glittering spear, and the shield. He swalloweth the

[1] Travels in Greece, &c. vol. I. p. 427.

ground with fierceness and rage: neither believeth he that it is the sound of the trumpet. He saith among the trumpets, ha, ha; and he smelleth the battle afar off, the thunder of the captains, and the shouting."

In our own country, the breed of horses is of very high antiquity, as we are informed by Julius Cæsar, that on his first invasion of the island, the Britons had already great numbers of them well trained to warlike exercises. The Romans, it is probable, contributed very little to the improvement of the British breed of horses, since no traces of amendment are to be found during so many ages. There is but little evidence during the early periods of our history to guide our researches, excepting a law of one of our Saxon monarchs to prevent the exportation of horses, which seems no indication of their plenty at that time, but that perhaps those of England were in some request in the neighbouring countries.

The first period of any particular or marked attention to the amendment of our breed of horses, may be dated from the reign of Henry VII. and VIII.; but the regulations then made, and the means employed agreeably to the genius of those unenlightened times, consisted of arbitrary directions and impolitic restraints, by no means calculated to advance the intended purpose. Magistrates were empowered, at Michaelmas tide, to scour the heaths and commons, and to put to death all mares which they should consider of insufficient size to bear good foals; and the ancient prohibition to export horses was continued in particular stallions.

The following list of horses, copied from the "Northumberland Household Book of 1512," containing the regulations

and establishments of Algernon Percy, the fifth Earl of Northumberland, will afford our readers a tolerable idea of the studs of those times.

" First, gentill hors, to stand in my lordis stable, six. Item, palfreys of my ladys, to wit, one for my lady, and two for her gentill-women, and oone for her chamberer. Four hobys and naggis for my lordis oone saddill, viz. oone for my lorde to ride, oone to lede for my lorde, and oone to stay at home for my lorde.

" Item, chariot hors to stond in my lordis stable yerely. Seven great trottynge hors to draw in the chariott, and a nagg for the chariott man to ride; eight. Again, hors for lorde Percy, his lordships son and heir. A grete doble trottynge hors for my lorde Percy to travel on in winter. Item, a great doble trottynge hors, called a curtal, for his lordship to ride on out of townes. Another trottynge gambaldyn hors for his lordship to ride upon when he comes into townes. An amblynge horse for his lordship to journey on dayly. A proper amblyng little nagg for his lordship when he gaeth on hunting or hawking. A gret amblynge gelding, or trottynge gelding, to carry his male."

Such were the horses of ancient days, ranked into classes, and allotted to different services.

The *gentil* horse was one of a superior and distinguished breed, so called in opposition to those of a mean and ordinary extraction. The Italians, at this day, call their noblest breeds, Razza *gentile*. *Gentleman* is understood in this sense, signifying a person of better birth and family.

Palfreys were an elegant and easy sort of horses; which

for their gentleness and agreeable paces were used upon common occasions by military persons and others; who reserved their great and managed horses for battle and the tournament. Their pleasing qualities soon recommended them to the fair sex, who, having no coaches, used these palfreys, and always travelled on horseback.

Hobys were strong active horses, of rather a small size. They are reported to be originally natives of Ireland, and were so much liked and used, as to become a proverbial expression for any thing of which people are extremely fond. *Nags* come under the same description as to their size, qualities, and employments.

Clothsek was a cloak-bag horse, as *male-horse* was one that carried the portmanteau. Horses to draw the *chariots* were waggon horses; from the French word *charrette*, whence the English word *cart;* for neither coaches, nor even *chariots* (in our present acceptation of that word) were known at this time. Indeed, the use of coaches was not known in England till the year 1580 (in Q. Elisabeth's reign), when they were introduced by Fitz-Allen, Earl of Arundel. Till this period, saddle-horses and carts were the only methods of conveyance for all sorts of people; and the queen rode behind her master of the horse, when she went in state to St. Paul's. This fashion, however, prevailed only in the former part of her reign, and was totally suppressed by the appearance of coaches. Their introduction occasioned a much larger demand for horses than former times had wanted; and such was the number of them employed in this service, that, at the latter end of the queen's reign, a bill was proposed in the house of lords, to re-

strain the superfluous and excessive use of coaches. It was rejected upon the second reading. The lords, however, directed the attorney-general to peruse the statutes for promoting the breed of horses, and to consider of some proper bill in its room.

A gret *doble* trottynge horse was a tall, broad, and well-spread horse, whose best pace was the trot, being too unwieldy in himself, or carrying too great a weight, to be able to gallop.

A *curtal* is a horse whose tail is *cut* or shortened—in the French, *curtaud*.

A *gambaldynge* horse was one of show and parade, a managed horse, from the Italian *gamba*, a leg.

An *amblynge* horse is too well known to need explanation. The *amble*, long before this time, as well as for a long while after, was such a favourite pace, and so much liked for its ease and smoothness, that almost all saddle-horses were taught to perform it, especially those which were used by the rich, the indolent, and infirm.

In the reign of Elizabeth, however, a gradual improvement took place in the breed of English horses, by the importation of foreign stock. In confirmation of this statement, an instance is cited of a horse which travelled eighty miles within the day for a wager. According to Blundeville, the desire of improvement was so generally diffused, that even the carters had become very nice in their choice of horses. The following races were well known to the gentlemen breeders of the country; namely, "the Turk, the Barbarian, the Sardinian, the Neapolitan, the Jennet of Spain, the Hungarian, the high Almaine, or German, the Friezeland, the Flanders, and the Irish Hobby." Still horses were so deficient in number, that on the

Spanish invasion, the queen found the utmost difficulty in mounting two or three thousand cavalry.

In the reign of James, horse-racing became fashionable throughout all parts of England; a favourite diversion of most of the princes of the royal house of Stuart, and particularly encouraged by them. Even the grave and hypocritical Cromwell, in his apery of the pomps of royalty, did not forget that necessary appendage—a stud of race-horses. It is well known that Richard Place was the Lord Protector's stud groom. The famous White Turk has immortalized himself and his keeper: the conjoined names of the man and the horse, Place's White Turk, are sure to be delivered down to the latest posterity.

By the institution of "Royal Plates" at the restoration, an additional encouragement was given to horse-coursing, and much emulation was promoted among the breeders, with the judicious view of perfecting and extending a race of horses, fit for the road, the chase, and the war; and by an enlightened policy, free exportation was allowed. From this period, to the middle of the last century, the system of renovation from the different original foreign stocks has been occasionally adopted; the happy consequences have been a decided superiority over the parent stock from whatever country; and an original breed of our own of all denominations, of superior proportion, speed, power, and utility.

This superiority having been for a long time established, it should seem, with some slight exceptions, perhaps, that we have no longer any necessity for recourse to foreign stock of any description, with the view of improvement; that being in our power, even to the highest point of perfection, by judicious

selections from our own native races. Indeed, our importations of foreign horses of late years have been made chiefly with the view of obtaining serviceable draught cattle, for immediate use, at more reasonable rates than they could be bred at home, rather than for the purpose of breeding; and this has been almost entirely confined to Flanders and Friezeland.

No importation of saddle-horses, we believe, has taken place within the present century; as to the Arabians, Barbs, and other foreign stallions, formerly so essential in our studs, they have for some years ceased to be much in request, and there are now but few of them in the country. The marks of their foreign origin are distinguishable but in very few of our English horses, being lost in the proper characteristic form of the country, which time, the influence of climate, good provender, and good care, have established. Thus our racing stock, although it has lost somewhat in delicacy of skin, and warmth of temperament, it has gained more size, fuller and better proportion, more speed and continuance, than is seen in the real Arabians; and our cart-horses, together with a peculiar characteristic rotundity of form, have acquired more beauty and greater activity than the species upon the continent from which they have descended.

The saddle-horses of England are in request in foreign countries, on account of their uniting superior action, with strength, proportion, and beauty. No people in the world have ever been so fond of speedy travelling as the English; of course, the attention of breeders has been no where else so much directed to the attainment of that particular shape which is most conducive to action. The Spaniards of the old school,

who valued a horse in proportion to his susceptibility of the manœuvres of the riding-house, were accustomed to style those which excelled in such exercises *hazedores*, or *doers*. We of this country emphatically distinguish those horses by the appellation of *goers*, which are particularly endowed with our favourite qualification—speed.

The original breed of English horses has long since become extinct by that general improvement which has pervaded every quarter of the country; a curious observer may nevertheless form a very good estimate of its figure and merits, by examining our common road hacks, which show little or no mixture of foreign blood, and the lower kind of farmer's horses, to the breed of which little attention has been paid. We are to except the Shetland ponies, and a few remaining Scotch and Welsh mountain hobbies, which are probably the same race, in all respects, as when they were either first created upon, or imported into the island. The Northern ponies are very small, very hardy and durable, and amazingly strong in proportion to their bulk.

The torrid zones, also, produce a very diminutive species of the horse; some of them in Guinea, and the East Indies, are scarcely superior in size to large dogs; but, unlike their peers of the hardy regions of the north, they are weak, delicate, mulish, and almost without use.

The horses of this country had, no doubt, arrived at the highest point of perfection, in the admired qualities of speed and strength, individually, long before the present time. For instance, we have no reason to expect that the speed, strength,

and continuance of Childers and Eclipse, as gallopers; of Archer, and one or two others, as trotters; or the powers of certain cart-horses, which have drawn such immense weights, and repeated so many dead pulls, will ever be excelled. It seems not to be within the compass of those powers of action which nature has bestowed upon the horse, to gallop a mile in less time than a minute; or to trot the same distance in less than three minutes, bating a few seconds. But animals capable of such extraordinary exertions are rare, even in England.

Before we proceed to notice the various breeds of English horses, we shall give, from Mr. Lawrence's "Treatise on Horses" (third edition), a general description of the horse, containing various particulars, which should be strictly attended to by every purchaser of horses.

The HEAD OF A HORSE should be void of flesh, and for length and size appear to hold fair proportion with the size of his body; his eye full, and somewhat prominent; eye-lids thin and dry; ears thin, narrow, erect, of middling length, and not distant from each other; forehead flat, not too large or square, and running nearly in a straight line to the muzzle, which should be small and fine; nostrils capacious; lips thin; mouth of sufficient depth, and the tongue not too large; the jaw-bones wide at top, where they join the neck; the head not abruptly affixed to the extremity of the neck, but with a moderate curve and tapering of the latter.

The NECK must be of moderate, not too great length, nor too thick and gross on the upper part, nor too large and deep, but rising from the withers or forehand, and afterwards declin-

ing and tapering at the extremity, it will form somewhat of an arch; underneath, the neck should be straight from the chest, and by no means convex or bellying out.

The SHOULDERS capacious, and of large extent, so as to appear the most conspicuous part of the body, but without being loaded with flesh; they should reach fairly to the top of the withers, which must be well raised; the chest should be sufficiently full, not narrow or pinched.

The BODY deep and substantial; back, a plane of good width, but handsomely rounded; back-bone straight, or with a trifling inclination, and not too short; loins wide, and the muscles of the reins, or fillets, full, and swelling on each side the back-bone; the space sufficient between the ribs and hip-bones, the bones themselves round, and the buttocks deep and oval; the rump level with, or not too much elevated above, the height of the withers; the croup must have reasonable space, and not sink too suddenly, in which case, the tail would be set on too low, which ought to be nearly on a level with the back.

The HINDER QUARTERS should spread to a wider extent than the fore-parts, and the hind-feet stand farther asunder than those before; the thighs should be straight, large, muscular, and of considerable length; the hock wide and clean; the shank not too long, but flat, and of sufficient substance, its sinew large and distinct, the fetlocks long; the hocks should form an angle of such extent as to place the feet immediately under the flanks. The fore-arms, like the thighs, should be large, muscular, and of good length, the elbows not turning outwards; the knees large and lean; the shank or cannon-bone, flat, strong, and not too long; the tendon large; the fore-arm

and shank must form nearly a straight line; fetlock joints large and clean; pasterns inclining to a certain degree, not too long, but large in proportion to their length; the coronary rings not thick or swelled, but clean, dry, and hairy; the feet neither too high nor too flat, and of size apparently a sufficient base for the weight they have to sustain; hoofs, of colour dark and shining, without seams or wrinkles, tough and strong, not hard like oak; foot internally concave, sole hard, but not shrunk, heels wide, and of middling height; frog not too large or fleshy, but tough and sound; the feet of equal size, should stand exactly parallel, so that the front or toe incline neither inward nor outward; the fore-feet should stand perpendicular to the chest, not too much under it, and they should be less wide apart than the fore-arms; the legs should not be loaded with hair.

The AGE OF A HORSE, it is sufficiently well known, is only determinable with precision by his teeth; and that rule fails after a certain period, and is sometimes equivocal and uncertain, even within that period. A horse has forty teeth; namely, twenty-four double teeth or grinders, four tushes, or single teeth, and twelve front teeth, or gatherers. Mares have no tushes in general. The mark, which discovers the age, is to be found in the front teeth, next the tushes. In a few weeks, with some, the foal's twelve fore teeth begin to shoot; these are short, round, white, and easily distinguishable from the adult or horse's teeth, with which they come afterwards to be mixed.

At some period, between two and three years old, the colt changes his teeth; that is to say, he sheds the four middle fore

teeth, two above and two below, which are sometime after replaced with horse's teeth. After three years old, two others are changed, one on each side the former; he has then eight colt's and four horse's teeth. After four years old, he cuts four new teeth, one on each side those last replaced, and has at that age eight horse's and four foal's teeth. These last new teeth are slow growers, compared with the preceding; they are the corner teeth, next the tushes, are called pincers, and are those which bear the mark: this mark consists in the tooth being hollow, and in the cavity bearing a black spot, resembling the eye of a bean. The tushes may then be felt.

At four years and a half old, these mark teeth are just visible above the gum, and the cavity is very conspicuous. At five years old, the horse has shed his remaining four colt's teeth, and his tushes appear. At six, his tushes are up, and appear white, small, and sharp, near about which is observable a small circle of young growing flesh; the horse's mouth is now complete, and the black mark has arrived at, or very near the upper extremity of the corner teeth. At seven, the two middle teeth fill up. Between the seventh and eighth year, all the teeth are filled up, the black mark has vanished, and the horse is then said to be *aged*, and his mouth full.

From that time forward, the age of the horse can only be guessed at from certain indications; but these guesses are usually made with considerable accuracy by experienced people. If his teeth shut close, and meet even, are tolerably white, not over long, and his gums appear plump, you may conclude he is not yet nine years old. At that age, and as he advances, his teeth become yellow and foul, and appear to

lengthen, from the shrinking and receding of the gums. The tushes are blunt at nine; but at ten years old, the cavity or channel in the upper tushes, until that period to be felt by the finger, are entirely filled up. At eleven, the teeth will be very long, black, and foul, but will generally meet even; at twelve, his upper-jaw teeth will overhang the nether; at thirteen and upwards, his tushes will be either worn to the stumps, or long, black, and foul, like those of an old boar. Beside those exhibited by the mouth, nature ever furnishes a variety of signs, which denote the approach of old age and decay, throughout the bodies of all animals.

After a horse has past his prime, a hollowness of his temples will be perceived; his muscles will be continually losing something of their plumpness; and his hair, that gloss and burnish, which is the characteristic of youth and prime, will look dead, faded, or entirely lose its colour in various parts. In proportion to the excess of these appearances will be the horse's age.

THE RACE-HORSE.

By a judicious mixture of several kinds, and by superior skill in management, the English race-horse is allowed to excel those of the rest of Europe, or perhaps the whole world. For supporting a continuance of violent exertion, or *bottom*, as it is technically called, they are superior to the Arabian, the Barb, or the Persian, and for swiftness they will yield the palm to none.

The usual trial of speed in English racing is the distance of

a single mile; of continuance, stoutness, or bottom, four miles. It has been asserted with confidence, but not proved, that flying Childers ran a mile over Newmarket in the space of a minute, a velocity almost incredible. This distance, however, has actually been performed in a minute and a few seconds.

The distance of four miles was run by Childers in 1721, carrying nine stone two pounds, in the space of six minutes, forty-eight seconds. This wonderful animal leaped ten yards with his rider upon level ground; and is supposed to have covered at every stride a space of twenty-five feet, which is more than forty-nine feet in a second.

Bay Malton ran four miles over York in 1763, in seven minutes, forty-three seconds and a half. This horse, in seven prizes, won the amazing sum of five thousand nine hundred pounds. Eclipse ran the same distance over York, in eight minutes, with twelve stone. This fleet animal won King's plates and other prizes to a great amount. In general, a horse which will run four miles in eight minutes, with eight stone, seven pounds, will win plates. No attempt, we believe, has hitherto been made to ascertain the number of miles which an English racer would run in an hour; Hull's Quibbler ran twenty-two or twenty-three miles in an hour; but little is to be inferred from this instance, as Quibbler was but an indifferent racer, and the performance has been equalled upon the hard road, by a three-part bred hack.

Some further particulars of famous racing-horses have been collected by Mr. Bewick. Highflyer was accounted the best horse of his time in England. The sums he won and received amounted to near nine thousand pounds, though he never start-

ed after five years old. He was never beaten, nor ever paid a forfeit. Matchem, a horse belonging to the late William Fenwich, Esq. of Bywell, was a very quiet stallion, and may be said to have earned more than any other horse in the world. He died in his thirty-third year.

Shark won, besides a cup, value one hundred and twenty guineas, and eleven hogsheads of claret, the astonishing sum of fifteen thousand five hundred and seven guineas, in plates, matches, and forfeits. In the celebrated match at Newmarket in 1799, between Sir H. Vane Tempest's Hambletonian, and Mr. Cookson's Diamond, which was won by the former, not less than two hundred thousand pounds were betted on the event of this severe race. The celebrated horse Regulus died in 1812. He was the sire of three thousand colts, that have produced upwards of eighty thousand pounds.

The following spirited description of a race at Newmarket is a version by George Dyer, of some Latin lines written by Lord Hampden on this subject.

Hence we raise horses, that in speed outstrip
The winds: go seek the plain, which the *Devil's ditch*
Divides; a field with slender verdure green.
Behold the signal given! Forth from the goal
Starts the resounding horse, and on his back
Firm sits, light load, the jockey, jerkined neat.
See, he devours the plain, the verdure's top
Scarce touches, swift as hawk or swallow flies;
That, when approaching nearer to the end
Of the long course, then headlong he may seem
To rush, and gain new vigour as he goes!
Then, neither lungs, nor any nerve, he spares!
His belly now appears to touch the ground,
And now he seems fleet as the wind to glide.

Blood mixed with sweat flows quick adown his sides;
His lips are wet with foam; with open throat
He drinks the wind: and from his nostrils wide
Issue, with sobs and pantings, curling smoke,
While through his body every vein distends.
Quicker and quicker now his light hoof strikes
The glebe—and now with love of nearer palm
Of victory he glows: while passing by
His several rivals, how his heart exults!
Resound the shouts of men, the smack of whips:
The goal the conqueror wins, but by a neck,
And quick he bears away the Royal Plate.

The turf is a grand national object, and its votaries are administering through the medium of their pleasures to the interest and prosperity of their country;—if horse-racing were to be discontinued, the English thorough-bred horse, the source of almost all that is excellent in the species, would soon become extinct. Sufficient examples of degeneracy are always to be seen in the studs of the different breeders, and the necessity of an occasional recourse to thorough blood is fully apparent; nor is the number of well-shaped, half-bred stallions ever very considerable, or sufficient for the demand of the country.

Horse-racing is of considerable antiquity in this island, and may be traced as far back as the eleventh century, but was not regularly pursued till the accession of the House of Stuart. Newmarket was frequented previously to the civil war; but in the reign of Charles II., encouraged by the monarch and his favourites, it shone forth in full splendour.

At these head-quarters of the turf frequent meetings are held, at stated periods, and the sport generally continues throughout the week. There are about eighty other places in England

where races are annually held; in some, twice in the year. At Newmarket, nearly all races are determined at one heat, as a measure of necessity, from their usual number and variety.

The speed and continuance of the race-horse must necessarily be affected and governed, in certain degrees, by the weight which he has to carry; and reasoning upon that position, it will be easily conceived, that if two horses be equally matched in point of speed and strength, and put to their utmost exertion for a considerable distance, the horse which carries the least weight, by even only a single pound, must infallibly have the advantage to a certain degree (however small) in the ability of going more swiftly, and lasting longer, than his antagonist. The swifter the race, and the longer it is continued, the more in proportion will the horse be affected by the weight he carries. It is said, that in running four miles, seven pounds make the difference of a distance, or two hundred and forty yards, between horses of equal goodness. This affair of weight is regulated with scientific precision upon the turf, and forms a principal consideration in all sporting transactions. The weights carried by race-horses vary from the maximum twelve stone, fourteen pounds to the stone, to a feather, which means a boy of the lightest weight to be found.

Fine and delicate horses, the nativesof warm climes, excel in swiftness: the most perfect of these were originally found in Arabia, but they are improvable in their descendants by a more fruitful country; the Arabians tried in England have never proved themselves, in any respect, equal upon the course to the English racers, the descendants of their blood. Although the general characteristic of thorough-blood is speed, yet the final

test is not speed, but continuance, since many common or half-bred horses have been known to possess racing speed, but no instance has ever occurred of its continuance in these, beyond perhaps half a mile; the powers of continuance increase in proportion to the quantity of blood: thus, three-part bred horses will persevere longer than half-bred, and those descended from bred horses, and three-part bred mares, will sometimes equal the real racers.

The *training* of race-horses is, at present, a much more simple and rational process than in former days, and is, indeed, making rapid advances towards perfection. Horses were formerly stuffed with baked bread, and loaded with a debilitating burthen of clothes; they were forced to breathe a suffocating and almost tropical heat within doors, and were greatly oppressed with severe and long continued exercise. A contrary practice, however, is now adopted. The heaviest oats and the hardiest and sweetest hay are given to the animal, and a free circulation of air is allowed in the stables. For a concise account of the exercise and diet of racing horses, we refer to Mr. Lawrence's Treatise.

The race-horse spends his winter in the paddock and stable, enjoying himself at his ease, until the periods of physic and discipline arrive.

A remarkable quality in the race-horse is that which is styled, in turf language, running to the whip; it means answering every stroke of the whip with an additional exertion as long as nature lasts. Horses of this generous kind are termed "honest" and "stout;" but the terms are usually confounded, for many a horse is honest, without being endowed with those constitutional

powers necessary to produce stoutness or continuance; and many which possess these in the amplest measure, which they occasionally evince, are yet never to be depended upon. It is dangerous to offend these last, with the immoderate use of the whip or spur, instances having been known of a winning horse being stopped suddenly by a foul cut under his flanks.

Some horses, though "honest and stout," have such critical skill in their own powers, that almost knowing the impossibility of success in a race, they will, if abused with the whip, instantly shorten their stroke; but, if nursed and encouraged with a pull, the use of which is known to every jockey, they will, although beaten, strain every nerve to the last extremity. It is a strange quality in the true whipped horse, that he will not keep to his stroke without the use of the spur or the whip, and never takes offence at either: but there is no utility, we conceive, in that tumultuous whipping and spurring, and loosing of bridles which usually takes place at the conclusion of a course.

The treatment of race-horses is, in general, mild and considerate, and well befitting that superiority which racing grooms challenge over all others. This professional humanity has even pervaded the circle of the repository, where in the stall, and in the show, a bred horse is treated with distinguished mildness.

All disputes relative to the affairs of the turf are referred to the opinion of the *Jockey Club*; a society composed of men of rank and character, whose decisions are truly equitable, and their reputation, as a public body, unimpeached.

Enough, we think, has been said of the English race-horse and of racing, to satisfy the general reader;—the sportsman we refer, for further information, to Weatherby's Sporting Calendar;

Mr. Stubbs's book on the pedigrees of racers for the last fifty years; Gard's Guide to the Turf; and to the Academies of Newmarket and Tattersal's, at which places he will not fail to meet with able tutors.

To those of our readers who have never witnessed a horse-race, the following description will convey a faint idea of the animation, bustle, and spirit which pervade it; those who *have*, we think, will not be displeased with this outline sketch of one of their most favourite amusements. It is from Miss Edgeworth's "Patronage."

There was to be a *famous* match between Colonel Hauton's High-blood and Squire Burton's Wildfire; and the preparations of the horses and of their riders occupied the intervening days. With all imaginable care, anxiety, and solemnity, these important preparations were conducted. At stated hours, Colonel Hauton, and with him Buckhurst, went to see High-blood rubbed down, and fed, and watered, and exercised, and minuted, and rubbed down, and littered.—Next to the horse, the rider, Jack Giles, was to be attended to with the greatest solicitude; he was to be weighed—and starved—and watched—and drammed—and *sweated*—and weighed again—and so on, in daily succession; and harder still, through this whole course he was to be kept in humour—"None that ever *s*arved man or beast," as the stable-boy declared, "ever worked harder for their bread, than his master and master's companion did this week for their pleasure."

At last the great, the important day arrived—and Jack Giles was weighed for the last time in public, and so was Tom Hand, Squire Burton's rider—and High-blood and Wildfire were

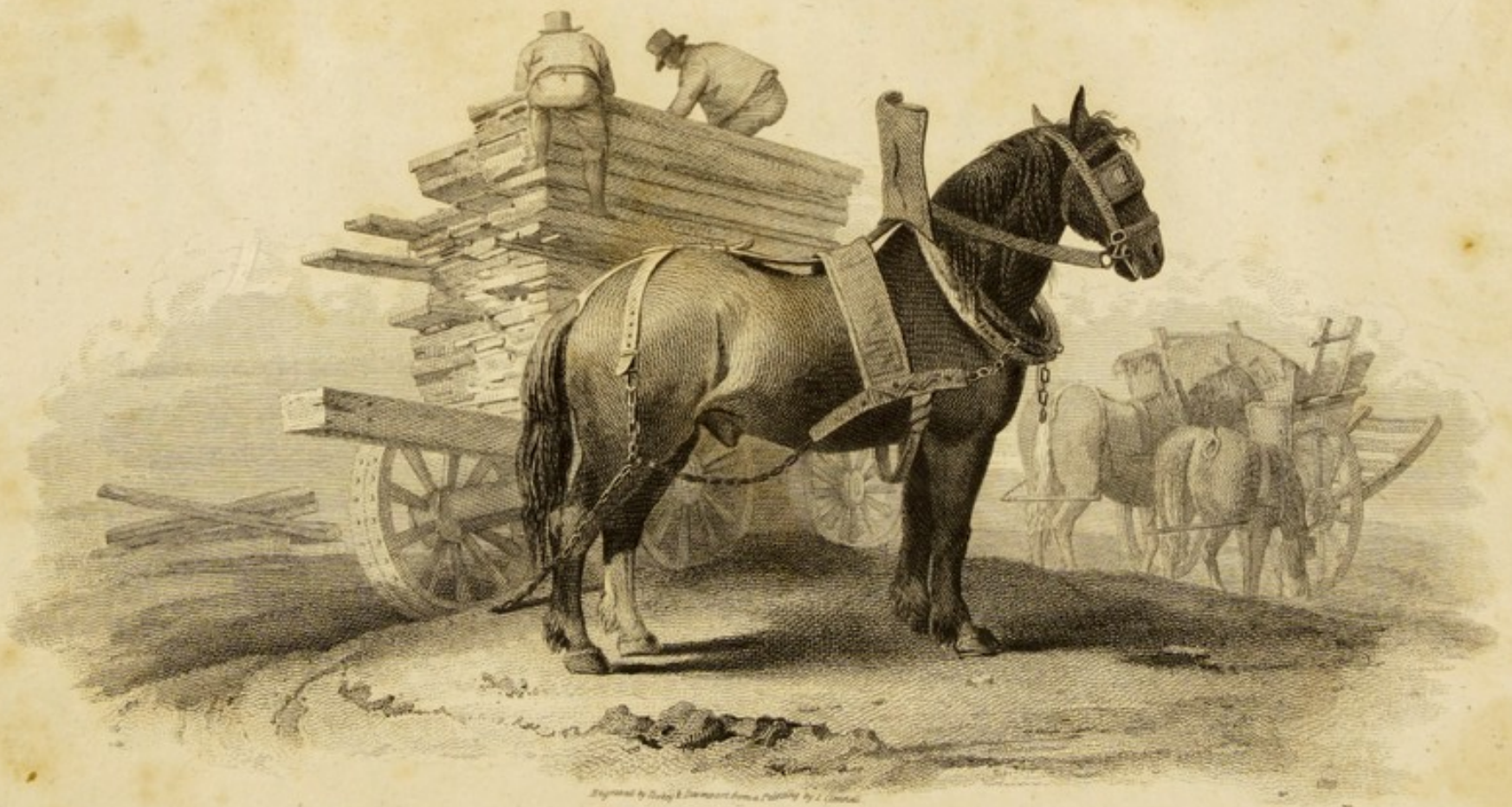
brought out: and the spectators assembled in the stand, and about the scales, were all impatience, especially those who had betted on either of the horses.—And—Now Hauton!—Now Burton!—Now High-blood!—Now Wildfire! Now Jack Giles!—And—Now Tom Hand!—resounded on all sides.—The gentlemen on the race-ground were all on tiptoe in their stirrups. The ladies in the stand stretched their necks of snow, and nobody looked at them.—Two men were run over, and nobody took them up.—Two ladies fainted, and two gentlemen betted across them. This was no time for nice observances—Jack Giles's spirit began to flag—and Tom Hand's judgment *to tell*—High-blood, on the full stretch, was within view of the winning post, when Wildfire, quite in wind, was put to his speed by the judicious Tom Hand—he sprang forward, came up with High-blood—passed him—Jack Giles strove in vain to regain his ground—High-blood was blown, beyond the power of whip or spur—Wildfire reached the post, and Squire Burton won the match hollow.

THE HUNTER.

The hunter is a happy combination of the racer, with others of superior strength, but inferior fleetness and lineage. This union, in fact, is absolutely necessary; for the fatigues of the chase require the spirit of the one, as well as the vigour of the other, to support it.

THE OLD ENGLISH DRAUGHT HORSE.

This animal is remarkable for its beauty, symmetry of form,



THE CART HORSE.

and large size. Possessing singular strength for draught, this race is in high request in the counties of Leicester, Northampton, Lincoln, and a few other shires to which they are suited, and affords an ample source of profit to graziers and breeders.

This breed possesses strength of constitution, hardiness and bone, in such a superior degree, that, as every attention is paid to the corresponding points, both in sires and dams, these horses produce very handsome prices. They come into use in general at two years old or under; and if brought to a good size in proper time, from thirty to fifty guineas are often given at two or three years old.

The English draught horse cannot be paralleled in any other country for strength, size and activity united. London furnishes horses that are able to draw, on level ground, for a short space, the weight of three tons, and could, with ease, continue half that load. The pack-horses in Yorkshire usually carry a burthen of four hundred and twenty pounds over every inequality of country: while some of our mill-horses, from exercise and habit, have been found equal to a weight of nine hundred pounds and upwards.

THE DRAY HORSE.

This animal, so common in London and its neighbourhood, has not its equal for size and fatness; but it is deficient in hardiness and energy. The farmers in some parts of Hampshire and Berkshire use these horses in their teams. Eastern princes (says Dr. Anderson) have their stables filled with stately elephants for parade, because none else can afford to

keep them; and wealthy London brewers, for the same reason, turn out these monstrous animals, day after day, to paw up the streets, and to be gazed at as a wonder by the admiring multitude.

THE SUFFOLK PUNCH.

The Suffolk punches, or Suffolk punch sorrels, as they are also termed, are singularly useful for those departments of agriculture which may require the labour of horses. The sandy tract of land, in the vicinity of Woodbridge, Suffolk, has long been celebrated for the production of this breed, which is generally allowed to afford the best cart horses in England.

The Suffolk punches are of a bright sorrel colour; have very low foreheads; large bodies, somewhat similar to those of cows; short legs; and ill-formed heads: but, notwithstanding their awkward appearance, they exceed every other race of horses in draught. An instance is recorded in the "Annals of Agriculture" of five of these horses belonging to Mr. Collett, which drew thirty sacks of barley, over the sandy road from Walton to Ipswich; and of a single horse belonging to Mr. Constable of East Berghott, which was known to draw in a cart ten sacks of flour, each weighing twenty stone and a half, for five or six miles, on a heavy road. The Suffolk punches are of various sizes, but the smaller ones are found, in general, to be the most serviceable.

THE CLYDESDALE HORSE.

This race of draught horses, bred in Scotland, is strong, hardy, active, and eminently calculated for hilly districts. They are much lighter in the body than the Suffolk punch, and in all respects more elegantly formed. The tread of the Lanark or Clydesdale horse is firm, with considerable activity, and he is capable of exerting a wonderful degree of muscular strength for a short push. They can live upon almost any food, and are well suited for the cart or plough. The colour is generally brown or grey; the legs are sinewy and clean; the eyes sprightly and animated; the head and body light and well formed. They are from fifteen to sixteen hands and a half in height.

THE CLEVELAND BAYS.

These horses are bred in various parts of Durham and Northumberland, and particularly in the district of Cleveland, Yorkshire, whence they have received their name. They are of a large size, and, in point of activity, hardiness, and strength, superior to most kinds of horses. They are well formed, and are generally of a bay colour, and are equally well suited for the coach or the plough.

THE NEW FOREST HORSE.

A diminutive breed of horses runs wild in the New Forest. In general, however, the horse is private property,

though sometimes with difficulty ascertained. Numbers of people, who have lands in the neighbourhood of the forest, have a right of common on it, and most of the cottagers who border on it assume that right. Many of them have two or three mares, and some who make it their business to breed colts have droves.

Herds of twenty or thirty are often seen feeding together; in summer especially, when they have plenty of pasturage, and can live as they please. In winter they are obliged to separate, and seek their food, as they can find it. In general, indeed, they are left, in all seasons, to take their chance in the forest. Where there is no expense, there can be no great loss; and what is saved, is so much gained. In marshy parts, a severe winter often goes hardly with them. But in dry grounds, where heath and furze abound, they pick up a tolerable winter-subsistence; especially if they have learned the little arts of living, which necessity teaches. Of these arts, one of the most useful is to bruise, and pound with their fore-feet, the prickly tops of furze.

When such colts as have long run wild are to be caught for sale, their ideas of liberty are so unconfined, from pasturing in so wild a range, that it is matter of no little difficulty to take them. Sometimes they are caught by slight of hand, with a rope and a noose. But if this method fail, they are commonly hunted down by horsemen, who relieve each other. Colt-hunting is a common practice in the forest. The colts which feed on Obergreen are sometimes taken by the following stratagem. In this part runs a long bog, described under the name of Longslade-bottom; which is crossed by a mole thrown

over it. With this passage the colt is well acquainted; and on being pursued, is easily driven towards it. When he is about the middle of the mole, two or three men start up in front, and oblige him to leap into the bog, where he is entangled, and seized.

At all the neighbouring fairs, these horses are a principal commodity, and are bought up for every purpose, to which a horse can be applied. Diminutive as they are, you may often see half a dozen of them straining in a waggon: and as it is fashionable to drive them in light carriages, their price has been enhanced. It is a little fortune to a poor cottager, if he happen to possess three or four colts, that are tolerably handsome, and match well.

