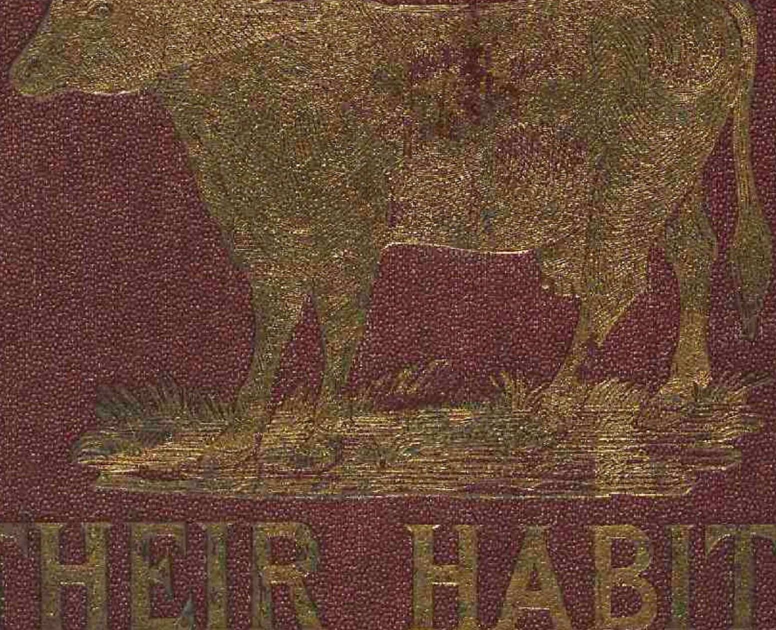
Domestic animals, familiar birds, &c. : their habits and history ; being pictures of the animal creation, drawn from nature, and accurately and carefully coloured, for the amusement and instruction of the young ; with a descriptive text, intended to serve as a first introduction to natural history

https://hdl.handle.net/1874/424717

DOMESTIC ANIMALS AND



THEIR HABITS.

Veiling Van Gendt. A'dam
juni 1985 (f 376-)


a
b
c
d
e
f

I

P

J.G. Verdoorn
1966

DOMESTIC ANIMALS,

FAMILIAR BIRDS, &c.:

THEIR HABITS AND HISTORY.

BEING

PICTURES OF THE ANIMAL CREATION,

Drawn from Nature, and Accurately and Carefully Coloured,

FOR THE

AMUSEMENT AND INSTRUCTION OF THE YOUNG.

WITH

A DESCRIPTIVE TEXT, INTENDED TO SERVE AS A FIRST INTRODUCTION TO NATURAL HISTORY.

BY

H. W. DULCKEN, Ph.D.

LONDON:
WARD, LOCK, AND TYLER, WARWICK HOUSE, PATERNOSTER ROW.

[c. 1870]

PREFACE.

In this book, as in the companion volume of "Wild Animals," the object of the Publishers has been to provide for their young friends well-drawn and accurate Pictures of the Animal Creation, and at the same time to furnish an Elementary Treatise on Natural History for those whose interest in books of the kind is not confined to the pictures only. The limits of the volume prevented the projectors from aiming at anything like completeness; nevertheless, in the selection, care has been taken to represent those families of animals with whose nature and habits children should be made acquainted before entering upon the study of Natural History in its more regular and systematic form.

The Pictures are by the same Artists who produced the Illustrations to "Wild Animals," and have been executed with equal taste and care.

CONTENTS.

DOMESTIC ANIMALS, BIRDS, &c.

BIRDS.

DOMESTIC ANIMALS, BIRDS, &c.

INTRODUCTION.

> "And God blessed Noah and his sons, and said unto them, Be fruitful, and multiply, and replenish the earth.
>
> "And the fear of you and the dread of you shall be upon every beast of the earth, and upon every fowl of the air, upon all that moveth upon the earth, and upon all the fishes of the sea; into your hand are they delivered."—*Genesis* ix. 1—2.

THE Bible tells us that the animal creation was delivered into the hands of man for his use and benefit, and that man was to be acknowledged as its master by every living creature; such was the decree of the Almighty Creator.

But as there are various kinds of animals, so the brute creation in various ways and degrees are adapted to minister to human wants or employ human energy. Against the lion and the tiger, and nearly all the flesh-eating animals, man has to exert his strength and prowess, as against his enemy. They are foes whose attacks are to be guarded against, and whose approach must be watched and noted, that they may be destroyed, or at least driven back into the wilderness, which is their natural abode. Others, like the fishes, are pursued through the water with nets and lines, and many cunning engines and stratagems, that they may furnish meat for man, or that the various substances of which their bodies are composed may minister to his necessities. Thus the great whale ships sail out every year to catch the mighty whale of the Northern seas, that the oil he furnishes may light up the darkness of many a chamber in the long wintry nights; and thus the horny substance that supplies the place of teeth in the huge jaws of the giant of the deep is devoted to many purposes in various manufactures; for whalebone plays an important part in the dress of the present day. And there is a third and very large division, that not only furnishes man with articles of food and raiment, but is made to live with him, and to form, as it were, part of the community on the farm and on the plain; and this class, losing its wildness and ferocity, and becoming tame and obedient, comprising creatures like the horse, ox, and sheep, who know their masters, and willingly submit to their sway, is known under the general name of THE DOMESTIC ANIMALS.

The general features that distinguish the domestic from the wild animals are these: They live in herds or flocks, being of a sociable disposition, and not inclined to fight savagely and devour one another, like many wild animals, as, for instance, the fierce cat tribe. They have a singular power of bearing changes of climate and different degrees of heat and cold, and are consequently found spread over a great space on the surface of the earth. Thus, for instance, in the cold island of Iceland, in the far north, where no tree will grow, and the ground is covered during the greater part of the year with ice and snow, a breed of strong useful horses is found; and in the dry Indian plains, where the sun's rays beat down so fiercely that Europeans can hardly bear the fierceness of the heat, the horse bears his rider swiftly and bravely across the field, and the wild native warrior learns to fight on horseback. In the highlands of Scotland, amid the barren wilds and bleak hills, the hardy oxen manage to pick up a living; and in the burning forests of Central and Southern America, where the ground cracks and breaks with the heat, and during half the year the ground is parched to a desert for want of moisture, numbers of horned cattle run wild, and live in all the happiness of liberty.

When the dry season prevails, they are sometimes in great distress for water; and then it is that the cunning mule manages to satisfy his thirst by a very clever stratagem. He searches in the burning plain for a round fruit like a melon, called the melocactus. This plant is covered with prickles; but the mule does not care for that, for he knows that it contains a watery pulp or juice. So he stamps upon it and kicks at it till he has burst it open; and then, with his large fleshy lips, he sucks out the juice with great delight, while the horses and oxen, less clever than he, go about parched with thirst.

But when the rainy season sets in, all is changed. There is water now in plenty; for the rain pours down in streams, and the whole sky is black with clouds. The entire plain is covered with pools and lakes, and the cattle have to swim about from one island to another, as if they were amphibious animals, or adapted to live in the water as well as upon land; and not a few of them are seized and devoured by the ravenous crocodiles and alligators that lurk in the waters for their prey. And yet, through all these dangers and difficulties, the wild cattle and horses of the steppes struggle on, and increase rather than diminish in numbers.

Another remarkable feature in the domestic animals is found in the various uses to which they can be applied. Let us take, for instance, the ox. He can be used as a beast of draught or burden, and will draw the plough with untiring strength, day after day. When he has finished his work on the farm, he falls into the hands of the slaughterman, and every part of him, his horns, his hoofs, his hide, his flesh, and his bones, will be found valuable and useful.

In the sheep we see the same peculiarity. Wool, skin, flesh, bones, tendons, all and each are made by man to serve some useful purpose, after the death of the patient animal to which they belonged. Contrast the sheep with one of the feline animals—for example, the tiger. When the beautiful striped hide has been stripped from the dead brute, the rest of his carcase is absolutely useless, so far as man is concerned, and can only be left as a prey to the jackals and vultures, and other beasts that feed upon carrion. For the tiger feeds upon meat, and this renders his flesh unfit for food.

Another and a very noticeable feature in the animals adapted to be the servants of man, and to live with him in a domestic or tame condition, is the wonderful increase in numbers they exhibit. Many a man has begun in Australia, or elsewhere, with a few sheep, perhaps a score or even fewer, and has found his flock increase year by year, until he has become a wealthy man. The flocks of sheep and the herds of cattle have, indeed, been so important, that some nations have depended upon them for their very existence. Even now there exists in Asia and elsewhere numerous nations whose only wealth consists in the domestic animals they possess. How valuable domestic animals were considered among the Eastern nations of old, can be easily seen from the words of the Bible, where the wealth of Abraham is enumerated thus: "He had sheep and oxen, and he-asses, and men-servants, and maid-servants, and she-asses, and camels." We are also told that "Lot, which went with Abraham, had flocks, and herds, and tents, and that the land was not able to bear them" (that is to say, to provide pasture for their flocks and cattle), "that they might dwell together; for their substance was great, so that they could not dwell together. And there was a strife between the herdsmen of Abraham's cattle and the herdsmen of Lot's cattle." And again, in the description of the rising fortunes of Jacob, who tended the cattle of his uncle Laban, we are told, "The man increased exceedingly, and had much cattle, and maid-servants, and men-servants, and camels, and asses."

Of these domestic animals we have now to speak, beginning with the ox tribe.


a
d

THE OX TRIBE.

"The ox knoweth his owner, and the ass his master's crib; but Israel doth not know, my people doth not consider."—*Isaiah* i. 3.

