**A treatise on domestic poultry, pigeons and rabbits, with a practical account of the Egyptian method of hatching eggs by artificial heat; and all the needful particulars relative to breeding, rearing, and management ... / By Bonington Moubray, Esq. [pseud. i.e. J. Lawrence].**

LAWRENCE, John
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A

# TREATISE

ON

# *DOMESTIC POULTRY,*

## PIGEONS AND RABBITS,

WITH

## A Practical Account

OF THE

## *EGYPTIAN METHOD*

OF

## HATCHING EGGS BY ARTIFICIAL HEAT;

AND ALL THE

*NEEDFUL PARTICULARS*

RELATIVE TO

BREEDING, REARING, AND MANAGEMENT.

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*DEDICATED TO HER GRACE THE DUCHESS DOWAGER OF RUTLAND.*

BY

BONINGTON MOUBRAY, Esq.

LONDON:

PRINTED FOR SHERWOOD, NEELY AND JONES;

PATERNOSTER ROW;

*By R. & R. Gilbert, St. John's Square, Clerkenwell.*

1815.

# A TREATISE ON DOMESTIC POULTRY, PIGEONS AND RABBITS, WITH A Practical Account OF THE EGYPTIAN METHOD OF HATCHING EGGS BY ARTIFICIAL HEAT; AND ALL THE NECESSARY PRACTICAL INFORMATION RELATIVE TO BREEDING, REARING, AND MANAGEMENT. DEDICATED TO MRS. COKER THE DUCHESS DOWAGER OF ROTTLAND. BY BONINGTON MOUBRAY, Esq. LONDON: PRINTED FOR SHERWOOD, NEELY AND JONES, PATERNOSTER ROW; 1819.

TO HER GRACE

THE

*DUCHESS DOWAGER OF RUTLAND,*

FROM A

SENSE OF HIGH RESPECT,

FOR

*HER MOST LAUDABLE AND EXEMPLARY ATTENTION*

TO

Rural and Domestic Economy,

THIS SMALL WORK,

IS WITH THE UTMOST DEFERENCE INSCRIBED,

BY HER GRACE'S

MOST HUMBLE AND MOST DEVOTED SERVANT,

THE AUTHOR.

TO HER GRACE

# *PREFACE.*

THE small Work which I here present to the reader, for his use and information, I may presume to style truly practical, since I have throughout my life, been a breeder and keeper, and also an amateur of domestic poultry, pigeons, and rabbits; at some periods, upon rather a considerable scale; and have for many years together, kept a register of the results. I have farther, done that, which I believe, no other man has taken the pains to do,—kept a regular stud book for those breeders, scarcely one of which was so poor, as to be without a name; and Regulus, Sampson, Flea-catcher, Selima, Moreau, Isaac, and Tom Paine, shine with peculiar lustre on my poultry and pigeon list, whilst Corney Buttercup, Adam, Beelzebub, Lucifer, Carolina, Hecuba--make a figure equally splendid and equally useful, among the rabbits. I think *Montaigne* says somewhere, that if a man would sit down, and describe that which he has known practically, upon almost any subject, he could scarcely fail of being useful. Just so far my ambition extends. Nor is the world intirely without need of advice on this subject, notwithstanding its

antiquity, and the multitude of counsellors. Of this fact I had a signal proof, in a visit a few years since, to an Hon. Baronet, in whose extensive park, and most convenient yards and offices, and upon a soil excellently adapted, I found a sufficiency of poultry could not be raised for the family use; in consequence of which, a very considerable annual expence was incurred at a neighbouring town, for an additional supply. This was regretted, and described to me as an unaccountable circumstance, by the housekeeper. I have here, moreover, an eye to a favourite plan of mine, making the country house its own mart for the supply of all necessaries, in a far more ample degree than it usually is; implicating, among other domestic objects, poultry, rabbits, fish, mutton, small beef, and an equal abundance of the superior, as of the orchard fruits.

In fine, I have avoided scientific detail, and have addressed plain understandings in the plainest language, aiming at utility solely; and I trust, the keeper of half a dozen hens and a cock, in the corner of his yard, will receive information, in degree, equally useful and satisfactory, with another who may desire to enter upon the most extensive plan.

*Bath, September* 10, 1815.

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## SECTION I.

### *Various Species.*

UNDER the term DOMESTIC POULTRY in this country, are generally understood—the *Chicken* or *Fowl*, *Turkey*, *Duck*, *Goose*, *Pea* and *Guinea Fowl*; to which, perhaps, may be added, the *Swan*. The wild varieties of the above species, of the duck more especially, are objects of pursuit to the sportsman, and to those inhabitants of the sea coasts, and of the vicinities of lakes and rivers, where wild fowl are taken in decoys for market.

## CUSTOMS.

In Britain, where a greater quantity of butcher's meat is consumed, than probably in any other part of the world, poultry has ever been deemed a luxury, and consequently not reared in such considerable quantities as in France, Egypt, and some other countries, where it is used more as a necessary article of food, than as a delicacy for the sick, or a luxury for the table. In France, poultry forms an important part of the live stock of the farmer, and it has been said of that country, the poultry yards supply a much greater quantity of food to the gentleman, the wealthy tradesman, and the substantial farmer, than the shambles do; and it is well known that, in Egypt, it has been from time immemorial, a considerable branch of rural economy, to raise domestic poultry for sale, hatched in ovens by artificial heat. The warmer climates are far more favourable than ours, for the purpose of raising poultry, and the same rule necessarily

holds, with respect to this country, where the warmest and dryest soils are best adapted to this production, more especially of the chicken and the turkey.

## POPULAR OPINION.

It has been a general and popular topic of declamation that, in former and presumed happier times, our small farmers' wives reared a superior quantity of poultry, to that which has been produced of late years; a position, at best, very questionable, since poultry has never yet risen in price, beyond the proportion of other articles of food, and since the demand of the markets has been supplied in as full a measure as formerly. Suppose a heath or common, on which poultry has been customarily bred, is inclosed and improved into farms, is it not probable that, generally at least, as large a quantity of poultry is reared, as upon the land in its former state of waste? In fact, it is open to the observation of every one that, poultry

has never been in this country, a favourite or prevailing article of diet, with the lower or middling orders of the people; thence our farmers, whether little or great, could never be more profitably employed, whether for themselves or the community, than in the production of the more substantial articles of food: in the mean time, the demand for the luxury of poultry never fails to be satisfied to the utmost extent, and a decline of price in that article, will be the natural consequence of a general decline in the meat market.

## SECTION II.

### *Qualities of the Flesh of Poultry.*

GALLINACEOUS FOWLS, OR CHICKENS. In the opinion of physicians, both ancient and modern, the flesh of the chicken at three months old, is the most delicate and easy to digest of all other animal food; thence best adapted to the stomachs of invalids, or to the constitutionally weak, being the least alkalescent of all animal food, free from irritation, and affording a mild and innoxious chyle. Age makes a striking difference in the flesh of fowls, since after the age of twelve months, it becomes tougher and more insoluble. The cock indeed, at that age, is only used for making soup, whilst the pullet is still excellent, although a more

substantial viand than the chicken. Whilst young, the cock and hen are equally delicate.

The CAPON or castrated cock, has ever been esteemed one of the greatest delicacies, preserving the flavour and tenderness of the chicken, with the juicy maturity of age, the flesh yielding a rich and good chyle, and without any tendency to inflammation. Capons are usually *crammed*, and made excessively fat, perhaps to the verge of disease, in which state, their flesh is neither so delicately flavoured, nor probably so wholesome, as when more naturally fed. Indeed the flesh of the barn door fowl, or that fed in a state of nature and at liberty to take exercise, is universally acknowledged to excel in genuine richness of flavour. There is probably greater variety of size, figure and appearance, in the chicken, than in any other species of fowl, and also considerable variety of quality, which will be pointed out under their different heads.

The TURKEY. The flesh of the turkey is

somewhat more dense of fibre, and more alkalescent and substantial than that of the chicken, but it is reckoned nourishing and restorative. Age produces a similar effect as in the chicken, whence the turkey after a certain period, is good for little except stewed.

GUINEA FOWL are not so white of flesh as the common, but more inclined to the pheasant colour; in quality, short and savoury like the flesh of the pheasant and easy of digestion. In fact the guinea fowl is reckoned by many, a good substitute for the pheasant. They are very prolific, and their eggs nourishing and good.

The PEACOCK has long ceased to form a dish for the table in this country, and probably, from its coarseness and ill colour, when it did, the motive was rather shew than use.

## *The Aquatic Species.*

The DUCK. The flesh of the duck, is of a savoury and somewhat of a stimulant

nature, is said to afford a preferable nourishment to that of the goose, being not so gross, and more easily digested; and that of the wild duck is reckoned still more easy of digestion than the tame, although more savoury.

The Goose. The whole anserine or goose tribe, of which there is great variety, are held to afford a food highly stimulant, of a strong flavour, and viscous quality, and of a putrescent tendency. The flesh of the tame goose is more tender than that of the wild, but generally, it is a diet best adapted to good stomachs and powerful digestion, and should be sparingly used by the sedentary and weak, or by persons subject to cutaneous disease.

The fat, or grease of the goose, is more subtle, penetrating and resolvent, than the lard of swine, and is an excellent article to be reserved for domestic use, in various cases. Sportsmen of the old school, held the opinion, extraordinary as it may now seem, that when a kennel of hounds shew symptoms of *rabies*, or madness, the best prophylactic remedy,

is to keep a considerable flock of geese in it, for a length of time ; and the late Dr. James, exceedingly attached to dogs, inclined to give a degree of credit to this presumed remedy, which, if real, must consist in the saline and penetrating qualities of the anserine excrement.

The SWAN. The cygnet or young swan only, is reckoned eatable, and that after a peculiar preparation, although in old times, the swan formed a dish of embellishment and show at great feasts. Swan fat possesses probably, much the same qualities as that of the goose above described, but is supposed somewhat more mild and emollient. The skin of the swan applied to the parts affected, is said be efficacious in rheumatic pains, and to strengthen the nervous system ; applied to the stomach, it dispels flatulencies and assists digestion.

## SECTION III.

### GALLINACEOUS FOWLS.

### *Varieties.*

WE have no history so ancient as the domestication of the common cock and hen. The cock was supposed to be of Persian origin, but the species has been since propagated and introduced into general use, throughout the whole world; from east to west, from the burning climate of India to the frozen zone. Although fowls used for the table are by nature granivorous, yet all the various species, the goose perhaps excepted, are carnivorous likewise, and great devourers of fish.

The principal varieties in use, of the

common species, or FOWLS, are—DUNGHILL FOWLS—GAME—DARKING—POLAND—BANTAM—CHITTAGONG or MALAY—SHACKBAG, and their endless sub-varieties.

The common DUNGHILL FOWL, needs no description—of middling size, every variety of colour, and to be found in every part of the country.

## *Game.*

GAME FOWLS are too well-known to require a particular description. Their plumage, particularly the red, is most beautiful and rich, their size somewhat below the common, and their symmetry and delicacy of limbs to be compared with those of the race horse and the deer, or in more strict analogy, with the wild species of their own genus. The ancients kept game cocks for the same purpose as the moderns, and there is a game breed, at present, existing in India, but I have not hitherto obtained any information as to the

origin of our game breed, which has been established during many centuries in this country. Their flesh is of the most beautiful white, and superior to that of all other breeds of domestic fowls, for richness and delicacy of flavour, but the extreme difficulty of rearing the chickens, from their natural pugnacity of disposition, shows itself at the earliest possible period, and deter most breeders, excepting those, who breed for the cock-pit. I have many times had whole broods, scarcely feathered, stone blind from fighting to the very smallest individuals; the rival couples moping in corners, and renewing their battles on obtaining the first ray of light. On this account few can be reared, and as this disposition, to a certain degree, prevails in the half breed, it prevents crossing with the game cock, otherwise a great improvement. The game eggs are smaller than common, fine shaped and extremely delicate.

Philanthropists are in the habit of declaiming much against the practice of

cock-pit battles, but on reflection, the cruelty of that sport will be found among the least, wherein the feeling of animals are concerned, since fighting in the game cock, is a natural and irresistible passion, since it can never take place against his will, and since those engaged in regular combat, upon the arena, would engage voluntarily, and with equal ardour, did they meet in the desert. Another and similar mistake is the supposed additional cruelty of arming the heels of the cock with steel, which on the contrary conduces to shorten the period of their sufferings. Throwing at cocks indeed, is really a diabolical and contemptible act of barbarity, as are all other tortures which animals are *compelled* to undergo. Such are totally against the laws of reason, common sense, and common humanity, and sufficient to bring into disgrace and contempt, the code of laws in which they are tolerated. The human being who can feel pleasurable sensations, on witnessing the agonized feelings, harrassment and

affright, of even the meanest brute animal, deserves in the first instance, supreme and pointed contempt; in the next, that is to say, after light imparted without effect, detestation and abhorrence.

An old German writer of the name of Cranenstein, we are informed, gives the following account of the origin of our throwing at cocks on Shrove Tuesday. Whilst the Danes were masters of England, and lorded it over the natives, the inhabitants of a certain city, grown weary of slavery, had formed a secret conspiracy to murder their masters in one bloody night, when twelve men had undertaken to enter the town hall by stratagem, and seizing the arms, to surprise the guard which kept it; at which time, their fellows, upon a signal given, were to come out of their houses, and murder all opposers: but while they were putting this plan in execution, the unusual crowing and fluttering of the cocks, near the place which they attempted to enter, discovered and frustrated their design; upon which

the Danes became so enraged that they redoubled their cruelty, exercising still greater severity over the English. Soon after, however, the English being freed from the Danish yoke, they instituted the custom of throwing at cocks, on Shrove Tuesday, the day of their disappointment, from a stupid and barbarian passion of revenge against the innocent cause of their misfortune, instead of admiring the natural vigilance of the birds, however unfortunately applied in a particular case: a reverse of the conduct of the Romans, who honoured the vigilance of the geese which saved the capitol. This infamous sport, although at first, only practised in one city, in process of time, became a national diversion, and remains even to this hour, in some parts of the country, exhibiting a strong taint of original ignorance and barbarism in the national character, which has not been wiped out by legislation.

Every one has heard the horrible story of Ardesoif of Tottenham, who about

thirty years since, being disappointed by a famous game cock refusing to fight, was incited by his savage passion, to roast the animal alive, whilst entertaining his friends. The company alarmed by the dreadful shrieks of the poor victim, interfered, but were resisted by Ardesoif, who threatened death to any who should oppose him; and in a storm of raging and vindictive delirium, and uttering the most horrid imprecations, he dropped down dead. I had hoped to find this, one among the thousand fanatical lies, which have been coined, on the insane expectation that, truth can be advanced by the propagation of falsehood; but to my sorrowful disappointment, on a late enquiry among the friends of the deceased miscreant, I found the truth of the horrible story but too probable.

The DARKING FOWL, so called from a town in Surry, where probably the variety was first bred, and where, and in its vicinity, they are to be found in great plenty and perfection, is, in the third de-

gree, the largest of our fowls, well-shaped, having a long capacious body and short legs, and is a plentiful layer. The genuine colour intire white; chief distinctive mark, five claws upon each foot. The white is probably not so pure as that of certain of the dung-hill fowls, nor is the colour of the flesh, that inclining to a yellow, or ivory shade. The Darking are the species generally made into capons.

In a late agricultural survey of the county of Sussex, an attempt is made to deprive Darking of the honour of originating this famous variety of fowls, with what degree of success, it would be a waste of time to enquire; it is sufficient we possess such a variety and know where to obtain it in perfection. The surveyor pretends that, the Darking fowls are all raised in the Weald of Sussex, and that Horsham is the chief market for them. That their having five claws is by no means their true and original characteristic, such peculiarity being merely fortuitous, and in fact objectionable; and

that those so marked are deemed a bastard breed. No doubt it is probable that, having five claws, accidentally brought into notice, certain fine and well formed individuals; but from those proceeded a distinguished permanent variety, and that variety bearing the name of Darking, seems a sufficient proof in favour of that town and its neighbourhood. In the mean time, the appellation, Darking fowl, has been in use, I apprehend, far beyond the memory of any one now living: and it is not at all improbable, the large Sussex breed has originated from a Darking cross, the peculiar mark of five claws, disappearing in the course of time, from the small number of Darking cocks employed, compared with that of the Sussex or common cocks, which were not so distinguished. Such is a common case in crossing varieties of live stock; the home variety in the end gets uppermost, as being the majority. In fine, five claws form an original distinction, in the common cock and hen, adverted to by Buffon;

nor is there any thing inconvenient or injurious in it, the fifth claw being seldom of sufficient magnitude to encumber the foot, or cause it to scratch out the eggs, as has been apprehended.

## *Poland.*

The POLAND fowls, as they are generally called, were chiefly imported from Holland. Their colour shining black, with white tops on the head of both cock and hen. Their form is plump and deep, and the legs of the best species, not too long. Perhaps the genuine sort has always five claws, and as the Poland cock will produce occasionally white stock from white English hens, it is most improbable, the similarity of form likewise considered, that our famous Darking breed may have been originally raised from that cross: or supposing such speculation groundless, the Darking, differing as it does from the common, may have been an imported breed.

The Polanders are not only kept as ornamental, but they are one of the most useful varieties; particularly on account of the abundance of eggs they lay, being least inclined to set of any other breed, whence they are sometimes called *everlasting layers*, and it is usual to set their eggs under other hens. They fatten as quickly as any breed, and are in quality similar to the Darking.

BANTAM, a well-known small breed, originally from India, valued chiefly for its grotesque figure and delicate flesh.

The CHITTAGONG OR MALAY, another Indian variety, is, as a contrast to the Bantam, probably the largest of the Gallinaceous tribe. They are in colour, striated yellow and dark brown, long necked, serpent headed, and high upon the leg; their flesh dark, coarse, and chiefly adapted to soup. They are good layers, and being well fed, produce the largest of hens' eggs and of the most substantial nutriment. Being too long legged, they are not generally, steady setters.

Buffon introduces several foreign varieties, of which I have no practical knowledge—the HAMBURGH COCK, the WONDERFUL INDIAN COCK, and the MUSCOVITE BLACK GAME HEN. I have heard of a WEST INDIA breed which are everlasting layers. The wonderful Indian cock is described, as a bird of most beautiful plumage, consisting of the following five colours—black, white, green, red and blue. The back part of the head has a sort of fleshy substance of pyramidal figure, scaly, and of a blood red colour; the bill thick and strong, and the breast mottled beautifully, with red and green. The tail consists of twelve large flaming feathers, resembling those of a peacock. The comb upon the head is double, with a single wattle hanging beneath the lower mandible, an inch and half long; the beak and legs yellow. It is a wild fowl, but easily domesticated. Nothing is said of the quality of its flesh.

SHACKBAGS. Formerly the largest variety, but in probability it has been entirely

worn out for some years. It was called the duke of Leed's breed, his grace more than fifty years since, being a great amateur breeder of them; but it does not appear whether his grace first raised the variety, or whether it arose merely from improving the size of the common dung-hill kind, and from any foreign cross; but the former is the most probable conjecture on account of the whiteness and fineness of the flesh, in the genuine shackbag. The only one I ever possessed, was a red one in 1784, weighing about ten pounds, which was provided for me at the price of one guinea, by Goff the dealer, who then lived upon Holborn Hill in London, and who at the end of two years, received him back at half a guinea, having allowed me in the interim, three shillings and sixpence each, for such thorough bred cock chickens as I chose to send to him. At that period, the real duke of Leeds's breed had become very scarce, which induced the dealers to put shackbags cocks to Malay hens, by that mean, keeping up the original stan-

dard size, but intirely ruining the colour and delicate flavour of the flesh. The shackbag fowl was a convenient substitute for the turkey, to the frequent great convenience of poulterers and inn-keepers, at Wokingham and elsewhere.

## SECTION IV.

### *The Turkey.*

OF the TURKEY or *Meleagris*, Buffon and others assert there is but one species, and the only varieties I am aware of, in this country, are the COPPER and WHITE, the former long in great esteem; the latter of a most delicate whiteness contrasted with its red head, said to have been originally imported from Holland.