The New Forest horse has been often said to be of Spanish extraction; from ancestors supposed to have been shipwrecked, on the coast of Hampshire, in the time of the Armada. Although this ancient account deserves little credit, yet there are some of the New Forest horses which would not disgrace so noble a lineage. In general, however, the croup of the Forest horse is low; and his head ill-set on, having what the jockeys call a *stiff-jaw*. Their claim, therefore, to high lineage must rest more on their good qualities than on their beauty—on the hardiness of their nature—on their uncommon strength—on their agility, and sureness of their foot, which they probably acquire by constantly lifting their legs among the furze.—(Gilpin's Forest Scenery, vol. ii. p. 250.)

GALLOWAYS.

The mountain ponies of Wales and Scotland, which, in the latter country, are known by the name of galloways, although very small, are extremely hardy and durable. The best of them seldom exceed the height of fourteen hands and a half. Their eyes are lively and spirited; their bodies are firm, and their legs nervous. They are too small for draught, and too little showy to make a sufficiently good appearance for saddle-horses; but for carrying a person, with ease and expedition, over rocky and mountainous roads, with little food and bad accommodation, they have, perhaps, few equals among their species.

Dr. Anderson possessed one of these galloways when he was a boy. In elegance of shape, he says, it could scarcely be excelled; and in disposition it was in the greatest degree gentle and compliant. It moved almost with a wish, and never tired. He rode this little creature for five and twenty years, and twice in that time he rode one hundred and forty miles at a stretch, without stopping, except to bait, and then for not above an hour at a time; and it came in, at the last stage, with the same cheerfulness and alacrity as it travelled the first.

In the Statistical Account of Scotland there is an anecdote, which affords additional proof of the great strength and hardiness of these animals. A countryman, some years ago, was employed by the Laird of Coll, as a post to Glasgow or Edinburgh; and his usual burthen was about sixteen stone. Being once stopped at a toll-gate, near Dumbarton, he humorously

inquired whether he should pay the toll if *he* carried a burthen through the gate; and on being answered in the negative, he immediately dismounted, and bore his horse through on his shoulders.

This breed is said to be now nearly extinct in Scotland, which is much to be regretted; for if a sufficient number of these horses could be obtained to make a proper selection for breeding from, it is impossible to say to what degree of excellence they might in time be raised. In the island of Mull, one of the Hebrides, some remains of them are still to be found, though they are so much neglected as to be fast degenerating, by intermixture with other infinitely less useful breeds. —(Anderson's Recreations in Agriculture; and Bingley's Memoirs, page 431.)

THE SHELTIES.

The general form of the Shetland ponies is very elegant; and the body is thicker and more compact than that of a blood horse. The bones are very small, as is also their head, and that part of the neck which joins to the head. The black kind are esteemed the most hardy. They sometimes live to the age of thirty years. The Shetland pony is so diminutive that a man of ordinary size and strength can lift one of them from the ground with ease: some of these are scarcely more than three feet in height from the foot to the shoulder. Yet the animal is so strong, that it will carry a man of twelve stone weight a journey of forty miles in a single day.

The late researches of Mr. Bracy Clark having thrown much light upon the structure of the feet of horses, and the nature of their shoeing, we think a portion of this article cannot be more beneficially employed than by giving our readers some of the leading circumstances of his discoveries in this important branch of art, extracted from the 1st and 2d Parts of his "Essay on the Foot of the Horse."

Mr. C. has proved, very satisfactorily, that the foot of the horse is encompassed with a circle of horn, which has the property of playing to the exertions and weight of the animal; opening according to the degree of their impression, and closing again in the manner of a bow. This action thus destroys any strong resistance which would be oppressive and fatiguing, or if quite solid, would be destructive of the animal, by inducing pain and its consequences, inflammation, disease, and death; the animal becoming, when disabled, the easy prey of his natural enemies.

To prevent this, the hoof is beautifully formed, he observes, to work as a bow under him, not only yielding to his impressions, but in closing again and returning to its former condensed state; assisting his spring and advances. Now to this bow of hard horn is superadded another member, or mass of a softer nature, which performs the part of a bow-string, and this is *the frog* of the foot, which does not perform the part of a wedge as heretofore erroneously apprehended, nor does it open and force the heels, which are harder than itself, but passively receives their impressions, and gives way to the elastic spring of the hoof. For it would have been, as Mr. C. justly remarks, the inversion of good mechanics to use the softer, to rend or

open the harder body, or very much like employing a wedge made of dough to cleave a block of wood. In order to make this part more elastic, the frog or bow-string is formed, by its Divine Architect, of arches that cause it the more readily to dilate and expand to the various impressions of the hoof.

Mr. Clark has found, on a more attentive examination of the frog, that it possessed a very remarkable band, which extended from the heels round the whole front of the foot, and passed in a circular line round the *coronet* to this new part. In order to avoid circumlocution in speaking of it, he has given it the name of *frog-band*. It does not appear, from the works of any preceding writers, that this part had been distinctly seen or described. The use, probably, for which it is destined is, to connect, in a remarkable manner, the frog with the hoof, and this with the skin to the upper edge of the hoof, holding it firmly in its place, and preventing the foot, under strong impressions from the weight or exertions of the animal, from passing too far into and sinking within the hoof. It swells with the application of moisture, and in this way maintains and presents a more soft and agreeable bond of union between the skin and the hard hoof; and it assumes a whiter appearance when dried from inflammation and heat of the hoof, induced by a feverish state of the foot. It becomes of a chalky whiteness, and then prematurely scales off. This singular band occupies, in well-formed feet, about half or three-quarters of an inch of the upper part of the hoof, and the frog itself is found to occupy nearly a sixth part of the general circle of the foot.

In the hoof, Mr. C. from a most attentive investigation, has discovered that it is of a different structure than has hitherto

been apprehended; for on making a section of the hoof, horizontally with a saw, he found that the hoof did not terminate where it was supposed to do, at the sharp edge of its posterior parts, the two heels, but was suddenly bent or inflected to an acute angle at this part, and was then carried on to the centre of the foot, forming the two parts usually called *the bars,* and thereby simplifying our notions of the structure of this part of the hoof. The two inflections, or bars, directed towards the centre of the circle, he compares to the two arms of a Turkish bow, whose extremities are turned inwards, towards the middle of the bow, thereby shortening the bow-string, and giving it more and stronger play by the operative parts of the bow thus extended, and which it not inaptly resembles.

This wall of the hoof, or upright exterior part of the foot, he also found, on nicer examination, to be not of that figure for which it is usually taken, and a casual glance of the eye would induce us to believe, viz. a *cone,* but that the figure of this part was indeed the section of a cylinder, the heels bearing the same slope or inclination as the toe, or front parts, and the sides being nearly (or quite, in some hoofs) upright, so that a cylinder of paper or pasteboard, cut obliquely through its axis, gave, when placed on a table, on its cut edge, an excellent figure of the horse's hoof when most truly and beautifully formed.

The cartilages distributed along the sides of the foot are as an elastic substitute for bone, and equalize the pressure of the weight against all parts of the sides of the foot, and by yielding, permit the elastic movements of the bow of horn of which the wall is made, and give full efficiency to its operations. These

elastic parts being held fixed, and having little or no motion from the application of the iron, in shoeing, become stiff, solid, and at length converted into bone, and are then termed, among horsemen, *ring-bones;* beginning at first, low in the hoof, and afterwards rising, as the ossific matter increases, up to the coronet, *corona*, or crown of the foot, or that rounded projecting circle visible over the hoof, and hence the name of *ring-bones*, or bones of the coronary ring or circle.

Now the hoof being so constituted an elastic, expanding, bow of horn, whose distension and play are permitted, and in some cases, restrained by the embrace of the frog, fully unfolds the difficulties, and hitherto clouded and half-concealed mysteries of the effects of shoeing: for the iron shoe, possessing none of these properties of the foot, which being a living part and kept fixed and bound by the iron, is soon reduced by its overpowerful restraint, first to a stiff and unyielding nature, and then, by the uniform continuance of the pressure, begins to waste and diminish. The consequence is, the horse is first brought to step short, then to go near the ground, trip, hobble, stumble, and finally to fall, when he is parted from, or used only in harness and supported by the bearing rein. The driver thus impresses the animal's mouth with the restraint and hardness of the bit, that he may the more easily forget the pain of his feet, and be at any rate less liable to accidents through their injuries.

Mr. C. has shown, by a novel and very conclusive experiment, the ratio or degree of contraction that a hoof would undergo, clad in iron for several years; and by dividing this contraction into annual periods, he has distinctly assigned to each

period the mischief that accrues from this practice, till it ends in the total ruin of the foot, and the slaughter of the animal; the bearing rein and harness being resorted to to keep them up, when they become unfitted by their tenderness and tripping for the saddle; and, in the last of these periods he observes, that horses by thousands are annually destroyed with circumstances of shameful barbarity, by error induced upon error, and which custom has rendered too familiar for us to see in its true enormity: and whole centuries have blindly passed away, in which these errors have not been perceived, in an ignorant and thoughtless acquiescence with them; and formerly with more effrontery and harsh proceeding in those inflicting them than at present. From these causes, horses are made scarcer and dearer consequently than they otherwise would be; and a greater number are obliged to be raised for the public supply, and tracts of land must be kept untilled for their support. Men scarcely begin to get used to their horses often, than they are obliged to abandon them. Post-masters and jobbers of horses are struck with astonishment at their prodigious and unaccountable losses, which can, for a great part, be traced to these causes. It is often the case, however, that from a timid or avaricious spirit they are under-horsed, or without a sufficient number for their work, in order to save the expenses of purchase and of keep, which brings on those they have more labour than is consistent with health: they suffer losses in consequence, which further intimidates them; and they progressively get into worse disorder, and sink at last into the most destructive violence and abuse of them, and then we hear complaints made of great losses and ill luck, &c.

In order to adduce proof of the fact of the stiffening and diminution of the foot from the iron shoe, he instituted an experiment of which the details afford the most conclusive evidence. A cast was taken from a mare's foot that had attained her fifth year, and had never been shod; this cast being preserved, it was compared with another cast a twelvemonth after she had been shod; and a cast was made from the same foot, every twelvemonth, during seven years. Satisfactory and demonstrative evidence was thus exhibited of the contraction and ruin of the foot, from the overpowering influence of the iron and nails, the sides of her foot diminishing where the nails were applied, but the foot, at the toe and heel, growing longer where there was liberty, giving to the foot at last a parabolic figure, totally different from the mould and form assigned by nature to the horse's foot, and creating the difficulties and miseries in their going, the true cause of which had been before so ill understood.

The evil does not take place, with equal rapidity, in all feet. This circumstance, perhaps, tended greatly to conceal this now obvious truth from discovery; for some feet are, by nature, so stout and inelastic, that the iron produces less influence upon them; as in the case of cart-horses, and also with the little stiff hard feet of small horses, as ponies and galloways; but on all mischievous effects are produced.

In the blood horse, where the utmost elasticity in all his members is bestowed, and with a concordant elasticity in the hoof itself, the mischief is most rapidly felt; so that it is the blood and saddle horse, or horses of a medium stature, and the most useful in society, that are most injured

by it, and are soonest brought into a crippled state. This, the actual experiment, shows to be more rapid, than any one not closely attentive to the operations of the iron could have believed, for men are accustomed to get rid of their horses when they find the evil; and do not either enter deeply into a consideration of the real cause of it, or impute it to the abuses and erroneous conduct of the smiths.

The sixth year's experiments are concluded with the following remarks.

"Here we quit the further consideration of this experiment, in observing that the ultimate effects of the iron on the feet, especially in such as the shoes are particularly inimical to, are never seen, since they are no sooner, from loss of parts or disfiguration of the feet, rendered unserviceable, or from overexertion, or pain, than they are slaughtered, their supply being very plentiful; that we know not to what condition the foot would at last be reduced.

"Having now exhibited the inimitable beauty and simplicity of design in the structure of the foot of the horse, and its provisions for destroying a too sudden resistance to the weight of the animal on meeting the ground, and disclosed, by actual experiment, proofs of the injurious nature of the shoe in respect to this property; and though much labour and care have attended these elucidations, yet we apprehend our readers will expect from us the consideration of further topics relating to these matters, and about which they may be even more solicitous than about the above illustrations, which were, however, previously necessary properly to understand the nature of these evils. The reader would perhaps be desirous of asking, What

can be done with feet already injured, as to their restoration? and whether we must be obliged to go on with these errors, from the impossibility of removing them? or whether we may partially remove them with those horses whose very utmost work is not required? for it will be readily admitted by us, that to obtain the full measure of work which the horse is capable of giving on the road, some artificial defence is necessary; or whether, by refraining from early shoeing, except with tips, the mischief may be greatly palliated, and we must rest content with that? or if we may look for a total removal of the evil in all cases by shoes on a principle widely different? Time has hardly been sufficient for us to consider and answer all these inquiries; nor do we consider ourselves pledged, in consequence of these discoveries of the defects of the present system, to find a remedy; since it has been much to point out a gross evil, that was scarcely before suspected, and certainly not seen in its true light. We believe, however, that preventive measures may be resorted to, to a great extent, and remove a considerable share of the evil, without much inconvenience; and of the remedial means in part, or perhaps wholly, we can, after much reflection, hold forth promising expectations, and which we believe will not be disappointed." We produce this extract more particularly to show, that Mr. C. did not intend that horses for all kinds of work were to go without defence, as has been often idly and wrongfully imputed to him.

Mr. C. next enumerates all the shoes at present in use, with brief remarks on their nature, and shows that they are all on the same principle, that of being a ring of inflexible iron, restraining the natural operations of the foot, and inducing diseased al-

terations of it; and that what has been said respecting difference of principle in shoeing, has only served to disguise and bewilder the truth.

Next, in a distinct Essay, Mr. C. has unfolded the difficult problem of, "why horses turned to grass with contracted feet, without shoes, do not, in a general way, become sound, but, on the contrary, are more lame and often foundered." This, after a painful series of experiments, and attended with heavy charges, he found to proceed from the interior of the foot suffering during the collapsed or contracted state of the hoof; the elastic plates or leaves of horn for holding the foot to the hoof, running perpendicularly down the inside surface of it, were not only diminished, and in some cases ossified, but the bone itself of the foot, termed by farriers *the coffin bone*, had been impaired, and lost its original form. The dilated crescent figure which nature had assigned it was changed for an oval or parabolic one, produced by the varying impressions of the iron; and a curious structure of plates of bone or scales on the sides of this bone, enlarging its sides, were absorbed from this cause, leaving a rough, uncouth, spongy mass of bone in its room. The consequence is, that if the hoof be ever so much opened, by taking off the shoes and turning the animal to grass, the bone cannot partake of it, or ever again alter its figure: instead of restoration, you obtain disturbance of the foot, and in many cases *founder*, by the bone falling down in the hoof, impressed by the weight of the animal.

To exhibit this the more plainly, the Essay is accompanied with an interesting and novel view of the natural coffin-bone of the horse's foot, and the appearances of the bone, after it has

been altered by the shoeing: the structure of this curious bone is also particularly explained, a portion of which description we cannot forbear to quote.

"On the sides of this bone, where the fibrous structure terminates, a new and most singular organization is seen; since at this part, the bone, enlarging considerably, is thrown into plates or scales, forming an oblong lobe of some extent; and these plates are disposed outwards in almost regular lines, being placed over one another like tiles, or the scales of fishes, but not in contact, having spaces between them. The thin exterior edges of these plates presents numerous sharp points and angles of bone, which, in their general direction, incline backwards towards the heels; thin partitions of bone lie also between these plates and support them, and towards the lower parts of this lobe cause it to assume more the appearance of cells than plates, and which are continued to the underside of the bone, where the depth and increased size of the cells give it a very rough spongeous appearance extending nearly to the heels.

"That this remarkable part of the bone may be distinguished from its other parts, as it appears to have tolerably well defined limits, we have called it the *Patiloba*, or the *Scaly Node* of the coffin-bone, by which term it can at pleasure be separately considered, and will give more correctness and facility of communication on these objects, which cannot but benefit our art.

"It will be expected that we should say something on the uses of this remarkable and unparalleled structure, being unlike any other bone which we have ever seen, and it may be, at least as to the extent to which it is carried, peculiar to the horse; for it is to be remarked, that as he is the noblest animal of his

tribe, and the inferior and meaner members of it having singularly flat-sided hoofs, so they possess a structure of body in conformity with this; for the ass could have no occasion for these perfections of the foot, if to the body was denied the powers for using them: as the superior fulness of make in the horse imparts his graceful movements and attitudes, so also the foot is made in conformity by a more elaborate structure to contribute to these effects. By this enlargement of the sides of the bone, an unusual increase or extension of surface is obtained for the adherence of the *reticulum*, and at a part of the foot where the hoof, dilating under the weight, particularly demands yielding combined with strength; and the bone itself, by being thus formed into thin plates, is also made in a degree elastic; and the *reticulum*, being sunk in the interstices of the plates and in the cells, finds a secure lodgment from the danger of rupture or derangement.

"The *base* or under part of this bone is considerably concave and somewhat polished, with slight asperities or breaks in its surface, for the adherence of the sensitive sole, which appears to be retained however in its place more effectually by the deeper cells dispersed on the sides and heels: small serratures or denticulations of bone surround the very exterior edge, and hold more firmly in their place the membranes enveloping this bone.

"At its posterior part, the coffin-bone presents a semilunar figure, and is on the under-side, and beneath the articulating surfaces, provided with a broad, very deep, angular excavation or cavity, to the superior part of which the ligament which retains the shuttle-bone to the joint is affixed; and dilating more

extensively downwards, this cavity next receives the spreading termination of the perforated tendon or back sinew; the more superficial margin or border of it serves anteriorly for the strong adherence of the ligament in which the point of the internal frog terminates; the remaining edges of the cavity serve for the more firm attachment of the sensitive sole. The above very important termination of the back sinew is, by its lodgment in this recess, removed from casual injuries and from contusion on the foot meeting the ground; it is also defended laterally below by the bars or intorsions of the hoof, and by the *strati-form processes* of the cartilages, but immediately beneath by the softer materials of the internal frog."

The discovery of the actual structure of the internal frog of the horse's foot is next discussed, which, in its general figure, the external coating of horn nearly represents. Of this internal part, Mr. Clark thus speaks.

"A very remarkable construction, which does not appear to have been understood, is found with the internal frog, and which we take the opportunity of relating here, as it appears particularly calculated to defend these dangerous parts from suffering under strong pressure or casual irregularities of the ground

"The mass of elastic material which fills the upward or inward cavity or arch of the horny frog is exteriorly covered by a frame-work or capsule, of a white, tough, dense ligament; and this capsule, in form like the frog, presents three sides, giving the inferior and two lateral surfaces of the frog. Within this ligamentary case or envelopment are formed several plates of tendons, which are disposed horizontally and attach to the sides of the capsule, and have between them a very lax, soft,

glossy, elastic membrane, also attached by short tendons to the surfaces of the above layers, and which, on the frog being cut perpendicularly through, and being pressed upon, projects from between these layers, and is like the caoutchouc, but of less resistance; and in the natural state this elastic membrane appears perfectly white, but assumes with being kept a yellow appearance, and a yellowish semifluid oil then forms about it, which perhaps is the cause of its having been mistaken for actual masses or bags of yellow oil: when seized with the forceps, its membranous nature becomes apparent.

"These transverse layers of ligament appear to give the foundation or principle to the structure of the internal frog; and these ligaments or tendons, in approaching the point of the frog, converge, and are condensed into a stout tendon, holding this part to the anterior edge of the cavity before mentioned of the coffin-bone. These layers of tendon or ligament in passing posteriorly become more numerous, and this structure at the frog-stay becomes doubled (existing on each side of it); and as these ligaments approach the base of the frog, they become more thin and flaccid, and are finally lost in these elastic parts of the heels by forming concentric layers of tendon with others coming from the extremities of the heels, and thus afford the rounded bulbs of the bifurcations of the frog.

"The above singular apparatus of *constrated layers* of ligament appear admirably designed and provided to break the force of violent pressure against the more tender parts above described; and this they appear to do by each layer in succession receiving the force of the stroke and conveying it with diminished impetus to the next above, till it is finally lost or ren-

dered incapable of doing injury. Towards the point of the frog these horizontal ligaments attach to a middle septum of tendon placed upright in the centre of it: and it appears necessary just to state that the capsule containing this apparatus is not, strictly speaking, in contact with the horn of the frog, since the membrane secreting the horn must ever be in that situation; and this *cornifacient* agent, on all occasions, is perhaps a continuation of and peculiar organization of the cuticle. We have observed also that a greater freedom of motion appears in the elastic organization of the heels, for a longitudinal rather than a lateral distension, determining the dilatation or extension, principally towards the base of the frog."

This Essay concludes with some remarks on feet, showing the general law of nature in this respect, and the great importance of a yielding and elastic basis or medium between the ground and the animal.

This bone receives, as a terminating point of the limb, all the weight or exertion of the animal, which is, through the more widely extended hoof, communicated to the ground without much solid resistance, or reaction to the bone; in consequence chiefly of the hoof being rendered yielding by the remarkable inflexion of its extremities, which can spring from the centre, to which they are directed, and afford by their lateral dilatation the non-resistance which in the feet of animals appears universally to obtain. Indeed we discover most clearly on investigation, that to every animal is given a share of elastic yielding in the foot, in order to destroy all jar and resistance reciprocally to the parts of the foot as to the body, and a change of form in the foot takes place according to the weight or exertion brought

upon it. In the elephant, cartilaginous cushions, for this purpose, are seen disposed under the foot; and in the camel, oblong pads; in the ox, this non-resistance to the load is effected by a deep division of the foot to the fetlock joint, thus making of it two members, thereby giving a flexibility that answers the same end. In the horse, a single pad is seen, for of such a nature is the frog; and this yielding property of the foot in him, and his tribe or family, is less perhaps than in any other family of quadrupeds, on account, it would appear, of the difficult combination of properties found in him, *viz.* an extraordinary degree of speed, with a large or heavy body, which to be impelled with effect required bases that should not be too yielding, by which the impulse had been diminished; and hence it is that this property has been nearly overlooked, and the foot treated by the smiths as though this necessary provision and property had in him no existence more than in a mass of wood of the same figure. Also the coffin-bone is more truly suspended in the hoof than resting upon it, on account of the reclining position of the hoof, by which a very large share of it is brought or placed over the bone, which is thus held or suspended by the elastic sutures to it; and this prodigious multiplication of the hoof's internal surface by these sutures secures it amply from the dangers of dislodgment.

The author has subjoined to this Dissertation on the foot of the horse, as naturally connected with the subject, an elaborate Essay, to exhibit (what we should scarcely have believed) that horses were not shod with the modern iron shoe, as late as the fourth century: this he has proved most decisively, and has given with much candour the extracts themselves and quota-

tions from numerous writers of antiquity, from Homer and Xenophon to Vegetius in the fourth century, in a way that can leave little or no doubt on the subject. Mr. Clark has also given us a new and interesting notice of the ancient shoe, or what was employed as a defence, when the worn hoof rendered it necessary; and he has since discovered, in the British Museum, a sculptured Grecian tablet, representing a chariot race, where three out of four horses have the *Hippopedes,* or defences, actually bound on the legs of the horses. Of this tablet it is his intention to present the public with an engraving and more detailed account.

The limits of the present work necessarily preclude any further extract from Mr. Bracy Clark's valuable "Essay on the Foot of the Horse:"—to this work, therefore, we refer our readers, in full confidence that it will amply repay the most attentive perusal; as it will afford him very many interesting particulars of the most interesting animal in existence.

Some further notices relative to the natural history of the horse will now be given.

No animals show more strength and perseverance in travelling than our common road-horses, if not tried beyond their power. Many of them are capable of carrying a full-sized man from fifty to seventy miles a day, for several days successively, if properly fed, and not too much hurried; but when a long journey is intended, the average rate of travelling should not exceed seven miles an hour. We have instances, however, of an extraordinary degree of fleetness in some well-bred road-horses. In the year 1745, the post-master of Stretton rode, on different horses, along the road, to and from London, no less than

two hundred and fifteen miles in eleven hours and a half, which is more than at the rate of eighteen miles an hour; and, in July, 1788, a horse, belonging to a gentleman in London, was trotted, for a wager, thirty miles in an hour and twenty-five minutes, which exceeds twenty-one miles by the hour. The feats of horsemanship performed in this country almost exceed belief. On the 17th of July, 1619, Bernard Calvert, of Andover, rode from Saint George's Church, Southwark, to Dover, when he passed by cutter to Calais, and from Calais back to Dover, and thence rode to Saint George's Church the same day, setting off at three in the morning, and returning at eight in the evening. On April 29th, 1745, Mr. Cooper Thornhill rode two hundred and thirteen miles in eleven hours, thirty-three minutes, and fifty-two seconds. A Mr. Shafto is stated, also, to have rode fifty miles upon ten horses, in one hour. For a further account of these performances, the reader is referred to "Daniel's Rural Sports," vol. i. p. 375, 4to edit.

Though the horse is possessed of strength that might set him above human control, he seldom exerts it to the prejudice of his master. The hunter is delighted with the chase, and the war-horse is inspired with the spirit of his rider.

> The fiery courser, when he hears from far
> The sprightly trumpets, and the shouts of war,
> Pricks up his ears, and trembling with delight,
> Shifts place, and paws, and hopes the promised fight.

The horse evidently receives satisfaction from pleasing and being useful, yet he is not unconscious of injury and injustice. He knows his benefactor, and his enemy, and will sometimes show his sense of both by certain demonstrations. Dennis

Rolle, Esq. the father of the present Lord Rolle, informs us, that a baronet, one of whose hunters had never tired in the longest chase, once encouraged the cruel thought of attempting completely to fatigue him. After a long chase, therefore, he dined, and, again mounting, rode him furiously among the hills. When brought back to the stable, his strength appeared exhausted, and he was scarcely able to walk. The groom, possessed of more feeling than his brutal master, could not refrain from tears, at the sight of such a noble animal thus sunk down. The master, some time after, entered the stable, when the horse made a furious spring upon him, and, had not the groom interfered, would certainly have despatched him.

We have already mentioned, at p. 81, a striking anecdote of affection in a horse for a dog, and of his avenging the cause of his companion. Mr. White furnishes us with one equally extraordinary in his account of a horse's attachment to a fowl.

An intelligent and observant person has assured me, (says Mr. White) that in the former part of his life, keeping but one horse, he happened also, on a time, to have but one solitary hen. These two incongruous animals spent much of their time together, in a lonely orchard, where they saw no creature but each other. By degrees, an apparent regard began to take place between these two sequestered individuals. The fowl would approach the quadruped with notes of complacency, rubbing herself gently against his legs: while the horse would look down with satisfaction, and move with the greatest caution and circumspection, lest he should trample on his diminutive companion. (Nat. Hist. of Selborne, vol. i. p. 330.)

Of the extreme sagacity of the horse, many instances are re-

corded; Mr. Laurence mentions the following. I have many times, (says this author) seen a favourite hackney walking, from her paddock to the stable, through droves of young chicks and ducklings, lifting up her feet, laying her ears, and putting her nose almost to the ground, lest she should tread upon them. The same mare, trotting at full speed, once flew a rod out of her way, that she might not tread upon a child, who was accidentally crossing the road. This was not the effect of starting or shying, to which she was not at all addicted, excepting sometimes from affectation, and when she was in a gay humour, and sought to entertain her rider.

This mare also saved herself and her master, at the Easter hunt, upon Epping forest, whither he had once the curiosity to go: He was riding slowly and very heedlessly up the hill, by the side of a waggon. The mare pricked her ears at a man and horse coming full speed down the hill, exactly in her line of direction; and at their approach hung back, and in an instant, with the dexterity of harlequin, stooped under the tail of the waggon. A horseman behind, going very fast, received the mighty shock, which made the earth tremble. One horse was killed, and the shoulder of the other shattered to pieces.

The ardour of the horse has been well described by SHAKSPEARE, in one of the finest passages of old English poetry. It is from the beautiful, but neglected, poem of "Venus and Adonis."

> Imperiously he leaps, he neighs, he bounds,
> And now his woven girts he breaks asunder;
> The bearing earth with his hard hoof he wounds,
> Whose hollow womb resounds like heaven's thunder:

The iron bit he crushes 'tween his teeth,
Controlling what he was controlled with.

His ears up-pricked, his braided hanging mane
Upon his compassed crest, now stands on end:
His nostrils drink the air, and forth again
As from a furnace, vapours doth he lend:
His eye, which glisters scornfully like fire,
Shews his hot courage, and his high desire.

Sometimes he trots, as if he told the steps,
With gentle majesty, and modest pride:
Anon he rears upright, curvets and leaps,
As who should say, lo! thus my strength is tried;
And thus I do to captivate the eye
Of the fair breeder that is standing by.

What recketh he his rider's angry stir,
His flatt'ring holla, or his stand, I say?
What cares he now for curb, or pricking spur?
For rich caparisons, or trappings gay?
He sees his love, and nothing else he sees,
For nothing else with his proud sight agrees.

A horse, if well managed, will live forty or fifty years. One belonging to a field officer, in 1715, at the time of the rebellion in Scotland, died only in the year 1760; and we might produce similar instances of longevity, though the general period of a horse's life is between twenty and twenty-five years.

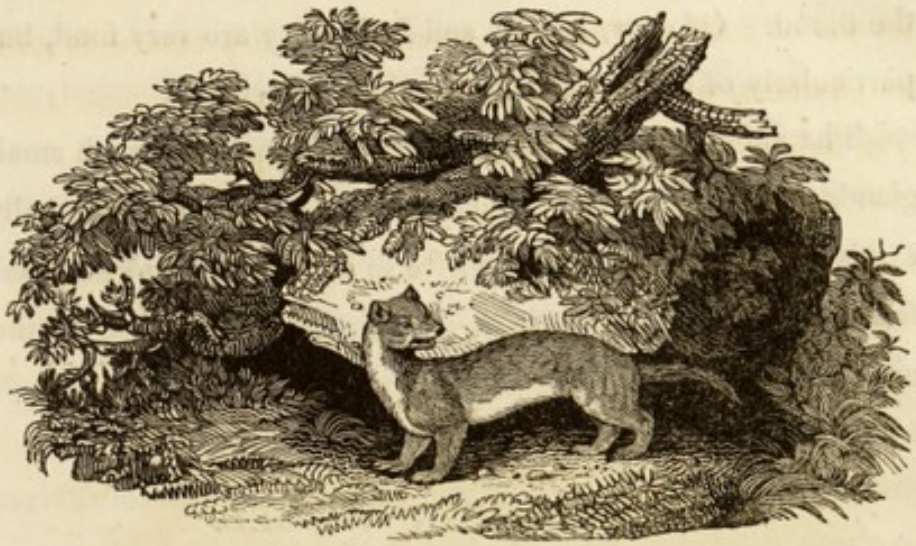
The mare goes two hundred and ninety days with young: she suckles her foal with fondness, and defends it from injury with a mild, but firm resolution.

The horse is subject to various diseases, but these more frequently arise from ill treatment than from nature. Fortunately, his cure is now taken out of the hands of ignorant farriers, and

assigned to men who have studied his anatomy and his constitution.

Horse flesh is eaten in the various countries of Asia, and it is a peculiar favourite with the Calmuc Tartars. Dr. Anderson recommends the fattening of horses for food, in Great Britain, instead of cattle! The skin of the horse, when tanned, is made into harness, and often, under the name of cordovan, into shoes. The hair is employed for several useful purposes.





THE WEASEL.

Active and enterprising, though small in size, the weasel is distinguished from all other carnivorous animals by its slender and lengthened body. They are so diminutive and flexible as easily to wind into the crevices of rocks, or burrows in the ground, in search of rats, moles, and other small quadrupeds. The loose articulations of the spine also assist them in this pursuit. The weasel is endowed with strength, courage, and ferocity, and is also very cunning and sagacious.

The prey of the weasel being precarious, the animal can subsist for a long time without food. It immediately kills every thing within its reach, and does not begin to satisfy the cravings of hunger till it has sucked the blood of its victims.

The English species of the weasel ascend trees and high walls after their prey. In the neighbourhood of farm-yards, in houses where poultry and pigeons are kept, and among game, the weasel is particularly destructive, often killing a much greater number than it eats, merely for the purpose of sucking the blood. Of eggs, honey, and fruit, they are very fond, but particularly of the former.

The animals of the weasel kind are all furnished with small glands near the anus, from which an unctuous matter continually exudes; this scent is very offensive in the weasel, polecat, and ferret, but affords an agreeable perfume when coming from the civet cat, martin, and pine-weasel.

THE COMMON WEASEL.

This little animal (viverra vulgaris) has much elegance of aspect, and its motions are light and easy. Its length is about seven inches, exclusive of the tail, which measures near two inches and a half. Its colour is a pale reddish or yellowish brown, and beneath it is entirely white; but below the corners of the mouth on each side is a brown spot: the ears are small and rounded, and the eyes are black. It is generally found in the cavities under roots of trees, as well as of banks near rivulets.

The motion of the weasel on the ground consists of unequal and sudden springs. Whenever it ranges abroad, it is observed to be very watchful to see that no attack is threatened. In robbing a hen-roost, this animal first singles out the young chickens; and should there be any eggs, he sucks them with

the greatest avidity. In return for these depredations, however, the weasel renders itself useful to the farmer by destroying rats, mice, and other vermin. He also goes in pursuit of moles.

To the hare and the rabbit the weasel is a determined enemy. It follows and terrifies its prey into a state of absolute imbecility, when the hare gives itself up without resistance, making at the same time piteous outcries. The weasel seizes its victim near the head; the bite is mortal, although the wound is so small, that the entrance of the teeth is scarcely perceptible; a hare or rabbit bit in this manner is never known to recover, but lingers for some time and dies.

Of the power of the weasel's bite Mr. Daniel mentions a curious instance. An eagle having pounced upon a weasel, mounted into the air with it, and was soon afterwards observed to be in great distress; the little animal had extricated itself so much from the eagle's hold, as to be able to fasten upon the throat, which presently brought the eagle to the ground and gave the weasel an opportunity of escaping.

The weasel's appetite for animal food is insatiable, and it will never touch the flesh it has procured till it begins to putrefy.

Of the havoc committed by the weasel among rabbits, Mr. Bingley (British Quadrupeds, p. 175), gives a most remarkable instance. In the warren at Wakefield Outwood, in Yorkshire, a weasel was one day observed in the act of dragging along a young rabbit, which it had just killed. The little animal was watched to a burrow, the repository of its plunder; and the mouth was carefully stopped up till a spade could be brought to dig it out. On turning up the earth there were found lodged,

at the bottom of the hole, no fewer than fourteen couple of small rabbits, all of which had evidently been conveyed thither by this voracious and destructive invader. The weasel may be said to play the tiger among the smaller murine tribes; eighty field mice having been found in one weasel's nest.

Buffon, in his first description of the weasel, affirmed that it was a perfectly untameable animal; but he afterwards received very authentic accounts of weasels which had been so completely tamed as to exhibit every mark of attachment to their benefactors, and to be as familiar as a cat or a lap-dog. An account of this kind is given by one of his correspondents in the seventh supplemental volume of his Natural History, which amply confirms the truth of this; and, among other curious particulars, it is observed, that, when asleep, the muscles of this little animal are in a state of extreme flaccidity, so that it may be taken up by the head and swung backwards and forwards, in the manner of a pendulum, several times before it wakes.