There are a great many varieties of the ox tribe, or, as it is called in Latin, the genus *Bos*: and, indeed, we naturally expect that animals found in each of the great divisions of the globe, and over nearly the whole face of each division, should vary according to the climate and position of the country in which each kind is found. Thus the hide of the ox that grazes in the plains of India, beneath a fierce tropical sun, would be quite insufficient to protect the musk ox or the bison of America from the cold to which they are exposed; and thus we find these two last varieties provided, one with a thick shaggy mane, and the other with coarse, rough, long hair over the whole body. But there are some general points in which all the family resemble each other, and with these we will begin.

In the whole ox tribe, we notice that the body is large and round, and the legs short, though strong: unlike the horse, they seem formed more for strength than speed. The neck is thick and muscular, and in it lies the chief strength of the animal. Thus the ox is more fit to draw the plough or cart than to carry burdens on his back, and thus also he defends himself against his enemies by pushing with his horns, or by endeavouring to toss his adversary in the air, an operation in which the great strength of his neck comes into play. The whole ox tribe also "part the hoof and chew the cud." Their hoofs are cloven or split, so that the animal has as it were two hoofs on each foot, unlike the horse, whose hoof is all in one round piece. Their stomachs are divided into compartments, from the first of which they can bring back the food into the mouth, to masticate or chew it completely. This is called ruminating; and few can have failed to observe the oxen and cows in a field, on a fine summer's day, lying placidly down, and chewing and chewing, without appearing to be eating anything. Excepting in a single variety, the horns may also be stated as a general feature in the ox tribe; and, unlike the deer, they are found in the female as well as in the male. These horns differ greatly in shape and size in the different kinds of cattle, and generally it may be seen that the more thoroughly tamed the cattle are, the smaller do the horns become; as if, given to the cattle to defend themselves in their wild state, these weapons are withdrawn from them by nature when the creatures came under the protection of man.

Though subject to fits of rage almost amounting to madness, the ox tribe cannot be regarded as a ferocious set of animals. In their wild state they seldom attack travellers unless first molested; but when once aroused their fury is very destructive. They are highly gregarious; that is, they are accustomed to keep together in large numbers, careering over the vast prairies and savannahs of North America, through the llanos and pampas of the South, as well as through the forests of Southern Africa. Every variety can be tamed.

EUROPEAN CATTLE. (*Plate* 1.)

It is impossible to say at what time the ox was first domesticated in Europe or elsewhere. In the Bible, cattle keeping is mentioned in the period before the Flood; and in Britain, when Julius Cæsar landed with his legions, more than nineteen hundred years ago, he found the Britons already possessing flocks and herds. The importance of oxen as an article of property has induced farmers to take great pains to improve the various breeds; and thus we have many sorts, some noted for the quantity of flesh on their carcases, others for the fine quality of the hide, others again for the quantity and richness of the milk yielded by the cows. The different kinds are divided into two classes according to the length of the horn, and are called "Long Horns" and "Short Horns," and thus each part of England and even of Scotland has its particular breed. The establishment of Cattle Shows, at which horned cattle, sheep, and pigs are exhibited, and prizes are awarded for the best specimens of each breed, has done much to improve our domestic farm animals; and British oxen are now considered superior to those of any other part of the world. So great is the value attached to them, that bulls have been exported to Australia and New Zealand, being carried at great cost to the opposite side of the world, and a thousand pounds has in several instances been the price of a prize bull.

In old times the dense forests in Scotland and in northern England were full of wild cattle, roaming about free and unfettered. These have now quite disappeared; but till within a few years some of these wild cattle remained at Chillingham Park, the seat of Lord Tankerville. They are described as being invariably of a creamy white colour, with a black muzzle; the whole of the inside of the ears, and the tips externally, are red; the horns are white, with black tips, very fine, and bent upwards. Some of the bulls have a thin upright mane, an inch and a half or two inches long. The following account is given of them:

"At the first appearance of any person, they set off in full gallop, and at the distance of about two hundred yards make a wheel round, and come boldly up again, tossing their heads in a menacing manner. On a sudden they make a full stop, at the distance of forty or fifty yards, looking wildly at the object of their surprise; but upon the least motion being made, they all again turn round, and fly off with equal speed, but not to the same distance, forming a shorter circle; and again returning with a bolder and more threatening aspect than before, they approach much nearer, probably within thirty yards, when they again make another stand, and then fly off. This they do several times, shortening their distance, and advancing nearer and nearer, until they come within such a short distance, that most people think it proper to leave them, not choosing to provoke them further."

Each separate country of continental Europe, such as Italy, Spain, Norway, Sweden, and the rest, has its separate kind of horned cattle. Denmark is celebrated for a very large kind; and cattle breeding forms one of the great sources of national wealth in Holland, whence immense quantities of butter and cheese, and many thousand head of oxen, are annually brought to England. A spotted breed without horns, which is mentioned by Tacitus, an old Roman historian who lived eighteen centuries ago, has been introduced even in the cold island of Iceland; and as that bleak country affords no grass for pasture, the oxen are frequently fed upon dried fish.

A great dislike to scarlet is noticed among all kinds of horned cattle. A young officer, employed in surveying some land in Moldavia, where large herds of cattle roam half wild over the plains, nearly lost his life through the circumstance that he carried a small table covered with red morocco. At sight of this table the cattle began wheeling round the intruder in an angry crowd; and he probably saved his life by his presence of mind in turning the red part of the table towards his chest, so as to hide the hated colour from his horned assailant, whose rage was soon calmed when the cause that excited it had been removed. In London, not long ago, a bull who was proceeding peaceably to market was seized with such ungovernable fury at the sight of a detachment of soldiers marching by in scarlet coats, that he charged them at once, and they were obliged in self-defence to receive him upon their bayonets, which soon put an end to him. The courage of the bull has frequently caused the poor beast to be made the subject of very cruel diversion, such as the bull fights in Spain, where he is made to contend against horsemen and combatants on foot, armed with spears and swords, whose attacks he repels with great courage. In England too, until a recent period, the practice of bull baiting was pursued in many towns. The bull was fastened by a rope passed round his horns, or by a ring through his nose, to a post, and then ferocious bull dogs were set upon him, while men more ferocious than either bull or dog stood round and enjoyed the cruel pastime. Fortunately, such exhibitions of brutality are no longer allowed among us.

Among foreign varieties of oxen we must notice a few of the most important. First comes

THE MUSK OX. (*Plate* II., *c.*)

This is a very small variety of the ox tribe. It is a native of the northern part of North America, and is uncommonly hardy and strong, though it hardly exceeds a large calf in size. Its Latin name is *Ovibos moschatus*, or the musk *sheep*-ox. To defend it from the biting cold, it has a thick coat of long hair, hanging down about its legs like a shaggy mat. In colour it is a dark dull brown. The strong musky smell which hovers about this ox, and from which it has obtained its name, renders its flesh very unpalatable; though the Esquimaux consider it a great delicacy. Inhabiting, as it does, the craggy, rocky regions of the Hudson's Bay territory and the banks of the Coppermine river of America, the musk ox becomes quite an expert climber, and very quick and active, scrambling up steep places with amazing agility, especially when pursued or alarmed. The horns are very peculiar in shape, curving downwards on each side of the head, and then suddenly turning upwards at the tip. The female is not quite so large as the male musk ox.

In Captain Franklin's "Journal of a Polar Voyage" we find the following particulars relative to the musk ox: "The musk oxen, like the buffalo, herd together in bands, and generally frequent barren grounds during the summer months, keeping near the rivers, but returning to the woods in winter. They seem to be less watchful than other wild animals, and when grazing are not difficult to approach, providing the hunters go against the wind. When two or three men get so near a herd as to fire at them from different points, these animals, instead of separating or running away, huddle closer together, and several are generally killed; but if the wound is not mortal they become enraged, and dart in the most furious manner at the hunters, who must be very dexterous to evade them. They can defend themselves with their powerful horns against wolves and bears, which, as the Indians say, they not unfrequently kill. The musk oxen feed on the same substances with the reindeer, and the prints of the feet of these two animals are so much alike, that it requires the eye of an experienced hunter to distinguish them. The largest killed by us did not exceed in weight three hundred pounds. The flesh has a musky, disagreeable flavour, particularly when the animal is lean, which, unfortunately for us, was the case with all that we killed."

THE ZEBU.

This variety of the ox tribe is at home in India, though zebus are found also in Africa and in the Asiatic islands. They are very various in size, some being as large as a good sized English bull, while others are not bigger than an antelope. The distinguishing features are: the hump on the back, which consists chiefly of fat, and is considered a great delicacy by the Indians; the large beautiful mild eye, shining with the softness of a gazelle's; and the long slender limbs, which enable some of these animals, when tamed to carry riders, to run and leap with the agility of hunting horses; even a five-barred gate is no obstacle to them. One kind of zebu, the Brahmin bull, is looked upon by the natives of India with superstitious reverence. These bulls are dedicated to the god Seeva, and roam about at their pleasure, after being marked with the figure of the god. They are allowed to do just as they please; for to hurt or molest one of them would be considered the height of irreverence.

Bishop Heber, who saw many of these zebus in India, tells us concerning them: "They feed where they choose, and devout persons take great delight in pampering them. They are exceeding pests in the villages near Culcutta, breaking into gardens, thrusting their noses into the stalls of the fruiterers' and pastrycooks' shops, and helping themselves without ceremony. Like other petted animals, they are sometimes mischievous, and are said to resent with a push of their horns any delay in gratifying their wishes."