On the etymology of the word turkey, I am altogether at a loss, unless we may suppose such name to have been ludicrously bestowed from the ostentatious strut of the bird, by a way of comparison with the pompous gravity of the Turk, an idea perhaps countenanced by the erroneous notion that, turkies were indigenous to Africa, and had been originally imported

from thence to Europe. The fact however seems to be sufficiently ascertained that, the turkey was intirely unknown to the old world, and that it had neither Greek nor Latin names, until it received the modern Latin denomination of *meleagris.*

The turkey was seen in America, by the first discoverers, and intituled by the Spanish doctor Fernandez, *gallus Indicus* and *gallus pavo*, the peacock of the Indies. They were both in a wild and domesticated state in America, on the arrival of the Spaniards, the wild being represented as of the largest size, reaching even the weight of sixty pounds, and of a superior flavour, but the flesh of a red colour. There is, however, some discrepancy in these accounts, certain of our voyagers representing the wild turkeys of Virginia, as carrion, utterly unfit to be eaten, and express their disappointment in the expectation of a good meal from some which they shot from a tree.

This bird, of such worth and consequence for domestic use, was most pro-

bably introduced into this country from Spain, soon after the discovery of America, since Tusser, who lived in the reign of Henry VII, represents it as a common Christmas dish, together with pig, goose, and capon. The turkey did not reach France quite so early; the first intelligence we have of it in that country, being at the nuptial feast of Charles IXth, in the year 1570. They have since been domesticated throughout the civilized world, in every climate, although said not to succeed equally on the barren sands of Africa.

There is a sameness of colour in the wild turkey, and the original stock seems to have been black, domestication generally inducing a variety of colours. Yet one would suppose that, white also, must have been a primitive colour with them, else the transition from black to white would be rather unaccountable. In a state of nature, they are said to parade in flocks of five hundred, feeding in general, where abundance of nettles are to be found, the seed of which is their common food: they also feed upon a small red

acorn, which, in the warm and fertile parts of America, is ripe in March, when the turkeys become so fat, as to be unable to fly more than a few hundred yards, and are then soon run down by dogs and horsemen. They roost upon the highest trees, and are very easily shot or otherwise destroyed, being a heedless and stupid bird. Since the planting and cultivation of such extensive tracts in America, the wild breed of turkeys has been driven into the uncultivated regions, and has long since become very rare. The Indians make elegant clothing and beautiful fans of wild turkey feathers, and the French of Louisania, manufacture them into umbrellas. The antipathy which the turkey-cock entertains for any thing of a red colour, is well known; and will indeed never be forgotten by myself, who, at about the age of eight years, having on a red waistcoat, was chased by two of them, around a very extensive yard, to my most terrible affright and discomfiture. The county of Norfolk breeds the largest

quantity of these fowls for market, which in the season, travel in their store state, upwards of one hundred miles in a certain number of days, to the metropolis.

## *The Duck.*

The GOOSE and DUCK genus is said by naturalists, to comprehend upwards of one hundred species, varying considerably in size and plumage from each other ; comparatively few of them have been domesticated, but the date of that domestication is far beyond all memorial or record.

This genus of fowls was deservedly a great favourite with the ancients, from the mildness and simplicity of their character, from their great fecundity, and from the cheapness and ease with which they were provided. Although the duck will eat flesh and garbage of any kind like the chicken, yet water insects, weeds, vegetables, corn and pulse, are their general food, and as has been already observed, the goose desires nothing but the latter.

The inoffensive and harmless character is common to both species, rendering them most pleasant as well as profitable animals to keep, and the contrast between them and chickens, in their nature and habits is highly in favour of the goose and duck tribe. In fact nothing can be more savage, cruel and voracious than the very nature of the common fowl, on which domestication and society work no softening effect. Nor is this confined to the game breed, for chickens of all kinds will tear to pieces, on the slightest occasion, their nearest akin, devouring their living flesh and entrails. That which is said of the duck, has full as much truth, when applied to the chicken; there is nothing too nasty, putrid, and abominable to human feelings for them, upon which eagerly to gratify their voracious appetites. Of the kind and social nature of the duck, I had a few years since, the following example.

We had drawn off for the table, the whole of a lot of ducks, one excepted.

This duck immediately joined a cock and hens, and became so attached to them, that it never willingly quitted their company, notwithstanding some harsh usage, particularly from the cock. It would neither feed nor rest without them, and shewed its uneasiness at their occasional absence by continual clamour. The manners and actions of the duck, whether upon land or water, are curious and pleasant to contemplate. Their regular afternoon parade and march in line, the elder drakes and ducks in front, from the pond homewards, is a beautiful country spectacle, to be enjoyed by those, who have a relish for the charms of simple nature. It is as long since, as the year 1767, that I recollect the following trait in the character and manner of the duck. A parcel of ducks, probably a score, which had been accustomed to their liberty, were for some particular reason, shut up during several hours. On the door of the coop being opened, they rushed out, threw themselves into a single

rank and file, and marched with rather a quick step, three or four times around a certain space, constantly bowing their heads to the ground, then elevating them and fluttering their wings; the ceremony finished, they quickly adjourned to the water. I have laughed a thousand times at the conceit with which my boyish imagination was imprest, namely that, the act which I had witnessed, was nothing less than a duckish thanksgiving for deliverance.

The social and conversing qualifications of ducks indeed receive a degree of countenance from the relations of ornithologists. The habitudes of the EYDER ducks, so valuable for their down, which frequent the lakes of northern countries, are thus described: the ducks flying in the air, are lured down from the heights by the loud voice of the mallard below, which nature seems to have furnished with powerful organs for vociferation. To this call, all stragglers resort, and in a short time, a lake, before naked, is com-

pletely black with water fowl. There they huddle together, extremely busy, and very loud. Upon what business they are thus incessantly employed all day, is not easy to guess by us, who understand not their language. There appears no food for them, in the midst of the lake, where they thus sit and cabal, nor does any action of theirs indicate a search of food; nor can courtship be the object, for which the season has not arrived; yet not one of them seems a moment at rest. Now they pursue each other; now rise up screaming, in a body, then down again; the whole appearing one strange scene of bustle, conducted with the utmost regularity, aud after all, with nothing at all to do.

It is a curious illustration of the *de gustibus non est disputandum*, that the ancients considered the swan as a high delicacy, and abstained from the flesh of the goose, as impure and indigestible: whilst the moderns reject the flesh of the swan and eat that of the goose with a universal relish. But upon the excellence of

the duck, both parties seem to have agreed, as upon some self-evident and hence incontrovertible proposition. The ancients went even beyond our greatest modern epicures, in their high esteem for the flesh of the duck, not only assigning thereto, the most exquisite flavour and delicacy, but also attributing to it important medicinal properties; for Plutarch asserts that Cato preserved his whole household in health, by dieting them with duck's flesh as a prophylactic; surely a most pleasant mode of taking physic! Several of the Roman medical writers moreover, strongly recommend the same regimen, as the most powerful means of exciting the prolific virtue in the sexes.

The opinion of a modern author respecting colour, is perhaps most correct as it regards the goose; it is however pretty generally to be depended on; he says—when one has seen a wild goose, a description of its plumage will, to a feather, exactly correspond with that of any other. But, in the tame kinds, no two

of any species are exactly alike. Different in their size, their colours, and frequently in their general form, they seem the mere creatures of art; and having been so long dependent upon man for support, they seem to assume forms intirely suited to his necessities.

The only variety of the common duck among us, is the Rhone duck, imported from France, generally of a dark coloured plumage, larger size, and supposed to improve our breed. They are of darker flesh, and more savoury than the English duck, but somewhat coarse. Rhone ducks have been so constantly imported for a great number of years, that they are very generally mixed with our native breed. The English duck, particularly the white variety, and when they chance to have very light coloured flesh, are never of so high and savoury flavour, as the darker colours. Muscovy and other foreign varieties of the duck, are kept rather out of curiosity than for the table.

## *The Goose.*

The Goose is a considerable object of rural economy, kept in large flocks, in the Eastern and fen counties of England. In some of those parts, their geese are exposed to the cruel operation of being annually stripped of their feathers; indeed the interested feelings of man know no scruple, and the cruelties practised upon the poor sea fowl, which have their down and feathers torn from them, and are then cast into the sea to perish, are enormous, and yet as it should seem, irremediable. Goose dung is a very powerful manure, and a large flock would have considerable effect, in fining and improving the grass of coarse meadow land. Geese as well as turkeys, it is well known, travel to the London markets; but it is not so generally known that goose feeding, in the vicinity of the metropolis, is so large a concern, that one person feeds for market, upwards of five thousand in the season. The best

geese in England, are probably to be found on the borders of Suffolk and Norfolk, and in Berkshire. Wild geese have not the superiority of the wild duck, tasting of fish, and being far inferior to the tame. The foreign fancy varieties of the goose, are chiefly ornamental for lawns and waters, and as objects of curiosity.

## *Pea and Guinea Fowls.*

The PEACOCK and HEN and GUINEA FOWLS, are always kept by the London dealers, whence any persons in the country, desirous of breeding them, may be supplied with breeding stock. Exclusive of the consideration of ornament to a poultry yard, the peacock is very useful for the destruction of all kinds of reptiles, but at the same time, some peacocks are said to be vicious, and apt to tear to pieces and devour young chicks and ducklings, suffered to be within their reach. They are also destructive in a garden.

This most beautiful of all the feathered

race, is supposed, originally, a native of India, and peacocks are said to be at present found in a wild state, upon the islands of Java and Ceylon. The history of king Solomon is a voucher for the antiquity of the peacock, and also the choice of the goddess Juno, who selected this for her favourite bird, from its gorgeous and brilliant plumage and majesty of demeanor. It is asserted by the ancient writers that, the first peacock was honoured with a public exhibition at Athens, that many people travelled thither from Macedon, to be spectators of that beautiful phenomenon, the paragon of the feathered race. It is probable, the ancients as well as the moderns, introduced the peacock upon table, rather as an ornament than a viand. There are varieties of this bird, some white; they perch on trees like the turkey. Their age extends to twenty years, and at three, the tail of the cock is full and complete. The cock requires from two to four hens, and where the country agrees with them, they are

very prolific. They are granivorous like other domestic fowls, preferring barley.

The PINTADA or Guinea Hen has been said to unite the character and properties of the pheasant and the turkey. It is about the size of the common hen, but standing high upon the legs, gives it the appearance of a larger size. The back is round, with the tail turned downwards like the partridge. It is an active, restless and courageous bird, and will even attack the turkey, although so much above its size. The Guinea fowl assimilate perfectly with the common species, in habits and in kinds of food; but have the peculiarity that, the cocks and hens are so nearly alike, it is difficult to distinguish them. They have also a peculiar gait and cry, or chuckling. The head is covered with a kind of casque, with wattles under the bill, and the whole plumage is either black or dark grey, speckled with regular and uniform white spots. The pintada is generally supposed to be a native of Guinea, whence its additional name; but it

is in equal plenty in America. In those countries it perches on trees, and in the wild state, builds its nest in the holes of the palm tree. It is gregarious, and often found in large flocks.

## *The Swan.*

The SWAN. Exclusive of ornament, the chief use of the swan is to clear pieces of water from weeds, a service which has been effected lately by swans, over a considerble breadth of water, at the residence of a nobleman, in the course of a year or two; but they are generally reputed great destroyers of the young fry of fish.

The antiquity of this delicate and stately bird, the silent swan, is conspicuous in the pages of history and of poetry. The prototype of the domesticated breed has been probably lost in the lapse of time, since the wild swans of all countries, differ essentially, both in plumage and organic structure from the tame. The longevity of the swan seems to equal, if

not exceed that of any other animal, as it is said to live three centuries, a fact, which it seems strange, and is to be regretted, has not been correctly ascertained in some of our great families, of old so extremely attached to this bird. They are chiefly to be found upon the Thames, and probably also, as in former days, on the inlet of the sea near Abbotsbury, Dorset, and in the river Trent. Their flesh is no longer in request as food, with the exception perhaps that formerly, cygnets or young swans, were fattened at Norwich, for the Christmas feast, and commanded the price of one guinea each.

The swan feeds like the goose and has the same familiarity with its keepers, kindly and eagerly receiving bread which is offered, although it is a bird of courage equal to its apparent pride, and both the cock and hen are extremely dangerous to approach during incubation, or whilst their brood is young, as they have sufficient muscular force, to break a man's arm with a stroke of their wing. They

both labour hard in forming a nest of water plants, long grass and sticks, generally in some retired part or inlet of the bank of the stream, or piece of water, on which they are kept. The hen begins to lay in February, producing an egg every other day, until she has deposited seven or eight, on which she sits six weeks, although Buffon says, it is nearly two months before the young are excluded. Swan's eggs are much larger than those of a goose, white, and with a hard and sometimes tuberous shell. The cygnets are ash-coloured when they first quit the shell and for some months after, indeed do not change their colour, nor begin to moult their plumage until twelve months old, nor assume their perfect glossy whiteness, until advanced in their second year.

The CYGNOIDES from Guinea, commonly called the SWAN-GOOSE or the MUSCOVY-GOOSE, a sort of middle species between the swan and the goose, are sufficiently plentiful in Britain, and unites so well with the common goose, accord-

ing to report, as to cause a little or no perceptible difference in the progeny. They are distinguished by their erect gait, and the screaming which they continue, during almost the whole day, without any obvious incitement.

## SECTION V.

### *On breeding and rearing Chickens. The necessary Yards and Buildings.*

IT has been already observed that, the warmest and dryest soils are best adapted to the breeding and rearing of gallinaceous fowls, more particularly chickens; thence the greatest success, attended with the least trouble, may be expected on such, and far greater precaution and expence will be required on those of an opposite description. Of these last, the wet and boggy are the most injurious, since however ill affected fowls are by cold, they endure it still better than moisture, whence they are found to succeed well upon dry land, even in the severe climate of the north. The counties

in England most productive in poultry, are NORFOLK, SURRY, SUSSEX, HERTS, DEVON, and SOMERSETSHIRE. The largest stock of poultry which I ever saw upon an English farm, was upon one of two or three hundred acres in Herts, many years since, amounting it appeared to many hundred head. It was dry and shingly land, like the sea beach, and I found on enquiry that, scarcely any care was taken of the breeding stock, or shelter afforded them, yet they multiplied in a most extraordinary degree, and preserved a constant state of good health. Upon a boggy or clayey soil, under such circumstances, they would have died like rotten sheep. In short, land proper for sheep, is generally also adapted to the successful keeping of poultry and rabbits.

But as the rearing of both is necessary, upon soils and in situations of every description, it will be most to the purpose, to point out those precautions which must be recurred to, in order to ensure success, upon the least favourable. On such

then, artificial or made ground, cannot be dispensed with, for a poultry yard, where rearing is made an object upon any considerable scale ; since upon damp and boggy soils, not only will the greater part of the broods be annually subject to disease and mortality, but the cocks and hens themselves will be frequently affected, to the great impediment of the business of the breeding season. Where it is not held worth while to make any extraordinary accommodations for poultry, and the risk is taken, enough may yet be preserved for family convenience and to repay the trifling expence. But no considerable stock can be kept, far less any profit made upon it, upon an unfavourable soil, independently of attention to needful local conveniences.

Whether or not, the poultry be suffered to range at large, and particularly to take the benefit of the farm yard, a separate and well fenced yard or court, must be pitched upon. The foundation should be laid with chalk, or bricklayers' rubbish,

the surface to consist of sandy gravel, considerable plots of it being sown with common trefoil, or wild clover, with a mixture of burnet, spurry, or star grass, which last two species are particularly salubrious to poultry. The surface must be so sloped and drained as to avoid all stagnant moisture, most destructive to young chickens. The fences must be lofty, well secured at bottom, that the smallest chicken cannot find a passage through, and the whole yard perfectly sheltered, from the north west to the east. Various beds, or heaps of sifted ashes, or very dry sand, should be always ready, in which the hens may exercise that propensity, so delightful and salutary to them, of rolling or bathing themselves. This is effectual in cleansing their feathers and skin from vermin and impurities, promotes the cuticular excretion, and is materially instrumental in preserving their health.

The poultry houses within the court, if there be a choice, should have a southern

aspect, at any rate should be well defended from cold winds and the blowing in of rain or sleet. If the number of the stock be considerable, the houses had far better be small and detached, both for health and safety sake, and especially they should be absolutely impenetrable to vermin of every description. Should these houses abut upon a stable, brew-house, or any conductor of warmth, it will be so much the more comfortable and salutary to the poultry.

The form and conveniences of the poultry house, are these—the bottom or flour should consist of well rammed chalk or earth, similar to the court-yard, that its surface being smooth, may present no impediment to being swept perfectly clean. For health's sake, the roof should be lofty, the perches will be then more out of the reach of vermin, should any accidentally break in; and there should only be one long and level range of perches, because, when these are placed one above another, the fowls dung upon

each other: Convenient steps driven into the walls, will render easy the ascent of the poultry to their perches; but care must be taken that, the mistake be not made of placing these steps immediately one over the other, but in such wise, that they can jump from one to the other.

Boxes, of which every carpenter knows the form, are to be arranged around the walls, and it is proper to have a sufficient number, the hens being apt to dispute possession, and sit one upon another; the steps will lead equally to these, as to the perches. The board, or step at the entrance, to be of sufficient height to prevent the eggs from rolling out. Provision of a few railed doors may be made, for occasional use, to be hung before the entrance in order to prevent other hens from intruding to lay their eggs upon those which sit, a habit to which some are much addicted, and by which a brood is often injured. The common deep, square boxes, uncovered at top, are extremely improper, because that form obliges the

hen to jump down upon her eggs; whereas for safety, she should descend upon them from a very small height, or in a manner walk in upon them. The same objection lies against hampers, with the additional one of the wicker work admitting the cold, in variable weather, in winter or early spring settings. It ought to be noted likewise, that many breeders prefer to have all the nests upon the ground, on account of the danger of chickens falling from those, which are placed above. In this respect, persons will be best guided by their own experience.

Turkeys being roosting fowls, may be kept in the yard of which we speak, either in a separate house, or their boxes for laying or setting, may be placed on the ground of the common houses; which last method perhaps is objectionable, since turkeys and common fowls might not roost quietly together. In the common way indeed, poultry of all kinds are associated in a common house, the cocks and hens aloft, and the ducks, geese and turkeys up-

on the ground flour. Or upon an extensive scale, all the domestic poultry may be contained within the inclosure, the circular form for which would be most comprehensive and advantageous, including a piece of water, with laying houses upon its banks, for the aquatic fowls, and dove cotes for breeding pigeons. Some shutters may open to the morning sun, for air, and particularly for the benefit of the setting hens.

### *Precautions.*

All the above arrangements, the best concerted plan, and the most valuable stock, will little avail the proprietor, or rather turn to his great mortification and disappointment, without a certain precaution, of more consequence than all others —a defence against MIDNIGHT THIEVES. Not merely a lock, or a bar, or a mere trifling apology for security, but such an ample safeguard, that, a man who values his property, may lay his head upon his

pillow with confidence. I speak feelingly on this part of the subject, having, three or four times in my life, been robbed in a single night, of the greater part of most valuable stocks of poultry, the breed and excellence of which, it took me several seasons to recover. In the first place, these small buildings should be made substantial, for on one occasion, my locks being good, the thieves made their way by wrenching open an angle of the building. In addition to substantial locks and hinges, bells hung upon the inside of the doors, or upon any part liable to be shaken, are good precautions, since the noise may deter the thieves, even if it fail to alarm the family. But the most certain security is that kind of vermin cur, generally kept by the country labourers. Several such should be enkennelled in the poultry court, and taught to bark, being equally useful against robbers and vermin. Nothing can charm and quiet the tongues of real good *latratores*, or barkers, and more

particularly when several of them are together.

A plan like the above, will obviously require the exclusive services of one or more ATTENDANTS, according to its extent. My poultry, rabbits, and bees, formerly were well attended by an aged labourer, with the occasional assistance of his wife; and the meritorious couple thus made an easy and comfortable living, after a life of severe labour, a circumstance to me, the source of heartfelt satisfaction. The sale of our surplus of this species of live stock, beside repaying all expences, and exclusive of a most abundant and comfortable supply for the household and for occasional presents, rendered an annual profit, by no means contemptible. We disposed of the surplus, for the greater part, to a higler in the vicinity, who allowed us a certain advance upon his common price, in consideration of the superior goodness and condition of the stock.

## SECTION VI.

### *Choice, and Treatment of Breeding-stock.*

GALLINACEOUS FOWLS. By a reference to the THIRD Section, which describes the qualities of each variety of this species, a choice may be made of the most suitable to the situation or fancy of the proposed breeder. A breeding stock of the common kind, is easily procurable, either in town or country, either from the markets or individuals; particular and fancy breeds must either be sought in those parts where they are customarily bred, or at the shops of the London dealers.