Dr. Shaw, in his splendid and accurate work "the General Zoology," (vol. I. part II. p. 422), quotes a very pleasing account of the education and manners of a weasel, which Mademoiselle de Laistre had taken under her protection. This lady affirms, that, far from having any predilection for meat in a state of putrefaction, it, on the contrary, always delighted most in that which was perfectly fresh For the two or three first days it was fed with warm milk; and afterwards with veal, beef, or mutton. It frequently eat from her hand, and seemed to be more delighted with this manner of feeding than any other. It was very fond of milk. "If I pour (says

Mlle. de Laistre) some milk into my hand, it will drink a good deal, but if I have not this complaisance it will scarce drink a drop. When it is satisfied it generally goes to sleep: my chamber is the place of its residence, and I have found a method of dispelling its strong smell by perfumes: by day it sleeps in a quilt, into which it gets by an unsewn place on the edge, which it has discovered. By night it is kept in a wired box or cage, which it always enters with reluctance, and leaves with pleasure. If it be set at liberty before my time of rising, after a thousand little playful tricks, it gets into bed, and goes to sleep in my hand, or on my bosom. If I am up first, it spends a full half hour in caressing me, playing with my fingers like a little dog, jumping on my head, on my neck, running round my arms and body, with a lightness and elegance which I never beheld in any other animal. If I present my hands, at the distance of three feet, it jumps into them without ever missing. It shews a great deal of finesse and cunning in order to compass its ends, and seems to disobey certain prohibitions merely through frolic. During all its actions it seems to be solicitous to divert and to be noticed, looking at every jump, and at every turn, in order to see whether you observe it or not; and if no notice be taken of its gambols, it ceases them immediately, and betakes itself to sleep; and even when most asleep, if you wake it, it instantly resumes its gaiety, and frolics about in as sprightly a manner as before. It never shews any ill-humour, unless when confined, or teazed too much, in which case it expresses its displeasure by a sort of murmur, very different from that which it utters when pleased. In the midst of twenty people this little animal distinguishes my voice, seeks me out,

and springs over every body to come at me. His play with me is the most lively and caressing; with his two little paws he pats me on the chin with an air and a manner expressive of delight; this, and a thousand other preferences, shew that his attachment to me is real. When he sees me dressed for going out, he will not leave me, and it is not without some trouble that I can disengage myself from him; he then hides himself behind a cabinet, near the door, and jumps upon me as I pass with so much celerity that I frequently can scarce see him.

"He seems to resemble a squirrel in vivacity, agility, voice, and manner of murmuring. During the summer he squeaks, and runs about all night long; but since the commencement of the cold weather I have not observed this. Sometimes, when the sun shines, while he is playing on the bed, he turns and tumbles about and murmurs for a while.

"From his delight in drinking milk out of my hand, into which I pour a very little at a time, and his custom of sipping the little drops and edges of the fluid, it should seem that he drinks dew in the same manner. He very seldom drinks water, and that only with great caution, and in defect of milk; and then seems only to refresh his tongue once or twice: he even seems to be afraid of water. During the hot weather it rained a good deal. I presented to him some rain-water in a dish, and endeavoured to make him go into it, but could not succeed. I then wetted a piece of linen cloth in it, and put it near him, when he rolled upon it with extreme delight.

"One singularity in this charming animal is his curiosity; it being impossible to open a drawer or a box, or even to look at a paper, but the little creature will examine it also. If he

gets into any place where I am afraid of permitting him to stay, I take a paper or a book, and look attentively at it; when he immediately runs upon my hand, and surveys with an air of curiosity whatever I happen to hold. I must farther observe, that he plays with a young cat and dog, both of some size, getting about their necks, backs, and paws, without their doing him the least injury."

We shall close this interesting narrative with part of an elegy on the death of a tame weasel, from Strozza, in the elegant version of the late Dr. Shaw.

Loving and loved, thy master's grief!
  Thou could'st th' uncounted hours beguile,
And nibbling at his fingers soft
  Watch anxious for th' approving smile:
Or, stretching forth the playful foot,
  Around in wanton gambols rove,
Or gently sip the rosy lip,
  And in light murmurs speak thy love.

The female weasel generally brings forth her young in some outhouse or decayed tree in the spring, and she constructs for them a nest of straw, leaves, and similar materials. The number of young at a litter is from four to six. They are born blind, but very soon gain sufficient to follow their dam, and assist in her excursions.

THE STOAT.

The stoat or ermine (viverra erminea) much resembles the weasel in its general appearance as well as in colour, but is

considerably larger; the body, exclusive of the tail, measuring ten inches, and the tail five and a half: the tip of the tail is also constantly black, whatever may be the gradation or cast of colour on the body; for the stoat, in the Highlands, and in some parts of the north of England, becomes milk-white, and is then called the white weasel; and instances are not very uncommon in which it appears parti-coloured, or white in some parts, and brown in others, the change of colour not having been completed. Its smell is strong and unpleasant.

Such is the agility of the stoat, that it will fairly run down a rabbit. Those who live in the neighbourhood of warrens may often see a stoat pursuing a rabbit by the scent, the animal hunting with its nose to the ground like a spaniel. When the rabbit is tired out, its enemy makes a sudden spring, and fixes upon the back of its prey, which it soon despatches by sucking its blood.

The stoat, like the weasel, for which indeed it is often taken, heaps together a quantity of food, which it will not touch till it be in a state of complete putrefaction. Its depredations among game are well known. The following well-authenticated instance will afford us some idea of the extent of the stoat's industry.

A gentleman in the neighbourhood of Felton shot a stoat, but the animal escaping into a hole in an old stone wall, he was induced to explore the place of its retreat, when the first victims he met with were a couple of well-grown leverets, unmutilated; a little further on were two young partridges also untouched, and a pheasant's egg unbroken; beyond these were found the heads of two other leverets, and at the extremity of

the hole lay the little marauder himself, dead. In what manner it had conveyed the pheasant's egg to its haunt, without breaking, it is difficult to conceive.

In England the fur of the stoat is of little value, having neither the thickness, the closeness, nor the whiteness of those which come from Siberia. In Norway (says Pontoppidan) the ermine lives among the rocks; his skin is white, except the tail, which is tipped with black. The furs of Norway and Lapland preserve their whiteness better than those of Russia, which soon acquire a yellowish cast; and, upon this account, the former are in greater request, even at St. Petersburgh. The ermine catches mice like a cat, and when practicable, carries off his prey. He is peculiarly fond of eggs, and when the sea is calm he swims over to the islands which lie near the coast of Norway, where there are vast quantities of sea-fowls.

It is alleged (continues the same author) that when the female brings forth on an island, she conducts her young to the continent, upon a piece of wood, piloting it with her snout. This animal, although small, kills those of a much larger size, as the reindeer and bear. He jumps into one of their ears when they are asleep, and adheres so fast by his teeth that the creatures cannot disengage him. He also surprises eagles and heath-cocks by fixing on them, and never quitting them, even when they mount in the air, until the loss of blood makes them fall down.

To destroy these worst of all four-footed vermin, so injurious to game in its infant state, Mr. Daniel recommends the following method. Provide small square-made steel traps, with a small chain and iron peg to fix them down; get two drachms

of musk; shoot some small birds, and dip the tails of these birds in the musk; tie one on the plate of each trap; and set it in the hedges, or where it is suspected they may come: this will soon reduce the number should it be ever so considerable. If no musk can be obtained immediately, the trap should be baited with part of a rabbit; and it should be remembered that this bait cannot be too stale.

The stoat is similar in its manner to the weasel, living in hollows under the roots of trees, in banks, near rivulets, &c. preying on all manner of smaller animals. It does not, however, like the weasel, visit houses, but confines itself to the fields.

THE COMMON MARTIN.

THE martin (viverra foina) is an animal of a highly elegant appearance, and is not uncommon in many of the southern parts of Great Britain and Ireland. It usually takes up its abode in some decayed tree; but in mountainous countries, as in Wales, it resides only among rocks.

The general length of the martin from nose to tail is about a foot and a half, and the tail is ten inches long. This animal is of a blackish tawny colour, with a white throat; and the belly is of a dusky brown; the tail is bushy or full of hair, and of a darker colour than the other parts: the ears are moderately large and rounded, and the eyes lively.

The martin lives in the woods, and in winter very often shelters itself in magpies' nests, breeds in the hollows of trees, and brings from four to six young ones at a time. The female

has but a small quantity of milk, but she compensates for this deficiency by bringing home eggs and live birds to her offspring. When the young are able to quit their nest, the dam conducts them through the woods, and inures them to a life of carnage and plunder.

The martin is easily tamed, if taken young, and it will prove extremely playful and good humoured. Its attachment, however, is not to be relied on, if it get loose, for it will immediately take advantage of its liberty, and retire to its natural haunts in the woods. A farmer in the parish of Terling, in Essex, was famous for taming this animal, and had seldom less than two. Some years since (Mr. Daniel observes) a martin used to run tame about the kitchen of the Bald-faced Stag inn, on Epping Forest. (Rural Sports, i. p. 503.)

M. Buffon possessed a martin which he took very young, and tamed. It was very fond of honey, and preferred hempseed to any other grain. It drank frequently. It slept sometimes for two days without intermission; but at other times, on the contrary, would keep entirely awake for that or a longer period. Before it went to sleep, it always coiled itself up into a round position, and covered its head with its tail. While awake it was perpetually in motion, and sprang with eagerness upon mice or poultry that came within reach of its chain.

Poultry, game, and small birds form the common food of the martin; it will eat mice, rats, and moles, and is said to feed also on grain, and to be extremely fond of honey. The martin has a great antipathy to the feline race, and will attack and vanquish the wild cat, though greatly its superior in point

of size and strength. It generally goes out in the dusk of the evening, or during the night, in search of its prey.

The scent of the martin is very sweet to hounds, and it is the best animal to enter young fox-hounds at. The martin, by running through the thickest bushes it can find, teaches hounds to run cover, which is of infinite service to them. When closely pursued it climbs a tree, and its agility is astonishing, for though it falls frequently from a tree into the midst of a pack of hounds, each intent on catching it, the instances are very few of a martin being caught by them in that situation. The martin is a determined enemy to the pheasant, and constantly attacks them while at roost. It compensates for this, however, by destroying a great quantity of rats, mice, moles, and other small vermin.

Various modes are adopted to lessen the depredations of this animal. Some perfer the box-trap (such as is used in warrens), which should be baited with a bird in the centre, and the feathers strewed through the inside of the trap, from one end to the other. The steel trap, baited with a piece of a pheasant or wood-pigeon, will generally be successful. Mr. Daniel (to whom we are indebted for some interesting particulars respecting the martin), thinks the following the best way of taking the animal in a park or cover paled in. As the martins constantly run along the pales and posts to dry themselves in the morning, a groove should be cut in some of the posts or gate-posts, where they run, sufficient to contain a strong hawk or rat trap; the trap must be set in this groove without a bait, and in leaping upon the place they are sure to be taken. A

small chain should be fixed to the trap, and fastened to the post.

The skin and excrements of this animal have an agreeable, musky scent, and are free from that disgusting rankness which distinguishes the other species of this genus, as the polecat. The fur is valuable, and much used to trim the gowns of aldermen and other magistrates. In some countries, the flesh of the martin is considered a palatable food.

THE PINE-MARTIN.

The pine-martin (viverra martes) so nearly resembles the common martin, that many writers have considered them as merely varieties of the same species. The colour of the hair on the neck and breast, which in the martin is white, and in the pine-martin yellow, is the only characteristic that can be depended upon. In the pine-martin the fur of the upper parts of the body is more dark than that of the common martin, but the lustre of the latter is by much the more brilliant, and its head is rather longer than that of the pine-martin.

It is much less frequent than the common martin, and confines itself altogether to the woods and fields, not visiting the habitations of man. The pine-martin is said often to usurp the nest of the squirrel as well as of the buzzard, in order to breed in, and sometimes dislodges the woodpeckers from their holes for the same purpose. It is chiefly found in the woody and thinly inhabited districts of Wales and Scotland, and occasionally in some of the northern counties of England. The pine-

martin produces seven or eight young at a birth; though Buffon reduces this number to three or four.

The pine-martin issues from its retreat at night in search of food, and, like the common martin, devours great quantities of squirrels, hares, and mice. When stimulated by long abstinence, it will sometimes fasten upon a lamb or sheep; and if it meet with the wild cat, it is sure to combat and vanquish this ferocious animal.

Instances are produced of pine-martins being rendered sufficiently docile to walk about the house, and to associate with a dog, making this animal its companion, and playing with it as cats are sometimes accustomed to do.

The fur of the pine-martin is considered of a superior quality to that of the former species, and the skins form a great article of commerce: those which are found about the region of Mount Caucasus are esteemed finer than any others: in these the throat is of an orange colour. The part of the fur most in estimation is that which extends along the back, from the neck to the very extremity of the tail. Pine-martins are found in the greatest abundance in the northern districts of America.

THE POLECAT.

The polecat (viverra putorius), unlike the animal we have just described, seeks with confidence the habitations of man. He even mounts the roofs of our houses, and resides in the corners of barns and outhouses, whence he issues, under the

cover of night, to commit his depredations on the eggs and poultry of the farm-yard. He makes less noise, but is more mischievous than the martin. The activity of the polecat is surprising, and when preparing to take a spring, by arching its back, the animal greatly increases the projectile force of its body.

The general length of the polecat is seventeen inches, exclusive of the tail, which measures about six inches. Its colour is an extremely deep blackish brown, with a tawny cast, slightly intermixed. The ears are edged with white, and the space round the muzzle is also whitish.

The polecat commonly forms itself a subterraneous retreat, sometimes beneath the roots of large trees, and sometimes under hay-ricks, and in barns. It preys indiscriminately on the smaller animals, and is very destructive to poultry: it is also, like the ferret, a cruel enemy to rabbits, which it destroys in the same manner as the weasel, stoat, and martin. It steals into barns, pigeon-houses, and other buildings, where it occasionally commits great havoc; biting off the heads of fowls and pigeons, and then carrying them away to its retreat, and sometimes it carries off the heads alone. During the summer, however, it principally frequents rabbit-warrens, or the hollow trunks of trees, and prowls about in quest of young birds, rats, field mice, and other prey. According to Buffon, a single family of polecats is sufficient to destroy a whole warren of rabbits.

The polecat is very fond of milk, and will visit the dairy in order to indulge in this article: it has been known to attack bee-hives in the winter season, and to feed on the honey.

This animal also preys occasionally on fish: of which a curious instance is recorded in Mr. Bewick's History of Quadrupeds. During a severe storm, one of these animals was traced in the snow from the side of a rivulet to its hole, at some distance from it: as it was observed to have made frequent trips, and as other marks were to be seen in the snow which could not easily be accounted for, it was thought a matter worthy of more diligent inquiry; its hole was accordingly examined; the animal taken; and eleven fine eels were discovered to be the fruits of its nocturnal excursions; the unusual marks in the snow having been made by the motion of the eels while dragged along in the animal's mouth. This circumstance, indeed, had already been noted by Aldrovandus and Johnston; the former assures us that the polecat will take up its residence in the hollow banks of rivulets, in order to lie in wait for and prey upon fish.

The polecat breeds in the spring, and produces three or four at a birth, which she is said to suckle but for a short time, using them early to suck the blood of the animals which she brings to them, as well as eggs, and other food, which she obtains in her predatory excursions.

As the destructive nature of this animal renders every precaution necessary against its attacks, we shall transcribe from Mr. Daniel's "Rural Sports," (vol. i. p. 506) the most approved method of taking the polecat, as it is used by the most experienced warreners. This plan will also be equally efficacious in securing the wild cat.

Box traps must be set in the bottom of ditches, or under walls or pales, with the ends of the traps fenced up, for four

or five yards aslant, and two or three yards wide at the entrance, with earth, bushes, or broken pales, so that the vermin shall not pass without entering the traps. When the traps are so placed, a trail of rabbit's paunches should be drawn from one trap to another, and the baits are red herrings, half broiled. Each end of the trap is to be rubbed with them, and a part of the herring is to be afterwards hung upon the nail, over the bridges of the traps. A thin bag, sufficiently large to admit one end of the trap, is to be provided, and slipt over it when any of the traps are sprung, and by rattling at the other end of the trap, the creature will spring into the bag; for, without this precaution, if it be a wild cat, the moment the light is admitted it will fly in the face of the person opening it. By having both ends of the box-traps painted white, and rubbed over with the entrails of any animal, the hares will be deterred from entering, at the same time it will allure the vermin to go into the traps. This mode will cause great destruction among them.

The polecat has been known to breed with the ferret, and it is said to be a practice with warreners, who keep these animals, to procure a mixed breed from time to time, which are of a colour between the ferret and the polecat, or of a dingy yellowish brown.

The smell of the polecat is proverbially fetid, being furnished, like several others of the weasel tribe, with certain receptacles which secrete a thickish fluid of a peculiarly strong and offensive odour: this, when the animal is heated or irritated, is smelt at a considerable distance. The fur, however, is beau-

tiful, and the skin, when properly dressed, is numbered among the commercial furs, and used for tippets, and other articles of dress. It is said also, that the furriers endeavour to obtain skins taken from such animals as have been killed during the winter, as being far less fetid than those killed in the spring and summer.





THE HARE.

The hare is one of the most innocent and the most timid of all quadrupeds. If disturbed, when feeding, it flies at the slightest alarm; but when seated in its form, will allow itself to be approached so near as to be reached by a stick, seeming to be fascinated as it were by fear; and instead of endeavouring to fly, continues to squat immovable, with its eyes fixed on its enemy. It is necessary, however, in order to conduct this manœuvre, to approach in a gradual and circling manner.

The fore legs of the hare (lepus timidus) being the shortest, it always runs swifter up hill, than on even ground; and, therefore, when pursued, it generally takes to rising grounds. It frequently keeps all day in its form, and only goes abroad to

feed by night. Its eyes are so prominent, that it sees behind as well as before; and if disturbed, after various doublings, it will return to the same place whence it set out.

Hares breed several times in the year; the female suckles her young about three weeks, and then leaves them to provide for themselves.

They are supposed to live about seven years, and the males reach a greater degree of longevity than the females. They pass their days in solitude and silence, except that they occasionally assemble by moonlight, and sport together, when they think themselves safe from annoyance. But a falling leaf disturbs them, and instead of seeking security from union, they scamper off in different directions. Their pace is a kind of gallop, or quick succession of leaps; and they are so extremely swift, and possess so many arts of eluding pursuit, that they often escape their enemies. Yet, generally, we are constrained to say with the poet,

> —— vain its best precaution: tho' she sits
> Concealed with folded ears, unsleeping eyes,
> By nature raised to take th' horizon in;
> And head concealed between her hairy feet,
> In act to spring away. The scented dew
> Betrays her early labyrinth; and deep
> In scattered sullen openings, far behind,
> With ev'ry breeze, she hears the coming storm;
> But, nearer and more frequent, as it leads
> The sighing gale, she springs amazed.

The hare is preyed upon by foxes, wolves, eagles, hawks, and kites, which, together with the more destructive pursuits

THE HARE.

of mankind, contribute to thin the number of these animals, which, from their prolific nature, would continue to multiply to the most extravagant degree. A Suffolk gentleman, in 1798, was obliged to destroy his hares, near some new plantations, and the amount of what were known to have fallen victims was one thousand and eighty-two. In some districts on the continent, these animals are very numerous. In two days shooting at a chateau in Bohemia, in the year 1788, there were nearly eleven hundred hares killed.

Such is the swiftness of the hare that it has been known to run four miles in twelve minutes, and to support a race of twenty miles for two hours. The voice of a hare is never heard, except when it is seized or wounded, and then it resembles very nearly the cry of an infant. It sometimes becomes quite white, in severe winters.

The hare is not destitute of docility, and has frequently been kept in the house and rendered very familiar. It has been known to keep company with a greyhound and a spaniel, and to sleep on the same hearth with them. Mr. White mentions an instance of a leveret being suckled by a cat.

The most successful attempt in taming hares was made by the amiable Cowper, who domesticated three of these interesting animals. His own account of the circumstance, though somewhat long, is so extremely pleasing, and communicates so much useful information to those who may be inclined to follow the example of the poet, that we cannot withhold it from our readers; who may, perhaps, say with Cowper of this playful animal—

I kept him for his humour's sake;
For he would oft beguile
My heart of thoughts that made it ache,
And force me to a smile.

The poet undertook the care of three young leverets, which, though all males, he distinguished by the names of Puss, Tiney, and Bess. Each had a separate apartment. "Puss (says Cowper[1]) grew presently familiar, would leap into my lap, raise himself upon his hinder feet, and bite the hair from my temples. He would suffer me to take him up and to carry him about in my arms, and has more than once fallen fast asleep upon my knee. He was ill three days, during which time I nursed him, kept him apart from his fellows that they might not molest him (for, like many other wild animals, they persecute one of their own species that is sick), and, by constant care, and trying him with a variety of herbs, restored him to perfect health. No creature could be more grateful than my patient after his recovery; a sentiment which he most significantly expressed, by licking my hand, first the back of it, then the palm, then every finger separately, then between all the fingers, as if anxious to leave no part of it unsaluted, a ceremony which he never performed but once again upon a similar occasion. Finding him extremely tractable, I made it my custom to carry him always after breakfast into the garden, where he hid himself generally under the leaves of a cucumber vine, sleeping or chewing the cud till evening; in the leaves also of that vine he found a

[1] This interesting narrative first appeared in the Gentleman's Magazine for June, 1784 (Vol. LIV. p. 413), from which we copy it.

favourite repast. I had not long habituated him to this taste of liberty, before he began to be impatient for the return of the time when he might enjoy it. He would invite me to the garden by drumming upon my knee, and by a look of such expression as it was not possible to misinterpret. If this rhetoric did not immediately succeed, he would take the skirt of my coat between his teeth, and pull at it with all his force. Thus Puss might be said to be perfectly tamed, the shyness of his nature was done away, and on the whole it was visible, by many symptoms which I have not room to enumerate, that he was happier in human society than when shut up with his natural companions.

"Not so Tiney. Upon him the kindest treatment had not the least effect. He too was sick, and in his sickness had an equal share of my attention; but if, after his recovery, I took the liberty to stroke him, he would grunt, strike with his fore feet, spring forward and bite. He was, however, very entertaining in his way; even his surliness was matter of mirth, and in his play he preserved such an air of gravity, and performed his feats with such a solemnity of manner, that in him too I had an agreeable companion.

"Bess, who died soon after he was full grown, and whose death was occasioned by his being turned into his box, which had been washed, while it was yet damp, was a hare of great humour and drollery. Puss was tamed by gentle usage; Tiney was not to be tamed at all; and Bess had a courage and confidence that made him tame from the beginning. I always admitted them into the parlour after supper, when the carpet affording their feet a firm hold, they would frisk and bound and

play a thousand gambols, in which Bess, being remarkably strong and fearless, was always superior to the rest, and proved himself the Vestris of the party. One evening the cat being in the room had the hardiness to pat Bess upon the cheek, an indignity which he resented by drumming upon her back with such violence, that the cat was happy to escape from under his paws and hide herself.

"You observe, sir, that I describe these animals as having each a character of his own. Such they were in fact, and their countenances were so expressive of that character, that, when I looked only on the face of either, I immediately knew which it was. It is said, that a shepherd, however numerous his flock, soon becomes so familiar with their features, that he can by that indication only distinguish each from all the rest, and yet to a common observer the difference is hardly perceptible. I doubt not that the same discrimination in the cast of countenances would be discoverable in hares, and am persuaded that among a thousand of them no two could be found exactly similar; a circumstance little suspected by those who have not had opportunity to observe it. These creatures have a singular sagacity in discovering the minutest alteration that is made in the place to which they are accustomed, and instantly apply their nose to the examination of a new object. A small hole being burnt in the carpet, it was mended with a patch, and that patch in a moment underwent the strictest scrutiny. They seem too to be very much directed by the smell in the choice of their favourites: to some persons, though they saw them daily, they could never be reconciled, and would even scream when they attempted to touch them;

but a miller coming in, engaged their affections at once; his powdered coat had charms that were irresistible. You will not wonder, sir, that my intimate acquaintance with these specimens of the kind has taught me to hold the sportsman's amusement in abhorrence; he little knows what amiable creatures he persecutes, of what gratitude they are capable, how cheerful they are in their spirits, what enjoyment they have of life, and that, impressed as they seem with a peculiar dread of man, it is only because man gives them peculiar cause for it.

"That I may not be tedious, I will just give you a short summary of those articles of diet that suit them best, and then retire to make room for some more important correspondent.

"I take it to be a general opinion that they graze, but it is an erroneous one, at least grass is not their staple; they seem rather to use it medicinally, soon quitting it for leaves of almost any kind. Sowthistle, dent-de-lion, and lettuce are their favourite vegetables, especially the last. I discovered by accident that fine white sand is in great estimation with them; I suppose as a digestive. It happened that I was cleaning a birdcage while the hares were with me; I placed a pot filled with such sand upon the floor, to which being at once directed by a strong instinct, they devoured it voraciously; since that time I have generally taken care to see them well supplied with it. They account green corn a delicacy, both blade and stalk, but the ear they seldom eat; straw of any kind, especially wheat-straw, is another of their dainties; they will feed greedily upon oats, but if furnished with clean straw never want them;

it serves them also for a bed, and, if shaken up daily, will be kept sweet and dry for a considerable time. They do not indeed require aromatic herbs, but will eat a small quantity of them with great relish, and are particularly fond of the plant called musk: they seem to resemble sheep in this, that, if their pastures be too succulent, they are very subject to the rot; to prevent which, I always made bread their principal nourishment, and filling a pan with it cut into small squares, placed it every evening in their chambers, for they feed only at evening and in the night; during the winter, when vegetables are not to be got, I mingled this mess of bread with shreds of carrot, adding to it the rind of apples cut extremely thin; for though they are fond of the paring, the apple itself disgusts them. These, however, not being a sufficient substitute for the juice of summer herbs, they must at this time be supplied with water; but so placed, that they cannot overset it into their beds. I must not omit, that occasionally they are much pleased with twigs of hawthorn and of the common briar, eating even the very wood when it is of considerable thickness.

"Bess, I have said, died young; Tiney lived to be nine years old, and died at last, I have reason to think, of some hurt in his loins by a fall. Puss is still living, and has just completed his tenth year, discovering no signs of decay, nor even of age, except that he is grown more discreet and less frolicksome than he was. I cannot conclude, sir, without informing you that I have lately introduced a dog to his acquaintance, a spaniel that had never seen a hare to a hare that had never seen a spaniel. I did it with great caution, but there was no real need of it.

Puss discovered no token of fear, nor Marquis the least symptom of hostility. There is, therefore, it should seem, no natural antipathy between the dog and hare, but the pursuit of the one occasions the flight of the other, and the dog pursues because he is trained to it: they eat bread at the same time out of the same hand, and are in all respects sociable and friendly.

Yours, &c.

W. C.

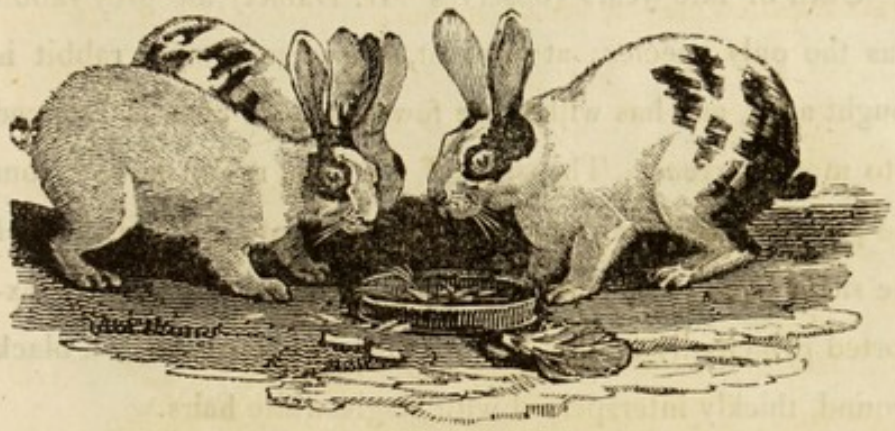
"P.S. I should not do complete justice to my subject, did I not add, that they have no ill scent belonging to them; that they are indefatigably nice in keeping themselves clean, for which purpose nature has furnished them with a brush under each foot; and that they are never infested by any vermin."

After Mr. Cowper's death, the following memorandum was found among his papers:—"Tuesday, March 9, 1786. This day died poor Puss, aged eleven years, eleven months. He died between twelve and one at noon, of mere old age, and apparently without pain." Upon this hare Mr. Cowper wrote a very elegant Latin epitaph, which may be seen in his "Poems," together with one in English, as remarkable for its simplicity, as for the poet's usual beautiful felicity of expression. Beattie has written a pretty little poem, entitled "The Hares."

The fur of the hare is employed largely in the manufacture of hats. Its flesh was esteemed a delicacy among the Romans, but forbidden by the early natives of Britain; and is now prohibited by the Jewish and Mohammedan laws.

The varying hare (lepus variabilis), according to Mr. Pennant, inhabits the summits of the Highland mountains. They exchange their grey coat for a white one, about the month of September, and become again grey in April. In Siberia and Russia they are found in great abundance, and flocks of five or six hundred may be seen together.





THE RABBIT.

The rabbit (lepus cuniculus) was not originally a native of Britain, but was introduced from other countries. Its general residence is in dry, chalky, or gravelly soils. It bears a very strong resemblance to the hare, but is considerably smaller, and its fore feet are furnished with longer and sharper claws in proportion, thus enabling it to burrow in the ground, and to form convenient retreats, in which it conceals itself by day, and like the hare comes out chiefly by night, and during the early part of the morning to feed.

Rabbits are most plentiful in Lincolnshire, Norfolk, Suffolk, and Cambridgeshire, whence immense numbers are brought for the supply of the London market. In Yorkshire there are

many warrens, and the skins of the rabbits are in great request for the hat manufactories of London and Manchester. The flesh of the rabbit is best when the fields which surround the covers present a choice of food, which is not the case with warrens.

Until of late years (observes Mr. Daniel) the grey rabbit was the only species; at present, the silver haired rabbit is sought after, and has within the few last years been introduced into most warrens. The skin of the grey rabbit is cut from the pelt, as a material for the manufacture of hats; but that of the silver haired one is dressed as fur, which, it is said, is exported principally to the East Indies. The colour is a black ground, thickly interspersed with single white hairs.

The rabbit lives to the age of eight or nine years, and goes with young about thirty days. It is so prolific an animal, that it has been known to breed seven times in a year, and to produce no less than eight young at each time. Rabbits will breed at six months old, and supposing that they breed seven times annually, and have five young ones each time, and that three of each kindle are females, the increase in four years would amount to the enormous number of four hundred and seventy-eight thousand and sixty-two!

In consequence of the male's unnatural dislike to its offspring, the doe frequently kindles out of the warren. She scratches a small burrow, about two feet deep, where she prepares a bed for her young, composed of the fur plucked from her own body, and some blades of grass; closing the earth artificially with her hind parts, when she leaves the nest, in order to procure food. Here she suckles her young for six

RABBITS.

weeks; but when half this period is expired, she conducts her young to the warren, where they are caressed by the buck.

The best mode of taking rabbits is by the *tipe* or trap. It consists of a large pit or cistern covered with a floor, with a small trap-door, nicely balanced, near its centre, into which the rabbits are led by a narrow meuse. The rabbits are suffered to go through the meuse and over the trap for a night or two, that they may be familiarized to the place where the turnips are grown, after that the trap-door is unbarred, and the number wanted are taken.

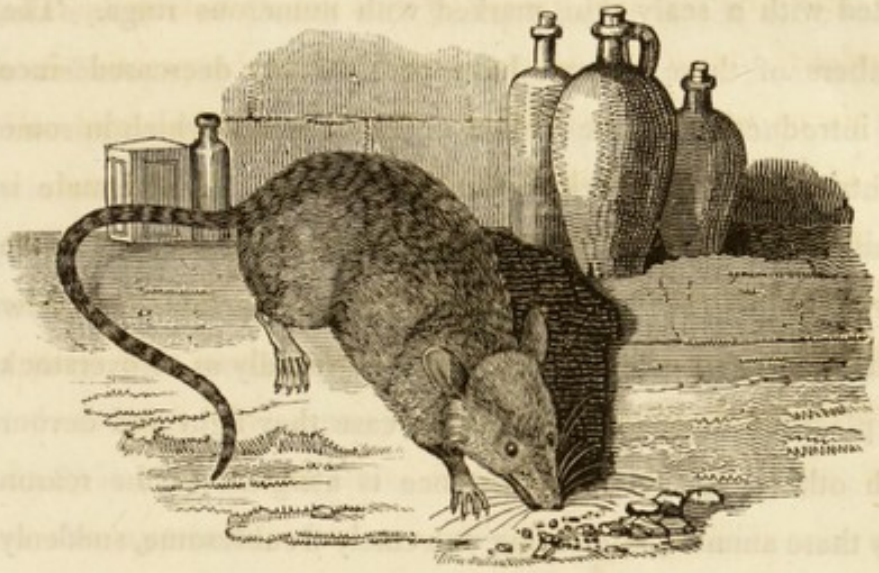
Another method of taking rabbits, is by employing the ferret. This animal, in its general form, resembles the polecat, but is smaller; its usual length being about fourteen inches, exclusive of the tail, which is about five. It is a native of Africa, and can scarcely support the cold of an European winter. The ferret is used for rabbit hunting, in preference to the polecat, because it is more easily tamed; but it is necessary to keep it in a warm box, with wool, or some other substance in which it may imbed itself. It sleeps almost continually, and when awake, immediately begins to search about for food: it is usually fed with bread and milk; but its favourite food is the blood of smaller animals.

The ferret is by nature an enemy to the rabbit; and it is affirmed by Buffon, that whenever a dead rabbit is presented, for the first time, to a young ferret, he flies upon it in an instant, and bites it with great fury; but if it be alive, he seizes it by the throat, and sucks its blood. When let into the burrows of rabbits, the ferret is always muzzled, that it may not kill the rabbits in their holes, but only drive them out, in order

to be caught in the nets. If the ferret be put in without a muzzle, or happen to disengage himself from it, he is often lost, for after sucking the blood of the rabbit, he falls asleep, and cannot be regained, except by sometimes smoking the hole, in order to oblige him to come out; but as this practice does not always succeed, he continues to lead a rapacious and soli tary life in the warren till he is killed by the cold of winter.

The best food for tame rabbits which are kept in hutches is the shortest and sweetest hay, of which one load will serve two hundred couple for a year. Too much green food renders them subject to the rot.





THE RAT.

Of the forty-one species, which this genus of animals comprises, three are natives of Britain, in common with the rest of Europe, viz. the black rat (mus rattus L.), the brown or Norway rat (mus decumanus L.), and the water rat (mus amphibius L.). Each of these species is very prolific, and all are distinguished by a voracity which nothing can resist.

THE COMMON BLACK RAT.