The zebu is still used in India and in many Oriental countries in the ancient practice of "treading out corn," to separate the grain from the straw, instead of threshing it out with a flail. Our readers will remember that this treading out of corn by oxen was practised among the Jewish people in the time of Moses; and hence the injunction given to the Israelites, "Thou shalt not muzzle the ox that treadeth out the corn," as though the great lawgiver recognized the right of the patient labouring animal to pick up a few grains as he performed his task.

THE BUFFALO (*Plate* III.),

Called in Latin *Bos bubalus*, is the most powerful of the whole ox tribe. His huge horns, deep chest, broad shoulders, and thick legs are all indicative of immense strength. The buffalo of the Old World was originally a native of India, but has been introduced into Africa, Spain, Italy, &c. In their wild state buffaloes live in small herds, and in hot weather delight greatly in wallowing in the muddy water of pools and sluggish streams. Frequently they remain for hours in the water, with only their horns and noses showing above the surface.

The buffalo has been long in use as a domestic animal, his immense strength rendering him a valuable servant, in spite of his temper, which is fierce and intractable. He will draw with apparent ease a weight that ordinary oxen or horses cannot move. The buffalo has a keen sense of smell, and thus in his wild state he runs with his muzzle thrust forward, and his horns laid back, finding his way less by the keenness of his eyes than of his nose.

The AMERICAN BUFFALO or BISON forms another variety of the ox tribe, to which also belongs the aurochs, a powerful animal still found in the forests of Poland and Lithuania. Vast herds of wild bisons roam through the prairies of North America, to the west of the United States. They are of great bulk and strength, and are distinguished by the vast size of the head and shoulders, which look even larger than they are from being thickly covered with a long shaggy mane. Herds of at least twenty thousand bisons have been seen running across the wide prairie, when the grass begins to fail, in search of new feeding grounds. A few old experienced bulls act as leaders, and the whole herd careers onward after them, swimming the broadest rivers, and travelling with great swiftness. The wild bisons of the West are, however, decreasing in number year by year. Many are killed by the backwoodsmen, many more die beneath the arrows of the few Indian tribes still left in the pathless solitudes of the West, and not a few fall victims to the most formidable and inveterate of their four-footed foes—the grizzly bear. Like all other varieties of the ox tribe, the bison can be tamed; but he never quite loses his fierce temper, or becomes completely tractable. In his wild state, when attacked, he tries to escape from his foes by flight; but, once wounded, often becomes mad with rage, and his strength then makes him a very formidable foe to encounter.

The BUFFALO OF THE CAPE OF GOOD HOPE is inferior to no other species in strength and ferocity. He does not fear even the lion, and he not unfrequently comes off victor in a fight with the king of beasts. Heavy and bulky as he is, he can run on level ground with great swiftness; but as his clumsy frame and the great breadth of his horns prevent him from climbing wooded crags, or scrambling up any steep place, the hunter or settler pursued by him can generally find safety in clambering up a rock or climbing a tree. The hide of the buffalo


a
d
c
b

is valuable from its extreme thickness and toughness; indeed, a common leaden bullet would make little impression on the skin of a Cape buffalo; thus the hunting of the buffalo is a matter of considerable danger.

Finally, it may be observed of the ox tribe, that the usefulness of these animals is seen alike in their wild and in their domestic state. To the Hottentots of Southern Africa, the flesh, the hide, the horns, and sinews of the buffalo, and other varieties of oxen, represent at once food, raiment, implements of war, and objects of domestic use; and the importance of the buffalo of America is strongly portrayed in the words of an intelligent traveller, who, speaking from personal experience, says: "I cannot convey any just impression of the total dependence of the remote western tribes on the buffalo for their very existence, without giving a sketch of the various purposes for which that animal is, by their ingenuity, rendered available. First, its flesh is their principal, sometimes their only, food; eaten fresh on the prairies during their hunt, and dried in their winter villages. Secondly, the skin is put to various uses. It forms the material of their lodges, of their bales for packing the meat, of their beds by night, and their clothing by day. The coarser parts they make into saddles or cut into *laryettes* or halters; and more than all this, it is now their chief source of trade with the whites, and thus is the source whence they must derive blankets, knives, beads, and every other produce of civilization. Thirdly, they use the sinews as strings to their bows, and the smaller fibres instead of twine or thread. The brains serve to soften and dress the skin; while the hoof at the end of the shank-bone is made to serve the purpose of a mallet. Fourthly, the bones are not less useful; some of them being serviceable as scrapers or close chisels, others are pointed and used with the finer fibres as needles and thread, and the ribs, strengthened by some of the stronger fibres, are made to furnish the bow with which other buffaloes are to be destroyed. This last is the triumph of Indian ingenuity. The first bow that I saw constructed in this manner caused me so much surprise and admiration, that I offered nearly the value of a horse for it, but was refused."

Such is the ox genus; a tribe of animals whose adaptability to the various necessities of man forms a striking proof of the bounty of that Providence which gave man "dominion over the fish of the sea, and over the fowl of the air, *and over the cattle*, and over all the earth."

THE GOAT AND THE SHEEP.

> "Be thou diligent to know the state of thy flocks, and look well to thy herds.
>
> "For riches are not for ever: and doth the crown endure to every generation?
>
> "The hay appeareth, and the tender grass sheweth itself, and herbs of the mountains are gathered.
>
> "The lambs are for thy clothing, and the goats are the price of the field.
>
> "And thou shalt have goats' milk enough for thy food, for the food of thy household, and for the maintenance for thy maidens."
>
> —*Proverbs* xxvii. 23—27.

There are many reasons why the goat and the sheep should be considered together, for they have many features in common. Both are social in disposition, dwelling together in flocks, and easily adapting themselves to a life of dependence on man. The hair of the goat, like the wool of the sheep, was in early times considered a valuable article of clothing; and the flesh and milk of the goat, as of the sheep, have been used for ages as articles of food. That the goat was considered at least equally important and serviceable with the sheep, among the ancients, appears in the following lines from a pastoral poem of the Roman poet Virgil:

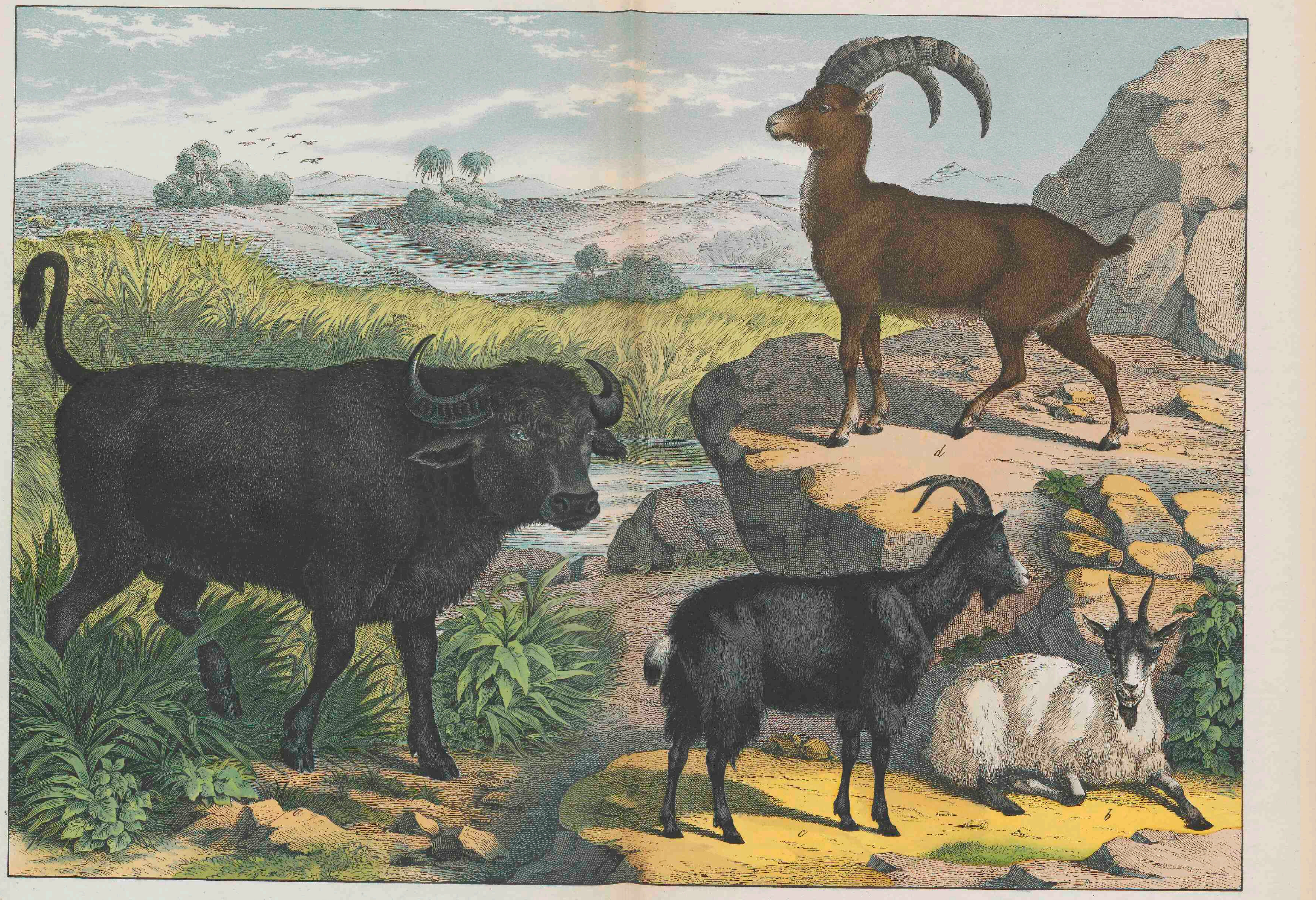
"For hairy goats of equal profit are
With woolly sheep, and ask an equal care.
'Tis true, the fleece, when drunk with Tyrian juice
Is dearly sold; but not for equal use;
For the prolific goat increases more,
And twice as largely yields her milky store.
Meantime the pastor shears their hoary beards,
And eases of their hair the loaded herds.
Their camelots warm in tents the soldiers hold,
And shield the shivering mariners from cold."