It should be a general rule to breed from YOUNG STOCK; a two year old cock, or stag, and pullets in their second year. Pullets in their first year, if early birds,

will indeed, probably, lay as many eggs as ever after, but the eggs are small, and such young hens are unsteady setters. Hens are in their prime at three years of age, and decline after five, whence, generally, it is not advantageous to keep them beyond that period, with the exception of those of capital qualifications. Hens with a large comb, or which crow like the cock, are generally deemed inferior; but I have had hens with large rose combs and also crowers, which were upon an equality with the rest of the stock. Yellow legged fowls are often of a tender constitution, and always inferior in the quality of their flesh, which is of a loose flabby texture and ordinary flavour.

The HEALTH of fowls is observable in the fresh and florid colour of the comb, and the brightness and dryness of the eyes, the nostrils being free from any discharge, and the healthy gloss of the plumage. The most useful cock is generally a bold, active, and savage bird, cruel and destructive, in his fits of passion, if

not well watched, to his hens, and even to his own offspring. Hens, above the common size of their respective varieties, are by no means preferable either as layers or setters. The indications of OLD AGE are paleness of the comb and gills, dulness of colour, and a sort of downy roughness in the feathers, and length and size of talons, the scales upon the legs becoming large and prominent.

NUMBER of hens to one cock, four to six, the latter being the extreme number, with a view of making the utmost advantage. Ten and even twelve hens have been formerly allowed to one cock, but the produce of eggs and chickens under such an arrangement, will seldom equal that to be obtained from the smaller number of hens. Every one is aware that the spring is the best season to commence breeding with poultry, and in truth, it scarcely matters how early, presupposing the best food, accommodation, and attendance, under which, hens may be suffered to set in January; but the attempt to rear

winter chickens in this climate, even in a carpetted room and with a constant fire, would in all probability be found abortive. I have repeatedly made the experiment with some scores, without being able to preserve an individual through the winter, and nearly the same has resulted with respect to pigs.

The CONDUCT of the cock towards his hens, should be early and constantly attended to, as it is a common occurrence for him to conceive an antipathy to one or more particular individuals; should this continue, the obnoxious one should be removed, since nothing but misery can ensue to the unhappy and persecuted bird, which will be harrassed and chased about, and unless when hiding and moping in corners, she will be always liable to be torn and maimed, and various examples have occurred of a hen under these circumstances, being instantly stricken dead by the cock. Such a hen being removed and replaced by a STRANGER, care should be taken for the

first week or two, that she be not worried or injured by the other hens. The CHANGE of a cock from death or accident, is always attended with interruption and delay, as it may be some considerable time, before the hens will associate kindly with their new partner: and further, a new cock may prove dull and inactive from the change, however good in nature. This frequently happens with cocks of the superior breeds, purchased from the London dealers, in whose coops they have been kept in such a state of temperature, that they are unable to endure the open air of the country, unless in the summer season. Such being removed in autumn, winter, or early spring, if immediately turned abroad with hens, are liable to become *aguish*, torpid, and totally useless, perhaps in the end, turning roupy or glandered. The only method of safety in the case, is to keep such a cock in the house, upon the best and most nourishing food, turning the hens to him several times in the day, and permitting him to be abroad an hour or

so, the weather being fine, until in a few weeks he shall be accustomed to the air.

In making the NESTS, short and soft straw is to be preferred, because the straw being long, the hen on leaving her nest, will be liable to draw it out with her claws, and with it, the eggs. The hen it is ascertained, will breed and lay eggs, without the company of a cock; in course, such eggs are barren. I confined a hen with a pheasant cock, which was never observed to attend to her; she laid twenty-nine eggs, all which proved barren. It may be said that she had previously associated with a cock, but that the attentions of one, were also subsequently necessary, to render the eggs perfect and prolific; such fact nevertheless, does not negative the other, of a hen's breeding eggs entirely independent of the male, as is confirmed by the circumstance of parrots and other birds in cages, laying eggs, without the possibility of a cock approaching them. According to Buffon,

a hen being properly attended by the cock for a few days, should she be then separated from him, the eggs laid by her during a month thereafter, would be fruitful.

Eggs for SETTING should never exceed the age of a month, the newer to be preferred. As nearly of a size as possible, and of the full middle size; void of the circular flaw which indicates the double yolk generally unproductive, nor should there be any roughness or cracks in the shells. NUMBER of eggs, according to the size of the hen, from eleven to fifteen, an odd number being preferable, on the supposition of their lying more close. The eggs to be marked with a pen and ink, and examined when the hen leaves her nest, in order to detect any fresh ones which she may have laid, and which should be immediately taken from her, as they, if at all, would be hatched too late for the brood. It is taken for granted, the box and nest have been made perfectly

clean for the reception of the hen, and that a new nest has not been sluggishly and sluttishly thrown upon an old one, from the filth of which, vermin are propagated to the great annoyance of the hen, and prevention of her steady setting.

EGGS BROKEN in the nest, should be cleared away the instant of discovery, and the remaining washed with warm water and quickly replaced, lest they adhere to the hen, and be drawn out of the nest: if necessary, the hen's feathers may also be washed, but always with warm water.

With respect to the CAPRICIOUSNESS of some hens, in the article of SITTING, it is a risk which must be left to the judgment of the attendant, who has to determine whether or not the hen which appears desirous of sitting, may be safely trusted with eggs. Leaving a number of eggs in the nest, is an enticement. Very frequently, a hen will cluck and appear hot for incubation, yet after sitting over her eggs a sufficient number of hours to

addle them, will then desert them; and probably in the course of a few days, will be taken with another fit of incubation.

Much useless cruelty is too often exercised, to PREVENT the hen from SITTING, when eggs rather than chickens, are in request; such, for example, as immersing her head, or whole body in water, which I have witnessed with regret, the hen, as soon as dry, running to her nest, although the dipping has been repeated several days following. But granting nature could be thus put out of her course, it is not probable that eggs would be obtained earlier than by suffering the hen to sit, since the improper treatment and the disappointment combined, are nearly an equal impediment both to laying and sitting.

I am sorry to see a late useful and well written publication disgraced by barbarities, similar to those above decried. The author, unreflectingly without doubt, recommends to thrust a feather through the hen's nostrils, in order to prevent her

from sitting; and to give her half a glass of gin, then swing her round until seemingly dead, and confine her in a pot, during a day or two, leaving her only a small breathing hole, to force her to sit! It is full time that these, and a hundred other such barbarous practices of former days practised upon various animals, should be dismissed with the contempt they merit. The pamphlet alluded to, is the Epicure, by Thomas Young, a publication replete with good things, on the interesting subjects of eating, wines, spirits, beer, cyder, planting, &c. It is written with *haut gout*.

Every succeeding year after the third, the hen continues to MOULT later in the season, and laying fewer or no eggs during the moulting period, which is sometimes protracted to two or three months. It should seem that old hens are seldom to be depended upon for eggs in the winter, such being scarcely full of feather until Christmas; and then probably, may not begin to lay till April, producing at last,

not more than twenty or thirty eggs. In general, it is most profitable to dispose of hens whilst they are yet eatable or saleable for that purpose, which is in the spring of the third year. Nor do delicate white hens lay so many eggs in the cold season as the more hardy, coloured varieties, requiring warmth and shelter, particularly by night. MOULTING, or the casting and renewal of feathers, lasts with its effects from one to three months, according to the age and strength of the bird. Whilst under this natural course, poultry are unfit for the table, as well as for breeding. It is the same with respect to young poultry, whilst shedding their feathers in the spring. The regular moulting of full grown fowls begins in the autumn.

## *Attention during Incubation.*

There is a DISTINCTION in the hen: in some, the desire of sitting or incuba-

tion is predominant, which they will repeat to the fifth or sixth time in the year, to their emaciation or almost destruction: in others, the desire is so slight, that they will probably set but twice, or even once in the season, and then not steadily. It is for the skilful breeder to take advantage of this variation of quality, the one kind furnishing plenty of eggs for the other to set upon.

It is proper to place CORN AND WATER beside the setting hen, whenever it may appear necessary, withdrawing them as soon as she is satisfied, not only to encourage steadiness of incubation, but to support the constitutions of those, in which the natural excitement is so powerful, that they will remain several successive days upon the nest, at the risk of famishing. I have had instances of hens of this description, fainting outright, and appearing as dead, on their final leaving the nest with the chickens; in a state of total emaciation, having probably not

eaten or drank more than once in three or four days, during the TERM of incubation, TWENTY-ONE DAYS. The plan of feeding on the nest, should be invariably pursued with all frequent setters.

## SECTION VII.

### *Hatching of the Brood.*

THIS must be watched on the expiration of the term, in which the state of the weather, warm or cold, may make some hours difference. Nature, as Reaumur long since observed, has committed to the chicken itself, the task of breaking its way through the shell, the hen being totally uninstructed and unqualified on that point; for indeed, any forcible strokes with her beak, might have the effect of wounding the chicken, whilst it broke the shell. The only use of her bill, generally, in the case, is to turn, or remove the eggs, defend them, or cast out the broken shells. The chicken in perfect health and unimpeded, suddenly at nature's impulse, performs the part of breaking its prison with a wonderful strength and energy, in-

dicative of future activity, considering the quiescent state, rolled up like a ball, in which it has laid from the time of its form being complete. ITS FORM AND POSITION IN THE SHELL is as follows—the neck curves or slopes towards the belly, on about the middle of which, the head is placed; the bill under the right wing, like a bird asleep; the feet are gathered up beneath the belly, like those of fowls trussed for the spit; the claws reversed, almost touch the head from their convexity. The forepart of the chicken is generally placed towards the biggest end of the egg, adapted by nature to that purpose; the whole body is surrounded by a membrane of considerable strength and thickness, confining him in a position apparently most unfavourable to the motions necessary to his emancipation; it is nevertheless without changing his attitude that, he performs his seeming most difficult task; repeated strokes with his little bill, which may often be heard, break the shell of the egg, at the same time tearing the

solid membrane, in which he is enveloped, and which resists his struggles, full as much as the hard but brittle shell.

Nor is the head at all at liberty, or released from the wing, during the struggle, the comparison in that respect, with a sleeping bird, not coming up fully to the point, since the head of the chicken in the egg, reaches farther under the wing, and the bill protrudes towards the back. The head, although in this confined state, by moving alternately backward and forward, and the reverse, or more exactly from the belly towards the back, and from the back towards the belly, reaches and strikes the shell, more or less roughly, according to the quickness of its motion: whilst in action, it is in some degree guided by the wing and the body, which retain and prevent it from leaving its place. The head is very heavy and large, with respect to the bulk of the body, making together with the neck, a weight so considerable, that the chicken is unable to support it for some time after its birth. On the other

hand, the manner in which all the parts are disposed, whilst yet in the egg, and in the form of a ball, renders the support of that weight of the neck and head, perfectly easy to the chicken; for in whatever position the egg may be, the head of the chicken is supported either by the body or by the wing, or by both united: in fine, the force of the blows against the shell by the beak, are powerful in proportion to the bulk of the head. The mother's affection for her brood, is always observed to be intensely increased, when she first hears the voice of the chicks through the shells, and the strokes of their little bills against them.

All chickens do not dispatch the important task in equal time. Some are able to disencumber themselves of the shell, in the course of an hour from the commencement of the operation; others take two or three hours; and generally, it may be looked upon as half a day's work: in case of natural or accidental debility, the period may be extended to

twenty-four, or even forty-eight hours, in which case however, there is seldom much success in the hatching. Here skilful assistance is wanted from the attendant, which very few possess. Reaumur, the greater part of whose observations, such I mean, as I have found leisure to attend to, appear to me correct, says, the women of most countries in his time (1747) were in the habit of dipping the eggs in warm water, and suffer them to remain in it a short time, on the day of hatching, from the presumption of rendering the shell more tender and easy to be penetrated by the bills of the chickens. This however is a useless, perhaps injurious labour, since the shell of a boiled egg does not prove sensibly less hard ; and granting it did, would soon reassume its primitive hardness from exposure to the air and evaporation.

ASSISTANCE IN HATCHING must not be attempted prematurely, and thence unnecessarily, but only in the case of the chick being plainly unable to extricate

itself: so indeed, an addition may probably be made to the brood, as great numbers are always lost in this way. The chick makes a circular fracture of the big end of the egg, and a section of about one third of the length of the shell being separated, delivers the prisoner, provided there be no obstruction from adhesion of the body to the membrane which lines the shell. Between the body of the chicken and the membrane, there remains a viscous fluid, the white of the egg thickened by the intense heat of incubation, until it becomes a real glue. When this happens, the feathers stick fast to the shell and the chick remains confined, and must perish unless released.

The METHOD of assistance is, to take the egg in hand, and dipping the finger, or a piece of linen, in warm water, apply it to the fastened parts, until they are loosened, by the gluey substance being dissolved and separated from the feathers; the chick then being returned to the nest, will extricate itself, a mode generally to

be observed, since violence used would often be fatal. Nevertheless, breaking the shell may sometimes be necessary, and tearing with the fingers as gently as may be, the membrane from the feathers, which are still to be moistened as above, to facilitate the operation. Small points of scissars may be useful, and when there is much resistance and apparent pain to the bird, the process must be conducted in the gentlest manner, and the shell separated into a number of small pieces. The SIGNS of a need of assistance are, the egg being partly pecked, and the efforts of the chicken discontinued for five or six hours. In commencement, the shell may be broken cautiously, by striking it with the end of a key. The rotten egg is known immediately by the motion of the contained fluid, and previous unsteady incubation.

WEAKNESS from cold, may disable the chicken from commencing the operation of pecking the shell, which must then be artificially performed, with a circular frac-

ture, such as is made by the bird itself. Pullets are occasionally liable to cause this defect. We have had but little success in this case, the chickens after delivery seldom succeeding, but the following quotation from De Reaumur will be fully explanatory.

" This assistance, which is so important to many chickens, might prove fatal to others; for which reason I would advise the reader not to attempt it in too great a hurry. My opinion is, the facility of coming out of their shells, ought not to be procured to any but those which have been near four and twenty hours together, without getting forward in their work. There are chickens, as I have already observed, which shew too great an impatience to peck their shells, and do it before the yolk is intirely got into their body: it would prove fatal to those, were they enabled to come out of their shell a few hours after they have pecked it, although they would be never the worse for it afterwards, IF NO YOLK WERE LEFT OUT OF THEIR

*body*, at the instant of their coming out of the shell. However, it is generally better to let the chicken come out of the shell of his own accord; for in that case, he is hatched only when his limbs have become sufficiently strong, and when they have assumed in the shell a consistence and vigour, which they would not be so sure to acquire, if they were exposed to the open air.

" I have often found both among the chickens which were hatched of their own accord, and those which I have assisted, some, that notwithstanding the perfect consolidation of the place, through which the yolk had been introduced into their body, had nevertheless still without it, portions of intestines some longer, some shorter: one might think that these portions had not been inclosed in the capacity of the belly, at the same time when the rest was; but it is no less probable that all this is the consequence of the efforts the chicken had made towards being hatched, and that they had brought on him a

rupture, which is commonly fatal in a few days."

The chickens FIRST HATCHED, to be taken from the hen, least she be tempted to leave her task unfinished. Those removed may be secured in a basket of wool or soft hay, and kept in a moderate heat, if the weather be cold, near the fire. They will require no food for many hours, even four and twenty, should it be necessary to keep them so long from the hen. The whole brood being hatched, the hen is to be placed under a koop abroad, upon a dry spot, and if possible, not within reach of another hen, since the chickens will mix, and the hens are apt to maim or destroy those which do not belong to them. Nor should they be placed near numbers of young fowls, which are likely to crush young chicks under their feet, being always eager for the chickens meat.

The FIRST FOOD, split grits, afterwards tail wheat; all watery food, soaked bread, or potatoes, improper. Eggs boiled hard,

or curd chopped small, much approved, as first food. Their water should be pure and often renewed, and there are convenient pans made in such form, that the chickens may drink without getting into the water, which often by wetting their feet and feathers, numbs and injures them; a bason whelmed in the middle of a pan of water, will answer the end, the water running round it. Generally, and dependent on situation, and the disposition of the hen, there is no necessity for kooping the brood beyond two or three days, but they may be confined as occasion requires, or suffered to range, as they are much benefited by the scratching and foraging of the hen. They must not be let out too early in the morning, or whilst the dew remains upon the ground, far less be suffered to range over the wet grass, one common and fatal cause of disease. Another caution is of the utmost consequence, to guard them watchfully against sudden unfavourable changes of the weather, more particularly if attended with

rain. Nearly all the diseases of gallinaceous fowls, arise from cold moisture.

For the period of the chickens QUITTING the hen, there is no general rule, the most certain is, when the hen begins to roost, leaving them; if sufficiently forward, they will follow her, if otherwise, they should be secured in a proper place, the time having arrived, when they are to associate with the young poultry, as nearly of their own age and size as possible, since the larger are apt to overrun and drive from their food, the younger broods.

## SECTION VIII.

### *Hatching Eggs by Artificial Heat.*

During ages, beyond the power of historical records to enumerate, the Egyptian people have been in the practice of hatching the eggs of all kinds of poultry, more especially the gallinaceous, by means of artificial heat; means the most obvious, when attended with success, of raising the greatest abundance of that species of provision, for public use. The philosophers of the French Academy, ever on the watch for the advancement of scientific or practical improvement, in the early and towards the middle part of the last century, eagerly laid hold of the report of their travellers, and made experiments in their own country of this Egyptian

practice. The experiment was made on a considerable scale, under the Royal patronage, and M. De Reaumur, a name well known in the annals of science, did not think it beneath the dignity of his name and acquirements, to undertake the practical and superintending part, performing it with a minuteness of attention, which may well excite jealousy in the breasts of the most thorough paced housewives in Christendom. He afterward presented to his country, and to the world at large, the successful and important results, in a comely octavo, adorned with fourteen explanatory and useful folding plates, and containing nearly five hundred closely printed pages. This curious work was translated into English, with greater fidelity than elegance, in the year 1750. Nor was the attempt of De Reaumur at the multiplication of chickens, the only one in France; ladies of high quality, and reverend inmates of the convent, patriotically bestowed their industry and attention on the same pursuit, with considerable suc-

cess. Not only in France, but at Florence, and even in Poland, similar attempts had been made. The project however, from whatever cause, seems in a very few years to have become extinct in France, and has since probably been confined to Egypt its native soil.

*Diodorus Siculus*, *Aristotle* and other ancient writers advert to the Egyptian practice of hatching eggs, and the latter explains the process of performing the same operation by the heat of dung. The ancients indeed, were well aware of the practicability of eliciting animal life from the egg, independently of the incubation of the hen, and *Pliny* has recorded the success of *Livia*, in hatching a chicken in her bosom, an act of patient curiosity which has been paralleled by several French ladies, who have, in the same way, proved themselves the mothers of gold-finches and canary birds. *Pliny* says also, *sed inventum, ut ova in calido loco, imposita paleis, igne modico foverentur, homine versante pariter die ac nocte, et statuto die*

*illinc irrumpere fœtus.* In English, it had been discovered in his time that, eggs placed on straw in a moderate heat, and turned day and night by an attendant, would be hatched within the limited period of incubation.

This art however, is not to be understood as ever having been of general notoriety even in Egypt. On the contrary, the knowledge of it is there confined to a single village, named *Berme*, situate in the *Delta*, within twenty leagues of *Grand Cairo*, and to a few adjoining places. The inhabitants teach the secret to their children, but conceal it from strangers. When the season for hatching approaches, which is the commencement of autumn, these *Bermeans*, disperse themselves over the country, each of them, taking upon himself the management of an oven, in the Egyptian language called *mamal*. In the construction of these ovens, which, however, discovers a considerable degree of ingenuity, there can be no secret, since they are open to

all, foreigners as well as natives: the peculiar skill of the *Bermeans* consists in the arrangement, gradual warming of the eggs and succeesful developement of the youngs broods.

The *Mamals* or OVENS of Egypt, of which De Reaumur in a fit of real enthusiasm, says that country ought to be more proud than of her pyramids, are scarcely above nine feet in height, but they have an extent in length and breadth, which renders them remarkable, and yet they are more so in their internal structure. The centre of the building is a very narrow gallery, usually about the width of three feet, extending from one end of the building to the other, the height of which is from eight to nine feet, the structure, for the most part of brick. The entrance into the oven is through the gallery, which commands the whole extent of it, and facilitates the several operations that are necessary, to keep the eggs to the proper degree of heat. The oven has a door, not very wide, and only as high as it is

broad : this door and many others in use in the *mamals*, are commonly no more than round holes.