This species, though common in Europe, is supposed to have been originally introduced from India and Persia: its head and body are seven inches long; the back is of a deep

blackish grey colour, and the lower parts of an ash colour; the legs are slightly covered with dusky hair; and the tail, which usually measures six or seven inches in length, is thin, and coated with a scaly skin, marked with numerous rings. The numbers of these animals have considerably decreased since the introduction of the brown or Norway rat, which in some countries has completely exterminated them. The female is furnished with ten teats, and brings forth several times in the year, generally six or seven at a litter: the late Dr. Shaw relates, that sometimes they increase so rapidly as to overstock the place of their abode, in which case they fight and devour each other; and this circumstance is assigned as the reason why these animals, after being extremely troublesome, suddenly disappear.

The common rat inhabits barns, granaries, and dwelling-houses; where the females construct nests for their young with various soft substances, and provide them immediately with food. On their first quitting their holes, the young rats are carefully watched by their dams, which protect them, and will even encounter cats in their defence.

THE BROWN OR NORWAY RAT

Is larger than the common black rat, and measures nine inches in length from the head to the tail, which is naked and scaly, consisting of about two hundred rings, and is also from seven to nine inches in length. The upper parts of this animal are of a tawny grey or ash-colour; but it is whitish

beneath, and, like the common black species, it has four toes on the fore feet, with a claw in the place of a fifth.

Though generally known by the name of the Norway rat, it is a native of Persia and India, whence it was introduced into Europe by the ships returning from those countries: it first appeared in England about eighty years since, and has nearly extirpated the black rat. This species is uncommonly prolific, and breeds several times in the year, producing from twelve to twenty at a litter; when unable to procure food from a particular spot, they migrate in large companies to towns and villages. In summer they are amphibious, and reside chiefly in holes on the banks of rivers, ponds, and ditches; but on the approach of winter they frequent farm-houses and granaries, and enter the corn-stacks and barns, where they commit the most vexatious depredations. From old houses it is impossible to eradicate them, and such is their voracity that nothing can escape their destructive attacks. Rabbits, hares, and poultry fall a prey to these *omnivorous* animals, which gnaw in pieces wool, stuffs, and furniture of all sorts. In short they would speedily destroy the fruits of the earth and the labours of man, were not their baneful increase counteracted by numerous enemies among other animals, as well as by their destroying and eating each other. An old rat is as much dreaded by its own species, as the whole race is dreaded by other creatures that are their natural prey. In fact, every animal that does not possess superior strength is obliged to submit to the Norway rats: and in Ireland it is said that they have almost exterminated the whole race of frogs, which had purposely been introduced into that country, that they might assist in the

destruction of insects. As the means of subsistence become more difficult, these voracious animals prey upon their own species; according to M. Buffon, the method they take to lessen their numbers is, for the stronger to despatch the weaker. After this they lay open their skulls, eat up the brains, and then the rest of the body. On the following day hostilities are renewed; nor do they suspend their havoc until the majority are destroyed.

All the stronger carnivorous animals have a natural antipathy to rats. Dogs, cats, and weasels pursue them with alacrity, and attack them with animosity; but the weasel is the most formidable antagonist, and never fails to conquer and to destroy the rat. Sometimes however these animals sell their lives very dearly: they have been known to attack a small dog, seize him by the lip, and inflict a deep wound, which does not easily admit of cure. Their depredations, however, are not confined to the land; they are equally destructive on shipboard. It is recorded as an authentic fact, that when the Valiant man of war returned from the Havannah in the year 1766, these vermin had increased to such a degree, that they devoured daily one hundred weight of biscuit: at length they were suffocated, and six hampers were, for some time, filled every day with the rats that had thus been destroyed.

Various expedients are resorted to for the extermination of rats; but so great is their cunning that it is difficult to entrap them, or to allure them to swallow poison. Among these methods none is more singular than that mentioned by Gesner, who tells us he had been informed, that if a rat be caught and a bell tied round its neck, and the animal be then set at liberty, it

will drive away the rest wherever it goes. This expedient, Dr. Shaw remarks, appears to be occasionally practised in modern times with success: he relates that "a gentleman travelling through Mecklenburgh about thirty (now forty) years ago, was witness to the following curious circumstance in the post-house at New Stargard. After dinner the landlord placed on the floor a large dish of soup, and gave a loud whistle. Immediately there came into the room a mastiff, a fine Angora cat, an old raven, and a remarkably large rat, with a large bell about its neck. The four animals went to the dish, and without disturbing each other fed together; after which the dog, cat, and rat, lay before the fire, while the raven hopped about the room. The landlord, after accounting for the familiarity which existed among the animals, informed his guest that the rat was the most useful of the four; for the noise he made had completely freed the house from the rats and mice with which it was before infested."[1]

For the two following expedients for destroying rats we are indebted to the late Dr. Willich; from whose valuable "Domestic Encyclopædia," (vol. iii.) they are selected.

Among other remedies, he recommends that commonly employed on the continent, where a sponge is fried with salt-butter in a pan; then compressed between two plates, and cut into small pieces, which are scattered about the holes frequented by rats and mice. This preparation is devoured with avidity; it excites thirst in the animals, which should be grati-

[1] Shaw's "General Zoology," vol. II. Part I. p. 53.

fied by exposing shallow vessels containing water. On drinking this fluid, after having swallowed the burnt sponge, it distends their stomach, and proves a fatal repast.

"A capacious cask of moderate height must be procured, and put in the vicinity of places infested with rats. During the first week, this vessel is employed only to allure the rats to visit the solid top of the cask, by means of boards or planks arranged in a sloping direction to the floor, which are every day strewed with oatmeal, or any other food equally grateful to their palate; and the principal part of which is exposed on the surface. After having thus been lulled into security, and accustomed to find a regular supply for their meals, a skin of parchment is substituted for the wooden top of the cask, and the former is cut for several inches, with transverse incisions through the centre, so as to yield on the smallest pressure. At the same time, a few gallons of water, to the depth of five or six inches, are poured into the empty cask. In the middle of this element a brick or stone is placed, so as to project one or two inches above the fluid; and that one rat may find on the former a place of refuge. These preparatory measures being taken, the boards as well as the top of the cask should now be furnished with proper bait, in order to induce them to repeat their visits. No sooner does one of these marauders plunge through the section of the parchment into the vessel, than it retreats to the brick or stone, and commences its lamentations for relief. Nor are its whining notes uttered in vain: others soon follow, and share the same fate: when a dreadful conflict begins among them, to decide the possession

of the dry asylum. Battles follow in rapid succession, attended with such loud and noisy shrieks, that all the rats in the neighbourhood hasten to the fatal spot, where they experience similar disasters. Thus hundreds may be caught by a stratagem, which might be greatly facilitated by exposing a living rat taken in a trap, or purchased from a professional rat-catcher."

No rats were to be seen in North America until they were conveyed thither in the ships which carried out the European settlers: their numbers have now increased to such a degree as to become a serious evil to the colonists. Their depredations, particularly in the maize plantations, are occasionally very great indeed.

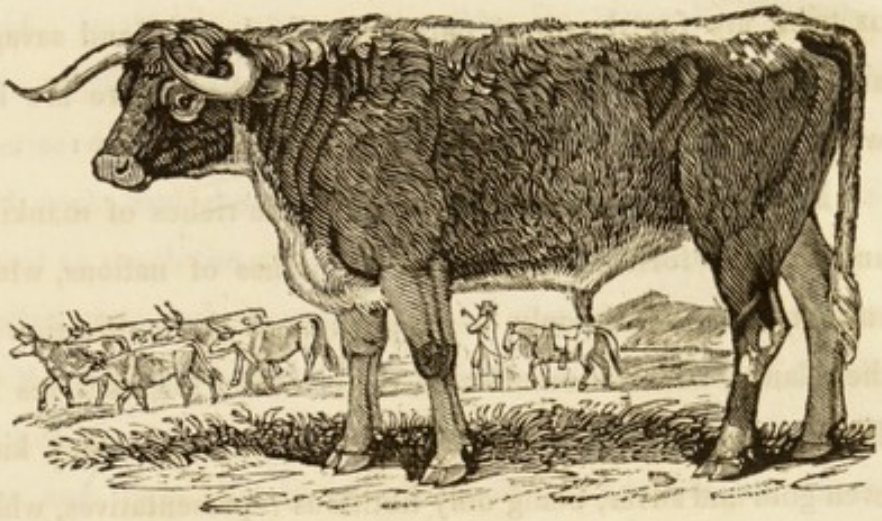
THE WATER RAT.

The water rat is less than the brown, but larger than the black species: it has a blunt thick nose; its ears are hid in fur, and its head and body are covered with long black hair, mixed with ferruginous; and the tip of its tail has a little white.

This animal is a native of Europe, the North of Asia, and America. In form it bears some resemblance to the beaver or otter, and is extremely dexterous in diving and swimming. It burrows in the banks of rivers, ponds, and ditches, feeding on fry and small fishes, frogs, insects, and roots. As a swimmer and diver, it excels: but frequently in pursuit of its prey, it is snapped up by the more voracious pike, in whose stomach it

has often been found. It is probable that these animals bring forth frequently in the year, but of this we have no certain information. Their flesh, Buffon says, is not absolutely bad; and in catholic countries the peasants eat it during Lent, as they do that of the otter.





THE OX.

UNDER this general term is included black cattle in general, without regard to age or sex. The ox tribe (bos taurus L.) is distinguished by the following characteristics, viz. the horns, which are hollow and smooth, bend out laterally, or are lunated, and the skin along the lower side is pendulous: there are, however, a few varieties which are *polled*, or destitute of horns. The colours are extremely various, reddish, white, black, grey, dun, and spotted; the face is frequently white, while the rest of the body is of a different colour; in short, like all animals which have long been domesticated, and whose breeds have frequently been mixed by crossing, both the form and the colour vary without end.

There are but few species of this tribe which appear to be really distinct; but the number of varieties into which they are divided, arising from the differences of climate, domestication, and other causes, is endless. In a wild state, indeed, the ox tribe are for the most part exceedingly wild and savage; although, as Mr. Bingley has justly remarked, there are few which are altogether incapable of being domesticated.[1]

Formerly, the ox constituted the whole riches of mankind, and he still forms the basis of the riches of nations, which subsist and flourish only in proportion to the cultivation of their lands, and the number of their cattle; for, observes M. Buffon, in these all real wealth consists; every other kind, even gold and silver, being only fictitious representatives, which have no value but what is conferred on them by the productions of the earth. To man, then, the ox tribe is indeed a most valuable race of animals: some are trained to labour, supplying the place of horses as beasts of draught and burthen; while their flesh and milk afford excellent nutritious food, and their hides are employed in various domestic purposes, which will be distinctly stated in the course of this article. It is not without some appearance of reason, therefore, that when the true knowledge of the Divine Being was lost, the ancient mythologists represented the bull and cow as symbols of the deity: the cow is an object of divine honours among the Hindoos to this day.

Naturalists are now generally agreed that the ox is a descendant of the bison, or rather the bison reduced to a

[1] Animal Biography, p. 390.

domestic state. This large and formidable animal inhabits the marshy forests of Poland, the Carpathian mountains, and Lithuania: though it is also found wild in the vicinity of Mount Caucasus, and in other parts of Asia, as well as in the new world. In this its native savage state, Dr. Shaw describes the bison as distinguished not only by his size, but also by the superior depth and shagginess of his hair, which about the head, neck, and shoulders, is sometimes of such a length as almost to touch the ground. His horns are rather short, sharp-pointed, extremely strong, and stand distant from their bases like those of the common bull: his colour is sometimes a dark blackish brown, and sometimes rufous brown; his eyes are large and fierce, his limbs extremely strong, and his whole aspect is in the highest degree savage and gloomy.[1]

By the lapse of ages, the modifications of treatment, and various other causes, the bison has become divested of his ferocious qualities; and the ox tribe is in this country divided into very numerous varieties, each differing widely from the other in size, form, and colour. The following synopsis will, it is conceived, afford a correct view of the principal breeds of British black cattle.

1. Wild cattle.
2. Devonshire breed.

Var. 1. Herefordshire.
2. Sussex.
3. Old Glocester red.
4. Kentish homebreds.

[1] General Zoology, vol. II. part II. p. 394.

8. Lancashire breed.
4. Shropshire breed.
5. Northern short horned breed.
6. Northern half-long horned.
7. Norfolk homebreds.
8. Welch cattle.
9. Scotch cattle.
    1. Galloway or polled.
        Var. Suffolk duns.
    2. Highland breed or kyloes.
    3. Lowland breed.
10. Alderney or French breed.
        Var. Dunlop breed.
11 Dutch breed.
12. Irish cattle.

1. WILD CATTLE.

Not three centuries ago Scotland contained a wild race of cattle of a pure white colour, which, according to the Scottish historian Boethius, had manes like lions. Mr. Pennant is disposed to credit this account, having seen in the parks of Drumlanrig, in Scotland, and of Chillingham, near Berwick-upon-Tweed, herds of cattle, which were probably derived from this savage breed: they had lost their manes, but retained their colour and fierceness. It appears, however, that this curious race is extinct in Scotland; but in the Earl of Tankerville's park, at Chillingham, some of them are still to be seen in all their native wildness.

Their colour is invariably of a creamy white; muzzle black;

the whole of the inside of the ear, and about one-third of the outside, from the tips downward, red; horns white, with black tips, very fine, and bent upwards; some of the bulls have a thin upright mane, about an inch and a half or two inches long. The weight of the oxen is from 35 to 45st. and the cows from 25 to 35st. the four quarters (14lb. to the stone).—The beef is finely marbled, and of excellent flavour.

From the nature of their pasture, and the frequent agitation they are put into by the curiosity of strangers, it is scarcely to be expected they should get very fat; yet the six-years-old oxen are generally very good beef, from whence it may be fairly supposed that in proper situations they would feed well.

At the first appearance of any person they set off in full gallop, and, at the distance of about two hundred yards, make a wheel round and come boldly up again, tossing their heads in a menacing manner; on a sudden they make a full stop at the distance of forty or fifty yards, looking wildly at the object of their surprise, but upon the least motion being made, they all again turn round, and fly off with equal speed, but not to the same distance, forming a shorter circle, and again returning with a bolder and more threatening aspect than before; they approach much nearer, probably within thirty yards, when they again make another stand, and again fly off: this they do several times, shortening their distance and advancing nearer and nearer till they come within such a short distance, that most people think it prudent to leave them, not choosing to provoke them further.

The mode of killing them was perhaps the only modern remains of the grandeur of ancient hunting. On notice being

given that a wild bull would be killed on a certain day, the inhabitants of the neighbourhood came, mounted and armed with guns, &c. sometimes to the amount of an hundred horse, and four or five hundred foot, who stood upon walls or got into trees, while the horsemen rode off the bull from the rest of the herd until he stood at bay, when a marksman dismounted and shot. At some of these huntings twenty or thirty shots have been fired before he was subdued. On such occasions, the bleeding victim grew desperately furious, from the smarting of his wounds, and the shouts of savage joy that were echoing from every side. But from the number of accidents that happened, this dangerous mode has been little practised of late years, the park-keeper alone generally shooting them with a rifled gun at one shot.

When the cows calve, they hide their calves for a week or ten days in some sequestered situation, and go and suckle them two or three times a day. If any person come near the calves, they clap their heads close to the ground, and lie like an hare in form, to hide themselves; this is a proof of their native wildness, and is corroborated by the following circumstance that happened to the writer of this narrative, (Mr. Bailey, of Chillingham), who found a hidden calf, two days old, very lean and very weak: on stroking its head it got up, pawed two or three times like an old bull, bellowed very loud, stepped back a few steps, and *bolted* at his legs with all its force; it then began to paw again, bellowed, stepped back, and bolted as before; but knowing its intention, and stepping aside, it missed him, fell, and was so very weak, that it could not rise, though it made several efforts: but it had done enough: the whole herd were

alarmed, and, coming to its rescue, obliged him to retire; for the dams will allow no person to touch their calves, without attacking them with impetuous ferocity.

When a calf is intended to be castrated, the park-keeper marks the place where it is hid, and, when the herd are at a distance, takes an assistant with him on horseback; they tie a handkerchief round the calf's mouth to prevent its bellowing, and then perform the operation in the usual way, with as much expedition as possible. When any one happens to be wounded, or is grown weak and feeble through age or sickness, the rest of the herd set upon it and gore it to death.[1]

2. DEVONSHIRE BREED.

This breed bears a closer affinity to the wild race than any other: it is said to be found in the greatest purity, and of the best kind, in the neighbourhood of Barnstaple. The horns are of a middle length, bending upwards; the colour varies from a light to a very deep red, with a light dun ring round the eye, and the muzzle of the same colour. If any white spots appear, except on the tip of the tail, the graziers consider the breed as impure, particularly if those spots blend or run one into another. These cattle are thin in the face, fine in the chops and bone, clean in the neck, and wide in the hips: the skin is thin and silky in handling; the back is straight, the tail small and set on very high.

The Devonshire breed is justly regarded as one of the

[1] Culley on Live Stock, p. 73, 78.

handsomest, and at the same time most profitable which are reared in Britain. They fatten early, and on the most valuable parts, and are admirably fitted for draught; and though small in point of size, they amply compensate for that defect by their hardiness and agility. The Devon oxen are mostly yoked at two or three years old, and lightly worked. Their labour is increased at four; and from that period to six they are fully worked. Worked oxen of this valuable breed attain a larger size than those which are not worked: and at six years old they mostly finish their growth.

"In excellence of beef," Mr. Bingley states, "the Devonshire oxen can scarcely be exceeded: and it is a remarkable circumstance, that they will bear driving to London, sometimes without the smallest waste, from a distance of considerably more than one hundred miles. Their skin is reckoned among the thinner classes, but it improves much in tanning: the tallow is of a peculiarly good quality."[1] As a permanent proof of the real value of this race, it may be sufficient to remark, that it has generally commanded the best prices at Smithfield for a century past.

Variety 1. THE HEREFORDSHIRE BREED.

THE Herefordshire breed, though at present evidently a mixed breed, is generally understood to have been originally of the Devonshire stock: though they are of great size and weight, yet their bones are uncommonly small. Their colour

[1] Brit. Quad. p. 402.

is a dark red; hair fine; head and neck clean, and the face bald or spotted; the horns bright, taper, and spreading; chest deep, and bosom broad; the hips, rump, and sirloin wide, thighs thin, legs sometimes white or spotted, back straight and small boned.

The Herefordshire variety is confessedly one of our most valuable breeds: it is found chiefly in the county whence its name is derived, though it is spreading into other parts of England. In size they are very conveniently various, but all require good keep: they are most powerful draught oxen, yet possess sufficient speed for any work, either at plough or cart, and will generally walk as quickly as their attendants find agreeable. As their meek and placid countenances indicate, they are docile and tractable, and if trained with temper and kindness, they will drive to an inch with reins: they are equally excellent upon the road or at plough. But the distinguishing qualities of Hereford oxen are the produce of beef, quick feeding in proportion to their growth and size, and the union of strength and speed in labour. With respect to the most profitable return in quantity of beef, it may be presumed that no breed can stand in competition with this: and the Herefords have accordingly been the most successful at the annual prize shows for cattle; they also command the first prices, whether alive or dead.[1]

[1] Lawrence on Cattle, p. 40, 41.

Variety 2. THE SUSSEX BREED.

This, like the Herefordshire, is a mixed breed, though of the Devonshire race. The Sussex cattle are in high estimation for beef and labour, and also in some degree for the quantity of milk which they produce: they are very flat and deep, generally, though not universally, of a deep red or brown colour. The horns are of a middle length, the points turning upwards and backwards, and the animals are of various sizes. In speed they are equal if not superior to the parent or Devonshire race; and are also equal in power to the cultivation of the deepest roads: though generally placid, they are rather quick in temper like the Devons.[1]

The calves run with the cows till they are eleven or twelve weeks old, when they are weaned and turned to grass. A good cow, after the calf is taken from her, if well kept, will produce from 6 to 8lbs. of butter per week, for three or four months after taking off the calf, and double that quantity of skimmed milk cheese. Though they do not yield so large a quantity of milk as the Suffolk cattle, yet this is much richer in point of quality. The Sussex oxen are mostly worked from three to six years old, sometimes to seven, when they are turned off for feeding.[2]

The Sussex breed, when fattened, is capable of attaining a very considerable size; an instance of which occurred at Barcombe, in that county, in the course of the present year. This

[1] Lawrence on Cattle, p. 45. [2] Culley on Live Stock, p. 53.

bullock, upon which a wager had been laid to the extent of its value, was slaughtered on Wednesday, June 8, 1814, and weighed the following morning, in the presence of many who were interested in the decision. Never was the fallacy of professed judgment more exposed, as this beast had been visited, viewed, and handled, between the months of March and June, by at least three hundred persons; many of whom were men of the soundest experience, and of considerable celebrity for their profound knowledge of the weight and value of live stock. He had been taken from the yoke in rather low condition, and immediately put upon fatting food towards the end of the preceding month of January, at which time the bet was made, and it was generally admitted that he could not weigh more than 120 stone. When weighed, after being slaughtered, his weight was 171 stone 11lbs., nearly 20 stone heavier than any one had ventured to estimate him at; and by which it appeared that, in the short space of four months, this ox had gained *fifty-one stone of flesh!*

The following were the dimensions of the Barcombe ox.

		ft.	in.
Height	Shoulder	5	0
	Rump	5	0
	Knee	1	0
	Elbow	2	6
Length	Neck	1	11
	Body	6	8
	Rump	2	5
	Face	1	10

		ft.	in.
Girth	Fore leg	0	9½
	Hind ditto	0	11½
	Horn	0	8
	Face	0	4¼
	Neck	4	11
	Chine	9	1½
	Carcase	10	1
Width	Hips	2	0
	Loins	2	3½

This bullock, to adopt the butcher's phrase, *died badly*,

that is, had but little fat on his kidneys; which favoured the opinion that had previously been given.

Variety 3. THE OLD GLOUCESTER REDS AND BROWNS.

THIS breed is described by Mr. Lawrence as being middle-horned, shewing *blood*, and exhibiting a considerable degree of resemblance to the South Devon oxen. They are a mixed breed, possessing much Welch blood, and appear to have been more disposed to take on fat than to give milk. This breed has given way to the long-horned species in that dairy country; so that it would at this time be difficult to find any genuine specimen of this old variety.

Variety 4. THE KENTISH HOMEBREDS.

THIS profitable breed is raised, as the name imports, in the county of Kent: the Sussex forms the basis, crossed, however, with Welch, Alderney, and other races: though small in size, they are excellent butter cows.

3. LANCASHIRE BREED.

THIS is an original species, probably of as high antiquity as any of this country, and is still to be found in considerable, if not entire, purity of form; because, although it has been used as a cross for almost all other breeds, the great improvers of long-horned cattle have generally, for various reasons, adhered to their own species. They were formerly called Lanca-

shire long horns, that county, Westmoreland, and Cumberland, being the earliest and most considerable breeding districts; from whence they spread southward, through the midland counties of Derby, Nottingham, Leicester, Stafford, Warwick, Northampton, Buckingham, all which are either breeding or dairy counties. The neck of land containing Lancashire and Cumberland on the western, and Yorkshire, Durham, and Northumberland on the eastern coast, has, by a curious singularity, been the parent country of both the long and short horned cattle; the latter extending from Northumberland southward, to the county of Lincoln. Now as we know that, for ages past, it has been the practice to import short-horned cattle from the opposite continent to our eastern coast, it seems rational to suppose that the long horned, found on the western side, were also originally imported from the opposite coast of Ireland, the neat cattle of that country being all long horned.

The characteristics of the Lancashire breed of cattle are, rotundity of carcase and bone, with considerable length of the former and coarseness of the latter; thickness of hide, and rich quality of milk, the quantity generally inferior to that of the short and middle horns. The horns of this species are either regularly and horizontally extended to the points, or fall down the cheeks until their points meet, when the animal is sometimes styled *wheel-horned*. Occasionally, the long horns assume a fanciful direction upwards, bending irregularly at the extremities; sometimes one horn takes its course up, the other downwards. The original colours of the Lancashire cattle were red, pied, brinded, and finch backed, that is, having a list

of white along the back; the last is the strongest characteristic of long-horned blood, as the bald face is that of Hereford, and the smoky face of Pembroke. Mr. Lawrence, to whom we are indebted for our description of this celebrated breed, adds, that the species, with a very few exceptions, is generally too slow and too sluggish to be employed in labour; and that this circumstance has induced many persons to form very erroneous conclusions on the subject of ox labour.[1]

But the advantages in other respects which this breed evidently possesses, concur to render it worthy of the very extensive introduction which it has obtained in various parts of England. From the peculiar rotundity of their form, and the richness of their milk, may be augured a propensity to fatten; and Mr. Bakewell's system and practice, which are noticed in a subsequent page, have fully proved their superiority in that respect. They are probably also the smallest consumers of food in proportion, and their hides, on account of their substance, are of great value. As dairy stock, their superior character has been established, through a long course of years, and the breed, in consequence, has been dispersed in every part of the island. Within these few years, however, the short-horned species have found admittance into many large dairies, it may be presumed on account of the excessive price of beef and pork, and on the supposition that larger milkers and larger cows, if they make less butter, will balance the account profitably, by the production of a greater quantity of the former articles.

[1] Lawrence on Cattle, p. 52.

An additional recommendation of this very profitable breed is the hardiness of their constitution, which adapts them to every variation of climate in our island. The value of a cow and calf, of the better sort of common stock, is stated by Mr. Bingley to be from £10 to £20: when fatted, the cows are worth from £10 to £25 each, and generally weigh from eight to twelve score per quarter.[1]

It was on this breed of neat cattle that the celebrated grazier, Mr. Bakewell of Dishley, in the county of Leicester, exercised his great talents at improvement. Many years before, Sir Thomas Glasby had selected from Lancashire and Westmoreland a herd of the best shaped cows. Certain descendants of these were afterwards purchased on the banks of the Trent, and introduced into Warwickshire, by Mr. Webster, of Canley, in that county, whence originated the celebrated Canley breed. The breed of the county were already long horned, but far inferior to those introduced by Mr. Webster. Mr. Bakewell commenced his operations with Canley cows, and a bull from Westmoreland, called Twopenny. After breeding in and in, or from the nearest affinities of blood with this stock, through a great number of descents, ever selecting individuals of the roundest form, and smallest bone, he attained the desired success in those respects, and raised that variety which has been since so celebrated for aptitude to acquire external fat. But in the attainment of this end he sacrificed the quality of great milking, and rendered the animals less certain in the faculty of procreation. Hence the Dishley or New Leicester variety of

[1] Brit. Quad. p. 410.

long horns are calculated solely for the purpose of the grazier, the old breed retaining its superiority in the dairy.

The size of the improved long-horned stock of the midland counties is considerable, as appears by a four year old steer of Mr. Princep's breed, killed some years since, the weight of which was 248 stone, 14 pounds to the stone, exclusive of twenty-five stone of fat. The hide weighed 177lb. It must be remembered, also, there is a mellowness and ductility in the thick hides of well-bred stock, which much enhances their value at the leather market.

The reality of Mr. Bakewell's improvement of neat cattle for the grazier's purpose is evident, beyond contradiction, from the vast and unprecedented sums given for beasts in the midland counties. Mr. Bakewell probably set the example of letting bulls and rams. His bull, Twopenny, before mentioned, covered at five guineas each cow, and he had many cows worth thirty guineas each. After a course of some years improvement, all his bulls were engaged for the season, from five to thirty guineas each, according to their form.

Mr. Fowler, of Rolwright, in Oxfordshire, was the earliest and most successful disciple of Bakewell. He commenced his breeding career with two Canley cows, for which he engaged the bull Twopenny: the produce, two cows, which he named Long-horned Beauty and Old Nell. He had also, in 1778, a bull of Mr. Bakewell, called D, which was the sire of Shakspeare. Thenceforth he bred entirely from his own stock, with what degree of success, will be seen from the following prices obtained by auction at his well-known sale in March, 1791.

PRICES OF THE BULLS.

	£.
Garrick, five years old - -	250
Sultan, two years old - -	230
Washington, ditto - - -	215
A, by Garrick, one year old -	157
Young Sultan, ditto - - -	210
E, by Garrick, ditto - - -	152

PRICES OF THE COWS.

	£.	s.	d.
Brinded Beauty by Shakspeare -	273	0	0
Sister to Garrick - - -	120	0	0
Nell by ditto - - - -	136	0	0
Young Nell by brother of ditto -	126	0	0
Black Heifer - - - -	141	0	0
Dam of Washington - - -	194	0	0
Fifty-three head of cattle produced	4289	4	6

Few exhibitions, we are informed, could be more enchanting than the picturesque view presented by these beautiful animals; the sale of which was attended by the most respectable farmers and graziers, many of whom had travelled several hundred miles from almost every part of Great Britain. So great indeed was Mr. Fowler's deserved reputation, that Frederick the Great, King of Prussia, conferred upon him a gold medal, and honoured him with his correspondence.

Other improvers have had an ample share of fame and success. Mr. Princep, of Croxhall, engaged Shakspeare two seasons at one hundred and sixty guineas. In 1795, at Mr. Padget's sale, Shakspeare sold for 400 guineas, the cow-stock making from 50 to 80 guineas each.

Yet this sum, ample as it is, is a trifle compared with that,

which we learn from the public journals, was this year given for a single bull, in the county of Durham. The animal in question was one of the finest of his species that perhaps was ever exhibited, and was purchased by four farmers for the sum of ONE THOUSAND GUINEAS!!!

The immense importance of the breed which we have just described must apologize for the length to which our notice is necessarily extended.

4. THE SHROPSHIRE BREED.

THIS race is large, square, deep, and bony, with thick hides, in colour brinded, red and brown, the horns branching, points turned upward and backward. They are used for labour, and said to be better milkers than their neighbours of Herefordshire, with which they are, doubtless, often blended. Of the origin of this variety no accounts are extant, or how long they have been a permanent or established breed. It has probably originated in a mixture of the old long horns, the Welch, and the red breed of the West.

5. NORTHERN SHORT-HORNED BREED.

UNDER this denomination are comprised the Teeswater, Lincoln, and Holderness, or Yorkshire, and Tweedside short-horned breeds. The northern short-horned race is the largest breed in Britain, the Herefords standing in the second place in that respect. The short-horns are an original species, but whether those of our northern counties are so or not, cannot

THE COW.

now be ascertained; that is to say, whether they are aboriginal, or were imported in very early times, as we know they have continually been during several centuries. This breed has long been in possession of the coast and districts of Northumberland, Durham, York, and Lincoln, meeting and intermixing with the Lancashire long-horns westward, but not extending so far towards the south. Opposite in almost every respect to the long-horns, this species has great depth of carcase; yet with ample substance, large bone, thin hide, and gives much milk, which is not distinguished for its richness. They are not of first rate character as labouring cattle, which nevertheless the Holderness variety seems to promise by their form.

Mr. Lawrence, to whose practical knowledge we are deeply indebted, considers the coarse, square, Dutch *beefy* breed as the basis of this species, which has been very greatly improved by the introduction of Norman or Alderney bulls in the course of the last century, which has been productive of the most beneficial results. In the quantity of milk which this improved breed affords they are unrivalled; their beef is much finer than that of the old short-horned breed, and they fatten much earlier and more quickly. They have both speed and strength enough for labour, and their shoulders are both well formed and well set for the purpose of draught; and as they are beautifully variegated in colour, being spotted, striped, sometimes *sheeted* red and white, or black, or brown, or white, they make fine stock for furnishing a park. Mr. Lawrence is of opinion that this breed is at least equal to the Herefords in the stall, at all points, and inferior to them, or to any other breed only in fine-

ness of flesh. The Holderness cows form the stock kept by the London cow-keepers for supplying the metropolis with milk.

6. THE NORTHERN HALF-LONG HORNS

Being the produce of the junction of the northern and short-horned breeds, possess equal portions of the qualities of the parent breeds; they consequently afford abundance of good milk.

7. THE NORFOLK HOMEBREDS.

This appellation is given to the cattle raised in Norfolk before the breeding of cattle ceased to be pursued as a system. The Norfolk homebreds consist of Suffolks, Lincolns, Scots, Welch, or a medley of all these races: they are found to graze both earlier and more quickly than either the Scotch or Welch cattle, so much in use in Norfolk; and no cattle are said to make better proof, or to bear higher character with the Smithfield salesmen than the Norfolk homebreds.

8. WELCH CATTLE.

The horns of the Welch cattle are large, bending upwards: the beasts themselves are small in size, and mostly of a black colour; their hides are thick, and in proportion to their bulk they have much bone. They are however remarkably quick feeders, and well calculated for labour, especially those bred in

Glamorganshire: they are capable of great improvement by proper selection and judicious crossing.

9. SCOTCH CATTLE.

The cattle bred in North Britain are divided into two classes, (1) the Galloway or Polled, which are found chiefly in the county of Galloway; (2) the Highland breed or Kyloes, which are reared in the highlands and western parts of Scotland; and (3) the Lowland breed, a mixed race, bred in the lowlands of Scotland.

(1) GALLOWAY OR POLLED.

These cattle are a very valuable breed; and, according to Mr. Culley's observation,[1] seem to be in weight and size as much less than the long horns, as these are smaller than the short-horns; they generally weigh from 40 to 60st. some particular ones reach 70 and upwards. But their most essential difference from every other breed of cattle is, in having no horns at all; though some few indeed (in every other respect polls) have two little unmeaning horns, from two to four inches long, hanging down loose from the same parts where the horns of other cattle grow, and are joined to the head by a little loose skin and flesh. In most other respects (except wanting horns) these cattle resemble the long-horns, both in colour and shape, only they are shorter in their form, which probably makes them

[1] On Live Stock, p. 60.

weigh less. Their hides seem to be in a medium between the two last-mentioned breeds, not so thick as the long-horns, nor so thin as the short-horns; but, like the best feeding kind of long-horns, they lay their fat upon the most valuable parts, and their beef is well marbled, or mixed with fat.

Vast numbers of these cattle are annually sent into Norfolk and other English counties to be fattened for the markets.

Variety. THE SUFFOLK DUNS.

This very profitable variety, Mr. Lawrence thinks, originated in the polled galloway breed of Scotland, with which Suffolk and Norfolk have been supplied, during more than a century past. They are of lighter colours, smaller, and finer in bone than the Scots galloways; long, with a large carcase, clean throat, snake headed, that is, the neck tapering to the head, thin tail, and rather short legs. These are very excellent dairy stock, giving the largest quantity of milk, in proportion to their size, of any breed whatever, but not rich in proportion with the long horns or Alderneys. A first-rate Suffolk cow will give six gallons of milk per day, when in full milking, and at the best season. This breed also feeds well, and the beef is fine: it is one of those breeds of such inherent excellence, as not to be improvable by any known cross. The Suffolk cow is one of the most advantageous for a private family.

(2) HIGHLAND BREED OR KYLOES.

This breed of cattle is covered with a long close coat of

hair, like the polled and long-horned races. Their beef is fine-grained, well flavoured, and mixed or marbled, but not so handsome on the outside of the beef when killed, being not of so bright a colour, and often spotted with black, even upon the best parts, except when made very fat. When grazed they feed very readily; their weight in general being from 20 to 35st.; some particular ones reach to more than 40st. The most prevalent colour is black, some are brindled or dun; but the breeders here, like those in Galloway, prefer the black ones.