The "Tyrian juice" here mentioned refers to the celebrated Tyrian purple, with which the garments of wool were stained; but goats' hair was very largely employed in the dresses worn by many European nations, and especially in the coarse garments of soldiers and sailors. Many of the Greek fables of Æsop make mention of the goat; and the goatherd was an important personage among the ancients. Who does not remember the story of the foolish goatherd, who, having taken shelter with his goats in a cave, and finding a number of wild goats already in possession there, gave the food of his flock to the wild goats, in hope of making a prize of them? the consequence of which proceeding was, that his own flock perished with hunger, while the wild goats escaped at the first opportunity, and thus he returned home without either wild goats or tame. The difference between the goats and the sheep may be compared to that which exists in many countries between the tribes inhabiting the mountain regions and those dwelling in the plain. The mountaineers, like the goat, are hardy and bold, insensible to danger, and fond of pursuing hazardous tracks among pathless crags; while the dwellers in the plain, like the sheep, are peaceable rather than warlike, loving ease and plenty, and unenterprising in character. Again, the goat, like the mountaineer, is prone to wander; while the lowlander, like the sheep, is content to remain in one spot, provided it supplies him with necessary food.

First in order among the goats we have to notice a wild kind, namely:

THE IBEX. (*Plate* IV., *d.*)

This is a wild species of mountain goat, formerly common among the Alpine regions of Central Europe, Switzerland, Savoy, and Northern Italy, but it has now become very scarce and must soon disappear altogether before the rifle of the hunter. In the almost inaccessible heights between Monte Rosa and Mont Blanc it is still occasionally found. The ibex is a fine bold animal, inhabiting the highest mountains, and climbing precipices that seem inaccessible with wonderful agility and safety. In the summer its food consists of the Alpine plants, but in winter it resorts to the forests that clothe the mountain side, and browses on the bark and branches of dwarf willows, birches, and other Alpine trees. But even in winter it seeks the heights whenever this is practicable, resorting to the lowlands only when driven by necessity. The large horns of the ibex are bent backward from the forehead, and surrounded at intervals with broad rings. The horns of the female are much smaller than those of the male. The colour of the skin is a dull reddish grey; the head is small, and the legs rather short and thick. The ibex is much larger than the common domestic goat. Its voice is a peculiar whistle, which it utters with great shrillness when alarmed. Hunting the ibex is a very dangerous pursuit, not only from the necessity of scaling the terrific precipices to which the creature betakes itself in its flight; but also from the fact that the ibex, when its retreat is cut off, will frequently spring in desperation upon the hunter, and roll headlong with him down the abyss. In its manner of life and general habits the ibex resembles the chamois in many points.


d
a
c
b

THE COMMON OR DOMESTIC GOAT

Is so well known an animal that its appearance need scarcely be described. (*Plate* IV., *b*, *c*.) The horns are generally curved backwards, and most species are provided with a beard. The domestic goat is distributed over nearly the whole world. The naturalist Buffon has given us a graphic description of his nature and character, especially noticing his love of change, and consequent tendency to wander; his hardy constitution, which renders him insensible to heat and cold, and enables him to browse on almost every herb; and his love of standing, climbing, and even sleeping on rugged and lofty eminences. Mr. Bell, in his "History of British Quadrupeds," also says on this subject, "It will find its food in places inaccessible to almost all other animals, and live and thrive by cropping the scanty herbage which they furnish. In the mountain ranges of Europe, on the Alps and Pyrenees, the goat is found at a great elevation, approaching as near the line of perpetual snow as it can find its scanty sustenance; and it feeds on many plants which to other ruminants are distasteful and even deleterious; thus hemlock, henbane, and digitalis (foxglove) is eaten by it with impunity, and even the acid euphorbia is not rejected."

An amusing story is told of two goats who met face to face on a narrow ridge overhanging a great depth, on the ramparts at Plymouth. The ledge was far too narrow for them to pass one another, nor could they well retreat; but one of the goats sagaciously solved the difficulty by lying down, and allowing his fellow to walk over his back; and then each pursued "the even tenour of his way."

Among the foreign varieties of this useful animal the Cashmere or Thibet goat of the Himalaya Mountains stands preeminent, and will probably maintain its position so long as Cashmere shawls are prized as costly and beautiful articles of apparel. The Cashmere goat has flat, spiral curved horns. Its body is covered with long, straight, shining hair; and under this coarser outward covering is concealed a soft down or wool, from which the exquisitely fine Cashmere shawls are made. The colder the climate inhabited by this goat, the thicker and closer is its downy coat; but in general the quantity of wool furnished by one goat is only about three ounces, so that ten or a dozen goats are required to furnish the wool for a shawl of moderate size. An attempt was made, early in the present century, to introduce the Cashmere goat into France. It was attended with partial success, and the goat of Cashmere has not only been naturalized in France, but the breed has been considerably improved. Among other varieties may be mentioned the Angora goat, of a snowy white colour, with long silky hair; the Syrian goat, with very small horns, but with ears so long that the goatherds frequently crop them, lest they should incommode the goat while feeding; and the Rocky Mountain goat of North America.

That the goat is both sagacious and teachable is proved by the fact that it is often used as a "performing animal," and carried about to excite the wonder of gaping audiences. In Dr. Clarke's "Travels" we find an instance of a "learned" or performing goat of this kind. The traveller says, "Upon our road we met an Arab with a goat, which he led about the country for exhibition, in order to gain a livelihood for itself and owner. He had taught this animal, while he accompanied its movements with a song, to mount upon little cylindrical blocks of wood, placed successively one above the other, and in shape resembling the dice boxes belonging to a backgammon table. In this manner the goat stood, first upon the top of one cylinder, then upon the top of two, and afterwards of three, four, five, and six, until it remained balanced upon the top of them all, elevated several feet from the ground, and with its four feet collected upon a single point, without throwing down the disjointed fabric upon which it stood. This practice is very ancient. Nothing can more conclusively show the tenacious footing possessed by this quadruped upon the jutty points and crags of rocks; and the circumstance of its ability to remain thus poised may render its appearance less surprising, as it is sometimes seen in the Alps, and in all mountainous countries, with hardly any place for its feet, upon the sides and by the brink of most tremendous precipices. The diameter of the upper cylinder, upon which its feet ultimately remained until the Arab had ended his ditty, was only two inches, and the length of each cylinder was six inches."

THE SHEEP.

> "And there was a man in Maon, whose possessions were in Carmel; and the man was very great, and he had three thousand sheep, and a thousand goats; and he was shearing his sheep in Carmel."—I. *Samuel* xxv. 2.

It is usual to look upon the sheep as a stupid animal; but this opinion is an error. All animals living in a domestic state lose some of the qualities which they possessed in their wild condition, simply because they are accustomed to have their wants provided for, instead of being obliged to cater for themselves; they rely on the protection of man, instead of acting in their own defence. The sheep, a confiding, social creature, has more confidence than any other kind in the protection and care of man, and thus completely loses the characteristics of its natural state. But the wild sheep of the northern parts of North America, and of other regions of the world, is as wary and cunning as the mountain goat, and the hunter well knows the difficulty of approaching near enough to get a shot at the agile prey. The male sheep or ram, even in a domesticated state, is by no means deficient in courage, and when roused will fight with the determination of a little bull. In usefulness the sheep is equal to the ox tribe. Though its small size and lack of strength prevents it from being made useful as a beast of burden or draught when living, every part of its carcase is available for some purpose when dead; and then it amply repays the shepherd for the care lavished upon it. The trade in tallow and wool occupies thousands upon thousands of persons; and every month ships are sailing half round the world, to convey to England the tallow and wool procured from the sheep fed in the broad plains of Australia and New Zealand. Food, clothing, and light during the darkness of winter are all represented by this one creature; no wonder, then, that the keeping of sheep should be one of the most universal, as it is one of the most ancient, of occupations. From the time of Abel, who brought "the firstlings of his flock" to sacrifice to the Lord, to the present day, almost every nation has included sheep farming among its branches of industry. On the rugged hills and snow-covered valleys of Iceland, Norway, and Lapland, flocks of sheep find a scanty pasturage, eating the "Iceland moss" and lichens where grass is unattainable, and supplying their owners with all the necessaries of the simple life in those regions; and in the burning plains of tropical countries, where the woolly fleece gives place to a thin hairy covering better adapted to the climate, the shepherd leads forth his flock, to pick a living as they can in the arid sun-dried fields. The sheep is one of the best gifts of Providence to mankind; and it has been scattered broadcast over the globe, as if with the intention that as large a portion as possible of the human race should reap the advantage of its presence and its usefulness.