The GALLERY is a corridor, with this difference from our common corridors, which have only one row of rooms, whereas that of the *mamal* has always two rows of them on both sides, namely, one on the ground floor and another above. Every one upon the ground floor. has one above, perfectly equal, both in length and breath. The rooms of each row on the ground floor, are all regular and equal, in length, breadth, and height. *Reaumur* observes, we know of no other rooms in the world so low as these, being only three feet in height. Their breadth, which is in the same direction with the length of the gallery, is four or five feet ; that they are very narrow in proportion to their length, which is twelve or fifteen feet.

Every one of these rooms has its door or round aperture, about a foot and a half in diameter, openning into the gallery, the hole being wide enough for a man to

creep through. All the eggs to be hatched, are at first ranged in these rooms. Father *Sicard* informs us, that four or five thousand eggs are put into each of them. These are the real ovens, so that the whole edifice which is denominated a chicken-oven, is an assemblage of many ovens set together, side by side, opposite, and over each other; and in the course of the process, a part of the eggs are warmed in the upper rooms, after having been previously in the lower.

There is some discrepancy in the accounts of authors, as to the number of rooms, and the quantity of eggs hatched at a time; it might arise however from different local customs. Father *Sicard* gives but four or five rooms to each row on the ground floor; Granger insists on seven; *Monconys*, ten or twelve to each; whilst *Thevenot* asserts, there are no more than three. They were all eye-witnesses; and according to the report of one, only forty or fifty thousand eggs were hatched at once, whilst another extends the number

to eighty thousand. The eggs are spread on mats, flocks, or flax, in each room upon the ground floor, where they contract their first and gentle warmth, during a certain number of days.

The UPPER ROOMS, or those of one story high, have each of them fire places, the fire of which warms the eggs in the corresponding inferior rooms: the floor which separates each of these from its inferior room, has a large hole, or aperture in it, through which the heat is communicated to the lower room. The floor which separates the upper room from that beneath, has, on each side, a gutter or channel, continued its whole length: in these two channels, the fire is lighted. Granger observed two more gutters, one at each end of the room; they were six inches wide and two deep.

Every upper room has, beside the large aperture, through which it has its communication with the lower ones, two other holes—a small one in the arch which supports it in lieu of a cieling, and ano-

ther in the wall, that separates it from the gallery. This last serves instead of a door, as the whole placed in the same manner under it, do to the room below; performing also the office of a chimney, the smoke having no other passage, since during the whole time the fire is burning, they keep the hole in the arch or cieling of each room, close stopped. The smoke by this mean, is carried into the gallery, through the door of the upper room, whence it escapes through holes which are made in its roof. They also stop the doors of the under rooms, whilst the fire is lighted, that the air within may be sooner warmed by the heat communicated from the upper ones. These doors as they are called, are only so many holes to be stopped, which it is of importance to do closely and exactly; thence it is more securely done, with wads or bundles of coarse tow, than with any kind of wood work.

The heat of the air, in the inferior rooms, and consequently that of the eggs, would rise to an excessive degree, were

the fire in the gutters, incessantly kept up. Father *Sicard* says, they keep it up only an hour in the morning, and an hour at night, and that they style these heatings, the dinner and supper of the chickens: they receive however, two more meals according to *Monconys;* that is, a luncheon and afternooning, the fire being lighted four times in a day. This may depend on the temperature of the air, as they have in Egypt, eggs hatched during several months together; and as in the hottest countries, all the months which follow one another, have not an equal temperature of air, the temperature of some of them require the fire to be lighted a greater number of times; or that they keep it longer in their ovens, than ought to be done, either in the succeeding months, or or in those which preceded.

During many days previous to that of the hatching, it would be needless, and even dangerous to increase the fire in the oven; because after a certain number of days, the whole extent of the place has acquired a degree of heat, that may be pre-

served in it, many days together, only by using a few easy precautions, notwithstanding the impression of the external air, and that without any sensible diminution, or at least without any, which might be hurtful to the chickens. Travellers differ as to the period, at the end of which, the fires cease in the ovens; but it seems probable that, they are only kept up during the first eight or ten days, the eggs being subsequently sufficiently warm from the temperature already acquired by the stoves. On the day on which they cease to light the fires, part of the eggs of each inferior room, are always conveyed into the room above. The eggs had been too much heaped in the former, and it is now time to extend and give them more room. It is a task sufficiently hard for the chick about to be hatched, to break and deliver itself from the shell, but it would be impossible for it to lift any additional weight.

The proper number of eggs from each inferior room, having been removed into the room above, all the apertures of the rooms and of the gallery, are closely and

exactly stopped with bungs of tow, excepting perhaps, half the apertures in the arches of ceilings of the upper rooms, which are left open, its order to procure there, a circulation of air. This precaution is sufficient to preserve in the ovens, for many days together, the temperature which has been obtained; which indeed would be the case with ovens upon so considerable a scale in any country, more especially in one so hot as Egypt. The fuel used, is the dung of cows or camels dried and mixed with straw, made into a kind of turfs; in these countries, tanner's bark would answer the purpose, as it does that of our hot houses for fruit. Wood and coals, unless indeed previously charred, would make too quick a fire.

*Sicard* gives an idea of the immense quantity of chickens hatched in his time, in Egypt. The number of these ovens, dispersed in the several cantons of the country, was no less than three hundred and eighty six. The business seems to be monopolized by the *Agas* or govern-

ment, and therefore cannot be varied in extent, but by their permission. Each *mamal* has one managing *Bermean.* These managers cannot absent themselves from duty, but with leave obtained from the *Aga of Berme*, never obtained but at the expense of from six to ten crowns. The *Aga* constantly keeps a register of these fees, which is to him a sort of rent-roll.

The above number of ovens is kept at work in Egypt annually, during four to six months, allowing more time than is necessary to hatch eight successive broods of chickens, ducks, and turkies, making on the whole, yearly, three thousand and eighty eight broods. The number in each hatching is not always equal, from the occasional difficulty of obtaining a sufficient number of eggs, which may be stated at a medium between the two extremes, of forty and eighty thousand to each oven. The *Bermean* contracts to return, in a living brood to his employer, two thirds of the number of eggs set in the ovens;

all above that number being his own perquisite, in addition to his salary for the season, which is thirty to forty crowns exclusive of his board. According to report, the crop of poultry thus artificially raised in Egypt, was seldom if ever, below that ratio, making the enormous annual amount of ninety two millions six hundred and forty thousand. It is obvious that, the apparent grand difficulty of obtaining a sufficient number of eggs, must subsist chiefly, or intirely, in the infancy of such an undertaking, and that its progress must infinitely extend the supply, as has been the case in Egypt, where the breeding-stock has been so multiplied, and where in consequence, the commodity is so cheap from its superabundance, that in the time of Father *Sicard*, a thousand eggs were sold for thirty or forty *medins*, making three or four shillings English money. Indeed, the chickens were not sold from the stoves by tale, but by measure; according to *De Reaumur*, by the bushel! And it appears from travel-

lers of the present day, to be the custom in Egypt, to purchase chickens by the basket full.

Thus much may suffice, as a general outline of Egyptian practice, in an art not likely to be pursued in any part of Europe, least of all in Britain, for reasons already assigned. Exclusive of the facts, that we are not a poultry eating people, and that we do not consume so many eggs, as are required in Roman Catholic countries, ours is not a country, from something peculiar in its economical constitution, which can long bear superabundance and cheapness; a hint much at the service of our political economists. With respect to the date of the above Egyptian details, as drawn from old authors, some of whom perhaps visited that country more than a century since, it may be remarked that, the orientals scarcely ever change their customs, and that in Egypt and Arabia, the manners and habits of the days of the patriarchs are still generally prevalent: thence it is probable, that the same system

of hatching fowls, which was common in the days of Father Sicard, prevails at the present time; nor have I met with an account of any material change, in the books of more modern travellers.

*De Reaumur* however, in the true style of a projector, thus reasons in support of his favourite scheme, which previously had been honoured with even a still more powerful advocate, in the Regent *Duc D'Orleans*. The former demands,— "Why do we not try then, to make up by art, for the scarcity of what the hens are disposed to give us. The example of the Egyptians, who are so much the better for not depending upon hens to have chickens, seems to point out to us, what we ought to do. Notwithstanding the expence of building the ovens, and that of the people employed to look after them, their broods are not by much, so expensive as ours: for it would be a very great mistake, to think that it costs us nothing to make our hens sit; a hen is employed in sitting on her eggs, and in the care of

her chicks that come out of them. for two months and half at least, and sometimes for three, or three and a half of the months, that are most favourable for laying, and during which she might have laid above thirty eggs at a medium. To have fifteen eggs sat on, which is the number commonly given to a hen in France, we must, of course, lose thirty others; by which means, the price of each of those which are put under the hen, becomes that of three eggs. This is one of those things that may seem to be small, or almost unworthy of our notice, when considered singly; but which appear of some importance, when we reflect on the prodigious number of times they are repeated. It would cost much more than one hundred thousand eggs, to have only fifty thousand of them sat on by hens; that is to say, above two thousand five hundred livres, in those countries where eggs are sold for six sous a dozen. It would not cost us nearly so much, to have the same number of eggs warmed after the Egyp-

tian manner; the whole expence indeed, would be little more than the salary of one or two men, for three weeks or a month at most."

This indefatigable advocate then proceeds to adduce a circumstance, in consequence of which the inhabitants of the European countries, from their greater advance in the conveniences of life, have an advantage, would they deign to make use of it, even over the Egyptians themselves, in the power of multiplying, without additional expence, the processes for hatching eggs with common heat. He says, every oven which has its arch covered over, affords a chicken-stove almost ready made; whence it is easy to judge, that people are actually provided, in most countries, with as many chicken-stoves, as are necessary to hatch a greater number, than there are annually produced in Egypt. 'Tis true the quantity of eggs warmed at a time in one *mamal*, is greater than that which can be warmed in one of our new ovens; but does not the number

of those ovens, which are heated frequently enough to serve to hatch chickens, vastly surpass that of the three hundred and eighty six, which is the whole number of the Egyptian *mamals?* If nothing was wanted to us but ovens, London or Paris alone, with the suburbs, &c. would enable us annually to hatch more chickens, than are hatched all over Egypt. We may without engaging ourselves in a calculation of the number of the ovens, that are employed to feed the inhabitants of those large towns, very confidently affirmed, that there are a great many more than three hundred and eighty six; nor are the ovens of the pastry cooks to be forgotten. In short, the stoves dependent on them, might serve to warm eggs and hatch chickens all the year round, whereas the Egyptians themselves do not think they can use theirs for any longer time than six months.

It cannot then be denied, that we have in our power, to hatch such an immense quantity of chickens, as would much sur-

pass that which the whole kingdom can consume, by using towards the warming of the eggs, a part of the heat of our bakers and pastry cooks, which has hitherto been absolutely lost. However, we are not to expect that all the people in these trades, will at once fall into the practice; but when some of the most industrious and active of them, shall have used their ovens with success for this purpose, they gradually will be imitated by others; and in time, none among them, but those that are either too idle to be rich, or are overloaded with business, will neglect procuring to themselves, an amusement as beneficial even as the most laborious occupation.

In the year 1782, whilst resident in Surry, *Reaumur's* book first fell into my hands. I had often heard of such a treatise, and being then much attached to breeding poultry, I had a strong desire to make trial of the Egyptian mode of hatching the eggs. I had in fact, already commenced, and our endeavours were

stimulated and amply assisted by the presence of such a guide. We were however, soon satisfied by a trial upon a very small scale, and can in few words, explain to the reader, both our process and the reason for its discontinuance.

There are TWO MODES of HEATING THE EGGS, through the means of fire, or stable dung; we made choice of the former. A number of eggs, wrapped in wool and covered with flannel, in a common wicker bottom sieve or riddle, were suspended over a chafing dish of charcoal, in a chimney where was no other fire. The chimney skreen was constantly kept fast, in order to concentrate the heat. It was a small chimney, into the funnel of which, the wind did not set with any force, at least at that time, and the heat was well retained as in a stove. We had no thermometer, but measured the degree of heat merely by our own feeling, and as we could judge it to correspond with the natural heat imparted by the body of the hen during incubation. *Reaumur* deter-

mined the proper degree of heat to be thirty-two degrees by his thermometer. Constant attendance, at least every three or four hours, must obviously be necessary, night and day, to preserve an equality of heat to both sides of the eggs, of which there was only one layer, filling the bottom of the sieve, to the number of forty odd. This was effected by turning the eggs, giving each side the equal chance of nearness to the fire, which must be constantly kept to a moderate and equable heat. We made use of all fine and new laid eggs, but in our first attempt, we lost a number, which however were not rotten, but had evidently bred chickens, which perished from an imperfect disposition of the heat. They were most probably of the eggs placed in the circumference, where the heat might be defective, and which we afterwards had the precaution to change to the centre, where the heat was greatest. Or, with equal probability, the heat might be sometimes too great in the centre, and occasion instant destruc-

tion to the nascent being in the shell. As the chickens advance in growth, the covering of flannel should be made lighter, and on the expectation of hatching, it must be reduced to a very thin covering, that nothing may press upon the eggs to impede the efforts of the chickens. We obtained between thirty and forty chickens, from about forty-five eggs, all in good health, two excepted, which being weak, required assistance to be released, and survived only a day or two.

The brood, placed in a basket of soft hay, and covered with flannel, were committed to the same chimney, the charcoal still burning. This was continued a day or two, the degree of heat considerably reduced, until they required feeding. Making a noise with the finger nails against a board, upon which the chicks were placed, in imitation of the pecking of the hen mother, first taught them to peck at their meat, and they from natural instinct, followed the noise readily and eagerly. They were soon taught to drink

also, but with some difficulty to prevent them in their eagerness, from wetting their feet and plumage. It should be here observed, that we had set three hens on the same day we commenced the process by artificial heat, and one of these, producing a small number of chicks, we contrived to deceive, and make her foster-mother, to a part of those artificially hatched; and acting the same part with the other two, we had few more than twenty to bring up by hand.

Here commenced the grand difficulty. The nurse chickens soon became weary of their basket, feeling the natural desire of almost perpetual action, and the want of a mother to lead and brood them. A capon is best calculated for this business, as from size being capable of covering such a number; but much discipline is required to bring the capon to this habit. I have never made trial of the capon for this employ, but am assured, that the discipline described by Buffon, namely, plucking the feathers from the breast, and

repeatedly irritating the skin with nettles, in order that the pain may impel the bird to take chickens to the part by way of alleviation, is equally futile and unnecessary, as it is barbarous; indeed more probable to enrage him, and endanger the brood. It is said, feeding the chicks a few times with the capon, attaches it to them; that some capons will brood them almost immediately, others can never be induced to it by any means. In the mean time AN ARTIFICIAL MOTHER cannot be dispensed with, under which the chickens may brood and shelter.

We made choice of a box, the sides of which we covered with lambs' skin, dressed with the wool on, the lid being covered with the same, placed and confined sloping within the box, so that one extremity reached nearly to the bottom, the other gradually ascending: the smallest chicks, by penetrating to the farther end, could nestle their heads and shoulders in the wool, and those which were taller, would find the same convenience in the ascend-

ing part of the lid. Such is their mode of nestling under the hen, and which is absolutely necessary to their comfort, and even their existence. A curtain of flannel was suspended, over the opening of the box.

A WICKER CAGE OR KOOP surrounding the above box and artificial mother, which will entirely confine the chickens to its circumference, is a great convenience in bad weather, or for the purpose of separation; indeed a koop of that kind for a hen and brood, is often useful. One discovery we made in the attempt at artificial hatching, namely, that young chicks are injured by being placed upon a BOARDED FLOOR, it is too cold and chilling for them, their feet and legs appearing swoln, as if from chilblains. Dry earth is their proper floor.

Mr. Young recommends the following plan of an artificial mother, and the experimenter may make his election between the two, or improve on them both, at his discretion.

" Five broods may at once be cherished under an artificial mother. This mother may be framed of a board ten inches broad, and fifteen inches long, resting on two legs in front, two inches in height, and on two props behind, two inches also in height. The board must be perforated with many small gimlet holes, for the escape of the heated air, and lined with lamb's skin dressed with the wool on, and the woolly side is to come in contact with the chickens.

" Over three of these mothers, a wicker-basket is to be placed, for the protection of the chickens, four feet long, two feet broad and fourteen inches high, with a lid open, a wooden sliding bottom to draw out for cleaning, and a long, narrow trough along the front, resting on two very low stools, for holding their food. Perches are to be fixed in the basket, for the more advanced chickens to roost on. A flannel curtain is to be placed in front, and at both ends of the mothers, for the chickens to run under, from which they soon learn

to push outwards and inwards. These mothers with the wicker basket over them, are to be placed against a hot wall, at the back of the kitchen fire, or in any other warm situation, where the heat shall not exceed 80 degrees of Fahrenheit.

" When the chickens are a week old, they are to be carried with the mother to a grass plat for feeding, and kept warm by a tin tube filled with hot water, which will continue sufficiently warm, for about three hours, when the hot water is to be renewed. Towards the evening the mothers are to be again placed against the hot wall. Their food as before observed, is to consist of coarse barley meal, steamed till quite soft ; steamed potatoes minced quite small, and occasionally pellets of coarse wheaten flour ; these articles may be given to them alternately." This description is certainly superior to mine, in variety of particulars and precision, if not in real use.

It will readily appear why, although we were perfectly satisfied with our success in

hatching a considerable number of eggs artificially, we did not yet wish to continue the practice. The fact is, there is no adequate motive in this country, where a quantity of poultry, fully equal, and even superior to the demand, may be raised by the natural mean: were it otherwise, there is no doubt, but the artificial process might be conducted here with sufficient success, and to the immense multiplication of domestic fowls of every description, an adequate expenditure in houses and attendance, being presupposed. On a first consideration of the subject indeed, a great apparent difficulty may present of obtaining a sufficient quantity of eggs; but the case is parallel, at any rate, to a certain degree, in Egypt, where notwithstanding, such an obstacle has never impeded the practice. This view is, in all likelihood, appropriate to France, equally with England. No person then, will attempt artificial hatching, but from the motive of mere curiosity, and that motive must indeed be powerful, to carry one through

the endless labour and attendance required. A lady some years since, obtained a premium of ten guineas, from one of the societies, for the plan of multiplying chickens, by causing the hens to SET CONSTANTLY, or a great many times in the season, which we had tried without success, many years before. It is, in fact, to undertake the most difficult part of the artificial process, that of bringing up the chickens without hens. Nor would the disappointments be few, in procuring hens which would set beyond the usual periods, and those so disposed, soon become consumptive and useless from such hard duty. The plan indeed as a general one, is totally useless. On this head, De Reaumur thus characterizes the hens of his country.—

" So long as we shall depend intirely upon our hens, we must not expect to see the multiplication of the species carried so far as might be wished; it is not nearly all the hens of a poultry yard, that are willing every year to sit. In some years,

when I have wanted sitting hens for some experiments, I have had the mortification not to find above four such, among fifty or sixty of them: complaints of hens that refuse to sit, are very common in the country, (France) and I think in general that, it seldom happens that, the third or even the fourth part of them are so disposed. Beside this, they are not always willing to sit at those times, when we wish they would, which is in part the reason why the early chickens are dear a great while, and why we have not every year, a supply of them as early as we wish for it."

## SECTION IX.

### *On feeding and fattening Chickens.*

THE points for consideration on this branch of the subject are—the local conveniences, the modes, common or extraordinary, the variety and quality of the food, and the length of time necessary for completion of the object.

The well-known common methods are, to give fowls the run of the farm-yard, where they thrive upon the offals of the stable, and other refuse, with perhaps some small regular daily feeds, but particularly at thrashing time, they become fat, and are thence styled BARN DOOR FOWLS, probably the most delicate and high flavoured of all others, both from their full allowance of the finest corn, and the constant health in which they are kept, by living in the natural state, and having the full enjoy-

ment of air and exercise: or they are confined during a certain number of weeks, in koops, those fowls which are soonest ready, being drawn as wanted. It is a common practice with some housewives, to koop their barn door fowls for a week or two, under the notion of improving them for the table and increasing their fat; a practice which however seldom succeeds, since the fowls generally pine for their loss of liberty, and slighting their food, lose instead of gaining additional flesh. Such a period, in fact, is too short for them to become accustomed to confinement.