These hardy animals are in possession of all that extensive and mountainous country called the Highlands of Scotland (together with the Western Isles), bounded on all sides by the sea and the Grampian-hills, the latter of which begin on the north side of the Frith of Clyde, and run eastward into the sea near Aberdeen.

These cattle are driven to the southward in great numbers every autumn; many into the western districts of Yorkshire; but the greatest part are sent into Norfolk, Suffolk, Essex, and other parts of the south of England, where they are fattened, and either slaughtered at their home-markets, or sent to Smithfield.

The demand for kyloes into England, Mr. Culley states, is of vast importance to those nobility and gentry who have estates in the north of Scotland; as the most of their rents are paid in live cattle.

In their natural and unimproved state the Highland cattle are frequently well formed: their fine eyes, acute face, and lively countenances, give them an air of fierceness, which is heightened by their white, tapering, black-tipped and sharp horns, pointing upwards, forwards, or backwards, and which

are really dangerous. The best highland cattle are said to be bred in Lochaber, Sunart, Morvin, N. Argyleshire, and Cowall or Rannock in Argyleshire. The Orkney Isles produce a small and ill-shaped breed of cattle; which, however, yield abundance of milk, and afford excellent beef. The Fifeshire cattle attain to a considerable size: they are black, lively, feed quickly, and are fit for labour; their horns are turned up. The milk yielded by the Fifeshire cows, though not very abundant, is rich, and uniform in its supply. The Isle of Sky breed is chiefly found in the island whence its name is derived: these animals are of a diminutive size, but in other respects similar to the kyloes; they are however said to be superior to the highland race for quick fattening.

(3) LOWLAND BREED.

This is a mixed race between the kyloes and the galloways, partly long-horned, and partly polled, They are black, brindled, or dun-colour; indifferent for the purposes of the dairy, though they partake of the galloway kindliness to fatten. On this account large numbers are annually sent from the lowlands of Scotland into England to be fattened for the markets.

10. ALDERNEY OR FRENCH BREED.

This breed is only to be found at the seats of the nobility and gentry, who keep the Alderney cows on account of the rich and excellent milk which they furnish for the tea-table. This

circumstance gives them a claim to our notice, although the breed is too tender ever to be introduced into the northern parts of our island. They are small sized, in general very fine boned, of a light red or yellow colour; and their beef, which is mostly yellow or very highly coloured, is very fine in the grain, and well flavoured.

Variety. THE DUNLOP BREED.

Is a cross of the Alderney cows with Fifeshire bulls, and derives its name from the place where it was first reared. The Dunlop breed is small in point of size, and of a pied or sandy-red colour; their horns also are small, and awkwardly set; but they are admirably well calculated for the dairy, on account of the plentiful supply of rich milk which the cows afford.

11. THE DUTCH BREED.

THESE animals are, as their name implies, of Dutch extraction, having originally been brought from Holland into the eastern maritime counties of England, to which they are chiefly confined. They are short-horned, thin-skinned, and have but little hair, of a red and white colour, nearly equally mixed; but they require great care, as their constitutions are tender. They possess, however, the valuable property of fattening kindly, and yield abundance of milk and tallow.

12. IRISH CATTLE.

The breed of Irish cattle, of which many thousand carcases are annually exported, is distinguished by little variety, excepting that which necessarily arises from the difference of situation. Originally they are long-horned cattle, smaller than the English, somewhat coarser, as well as higher on the leg: their produce in hides and tallow is very considerable. The mountain cattle in Ireland are both less in size, and inferior in the grain of their flesh, to those of the low country; and they also yield a very small quantity of milk. All the Irish cattle, however, are remarkable for the strength of their constitution. The counties of Roscommon, Limerick, Cork, and Tipperary are chiefly celebrated for the vast herds of cattle which are there annually bred and slaughtered for exportation; and many of the most public-spirited breeders have, of late years, incurred very considerable expense by purchasing prime long-horned stock from England, for the purpose of improving their breeds; a measure that has already been attended with the most beneficial effects, and which will doubtless, in the course of a few years, prove a source of great wealth to that island.

From the preceding view of the various breeds of cattle occurring in the British isles, our readers will be enabled to form some idea of their respective values, and of the vast importance which is, not unduly, attached to the improvement of them by the graziers of Great Britain and Ireland; especially when it is recollected that it is to the superior good quality of

our English beef that our brave seamen are indebted for their strength.

The importance of the subject will justify the further consideration of these valuable animals, whose natural habits, together with the best modes of selecting and rearing them, as well as the diversified benefits we derive from them, afford ample sources of information to the reflecting reader.

The general character of the ox-tribe, in common with other ruminating animals, is mild and pacific: they are subject to few diseases, and are said to be less incommoded by intense cold than by extreme heat. During the sultry heats of summer they eagerly seek for shade, and if a stream or pond of water be near, they will walk into it, and continue there for many successive hours. Here they find a cool retreat from the solar rays, and a secure shelter from the stinging assaults of the breeze or gad-fly. This insect, the œstrus bovis of Linnæus, has spotted wings, and a yellow breast; and is furnished with a long proboscis, armed with a sharp dart, inclosing two others within it. The gad-flies deposit their eggs in the backs of neat cattle, in which the maggots are nourished during the month of June; and throughout the summer they plague the cattle by means of their darts, to such a degree, that the whole herd will rush into the water, and remain there till the approach of night. The effects of the gad-fly on cattle have not been unnoticed by the elegantly simple Thomson; who, in his exquisite picture of a woodland retreat at noon during summer, thus portrays a group of herds and flocks:

> Around the adjoining brook, that purls along
> The vocal grove, now fretting o'er a rock,

Now scarcely moving through a reedy pool,
Now starting to a sudden stream, and now
Gently diffus'd into a limpid plain;
A various group the herds and flocks compose,
Rural confusion! on the grassy bank
Some ruminating lie; while others stand
Half in the flood, and often bending sip
The circling surface. In the middle droops
The strong laborious ox, of honest front,
Which incompos'd he shakes; and from his sides
The troublous insects lashes with his tail,
Returning still. Amid his subjects safe,
Slumbers the monarch-swain; his careless arm
Thrown round his head, on downy moss sustain'd;
Here laid his scrip, with wholesome viands fill'd;
There, listening every noise, his watchful dog.
Light fly his slumbers, if perchance a flight
Of angry gad-flies fasten on the herd;
That startling scatters from the shallow brook,
In search of lavish stream. Tossing the foam,
They scorn the keeper's voice, and scour the plain,
Through all the bright severity of noon;
While, from their labouring breasts, a hollow moan
Proceeding, runs low-bellowing round the hills.

THOMSON'S SUMMER.

Equally picturesque, and with equal fidelity of description, is the following rustic scene, delineated by the moral muse of Mr. Gisborne:

Behold yon pool, by unexhausted springs
Still nurtured, draw the multitudes that graze
The plains adjacent! On the bank worn bare,
And printed with ten thousand steps, the colts
In shifting groups combine; or, to the brink
Descending, dip their pasterns in the wave.
Bolder the horned tribes, or less of heat

And teasing insects patient, far from shore
Immerge their chests; and while the hungry swarm
Now soars aloof, now resolute descends,
Lash their tormented sides; and, stamping quick
And oft, the muddy fluid scatter round.
Fix'd many an hour, till milder skies recall
Desire of long-forgotten food, they stand
Each in her place; save when some wearied beast
The pressure of the crowd no longer brooks,
Or in mere vagrant mood her station quits
Restless; or some intruder, from afar
Flying o'er hill and plain the gadbee's sting,
(For still the dreaded hum she hears, and shakes
The air with iterated lowings,) spies
The watery gleam. With wildly-tossing head,
And tail projected far, and maddening gait,
She plunges in, and breaks the ranks, and spreads
Confusion, till constrain'd at length she stops,
Wedged in the throng.

WALKS IN A FOREST, p. 36.

It has been suggested that the production of these terrible insects, the gad-flies, might in some degree be checked by washing neat cattle in the spring with a strong decoction of tobacco, or of any other bitter and acrid vegetable.

But however patient and docile cows and oxen may in general be, the bull is naturally a fierce and terrible animal: when the cows are in season he is perfectly ungovernable, and frequently altogether furious. When chafed, he has an air of sullen majesty, and often tears up the ground with his feet and horns. The bull attains the age of puberty generally at the end of from twelve months to two years; but as he rarely attains his full growth until the expiration of four years, practical farmers advise that he should be restrained from propagating his species

before that time. His naturally fierce and ungovernable temper is not a little increased by his being permitted to live quietly in the best pastures, without being applied to any useful purpose but that of propagating his species. Hence this animal, naturally vicious, often becomes so mischievous as to endanger many valuable lives, an evil which, we conceive, might be remedied by training him to labour. For, being the only beast of his size which is thus indulged in idleness, and as he possesses equal strength with the ox, we doubt not but if he were moderately worked, and allowed to indulge his desires during the breeding season, he would, by being inured to labour and attended by mankind, become gradually tame, and harmless as the horse, or any other often naturally vicious animal. We understand, indeed, that several experiments have been made for this purpose; and, from their successful result, we think the practice of working bulls may be advantageously adopted; especially as these animals are not only broken in with little difficulty, and work well, but also because they recover from fatigue much sooner than any ox, and may generally be procured at easy prices in those places where, oxen being scarce, a young farmer cannot purchase without involving himself in great expense.

As the strength and excellence of a breed greatly depends upon the qualities of the sire, it is requisite that a bull, like a stallion, should be the handsomest of his species. He ought to be tall and well made; his head should be rather long; and, as it is designed by nature to be the chief instrument both of offence and of defence, it ought to present every mark of strength; his horns should be rather long, clean, and bright; his large black eyes lively and protuberant; his forehead broad and close

set, with short, curled hair; his ears long and thin, hairy within and without; muzzle fine; nostrils wide and open; neck strong and muscular, not incumbered with a coarse, wreathy skin, but firm, rising with a gentle curve from the shoulders, tapering to the part where it is connected with the head; and dewlap large, thin, and hairy. Farther, his shoulders should be deep, high, and moderately broad at the top; the bosom open; breast large, and projecting well before his legs; back straight and broad, even to the setting on of the tail, which should not extend far up the roof, but be strong and deep, with much lank hair on the under part of it; ribs broad and circular, rising one above another, so that the last rib shall be rather the highest; the fore thighs strong and muscular, tapering gradually to the knees; the belly deep, straight, and also tapering a little to the hind thighs, which should be large and square; the roof wide, particularly over the chine and *hips*, or *hooks;* the legs straight, short jointed, full of sinews, clean, and fine boned; knees round, big, and straight; feet distant one from another, not broad, nor turning in, but easily spreading; hoofs long and hollow; the hide not hard, or stubborn to the touch; the hair uniformly thick, short, curled, and of a soft texture; and the body long, deep, and round, filling well up to the shoulder and into the groin, so as to form what has not improperly been termed a round, or *barrel-like* carcase[1].

By castration the nature of this animal becomes remarkably softened; it destroys all his fire and impetuosity, and renders him mild and tractable, without diminishing his strength; on the contrary, after this operation, his weight is increased, and

[1] Complete Grazier, p. 9.

he becomes better fitted for the purposes of ploughing, &c. A difference of opinion subsists as to the best time of castrating male, or *spaying* female calves: by some practical writers, the age of puberty, or when they are from eighteen to twenty-four months old, is assigned as the fittest time; if the operation be performed earlier, the animals often die. In Scotland, however, and in some other places, it is deferred till the animals are three years old; but in many parts of England the usual practice is to castrate them when they are fifteen or twenty days old, as at that time there is the least danger. One great advantage resulting from the early performance of this operation is, that the beasts which recover from it generally grow larger and fatter, and also have more courage and activity than those which are castrated at the age of puberty. Besides, when the operation is delayed until the age of six, seven, or eight years, the animals lose but few of the qualities of bulls, and are likewise much more furious and untractable than other oxen.

The bull, as well as the cow and ox, generally lives about fourteen years; but these animals are in the greatest vigour between the age of three and nine years. After the latter period, the teeth become black and irregular: consequently they feed with more difficulty, and were it not that they rarely are permitted to reach the extreme bounds of life, they would, from this single circumstance, decline in the midst of plenty; and gradually becoming emaciated, would ultimately perish.

The females of all those species which we keep in flocks, and whose increase is the principal object, are much more useful than the males: thus we are indebted to the cow for milk, butter, cheese, &c. which are not only principal articles of our food, but are also applied to various purposes in the arts.

A perfect cow ought to have a broad, smooth forehead; black eyes; large, clean horns; a long, thin skin; a large, deep body; strong, muscular thighs; a large, white udder with four long, elastic teats, together with every other token requisite in a bull, allowing for the difference of sex. Further, the animal ought particularly to be young; for milch kine are not good for breeding after they are twelve years old, though they will often live a much longer time if their pasture be good, and they be kept from diseases.

By some eminent naturalists the cow is stated to arrive at puberty at the end of eighteen months; though some instances have occurred where these animals have produced calves before that time. They are generally in season, and receive the bull from the beginning of May to the middle of July; so that they may calve in January, and thenceforward till March or April, during which interval the markets are abundantly supplied with veal. Luxury, however, has devised various means by which the order of nature is inverted or interrupted, and veal may be procured at almost any period of the year. Hence various artificial expedients are frequently employed in order to induce cows to take the bull; a measure which cannot be sufficiently deprecated: for the most efficacious mode of obtaining this object undoubtedly consists in keeping them in good heart; in consequence of which nature will predominate over the animal's body, and cause it to show signs of procreation through the medium of the creature's constitutional feelings.

The period of gestation, or time during which the cow goes with a bull calf, is computed by Mr. Lawrence, according to an average of his own accounts, at 287 days, or 41 weeks, with

a variation of a few days in the way; a cow calf comes in less time. Between nine and ten months therefore may be assigned for the period of gestation; at the end of which she produces one calf; though instances sometimes occur when two, or even three, are brought forth. It may not, however, be useless to remark, that some cows are naturally *barren*, which is said to be the case when a male and female calf are produced at the same time. The male animal is perfect in all respects; but the female, which is denominated a *free martin*, is incapable of propagating her species; it does not vary very materially, in point of form or size, from other neat cattle, though its flesh is erroneously supposed to be greatly superior, with regard to flavour and fineness of the grain.

As, however, cows are very subject to abortion, when improperly treated during gestation, they ought to be observed with more than ordinary care through the whole of that period, lest they should leap ditches, &c. On no account should they be suffered to draw in the plough, or other carriage, which is the practice in some counties: nor should they be milked for six weeks or two months before they bring forth their young. For about a month or six weeks before the time of calving arrives, it is recommended to turn the cow into sweet grass, if in the spring; or, if it happen in the winter, she should be fed with the best hay, where that can be conveniently supplied; in which case she will yield a larger quantity of milk than if she had been provided with that food for a longer time, because the fatter a cow is, the less milk is given; and yet, if it be too poor, there is danger lest she should fall in calving. Or she may be taken into the cow-house from the field, or straw-yard,

and baited twice a day with green food, consisting of the hearts of cabbages, their decayed leaves being plucked off and given to lean cattle, turnips, potatoes, carrots, or other winter fodder, or with a mixture of bran and oat or bean meal, to which grains may sometimes be added; care being taken, in such case, to increase the quantity of meal.

The day and night after a cow has calved, she should be kept in the house, and be allowed tepid or lukewarm water only for her drink. On the day following, she may be turned out about noon, and be regularly taken in, during the night, for three or four successive days. The animals thus housed should be kept till the morning cold is dispersed, and a draught of warm water ought to be given previously to their being turned into the field, otherwise a premature exposure to the damp atmosphere cannot fail of greatly weakening them.

These remarks are offered upon the supposition that no difficulty happens during the times of gestation or calving: in all cases of danger, no time should be lost in applying to an expert cow-doctor. Where, however, a cow slips, or casts her calf prematurely, she must be tended with great care; and, whatever may be the cause, whether abusive treatment, violent exercise, bruises or blows, or that unnatural appetite known by the name of *longing*, every animal that has slipped her calf should be carefully separated from the rest of the herd. Cleanliness, which is an essential requisite in the general management of cattle, ought in this instance to be an object of special attention; and, as cows which are liable to drop their calves usually evince some preparatory symptoms between the cause of the abortion and the actual slipping of the fœtus, it will not

be altogether useless to bleed them two or three times, as this expedient has sometimes operated as a preventive.

It will further be necessary to milk the cows, especially if they be full of flesh and the udder hard, three or four times a day, for two or three days, and the calf should be suffered to suck as frequently, if in the house; or, in the field, to run with her, and suck at pleasure; care being taken to observe that the mother does not prevent it; for, if the udder or teats be sore, she will naturally be averse to suckling, and danger is incurred of losing both animals: and, in case the kernel of the udder is hard, the hardness may be removed by rubbing it three or four times in the day [1].

There are two methods adopted in the feeding of calves: one is, to allow them to run about with the cows the whole of the first year; the other mode is to wean them when they are about a fortnight old, and then to bring them up by hand.

The first of these modes is generally allowed to produce the best cattle, and is preferred in those countries where fodder is both cheap and plentiful. Whether calves are designed to be raised for breed, labour, or feeding, care should be taken that they have a sufficient supply of good pasture; because, if the latter be scanty at first, they rarely, if ever, attain to a large growth. And it may be considered as a general rule, that those calves which are dropped in October or November are best calculated for increase; as the cow's milk is, at that time, not so well adapted to the purpose of the dairy, while the animal is less susceptible of distempers, and will thrive greatly by the

[1] For these interesting particulars we are indebted to that valuable practical work, "The Complete Grazier."

nourishing pastures into which it may be turned in the ensuing spring.

Various plans have been suggested, and tried with considerable success, for rearing calves without any, or at least with a small quantity of milk. The time of weaning them varies, from one fortnight till they are seven weeks old; but the latter period is preferable, on account of the weak and tender state of the calves, if separated from the dam before they are three weeks old. In several counties of England, calves, on being taken from the cows, are, with great pains, taught to drink skimmed milk in a lukewarm state. The time selected for this purpose is, from the latter end of January to the beginning of May, about twelve weeks after which, for three or four weeks, they are fed with lukewarm milk and water. Small wisps of fine hay are then placed within their reach, in order to induce them to eat. Towards the end of May, they are turned out to grass, being taken in a few nights, when they have tepid milk and water given them; which is usually continued, though gradually in smaller proportions, during the last month, till they are able to feed themselves, when they totally disregard it. Care, however, should be taken that the grass is short and sweet, and by no means rank or sour. In the county of Suffolk, calves are usually weaned soon after Christmas; when they are fed with lukewarm *flet*, or skimmed milk and water, having bran or oats in it, and some very sweet hay by them, till the grass is ready; though, if the farmer have carrots, these form an excellent article of food, and render the use of oats unnecessary. Norfolk calves are fed with skimmed milk, in which is mixed a little wheaten flour; they have also chopped turnips in a trough, and some hay in a low rack. As soon as

these animals learn to eat turnips freely, they are no longer supplied with milk, those roots, with the addition of a little hay, furnishing them both with food and drink. The period of raising calves in the above-mentioned county is from Michaelmas to Candlemas; but the time of feeding them wholly with turnips varies according to circumstances or accident. Where there are older calves that have been accustomed to these roots, the younger ones soon acquire the method of breaking and eating them, by picking up the fragments left by the former.

Towards the month of March, those which are first reared are turned out among the fattening bullocks during the day; and are sheltered in the night; though, if the weather prove favourable, they are in a few days turned out altogether. In the succeeding summer they are kept in clover, or other luxuriant grasses, and, the following autumn, are sufficiently strong to stand in the straw or fold-yard. This circumstance is considered as a chief advantage to be derived from rearing calves early in the season; as those which are raised during the spring require two years nursing.

In Holland, we are informed that the calves are reared in long and narrow, but tolerably lofty suckling-houses. The pen in which the calf is kept is so narrow that it cannot turn round, so that it can only go backwards to the end of the pen, which is also short, and forwards to the door: the house is kept in total darkness, and the pen kept perfectly clean and sweet. When the suckler comes to administer the milk, a small hole is opened, sufficiently big to admit its head to be thrust out, and which is made in the door-way; as soon as the animal perceives the light, it advances towards it, pushes out its head, which the suckler puts into the milk-pail; and, being taught to drink the

milk, it very soon gets fat, and much quicker than by either of our modes, where the calf is usually tied up, or is permitted to run about in an open place. The Dutch farmers hang up a piece of chalk near the door, for the animal to lick; and when the calf is about to be removed, the pen is so contrived, as to height, that, when the door of the suckling-house is open, it falls down on the tail of the cart, and the animal walks into it, and is secured. The floor of the Dutch calf-pens is of lattice work, so that it always lies dry[1].

In the rearing of calves much, however, depends on the regularity of feeding them; the common practice is, to supply them with food twice in the day, in the morning and at evening, when they generally receive as large a quantity as their craving appetites can take. Hence the digestive organs are necessarily impaired, and numerous animals either become tainted with disease, or perish from the inattention of their keepers; whereas, by feeding them thrice in the day, at equidistant intervals, and allowing sufficient room for exercise, they will not only be preserved in health, but they will also greatly improve in condition.

Veal being a favourite article of diet, the fattening of calves is an object of no small importance, particularly in the vicinity of the metropolis, where the lands are more profitably occupied in other branches of rural economy. Hence various sorts of food are provided, and numerous modes of treatment have been recommended. Their provender is now, for the most part, turnips, potatoes, grains, pollard, and sweet hay; but the most

[1] Malcolm's "Compendium of Modern Husbandry," vol. i. p. 354.

effectual, and consequently the best way, is to keep them in pretty dark places, in coops, lest they should fatigue themselves by sporting too much in the light, which would be injurious to them. Farther, as cleanliness is an indispensable object in fattening cattle, it should, in the present case, be particularly attended to. For this purpose, the coops ought to be elevated at such a height from the ground that their urine may pass freely off; fresh litter should be supplied every day, in order that they may lie dry and clean; and a large chalk-stone should be suspended over the coop, so that the calves can easily lick it.

It is a common practice to bleed calves when they are four or five weeks old, and again a little time before they are killed, with a view of increasing the whiteness of their flesh: the quantity of blood taken is almost two quarts, or more, according to the age and strength of the calf. The operation of bleeding is, therefore, frequently repeated by some persons, though it does not appear to be altogether necessary; as the most experienced breeders are of opinion, that it is sufficient to bleed them twice, drawing from them such a quantity at each time as their age and size will allow, without hazard of destroying the animal[1].

It would exceed the limits necessarily assigned to this article were we to detail all the economy of a dairy farm. So large a portion, however, of our subsistence is derived from these useful animals, that we should not justify to our readers the omission of some important particulars relative to the management of butter and cheese.

[1] Treatise on the Choice, &c. of Live Stock, p. 44, 56.

As the quantity and quality of cows' milk greatly depend on the nature of their food, it will be proper throughout the year to supply them with such food as shall keep them in good condition, at the same time that it promotes a kindly flow of milk. The quantity which a cow will yield is also in some degree influenced by the manner of milking them: hence the greatest caution is necessary in selecting proper persons for milkers; for if a cow be roughly handled, it is not only painful to her, but will also cause her to withhold her milk, which is often attended with serious consequences; whereas, if it be gently drawn, she will yield that salutary fluid abundantly. As it sometimes happens that cows are *ticklish*, they should, on such occasions, by no means be harshly or severely treated; and if the udder be hard and painful, it ought to be fomented with warm water, and rubbed tenderly, by which simple expedient she will be brought into good temper, and yield her milk with pleasure and freedom.

In this country, it is the general practice to milk cows twice in the course of twenty-four hours, throughout the year; but, in summer, the proper periods are at least three every day, and at intervals as nearly equidistant as possible, viz. in the morning, at noon, and a little before the approach of night. For it is a fact, confirmed by the experience of those who have tried it, that cows, when milked thrice in the day, will yield more milk in point of quantity, and of as good, if not better, quality, than she will under the common mode of milking only on the morning and evening.

After the milk is drawn from the cow, it should be carefully strained through a linen cloth, or hair sieve (the late eminent

rural economist, Dr. Anderson, preferred a sieve made of silver wires, on account of its superior wholesomeness), into the cream dishes, which should never exceed three inches in depth, though they may be made so wide as to contain any quantity required, and which ought to be perfectly clean, sweet, and cool. If any ill flavour is apprehended from the cows having eaten turnips, &c. the addition of one eighth part of boiling water to the milk, before it is poured into the dishes, will effectually remove it; and, when filled, the dishes ought to be set upon shelves, or dressers, there to continue till the cream is removed. This should be steadily done by means of a skimming-dish, if possible, without spilling any upon the floor, because it will speedily taint the air of the room, and the cream poured into a vessel, till enough be obtained for churning.

The greatest possible cleanliness ought to be observed in every thing that is connected with the economy of the dairy; and, whatever sort of churn may be employed, the process of churning ought to be very carefully performed. After the butter is made, the milk is forced out of its cavities by means of a flat wooden ladle, furnished with a short handle, at the same time agitating the butter as little as possible, lest it become tough and gluey.

Butter thus freed from the remaining milk is denominated *fresh butter:* to preserve it sweet, it becomes necessary to be salted, which is usually done in vessels prepared for the purpose, and with common salt. But Dr. Anderson recommends the following preparation, which he has experienced to be much superior, as it not only prevents the butter from becoming in

any degree tainted or rancid, but also improves its look or appearance, while (what is of more importance) it imparts a sweeter and richer taste than could have been effected by the use of common salt only. Let two parts of the best common salt, sugar and saltpetre of each one part, be completely blended together by beating, and add one ounce of this mixture to every pound of butter, incorporate it thoroughly in the mass, and close it up for use. It will be necessary, however, to keep butter, thus prepared, for two or three weeks before it is used, otherwise it will not taste well; but, if properly cured according to the hints above given, Dr. A. states, that it will continue so perfectly sweet for three years, as not to be distinguished from newly-made and salted butter. The best butter is that made during the summer; but by adding a certain portion (which experience only can determine) of the juice expressed from the pulp of carrots to the cream previously to churning, winter-made butter will acquire the appearance and flavour of butter that has been churned during the prime part of the summer season.

In the making of cheese many circumstances are to be attended to; such as the preparation of rennet, coagulation of the milk, preparation of the curd, &c. As these processes are differently conducted in different dairies and different parts of the country, we shall pass over them, and proceed to observe that cheese should be kept in an airy and cool place; and if the young twigs of the common birch-tree be placed on the surface or sides of cheeses, they will, especially the tender branches of the birch, be found very serviceable in preventing the depredations of mites. Sometimes, however, it happens

that cheese will swell, either from some accident, or from inattention in some part of the process. To prevent, as well as to stop this swelling, it has been recommended to lay such cheeses in a moderately cool, dry place, and regularly to turn them. Whenever any one becomes considerably swollen, it will be requisite to prick it on both sides in several places, particularly where it is most elevated, by thrusting a large awl, pin, &c. pretty deeply into it; repeating this as often as may be necessary. Although this pricking will not altogether prevent the swelling, yet, by giving a passage to the confined air, it will considerably diminish it, and the cavities of the cheese will neither be so disagreeable, nor consequently so unsightly or unpleasant to the eye.

The advantageous fattening of oxen depends on so many circumstances, and requires such variety of detail, that we are unwillingly obliged to refer to practical writers on this subject; but we cannot leave unnoticed their very great utility for the purposes of draught. And although our limits do not admit of a comparative detail of the arguments adduced for and against the practice of working oxen in preference to horses; yet, from all that has been said and written upon this subject, we may venture to remark, that the more frequent use of oxen for the purpose of draught would be more conducive to the interests of the community as well as of individuals: for it is a certain fact, that, in many cases, oxen would perform the duty of horses with full effect; while it should be taken into the account, that their subsistence is much cheaper, that they are less obnoxious to diseases, and that, when age puts a period to their labour, their flesh is still equally valuable as when young. On the

contrary, the value of a horse is constantly diminishing, after he has passed his prime; and, at last, he is reduced to the trivial worth of his skin[1].

It is recommended to accustom such calves as are intended for draught to be handled and stroked, and tied up to the manger; as they may be handled with less apprehension of danger when they come to be broken in for the yoke.

Of all ruminating animals, that is, of such as chew the cud, the ox-tribe holds the first rank both in beauty and in general utility: in fact, there is scarcely any part of this animal without its use. The blood, fat, marrow, hides, hair, horns, milk, cream, butter, cheese, whey, urine, liver, gall, spleen, bones, and dung, have each their particular use in manufactures, commerce, and medicine.

The skin has been of great use in all ages. The ancient Britons, before they knew a better method, constructed their boats with osiers, and covered them with the hides of bulls, which served for short coasting voyages: and similar vessels are still in use on the Irish lakes, and in Wales on the rivers Dee and Severn. Boots, shoes, and other conveniences of life, are produced from hides. Vellum is made of calf's skin, and gold-beater's skin is formed either of a thin vellum, or the finer parts of the intestines of the ox. The hair mixed with lime is a very necessary ingredient in mortar, and it is also used in various manufactures. Of the horns are made

[1] The reader, who is desirous of further information on this topic, may see it illustrated, by numerous minute facts and details, in the valuable Treatise on Live Stock, already referred to, p. 64—71.

combs, plates for lanterns (said to have been the invention of King Alfred), handles of knives, boxes, cups, and various other useful articles. Carpenter's glue is manufactured from the chips of the hoofs and the parings of the raw hides. The bones are used as a substitute for ivory; and from the feet is procured an oil, which answers many useful purposes. The blood is said to be an excellent manure for fruit-trees, and forms the basis of Prussian blue. Our artificial light is, in a great measure, derived from the fat and suet of these animals, which are further useful in various manufactures. Their gall, liver, spleen, and urine, had formerly a place in the materia medica; although they have now resigned it to more agreeable medicines. But the greatest benefit, perhaps, which we derive from the ox-tribe is the knowledge of vaccination, or inoculation with the cow-pox, the successful introduction of which promises in time to eradicate that pestilent malady the small-pox. The genuine vaccine matter is obtained from a pustulous eruption on the udder of the cow, which frequently produces a casual cow-pox upon the hands of milkers, or in other parts of the body; when introduced into the system by inoculation, similar pustules appear in different parts of the body, which are less severe than those arising from casual infection. The honour of inventing the science of vaccination, though contested by many persons, is now conceded to Dr. Jenner, who has received two several gratuities from parliament of £10,000 and £20,000 for his invaluable discovery. Ignorance and malevolence opposed the progress of vaccination in various ways; but it has triumphed over every effort made to impede its progress, and at no very

distant period we may confidently expect the annihilation of the small-pox. In Turkey it has recently been asserted, that vaccination is an effectual preventive of the plague.

Such are the various benefits which we derive from this most useful tribe of animals; yet, not content with these advantages, the refined cruelty of man has contrived to elicit even amusement from their sufferings. Hence originated the detestable practice of bull-baiting in our own country, and the bull-fights which were recently abolished in Spain.

The earliest bull-baiting in England is said to have taken place at Stamford, in the year 1209; and the second at Tutbury in Staffordshire, in 1374. In progress of time donations were left by different persons, for purchasing bulls to be baited and then distributed among the poor; and the practice has been subsequently continued on the specious plea of charity. On the opening of this sublime amusement, the bull is fastened to a stake by a chain, about fifteen yards long, and terminating in a very strong leather collar passing round his neck; the horns are previously muffled at the points by a composition of tow, tallow, and melted pitch. The attack then commences with noises of every possible description, and every expedient that refined cruelty can suggest is adopted, in order to irritate the animal. When the irritation is judged sufficient, a bull-dog is first let loose upon the prey; and if he be found incapable of pinning him by the nose to the ground, he is soon assisted by a second, or even a third: when these are tired or gored, other bull-dogs, howling and impatient of control, are let loose in their turn, until the exhausted captive falls a victim to a sport as barbarous as ever disgraced the race of man. A humane

attempt was made to abolish this detestable practice by an express law, to which the parliament refused its sanction. For the honour of public feeling, however, we record, that this vile sport is now on the decline, and in the course of another century perhaps may be totally abolished.

Bull-fighting is a favourite sport of the Spaniards and Portuguese, who are supposed to have received it from the Moors, as these are said to have derived it from the Romans, and the latter from the Greeks. The following account of a bull-fight, given at Cadiz, in November, 1809, in honour of the illustrious Lord (now Duke) Wellington, will furnish the reader with a lively idea of the nature of this barbarous sport. We are indebted for the description to the very intelligent traveller, Mr. Jacob.

"This diversion, peculiarly belonging to the Spanish nation, has fallen into disuse, and lately has been restricted by orders from the government, though under new regulations it is still sometimes permitted. The Plaza de Toros is a large amphitheatre, capable of holding fourteen thousand persons. On this occasion it was not full, and I suppose that not more than ten thousand people were present. The appearance of the assembly was striking, and a degree of interest was excited in every countenance, which, I should previously have thought, a much more important contest would scarcely have called forth. I entered the place at the moment when the first bull was killed, and horses, gayly decorated, were dragging him from the circle, amid the sounds of music, and the applauding shouts of the people.

"Preparations were made for a fresh conflict: three men

were posted behind each other, about ten yards asunder, mounted on small but active horses, and armed with a spear about fifteen feet long; and five or six men on foot, dressed in scarlet cloaks, were placed in other parts of the arena. The gates were thrown open, and the bull rushed in. He made towards the first horseman, who received him on the point of his spear, and wounded him between the shoulders; this turned him, and he attacked the second horseman with great fury; but from the want either of dexterity in the rider, or agility in the animal, the horse was dreadfully gored in the body, and his bowels fell on the ground. The combatants were soon disentangled, and the bull attacked the third horseman, who received him like the first, and wounded him severely. He now became furious, and galloped round the circle; but either from the loss of blood, or the pain he endured, he was fearful of facing the horsemen; the men on foot then began to irritate him, by sticking small darts in his body, and whenever he made a push at them, threw the cloak over his eyes, and with great dexterity avoided his thrust.

"This irritation was continued some time, till the animal, streaming with blood, became exhausted. The matador, or principal actor, then made his appearance, armed with a small sword and cloak: he advanced towards the bull, which ran and pushed at him, but the man received the thrust on his cloak, and stepping nimbly aside, withheld his blow, because the animal did not present himself in the exact attitude which the matador required for dispatching him with grace; he then made a second advance towards the animal, and, while he was in the act of pushing at him, plunged the sword up to the hilt between

his shoulders; the bull ran a few paces, staggered, and dropped dead. The trumpets sounded a flourish; horses galloped in, were fastened to the carcase, and dragged it away, amid the applauding shouts of the spectators.

"Six or seven other bulls were then in succession dispatched in a similar manner, with only such variations as were occasioned by the different degrees of courage which the animals possessed. When the last bull was fighting, the matador so contrived it that he gave him the *coup de grace* immediately under the box in which Lord Wellington and the English party were seated. Before this operation, he addressed himself to his lordship, and said, with much dignity, that he should kill that bull to the health of King George the Third, which was quickly performed. His lordship threw him some money, and the entertainment closed.

"This bull-fight was represented to me as a very inferior exhibition, owing to the coolness of the weather, the bulls having much more courage during the intense heat of summer than at the present season. It is certainly a cruel amusement both to the bulls and to the horses, though attended with little danger to the men. One horse was destroyed, by having his belly lacerated: after he was wounded, and his bowels trailing on the ground, the rider continued the fight, and galloped round the circle, while the poor animal literally trampled on his own entrails at every step: a sight more disgusting than this can scarcely be conceived, and even the bull, though streaming with blood, had not nearly so repulsive an appearance. The men were secured from much danger by their own agility, by the dexterous application of their cloaks, when the animal charged

them, and by the barriers placed round the circle, behind which they retired when pressed by the bull.