It is almost imposssible to say from what wild stock the domestic sheep derived its origin; but the majority of naturalists consider that our tame sheep are closely connected with the animal whose description follows here, namely:

THE MOUFFLON (*Plate* v., *a.*)

This creature, which unites the qualities of the goat and the sheep, is found in the rocky regions of Corsica, Sardinia, the Greek islands, &c. The colour is a reddish brown, with a darker stripe along the back, and white underneath. It is about as large as a full-sized goat, and has great horns curving backward from its forehead, and resembling those of the ibex. Like all its race, it is gregarious, consorting in flocks, living upon the high mountains, and flying with great agility on the appearance of the hunter. So shy, indeed, is the moufflon, that it can very rarely be taken alive. The young are covered with a short fleece; but the older moufflon has a hairy instead of a woolly coat, though beneath the outward hair a woolly down is found, as in the Cashmere goat. In the summer, when the moufflon finds plenty of Alpine plants in the sheltered valleys of the higher regions of rocks, it grows very fat, and its flesh is said to be equal to venison in flavour; but in the winter the scarcity of food among the mountains forces it to descend into the lower valleys in search of grass and herbs; and this is the period chosen by the hunter to surprise the wary animal, the agility of whose movements is quite in contrast with the feeble gait we generally associate with the sheep.

THE DOMESTIC SHEEP.

In almost every country there are one or more breeds of sheep; some covered with coarse hair scantily mixed with wool, others presenting a soft thick fleece, exceedingly valuable for its weight and texture; many kinds have a dark brown crisp wool, very different from the snowy fleeces of the English breeds; and some are entirely black. The sheep of Guinea, in Africa, has long legs, a gaunt, thin body, and a covering of coarse shaggy hair. In Syria and Egypt there is a remarkable race called the fat-tailed sheep. This sheep has a long tail reaching to the ground; and, indeed, in some cases the shepherds provide little waggons, in which the tails of the sheep are supported, to prevent them from dragging on the ground and sustaining injury as the animal walks on. For these tails are considered a great delicacy, consisting as they do almost entirely of a soft marrow-like fat. In their ordinary state they weigh about fifteen pounds; but there is an art by which the sheep may be fattened, so that the tail increases to fifty, sixty, and, it is said, in some instances even to eighty pounds in weight. This fat is often used instead of butter. Iceland possesses a remarkable breed of sheep, strongly built, and with a rough coat consisting more of hair than of wool, and only fit for coarse fabrics, such as druggets and horse cloths. But this Iceland breed yields a great quantity of good milk, an invaluable article in a cold climate. A single ewe will give, it is said, five or six quarts a day. A strange peculiarity is in the number of horns on the head of the ram, which sometimes has no fewer than eight growing from his forehead. The general number is four. In the Feroe Islands a wild race of sheep clamber about the rocks, quite free from the control of the inhabitants, who hunt them like deer, and seldom succeed in taking them alive.

The breeds of English sheep are very numerous, and great attention is paid to their improvement. Among the principal are the Southdowns, in Sussex and Kent, the Dorset, the Suffolk, the Leicestershire, and the Cheviot breed of Northumberland. It would take too long to enumerate here the different qualities of size, fleece, and fatness for which these various breeds are remarkable. Among the ancients a strange and barbarous method of obtaining the wool of the sheep prevailed. Instead of being shorn, the unhappy animals had the wool torn off their bodies, somewhat in the method in which poultry are plucked; and they were previously kept for three days without food, that they might be exhausted, and thus the wool would come off more easily. In the Orkney Islands this barbarous practice was continued until lately.

In the bleak winter, among the northern hills, the flocks of sheep are exposed to great hardships in the drifting snow-storms and furious gales. They have an instinct by which they know of the approach of a tempest, and manifest their uneasiness in various ways, well understood by the watchful shepherd, who forthwith takes every precaution for the safety of his charge. Notwithstanding all his care, however, many are lost by being blown over into the ravines among the rocks, and others are buried beneath the drifting masses of snow. In some cases sheep have manifested a remarkable tenacity of life under such circumstances, having been found alive after being buried twenty and even thirty days beneath the snow. In most countries on the Continent of Europe, and also in the East, the shepherd does not drive the flock before him, but literally *leads* them, walking at the head of the troop, which follows him wherever he goes.

The affection of the ewe for her lamb, the care with which she devotes herself to the little helpless creature, and her grief when deprived of her nursling by death, as also the stratagem employed by the shepherd, who strips the skin from the dead lamb and wraps it round some little motherless thing, thus cheating the bereaved mother into the belief that her own offspring has come back to her, have been admirably described by the poet Bloomfield, in the following lines:

> "Her tender offspring dead, the dam aloud
> Calls, and runs wild amidst th' unconscious crowd,
> And orphaned sucklings raise the piteous cry,
> No wool to warm them, no defender nigh!
> And must her streaming milk then flow in vain?
> Must unregarded innocence complain?
> No; ere this strong solicitude subside,
> Maternal fondness may be fresh applied,
> And the adopted stripling still may find
> A parent most assiduously kind.
> For this he's doomed awhile disguised to range
> (For fraud or force must work the wished-for change);
> For this his predecessor's skin he wears,
> Till, cheated into tenderness and cares,
> The unsuspecting dam, contented grown,
> Cherish and guard the fondling as her own.
> Thus all by turns to fair perfection rise;
> Thus twins are parted to increase their size;
> Thus instinct yields as interest points the way,
> Till the bright flock, augmenting every day,
> On sunny hills and vales of springing flowers,
> With joyous bleatings greet the vernal hours."

The most famous of the foreign breeds is the merino sheep of Spain, which has been used to improve the breeds of Saxony, Austria, and other Continental nations. The name "merino" signifies "from beyond the sea;" and it is conjectured that the breed was considerably improved by some Cotswold sheep, imported into Spain in the reign of Edward III. The rearing of these sheep is considered a very important matter in Spain; and centuries ago the Spanish Government took the matter in hand, and enacted laws regulating the privileges of pasture the sheep were to enjoy on their journeys from one part of the country to another, which they were made to perform twice a year, the number and pay of the shepherds, and, in fact, all matters connected with the sheep-breeding interest. This system of migration of flocks was supposed to improve both the fleece and the flesh of the sheep; but of late great doubt has been cast on the fact, as it is asserted that the merinos in certain provinces, where the sheep are kept to the same locality all the year round, thrive quite as well as those who occupy a full quarter of the year in their journeyings.

Closely connected with the breeding of sheep is the history of the cloth manufacture. The first knowledge possessed by the Britons of the art of cloth making came, no doubt, from Gaul. The Romans had a factory for the making of cloth for soldiers' coats at Winchester; and under the earlier Norman kings several cloth weavers found their way over to England from Flanders, where the art was best understood. In the reign of Stephen we find that

Bedford, Worcester, Nottingham, and several other towns were actively employed in the weaving of cloth; but it was in the reign of Edward III. that the art became really understood in England, which had until then been content to export a great quantity of wool to the Continent, leaving to the Flemings the profit obtained by its manufacture into cloth. The following extract from the old historian Fuller will explain what took place with regard to the cloth manufacture. "At length," he says, "the king and State grew sensible of the great gain the Netherlands got by our English wool; and this good king resolved, if possible, to bring the trade to his own countrymen, who yet were ignorant of that art, knowing no more what to do with their wool than the sheep that wore it, as to any artificial or curious drapery; their best cloths being then no better than freizes, such was their want of skill in their makings. But soon after followed a great alteration, and we shall enlarge ourselves in the manner thereof.

"Unsuspected emissaries were employed to go into the Netherlands, who wrought themselves into familiarity with such Dutchmen as were absolute masters of their trade, but not masters of themselves, being either journeymen or apprentices. These bemoaned the slavishness of those poor servants, whom their masters used rather like heathens than Christians; yea, rather like horses than men: early up, and late in bed, and all day having hard work, and harder fare (a few herrings and mouldy cheese); and all to enrich the churls their masters, without any profit to themselves.

"But oh! how happy would it be for them, if they would but come over into England, bringing their mystery with them, which would provide their welcome in all places.

"Thus persuaded, many Dutch servants did come. Their departure (being picked here and there) made no sensible vacuity, but their meeting together amounted to a considerable fulness. Happy the yeoman's house into which one of these Dutchmen did enter, bringing industry and wealth along with him: such as came in strangers, soon after went out bridegrooms, and returned sons-in-law, having married the daughters of their landlords, who first entertained them; yea, those yeomen in whose houses they harboured soon became gentlemen, gaining great estates to themselves, and honour to their estates."

The following fact will testify to the importance of the sheep to the peasant in the mountains of Savoy. Nearly every part of the dress of a Savoyard peasant is produced from his own little flock. He dresses the wool himself, his wife or daughter spins it, and then the yarn is woven into cloth by the village weaver. The holiday coats are generally dyed blue, but those of every-day wear are of a less expensive colour. As they have plenty of black sheep in Savoy, they mix their wool with the wool of the white sheep, and, spinning them together, produce a sort of greyish-brown cloth without the expense of dyeing. In another part of the Alps, the Grisons took their name from their custom of wearing grey cloth similarly manufactured.

For a long time Saxony had the pre-eminence in the manufacture of the finest kind of broadcloth, especially that of a blue colour. "Blue Saxony cloth" became proverbial for its excellence; but the town of Leeds and several other places in England can not only vie with any Continental manufacture, but indeed surpass the best efforts of the foreign loom.