FEEDING HOUSES, at once warm and airy, with earth floors such as have been already described, well raised, and capacious enough to accommodate twenty or thirty fowls, have always succeeded best according to my experience. The floor may be slightly littered down, the litter often changed, and the greatest cleanliness should be observed. Sandy gravel should be placed in several different layers and often changed. A

sufficient number of troughs for both water and food, should be placed around, that the stock may feed with as little interruption as possible from each other, and perches in the same proportion should be furnished, for those birds which are inclined to perch. which few of them will desire, after they have begun to fatten, but which helps to keep them easy and contented until that period. In this mode fowls may be fattened to the highest pitch, and yet preserved in a healthy state, their flesh being equal in quality, to that of the barn door fowl. I am aware that, to suffer fattening fowls to perch, is contrary to the general practice, since it is supposed to bend and deform the breast bone ; but as soon as they become heavy and indolent from feeding, they will rather incline to rest in the straw ; and the liberty of perching on the commencement of their kooping, has a tendency to accelerate that period, when they are more inclined to rest on the floor. Fowls morever, of considerable growth will have many of them,

become already crooked breasted from perching whilst at large, although much depends upon form in this case, since we find aged cocks and hens of the best shape, which have perched all their lives, with the breast bone perfectly straight.

It has always been a favourite maxim among feeders that, THE PRIVATION OF LIGHT, by inclining fowls to a constant state of repose, excepting when moved by the appetite for food, promotes and accelerates obesity. It may probably be so, although not promotive of health; but as it is no question that, a state of obesity, obtained in this way, cannot be a state of health, a real question arises—whether the flesh of animals so fed, can equal in flavour, nutriment and salubrity, that of the same species fed in a more natural way? Pecuniary and market interest may perhaps be best answered by the plan of darkness and close confinement, but a feeder for his own table, of delicate taste, and ambitious of furnishing his board with the choicest and most salubrious viands, will

declare for the natural mode of feeding; and in that view, A FEEDING YARD, gravelled and sown with the grasses already described, the room being open all day, for the fowls to retire at pleasure, will have a decided preference, as the nearest approach to the barn door system.

Sized store fowls have been intended thus far; but the above feeding rooms are well calculated for fattening the younger chickens, which may be put up as soon as the hen shall have quitted her charge, and so to speak, before they have run off their sucking flesh. For generally when well kept and in health, they will be in fine condition and full of flesh, at that period, which flesh is afterwards expended in the exercise of foraging for food, and in the increase of stature, and it may be a work of some time afterwards, to recover it and more especially in young cocks, and all those which stand high upon the leg. In fact, all those which appear to have long legs, should be fattened from the hen, to make the best of them; it being extremely

difficult and often impossible to fatten long legged fowls in koop, which however are brought to a good weight, at the barn door.

In the year 1779, says one of those small publications, which are circulated through the country, for the instruction of our housewives, a gentleman in London presented to a learned body, a newly invented method of rearing chickens for the spit, quicker than was ever before discovered, for which the learned society honoured him with a gold medal. The method is as follows—the chickens are to be taken from the hen, the night after they are hatched, and fed with eggs boiled hard, chopped and mixed with crumbs of bread, as larks and other birds are fed, for the first fortnight; after which, give them oatmeal and treacle, mixed so as to crumble, of which the chickens are very fond, and thrive so fast, that, at two month's end, they will be as large as full grown fowls. On this sagacious project, I shall only remark that, however learned the public

body alluded to, might be, on other important subjects, they appear by this award, to have shewn little information in chickenology.

In the choice of FULL SIZED fowls for feeding, the short legged and early hatched always deserve a preference. The green linnet is an excellent model of form for the domestic fowl, and the true Darking breed approaches the nearest to such model. In course, the smaller breeds and the game, are the most delicate and soonest ripe. The London chicken butchers as they are termed, or poulterers, are said to be of all others, the most dexterous and expeditious feeders, putting up a koop of fowls and making them thoroughly fat, within the space of a fortnight; using much grease, and that perhaps not of the most delicate kind, in the food. In this way, I have no boasts to make, having always found it necessary to allow a considerable number of weeks, for the purpose of making fowls fat in koops. In the common way, this business is often badly managed,

fowls being huddled together in a small koop, tearing each other to pieces, instead of enjoying that repose which alone can ensure the wished for object; irregularly fed and cleaned, until they are so *stenched* and poisoned in their own excrement, that their flesh actually smells and tastes of it, when smoaking upon the table.

All practical and practicable plans have their peculiar advantages, among others, that of leaving poultry to FORAGE AND SHIFT FOR THEMSELVES; but where a steady and regular profit is required from them, the best method, whether for domestic use or sale, is CONSTANT HIGH KEEP from the beginning, whence they will not only be always ready for the table with very little extra attention, but their flesh will be superior in juiciness and rich flavour, to those which are fattened from a low or emaciated state. Fed in this mode, the SPRING PULLETS are particularly fine, at the same time most nourishing and restorative food. The pullets which have been hatched in March, if

high fed from the *teat*, will lay plentifully throughout the following autumn, and not being intended for breeding stock, the advantage of their eggs may be taken, and themselves disposed of thoroughly fat for the table in February, about which period their laying will be finished. In February 1792, we had a fine shew of white and coloured pullets, most wonderfully improved in size, although we had not for years changed our stock, and so excessively fat from the run of the barn-yard, that they opened more like Michaelmas geese than chickens.

Instead of giving ordinary and TAIL CORN to my fattening and breeding poultry, I have always found it most advantageous, to allow the heaviest and best, putting the confined fowls upon a level with those fed at the barn door, where they have their share of the weightiest and finest corn. This high feeding shews itself not only in the size and flesh of the fowls, but in the size, weight, and substantial goodness of their eggs, which in

those valuable particulars, will prove far superior to the eggs of fowls fed upon ordinary corn or washy potatoes; two eggs of the former, going farther in domestic use than three of the latter. The water also given to fattening fowls should be often renewed, fresh and clean, indeed those which have been well kept, will turn with disgust from ordinary food and foul water.

Eggs. December 7, half-bred Poland hen matched with the cock: began to lay on the 28th. On March 1, 1806, she had laid 56 eggs, and afterwards set over 12 eggs. After incubation had commenced, she laid two eggs, making the total 58, which two were withdrawn. Her eggs unbroken, weighed from one ounce three quarters, to two ounces each, amounting, at one and three quarters of an ounce each, to nearly seven pounds avoirdupois. I had, from motives of curiosity, deducted the weight of the shells, but the memorandum is lost. The eggs of another hen, in poor condition and ill fed, were small,

light, and the yolk unsubstantial; the same hen after good feeding, laid plenty of eggs of larger size and nearly double the weight. The largest eggs will weigh two ounces and a half, those of the Chittagong hen, perhaps three ounces. To promote fecundity and great laying in the hen, nothing more is necessary than the best corn and fair water; but malted or sprouted barley has occasionally a good effect, whilst the hens are kept on solid corn; but if continued too long, they are apt to scour. Cordial horse-ball is good to promote laying in the cold season, and toast and ale, as every housewife well knows. It must be noted, that nothing is more necessary towards success in the particular of obtaining plenty of eggs, than a good attendance of cocks, especially in the cold season; and it is also especially to be observed that, a cock whilst moulting is generally useless. My practice is, to withdraw a cock under that circumstance to a separate walk, and substitute another, which is known and fami-

liar with the hens, since a stranger will not always be received, and such a circumstance will sometimes totally interrupt the business of the poultry yard : these particulars respecting the cock, require the more especial attention, since according to the old poultry books, one cock was deemed sufficient for ten or even a dozen hens, whereas in winter time, a cock to every four hens may be necessary. Buffon says, a hen well fed and attended, will produce upwards of one hundred and fifty eggs in a year, beside two broods of chickens. I have observed, a hen generally CACKLES three or four days previously to laying. Some half bred game hens began to lay, as soon as their chickens were three weeks old; the consequence of high keep and good attendance of the cocks.

QUANTITIES OF FOOD. By an experiment, made in July, 1806, a measured peck of good barley, kept in a high style of condition, the following stock, confined, and having no other provision; one cock,

3 hens, 3 March chickens, 6 April and 6 May ditto, during eight clear days, and one feed left. According to another trial, in the winter season, a cock and two hens, kept by themselves seven clear days, consumed a quarter of a peck of the best barley, having no other food, having as much as they chose to eat. The same being tried at their liberty, and pecking about, with cabbage leaves occasionally thrown to them, did not eat so much barley in the week, although allowed all they desired. They were in a perfect thriving state, but it must be remembered that light and ordinary corn would not have gone so far, or have kept the fowls in such condition. Poultry which have their fill of corn will eat occasionally cabbage or mangel wurtzel leaves greedily. Barley and wheat are the great dependence for chicken poultry. The heaviest oats will keep them it is true, but neither go so far as other corn, nor agree so well with the chickens, being apt to scour them, and the chickens generally are tired of oats after a while. Brank or

French wheat is also an unsubstantial food.

THE CAPON. I have already acknowledged my inferiority in the affair of quickly feeding poultry in close koops, and have a similar acknowledgement to make, respecting capons, never having had any success in cutting either fowls or rabbits for such purposes, nor in truth, much affecting the practice, which however has long been successfully carried on by the breeders of Sussex and Berks, and seems to have been almost intirely confined to that part of the country. In fact, the mode of performing the operation, seems to be utterly unknown elsewhere, or granting that the common cutters and cow leeches have some speculative knowledge thereon, they generally kill the patient, in their attempt at the practice. The Chinese are said to be particularly skilful in this operation, the outline of which according to their mode, I give as a matter of curiosity. *The wings of the fowl are folded back till they meet, and the left foot of the*

*operator is placed upon them, the great toe of his right foot pressing upon the legs to keep them fast. After pulling the feathers, an incision is made, one inch long, and one inch from the spine, obliquely downward and forward.* The reader may smile at that which may be deemed false delicacy in me, but I have naturally a kind of dread and abhorrence of all practices of this kind, however profitable. I can take the life of an animal, without the shadow of a scruple, but every act that bears the semblance of torture, shocks me to the marrow. They who wish to have their fowls or rabbits safely cut, where the practice is not common, must procure an operator from the proper district.

Cramming. Barley and wheat meal are generally the basis, or chief ingredient, in all fattening mixtures for chickens and fowls; but in Sussex, ground oats are used, and in that county, I think, oats are in higher repute for fattening than elsewhere, many large hogs being there fattened with them. The Sussex men

making the highest pretensions as poultry feeders, I shall give them the precedence in quotation. In the report for that county, the Rev. Arthur Young says, " North Chappel, Kindford, &c. are famous for their fowls. They are fattened there to a size and perfection, unknown elsewhere. The food given them is ground oats made into gruel, mixed with hog's grease, sugar, pot liquor and milk: or ground oats, treacle and suet, sheep's plucks, &c. The fowls are kept very warm, and crammed morning and night. The pot liquor is mixed with a few handfulls of oatmeal and boiled, with which the meal is kneaded into crams or rolls of a proper size. The fowls are put into the coop two or three days before they are crammed, which is continued for a fortnight, and they are then sold to the higlers. Those fowls, full grown, weigh seven pounds each, the average weight five pounds, but there are instances of individuals double the weight. They were sold at the time of the survey, at four to

five shillings each. Mr. Turner of North Chappel, a tenant of Lord Egremont, crams two hundred fowls per annum. Many fat capons are fed in this manner; good ones always look pale and waste away: great art and attention is requisite to cut them, and numbers are destroyed in the operation. The Sussex breed are too long in the body to be cut with much success, which is done at three quarters old." Thus far Mr. Young—but what can possibly be meant by—good ones always looking pale and wasting away. One would suppose that, wasting away, must be indicative of loose, flabby and bad flesh, instead of good.

OAKINGHAM in Berks, is particularly famous for fatted fowls, by which many persons in that town and vicinity, gain a livelihood. The fowls are sold to the London dealers, and the sum of £150 has been returned in one market day by this traffic. Twenty dozen of these fowls were purchased for one gala at Windsor, after the rate of half a guinea the couple. At

some seasons, fifteen shillings have been paid for a couple. Fowls constitute the principal commerce of the town. Romford in Essex, is also a great market for poultry, but generally of the store or barn-door kind, and not artificially fed.

The Oakingham METHOD OF FEEDING, is to confine the fowls in a dark place and cram them with a paste made of barley meal, mutton suet, treacle or coarse sugar and milk, and they are found completely ripe in a fortnight. If kept longer, the fever that is induced by this continued state of repletion, renders them red and unsaleable, and frequently kills them. Geese are likewise bred in the same neighbourhood, in great numbers, and sold about Midsummer to itinerant dealers, the price, at the time the survey was made, two shillings, to two and three pence each. I must presume to repeat, it appears to me utterly contrary to reason, that fowls fed upon such greasy and impure mixtures, can possibly produce flesh or fat so firm, delicate, high flavoured or nourishing,

as those fatted upon more simple and substantial food ; as for example, meal and milk, and I think lightly of the addition of either treacle or sugar. With respect to grease of any kind, its chief effect must be to render the flesh loose and of indelicate flavour. Nor is any advantage gained, excluding the commercial one, as I confine myself intirely to the consideration of home use, by very quick feeding ; for real excellence cannot be obtained, but by waiting nature's time, and using the best food. Beside all this, I have been very unsuccessful in my few attempts to fatten fowls by cramming—they seemed to loathe the crams, to pine, and to lose the flesh they were put up with, instead of acquiring fat ; and where crammed fowls do succeed, they must necessarily, in the height of their fat, be in a state of disease.

## SECTION X.

### *The Turkey. Breeding and Management.*

THE turkey-cock is sufficient for six hens, and even more under the management of some districts, where one breeder keeps a cock for his own, and for the use of his neighbours, who send their hens, and in that mode, avoid the charge of keeping a cock; but this practice is exposed to uncertainty, and is scarcely worth following, although whilst the hen is setting, the absence of a cock is no loss, as he will sometimes find the opportunity of tearing the hen from her nest, and in the struggle of destroying the eggs.

The hen will cover according to her size, from nine to fifteen EGGS, and unless

attended to, will perhaps steal a nest abroad, in some improper and insecure place. The turkey hen lays a considerable number of eggs in the spring, to the amount of eighteen to twenty-five upwards, and her term of incubation is thirty days. She is a most steady sitter, and will sometimes continue upon her eggs until almost starved, rather than quit her nest : hence the necessity of constant attendance with both victuals and water. She is also a most affectionate mother ; and that most curious and accurate observer Buffon, remarks her soft and plaintive cry, with her different tones and inflections of voice, expressive of her various feelings. These facts, however, are to be received with a due degree of circumspection, since I have known unsteady sitters among turkies, and however affectionate, the turkey hen, from her natural heedlessness and stupidity, is the most careless of mothers, and being a great traveller herself, will drag her brood over field, heath or bog, never casting a regard behind her to

call in her straggling chicks, nor stopping whilst she has one left to follow her. She differs beside, in this particular, from the industrious common hen; she never scratches for her chicks, leaving them entirely to their own instinct and their own industry. On these accounts, where turkies are bred to any extent, and are permitted to range, it is necessary to allow them a KEEPER. The turkey hen is nevertheless extremely vigilant and quick in discovery of any birds of prey in the air which may endanger her brood, and has the faculty by a peculiar cry, of communicating her alarm, on which the chicks immediately seek shelter or squat themselves upon the earth: but she will not, from her timid nature, fight for her brood, as the common hen will. The domesticated as well as the wild turkies, run with considerable speed.

The CHICKS must be withdrawn from the nest as soon as hatched, and kept very warm. It is a very old and very general custom, to plunge them instantly in cold

water, and then give them each a whole pepper-corn, with a small tea spoonfull of milk. This baptism is used by way of a prophylactic against catching cold, to which young chicks are so peculiarly liable; but it is a practice which I have never used, and from which, in severe weather, I should suspect danger; however, their being instantly thereafter, wrapped in wool or flannel, may secure them. The turkey from sitting so close and steadily, hatches more regular and quickly than the common hen.

The hen and brood must be HOUSED during a month or six weeks, dependent upon the state of the weather. First FOOD, curd and barley meal kneaded with milk, and frequently renewed with clear water, rather than milk, which often scours them. In case of the chicks appearing sickly and the feathers ruffled, indicating a chill from severity or change of weather, we generally allowed half ground malt with the barley meal, and by way of a

medicine, powdered carraway or coriander seeds. Also ARTIFICIAL WORMS, or boiled meat pulled into strings, in running after which the chicks have a salutary exercise. It is to be noted that, the above diet is beneficial for every other species of chicks, equally with the turkey. Superfluous moisture, whether external or internal, is death to chickens, therefore all slop victuals should be rigorously avoided. The utmost CLEANLINESS is necessary, and a dry GRAVELLED layer is most proper. A fresh TURF of short sweet grass daily cleared from snails or slugs which will scour young chicks, is very pleasing and comfortable to them, and promotes their health. The above substantial food was always our chief dependence with this brood, nor did we ever find it necessary, to waste time in collecting ants' eggs or nettle seed, or give clover, rue or wormwood, according to the directions of the elder housewives. Eggs boiled hard, are equally proper with curd, and generally

nearer at hand; the eggs being rotten, is said to be no objection, although we never used such.

Our first preference of water instead of milk for turkey chicks, so much recommended by the old writers, arose from the observation that, chickens at large among the troughs of milk-fed pigs, generally were sickly and scouring, and rough in their feathers; and more particularly so, when they had access to potatoe wash, which not only purged them, but glued their feathers together, keeping them in a comfortless and unhealthy state.

The weather being remarkably favourable, we have usually KOOPED the hen abroad, about two hours in the forenoon, in a moderately warm sun, whilst the chicks were only three or four weeks old, great care being taken that, they did not stray far from the koop. Six weeks is their longest period of confinement within doors, after which it is more safe to koop the hen for another fortnight, that the chicks may acquire strength abroad sufficient to enable

them to follow the dam, they being naturally inclined to stray too far and to weaken themselves by fatigue. When full half grown and well feathered, they become sufficiently hardy, and in a good range will provide themselves throughout the day, requiring only to be fed at their out-letting in the morning and on their return at even: the same in spacious farm-yards; if confined to the poultry yard, their food and treatment is similar to that of the common cock and hen. Turkies would prefer roosting abroad upon high trees, in the summer season, could that be permitted with a view to their safe keeping.

To FATTEN. Sodden barley, or barley and wheat meal mixed, is the proper food for turkies confined to feeding; generally their food and treatment are the same with other fowls. They may be fattened early, or may be CAPONIZED, a practice not very common, but the bulk of the turkies are fed for Christmas, or the months immediately preceding and subse-

quent, when the quantities fat, sent to London from Norfolk alone, are immensely great; as also are previously the droves of store turkies. Turkies share with the geese, in gleaning the corn fields, or shacking, and the former forage over the woods and commons, in the autumnal season, after which, they are put up to be completely fattened. I have heard of Norfolk turkies fattened to weigh twenty, and even thirty pounds each; and Buffon relates that the wild turkey of America, has been known to attain the weight of sixty pounds; but I have never made any heavier than fifteen pounds ready for the spit.

Turkies are the most tender and difficult to rear of any of our domestic fowls, but with due care and attention, which, rightly considered, in all things, give the least trouble, they may be produced and multiplied with little or no loss, and the same may be averred with all truth, of the rest of our domestic fowls, and animals in general; the losses and vexations annually

deplored, arising almost entirely from ignorance and carelessness united hand in hand. Turkies as well as geese, under a judicious system, may be rendered an object of a certain degree of consequence to the farmer.

### AQUATIC FOWLS.

Under a regular system, it would be preferable to separate intirely the aquatic from the other poultry, the former to have their houses ranged along the banks of a piece of water, with a fence, and sufficiently capacious walks in front; access to the water by doors, to be closed at will. Should the water be of considerable extent, a small boat would be necessary, and might be also conducive to the pleasure of angling.