"However repugnant this diversion may appear to every delicate and feeling mind, it is more frequented and admired by the ladies than by the gentlemen; they attend these exhibitions in their gayest dresses, applaud the address of the inhuman combatants, and feel the greatest solicitude at the different critical turns of the fight. Many of the young country gentlemen may trace their ruin to these spectacles, as decidedly as Englishmen of the same class may trace theirs to Newmarket. In fact, it is the great object which engages the attention of that description of men distinguished by the term Majos[1]."

In this manner are bull-feasts generally conducted throughout Spain. It is difficult to conceive how such exhibitions can tend, in any way, to preserve the national energy of the Spaniards; while its natural tendency to debase the human heart, and to annihilate all the tender feelings, is too obvious to be pointed out.

Until they are turned two years, the ox-tribe do not cast any *teeth:* at the end of that time they get two new teeth; and at three years old, two others. Every succeeding year, until they are five years old, they get two fresh teeth: they are then said to be full-mouthed; although this is not in fact the case, as the two corner teeth (which are renewed last) are not perfectly up until they are six. After the signs, afforded by the *teeth*, become uncertain, the *horns* may be resorted to, to ascertain

[1] Letters from Spain, p. 172—175.

the age. When three years old, they are smooth and handsome; after which period there appears a circle or wrinkle, which is annually increased as long as the horn remains; so that, according to the number of circles or rings, the age of a beast may be ascertained with tolerable precision, unless the wrinkles are defaced, or artificially removed, by filing or scraping,—a fraudulent practice, which is too frequently adopted, in order to deceive the ignorant or inexperienced purchaser with respect to the real age of the animal.





THE BEAVER.

The beaver is readily distinguished from every other quadruped by the remarkable structure of its tail. It is of an oval form, nearly flat, but rising into a slight convexity on its upper surface, perfectly void of hair, except at the base, and marked out into scaly divisions like the skin of a fish. The general length of the beaver is about three feet, and of the tail nearly one foot. The colour of the animal is a deep chestnut, and the hair is very fine, smooth, and glossy. The beaver, like other quadrupeds, sometimes varies in colour, and is occasionally found perfectly black. Instances have also occurred in which it has been found entirely white, cream-coloured, or spotted.

The beaver (castor fiber) is a native of the northern parts

of Europe, Asia, and North America, abounding most in cold regions, and becoming gradually less common towards the south. In ancient times, the beaver was a more general inhabitant of Europe than it is at present, especially in France, Spain, Italy, Greece, and Egypt, where they are now scarcely ever observed. They have been wholly exterminated from Britain for some centuries, yet, as they once abounded in this island, it will not, we conceive, be displeasing to our readers to find some account of so curious and interesting an animal in a work which professes to describe British quadrupeds.

That the beaver was formerly an indigenous inhabitant of this country is certain, upon the credit of the most authentic records. The latest account we have of them is by Gyraldus Cambrensis, who travelled through Wales in 1188: he gives a brief history of their manners, and adds, that they were only found in the Teivi river. Several pools of water in the northern parts of the Cambrian principality still bear the name of Llyn yr afange, the pool or lake of beavers. There are two, if not more, of the pools amid the wilds of the Snowdonian mountains that bear this name to the present day; a remarkable one exists in the romantic vale of Nant Frangon, near Beddgelert, in Caernarvonshire, and another near the Conway, a few miles above Llanrwst. These were evidently the haunts of beavers. It is, however, believed that the beaver was uncommon in Britain before the tenth century, for by the laws of Howel dda, the price of the beaver's skin (croen lloslydan) was estimated at one hundred and twenty pence, a great price in those days.

Of all quadrupeds, the beaver is considered as possessing the greatest degree of natural or instinctive sagacity in con-



BEAVERS.

structing its habitation, preparing, in concert with others of its own species, a kind of arched caverns or domes, supported by a foundation of strong pillars, and lined or plastered internally with a degree of neatness and accuracy unequalled by the art of any other quadruped. It does not appear that this extraordinary sagacity of the beaver was known to the ancients, though they were well acquainted with the animal, which they killed chiefly for the sake of the medical drug, castoreum or castor.

The beaver is about three feet in length, and its tail is eleven inches long. He uses his tail as a rudder to direct his course in the water. In places much frequented by man, the beavers neither associate nor build habitations. But, in the northern regions of both Continents, they assemble in the month of June or July, for the purposes of uniting into society and of building a city. From all quarters they arrive in numbers, and soon form a troop of two or three hundred. The operations and architecture of the beavers are so well described by the Count de Buffon, that we shall lay it before our readers nearly in his own words. The place of rendezvous, he remarks, is generally the situation fixed upon for their establishment, and it is always on the banks of waters. If the waters be flat, and seldom rise above their ordinary level, as in lakes, the beavers make no bank or dam. But in rivers or brooks, where the water is subject to risings and fallings, they build a bank, which traverses the river from one side to the other, like a sluice, and is often from 80 to 100 feet long, by 10 or 12 broad at the base. This pile, for animals of so small a size, appears to be enormous, and presupposes an incredible labour[1]. But the solidity with which

[1] The largest beavers weigh only 50 or 60 pounds.

the work is constructed is still more astonishing than its magnitude. The part of the river where they erect this bank is generally shallow. If they find on the margin a large tree, which can be made to fall into the river, they begin, by cutting it down, to form the principal basis of their work. This tree is often thicker than a man's body. By gnawing it at the bottom with their four cutting teeth, they in a short time accomplish their purpose, and always make the tree fall across the river. They next cut the branches from the trunk, to make it lie level. These operations are performed by the joint industry of the whole community. Some of them, at the same time, traverse the banks of the river, and cut down smaller trees, from the size of a man's leg to that of his thigh. These they cut to a certain length, dress them into stakes, and first drag them by land to the margin of the river, and then by water to the place where the building is carrying on. These larger piles they sink down, and interweave the branches with the stakes. In performing this operation many difficulties are to be surmounted. In order to dress these stakes, and to put them in a situation nearly perpendicular, some of the beavers must elevate, with their teeth, the thick ends against the margin of the river, or against the cross tree, while others plunge to the bottom, and dig holes with their fore-feet to receive the points, that they may stand on end. When some are labouring in this manner, others bring earth, which they plash with their feet, and beat firm with their tails. They carry the earth in their mouths, and with their fore-feet. They transport earth in such quantities, that they fill with it all the intervals between the piles. These piles consist of several rows of stakes, of equal height, all placed opposite to each other, and extend from

one bank of the river to the other. The stakes facing the under part of the river are placed perpendicularly; but those which are opposed to the stream slope upward to sustain the pressure of the water; so that the bank, which is ten or twelve feet wide at the base, is reduced to two or three at the top. Near the top, or thinnest part of the bank, the beavers make two or three sloping holes, to allow the surface-water to escape. These they enlarge or contract in proportion as the river rises or falls; and, when any breaches are made in the bank by sudden or violent inundations, they know how to repair them when the water subsides.

Hitherto all these operations were performed by the united force and dexterity of the whole community. They now separate into smaller societies, who build cabins or houses. The cabins are constructed upon piles near the margin of the river or pond, and have two openings, one for the animals going to the land, and the other for throwing themselves into the water. The form of these edifices is either round or oval, and they vary in size from four or five to eight or ten feet in diameter. Some of them consist of three or four stories. Their walls are about two feet thick; and are raised perpendicularly upon planks, or plain stakes, which serve both for foundations and floors to their houses. When they consist of but one story, they rise perpendicularly a few feet only, afterwards assume a curved form, and terminate in a dome or vault, which answers the purpose of a roof. They are built with amazing solidity, and neatly plastered with a kind of stucco both within and without. In the application of this mortar the tails of the beavers serve for trowels, and their feet for plashing. Their houses are impene-

trable to rain, and resist the most impetuous winds. In their construction, they employ different materials, as wood, stone, and a kind of sandy earth, which is not liable to be dissolved in water. The wood they use is generally of the light and tender kinds, as alders, poplars, and willows, which commonly grow on the banks of rivers, and are more easily barked, cut, and transported, than the heavier and more solid species of timber. They always begin the operation of cutting trees at a foot or a foot and a half above the ground: they labour in a sitting posture; and, beside the convenience of this posture, they enjoy the pleasure of gnawing perpetually the bark and wood, which are their favourite food. Of these provisions they lay up ample stores in their cabins to support them during the winter. Each cabin has its own magazine, which is proportioned to the number of its inhabitants, who have all a common right to the store, and never pillage their neighbours. Some villages are composed of twenty or twenty-five cabins. But these large establishments are not frequent; and the common republics seldom exceed ten or twelve families, of which each have their own quarter of the village, their own magazine, and their separate habitation. The smallest cabins contain two, four, or six, and the largest eighteen, twenty, and sometimes thirty beavers. As to males and females, they are almost always equally paired.

In their society, however numerous, an universal peace is maintained. Their union is cemented by common labours; and it is perpetuated by mutual conveniency, and the abundance of provisions which they amass and consume together. A simple taste, moderate appetites, and an aversion from blood and carnage, render them destitute of the ideas of rapine and of

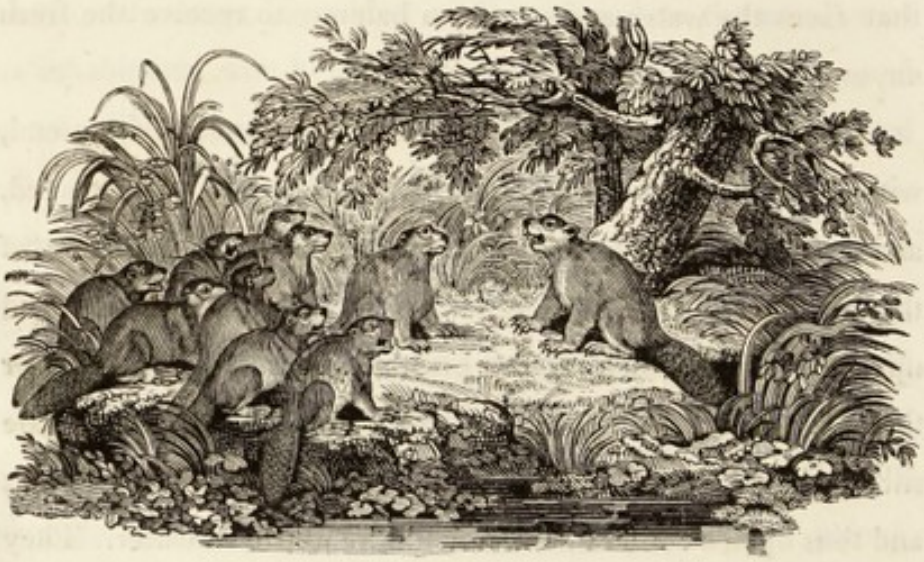
war. Friends to each other, if they have any foreign enemies they know how to avoid them. When danger approaches, they advertise one another, by striking their broad tail on the surface of the water, the noise of which is heard at a great distance, and resounds through all the vaults of their habitations. Each individual, upon these occasions, consults his own safety: some plunge into the water; others conceal themselves within their walls, which can be penetrated only by the fire of heaven, or the steel of man, and which no animal will attempt either to open or to overturn. These retreats are not only safe, but neat and commodious. The floors are spread over with verdure: the branches of the box and of the fir serve them for carpets, upon which they permit not the smallest dirtiness. The window that faces the water answers for a balcony to receive the fresh air, and for the purpose of bathing.[1]

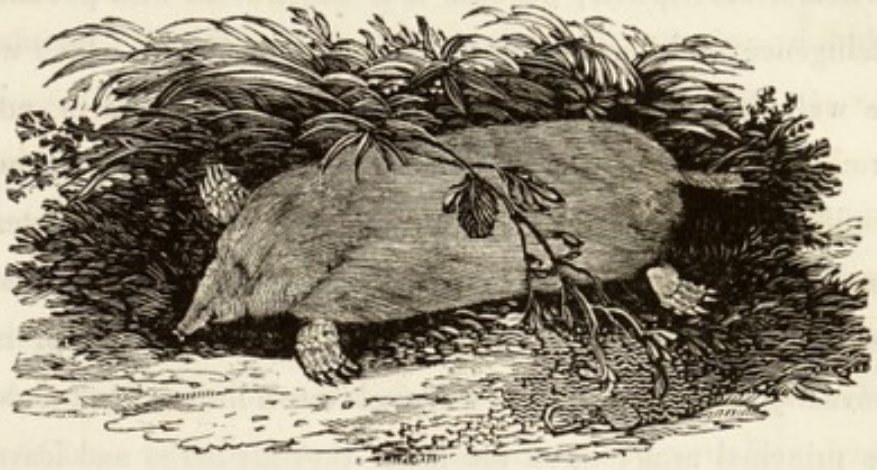
During the greater part of the day, the beavers sit on end, with their head and the anterior parts of their body elevated, and their posterior parts sunk in the water. The aperture of this window is sufficiently raised to prevent its being stopped up with the ice, which, in the beaver climates, is often two or three feet thick. When this accident happens, they slope the sill of the window, cut obliquely the stakes which support it, and thus open a communication with the unfrozen water. They often swim a long way under the ice. The continual habit of keeping their tail and posterior parts of their body in the water, appears to have changed the nature of their flesh; for that of their anterior parts, as far as the reins, has the taste and con-

[1] Smellie's Philos. of Nat. Hist. vol. i. p. 313.

sistence of the flesh of land-animals; but that of the tail and posterior parts has the odour and all the other qualities of fish.

In September, the beavers collect their provisions of bark and of wood. Till the end of winter, they remain in their cabins, enjoy the fruits of their labours, and taste the sweets of domestic happiness. This is their time of repose, and their season of love. Knowing and loving one another, each couple unite, not by chance, but by taste and a real selection. The females bring forth in the end of winter, and generally produce two or three at a time.





THE MOLE.

THE whole form of the mole (talpa europæus) is well calculated for its subterraneous mode of life. Its fore feet are quite naked, very broad, with large palms almost like a hand; there are five toes on each, terminated with strong nails, very concave on the upper side; and in the place of a thumb a strong bone under the skin. The hind feet are very small, with five slender toes, and a small thumb on the inside. Its skin is much thicker and tougher in proportion than in other quadrupeds, and the fur with which it is covered equally surpasses that of other animals in fineness and softness. This animal is supposed to possess the power of hearing in an exquisite degree; and, if at any time it emerges from its subterraneous retreat, instantly disappears on

the approach of any danger. When first taken, either by digging it out or otherwise, it utters a shrill scream, and prepares for defence by exerting the strength of its claws and teeth.

The habitation where moles deposit their young merits a particular description; because it is constructed with peculiar intelligence, and because the mole is an animal with which we are well acquainted. They begin by raising the earth, and forming a pretty high arch. They leave partitions, or a kind of pillars, at certain distances, beat and press the earth, interweave it with the roots of plants, and render it so hard and solid, that the water cannot penetrate the vault, on account of its convexity and firmness. They then elevate a little hillock under the principal arch; upon the latter they lay herbs and leaves for a bed to their young. In this situation they are above the level of the ground, and, of course, beyond the reach of ordinary inundations. They are, at the same time, defended from the rains by the large vault that covers the internal one, upon the convexity of which last they rest along with their young. This internal hillock is pierced on all sides with sloping holes, which descend still lower, and serve as subterraneous passages for the mother to go in quest of food for herself and her offspring. These by-paths are beaten and firm, extend about twelve or fifteen paces, and issue from the principal mansion like rays from a centre. Under the superior vault we likewise find remains of the roots of the meadow saffron, which seem to be the first food given to the young. From this description it appears, that the mole never comes abroad but at considerable distances from her habitation. Moles, like the beavers, pair; and so lively and reciprocal an attachment subsists between

them, that they seem to disrelish all other society. In their dark abodes they enjoy the placid habits of repose and of solitude, the art of securing themselves from injury, of almost instantaneously making an asylum or habitation, and of procuring a plentiful subsistence without the necessity of going abroad. They shut up the entrance of their retreats, and seldom leave them, unless compelled by the admission of water, or when their mansions are demolished by art.

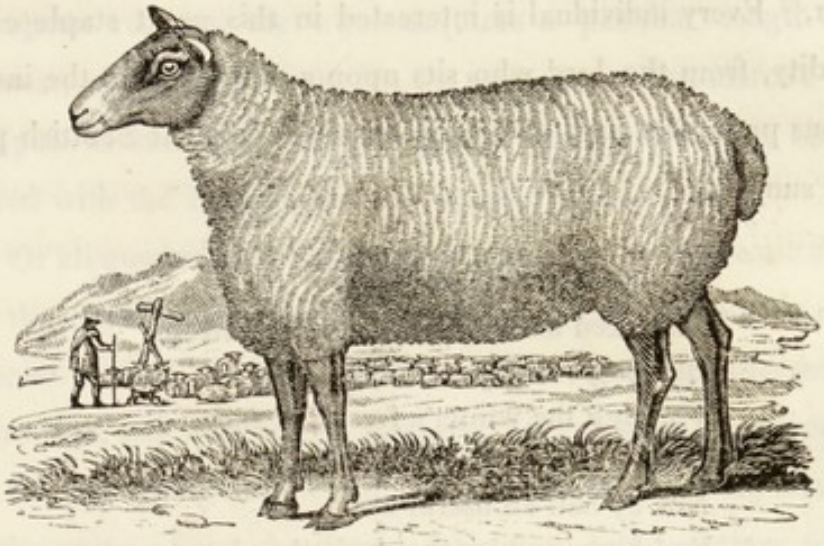
The muscular strength of the mole is very great, and it is enabled to force itself into the ground with an extraordinary degree of celerity. On one occasion, a mole is said to have been seen swimming towards a small island in the middle of the loch of Clune, in Scotland, at the distance of 180 yards from land.

The eyes of the mole are so small, and so deeply imbedded in fur, as to be scarcely perceptible; and it has been doubted whether they were intended by nature for distinct vision, or rather merely for giving the creature such a degree of notice of the approach of light, as might sufficiently warn it of the danger of exposure. The mole is reported to feed not only on worms, insects, &c. but also on the roots of vegetables; but, generally speaking, it is a carnivorous animal, and, in particular circumstances, is extremely fierce and voracious. It is said to be unknown in Ireland.

In rich and fertile soils, observes a late writer, mole-hills are frequently thrown up in great numbers, from their abounding more with the food of the subterraneous animals that produce them. Meadows are often extensively and seriously injured by them on account of their depth of soft, humid soil. Moles usually destroy and render useless the grass, not only of

the very spot where the hills are raised, but likewise to some extent immediately round them, as well as impeding the free course of the scythe: for these reasons, the extermination of moles becomes an object of great consequence to grass husbandry. Notwithstanding the practice pursued by some of spreading out the mole-hills in the spring, the best method invariably is, never to suffer the animals to remain in the land, but to procure an expert mole-catcher to destroy them, and thus prevent the hills from being thrown up.





THE SHEEP.

Of all domestic animals, none perhaps are so extensively beneficial to man as the sheep-kind. Others may excel in strength, docility, and dignity of character; but the sheep supplies us both with food and clothing, and is therefore indispensable to our comforts,—we might almost add to our existence. In an agricultural point of view, they are of the greatest importance to the British nation, as there are very few farms on which they may not be advantageously kept, either for breeding, grazing, or for feeding fat lambs. The most polished of our bards, Mr. Pope, has somewhere remarked

> The fur that warms the monarch, warmed a bear:

but the wool of these valuable creatures warms every class of

people, from the king to the beggar; employs thousands in the manufacturing of their fleeces, and whole fleets in the exportation. Every individual is interested in this great staple commodity, from the lord who sits upon a woolsack to the industrious poor who card and spin; or as an ancient Scottish poet has sung—

> The bonny harmless sheep
> That feed on mountains stay and steep,
> Bleating sweetly as they go
> Through the winter's frost and snow:—
> Hart and hind and fallow deer
> Not by half so useful are—
> Fra' kings to him that hads the plow,
> All are obliged to tarry-woo.[1]

This animal is so generally known, as to render a particular description of its form almost unnecessary. Its most prominent characters are these:—It has eight cutting teeth in the lower, and nine in the upper jaw; the horns twist spirally outwards; the tail is round and short, and the body is covered with wool. These characters, however, are so greatly varied in the different races, that it becomes exceedingly difficult to fix on an absolute distinctive mark which shall apply to all the varieties.

The domestic sheep, Dr. Shaw remarks, in its most valuable or woolly state, exists hardly any where in perfection, except in Europe, and in some of the temperate parts of Asia. When transported into very warm climates, it loses its peculiar covering, and appears coated with hair, having only a short wool next the skin: in very cold climates also the exterior part

[1] Culley on Live Stock, p. 101.

of the wool is observed to be hard and coarse, though the interior is more soft and fine. In England, and in some other European regions, the wool acquires a peculiar length and fineness, and is best adapted to the purposes of commerce: that of Spain is still finer, but less proper for using alone; and is mixed with the English for the superior kinds of cloth.

Of all quadrupeds, the sheep, in their present domestic state, are the most innocent and defenceless. Long accustomed to depend on man for support, they appear to resign themselves to his will, and to have few instincts, except what are necessary for the preservation and continuance of the race. They tremble at the voice of the shepherd or his dog, and, contrary to the characters of the horse and the cow, are more awed by the latter than the former. Hence the Count de Buffon, and some other natural historians, have represented the sheep as the most stupid of all four-footed animals. But this seems not to be altogether just: for though the talents of the sheep be not so brilliant as those of some other quadrupeds, yet he appears not to be the stupid, defenceless, timid creature delineated by Buffon, and those writers who have implicitly copied his details.

All tame animals, Mr. Smellie very justly observes, lose a portion of that sagacity, dexterity, and courage, which they are obliged to employ against their enemies in a wild state; because they have been long accustomed to rely upon the protection of man. Sheep, when enslaved by men, tremble at the voice of the shepherd or his dog. But, on those extensive mountains, where they are allowed to range almost without control, and where they seldom depend on the aid of the shepherd, they assume a very different mode of behaviour. In this situation, a ram or a

wedder boldly attacks a single dog, and often comes off victorious. But, when the danger is of a more alarming nature, like man, they trust not to the prowess of individuals, but have recourse to the collected strength of the whole flock. On such occasions, they draw up into a compact body; they place the young and the females in the centre; and the strongest males take the foremost ranks, keeping close by each other's sides. Thus an armed front is presented on all quarters, which cannot be attacked without the greatest hazard of destruction. In this manner they wait, with firmness and intrepidity, the approach of the enemy. Nor does their courage fail them in the moment of attack: for, if the aggressor advances within a few yards of the line, the rams dart upon him with such impetuosity, as lays him dead at their feet, unless he saves himself by flight. Against the attacks of single dogs, or foxes, they are, when in this situation, perfectly secure. Besides, a ram, regardless of danger, often engages a bull, and never fails to conquer him; for the bull, by lowering his head, without being sensible of his defenceless condition, receives between his horns the stroke of the ram, which usually brings him to the ground.

The boldness of the female, when not in a state of absolute slavery, in protecting her young from injury, is likewise extremely remarkable. When robbed of her lamb, she bleats in a manner which strongly marks the anguish she feels. In the eagerness of her search, her eye-balls seem to start from their sockets; and her irregular and distracted motions, joined to the violence and constancy of her bleatings, are evident indications of the most pungent grief. When perfectly tamed, the sportive gambols of sheep are too well known to require any description.

A lamb, separated from the flock, and brought up by the hand, often displays considerable docility and attachment. Admitted to a degree of intimacy with mankind, it will sometimes play several frolics, and butt against its benefactors; but the general inoffensiveness of its manners recommends it so strongly to human affection, that it is usually a particular favourite with infancy and youth. The sportive innocence of lambs has afforded frequent subjects of delineation to the poets, few of whom have more happily described them, than the author of the "Farmer's Boy."

A few begin a short but vigorous race,
And Indolence abashed soon flies the place;
Thus challenged forth, see thither one by one,
From every side assembling playmates run;
A thousand wily antics mark their stay,
A starting crowd, impatient of delay.
Like the fond dove from fearful prison freed,
Each seems to say, "Come let us try our speed;"
Away they scour, impetuous, ardent, strong,
The green turf trembling as they bound along;
Adown the slope, then up the hillock climb,
Where every molehill is a bed of thyme;
There panting stop; yet scarcely can refrain;
A bird, a leaf, will set them off again:
Or, if a gale with strength unusual blow,
Scattering the wild-briar roses into snow,
Their little limbs increasing efforts try,
Like the torn flower the fair assemblage fly.
Ah, fallen rose! sad emblem of their doom;
Frail as thyself, they perish while they bloom!
Though unoffending Innocence may plead,
Though frantic Ewes may mourn the savage deed,
Their shepherd comes, a messenger of blood,
And drives them bleating from their sports and food.

In the selection of food few animals discover greater sagacity than the sheep: nor does any domestic animal show more dexterity and cunning in its attempts to elude the vigilance of the shepherd, and to steal such delicacies as are agreeable to its palate.

Besides its hardiness in enduring great severities of the weather, the natural instinct of sheep, in foreseeing the approach of a storm, is no less remarkable: in their endeavours to secure themselves under the shelter of some hill, whole flocks have frequently been buried for many days beneath a covering of snow, whence they have afterwards been taken out without sustaining any material injury. This scene is thus beautifully described by Thomson:—

> Oft the Whirlwind's wing
> Sweeps up the burden of whole wintry plains
> At one wide waft, and o'er the hapless flocks,
> Hid in the hollow of two neighbouring hills,
> The billowy tempest whelms; till, upward urged,
> The valley to a shining mountain swells,
> Tipt with a wreath high curling in the sky.
>
> WINTER.

Mr. Bewick records an instance where a sheep, at the approach of a storm, fled for shelter to a neighbouring cottage, and took refuge with its shepherd.

These animals are supposed to be fond of any jingling kind of noise: and on this account it is, that the shepherds often fasten a bell round the neck of the leader (which is thence termed the *bell-wether*); as the sound of the bell prevents the flock from ranging far from the spot where he feeds. They implicitly follow their leader wherever he goes: but in case of

sudden alarm, if any one of the flock push forward to escape, and thus take the lead, the rest generally follow him, and precisely in the same way.

Mr. Bingley, to whom we are indebted for this curious fact, has recorded a ludicrous instance of the disposition of sheep to follow their leader, on the authority of the late eminent rural economist, Dr. Anderson; who witnessed it at Liverpool.

"A butcher's boy was driving about twenty fat wedders through the town; but they ran down a street along which he did not want them to go. He observed a scavenger at work with his broom, a little way before them, and called out loudly to him to stop the sheep. The man accordingly did what he could to turn them back, running from side to side, always opposing himself to their passage, and brandishing his broom with great dexterity. But the sheep, much agitated, pressed forward; and at last one of them came right up to the man, who, fearing it was about to jump over his head, while he was stooping, raised his body erect, and grasping the short broomstick in both hands, held it over his head. He stood for a few seconds in this position, when the sheep made a spring, and jumped fairly over him, without touching the broom. The first had no sooner cleared this impediment, than another followed, and another, and another, in such quick succession, that the man, perfectly confounded, seemed to lose all recollection, and stood, in the same attitude, till the whole had jumped over him, not one of them attempting to pass on either side, though at the sides the street was quite clear. As this took place during wet weather, the man was entirely bespattered over with dirt before they had all passed; and it is impossible to conceive

a more ludicrous appearance than the poor fellow made on the occasion."[1]

It does not appear from early writers that the breeding of sheep was cultivated by the ancient Britons for the sake of their wool: the inhabitants of the inland parts of this island either went entirely naked, or were only clothed with skins; nor was it until several ages after these animals were regularly bred, that the woollen manufacture was carried on among us. In process of time, however, the intercourse of our ancestors with the more civilized inhabitants of the continent taught them the use of woollen garments; but it was long before they knew how to manufacture them. That valuable branch of business lay for a considerable time in foreign hands, and we were obliged to import cloth manufactured from our own materials. There were, notwithstanding, many unavailing efforts among our kings to introduce and to preserve the manufacture at home.

Henry II. actuated by true policy, forbade the use of any other except English wool, in the making of cloth; but, notwithstanding this injunction, the weaving business proceeded so slowly, that Edward III. was obliged to permit the importation of foreign cloth, at the commencement of his reign. But, by encouraging foreign artificers to settle in England, and instruct the natives in their trade, he was, in the sequel, enabled to recal his permission. Many salutary laws, passed at succeeding intervals, operated, by degrees, to the establishment of this valuable trade in England. But the full dawn of its prosperity

[1] Bingley's British Quadrupeds, p. 362, 363. Anderson's Essays on Agriculture, &c. vol. iii. p. 366.

is to be dated from the reign of Queen Elizabeth, when the tyranny of the Duke of Alva in the Netherlands drove many of the artificers into this country, who well repaid the protection they received, by founding that immense manufacture we now carry on, and in which we are unrivalled, both in the fineness and durability of our fabrics.[1]

Indeed, no country on earth is so well supplied with every sort of materials necessary in the clothing business as Britain; and, though the sheep of this island have not uniformly fine fleeces, they are all serviceable in some particular branches of the manufacture. The following synopsis will, it is conceived, afford a correct view of the principal breeds of sheep now reared in the British islands:

I. *Sheep without Horns.*

1. Lincolnshire breed.
2. Teeswater breed.
3. Dishley or new Leicestershire breed.
4. Cotswold breed.
5. Dartmoor breed.
6. South-Down breed.
7. Romney Marsh breed.
8. Herefordshire or Ryeland breed.
9. Herdwick breed.
10. Dunfaced breed.
11. Cheviot breed.
12. Shetland breed.

[1] Pennant's British Zoology, vol. i. p. 23—26.

II. *Horned Sheep.*

13. Morf or Shropshire breed.
14. Dorsetshire breed.
15. Exmoor breed.
16. Wiltshire breed.
17. Norfolk breed.
18. Heath breed.

Mr. Culley (in his Treatise on Live Stock, p. 102) has given a valuable synopsis of the permanent races of sheep bred in this island, exhibiting in a tabular form the weights of the respective fleeces, the prices which they respectively produced per lb., the weight of the wethers per quarter, and the ages at which the animals were killed. This table is well deserving the consultation of the practical reader: but as the natural division of these useful animals is obviously that of hornless and horned, we have adopted it in the following notice of the British breeds.

I. SHEEP WITHOUT HORNS.

1. THE LINCOLNSHIRE BREED.

This race is found principally in the county of Lincoln, whence it takes its name, and is distinguished by having white faces, large bones, long, thin, and weak carcases, with thick, white, and rough legs. Its fleece is the heaviest of all the British breeds, weighing from nine to eleven pounds when the animal is killed at three years old: the wool is fine, and from

ten to eighteen inches in length. The original Lincoln race was calculated only for the richest pastures, being slow feeders, and distinguished by the defects of having too loose a form, and course-grained flesh, together with too much bone. These disadvantages, however, are now removed by crossing with Dishley or new Leicester rams: the *name*, however, of a good old Lincoln sheep still continues to be held in much request at Smithfield; and the flavour of Lincoln mutton has been considered superior to that of the Dishley breed.

2. THE TEESWATER BREED.

This kind differs from the Lincolnshire, in their wool not being so long and heavy, in standing upon higher, though finer-boned legs, yet supporting a thicker, firmer, heavier carcase, much wider upon their backs and sides, and in affording a fatter and finer-grained carcase of mutton. The two-years-old wethers weigh from 25lb. to 35lb. per quarter; some particular ones, at four years old, have been fed to 55lb. and upwards.

There is little doubt but the Teeswater sheep were originally bred from the same stock as the Lincolnshire; but by attending to size, rather than wool, and constantly pursuing that object, they have become a different variety of the same original breed.

This largest kind of sheep is not adapted to live in numerous flocks, or upon bare pastures; they require good ground, depasturing very few together, or in small parcels, and great indulgence in winter. Accordingly, we find in that fine tract of country by the Tees, where these sheep are principally kept, the land is in general good, well sheltered, and cut into small

inclosures, where they keep a very small number in the same field, allow them to go to a hay-stack all the winter, or to hecks or sheep-racks in the field, and generally give the ewes corn, previous to, and for some time after, their lambing.

The ewes of this breed generally bring two lambs each, and sometimes three: there are instances of even four or five. Mr. Culley mentions a Mr. Eddison who had a ewe that produced him sixteen lambs in four years, of which the first nine lambs were yeaned within the short space of eleven months.

The Teeswater sheep are at present rarely to be found pure, except in the possession of some old breeders: and Mr. Lawrence presumes that it now would be a matter of extreme difficulty to procure any genuine individuals of this breed.

3. THE DISHLEY OR NEW LEICESTER BREED.

These sheep are particularly distinguished from other long-woolled breeds, by their clean heads, fine lively eyes, straight and broad backs, round or barrel-shaped bodies, fine and small bones, and thin pelts. The peculiar advantages of this breed are, fineness and length of wool, which is well adapted for combing, and weighs upon an average eight pounds per fleece, when killed at two years old, the most profitable time for killing this race. The new Leicesters are tolerably hardy and vigorous; and as they fatten both kindly and early, they are admirably calculated for the market, especially as they require less food than others, and will also thrive on pastures that will scarcely keep other sheep.

The Dishley, or new Leicester breed, derives its name from the residence of that first of all cattle improvers, the late Mr.



SHEEP,

New Leicester Breed.

BAKEWELL, to whom British farmers and breeders are so deeply indebted. Before his time all the midland county sheep, as well as those of Lincolnshire, were of a form too coarse, loose, and irregular: having acquired much experience in the different breeds by travel in this country, and by visiting the continent and Ireland, he determined to improve the defects of the cattle in his own neighbourhood. Mr. Bakewell's well-known fundamental principles, that "like produces like, that small bones, thin pelts, and the barrel-shape, are soonest and most productive of fat at the least expense of food," were most probably the original suggestions of his own mind, as no source has hitherto been discovered whence he could derive them.

That Mr. Bakewell's theory was well grounded there can be no doubt; and his improvements have received the sanction of a success so widely extended, that nothing similar can be found either in past or present experience. It is reported, Mr. Lawrence states,[1] and with the strongest probability, from the appearance of the stock, the fineness of the wool, and of the grain of the mutton, that a Ryeland cross was a prime instrument in the Dishley improvement of sheep. Probably the root or foundation was Lincoln. The Dishley cross has made its way into every part of this island; to the Land's End, to the bottoms of the Welsh mountains, and of the Scottish Highlands, to Ireland, and even to Russia. Its general success, indeed, has been attended with various particular instances of failure; the cross is sometimes very injudiciously used with short or carding wool stock, excepting where the intention is only

[1] Treatise on Cattle, p. 326, 330, 332.

to obtain forward lambs. On stock naturally good and improveable, this peculiar effect of the New Leicester cross has resulted, viz. the improved have considerably surpassed, in the most valuable properties, their improvers. Of this many examples may be seen in the improved Lincoln, Northumberland, and midland county sheep.