Sheep-shearing time, when the farmer receives in the heavy fleece the reward of the care bestowed during the past twelve months upon his flock, has always been regarded, even from very ancient times, as a festive season. In one of the best country books ever written for boys, Mr. Thomas Miller, the author, speaking on this subject, says,

"Pleasant, too, was sheep-washing and sheep-shearing time: such a dreamy bleating beside the brooks and about the barns, as the sheep and lambs answered each other from the wattled fences in which they were confined to keep them separate. Rare fun was it to us to pull and drag at some great, fat, heavy sheep, and, drawing it towards the water's edge, shove it in, and perhaps ourselves with it, while the sheep-washer stood ready to souse the moving mass of wool over head and ears. The washing once over, and the sheep having stayed a few days just to let the wool regain its old oily elasticity, so that, as the clippers say, they may shear all the softer, then the great summer sheep-shearing began in earnest. The huge, high, heavy, ponderous barn doors were taken off their hinges, and placed on strong, low tressels, or heavy logs of wood, to elevate the doors to a convenient height, and on these ample tables the sun-browned shearers clipped the bleating sheep. Oh! it was famous fun to see them clipping away one against the other, and striving who could get done first—to roll up the fleeces and carry them into the barn, until we raised up quite a stack of wool—then to have a swing suspended from the great high rafters of the barn, and go such a height—ah! that was swinging indeed!—then to roll all amongst the wool—to fetch the sheep up to the shearers—to turn them loose again after they were clipped, and watch how the lambs were puzzled to pick out their dams from the flock which had been shorn: you would have liked to have been there, amid all that bleating of sheep, and barking of dogs, and such racing as we had after the sheep that ran away: it was prime sport, I can tell you. But the best of all was the sheep-shearing feast—such bowls of furmenty stuffed full of currants as you never before saw in your life, and chines of beef seasoned with all kinds of nice herbs, which are only known to old-fashioned country people; great horns of ale, and glorious plum puddings, almost as much as a boy could lift. Then, it was so pleasant to remember that these sheep-shearing feasts are hundreds and hundreds of years old, and that we read all about them in the Holy Bible, and what Nabal's wife, who lived in Carmel, sent to King David when she kept up her sheep-shearing feast. There are many good old customs still existing in England, as we shall show before we have written all we intend to write about the four seasons of the year."

THE HORSE TRIBE.

> " Hast thou given the horse strength? hast thou clothed his neck with thunder?
> " Canst thou make him afraid as a grasshopper? the glory of his nostrils is terrible.
> " He paweth in the valley, and rejoiceth in his strength: he goeth on to meet the armed men.
> " He mocketh at fear, and is not affrighted; neither turneth he back from the sword.
> " The quiver rattleth against him, the glittering spear and the shield.
> " He swalloweth the ground with fierceness and rage: neither believeth he that it is the sound of the trumpet.
> " He saith among the trumpets, Ha, ha; and he smelleth the battle afar off, the thunder of the captains, and the shouting."—*Job* xxxix. 19—25.

The above description of the horse in the Book of Job fully exhibits the chief qualities of the noblest of quadrupeds—his fearlessness, strength, and fleetness. From the very earliest period of known history the horse appears as the chosen servant of man, alike in peace and in war. The chariots and horses of Egypt are mentioned repeatedly in Holy Writ; and in Miriam's song of victory it is recorded among the triumphs of the Lord, "The horse and his rider hath He thrown into the sea." The ox, in ancient times, was the labourer—the patient and willing drudge in the work of the farm, the bearer of burdens, and the assistant in the important processes for obtaining bread; for he it was who dragged the rough plough over the fields, and who afterwards, when the corn had been reaped, "trod out" the grains from the straw on the floor of the barn. But to the horse more stirring duties were assigned. He was made to participate in the dangers and glories of war. It was for him to bear his rider through the thickest of the fight, to charge headlong upon the foe, or to bear his master swiftly away from the pursuit of the enemy. The war chariots of the Egyptians and other Eastern nations were of vast importance to them, and gave a great increase to the strength of their armies; and thus, when Pharaoh pursued the Israelites, after their escape from the bondage of Egypt, we are told that "he made ready his chariot, and took his people with him; and he took six hundred chosen chariots, and all the chariots of Egypt, and captains over every one of them." And though in later times some breeds of horses have been devoted exclusively to the labours of the field and the road, the charger, or war horse, has always kept his place in the armies of the modern as he had it in those of the ancient world. Not the least famous among the "heroes" of the battle of Waterloo was "Copenhagen," the gallant charger who bore the Duke of Wellington upon his back, without apparent fatigue, during sixteen or seventeen hours on that eventful day.

Among the circumstances which render the horse peculiarly valuable to man is the fact that each breed has separate qualities fitting it for some branch of usefulness. Thus, the characteristic of the racer is marvellous speed; while the hunter, with almost as great a swiftness of motion, combines a strength and an endurance which enable him to pursue the flying deer or fox for many hours over ground which would try the powers of the slim, graceful race horse far too severely. Again, for the plough horse and waggon horse, which has to draw heavy loads, but is only required to move slowly, we have a heavy, bulky kind, whose ponderous, heavy strength almost resembles that of the elephant, dragging, almost without effort, and by their own weight, loads that a lighter breed of horse could scarcely move with the most violent exertion. The rough, hardy Shetland ponies, again, are very useful in their way, being able to endure much fatigue, while they thrive upon scanty and coarse food.

The sagacity of the horse, and his readiness to learn, also increase his value. With the exception of the dog and the elephant, no animal is more teachable than he. The war horse masters his exercise quickly, and remembers it well; the hunter soon learns to enter into the excitement of the chase, which he often pursues as eagerly as his master; and the heavy dray horse soon learns to pick his way through crowded streets with such skill that he scarcely requires the guiding-rein. He is also capable of considerable attachment to his master, for whose benefit he exerts himself even beyond his strength.

The natural term of the horse's life seems to be between twenty and five and twenty years; but this period is generally shortened by over-work and ill-treatment, arising, in most cases, rather from thoughtlessness and ignorance on the part of the owner than from deliberate cruelty. Because the horse is strong, and willing to exert his strength, many persons seem to think that his powers are unlimited; and because he can run fast, that he may be driven or ridden for a long distance at the top of his speed; and thus his powers decay early, and he dies before his time.

So generally is the horse spread throughout the world, that it is impossible to say with certainty what was originally his native country. Wild horses are still found in vast numbers in the great plains of Tartary and of Central Asia and in the prairies of North, and the pampas of South America. The wild horses of America are descendants of Spanish horses brought over by the first conquerors of the New World. Many horses regained their liberty, and became the progenitors of a wild race. In Southern Africa a race of small wild horses also exists. The following description of the wild species is given in a popular book on science: "Wild horses appear to be free from nearly all those diseases to which the domestic breed are prone. They are generally of a pale or greyish-brown colour, with brown mane and tail, a whitish muzzle, changing to black about the mouth. They are smaller than the domestic breed, with a larger head, longer legs, larger ears. . . . They recognize the presence of man at a great distance, when he approaches them to windward, and fly from him with wonderful speed. They prefer sunny slopes, and avoid forests and steep places. They do not wander beyond the fiftieth degree of north latitude."

Horses are entirely herbivorous, feeding on vegetable productions. In their wild state they subsist almost exclusively on grass, though their teeth enable them to masticate hard corn and beans. They are naturally dainty as regards their food, and especially nice as to the purity of the water they drink. Many horses, even when suffering from great thirst, will not drink from a horse-trough or from a pail that has not been kept scrupulously clean.

The Arab horse has long been famous for beauty, swiftness, and endurance; and some of the Spanish horses, especially those called barbs, because they originally came from the Barbary States in Northern Africa, are excellent. It is impossible to tell when or how the horse first came into Britain. When Cæsar arrived from Gaul with his legions, nineteen hundred years ago, he found the wild inhabitants of our island possessed of a large and swift breed of horses, which they used with great effect in war, yoking them to chariots, whereof the axles were furnished with sharp scythes to mow down the enemy among whose ranks they were driven. That the Saxons had good horses, and knew how to value them, is proved by a law made by Athelstan, who forbade the exportation of horses, excepting they were sent out as presents. The Normans greatly improved the breed of the English horses, chiefly by importing some of the best that Spain could produce; these were, no doubt, of Arabian origin.