The DUCK will cover from eleven to fifteen eggs; her term of incubation THIRTY days. One DRAKE to five ducks. They begin to lay in February, and unless watched, will lay abroad and conceal their eggs. The duck, on leaving her nest,

will cover the eggs with leaves, or any thing within her reach, as will the goose, sometimes; the hen never. Our old housewives had a notion that, the variety of ducks which have the bill bending upwards, lay a greater number of eggs than common, of which I can say nothing from my own observation, but can remark that, with ducks well fed, I never failed to have plenty of eggs. The duck generally lays by night, or early in the morning, seldom after ten o'clock, with the exception of chilling and comfortless weather, when she will occasionally retain her egg, until mid-day or afternoon. In order to keep her within, until she has laid, some will EXAMINE HER, but it is better avoided, as her appearance and weight behind, or otherwise, may be trusted to, by constant observers. Accustomed to a nest, she will not forsake it. It has been formerly directed, to give to each duck her own eggs, to which however, much consequence need not be attached; nevertheless, the eggs may be appropriated to

each, with respect to colour; since white and light coloured ducks produce similar coloured eggs, and the brown and dark coloured ducks those of the greenish blue and largest size. At any rate, it is most safe that the eggs be all of one colour, since I have known some few instances of the duck turning out with her bill, those eggs which were not of her natural colour. The duck swimming with her tail flat, and level with the water, indicates her egg being ready for protrusion.

During INCUBATION, the duck requires a secret and safe place, rather than any attendance, and will, at nature's call, cover her eggs and seek her food, and the refreshment of the waters. On HATCHING, there is not often a necessity for taking away any of the brood, barring accidents; and having hatched, let the duck retain her young upon the nest her own time. On her moving with her brood, prepare a coop, upon the short grass, if the weather be fine, or under shelter, if otherwise; a wide and flat dish of water, often to be

renewed, standing at hand: barley, or any meal, the first food. In rainy weather particularly, it is useful to clip the tails of the ducklings, and the surrounding down beneath, since they are else apt to draggle and weaken themselves. The duck should be cooped at a distance from any other. The period of her confinement to the coop, depends on the weather and the strength of the ducklings. A fortnight seems the longest time necessary; and they may be sometimes permitted to enjoy the pond at the end of a week, but not for too great a length at once, least of all, in cold wet weather, which will affect and cause them to scour and appear rough and draggled. In such case, they must be kept within a while, and have an allowance of bean or pea meal mixed with their ordinary food. The meal of buck wheat and the former is then proper. The straw beneath the duck should be often renewed, that the brood may have a dry and comfortable bed; and the mother herself be well fed with solid corn, without

an ample allowance of which, ducks are not to be reared or kept in perfection, although they gather so much abroad.

DUCK EGGS are often hatched by HENS, when ducks are more in request than chickens; also as ducks, in unfavourable situations, are the more easy to rear, as more hardy; and the plan has no objection in a confined place, and with a small stock, without the advantage of a pond; but the hen is much distressed, as is sufficiently visible, and in fact, injured by the anxiety she suffers, in witnessing the supposed perils of her children venturing upon the water.

Ducks are FATTENED, either in confinement, with plenty of food and water, or full as well, restricted to a pond, with access to as much solid food as they will eat, which last method I prefer. They fatten speedily, in this mode, mixing their hard meat with such variety abroad, as is natural to them, more particularly, if already in good case; and there is no check or impediment to thrift from pining,

but every mouthful tells and weighs its due weight. A dish of mixed food, if preferred to whole corn, may remain on the bank, or rather in a shed, for the ducks. I must here mention a fact, which I have either actually verified, or supposed that I have verified. BARLEY, in any form, should never be used to fatten aquatics, ducks or geese, since it renders their flesh loose, *woolly*, and insipid, and depriving it of that high savoury flavour of brown meat, which is its valuable distinction; in a word, rendering it *chickeny*, not unlike in flavour, the flesh of ordinary and yellow legged fowls. OATS, whole or bruised, are the standard fattening material for DUCKS and GEESE, to which may be added pea-meal, as it may be required. The house-wash is profitable to mix up their food, under confinement; but it is obvious, whilst they have the benefit of what the pond affords, they can be in no want of loose food.

ACORNS in season, are much affected by ducks which have a range; and in former days, residing on the borders of a forest, I had annually great numbers fattened entirely on that provision, to such excess, that the quantity of fat was inconvenient, both in cooking, and upon the table. Ducks so fed, are certainly inferior in delicacy, but the flesh eats high, and is far from disagreeable. I have also occasionally ate of them fed on butcher's offal, when the flesh resembles wild fowl in flavour, with however considerable inferiority. Offal fed ducks flesh does not yet emit the abominable stench which issues from offal-fed pork, and with which the dining tables of London are so frequently and satisfactorily perfumed.

## *The Goose.*

A GANDER and five geese comprize a single breeding stock. The goose sits upon her eggs from twenty-seven to thirty days, covering from eleven to fifteen eggs. A nest should be prepared for her in a

secure place, as soon as carrying straw in her bill, and other tokens, declare her readiness to lay. The earliness and warmth of the spring are the general causes of the early laying of geese, which is of consequence, since there may be time for two broods within the season, not however a common occurrence; and which happening successively for two or three seasons, has occasioned some persons formerly, to set a high value upon their stock, as if of a peculiar and more valuable breed than the common. The method however, to attain this advantage is, to feed breeding geese high throughout the winter, with solid corn, and on the commencement of the breeding season, to allow them boiled barley, malt, fresh grains, and fine pollard mixed up with ale, or other stimulants.

With a good GANDER present, no mischief can happen to the sitting geese, without extraordinary alarm, he sitting centinel at the chamber door of his wives. With respect to feeding the goose or duck

upon the nest, it may be occasionally required, but is not a thing of much account, since they will generally repair to the water sufficiently often, from their natural inclination. The goose will not quit until she has completed her hatch, nor would it be very practicable to take any of the goslens from her, were it necessary, as she is too strong and resolute and might kill some in the struggle.

It has been formerly recommended, to keep the newly hatched GULLS in house, during a week, least they get cramp from the damp earth, to which they are indeed liable; but we did not find this indoor confinement necessary, penning the goose and her brood between four hurdles, upon a piece of dry grass, well sheltered, putting them out late in the morning, or not at all in severe weather, and ever taking them in, early in the evening. Sometimes we have pitched double the number of hurdles, for the convenience of two broods, there being no quarrels among this sociable and harmless part of the feathered race, so un-

like those quarrelsome and murderous fiends, the common, or gallinaceous fowls. We did not even find it necessary to interpose a parting hurdle, which, on occasion, may be always conveniently done. The FIRST FOOD similar to that of the duck, but with some cooling greens, clivers or the like, intermixed—namely, barley meal, bruised oats, or fine pollard.

For the FIRST RANGE, a convenient field containing water, is to be preferred to an extensive common, over which, the gulls or goslins are dragged by the old one, until they become cramped or tired, some of them squatting down and remaining behind at even, which the good housewife sees no more. It is also necessary to destroy all the HEMLOCK or deadly night shade, within the range of young geese, many of which drop off annually, from eating that poison, when the cause is not suspected. I know not that the elder geese will eat hemlock, but I believe that both the young and old have been occasionally killed by swallowing

slips of YEW. The young becoming pretty well feathered, will also be too large to be contained or brooded beneath the mother's wings, and will then sleep in groups by her side, and must be supplied with good and renewed straw beds, which they convert into excellent dung. Being now able to frequent the pond, and range the common at large, the young geese will obtain their living, and few people, favourably situated, allow them any thing more, excepting the vegetable produce of the garden. But it has been my constant practice, always to dispense a moderate quantity of any solid corn or pulse, at hand, to the flocks of store geese, both morning and evening, on their going outand their return, together, in the evening more especially, with such greens as chanced to be at command; cabbage, mangel wurtzel leaves, lucerne, tares, and occasionally sliced carrots. By such full keeping, our geese were ever in a fleshy state, and attained a large size; the young ones were also forward and valuable breeding stock.

Geese managed on the above mode will be speedily FATTENED green, that is at a month or six weeks old, or after the run of the corn stubbles. Two or three weeks after the latter, must be sufficient to make them thoroughly fat; indeed I prefer a goose fattened intirely in the stubbles, granting it to have been previously in good case, and to be full fed in the field; since an over-fattened goose is too much in the oil-cake and grease tub style, to admit even the ideas of delicacy, tender firmness, or true flavour. But when needful to fatten them, the feeding-houses already recommended, are most convenient. With clean and renewed beds of straw, plenty of clean water, and upon oats crushed or otherwise, pea or bean meal, the latter however coarse and ordinary food; or pollard; the articles mixed up with skimmed milk when to be obtained, geese will fatten pleasantly and speedily. I know nothing of the imposthume said by our elders, to grow upon the rump of the feeding goose, and through which, she perpetual-

ly, like a bear, sucks her own fat, and which thence must needs be exsected. Nor am I, however ardently attached to the writings of antiquity, sufficiently classical, or a *gourmand* of sufficient taste and calibre, to rival those of ancient Rome, in the size of their goose LIVERS. I have thence, never fed my geese during sixteen days, with a paste of Turkey figs stamped and beaten up with cream, in order to bring their livers upon the table, each the weight of three or four pounds! I modestly leave such practice to princes, ministers and men in high place. It may be added that, equal quantities of the meal of RYE and PEASE, mixed with skimmed milk form an excellent feeding article for geese.

The SPANISH geese used to be preferred, but I have had no experience of them. Our flock whilst we resided in Middlesex in the year 1788, were esteemed the finest in the vicinity; the breed of them had been procured for us, from the neighbourhood of Bungay in Suffolk, by Goff the

dealer already spoken of. At present (1815) the *Embden* geese are in the highest esteem. They are all white, male and female, and of a superior, indeed very uncommon size. Whether or not, as might be expected, there be a countervailing objection in a corresponding whiteness, and thence defect of savory flavour, in the flesh, I am unable to say, having yet had no experience in the Embden variety of Geese.

## SECTION XI.

### *Pigeons.*

THE PIGEON is recorded as one of the most ancient inhabitants of all climates, those excepted, in the vicinity of the poles; it prospers abundantly in temperate regions, but in a still higher degree, under the burning sun of the tropics, no heat being too ardent for its natural constitution. The wild pigeons of cold countries, are said to emigrate towards the south, on the approach of the winter. Pigeons exhibit a satisfactory proof of the superiority of the civilized, over the savage or mere natural state, in their multitudinous increase and endless varieties, in a state of domestication under the fostering care

and all-subduing art of man. From their peculiar beauty and innocence, they have always ranked among the chief feathered favourites of mankind; and in the eastern countries, the original sources of religious superstition, the dove has ever been a great object of veneration, as an emblem of something divine.

But to proceed to a far more material point—the NATIONAL PROFIT of encouraging the breed of pigeons to any great extent, has long been the subject of much dispute, and the celebrated M. Duhamel, the apologist of these beautiful favourites, I apprehend, has not been a successful advocate. He avers that pigeons do not feed upon green corn—that their bills have not sufficient power to dig for seeds in the earth, and that they only pick up scattered grains, which would else be wasted, or become the prey of other birds. From the season of the corn appearing, he says, pigeons subsist upon the seeds of weeds, the multiplication of which, they must in consequence, greatly prevent.

Another writer has of late introduced a story of the farmers in a certain district in England, who finding their corn and pulse crops greatly reduced, attributed it to the vast quantity of pigeons kept among them, which, on such account, by a general resolution, they agreed to destroy. A few seasons afterwards, it seems, they found their lands so exhausted, and their crops so eaten up by weeds, that they came to a general wish for their pigeons back again. Now this is either a lame story, or the farmers implicated, were very lame farmers, as being ignorant how to weed their land, without the assistance of instruments, the use of which must cost them so considerable a part of their crops.

No man, in the least acquainted with country affairs, but is fully aware of the immense damage done to the crops of corn, beans, pease, and tares, that is to say, the grand articles of human subsistence by pigeons. Our best practical agricultural writers may be consulted on

this head, but a sufficient proof of the fact is the reduction of dove-cotes, throughout all countries where agriculture is best known, valued and practised. Indeed the feudal laws in favour of these birds, were a most cruel and fertile source of oppression. Every one will judge for himself of the degree of credit to be given to the following statement, extracted from Mr. Vancouver's valuable survey of the county of Devon.

Pigeons often fly to a great distance for their food, and when they can find corn to eat, seldom prey upon any thing else. They begin to eat corn about the middle of July, and rarely want the same food at the stacks, in the straw yards, or in the fields, until the end of barley sowing, which is about old May-day, and which includes a period of two hundred and eighty days, or better than three quarters of the year; the rest of the time they live upon the seeds of weeds and bentings. It is somewhere stated that, in England and in Wales, there are twenty thousand DOVE-

HOUSES, averaging each at about one hundred pair of old pigeons. We will take this estimate at three fourths, which will equal one million, one hundred and twenty-five thousand pair of dove-house pigeons in England and Wales. These, to speak moderately, will consume, with what they carry home to their young, one pint of corn per pair daily, and which for one hundred and forty days, being half the period they are supposed to subsist upon corn, amounts to one hundred and fifty-seven millions, five hundred thousand pints of corn consumed annually, throughout England and Wales, by these voracious and insatiate vermin, for in no other light can they be considered by the agriculturist. The amount and value of this consumption when brought into bushels, and averaged at the present price of wheat, rye, barley, oats, beans and pease, and assuming that an equal quantity of each corn is thus consumed, but which is far from being the case, as wheat is not only the most inviting, but by far the most ex-

posed to the ravages of these birds, both at seed time, and preceding harvest, will stand thus--157,500,000 pints = 4,921,875 Winchester bushels, which at 6s. per bushel, the present average price of the grain before enumerated, amounts to £1,476,562 10s. value of the agricultural produce of the country consumed in this manner. To which is to be added, the irreparable injury committed by pigeons in seed time, by picking up every grain of seed, wherever they alight, and the corn trod under and beaten out by their wings before harvest.

On a general view of the subject it appears, that the dove-house system has ever been one of extreme injustice, as well as impolicy, in point of national advantage, for in the first respect, it must unavoidably happen that, great flocks must be maintained at the expence of persons having no property in them. But as certainly, neither the public nor individuals will consent to be deprived of the enjoyment of this ancient luxury, the fairest mode

appears to be, the regular feeding of pigeons by their proprietors, which, according to my experience, so attaches them to home, that there is often a necessity of driving them out for exercise. This plan should in course, be more punctually observed in seed time, and towards the approach of the corn crops to maturity. With respect to that risk of damage from pigeons, which must unavoidably be incurred by the farmer, his insurance must consist in that vigilance, in which generally, he is too defective.

Buffon enumerates upwards of thirty VARIETIES of the pigeon, which according to his usual systematic plan, the convenience of which, perhaps, is rather more obvious than its accuracy, he derives from one root, namely the STOCK DOVE, or common wild pigeon. All the varieties of colour and form which we witness, he attributes to human contrivance and fancy. There exist nevertheless, essential specific differences in these birds, which seem rather attributable to the nature of the

region, soil, or climate, to which they are indigenous, than to the art of man.

The STOCK DOVE, or original of the pigeon genus, in its natural or wild state, is thus described; of a deep blue and ash colour, the breast darked with a fine changeable green and purple; the sides of the neck of a reddish gold colour; its wings marked with two black bars, one on the quill feathers, and the other on the covert; the back white, and the tail barred near the end with black. The RING DOVE is yet held by naturalists to be distinct from the stock dove, and it would seem that the TURTLE DOVE is equally so from both.

In this country, the BLUE DOVE-HOUSE PIGEON is the most common, and the only WILD SPECIES are the ring doves, or wood pigeons, and the turtle doves, which are to be found in all parts of South Britain, breeding during the spring and summer, and retiring to the deepest recesses of the woods, in the winter season,

whence probably, the turtle has been supposed to emigrate.

But both in the ancient and modern world, this beautiful and variegated genus of birds, has been cherished by man, as a source of amusement, and of gratification to the eye, as well as of profit, in the article of provision for the table. Among certain of the nations of antiquity, however, pigeons were held sacred, and their lives no one dared assail. The useful qualification of MESSENGER, appertaining to the Asiatic and African species of the pigeon, is of high antiquity; and we read, in the time of the Crusades, of an Arabian prince, who had a sort of telegraphic communication kept up, in his dominions, through the instrumentality of pigeons, which carried letters, and were regularly relieved at the appointed posts. From those doubtless, the breed celebrated in Europe, under the name of THE CARRIER, has proceeded.

In modern times, those varieties which are kept for the purposes of amusement

and show, are styled FANCY BREEDS, and they form a distinct article of commerce in cities and great towns, the varieties, as they chance to be in fashion, bringing a considerable price. In London, the pigeon fanciers immemorially, I believe, have had a club, in which premiums are awarded, and the notable science of the fancy, through the medium of crossing colours and forms, is promoted and perpetuated. The chief objects of the fancy have hitherto been those varieties styled ALMOND (probably *ermine*) TUMBLERS, CARRIERS, and the birds with great crops, the most fashionable variety of which, is the POUTING HORSEMAN. The specific merits of these breeds are indicated by their names. The tumbler exercises that faculty in the air, but is chiefly valued for his peculiar form and variegated plumage. The carrier, as a messenger, cuts the air with almost inconceivable swiftness. The pouter, distends his crop to a size attractive to curiosity, and by his grotesque attitudes and fami-

liarity with man, engages his attention. Half a century ago, the pigeon fancy was in higher estimation and prosperity than at present; and the almond tumbler was then in the greatest vogue, such sums probably, as twenty or thirty guineas each, being the price of superior cocks of that breed, such, as at the present time, would not produce more than five. The pigeon shops generally seem the abode of poverty and misery, of which the poor, unfortunate birds, crammed into baskets and narrow coops, obviously partake in the fullest measure. This fancy is a great favourite with certain of the lower classes in the Metropolis, and perhaps too generally injurious to their better interests. Their common method of entrapping stray pigeons, the property of other people, does not well consist with an honest principle, takes up too much of the time of those who practise it, and leads to loose and irregular habits. PIGEON SHOOTING is another purpose, to which these birds

are applied, and of which, annual details are to be found in the newspapers.

It is necessary to apprize the reader, that I have never had the honour to be initiated in the pigeon fancy, but have been simply a keeper of pigeons, for the use of the table, with some additional pleasure in their flight, and a degree of attention to those breeds which are of the largest size. On the subject of the fancy, the best authority with which I am acquainted, is a Treatise on Domestic Pigeons, published by Barry, of Fenchurch street, in 1765, with very good plates, descriptive of the chief fancy varieties. That treatise had been preceded by Moore's Columbarium. The only breeds which I have kept, exclusive of the common, were TUMBLERS, HORSEMEN, CARRIERS, TURTLES, DRAGOONS, (commonly called DRAGONS), and RUNTS; the latter, both Spanish and Leghorn, for their great size. As breeders, no fancy pigeons will, in general, equal the common dove-house

kind, unless perhaps with great care and attention.

The PIGEON is monoganous, that is, the male attaches and confines himself to one female, and the attachment is reciprocal; the fidelity of the dove to its mate being proverbial. Young pigeons are termed SQUEAKERS, and begin to breed at about the age of six months, when properly managed: their courtship, and the well known tone of voice in the cock, just then acquired and commencing, are indications of their approaching union. Nestlings, whilst fed by the cock and hen, are termed SQUABS, and are at that age, sold and used for the table. The dove-house pigeon is said to breed monthly, being well supplied with food, more particularly when the ground is bound by frost, or covered with snow. At any rate, it may be depended on, that pigeons of almost any healthy and well established variety, will breed eight or ten times in the year; whence it may be conceived, how immense are the quantities which

may be raised. Nevertheless, it is with difficulty, that one can give entire credit to the calculations in such respect, on pigeons and rabbits; bringing to remembrance, to compare small things with great, the earths of gold, of the celebrated Doctor Price, which have been so greatly reduced in number and weight, by subsequent doctors. But I suppose we must not question the positive testimony of Stillingfleet, who asserts, that *fourteen thousand, seven hundred and sixty pigeons, were produced from one single pair, in the course of four years.* To class things of similar bearing together, it has been calculated, but I know not by whom, or on what practical ground, that *a single pair of rabbits may, in the same portion of time, namely four years, produce one million, two hundred and seventy four thousand, eight hundred and forty of their kind.*

The first step towards pigeon keeping, is undoubtedly, to provide a commodious place for their reception, of which I shall

afterwards speak; the next, to provide the pigeons themselves. These will be had in pairs, but if not actually MATCHED, pains must be afterwards taken, to that end, that no time be lost; indeed they may be matched according to the fancy of the keeper, for the purpose of varying the colours, or with any other view. But it is necessary to give a caution on the subject of OLD PIGEONS, of which a bargain may offer, since the difficulty of retaining them is so great, indeed insuperable, without the strictest vigilance. Nothing short of cutting their wings, and confining them closely, until they have young to attach them to the place, will be a security; and even afterwards, they have been known to take flight with the first use of their wings, and leave their nests. I have had several examples of this. Thence it is always preferable, to purchase SQUEAKERS, or such as have not yet flown: these being confined a short time, well fed, and accustomed gradually to the surrounding scenery, before they have acquired sufficient

strength of wing wherewith to lose themselves, will become perfectly domesticated.