Few persons, who are acquainted with the history of agriculture, can be ignorant of the high prices formerly and still given for new Leicester tups and ewes, and of the vast rates at which the former were let for the season, for that useful custom was generally introduced by Bakewell. The famous ram named the TWO POUNDER was let for one season, at the substantially famous price of EIGHT HUNDRED GUINEAS, exclusive of his duty, in the same season, to the flock of his proprietor, which being reckoned proportionally, amounts to the almost incredible sum, for one year, of twelve hundred guineas. It must be observed, that such high prices are given only by tup breeders. This profitable branch of husbandry has so much increased, since the days of Mr. Bakewell, that it is averred there are now not less than ten thousand farmers, in the midland counties, each of whom either lets or hires a tup, for the season, at ten pounds.

The hired tups are conveyed some time in September and October, in two-wheeled carriages, which are hung on springs, and which are large enough to hold three or four rams. In these they very conveniently travel twenty or thirty miles a day, and have sometimes been sent upwards of three hundred miles. The tupping business has been productive of much profitable intercourse in these counties; every considerable breeder, during

the shews, keeping open house to the *profession*. The practice of improvement has also introduced the most liberal and judicious system of sheep management which is to be found in Britain. The annual private shows of rams, in the neighbourhood of Leicester, with the public exhibition of them at that town, in October, are calculated to afford considerable amusement and information to an amateur.

4. THE COTSWOLD OR IMPROVED GLOUCESTERSHIRE BREED

Is originally a variety of the Lincolnshire sheep improved by crossing, but now become a distinct race. These sheep are found chiefly on the Cotswold hills, in the county of Gloucester, whence they derive their name. They are considered in many respects to be superior to the parent stock: the wool is fine and well adapted for combing; and the mutton is full sized, and of a fine grain.

5. THE DARTMOOR, BAMPTON, OR DEVONSHIRE NATTS

Have white faces and legs, thick necks, large bones, narrow backs, and high back-bone, good sides, and short legs. The wool is long, averaging nine pounds per fleece, at about two years and a half old: the breed is chiefly confined to the moor whence it takes its name.

6. THE SOUTH-DOWN BREED

Is one of the old varieties of sheep in this island, and has from time immemorial been in possession of the Sussex downs,

and of the Kentish hills. Of late years the great merits of these animals, both as hill and pasture sheep, having become more generally known, they have been introduced into almost every part of Britain, and also into Ireland. Their faces and legs are grey, bones fine, neck long and small, low before, shoulder high, light in the fore quarter, sides broad, loin tolerably good, back-bone rather too high, thigh full, and twist good.

The wool is very fine and short (the staple being from two to three inches in length) weighing an average of two pounds and a half per fleece, when killed at two years old. The flesh is fine grained, and of excellent flavour. They are quick feeders, of a hardy and vigorous constitution, capable of great improvement. This breed has been found to consume less food in proportion to weight than the Norfolks, yet keep in better order. Young sheep produce the best lambs: the crones are therefore constantly sold at four or five years old; and if this were done earlier, it is supposed it would be more profitable. More than one third, it is said, will produce twins, if the ewes be well fed, and the lambs be very well covered when yeaned. They are quiet, healthy, and very handsome park stock—no small recommendation in this age of fashionable breeding.

7. THE ROMNEY MARSH BREED.

This is a large long-woolled breed, averaging about eight pounds per fleece, when killed at two years and a half old. The Romney sheep have white faces and legs, rather large bones, and round or barrel-shaped bodies. The flesh is excellent and fine-grained, and the sheep fatten kindly on rich marsh or

pasture grounds, in which situations only they are profitable. The stock is good, and with proper attention is capable of much improvement without an alien cross.

Romney Marsh has ever been famous for its vast annual return of mutton and wool, and for the number of sheep per acre it constantly feeds. It is divided into breeding and feeding grounds, according to quality. The graziers have an excellent practice of providing a sufficient number of Welsh calves, and keeping them at a straw-yard, in readiness to turn into the marshes in season, with the intent of keeping under the long grass, and of preventing its running away from the sheep. The marsh is supposed to produce 20lb. of wool per acre, or to make, perhaps, an annual total of five thousand packs, some of it of the finest quality, and longest staple, but often disadvantageously mixed with an inferior quality, which induces a hesitation in the buyer, and an uncertainty as to the price. The winter management of the sheep stands far more in need of improvements than the breed itself. The ewes are much injured by exposure, and in a difficult season are very weak at yeaning time, seldom bringing up more than a lamb, although many twins are yeaned; great sickness and mortality often ensue, causing an immense waste of mutton and wool, with no trifling reduction of condition and quality in the stock. (See Lawrence on Cattle, p. 334.)

8. THE HEREFORD OR RYELAND BREED.

THESE sheep have white legs and faces, with wool growing close to their eyes, and a tolerably well-formed carcase, producing excellent mutton. The wool is fine and short, weighing from one pound and a half to two pounds and a half per fleece. Those sheep which have the finest wool are kept lean, and yield a pound and a half each; if better kept, they attain a larger size, but are inferior in quality.[1] The Hereford sheep, Mr. Lawrence remarks, while they remained pure and unmixed, bore the finest fleece of any British sheep, and the nearest in appearance and quality to the Spanish wool. Their mutton had always an equal character for excellence; but no great quantity of it, in these times, finds its way to the London markets. They have been of late years much crossed with Dishley tups, for the reasons before assigned; and it is averred that they are now become far more tender, and worse in constitution than formerly, when they used to be esteemed a very hardy race. On those farms where they still *cot* their sheep, they are either kept in the cot by night, all the year round, or in the winter months only, their food being pease, barley, oat or wheat straw, in racks. These cots, according to Mr. Culley, are low buildings, completely covered over, and made to contain from one to five hundred sheep, in proportion to the size of the farm, sheep-walk, or flock kept. The true Herefordshire breed are properly called RYELAND sheep, from the circumstance of the land, on which they are fed, being formerly thought capable of

[1] Culley on Live Stock, p. 122.

producing no better grain than rye—being a tract of very poor land, which, however, is now found capable of yielding almost any kind of grain.

9. THE HERDWICK BREED.

These sheep are so called from their having been immemorially farmed in herds, at a yearly sum, upon certain mountain-farms, thence termed *Herdwicks*. They are peculiar to that high mountainous district, at the head of the rivers Dudden and Esk, in the county of Cumberland, which is more particularly known by the names of Hardknot, Scalefell, and Wreynose. The property, both of the mountains and flocks, is in the lord of the soil, Lord Muncaster. The Herdwick sheep are described by Mr. Culley, as having faces and legs speckled, but a greater portion of white, with a few black spots, which are accounted marks of the purest blood; fine, small, clean legs; a thick matted fleece of short coarse wool; the lambs when dropped well covered. They are a very lively little animal, well adapted to rocky and thin soiled counties, and support themselves in winter, without hay, in the severest storms and deepest snows, by scratching down to the heath or other herbage, instinctively finding out those parts of the mountain which are blown bare. They do not face the storm as has been said, but, like other sheep, turn their back on it; and in such weather generally gather close together, and keep stirring about, by which means they are seldom overblown, as they tread down the snow and keep above it.

10. THE DUNFACED BREED.

THE Dunfaced breed of the Grampian hills have faces of a DUN or tawny colour (whence their name), wool variously mixed and streaked, black, brown, red, and dun, some of it very fine, and short tails: these sheep are the smallest upon the island, many of them weighing only six or seven pounds per quarter; the mutton excellent.

Mr. Culley supposes, with much probability, that these sheep are of Spanish origin, and that they might have been cast on shore from the wrecks of the Spanish armada. The same kind of sheep are found in Spain, and are called *Ovejas Marinas*, and their wool, of which the fine Segovian cloths are made, is reckoned the finest in the world, excepting the Peruvian and Cashmirian. Mr. Culley inclines to the opinion that this breed is too tender for the severe climate of the Grampian hills, and that they will soon be supplanted by the Heath or Cheviot sheep; yet the Dunfaced breed have been naturalized there for centuries, and no particular instances of their defect of hardiness have been adduced.

11. THE CHEVIOT BREED

DERIVE their name from the Cheviot hills, a mountainous tract, from which they have been introduced into the Highlands of Scotland, and some other northern districts. Their legs and faces are white, excepting when crossed with the Heath breed (No. 18 infra), which gives them speckled legs and faces, and sometimes small grisly horns. The pure Cheviot breed have a fine open countenance, with lively prominent eyes,

a long body, largest on the hinder quarters, the fore-quarters being narrow and low, fine small-boned legs: the wool is partly fine, and in part of a coarse quality, each fleece averaging about three pounds, when killed at four years and a half old. This hardy mountain breed is well calculated for exposed situations.

12. THE SHETLAND BREED.

Though considered as a distinct race, there is reason to believe that this and the Dunfaced breed are kindred varieties. The Shetland sheep have unusually short and small tails, very fine wool, and of various colours.

From a report, addressed by Mr. T. Johnson to the British Wool Society,[1] it appears that there are two varieties of this breed, both found in the Shetland islands. One of these carries coarse wool above, and soft fine wool below: they have three different successions of wool yearly, two of which resemble long hairs more than wool, and are termed by the common people *fors* and *scudda*. When the wool begins to loosen at the roots, which generally happens about the month of February, the hairs, or *scudda*, spring up; and when the wool is carefully pulled off, the tough hairs continue fast until the new wool grows up, about a quarter of an inch in length, then they gradually wear off; and when the new fleece has acquired about two months' growth, the rough hairs, termed *fors*, spring up and keep root until the proper season for pulling it arrives, when it is plucked off along with the wool, and is separated from it at dressing the fleece, by an operation called *forsing*.

[1] Culley on Live Stock, p. 163. Lawrence on Cattle, p. 350, 351.

The *scudda* remains upon the skin, as if it were a thick coat, a fence against the inclemency of the seasons.

The native or kindly breed are rather more tender than the other varieties, though both are hardy races of animals. In the winter season, especially while the ground is covered with snow, they eat sea weed very greedily, and often, during long and severe snows, they have little else to live on. Nature, says Mr. Culley, seems to have imparted to them a perfect knowledge of the times at which this food may be procured; for immediately upon the tide beginning to fall, the sheep in one body run directly down to the sea shores, although feeding on hills several miles distant from the sea, where they remain until the tide returns, and obliges them to seek their usual haunts.

The wool of these sheep is short and open, and destitute of a covering of long hairs. These soft fleeces are liable to be rubbed off during winter, or early spring, which, it is said, might be prevented, by clipping the sheep in the usual way, instead of the barbarous mode of pulling off the wool, which tends to weaken the sheep, and decrease the length of the staple. It is believed by many that *pulling* the wool is unattended with pain or damage to the animal; but as the case is directly the reverse, so improper a practice ought not to be suffered to continue by the lords of the soil.

The colours of Shetland wool are various: silver grey the finest and softest; the pure white generally the most valuable for all the purposes of the finest combing wool; the black and the mourat or brown, very little inferior. The whole is of the softest texture, fit for the finest manufactures, and in some instances rivalling even Spanish wool, than which it is somewhat longer



Engraved by J. Scott, from a Painting by G. Arnald A.R.A.

HEADS OF SHEEP.

Published Nov.1.1814. by W. Clarke New Bond. Street.

in the staple, though not so elastic. According to an account in the Bath Society's Papers, stockings have been made of this wool, at Aberdeen, which were sold for five or six guineas a pair: and such is its softness and lustre, that the skin with the fleece on makes a fur of great value, specimens of which have been sent to the China market.

The Shetland breed were formerly natives of the higher parts of Aberdeenshire, and every where to the northward of that county; but they have been since crossed, most probably with the common view of increasing size with the improvement of the soil, and are now confined to the Orkney and Shetland isles, the purest breed being to be found in the latter, where also are fed both long and short woolled sheep of the English and Welsh breeds.

II. HORNED SHEEP.

13. THE MORF OR SHROPSHIRE BREED

Have small horns, with speckled, dark, or black faces and legs; they have the full character of real fine woolled sheep, and have been, for centuries, bred in Shropshire, Staffordshire, Worcestershire, and the vicinity. Their fleece is nearly all fine, and, it is said, superior to Ryeland wool, since the crossing which has taken place in that stock. Mr. Pitt, of Pendeford, in a letter to Lord Somerville, dated 1799, estimates the extent of Morf common, or waste, at 3,600 acres, and the number of sheep summered thereon, at 15,800, to the annual profit of fifteen shillings per acre in wool only, on a moderate calculation,

eight fleeces and a half to the stone of fourteen lbs. Nothing is reckoned on account of carcase, as the sheep have some extra keep during winter. The Shropshire commons produce good fine wool, but none equal to Morf by sixpence a pound.

14. THE DORSETSHIRE BREED.

These sheep are chiefly confined to the county of Dorset, and to the neighbouring districts: they have the face, nose, and legs white; head rather long but broad, and the forehead woolly like the Spaniards and Ryelands; the horns round and bold, middle sized, and standing from the head; the shoulders broad at top, but lower than the hinder quarters; the back tolerably straight, carcase deep, and loins broad; legs not long, nor very fine in the bone. The Dorsetshire breeders, it is said, pay great attention to preserve the colour of their flocks from mixture, since white lambs are most esteemed in the London markets, from a presumed superior delicacy in the meat. This breed is considered to be one of the best in England, if not superior to all others, considering its various qualifications. Their property of bringing twins, making our highest prized house lamb, must be considered first; they are both good hill sheep and good pasture sheep, and their flesh is an excellent medium between the delicate mutton of the hills, and the rich and juicy meat of the best lowland sheep. The latter Dorset lambs, when fattened, make the earliest grass lamb.

15. THE EXMOOR BREED

Have white faces and legs, with a peculiarly delicate bone, head and neck: they are very hardy, and the wool is very fine



THE NORFOLK SHEEP.

and long, averaging about four pounds per fleece. This breed is chiefly found on the forest of Exmoor and its vicinity, in the northern parts of Devonshire, whence its name is derived.

16. THE WILTSHIRE BREED.

THESE sheep are distinguished by a large head and eyes, Roman nose, wide nostrils, horns bending down the cheeks, colour wholly white, back rather straight, substantial carcase, legs rather long, bone coarse, fine middle wool, very thin on the belly, which is sometimes bare. The basis of this breed Mr. Lawrence considers to have been the Dorset, enlarged by some long-woolled cross: the Wiltshire sheep work well in the fold, and yield large high-flavoured mutton. They are now, however, on the decline, being generally supplanted by the South Down breed, of which the farmers find that they can keep more than one and a half for one of the Wiltshire race, on the same quantity of land.

17. THE NORFOLK BREED.

THESE are fine-woolled heath sheep—natives, it is supposed, of the county whence their name was derived, when it was a barren waste, but progressively improved through a series of years.

Norfolk sheep have black faces, black or dark grey legs, large horns, of such size indeed, that some of their rams horns, if straight, would each measure a yard in length, and near a foot in compass at the base: narrow chines and backs, long and thin, but straight barrels, long legs, with much bone. A part

of the light fleece of this breed is coarse, the best of it very fine. The flesh is excellent, but it does not stiffen well in hot weather, and, for which no reason can be assigned, taints sooner than any other high flavoured mutton. It is probable that in a few years this breed, as a distinct race, will no longer be found; as the South Down sheep are extensively adopted by the farmers in that highly cultivated county.

18. THE HEATH BREED

HAVE large spiral horns, black faces and legs, a fierce wild-looking eye, short and firm bodies, well covered with coarse shaggy wool, averaging three or four pounds per fleece. They are an active, wild, and hardy race; run with amazing agility; and are best adapted, of all other breeds, to exposed, heathy, and mountainous districts. The heath-sheep are natives of the north-west of Yorkshire, and of that mountainous tract of country, which is contiguous to the Irish sea, from Lancashire to Fort William. Of late years they have been introduced into the western highlands of Scotland: and the black-faced Linton, or short sheep of Scotland appear to be a variety of the Heath breed.

It is observable of sheep, that they drink very little. For this reason they will thrive on the mountains and upland downs, where water is scarcely within their reach; and, indeed, they seem to delight in dry situations, which equally contribute to the flavour of their flesh, and the fineness of their wool. They

are subject to various diseases; but, should they escape both these or violence, the duration of their life is seldom beyond twelve or thirteen years. It is however probable that the age of sheep might be prolonged even beyond twenty years. Mr. Lawrence has mentioned a bell-wether in Kent, which lived to full twenty-four years, his wool decreasing in quantity and quality with the increase of his years, until his body became bare in patches. In general, the incipient decay of the teeth, or the broken mouth, in sheep, is an infallible indication that their utility is on the wane, and that their keeper's, and the public profit require they should be forthwith replaced by younger stock. Nevertheless old ewes will breed good stock, and may be kept to eight or ten years of age, should any particular purpose render such a measure desirable; but old rams are not to be depended on. Dentition commences and is completed early with the lamb. Two of the front teeth fall, and are replaced by two broad or sheep's teeth, at some period previous to the sixteenth month, sometimes, although rarely, within the first year. A similar renewal of two teeth takes place every succeeding year, until towards the end of the third, some time during the fourth, or in the commencement of the fifth year, when the sheep is full-mouthed or aged, having acquired his eight broad teeth. Mr. Culley observes, that in the opinion of some shepherds, sheep renew only six of their teeth; but this is apprehended to be only an exception to the general rule.

Various are the appellations given to sheep at different periods of their growth. The general name by which the male

sheep are known is *ram*, or *tup*: when lambs, they are called *ram* or *tup-lambs*, as long as they suck; from weaning, or taking from the ewes, to the shearing or clipping for the first time, they are called *hogs*, or *hoggerels*, or *lamb-hogs*; then they take the name of *shearing*, *shearling*, *shear-hog*, or *diamond-tups*, or *rams*; after that, according to the year they are clipped or shorn, they are called *two-shear*, *three-shear*, and so on, which always takes place from the time of shearing. But when gelt or castrated, they are called *wether-lambs* while sucking; then *wether-hogs*, until shorn or clipped, when they take the name of *shearlings*, &c. until they are shorn a second time, when they are *young wethers*, or *two-shear wethers*; then *three* or *four shear wethers*, or more, according to the times they are clipped or shorn.

The general name by which the female sheep are known is *ewe*; while sucking, they are called *ewe-lambs*, or *gimmer-lambs*; but when weaned, or taken from the dams, they are called *ewe-hogs*, or *gimmer-hogs*, until clipped or shorn, for the first time, when they take the name of *gimmers*; which name continues only one year, until they lose their fleeces a second time, when they obtain the name of *ewes*, which they retain as long as they live; only every time they are shorn, they add a year to their age, and are called *two-shear*, *three-shear*, or *four-shear ewes*, according to the times they have been clipped or shorn: and this holds good of all other sheep; for the age of sheep is not reckoned from the time they are lambed, but from the time of shearing; for although a sheep is generally fifteen or sixteen months old when first shorn, yet they are not called

shearlings until once clipped, which is understood to be the same as one year old.

What are called *gimmers* in the north, in many of the midland parts of England are termed *theaves*; and when twice shorn, *double-theaves*. There are other variations of names, in different parts. In some places they call the male lambs *heeders*, and the females *sheeders*; and in others *hogs* are called *tegs*, and two-years-old ewes, *twinters*, and three-years-old, *thrunters*. (Culley).

In the selection of sheep as an article of live stock, it is recommended to avoid the purchasing of breeds which are merely fashionable, and also to suit them to the nature of the soil and pasture on which they are to feed. They should therefore, if possible, be brought from a poorer soil than that which is to be appropriated to their future use; as experience shews (and the same principle applies to neat cattle with equal force), that sheep will decrease both in value and condition, if brought from a rich to an inferior pasture. The value of sheep greatly depends upon the individuals selected to breed from; and as in all cattle the male has the greatest influence, Mr. Culley has stated the following requisites to be essential to a good ram.

His head should be fine and small; his nostrils wide and expanded; his eyes prominent, and rather bold and daring; ears thin; his collar full from his breast and shoulders, but tapering gradually all the way to where the neck and head join, which should be very fine and graceful, being perfectly free from any coarse leather hanging down; the shoulders broad and

full, which must at the same time join so easy to the collar forward and chine backward, as to leave not the least hollow in either place; the mutton upon his arm, or fore-thigh, must come quite to the knee; his legs upright, with a clean, fine bone, being equally clear from superfluous skin and coarse, hairy wool, from the knee and hough downwards; the breast broad and well forward, which will keep his fore-legs at a proper wideness; his girth, or chest, full and deep, and, instead of a hollow behind the shoulders, that part, by some called the fore-flank, should be quite full; the back and loins broad, flat, and straight, from which the ribs must rise with a fine circular arch; his belly straight; the quarters long and full, with the mutton quite down to the hough, which should neither stand in nor out; his *twist* (i. e. the junction of the inside of the thighs) deep, wide, and full, which, with the broad breast, will keep his four legs open and upright; the whole body covered with a thin pelt, and that with fine, bright, soft wool. (Culley, p. 103).

Such is the description of the animal recommended by Mr. Culley, who observes, that the nearer any breed of sheep comes up to it, the nearer they approach towards excellence of form; and there is little doubt, but if the same attention and pains were taken to improve any particular breed, which have been bestowed on the *Dishley breed*, already described, at p. 308, the same beneficial consequences would be obtained.

With respect to the *time*, or proper age, for purchasing sheep intended for breeding, there is a difference of opinion: but the most experienced breeders recommend these animals

to be procured, a short time previously to shearing, from the farmer, grazier, or owner's house; because they will then be seen in their natural state, and the *real* depth of the staple may also be easily ascertained, without the possibility of any fraud or imposition being practised on the buyer by the vender.

The *choice* of ewes ought to be made with care and discrimination, not only as to the characteristic marks, which ought to be the same as those of the ram, but also with regard to the *breed;* for, with sheep, as with other cattle stock, no certain degree of excellence can be attained, unless the *female possess an equal degree of blood with the male.* In particular, a purchaser should see that the animals be *sound*; and, in order to ascertain this point, it will be advisable to examine whether the *teeth* are white, the gums red, the *breath* not fetid, the *eyes* lively, the *wool* firm, and the *feet* cool; qualities these which afford a certain criterion of health or disease.

The ewe is capable of procreation as soon as she produces sheep's or broad teeth, but if she bring stock towards the close of the second year, it may be sufficiently early. The period of gestation with the ewe is from twenty weeks to one hundred and fifty days, and she will breed twice and even thrice a year, if it be made a point to produce such an effect by attention and high keep, since she will receive the male indifferently at any season. The ewe brings most commonly one, next in degree of frequency, two, rarely from three to five lambs at a birth. This property of double birth is in some instances specific; the Dorset and Teeswater sheep usually yeaning twins, and producing occasionally more at a birth. Other breeds bring

twins, in the proportion of one third of the flock, which is supposed to depend considerably on good keep.

When ewes are about to lamb, their keep should be of the most nourishing kind, consisting of plenty of turnips or cabbage. Till this period they may do without them; but all cattle that have young require as good keep as those which are fattening. It is recommended to draw the turnips or cabbages for them, and give them to the sheep on dry ground. A standing rack of hay should also be left for them in the field, which will be of great advantage to them.

With regard to the best time for *weaning* lambs, much depends upon the period or season when they were yeaned. When a lamb is to be kept for breed in a good common pasture, it is the practice, in some counties, to wean it at the end of about four months, in order that it may become strong, and that the ewe may acquire strength, and go quickly to the ram. In others, which are more mountainous and poor, the lambs are weaned a month earlier. But, whatever influence local customs may have in this respect, this business should be performed before the expiration of July; and as it is of essential importance to their future growth, and consequently to the breeder's profit, that due provision be previously made, it will be proper to remove the lambs to a distance from the ewes, to such fresh food as may be most convenient. In the opinion of Mr. Young, clover, while in blossom, is the most forcing food; sainfoin *rouen* may also be successfully employed for the same purpose; but if the farmer, or breeder, possess neither of these succulent vegetables, he ought, at least, to have reserved

a sweet bite of fresh pasture-grass. On weaning the young animals, their dams may be milked two or three times, in order to relieve their udders, which would otherwise become painful.

Various ages are mentioned as being most proper for gelding those lambs which are not intended to be raised as rams for breeding; the sooner, therefore, this operation is performed, the better for the animal, which is more able to support it when young, and running with the dam, and when there is less danger to be apprehended, lest any inflammation should ensue. The time best calculated for this purpose, in the opinion of the best farmers and breeders, is within the first fortnight, unless the lambs are unusually weak, in which case it will be advisable to defer castration for two or three weeks, or such longer term as may be expedient, till they acquire sufficient strength.

The *shearing* of sheep, and the profit thence derived from the wool, form a very considerable article of rural economy. The most proper time for this purpose must be regulated according to the temperature of the weather, in the different parts of this island. If the weather be hot, the month of June may be fixed for shearing or clipping these animals, though some breeders defer it till the middle of July, under the idea that an additional half pound of wool in every fleece may be obtained, in consequence of the increased perspiration of the sheep. An early shearing, however, is preferable where the weather and other circumstances will admit of the operation being performed; because the new wool will not only gain time to *get a-head*, but the animal will also be secured from

the attacks of the fly, to the depredations of which it becomes liable by delaying the operation.

In June, the washing of sheep generally takes place previously to shearing. The washing is best performed by a stream of water; and it is recommended that those who are engaged in it, instead of standing in the water, which uncomfortable situation frequently leads them to hurry negligently over their work, should, by means of a cask or tub, be freed from such an unpleasant and dangerous exposure. The shearing, which speedily follows, should be as close as possible; and circular clipping is by far preferable to the longitudinal mode formerly practised, and which is still retained in some parts of England.

The washing and shearing of sheep is always a season of festivity, particularly in the southern counties: and of late years it has been signalized by premiums and public meetings.

Thomson thus beautifully describes the process of washing and shearing:

> Urged to the giddy brink, much is the toil,
> The clamour much, of men, and boys, and dogs,
> Ere the soft, fearful people, to the flood
> Commit their woolly sides.
> Then, as they spread
> Their swelling treasures to the sunny ray,
> Inly disturbed, and wond'ring what this wild
> Outrageous tumult means, their loud complaints
> The country fill; and, tossed from rock to rock,
> Incessant bleatings run around the hills.
> At last, of snowy white, the gathered flocks
> Are in the wattled pen innumerous pressed,
> Head above head, and, ranged, in lusty rows,
> The shepherds sit, and whet the sounding shears.

Behold, where bound, and of its robe bereft,
By needy man, that all-dependent lord,
How meek, how patient, the mild creature lies!
What softness in his melancholy face!
What dumb complaining innocence appears!

There is also a beautiful description of this festivity in Dyer's poem, the *Fleece,* who has incorporated in it some allusions to customs still retained by the simple shepherds of Wales.

At shearing-time along the lively vales
Rural festivities are often heard;
Beneath each blooming arbour all is joy
And lusty merriment. While on the grass
The mingled youth in gaudy circles sport,
We think the Golden Age again returned,
And all the fabled dryades in dance:
Leering they bound along, with laughing air,
To the shrill pipe, and deep-remurmuring cords
Of th' ancient harp, or tabor's hollow sound.
While the old apart, upon a bank reclined,
Attend the tuneful carol, softly mixed
With every murmur of the sliding wave,
And every warble of the feathered choir,
Music of Paradise: which still is heard
When the heart listens, still the views appear
Of the first happy garden, when content
To Nature's flowery scenes directs the sight.
With light fantastic toe the nymphs
Thither assembled, thither every swain;
And o'er the dimpled stream a thousand flowers,
Pale lilies, roses, violets, and pinks,
Mixed with the greens of burnet, mint, and thyme,
And trefoil, sprinkled with their sportive arms.
Such custom holds along th' irriguous vales

From Wrekin's brow to rocky Dolvoryn,[1]
Sabrina's early haunt, ere yet she fled
The search of Guendolen, her stepdame proud,
With envious hate enraged. The jolly cheer,
Spread on a mossy bank, untouched abides,
Till cease the rites: and now the mossy bank
Is gaily circled, and the jolly cheer
Dispersed in copious measure: early fruits,
And those of frugal store, in husk or rind;
Steeped grain, and curdled milk with dulcet cream
Soft tempered, in full merriment they quaff,
And cast about their gibes: and some apace
Whistle to roundelays: their little ones
Look on delighted; while the mountain-woods
And winding vallies with the various notes
Of pipe, sheep, kine, and birds, and liquid brooks,
Unite their echoes: near at hand the wide
Majestic wave of Severn slowly rolls
Along the deep-divided glebe: the flood
And trading bark with low contracted sail,
Linger among the reeds and copsy banks
To listen, and to view the joyous scene.

In the preceding account of sheep-shearing, one annual clipping only has been intended; but experiments have been made by some enterprising breeders, tending to shew that, in certain cases, long-woolled sheep may be shorn *twice*, and even *three times* in the year, without the animal receiving any material injury. And Mr. Ellman, a spirited farmer of Glynd, in Sussex, clips off the coarsest wool on the thighs of his South-down flock (the first of that breed in this island), and docks them about four weeks before the usual time of washing and

[1] Dolvoryn, a ruinous castle in Montgomeryshire, on the banks of the Severn.

shearing. The wool, thus severed, he sells, as locks, for 3½d. per pound, each sheep yielding, upon an average, four ounces. He is said to find this method very beneficial, as the animals are kept clean and cool during hot weather; and from the success with which this method was practised, it has been adopted in other counties with different breeds of sheep.

A more singular mode was recently tried on the Merino sheep at the French national farm, at Rambouillet, the result of which is stated to be, that the fleece of sheep improves greatly by being suffered to grow for several years; and that the fleeces of some sheep, which were shorn in the summer of 1804, for the first time for *three* years, were equal in point of staple to those of *three* others which were annually shorn, and produced a larger sum. It is possible, Lord Somerville remarks ("Facts and Observations on Wool," &c. p. 42), that this property in the Merino fleece to grow beyond the period usual in our breed of sheep, may be productive of some new manufacture, requiring great length, and fine quality of pile: but the hazard of the *blow-fly*, and the chance of losing in hedges and brakes any part of a fleece after it is once fit for a manufacture, will not allow such a practice to become general; admitting even that the sheep suffer nothing in their proof during the summer months, from the weight of the fleece (which in a large scale of business is improbable), and that the wool should be found to pay as well for growing to this length as it would when shorn in common course.

After sheep have been clipped, it is usual to mark them with ochre, tar, ruddle, or other colouring matter; but, as it

sometimes becomes difficult to wash the stains of these substances out of the wool, another composition was suggested by the late Dr. Lewis. It is prepared by mixing finely-pulverized charcoal, or lamp-black (which is better, where it can be procured), with such a quantity of tallow, over a moderate fire, as will produce a black colour, and a proper consistence; and, with the view of rendering this preparation more durable, Dr. Lewis states, that one-fourth, sixth, or eighth part of tar may be incorporated with the tallow; and that wool, which has been marked with such mixture, may be easily cleansed therefrom, by washing in strong soap suds.

The following method of *salving* sheep, after they have been shorn, is practised by Mr. Curran, a respectable grazier:—He mixes together one pint of tar and four pounds of butter, which quantity is sufficient for twelve sheep: and he is of opinion, from several years' experience, that the *quality* of the wool is not only much improved, but that the *quantity* also is increased; besides which, the flock is in better condition than formerly. Mr. C. has also found it beneficial, both for the quantity and quality of the fleece, to rub the skin of the animal over with oil *(not train oil)* mixed with warm water. One pennyworth of oil is enough for a sheep. (Culley, p. 104).

The practice of salving, however, is beginning to lose ground in North Britain, on the experience of those who have relinquished it, that the sheep endure the winter in a state of equal health and safety without it, and that the wool is of equal quality, beside escaping the damage and soil of the salve. Mr Lawrence remarks, that an improved winter treatment, with

less exposure of the sheep, would be an excellent substitute for salving, and, indeed, render that practice totally unnecessary.

In the southern counties of this island, the severing of sheep usually takes place about six, eight, or ten weeks after the shearing is finished, or about the middle of August. In making this selection, great care should be taken to choose those only which give indications of their being of the true breed (whatever that may be); and, according to their comparative strength or weakness, to regulate their pastures. Hence it will be proper to place those animals which are designed for feeding or fattening by themselves; the ewes by themselves; the *wedder* or *wether-hogs* (i. e. males, whether castrated or not, that are of one year's growth), and *theaves*, or females, that are two years old, by themselves; and the older wethers or rams by themselves; aud, lastly, the lambs by themselves; otherwise the strong animals will injure such as are weak, and prevent them from taking that food which would be most beneficial for them. When a proper assortment of sheep is obtained, it will be necessary for the owner to inspect them often, at least twice in the year, particularly in the winter; and, if the severity of the weather or season has proved fatal to any, he should replace them with others from sound flocks, and as nearly of the same size, quality, and property, of his own stock, as the difference of circumstances will admit. At such annual, or half-yearly musters, it will also be proper to dispose of those animals which do not thrive upon their allotted grounds; but, independently of these examinations, the shepherd ought constantly to con-

tinue with this charge, as they are liable to various maladies, which, if not speedily attended to, will carry them off in a few minutes. (Complete Grazier, p. 57).

In addition, however, to this periodical mustering of sheep, it will be desirable, where they are kept in inclosures, particularly in a woodland country, to examine them twice every day, in order to guard them against injury from the fly; which, in twenty-four hours after having struck them, sometimes produces incurable disease. The most efficacious treatment in such a case is, first to part the wool wherever the maggots are found, and, after picking them out with a knife, then to scrape a small quantity of white lead among the wool, so that it may be carried evenly down to the wound. Regular and minute examination will prevent such a circumstance as a broken coat in any of these animals, from a cause so dangerous and fatal where they are neglected.

It would be foreign from the plan of this work to enter into all the various details of sheep-husbandry,—one of the most important that claims the farmer's attention: yet, as we might justly be charged with neglect if we were not to present a few suggestions relative to the most improved system of sheep-management, the following particulars are offered to the consideration of such of our readers as may be possessed of these useful animals.

Towards the end of August the annual purchase of wether lambs for an estate on which regular flocks are not kept generally takes place. These are justly preferred for stock to all others. The new Leicester have the advantage in competition

with all the long-woolled breeds, and the South Down with all those of short or middling wools. For severe and mountainous moors, the black-faced and coarse-woolled Scotch sheep are by far to be preferred, being able to sustain the most rigorous weather, and to live on the most scanty food. Instead of putting sheep, after the above-mentioned purchases, to the highest feed, and pushing them to perfect fattening, the better way is to keep them tolerably well till March, and to begin then to fatten them, by which method they will be fit for sale at a season of more advanced price; and upon this plan the purchase money is, with good management, generally doubled, and the fleece found an additional clear advantage. Whatever be the nature of the stock, towards the middle of May they should be turned into their summer grass, and, in an inclosed farm, the division of the fields into different parcels intended to be fed is an object of great importance. It is justly thought, that in large parcels they do not thrive equally well as in small ones, and the waste of food is considerably greater. It will be found, that in flocks of from ten to twenty the same farm will keep considerably more than one flock. The number should be appropriated to each field according to what it is enabled to carry, and suffered to remain, without any other change than what depends upon the state of individuals from accident or season. They will thus inevitably flourish. By adhering to the practice of folding, which, however, in certain cases may be necessary, much loss is often sustained; much food is spoiled; and injury arises from numbers being so closely crowded together: and although the practice may be highly beneficial, as a preparative for corn, this advantage is often too dearly paid for. Another point of very

considerable consequence with respect to sheep is the practice of close feeding. Even in pasturage shorn completely to the ground the herbage is found rapidly to spring up; and when drought is observed nearly to destroy the produce of fields treated in a different manner, by being permitted to run to bent, such as are managed in this close way are in comparison at least highly productive. In all plants cultivated for pasture the moment the seed stem runs, the grand effort of the system is directed to the formation of the seed, and the way to produce the greatest abundance of leaves, therefore, is to prevent the rising of these stems, which by close feeding is of course effectually accomplished.