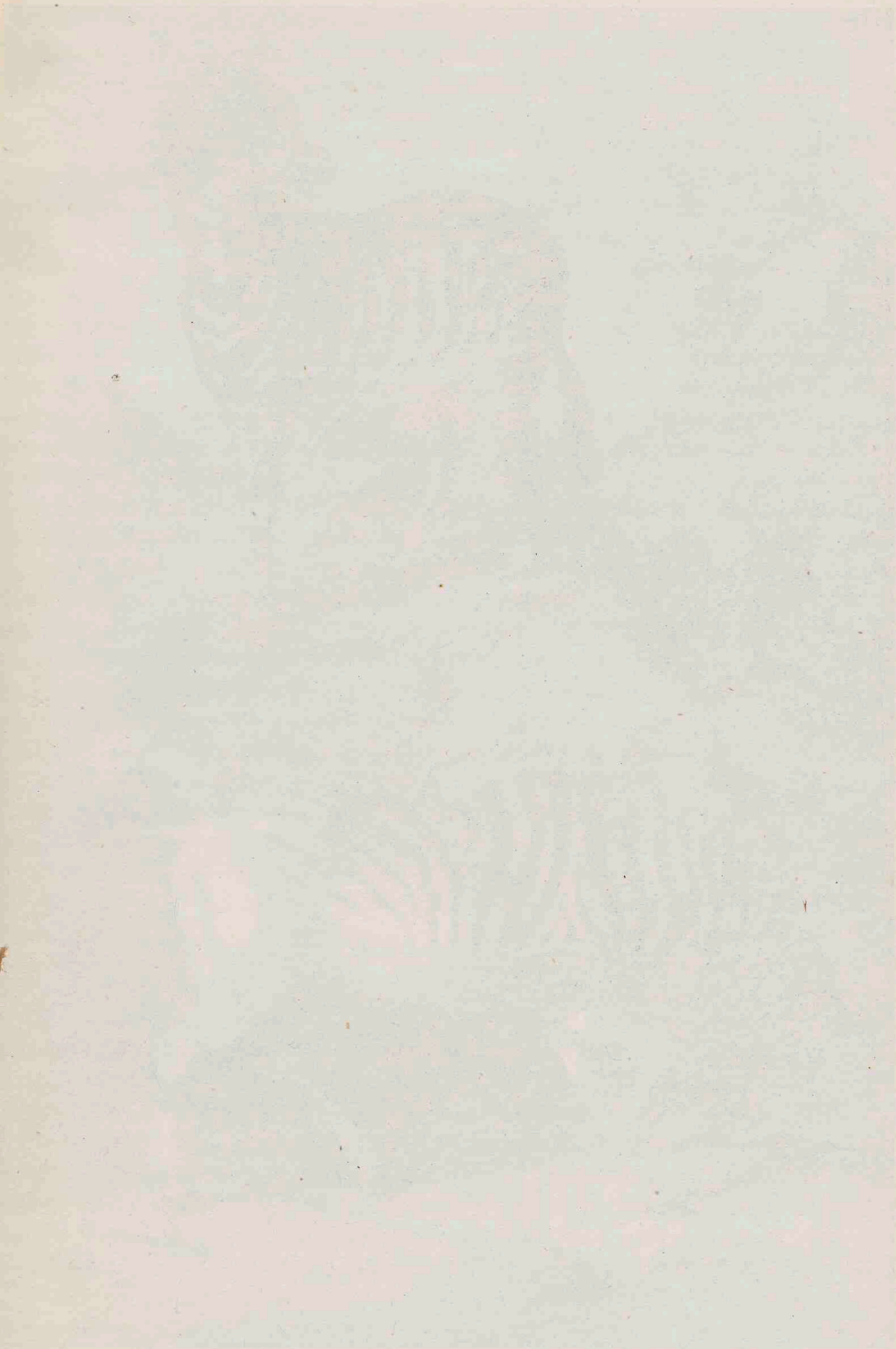
Horse racing soon began to be practised as a national sport: we find it mentioned as early as the reign of Henry II. Under the Stuart rule the sport was patronised by royalty; and it was on his return from Newmarket that the Rye House conspirators hoped to seize the person of Charles II., in the celebrated Rye House Plot. The English race horses are of Arabian origin. (See *Plate* VI.) An old writer named Camerarius gives in a few words a capital idea of what a good horse ought to be; and Goldsmith and several other writers have copied his instructions. They are these: "A perfect horse should have the breast broad, the hips round, and the mane long; the countenance fierce, and somewhat resembling that of a lion; the nose similar in form to that of the sheep; the head, legs, and skin of a deer; the throat and neck of a wolf; and the ear and tail of a fox."

The ancients were in the practice of using their horses unshod, consequently the hardness and firmness of the hoof was considered a very important point; and hence also the Arab saying, that "If a cavalcade be passing through a stony country, the grey horses will break the stones with their feet." The wild Huns, who, early in the Christian era, poured into Europe from Central Asia, under their King Attila, spreading terror and destruction wherever they went, were a nation who depended almost entirely upon the horse for subsistence. Their food was horse-flesh, their drink the mare's milk. The horses' hides furnished them with materials alike for their clothing and for the tents in which they dwelt. Continually in the saddle, they had acquired immense dexterity in riding, and always fought on horseback. The terror inspired by these plunderers gave rise to the proverb, "Where the horse of Atilla had set its hoof, no grass could grow."

THE ASS (*Plate* VIII.)

"Who hath sent out the wild ass free? or who hath loosed the bands of the wild ass?"—*Job* xxxix. 5.

Almost equally important with the horse, and in some countries even more necessary than that noble animal for the well-being of the people, the patient, useful ass has yet been in almost every clime and at every period the ill-used drudge of man. Because his pace is somewhat sluggish, and in outward appearance he lacks the graceful beauty of the horse, he has been set down as heavy and stupid; and the very patience with which he endures ill-treatment seems only to render him more despised. The expression "a stupid ass" has become proverbial, and it seems quite an understood thing that this poor creature should be fed on the coarsest food and driven with the heaviest stick. Yet all this is very foolish as well as wrong. Naturally, the ass is anything but a stupid animal. He has been known to display great sagacity, and to attach himself strongly to the master *who uses him kindly;* but ill-treatment and neglect have upon him the effect they would produce on a human being,




c
b
d
a
E. Hummel, lith.

and render him stubborn and sluggish. Though his pace is slow, he will continue his journey for many hours without showing signs of fatigue, and the coarsest fare suffices to keep him in health. In rocky countries and over difficult roads his feet are more sure than those of the horse, and he will carry his rider in safety along winding paths skirting the most tremendous precipices. Hardy, vigorous, and temperate, he is very valuable to the poor man. Many a wandering pedlar, and many a hawker of small commodities, has dated his rise in the world from the day when he had saved enough to buy an ass to carry his goods, thus lessening his labour by one-half, while the keep of the frugal animal scarcely increased his expenses.

The ass attains his full growth in about four years, and lives to the age of four or five and twenty. The colt is rather pretty in appearance, and quick and playful; but the laborious life led by the ass soon brings on that heavy appearance and sluggish gait which seem peculiar to the race. In Eastern countries, where the ass is frequently used instead of the horse, it appears under a better aspect than in Europe. It is larger and more lightly built, and is evidently the object of more care and attention than here, where the horse is the valued servant, and the ass only the slave. The female ass is very affectionate towards her colt, and will encounter any danger in defence of her offspring. She has but one colt at a time; very rarely two are born together.

The wild ass of the East is a very different creature from the poor domestic drudge. It is large, shapely, and handsome, and runs with especial swiftness. It is found in Tartary, Asia Minor, Persia, and many other countries. The Persians esteem its flesh a great delicacy, and capture it in pits. The wild asses associate together in herds. They are exceedingly shy, running off with great swiftness on the approach of men. Sir. R. K. Porter, the Eastern traveller, gives the following account of an exciting chase after a wild ass:

"The sun was just rising over the summits of the eastern mountains, when my greyhound Cooley suddenly darted off in pursuit of an animal, which my Persians said, from the glimpse they had of it, was an antelope. I instantly put spurs to my horse, and with my attendants gave chase. After an unrelaxed gallop of full three miles, we came up with the dog, which was then within a short stretch of the creature he pursued; when, to my surprise, and at first vexation, I found it to be an ass; but on a moment's reflection, judging from its fleetness that it must be a wild one, which the Persians prize above all other animals as an object of chase, as well as an article of food, I determined to approach as near to it as the very swift Arab I was on would carry me. But the instant of checking my horse to consider had given our game such a head of us, that, notwithstanding all our speed, we could not recover our ground on him. I, however, happened to be considerably before my companions, when, at a certain distance, the animal in its turn made a pause, and allowed me to approach within a pistol-shot of him. He then darted off again with the quickness of thought, capering, kicking, and sporting in his flight, as though he were not blown in the least, and as though the chase were his pastime. The prodigious swiftness and peculiar manner in which he fled across the plain coincided exactly with the description that Xenophon gives of the same animal in Arabia."

Such is the wild ass; but that, even in the most ancient times, the poor domestic species was the sport and butt of the mischievous, is shown by the mention made of the ass by Homer in the following lines of the "Iliad":

"The sluggish ass, with heavy strength endued,
In some wild field by troops of boys pursued,
The shivering sticks assail his sides in vain,
He crops the waving corn, and spoils the plain.
Whilst on his hide the feeble blows resound,
The beast, regardless, still maintains his ground;
Scarce from the field with all their efforts chased,
And scarce, though sated, mends his pace at last."

THE ZEBRA. (*Plate* VII., *c.*)

This very beautiful animal is a native of South Africa, where it roams in vast herds at the back of Cape Colony, and especially beyond the Gariep or Orange River. In size it is between the horse and the ass, and has indeed many qualities of both. The Dutch settlers at the Cape have called it the "Wilde Paard," or wild horse, and Dr. Burchell the traveller very aptly gave the Latin name *Equus montanus*, the mountain steed. The zebra has a short erect mane, slender legs, a very hard round hoof, a tail like that of the ass, but furnished at the end with a long tuft of hair, a shapely head, and bright intelligent eyes. Its distinguishing feature consists in the long black bands with which it is striped, and which are considered so elegant, that Buffon the naturalist calls it the first of quadrupeds for beauty. There are two species, the common zebra and Burchell's zebra. They are distinguised from each other principally by some trifling difference in the striping. The voice of the zebra is a harsh, barking neigh. United in bands, they resist the aggression of any foe, and fight vigorously with teeth and hoofs for their freedom when attacked.

At one time it was believed that the zebra could not be tamed, but this is a fallacy. All herbivorous animals are capable of being domesticated, though some are more difficult to tame than others. A few years ago a couple of zebras might be seen in the Zoological Gardens in London, very carefully dragging a cart about the grounds, perfectly tractable and resigned to their fate; and the old menagerie at Exeter Change contained a zebra so tame that he was employed in the pacific business of carrying children on his back "for the sum of one penny." The Hottentots consider the flesh of the zebra a delicacy, and eat it eagerly; but the colonists reject it, probably considering it too closely allied to horse-flesh.

THE QUAGGA (*Plate* VII., *d*)

Closely resembles the zebra, from which it is distinguished chiefly by its skin being only marked over the head, neck, and shoulders, with the bars that cover the whole body of the zebra. Its habits are like those of the zebra, associating in large herds, and flying with great swiftness from its pursuers. It is, however, much more tractable than the zebra, and is often used as a beast of burden. Its name "quagga" is said to be derived from its barking voice.

THE DEER TRIBE.

> "The bounding fawn that darts across the glade,
> When none pursues, through mere delight of heart,
> And spirits buoyant with excess of glee."