The DOVE-COTE or pigeon-loft, as to its situation or extent, will necessarily depend on convenience, one GENERAL RULE however, must be invariably observed,—that every pair of pigeons have two holes, or rooms, to nest in. Without this indispensible convenience, there will be no security, but the prospect of constant confusion, breaking of eggs, and destruction of the young. Pigeons do well near dwellings, stables, bake-houses, brew-houses, or such offices; or their proper place is in the poultry court. A dove-cote is a good object, situate upon an island, in the centre of a piece of water: indeed such is a proper situation for aquatic poultry, and rabbits also; and may be rendered extremely beautiful and picturesque by planting, and a little simply ornamental and useful building. Where pigeons are kept in a room, some persons prefer making their nests upon the floor,

to escape the danger of the young falling out; but, in probability, this is to guard against one risk, and incur a greater number, particularly, that of rats and other vermin.

The FRONT of the pigeon-room, or cote, should have a south-west aspect; and if a room be selected for the purpose, it is usual to break a hole in the roof of the building for the passage of the pigeons, which can be closed at convenience. A platform is laid by the carpenter at the entrance, for the pigeons to alight and perch upon, with some kind of defence against strange cats, which will often depopulate a whole dove-house; cats are yet necessary for the defence of the pigeons against rats and mice, as they will both destroy the birds and suck the eggs; thence, cats of a known good breed, should be trained up familiarly with the pigeons. The platform should be painted white, and renewed as the paint wears off, white being a favourite colour with pigeons, and also most conspicuous as a

mark to enable them to find their home. The boxes also should be so coloured, and renewed as necessary, for which purpose, lime and water will be sufficient.

CLEANLINESS is one of the first and most important considerations: the want of it in a dove-cote will soon render the place a nuisance not to be approached, and the birds, both young and old, will be so covered with vermin, and besmeared with their own excrement, that they can enjoy no health or comfort, and mortality is often so induced. Ours were cleaned daily; thoroughly, once a week, a tub standing at hand for the reception of the dung, the floor covered with sifted gravel, often renewed. Pigeons are exceedingly fond of water, and, having a prescience of rain, will wait its coming until late in the evening, upon the house-top, spreading their wings to receive the refreshing shower. When they are confined in a room, they should be allowed a wide pan of water, to be often renewed, as a bath,

which cools, refreshes, and assists them to keep their bodies clear of vermin.

The common BARREL DOVE-COTE needs no description, at the same time is adapted to every situation, in which it is desirable to keep pigeons for ordinary use. To return to the ROOM, or LOFT; the shelves should be placed sufficiently high, for security against vermin, a small ladder being a necessary appendage. The usual breadth of the shelves is about twenty inches, with the allowance of eighteen, between shelf and shelf, which will be sufficient not to incommode the tallest pigeons. Partitions between the shelves may be fixed at the distance of about three feet, making a blind, by a board nailed against the front of each partition, whence there will be two nests in the compass of every three feet, so that the pigeons will sit in privacy, and not liable to be disturbed. Or a partition may be fixed between each nest;—a good plan, which prevents the young from

running to the hen sitting over fresh eggs, and perhaps occasioning her to cool and addle them: for when the young are about a fortnight or three weeks old, a good hen will leave them to the care of the cock, and lay again.

Some prefer breeding-holes, entirely open in front, for the greater convenience of cleaning the nests; but it is from those that the squabs are likely to fall, thence a step of sufficient height is preferable. The tame pigeon seldom taking the trouble to make a nest, it is better to give her one of hay, which prevents her eggs from rolling. Or a straw basket, or unglazed earthen pan, may be placed in every nest, apportioned to the size of the pigeons you breed. A pan of three inches high, eight inches over the top, and sloping to the bottom like a bason, will be of sufficient size for a TUMBLER, or small pigeon, whilst one of double those dimensions, will be required for a large RUNT. A brick should always be placed in contiguity to the pan,

to enable the cock and hen to alight with greater safety upon the eggs.

The PIGEON-TRAP, on the house-top, is the well known contrivance of those London rascals, who lie in wait, as has been said, to entrap the property of others. A trap of another description, and for a very different purpose, is sometimes used. It is an area, on the outside of a building, for the purpose of confining in the air, valuable breeds of pigeons which cannot be trusted to flight. Some are erected to the extent of twenty yards long, and ten yards in width, with shelves on every side, for the perching of the pigeons; thus, they are constantly exercised in the air, retiring at their pleasure to the room or loft within.

FOOD and WATER should be given in such way, as to be as little as possible contaminated with the excrement, or any other impurity. My pigeons having been constantly attended, we have never found the need of any other convenience than

earthen pans; but there have been ingenious inventions for this purpose, of which the MEAT-BOX and WATER-BOTTLE following, are specimens. The meat-box is formed in the shape of a hopper, covered at the top, to keep clean the grain, which descends into a square shallow box. Some fence this with rails or holes on each side, to keep the grains from being scattered over; others leave it quite open, that the young pigeons may the more easily find their food.

Ths WATER-BOTTLE is a large glass bottle, with a long neck, holding from one to five gallons, its belly shaped like an egg, that the pigeons may not light, and dung upon it. It is placed upon a stand, or three-footed stool, made hollow above, to receive the belly of the bottle, and let the mouth into a small pan beneath: the water will so, gradually descend out of the mouth of the bottle as the pigeons drink, and be sweet and clean, and always stop when the surface reaches the mouth of the bottle.

To MATCH or PAIR a cock and hen, it is necessary to shut them together, or near and within reach of each other; and the connection is generally formed in a day or two. Various rules have been laid down, by which to distinguish the cock from the hen pigeon; but the masculine forwardness and action of the cock, is for the most part distinguishable.

INCUBATION. The great increase of domestic pigeons does not proceed from the number of eggs laid by them, but from the frequency of their hatching. The hen lays but too eggs, and immediately proceeds to incubation. Having laid her first egg, she rests one day, and, on the next, lays her second egg. They usually stand over the first egg, not sitting close until they have two, whence, both the young are hatched nearly at the same time: there are some exceptions, however, to this rule of nature, and the hen having sat close at first, one young bird may be hatched a day or two before the other.

The PERIOD of incubation is NINETEEN

or TWENTY days from laying the first egg, and SEVENTEEN or EIGHTEEN from the last. The labour of sitting is equally divided between the cock and hen, excepting that the hen always sits by night. She is relieved in the morning by the cock, which sits during the greater part of the day. The business of feeding the young is also divided between the parents; and the cock has often brought up the young, on the accidental death or loss of his mate. Should the eggs not be hatched in due time, from weakness, some small assistance may be necessary to extricate the bird from the shell; or should they be addled, it is generally held necessary to provide the cock and hen with a borrowed pair of young, or at least one, to feed off their soft meat, which else may stagnate in their crops, and make them sick: but as young ones, for this purpose, may not always be at hand, the exercise of flying, fresh gravel, and those saline compositions generally given to

pigeons, are the proper remedy. Addled, or rotten eggs, should be immediately removed.

SOFT MEAT is a sort of milky fluid or pap, secreted in the craw of pigeons, by the wise providence of nature, against the time when it will be wanted for the nourishment of their young. In all probability, from instinct, the pigeons eat a greater quantity at this time, and the grain goes through a certain process in their crops, which produces the soft meat or pap, in question. This they have the power of throwing up at will; and, in feeding, they inject it from their own bills, into those of the young ones, which are taken into their own. This kind of feeding continues six or seven days, when the old ones begin to mix some harder food with it, until at length, they feed with whole grain. When the time approaches for the hen to lay, the cock is often seen driving her from place to place, not suffering her to rest any where but in her

nest, apparently from an instinctive apprehension that she may drop her egg in an improper place.

Food. Pigeons are entirely granivorous, and very delicate and cleanly in their diet; they will sometimes eat green vegetables, in particular warm sallads, and are extremely fond of seeds. Tares, and the smallest kind of horse-beans, commonly called pigeon beans, are both the best and cheapest food for pigeons, but the pulse should always be old, that is to say, of the previous year; as the new will scour pigeons, as well as any other kind of live stock. Seeds are occasionally given to pigeons, as a warming and stimulant diet; but according to my experience, they greatly prefer rape and canary to hemp-seed. It has been remarked, that beans, sodden in salt-water, scour pigeons equally with new beans, and, in a voyage, suffering them to drink sea-water, will soon kill them; although so generally benefited by salt, an excess of it is fatal, as it is also to vege-

tation, promoted as that is, by a moderate quantity. In most publications on the subject of pigeons, a dangerous mistake has been made in a term applied to beans. Small *tick* beans are recommended, instead of small horse-beans. Now, the tick, or *kidwell* (in the western phrase), are the larger of the two common field varieties, and, beside being inferior in quality, are too large for pigeons, which have been sometimes choked even with the common sized horse-beans; on which account, the smallest possible should be procured, and whence they are termed in the market accounts "pigeon-beans." Pease, wheat, and buck-wheat, or brank, are eaten by pigeons; but should be given only in alternation, not as a constant diet. The same of seeds. They yet prefer wheat. The strong scent of cummin, and flavour of coriander seeds, are said to have an alluring effect upon the olfactory nerves and palate of these birds; as also the scent of *assafœtida*, and other powerfully odoriferous drugs; and that the use

of fumigations of such, in the dove-cote, will not only attract the pigeons to their home, but allure strangers, which may be wandering in search of a habitation.

The last dietetic, or rather, perhaps, medicinal article necessary to be described, is the SALT-CAT, so called, from some old fancy of baking a real cat with spices, for the use of pigeons, which, however, I never observed to eat animal food. In compliance with this custom, I caused to be placed in the middle of the pigeon-loft a dish of the following composition: loam, sand, old mortar, fresh lime, bay salt, cummin, coriander, carraway seed, and all-spice, moistened into a consistence with urine. The pigeons were constantly pecking at this, and were in a constant state of good health; how much of which may be attributed to the use of the cat, I cannot determine; but, certainly, they are extremely fond of it, and if it have no other merit, it prevents them from pecking the mortar from the roof of the house, to which otherwise they are much inclined.

The cat was mixed, and heaped up in the dish, a piece of board being placed upon the summit, to prevent the birds from dunging upon it; when became too hard, it was occasionally broken for them.

The regular old formula for this cat is as follows: gravel or drift-sand, unctuous loam, the rubbish of an old wall, or lime, a gallon of each—should lime be substituted for rubbish, a less quantity of the former will suffice—one pound of cummin-seed, one handful of bay-salt; mix with stale urine. Inclose this in jars, corked or stopped, holes being punched in the sides, to admit the beaks of the pigeons. These may be placed abroad.

Many fanciful and groundless tales may be found in old books, relative to the MEDICINAL and REMEDIAL properties of almost every part of the pigeon; thus much, however, may be relied on, their flesh, when young and in good condition, is a nourishing and stimulant diet; that of the full-aged pigeon more substantial, but harder of digestion, and, in a consi-

derable degree, heating. Their DUNG is of an extremely heating and drying quality, whether as a manure, or for medicinal purposes. It was in former days, a principal ingredient in the nitre beds, when that article was almost intirely manufactured at home.

CARRIERS, HORSEMEN, and DRAGOONS, are travellers or messengers, and I have occasionally seen TUMBLERS turned off, at the distance of forty miles from home. The carrier, it is said, has performed a journey of forty miles in an hour and half, and of even ninety miles in three hours. A dragoon has flown seventy-six miles in two hours and half: but this fancy of flying pigeons, is in no country, it seems, so much in vogue as formerly. The admired qualities in the TUMBLER, are excessive high flight, so as to be almost imperceptible to the keenest eye, in fine and clear weather; perseverance in their flight for many hours together, and tumbling over and over repeatedly, during their ascent and descent.

The following imperfect account of pigeons used and sold from a Berkshire dove-cote, in 1807, is extracted from the Survey:—147 used in the house, at *5s.* per dozen, *3l. 1s. 3d.*—Sold 550 for *10l. 15s. 10½d.* = *13l. 17s. 1½d.* The DUNG estimated at one fourth of their return per annum.

NEW GUINEA pigeons are said, in some Lady's Voyage to India, nearly to equal the turkey in size; of a slate colour, with a crest of gauze feathers, some inches high, in the form of a fan; the iris of the eye, bright vermillion.

By my memoranda, in 1801, I observe, that sixty-five pairs of old pigeons, and one hundred and forty squeakers of all sizes, regularly fed, consumed in one week, five pecks of the smallest beans, and ten quarts of seeds. The above old stock, without any young, consumed about half the quantity.

From the same.—FAN-TAILS or SHAKERS, the head always in motion, are beautiful stock and good breeders, but so

stupid and silly, as scarcely to be capable of taking care of themselves, or finding their home. RUNTS although so much larger, breed as fast and equally forward as tumblers. The duration of life in the pigeon, is said to extend to about twenty years.

## SECTION XII.

### *Rabbits.*

RABBITS are animals proper to be allowed in a wild state, in those countries only, where are extensive wastes, and where corn and other farming productions are not at a high price; in populous and highly cultivated regions, they are a great and wasteful nuisance, and proofs are before the public, only a few years old, of nearly the whole produce of a farm being devoured by them, to the ruin of the tenant. This farm was situated near extensive preserves; but it is equally unfortunate for a farmer to be fixed near to, or within some miles distance of a rabbit warren, since they will travel to a

great distance, to feed either upon corn or vegetables, and if the soil and corn be to their liking, will always remain in sufficient numbers to stock a new district. At the same time, they are good and profitable stock, domesticated; infinitely more prolific, under good management, than in their wild and exposed state, and their dung is extremely valuable upon a farm.

The old writers perhaps, rather overvalued the profits of this stock. Rabbit keeping is practised by a few individuals in almost every town, and by a few, in almost every county; but thirty or forty years ago, there were one or two very considerable feeders near the metropolis, keeping each, according to report, from fifteen hundred to two thousand breeding does. These large concerns have ceased it seems, long since, and London receives the supply of tame, as well as wild rabbits, chiefly from the country.

The only considerable rabbit feeders at present, of whom I have heard, are two gentlemen, the one resident in Oxford-

shire, the other in Berks. The former fed some hundreds a few years since, and then it was said, intended to double his stock. The HUTS were placed in a small building set apart for that purpose. The then stock produced one load of dung per week, two loads of which were sufficient to manure an acre of land. Three dozen of rabbits per week, were sent to the London market; but keep and attendance reckoned, no other profit accrued, excepting the dung, the price of which used to be eight pence per bushel, and I believe thirty-six bushels are reckoned a load. The Berks gentleman, according to the Survey of that county, feeds white rabbits on account of the superior value of their SKINS, from their application of late years to the purpose of trimmings. Twenty does and two bucks were my largest stock.

The RABBIT-HOUSE should stand upon a dry foundation, and be well ventilated. Exposure to too much humidity, whether externally or internally, is fatal to rabbits,

which are liable to the rot like sheep, and from the same causes. The rains of 1799, which continued nearly four months, destroyed my stock of rabbits, which were hutted in a boarded shed, not well defended from the cold and moist air. Ventilation and fresh air are also necessary, where considerable numbers of these animals are kept, which will not else remain healthy, or prosper, for any length of time; and even sudden mortality may ensue, from impure and stagnant air. A thorough draught or passage for the air, is thence of great use, and should be contrived in the building, with the convenience of shutting such opposite windows or doors, in cold and wet weather.

The HUTS or HUTCHES are generally placed one above another, to the height required by the number of rabbits, and the extent of the room. Where a large stock is kept, to make the most of room, the hutches may be placed in rows, with a sufficient interval between, for feeding and cleaning, instead of being joined to

the wall, in the usual way. It is preferable to rest the hutches upon stands, about a foot above the ground, for the convenience of cleaning under them. Each of these hutches intended for breeding, has two rooms, a feeding and a bed room. Those are single, for the use of the WEANED rabbits, or for the BUCKS, which are always kept separate. When much green meat is given, rabbits make a considerable quantity of urine, and I have sometimes seen occasion to set the hutches sloping backwards a few degrees, a very small aperture being made the whole length of the floor, to carry off the urine. A sliding door in the partition between the two rooms, is convenient for confining the rabbit, during the operation of cleaning; which indeed is a good argument for having all the hutches double, since it is more troublesome to clean out a room with a number of rabbits in it, than with only one. It must not be forgotten, that the teeth of rabbits are very effectual implements of destruction to any thing not

hard enough to resist them, and their troughs should be bound with something less penetrable than wood. As they are apt to scratch out their food, and dung in it, I have often thought it might be useful to adopt the feeding troughs with moveable boards, as well for rabbits as hogs. The floors of the hutches should be planed smooth, that wet may run off, and a common hoe with a short handle, and a short broom, are most convenient implements for cleaning these houses. The object being to obtain the dung pure, for sale, no litter should be allowed; but on a farm, where the dung is expended at home, the hutches should be littered with refuse hay or straw, perfectly dry. The rabbit house to contain a tub for the dung, and a bin, for a day's supply of hay, corn, roots, or other food, which should be given in as fresh a state as possible.

There are other MODES of confining rabbits for breeding, in which they are left to their liberty, within certain bounds; for example, an artificial mound walled in, in

which they burrow, and live as in the natural state; and an island, as described in Mr. Young's Annals; methods which are certainly ornamental and pleasurable, as well perhaps as more for the comfort of the animals; but surely not so profitable to the owner as hutching, in which mode also, they may be preserved, with due care, in the highest state of health. On this head, I find the following remark in my memoranda for the year 1805:—*Rabbits, at large, must always suffer more in point of profit, by loss of number, than they gain by cheaper feeding, exclusive of the mischief they do;* and this principle operates proportionally in limited enlargement, as in the unlimited, upon the warren. They are quarrelsome and mischievous animals; and the bucks, when at liberty, destroy a considerable part of the young. A run abroad, indeed, for young rabbits, until a certain age, might be beneficial, if *growth* were the object; but all rabbits must be separated at the age of puberty, or as soon

as they become fit for breeding; they will else tear each other to pieces.

As to the VARIETIES of FORM and COLOUR, in the rabbit, the short-legged, with width and substance, generally few in number, and to be obtained only by selection, are the most hardy, and fatten most expeditiously, taking on fat both internally and in the muscular flesh. They have, besides, the soundest livers, the rabbit being generally subject to defects of the liver; they are the smallest variety. There is a very large variety of the hare colour, having much bone, length and depth of carcase, large and long ears, with large eyes resembling those of the hare. They might well be taken for hybrid, or mules, but from the objection of their breeding. Their flesh is high-coloured, substantial, and more savoury than that of the common rabbit; and they make a good dish, cooked like the hare, which, at six or eight months old, they nearly equal in size. The large white, and yellow and white species, have whiter

and more delicate flesh, and, cooked in the same way, rival the turkey. With respect to colour, I have always preferred the wild colour, and black, finding the skins of full as much worth as the white. The TURKISH or FRENCH RABBIT, with long white fur, differs little from the common varieties; nor did I find their skins of more value, either for sale or home use. I have been in the habit of drying the skins, for linings of night-gowns, and other domestic purposes; but have always found reason to prefer the short, close fur. The large, above mentioned,—indeed, any peculiar varieties—must be sought among the London dealers.