"In the whole range of husbandry perhaps the most perplexing point of management is the providing for flocks of sheep in the months of March and April. Turnips and hay are generally depended upon; but being frequently inadequate, rye is sometimes sown on purpose, and crops of wheat are also sometimes eaten down by them. All, however, is too frequently found insufficient, and they are permitted to run over the clover and pastures of the farm, committing great waste and damage. To prevent these evils, burnet should be cultivated by the farmer. It is a most hardy plant, and preserves its green leaves through the winter, and under deep snows vegetates with singular luxuriance. This will be an admirable feed for sheep in April, when turnips ought no longer to remain upon the ground. But kept grass on dry meadow and pasture, or what is called rouen, is preferable to every other dependance, and though consisting as it were of hay and grass in the same mouthful, being the autumnal growth at top sheltering the more recent vegetation

beneath, the sheep eat both together without the slightest hesitation, and are found to thrive upon it extremely. Ten ewes, with their lambs, may be supported throughout April on one acre of this rouen, and no cheaper mode of keeping a full stock in April can possibly be adopted."[1]

But whatever management may be adopted, salt should on no account be withheld from the sheep; for not only does the continual use of that article contribute to the digestion of succulent vegetables, and of course preserve the animals in constant health, but it is also said to improve both the quantity and the quality of the wool. Hence, as it augments the nourishment of the food eaten in proportion to the quantity of saline matter, it ought to be particularly used in those moist situations, the produce of which is liable to *rot* sheep, of which malady it is both a preventive and a cure. Rock-salt is undoubtedly preferable; but, where this cannot be conveniently procured, it will be advisable to dissolve common salt in water, and, after mixing it with fine pure clay, or with pulverized and sifted chalk, form the whole into masses or lumps, which may be placed under shelter, so that the sheep may lick it at pleasure.

The practice of docking or cutting off the tails of sheep is of unquestionable utility, since they are so liable to foulness behind; although in some counties, particularly in Dorsetshire, the tails are left entire. The tails are usually cut when the lambs are three or four months old: as, if the operation were

[1] For this statement of the modern and improved system of sheep management we are indebted to the BRITISH ENCYCLOPEDIA, vol. i. article *Agriculture*. More minute details will be found in the valuable works already referred to in the course of this article.

deferred beyond that time, it could not be performed with safety to the animal. But this practice is objected to by some intelligent breeders in England, on the ground that it renders sheep unable to defend themselves against the attacks of flies during hot seasons. By others, however, this practice is strongly recommended, because it tends to preserve the health of the animals, by keeping them more clean from the ordure, which they, in a great measure, deposit on the fleece. Of equal utility is another practice adopted by the best sheep-masters of ancient and of modern times: it is to trim the sheep behind against the approach of hot weather, which keeps them clean and cool, and prevents disagreeable accidents from filth and the fly. The udders of all breeding ewes should be constantly kept close trimmed, which prevents the danger of cold sometimes consequent upon trimming them a short time before lambing; but they should on no account be suffered to go to suckling with foul and woolly bags, which become inflamed and chafed, and so tender that the ewes will not suffer their lambs to come near them. And indeed it may eventually prove a great saving of trouble to keep the whole flock entire in skin, by preventive cleanliness or timely application of the proper remedy to any accidental breach. (Lawrence, p. 307.)

Sheep, like other animals, are liable to various diseases, for an account of which we must refer the reader to practical works, observing only, that disease may, in very many instances, be prevented by due attention to the business of inspection. The benefits, indeed, which mankind owe to these animals, are very numerous: their horns, flesh, tallow, fleece, and even their bowels, are all articles of great utility to human life.

The horns are manufactured into spoons, and many other useful articles; the skin is prepared into leather for an inferior sort of shoes, for the coverings of books, for gloves and for parchment. Of the entrails, after proper preparation, are made strings for various musical instruments.

The milk of sheep is thicker than that of cows; and as it is rather of a strong taste, it is mostly made into a rich and highly flavoured cheese, which would probably be better if more attention were paid to cleanliness in its preparation. The flesh of these animals is one of our most valuable articles of food: it is neither disagreeably coarse, nor yet so tender and delicate as not to afford strengthening nourishment. The flesh of the lamb, at the proper season, is one of the greatest delicacies which even an epicure can desire.

The bones are useful for various purposes: of these, as well as of other bones when calcined, are made the cupels used in the refining of metals. Their dung is an excellent manure where they are folded in sufficient numbers upon the land; but the fleece is eminently serviceable to man, who is indebted to it for an essential part of his apparel; and the manufacture of the wool into cloths has long formed the principal source of the riches of England. Hence it has become an important object to increase the quantity of fine wool grown in this country: and in addition to the salutary regulations of former sovereigns, we record with pleasure the patriotic efforts made under his present Majesty's patronage for promoting this national benefit. We refer to the introduction of Merino Spanish sheep into Britain, by judicious crossing with which, wool is now obtained equal in fineness of pile to that

afforded by the parent Spanish animals; and although the length of this article forbids a history of the steps by which this great advantage has been secured, yet we trust the few additional facts subjoined will be favourably received by our readers.

The males of the *Merino breed* have horns of a middle size, but the females are sometimes without them: the faces and legs of both are white, the legs rather long, and bones fine. This breed is asserted to be tolerably hardy, and kindly disposed to take on fat. The average weight, per quarter, of a tolerably fat ram, is about 17lbs.; that of ewes, about 11lbs. They are further distinguished by a pendulous skin beneath the throat, or *throatiness* (as it is termed), which, as it is usually accompanied with a sinking or hollow in the neck, presents an offensive appearance to the eye of an English breeder, with whom symmetry of proportion constitutes a principal criterion of excellence. This throatiness, however, is much esteemed in Spain, being there supposed to denote a tendency both to wool and to a heavy fleece; but it may be removed by drafting off the most faulty ewes, and by paying due attention to the form of the rams, so that in a few years, such defects will perhaps be scarcely found. Culley on Live Stock, Appendix, p. 225.

The wool of the Merino sheep is uncommonly fine, and weighs, upon an average, about three pounds and a half per fleece. The best Merino fleeces have a dark brown tinge on their surface, almost amounting to black, which is formed by dust adhering to the greasy, yolky properties of its pile; and the contrast between it and the rich white colour within, as well as the rosy hue of the skin (which peculiarly denotes high proof), surprise at first sight. The Merinos or Spanish sheep were

first introduced into England in the year 1787; but it was not until 1792 that any effectual measures were adopted towards improving our native breeds by a Spanish cross.

In this year, His Majesty received several rams of the Negretti breed: and in the course of 1809, several hundred Spanish sheep were sent from Spain as a present to His Majesty. But so great was the force of prejudice, that notwithstanding the manufacturers confessed the wool of the Anglo-Spanish cross to be of *prime quality*, yet not one individual would bid a price for it, at all equal to what they paid for good Spanish wool. In progress of time, from the patriotic exertions, upon a small but judicious scale, of Dr. Parry of Bath, and especially of the Right Hon. Lord Somerville, who, at an immense expense and risk, imported a flock of choice Merino sheep, the real value of this breed has very rapidly risen in the public mind; and, from the superior prices which Anglo-Merino wool produces, and the excellent nature of the cloth manufactured therefrom, it is now fully proved that the wool of the fourth cross of this breed is fully equal to that of the original Spanish ram. Dr. Parry further adds, that the fleece of the Anglo-Merino sheep is heavier in proportion to the carcase than that of any other known breed in Europe: he estimates the average weight of the fleeces of two shear ewes at 4½lbs. averdupois, in an unwashed state; the fleece of a fat wether, of the same age, will be from five to seven pounds. See Facts and Observations on British Wool, 1799, 4to. p. 45. These are very important considerations, which only require to be known, in order to extend more widely the improvement of our breeds by *judicious* crossing with Spanish sheep. In concluding this subject we

would observe that, as the excellence of the Spanish wool is attributed to the migration of the sheep, a similar method of treatment might be adopted with success. Something like migration, indeed, has of late years taken place in this country; the graziers having carefully crossed their breeds from the more distant counties, and having also paid the greatest attention to the superiority of flesh and fleece in the animals from which they have raised their stock.





THE BAT.

Should a speculative philosopher (observes a good writer), not aware of the anatomical impossibility of success, attempt, by means of light machinery, to exercise the power of flight, he could not hit on a more plausible idea than that of copying the structure of the bat: the folding continuity of whose wing, with other peculiarities of conformation, cannot be contemplated without wonder. The bones of the extremities are continued into long and thin processes, and are connected by a most delicately formed membrane or skin, capable, from its thinness, of being contracted at pleasure into innumerable wrinkles, so as to lie in a small space when the animal is at rest, and to be stretched to a very wide extent for flight.

The nocturnal flight of the bat, together with its general appearance, excites the idea of something hideous and dismal. The ancients consecrated it to Proserpine, and demons and fiends are usually depicted with the leathern wings of the bat: the larger animals of this species also in India and Africa, allowing for the licence of poets, answer extremely well to the general description of the fabulous harpies of the ancients.

The two most common species of bat in this country are the *vespertilio murinus* and *auritus* (common and long-eared bat); the former is about the size of a mouse, or nearly two inches and a half long, if measured from the nose to the tip of the tail; and the extent of the wings, when fully expanded, is about nine inches. It is of a mouse colour, tinged with reddish; the wings and ears black. The long-eared bat is nearly similar, though rather smaller, and the fur has less of the reddish tinge; it chiefly differs from the common bat in the size of its ears, which are more than an inch long, and of a very considerable width.

The bat is seen fluttering about in the evenings of summer and autumn in quest of its prey, uttering a sharp note or scream during its flight. It principally frequents the sides of woods, glades, and shady walks; but it also skims along the surface of rivers and lakes, or wherever it can find gnats, moths, and other nocturnal insects. If in its flight it strike against any object, and fall to the ground, it is caught with facility. It may also be caught by throwing up the heads of burdock whitened with flour. The bat pursues its prey with open mouth, and when satisfied, retires to its habitation, which is commonly the chink of a ruined building, or the trunk of a tree. There it sleeps

away the greatest part of the day, even in summer, never venturing abroad by day-light, or in rainy weather; but as soon as winter sets in it becomes wholly torpid, and remains in that state till the return of spring.

On its first perceiving the approaching cold weather, the bat seems rather to select a place where it may remain in a lifeless inactivity, during the winter, without interruption, than where it may be warmly or conveniently lodged. Hence it is frequently seen hanging by its hooked claws to the roof of a cave, regardless of the surrounding damps. This, indeed, seems to be the most eligible situation, as the occasional warm rays of the sun are excluded, and the animal is consequently allowed to enjoy its long sleep, without being prematurely revived; which is often the case, when its hiding-place is exposed to the external air, during a mild winter, or when the sun shines with unusual warmth on its abode. Thus, Nature wisely provides for all her children, by removing the necessity of food, when it is not to be procured; or, by enabling such as are not destined to be torpid to migrate into countries where the supply of provisions is equal to the demands of life.

The bat brings forth her young in summer, generally from two to five at a time. She has two nipples, placed forward on the breast, as in the human kind, to which her offspring adhere, and drain the milky juice. It is remarkable, however, that she makes no nest; but sticking herself by her hooks against the sides of her apartment, she permits her young to hang at the breast till she begins to grow hungry, when she sticks her little ones in the same manner against the wall, to which they immediately cling, and patiently wait her return.

The bat, like the mouse, is capable of being reclaimed to a certain degree; and we are told by Mr. White (Hist. of Selborne, vol. i. p. 56) that he was once much amused by the sight of one that had been domesticated. "It would take," says he, "flies out of a person's hand. If you gave it any thing to eat, it brought its wings before its mouth, hovering, and hiding its head, in the manner of birds of prey when they feed. The adroitness it shewed in shearing off the wings of flies, which were always rejected, was worthy of observation, and pleased me much. Insects seemed to be most acceptable, though it did not refuse raw flesh when offered; so that the notion that bats go down chimneys and gnaw people's bacon, seems no improbable story. While I amused myself with this wonderful quadruped, I saw it several times confute the vulgar opinion, that bats, when down on a flat surface, cannot get on the wing again, by rising with great ease from the floor. It ran, I observed, with more dispatch than I was aware of, but in a most ridiculous and grotesque manner."

Bats are said to drink on the wing like swallows, by sipping the surface as they play over pools and streams. They love to frequent waters, not only for the sake of drinking, but on account of insects, which are found over them in the greatest plenty. "As I was going (says Mr. White) some years ago, pretty late, in a boat from Richmond to Sunbury, on a warm summer's evening, I think I saw myriads of bats between the two places: the air swarmed with them all along the Thames, so that hundreds were in sight at a time."

Many cruel experiments have been made to ascertain the existence of a supposed additional sense or faculty in bats,

which enables them, when deprived of sight, to avoid any obstacles as readily as when they retained their power of vision. Though we cannot but disapprove of cruelty exercised in any way, yet, perhaps, some account of these experiments will be expected in a work of this nature. Spallanzani having observed that bats would fly in the darkest chambers with precision, and not even touch the walls, he found them equally exact in their motions when their eyes were closely covered; and at length he destroyed the eyes, and covered the socket with leather; and even in this state the animal continued to fly with the same precision as before, avoiding the walls, and cautiously suspending its flight in seeking where to perch. It even flies out of a door without touching the architraves. The abbé repeated his experiments on several species of bats, and with the same success.

The professor's arguments for supposing that, in these instances, no other sense can supply the place of sight, are thus given by Dr. Shaw, in his "General Zoology," (vol. i. p. i. p. 127.) "*Touch* cannot, in this place, supply the place of sight, because an animal covered with hair cannot be supposed to have that sense very delicate. In flying through the middle of a sewer which turned at right angles, the bats regularly bent their flight at the curvature, though two feet distant from the walls. They discovered holes for their retreat; found a resting place on the cornice; avoided the branches of trees suspended in a room; flew through threads hung perpendicularly from the cieling, without touching, though they were scarcely at a greater distance than that of their extended wings; and when the threads were brought nearer they contracted their wings to pass through them. They equally avoided every

obstacle, though the whole head was covered with a varnish, made of sandarach dissolved in spirit of wine.

"The *ear* could not have discovered a cornice or the threads: this sense, therefore, does not compensate the want of vision. Besides, bats fly equally well, when the ear is most carefully covered. The *smell* might possibly assist them; for when the nose was stopped, they breathed with difficulty, and soon fell; while they did fly, however, they avoided obstacles very well; and the smell could scarcely have assisted them in discovering the suspended threads. The *taste* must have been, in every respect, unequal to the task of supplying the place of sight."

The sense of hearing in the bat is uncommonly delicate, and is, perhaps, one of the principal causes of the dexterity with which these animals, even when blinded, avoid objects which would impede their flight. And this seems proved by the observations of Mr. Carlisle on this curious subject. Having collected (we continue to quote the language of Dr. Shaw) several specimens of the long-eared bat, Mr. Carlisle observed that when the external ears of the blinded ones were closed, they hit against the sides of the room, without being at all aware of their situation. They refused every species of food for four days, as did a larger number which were afterwards caught and preserved in a dark box for above a week. During the day-time they were extremely desirous of retirement and darkness; and, while confined to the box, never moved or endeavoured to get out during the whole day, and when spread on the carpet, they commonly rested some minutes, and then beginning to look about, crawled slowly to a dark corner or

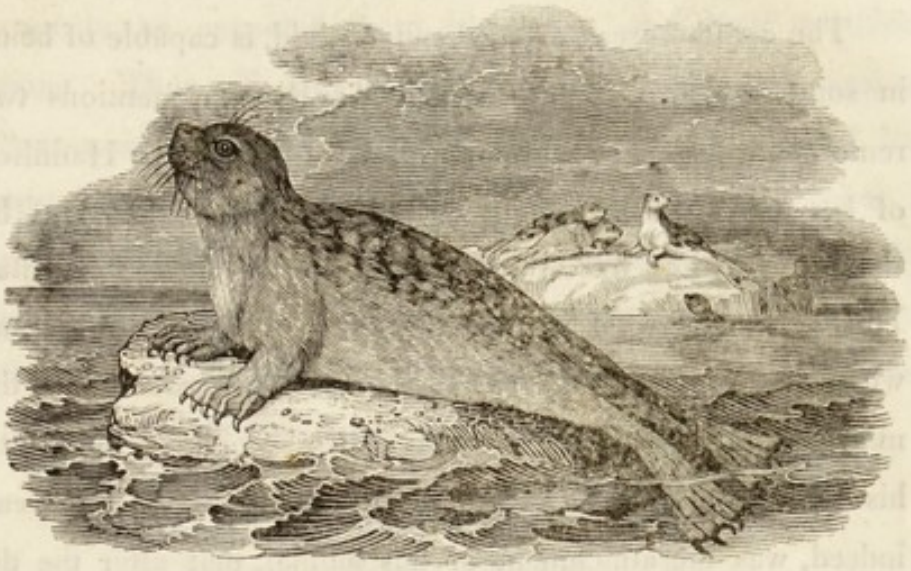
crevice. At sunset the scene was quite changed: every one then endeavoured to scratch its way out of the box; a continued chirping was kept up, and no sooner was the lid of their prison opened, than each was active to escape, either flying away immediately, or running nimbly to a convenient place for taking wing. When these bats were at first collected, several of the females had young ones clinging to their breasts in the act of sucking. One of them flew with perfect ease though two little ones were thus attached to her, which weighed nearly as much as their parent. All the young were devoid of down, and of a black colour.

The bat is, in this country, an innocent and inoffensive creature. The general tenor of its industry is to pursue insects, of which it diminishes the number; while its evening flight amuses the imagination, and adds one figure more to the pleasing group of animated nature. In the warmer climates, however, both of the eastern and western world, bats are truly formidable; each of them, singly, is a dangerous enemy, but when united in flocks they become dreadful. In New Holland, near Port Jackson, more than twenty thousand of these animals have been seen within the space of a mile.

The *Vampyre* or spectre of Guiana, called also the flying-dog of New Spain, and by the Spaniards *Perro-volador*, is a bat of a monstrous size, which sucks the blood of men and cattle while asleep. Captain Stedman, who had nearly fallen a prey to one, gives the following account of their mode of attack. Knowing by instinct that the person they intend to attack is in a sound slumber, they generally alight near the feet, where, while the creature continues fanning with his enormous wings,

which keeps one cool, he bites a piece out of the tip of the great toe, so very small indeed, that the head of a pin could scarcely be received into the wound, which is consequently not painful; yet, through this orifice, he continues to suck the blood until he is obliged to disgorge. He then begins again, and thus continues sucking and disgorging till he is scarcely able to fly; and the sufferer has often been known to sleep from time into eternity. Cattle they generally bite in the ear, but always in places where the blood flows spontaneously.





THE SEAL.

Of the three species of seals that frequent our coasts, only one, the common seal, (phoca vitulina) is found in any abundance; and this, principally, on the most rocky and uninhabited shores of Scotland and Ireland. About the Land's End in Cornwall they are perhaps more numerous than on any of the coasts of South Britain, unless it be those of a few parts of Wales. Sometimes, indeed, individuals are found off Cumberland, Lancashire, and other neighbouring maritime counties.

The usual length of the seal is from five to six feet. The body is closely covered with short hair of various colours, smooth, and shining; its tongue is forked at the end; it has two canine teeth in each jaw, six cutting teeth in the upper, and

four in the lower; it has five toes on each foot, furnished with strong, sharp claws, which enable it to climb the rocks, on which it frequently basks.

The common seal, even when taken old, is capable of being in some measure domesticated. Mr. Bingley mentions two remarkable instances communicated to him by Dr. Hamilton of Ipswich. A seal caught on the Welsh coast, and sent by water to London, was brought to St. Bartholomew's hospital. During the voyage, it had been fed principally upon milk; and when it arrived, it had become so familiar that it would suffer the man who brought it to play with it like a dog, and would lick his hands or face with the utmost complacency. So great, indeed, was the attachment of this animal, that after the departure of its master from the hospital, it continued for some time to emit a melancholy noise, evidently bemoaning its loss; and it died in the course of the ensuing week.

A live seal of the present species, that had been caught below Yarmouth, was brought to Ipswich, and carried about the streets in a basket, as a show. Dr. Hamilton saw and examined it. The animal was so gentle as to suffer him, though a stranger, to stroke its head; while, at the same time, it turned quickly about, with open mouth, like a dog in the act of playing, rolling its fine black eyes, as if greatly delighted. It also allowed him, without any difficulty, to examine its fore-feet; and to extend, in order to view their structure, the webs of the hinder ones.

In Cornwall, when persons are in pursuit of the seal, it is said to be a common practice, as soon as the animal is observed to thrust its head above water, to halloo to it, till they can ap-

proach within gun-shot, since it will continue to listen to the sound for many seconds.

The seal, indeed, displays a taste for music, which could scarcely be expected from his habits and local predilections. They will long follow a boat in which any musical instrument is played, and even a tune simply whistled has attractions for them. The Dean of the Isles says of Heiskar, a small uninhabited rock, about twelve (Scottish) miles from the isle of Uist, that an infinite slaughter of seals takes place there. To this circumstance Mr. WALTER SCOTT has prettily alluded in his poem of "The Lord of the Isles:"—

> In Lettermore, the timid deer
> Will pause, the harp's wild chime to hear;
> Rude Heiskar's *seal* through surges dark
> Will long pursue the minstrel's bark;
> To list his notes, the eagle proud
> Will poise him on Ben Cailliach's cloud.

The coast of Caithness, at the northern extremity of Scotland, is well known for the pursuit of seals. The immense caverns on this coast are much resorted to by the seals, in the months of October or November, during the breeding season. About midnight the hunters, with torches and bludgeons, enter the mouths of the caverns: having roused the flock, and suffered the large ones to escape, they despatch most of the young seals by a slight blow on the nose, which immediately destroys them. On the west side of North Uist, already mentioned, more than three hundred have been killed at a time.

When the dam suckles her young she sits upon her hind legs: she has but four teats, and consequently never brings

forth more than three or four at a litter, which at first are clothed with a fine white woolly kind of hair. The mother attends the young in the place where they are brought forth, for the space of fourteen or fifteen days, after which she is said to bring them down to the water, and accustom them to swim, and provide for their own subsistence. It is even said that the parents carry out the young to sea on their backs, and push them off repeatedly till they are initiated in swimming.





THE GUINEA PIG.

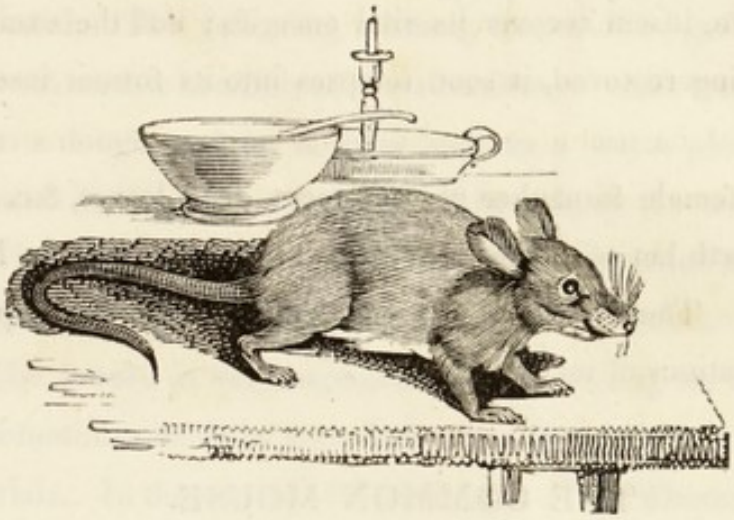
This little animal, great numbers of which are kept in England in a domestic state, is not a native of Guinea, but of Brazil, whence it has been imported into Europe. The Guinea pig (cavia cabaya) is tamed with great facility, and is inoffensive, timorous, and particularly cleanly; it does not, however, appear susceptible of strong attachments to its benefactors, nor is it remarkable for docility.

The Guinea pig is one of the most prolific of animals, and Buffon calculates that in twelve months only, in their wild state, one thousand might be produced from a single pair, as the female has been known to bring forth young when two months old only, and the time of gestation is only three weeks;

and she will produce at least every two months. They are six or seven months before they arrive at their full growth.

The food of this animal consists of all kinds of herbs, but they are particularly fond of parsley, as also of apples and other fruit. Cats are their natural enemies; but their haunts being supposed to be exempt from the inroads of rats, Guinea pigs might be usefully reared in country places infested with these predatory animals, as they afford a palatable and wholesome food. In a domestic state they are very restless, and make a continued noise, similar to the grunt of a young pig.





THE DORMOUSE AND MOUSE.

The dormouse is an elegant little creature, and is for that reason sometimes taken under the protection of man. It has full, black eyes; the ears are round and thick; and the tail, which is two inches and a half long, is covered on every side with hair. The body is about the size of the common mouse, but is rather more plump; and the colour is a tawny red, except in the throat, where it is white.

The common dormouse (myoxus muscardinus) is a native of almost every part of Europe. It generally builds its nest near the bottom of a thick hedge, either with moss or the leaves of trees, subsisting principally on nuts, which it eats in a kind of erect posture, after the manner of the squirrel. At the

commencement of winter, it rolls itself up in its retreat, where it lies in a torpid state, till revived by the genial heat of the returning spring. Sometimes, however, when the weather proves unusually mild in the season, or when it is brought near a fire, it will recover its vital energies; but the exciting cause being removed, it soon relapses into its former insensibility.

The female forms her nest of moss, dead leaves, &c. and brings forth her offspring (usually about three or four) in May or June. The dormouse has never been known to frequent the habitations of man.

THE COMMON MOUSE.

This active, but timid and cautious little creature, is so entirely domestic, that it is never found in the fields, or where the country is uninhabited by man. Fearful by nature, but familiar from necessity, it attends on the human race; and except in searching for its food, seldom quits its retreat. It may, however, be tamed to a certain degree, but it never entirely loses its timidity.

The common mouse (mus musculus) is uncommonly prolific, producing several times in the year five or six young at a litter. There are several varieties of the common mouse, which are chiefly distinguished by their colour, such as black, yellowish, spotted, &c.; but the most rare and beautiful are white, with red eyes—they are in some degree capable of being tamed, especially by means of music, to which all mice are singularly attached.

These little depredators may be destroyed in houses by the common traps, baited with cheese: in barns, it will be necessary to allure them by means of singed leather, grease, or other animal food; and, in chambers where cheese is preserved, with malt-meal. The following method, however, is perhaps the best: take a few handfuls of wheaten flour, or malt-meal, knead it into a dough, and let it grow sour in a warm place; then mix with it finely levigated iron filings, form the whole into small balls, and put them into the holes frequented by mice. On eating this preparation, they are inevitably killed.

The mouse is very ingenious in constructing its nest, and has sometimes made its little habitation of the most expensive materials. In the course of January 1814, Mr. Thomas Lang, a respectable blanket manufacturer of Littletown, deposited, in a drawer in his desk, two bills of exchange of the value of upwards of £70. Mrs. Lang, having occasion to refer to the bills, went to the drawer; but, to her great consternation, no bills were to be found. Every article in the desk was turned over, and the search was continued until midnight without effect, and resumed next morning with no better success. When all hopes of finding the lost property had vanished, a neighbour came in, and, having heard of the story of the loss, removed the desk; and on the back of it a small aperture was discovered. On continuing the search, a similar hole was found in the floor; and, upon removing the flags, a mouse's nest was discovered, in which were the lost notes, almost reduced to their original rags, and which the mouse, with great ingenuity, had converted into a very comfortable lining for its nest; but, fortunately, the

bills, though torn into very minute pieces, retained sufficient of the writing to ascertain their identity.

THE LONG-TAILED FIELD MOUSE.

These animals are found in fields, gardens, and shrubberies, where they do incalculable damage; burrowing under the ground, and digging up grain, acorns, pease, or beans, &c. when newly sown; which they carry to their subterraneous granaries. Their habitations may be discovered by the small mounds of earth, that are raised on, or near, the entrance of their abode; or by the passages leading to their nests, or store-houses: and, by following the course of such passages, the vermin may be easily destroyed.

The long-tailed field mouse (mus sylvaticus) measures, in general, from eight to nine inches, including its tail.

THE HARVEST MOUSE.

The harvest mouse (mus messorius) is very small and slender: its whole length, together with the tail, not exceeding four and a half or five inches. It is chiefly found in the county of Hants, where it is very numerous, especially during the harvest. This creature constructs its nest of a circular form, with blades of corn, which it deposits above the surface of the ground between the straws of standing grain, and frequently in thistles, where the female produces from six to eight young ones at a time.

The harvest mice never enter houses; but are often carried into ricks, among sheaves of corn; *one hundred* having some-

times been found in a single rick, on taking it down to be housed. Those remaining in the field shelter themselves during the winter beneath the ground, into which they burrow deeply, forming their beds or nests of decayed grass. They may also be taken by traps.

This singularly curious and interesting species, which was unknown to Linnæus, was first discovered in Hampshire by Mr. White, about the year 1767. Mr. Bingley kept a female harvest mouse in a cage for two years and a quarter, and has given a very interesting account of its manners, when domesticated, in his "Memoirs of British Quadrupeds," p. 267.

THE MEADOW MOUSE.

The meadow mouse (mus arvalis) is from three to six inches in length; dwelling in bushy places, corn-fields, meadows, and gardens, chiefly near waters. It subsists on nuts, acorns, pease, and grain, which last it prefers to every other kind of food, collecting considerable quantities in its subterraneous residence.

As soon as the corn is ripe, the meadow mice assemble together in corn-fields, where they commit great ravages, by cutting down the stalks of corn with their teeth, and robbing the ears; nay, they follow the reapers, consume all the fallen or neglected grain, and, when the gleanings are devoured, they flock to the newly sown fields, and destroy the crop of the succeeding year. Being very prolific, the females produce from eight to twelve at a litter, several times in the year. During the winter, they retire to woods, coppices, &c. where they subsist on acorns, hazel-nuts, and the seeds of trees.

In some seasons, the meadow mice become so numerous, that they would consume every esculent, if they did not destroy each other. Hence, in unproductive years, their numbers are greatly diminished, not only by devouring their own species, but also by becoming the prey of the long-tailed field mice, of foxes, wild cats, weasels, and especially of dogs.



INDEX.

Page

A.

Ass - - - - 59

B.

Badger - - - 21
Bat - - - - 344
Beaver - - - - 285

C.

Cat, domestic - - 33
—— wild - - - 43

D.

Deer - - - - 1
—— stag - - - 6
—— fallow-deer - - 16
—— roe - - - 18
Dog - - - - 73
—— shepherd's dog - 92
—— bull-dog - - - 93
—— mastiff - - - 94
—— hound - - - 95
—— fox-hound - - 97
—— Irish greyhound - 99
—— common greyhound 101
—— lurcher - - - 102
—— terrier - - - 103
—— blood-hound - - 106
—— pointer - - - 107
—— setter - - - 108
—— Newfoundland - 109

Page

Dog, water - - - 111
—— spaniel - - - ib.
—— turnspit - - - 117
—— hydrophobia, remarks on - - - 118
Dormouse - - - 359

F.

Fox - - - - 25

G.

Goat - - - - 127
Guinea pig - - - 357

H.

Hare - - - - 211
Hedge-hog - - - 69
Hog, see Swine
Horse - - - - 137
——— race-horse - - 156
——— hunter - - 164
——— old English draught horse - - ib.
——— dray-horse - - 165
——— Suffolk punch - 166
——— Clydesdale horse - 167
——— Cleveland bays - ib.
——— New Forest horse ib.
——— Galloways - - 170
——— Shelties - - 171
——— on the foot of the 172

Page

M.

Martin, common - - 202
——— pine - - - 205
Mole - - - - 293
Mouse - - - - 360
Mule - - - - 133

O.

Otter - - - - 123
Ox - - - - 233
— wild cattle - - 236
— Devonshire breed - 239
— Herefordshire - - 240
— Sussex - - - 242
— Kentish homebreds - 244
— Old Gloucester - - ib.
— Lancashire - - ib.
— Shropshire - - 250
— Northern short horned breed - - - ib.
— Northern half long horns - - - 252
— Norfolk homebreds - ib.
— Welsh cattle - - ib.
— Scotch cattle - - 258
— Galloway - - - ib.
— Suffolk duns - - 259
— Kyloes - - - ib.
— Lowland breed - - 256
— Alderney, or French breed - - - ib.
— Dunlop breed - - 257
— Dutch breed - - ib.
— Irish cattle - - 258

P.

Polecat - - - 206

Page

R.

Rabbit - - - - 221
Rat, common black - 225
—— brown or Norway - 226
—— water rat - - 231
Roe - - - - 18

S.

Seal - - - - 353
Sheep - - - - 297

I. *Without horns.*

—— Lincolnshire breed - 306
—— Teeswater - - 307
—— Dishley, or New Leicester - - 308
—— Cotswold - - 311
—— Dartmoor - - ib.
—— South down - - ib.
—— Romney Marsh - 312
—— Hereford - - 314
—— Herdwick - - 315
—— Dunfaced breed - 316
—— Cheviot - - ib.
—— Shetland - - 317

II. *Horned Sheep.*

—— Morf, or Shropshire breed - - - 319
—— Dorsetshire - - 320
—— Exmoor - - ib.
—— Wiltshire - - 321
—— Norfolk - - - ib.
—— Heath breed - - 322
—— Merino breed - - 342
Squirrel - - - 65
Stag - - - - 6
Stoat - - - - 199
Swine - - - - 45

	Page
Swine, Shropshire breed	53
——— Herefordshire -	ib.
——— Wiltshire - -	54
——— Berkshire - -	ib.
——— Hants - -	ib.
——— Suffolk - -	ib.
——— Chinese breed -	ib.

W.

	Page
Weasel - - -	193
——— common - -	194
——— stoat - - -	198
——— common martin -	202
——— pine martin -	205
——— polecat - -	207

THE END.

Directions to the Binder for placing the Plates.

The Wild Boar and Dogs	-	to face the title
Deer - - - - -	page	10
Badger and Dogs - - - -		21
The Fox - - - - -		27
The Cat - - - - -		33
Swine - - - - - -		53
An aged Boar - - - - -		54
Asses - - - - - -		61
Asses - - - - - -		62
Squirrels - - - - -		66
The Pointer - - - - -		107
The Setter - - - - -		108
The Spaniel - - - - -		111
Goats - - - - - -		128
Mules - - - - - -		134
The Hackney - - - - -		137
The Cart Horse - - - -		165
The Hare - - - - -		212
Rabbits - - - - -		222
The Cow - - - - -		250
Beavers - - - - -		287
Sheep (New Leicester) - - -		308
Heads of Sheep - - - -		319
The Norfolk Sheep - - - -		321

T. Davison, Lombard-street,
Whitefriars, London.

3/54D