The DOE will breed at the age of six months; and her period of GESTATION is thirty or thirty-one days. It should be premised, that the buck and doe are by no means TO BE LEFT TOGETHER; but their union having been successful, the buck must be immediately withdrawn, and the doe tried again in three days: in fact, with rabbits, this business is conducted on

the same principle as in the stud. Like chickens, the best breeding rabbits are those kindled in March. Some days before PARTURITION, or kindling, hay is to be given to the doe, to assist in making her bed, with the flue, which nature has instructed her to tear from her body for that purpose. She will be at this period, seen sitting upon her haunches, and tearing off the flue, and the hay being presented to her, she will, with her teeth, reduce and shorten it to her purpose.—Biting down of the litter or bed, is the first sign of pregnancy. The number produced generally between FIVE and TEN; and it is most advantageous always to destroy the weak or sickly ones, as soon as their defects can be perceived, because five healthy and well grown rabbits are worth more than double the number of an opposite description, and the doe will be far less exhausted. She will admit the BUCK again with profit at the end of six weeks, when the young may be separated from her, and WEANED. Or the young

may be suckled two months, the doe taking buck at the end of five weeks, so that the former litter will leave her about a week before her next parturition. A notion was formerly prevalent, of the necessity for giving the buck immediately after the doe had brought forth, lest she should pine, and that no time might be lost; and if it were intended that no time might be lost in destroying the doe, such indeed would be the most successful method. Great care should be taken, that the doe, during her gestation, be not approached by the buck, or, indeed, by any other rabbit; as, from being harassed about, she will almost certainly CAST her young. One doe in a thousand may DEVOUR her young; the sign that she ought to be otherwise disposed of. Some does admit the buck with difficulty, although often apparently in season; such should be immediately fattened off, since it can never be worth while to keep any individual for breeding, of a stock to be produced in such multitudes, against which

there lies an objection. Should the doe be WEAK on her bringing forth, from cold caught, or other cause, she will drink beer caudle, as well as any other lady; or warm fresh grains will comfort her; a malt mash; scalded fine pollard, or barley-meal, in which may be mixed a small quantity of cordial horse-ball.

With due attention to keeping them warm and comfortable, and guarding against any sudden impressions from cold, and, more particularly, moist air, and with the aid of the best and most nourishing food, I have bred rabbits throughout the WINTER, with nearly equal success as in the summer season. But, in truth, their produce is so multitudinous, that one might well be satisfied with four or five litters, during the best part of the year, giving the doe a winter fallow.—Even four litters would, upon the lowest calculation, produce TWENTY YOUNG ONES ANNUALLY to each doe—equal to an annual TWO THOUSAND, from a stock of ONE HUNDRED DOES. I have no ex

perience of does, as breeders, beyond the FIFTH year; the BUCK will come into use at six, or even four months old, and be in perfection from the age of two, to three years.

Upon a regular plan, and with sufficient attendance, it is better to FEED three times, than twice a day. The art of feeding rabbits with safety and advantage, is, always to give the upper hand to dry and substantial food. Their nature is congenial with that of the sheep, and the same kind of food, with little variation, agrees with both. ALL WEEDS, *and the refuse of vegetation, should be banished from rabbit feeding;* such articles are too washy and diuretic, and can never be worth attention, whilst the more solid and nutritious productions of the field may be obtained in such plenty, and will return so much greater profit. Rabbits may, indeed, be kept, and even fattened upon roots, good green meat, and hay; but they will pay for corn; and this may be taken as a general rule:—*Rabbits*

*which have as much corn as they will eat, can never take any harm from being indulged with almost an equal portion of good substantial vegetables.* However, the test of health is, that their dung be not too moist. Many, or most, of the town feeders never allow any greens at all; the reason, I suppose, because they feed almost entirely on grains. The CORN proper for rabbits:—oats, peas, and wheat; pollard; and some give buck wheat. The GREENS and ROOTS, the same as our cattle crops, namely, carrots, Jerusalem artichokes, and, if potatoes, baked or steamed. Lucerne, cabbage-leaves, clover, tares, furze. I have had them HOVEN, from eating rape; and, not improbably, mangel wurtzel might have a similar effect. Clover and meadow hay, pea and bean straw.

Rabbits are generally sold from THE TEAT, but there is also a demand for those of larger size, which may be FATTENED upon corn and hay, with an allowance of the best vegetables. *The better the food,*

*the greater weight, better quality, and more profit*, which I apprehend to be generally the case, in the feeding of all animals. Some fatten with grains and pollard. I have tried all wheat, and all potatoe oats, comparatively; but could find no difference in the goodness of the flesh. The rabbit's flesh being dry, the allowance of succulent greens may tend to render it more juicy; and I suppose the old complaint of the dryness of the flesh in Devon beef, entirely fed with hay, might be remedied in the same way. Rabbits are in perfection for feeding at the FOURTH or SIXTH month; beyond which period, their flesh becomes more dry, and somewhat hard. It requires THREE months, or nearly so, to make the rabbit thoroughly fat and ripe; half the time may make them eatable, but by no means equal in the quality of the flesh. They may yet be over fattened, as appears by specimens exhibited a few years since, at Lord Somerville's show, which were

loaded with fat, without and within, like the best feeding sheep.

The flesh of the rabbit is esteemed equally digestible as that of fowls, and equally proper for the table of the invalid.

CASTRATED rabbits might be fatted, no doubt, to the weight of upwards of ten pounds, at six or seven months old. I have not succeeded at castrating the rabbit, but am informed it is successfully practised in the land of capons, namely Sussex, near Chichester, where on the average, not one in three hundred, is lost by the operation, which is performed at five or six weeks old. With respect to QUANTITIES of corn consumed in fattening;—August, 1813, killed a young buck, which weighed three pounds, fit for the spit; it was put up in good case, and was only one month in feeding, consuming not quite four quarts of oats, with hay, cabbage, lucerne, *bunias orientalis*, and chicory; the skin, silver and black, worth four pence.

In SLAUGHTERING full grown rabbits, after the usual stroke upon the neck, the throat should be perforated upwards towards the jaws, with a small pointed knife, in order that the blood may be evacuated, which would otherwise settle in the head and neck. It is an abomination to kill poultry by the slow and torturing method of bleeding to death, hung up by the heels, the veins of the mouth being cut; but still more so the rabbit, which in that situation, utters horrible screams. The ENTRAILS of the rabbit, whilst fresh, are said to be good food for fish, being thrown into ponds.

The rabbit is a CARESSING animal, and equally fond with the cat, of the head being stroked; at the same time, it is not destitute of courage. A whimsical lady admitted a buck* rabbit into the house, where he became her companion for upwards of a twelve month. He soon intimidated the largest cats so much, by chasing them round the room, and darting upon them, and tearing off their hair by

mouthfuls, that they very seldom dared to approach. He slept in the lap by choice, or upon a chair, or the hearth-rug, and was as full of mischief and tricks as a monkey. He destroyed all rush-bottomed chairs within his reach, and would refuse nothing to eat or drink, which was eaten or drank by any other member of the family.

No live stock is less liable to DISEASE than the rabbit, with regular and careful attention, such as has been pointed out, so that any sudden and accidental disorder is best and most cheaply remedied by a stroke behind the ears. But want of care must be remedied, if at all, by an opposite conduct, and improper food exchanged for its contrary. Thus if rabbits become POT-BELLIED, in the common phrase, from being fed on loose vegetable trash, they must be cured by good hard hay and corn, ground malt or pease, or any substantial and absorbent food. Their common liver complaints are incurable, and when such are put up to fatten, there

is a certain criterion to be observed. They will not bear to be pushed beyond a moderate degree of fatness, and should be taken in time, as they are liable to drop off suddenly. The dropsy and rot must be prevented, as they are generally incurable; nor is a rabbit worth the time and pains of a probable cure. Of the 'madness in tame conies,' on which our old writers hold forth, I know nothing.

## MISCELLANEOUS ADDITIONS.

### *Gallinaceous or Common Fowls.*

I acknowledge myself obliged to Mr. Castang, at the Menagerie in the Hampstead Road, near Tottenham Court Road, London, for several particulars in these additions, respecting new and fashionable breeds introduced of late years.

The breed of SHACKBAGS, it has been already observed, has been many years extinct, and the substitute of the MALAY cross, is not satisfactory. A large variety has been since introduced, with success; a cross between the SPANISH and our Darking breed, the best of which are to be found in Sussex and near Woking,

Berks. The Spaniard is very large, the plumage black, flesh white and delicate, and the new variety equals in size the old Duke of Leeds' breed. They are well adapted for CAPONS, and produce the largest eggs to be obtained.

GUINEA FOWLS are in season for the table when game is going out, namely, from February to June; PEA-FOWLS also, are used in the same season.

Beside the POLANDERS, there is a small variety now imported from Holland, called EVERY DAY HENS, which are everlasting layers.

There has been lately obtained, a variety of BANTAMS, extremely small and as smooth legged as a game fowl. From size and delicacy, they are very convenient, as they may always stand in the place of chickens, when small ones are not otherwise to be had. They are also particularly useful for sitting upon the eggs of partridge and pheasants, being good nurses, as well as good layers.

SALE AND PRICES. At Christmas,

1804, a Sussex farmer received from his salesman in London, seven shillings each, for one lot of CAPONS, for another, ten shillings each. The best of them weighed eight pounds each. At the same time, two India ships took out as stores, one hundred and fifty dozen of HENS. No cocks were admitted, an account of the danger of their fighting, nor any young poultry, as they will not stand a sea voyage.

TURKEY. The true black Norfolk turkey is esteemed superior to all others. The COPPER turkey, (see varieties) originally of the wild American breed, proved too tender, and degenerated in this country.

CYGNETS. Young swans are sometimes fattened for home use, or presents, but are not to be purchased.

BUSTARDS. The bustard is the largest land bird of Europe, the cock generally weighing from twenty-five, to twenty-seven pounds. The neck, a foot long, the legs

a foot and half. It flies with some little difficulty. The head and neck of the cock, ash coloured; the back, barred transversely with black, and a bright rust colour. The greater quill feathers black, the belly white; the tail consisting of twenty feathers, marked with broad black bars: it has three thick toes before and none behind. There are upwards of half a dozen species of this bird, two or three of which (African) are crested. The LITTLE bustard, differs only in size, not being larger than a pheasant. They were known to the ancients in Africa, and in Greece and Syria: are supposed to live about fifteen years; are gregarious, and pair in spring, laying only two eggs, nearly of the size of a goose egg, of a pale olive brown, marked with spots of a darker hue. They sit about five weeks, and the young ones run like partridges, as soon as delivered from the shell. The cocks will fight until one is killed or falls. Their flesh has ever been held most delicious,

and I suppose they are fed upon the same food as the turkey.

There were formerly great flocks of bustards in this country, upon the wastes and in the woods, particularly in Norfolk, Cambridgeshire and Dorset, and in various parts of Scotland, where they were hunted with greyhounds, and very easily taken. Buffon was mistaken in his supposition that, these birds are incapable of being propagated in the domestic state, chiefly on account of the difficulty of providing them with proper food, which, in their wild state, he describes to be heath berries and large earth-worms. Probably the HAW or white thorn berry might succeed equally well. Mr. Castang informs me that, a person in Norfolk, has at this time, some bustards: also that he had last year, an old bustard and four eggs, which he sold to Lord Stanley. To those who aim at variety and novelty in this line, the bustard appears peculiarly an object for propagation and increase, since the flesh

is of unrivalled excellence, and it is probable, this fowl will render great weight of flesh for the food consumed.

AQUATIC FOWLS. A GOOSE on a farm in Scotland, two years since, of the clearly ascertained age of eighty nine years, healthy and vigorous, was killed by a sow, whilst sitting over her eggs; it was supposed she might have lived still many years, and her fecundity appeared to be permanent. Other geese have been proved to reach the age of seventy years. Asserted that, at the great goose-feeders near London, the stock is fed upon the purest and best food, kept in the highest state of cleanliness, and that, they are among the finest and best with which the metropolis is supplied.

DUCKS. The white AYLESBURY are a beautiful and ornamental stock, matching well in colour, with the EMBDEN GEESE. They are said to be early breeders (see VARIETIES, for opinion on colour as it affects quality.) The CANVASS-BACKED

ducks of America, bred only on the Potowmac and Susquehanah rivers, are said to be the best in the world. I believe, they have never yet been imported into Europe. DUCKLINGS are not safe in waters stocked with EELS.

EGGS become desicated, and in consequence, lose great part of their substance and nutritive quality, by keeping, and every body knows the value of a fresh laid egg. They will retain their moisture and goodness however, three or four months, or more, if the pores of the shell be closed and rendered impervious to the air, by some unctuous application. We generally anoint them with mutton suet melted, and set them an end, wedged close together, in bran, *stratum super stratum*, the containing box being closely covered. Laid upon the side, the yolk will adhere to the shell. They thus come into use, at the end of a considerable period of time, in a state almost equal to new laid eggs, for consumption, but ought not to be trusted for incubation, excepting

in the case of the imported eggs of rare birds.

FEATHERS or DOWN intended for use, should be plucked as soon as possible, after the bird is dead, and before it is cold, otherwise, they are defective in that elasticity, which is their most valuable property, and are liable to decay. The bird should beside, be in good health, and not moulting, for the feathers to be in perfection; and being plucked, and a sufficient quantity collected, the sooner they are dried upon the oven, the better, since they are else apt to heat and stick together.

The practice of plucking the LIVING FOWL, if interest must sanction such a custom, should be performed in the most tender and careful manner, and not at, or near the time of moulting. The ripe down only, should be taken from each wing of the swan, goose, or duck, and four or five feathers. Lean geese furnish the greatest quantity of down and feathers, and of the best quality; to which also the

goodness of their food, and the care bestowed, contribute in a considerable degree. Geese are sometimes stripped three times in the season, but in the whole affair, I speak with entire ignorance of the practice. Strict PRECAUTION is necessary to HOUSE the stripped fowls, for a time, sufficient to enable them to endure the air, and by all means, to keep them from the water. The down and feathers of ducks, pigeons, and partridges, are used in France, for mattrasses and pillows. *M. Parmentier* proposed to multiply the breed of WHITE TURKIES, and to employ for plumes, the feathers found on the lateral part of the thighs of those fowls.

## *On the Diseases of Poultry and Rabbits.*

The diseases of our domestic animals kept for food, are generally the result of some error in diet or management, and should either have been PREVENTED, or are to be cured most readily and advan-

tageously by an immediate change, and adoption of the proper regimen. When that will not succeed, any farther risk is extremely questionable; and particularly with respect to poultry, little hope can be derived from medical attempts. In fact, the far greater part of that grave and plausible account of diseases and remedies, which is to be found in our common cattle and poultry books, is a farrago of sheer absurdity, the chief ground of which, it is to be apprehended, is random and ignorant guess-work.

COMMON FOWLS.—Of these, the most frequent diseases, real or presumed, are thus named: the PIP, a white skin or scale, growing upon the tip of the tongue. The CURE,—tear off the skin with your nail, and rub the tongue with salt. Of this I know nothing, and could never hear any thing with certainty. Imposthume upon the rump, called the *roup*. This is directed to be opened, the core thrust out, and the part washed with salt and water. The roup also seems a general term for

all diseases, but is chiefly applied to CATARRH, to which gallinaceous fowls are much subject. The FLUX, and its opposite, CONSTIPATION. Cure the first with good solid food; the other with scalded bran or pollard, mixed with flet or skimmed milk or pot liquor, a small quantity of sulphur being added, if needful. VERMIN, generally the consequence of low keep, and want of cleanliness. The remedy obvious; not to forget sand and ashes for the fowls to roll in.

But the chief disease to which chickens and fowls are liable, originates in changes of weather, and the variation of temperature, and when the malady becomes confirmed, with running at the nostrils, swollen eyes, and other well known symptoms, they are termed ROUPY. The discharge becoming fetid, like the glanders in horses, the disease is supposed to have arrived at the stage of infection; and whether so or not, it is certainly proper, for cleanliness sake, to SEPARATE the diseased from the healthy, whence the

necessity of an INFIRMARY in a regular poultry establishment. Roupy hens seldom lay, and their eggs are scarcely wholesome. The eggs taken from a hen which died of the roup, were black, and in a state of putrefaction.

Chickens are frequently, and chiefly in bad weather, seized with the CHIP, in about three weeks from their hatching, when all their beauty of plumage vanishes, and they put on their long great coat, or rather shroud, and sit *chipping*, pining and dying in corners; always apparently in torture, from a sense of cold, although to the touch, they seem in a high state of fever. This disease seldom admits of remedy; but I have tried mustard in water, crams, with a small quantity of black pepper, and afterwards nitre, given in the water. The sun, or warmth in the house, are the best remedies.

For grown fowls affected by the roup, warm lodging is necessary, and even the indulgence of the fire, or the warmth of the bake-house. Wash the nostrils with

warm soap and water, as often as necessary, and the swollen eyes with warm milk and water. Afterwards bathe the swollen parts with camphorated spirit, or brandy and warm water. As a finish to the cure, give sulphur in the drink, or a small pinch of calomel in dough, three times in a week. The common symptom of GAPING, during this influenzal disease, induced the learned a few years past, to coin a new disease, under the name of the GAPES, which they conveniently attributed to a species of *fasciola*, infecting the *trachea*, or wind-pipe of poultry. For the roup, and other diseases, more at large, see an Article in the Monthly Magazine of December, 1810.

The head being raw, and the eyes blinded from fighting, wash the eyes as before, and the head, which, after washing, may be alternately, according to need, dressed with fresh butter, and with brandy, in which has been infused two or three drops of laudanum. A hen sate about in corners, and neither ate, drank, nor evacu-

ated, yet looked full and not diseased. Her CROP was totally obstructed. On an incison being made, from the bottom upwards, a quantity of new beans was found which had vegetated. The wound being stitched properly, immediately healed, and the hen suffered little inconvenience. A cock's SPURS being too long, impeding his walk and wounding his legs, they should be cut carefully with a sharp penknife, but not too near the quick, every three months.

GEESE. The GARGLE in geese, is described as a stoppage in the head. Most probably, an affection of cold. They direct to- house the patients for a time, and to give garlic fasting, two or three long balls; the garlic, three or four cloves, to be beaten in a mortar with fresh butter. Toast and ale with a little confinement, will probably succeedeq ually well.

DUCKS. Young ducks at the age of two or three weeks, will drop off suddenly, without any apparent cause, or sign

of disease. It is probably occasioned by too early liberty abroad and in the water.

PIGEONS also, are subject to the ROUP, understanding by that term, a cold, or catarrh, the symptoms of which are too visible in the miserable creatures exposed to sale, hung up in baskets, in all weathers and currents of air. Garlic in pills and rue given in water, are the general remedies. Sheltered places with room for exercise, and warm seeds, or cordial horse ball in their food, form the best dependence. They are, in course, most liable at MOULTING TIME, a season at which all kinds of poultry should be carefully sheltered and attended.

WOUNDS upon the head, or the WATTLES of Carriers and Barbs, to be treated as already directed for chickens, but if the parts should CANKER as it is styled, wash with stale urine, or alum and water, or any spirit and water; or make an unguent of burnt alum and honey; or mix twenty grains of red precipitate with half an ounce of honey; or dissolve five grains

of vitriol, in half a table spoonful of vinegar, and mix with the above alum and honey. Pigeons are liable to several peculiar internal complaints of weakness, for which it is probable that, prevention or subsequent care, are the only remedies. A variety of remedies are offered for vermin in pigeons, such as stavesacre, tobacco, snuff and similar articles, but the only effectual one is strict CLEANLINESS.

Croppers particularly, are apt to GORGE themselves, and all young pigeons are occasionally subject to have the crop obstructed by receiving too great a quantity of food, and too speedily for digestion. The first or old pigeons in this state, may be treated as already directed for fowls. The crops of the squabs being gently stroaked upwards with the fingers, will generally be cleared, a bean at a time. The VERTIGO, MEGRIM, or GIDDINESS in pigeons, arises probably, from some error of diet or keeping, and I know of no remedy, but confinement, with room for exercise, fine water being allowed with chalk and saffron

infused. For SCOURING, forge-water, or rust of iron in pellets of dough; afterwards, sulphur in the water. In ERUPTIONS, sulphurated water. If any external applications necessary, the unguents already directed, will be proper. For wounds in the FEET, Venice turpentine spread on brown paper. The FLESH WEN, may be either opened, or cut off, the part being washed with alum water, &c. or the dressings used as before directed. EXOSTOSIS, or the BONE WEN upon the joints, somewhat similar to splents upon the shank of the horse, is deemed incurable. The best cure, to fatten for the table. The CORE, a hard substance of a yellowish colour mixed with red, and resembling the core of an apple, is sometimes found in the anus or vent, and has been known in the æsophagus or gullet of a pigeon. This will ripen and maturate, and may be then discharged, dissected or drawn out. A purge of a very small quantity of tobacco is directed in this case, but on what grounds I am not informed.

In keeping poultry of all kinds, it ought to be a first consideration that, there be sufficient ROOM and AIR for the number kept; otherwise, they will be, in the vulgar phrase, *stenched*, that is infected by the impurity of their own atmosphere, and become in consequence, subject to frequent mortality.

FINIS.

Printed by R. & R. Gilbert, St. John's Square, London.

*Printed for Sherwood, Neely, and Jones, Paternoster Row, London.*

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