The deer species includes animals of very various kinds, and inhabiting very different parts of our globe. Indeed, so great is the difference between the gigantic elk (see "Wild Animals") and the graceful antelope or gazelle, that at first sight few people would think they belonged to the same family; but all the deer tribe have some features in common, though the antelopes are confined to the hot climate of Africa, while the other varieties are generally found in the colder countries of Europe and America, great heat being as destructive to them as cold would be to the antelope. We have now to speak chiefly of those kinds of deer that have become domesticated as servants to man, or half domesticated as ornaments to the gentleman's park or the well preserved forest.

Generally speaking, the deer may be considered rather as a beautiful and graceful, than as a very useful animal. In civilized countries the laws introduced with the Feudal system have placed him at the head of the *game* animals, or those which all but a small class were forbidden to touch. Under the earlier Norman kings, the forest laws were so severe that even noblemen might not hunt the deer except in the company of the king, and by his special permission; and as to the common people, the man among them who slew a deer was considered guilty of a far greater crime than the slaying of a fellow man. William Rufus, the tyrannical "Red King," was especially cruel and harsh in carrying out the forest laws, and inflicting punishment upon all who in any way molested the deer; so that the Saxons used to say that he loved the stags far better than his subjects; and looked upon his death while hunting in the New Forest as a Divine vengance for his tyranny. Gradually the severity of these laws was abated; but still the deer has remained the exclusive property of the higher classes—a privileged animal, whose flesh never appears on the poor man's table. Far different, however, is the case in the cold North, where dwells the member of the deer family who represents to the Laplander what the horse was to the Hun, and the sheep and ox to the patriarchal ancestors of the Israelites; namely, food, clothing, shelter, and the means of moving from place to place; for all the wants of the Laplander are supplied, in the frozen regions he inhabits, by the possession of one docile and invaluable animal. This animal is

THE REINDEER.

Though he is doubtless by far the most useful, the reindeer is, perhaps, the least beautiful of the tribe to which he belongs. He is large in size, about four or five feet high, with a short thick neck, strong legs, and very large hoofs, whose breadth and flatness prevent him from sinking into the deep snow, as he runs swiftly over the frozen plains. His horns are rounded, and droop over his forehead. This arrangement is admirably useful in enabling him in winter-time to shovel away the snow which covers the moss on which he subsists. He is covered with very thick woolly hair, and can thus endure a great amount of cold. He is also a strong swimmer, crossing broad and rapid rivers with the greatest ease. A strong, powerful animal, he readily defends himself, in his wild state, against even the wolf, whom he puts to flight by vigorous kicks. The wild reindeer live together in large herds, and in summer-time emigrate to the sea shore, to escape the attacks of a fly, aptly called by a Latin name signifying "the fury," which follows them incessantly, and allows the poor animals no rest. Numbers of them fall victims every year to the onslaught of these insects.

As a domestic animal the reindeer is beyond all price to the Laplander, who, but for this useful creature, would be confined to one spot in a country where there are no roads, and where in winter the uniform dreary waste of snow presents no track or sign by which the traveller could find his way. But as a writer on the subject justly observes, "The Laplanders commit their lives with wonderful confidence to these faithful animals, during a journey of hundreds of miles; and that trust is never violated, and it is very seldom that an accident occurs. They travel with such speed and perseverance, that it is not uncommon for a pair of reindeer, with the sledge and Laplander, to perform a journey of three hundred miles in twenty-four hours. Their usual trot is, however, at the rate of ten miles an hour; and they will draw from two hundred to three hundred pounds weight each, while going at that pace. After the deer have been well broken in and trained to the sledge, the art of driving is merely holding the rein. In long journeys, and when parties are travelling together, it is not unusual to fasten each deer to the sledge before it, so that one follows the other in the same track, and at the same pace.

At starting, and when the snow is good, the deer set off at a gallop, relaxing at length into a long and steady trot. Each deer follows the foremost sledge so closely, that the head of the deer is generally in contact with the shoulders of the driver before it; and should the leader of the whole train make a bend in his course, each one in succession follows close in the track, instead of attempting to save ground by cutting off the angle made by the first sledge. No power can remove the deer from the track its predecessors have taken; and it is this remarkable instinct that, no doubt, greatly contributes to the safety of his master; for, should any of the party by accident be detached from the rest, the keen scent of the deer enables it to pursue the track, and at last to overtake the train of carriages that has passed on before."

A wealthy Laplander will frequently be the owner of a herd of two thousand reindeer, whose milk, flesh, skins, and horns are all put to good use. Thus in the arctic regions the reindeer is to the inhabitant what the camel is to the traveller in the burning tropical desert—the one creature indispensable to his comfort, and even to his very existence.

THE STAG

Is a creature of noble appearance, with his branching horns, bright eyes, and graceful form; and appears worthy of the distinction of being placed at the head of the game animals. In his wild state he is found throughout Northern and Central Europe, in the same portions of Asia, and in the northern regions of America, especially in Canada. But for many centuries he has been kept in a half domesticated state in deer parks and forests, so that in England and Scotland, and even in France and Germany, he can hardly be looked upon as a wild animal. In disposition the stag is gentle and harmless, though when pursued and driven to desperation, he will turn upon his pursuers and fight for his life. It was from a stag thus driven to bay that the Norman Prince Richard, the favourite son of William the Conqueror, met his death in the New Forest. The age of the stag can be told by the size of his horns or antlers, and by the number of branches on them. A stag with ten branches was considered a very valuable animal, and called a "stag of ten." The swiftness of the stag, combined with the excellence of his flesh, has always made him a favourite animal of the chase. He sheds his horns every year, and hides himself in the thickest parts of the wood until his new antlers are grown.

The female of the stag is called the hind, and the young one the fawn. The attachment of the hind to her fawn is very remarkable. She hides it in the deepest covert from every foe, and tends it with admirable affection. In Scotland many wild red deer are still found. The horns are made into knife-handles and other articles, the skin is excellent leather, and the flesh, called venison, is esteemed a great delicacy.

THE ROE

Is a very small species of deer, still found wild in the highlands of Scotland, though it has become extinct in England, except in a half tame state in parks. The buck or male is somewhat larger than the female or doe, and has short horns on his head, while the female has none (see *Plate* IX., *b* and *c*). The roe deer do not associate in herds, but in couples, their fawn remaining with them till about nine months old. Their food in summer is grass, in winter broom, heath, and the tender branches of the fir and birch, and the catkins of hazel and willow. The roe is naturally a native of the mountains, and it is said that the flesh of those which have been brought up in low and flat districts is always of an inferior quality. In summer the hair is much shorter, thinner, and smoother than in winter, when nature seems specially to provide the little roe with a coat suited to the season. The colour of the hair is a mixture of deep red and grey. It is said that the roebuck can never be completely tamed.


d
c
a

THE FALLOW DEER

Is between the roe and the stag in size. The horns are not divided into branches, but spread out broad and flat (see *Plate* x., *a*). In colour the fallow deer vary, some being dark brown with lighter spots, others reddish, others of a pale fawn tint. The doe is without horns, and the buck, like the stag, has a new pair every year, each pair larger than the last, till he has attained his full growth. The duration of the fallow deer's life is from fifteen to twenty years. His flesh is preferred to that of the stag, being more tender and better flavoured. In England large herds of fallow deer are kept in parks, where they range about at full liberty, allowing strangers to approach to a certain distance, and then bounding away with great quickness, and turning, after a time, to gaze at the intruder. Generally the deer in a park form into various herds, which feed separately, each herd chasing away any intruders from one or the others who may seek to associate with them. Not unfrequently, combats occur between the various herds; but the fallow deer is not nearly so pugnacious as the stag, who, so far as his own kind are concerned, is exceedingly given to brawling and fighting. The fallow deer, like the stag, has two remarkable holes or slits under its eyes, through which it is said to draw in the air, as through the nostrils; and this is the more probable as, in drinking, it thrusts its nose deeply into the water, keeping the nostrils immersed for a long time. A breed of fallow deer, that has flourished greatly in England, was introduced by James I., who brought some specimens home from Norway, when he returned from the famous journey during which he married Anne of Denmark.

THE SPRING BUCK or SPRINGBOK (*Plate* IX., *d*)

Is one of many kinds of antelopes found in South Africa. These creatures exists in vast numbers in the great uninhabited plains at the back of Cape Colony, where they roam across the country in herds of many thousands. The springbok takes its name from the agility with which, when pursued or alarmed, it jumps from crag to crag, or flies in long leaps across the plain. And, indeed, the swiftness with which the springbok and the other Cape antelopes are endowed is necessary for their very existence, for flight is their sole defence against the many enemies who lie in wait for them. The colonists shoot them down in numbers: they are the favourite food of the lion and other beasts of prey lurking in the thicket; and even the hyena pursues them, and drags many a victim from their flocks. But, on the other hand, these antelopes exist in so many varieties, and in such vast numbers, that the attacks of all their enemies seem powerless to reduce their mass in any great degree. Sparmann, the African traveller, speaks of two thousand who all came down at once to drink at the same well. Vaillant, a French naturalist, while travelling in the wilds in the rear of Cape Colony, found himself encircled by a vast herd of antelopes, all travelling southward in search of fresh pastures and running streams; for one of the droughts which frequently occur in Southern Africa had burned up the grass on which they fed, and dried up the rivers. He estimated their numbers at no fewer than fifty thousand. These migrations of the antelopes are sometimes a source of great annoyance and loss to the colonists; for the little intruders break into fields and gardens, eating up "every green thing" with the perseverance and rapacity of a swarm of locusts. These antelopes are graceful in form. Their colour is generally a light brown. The males have small horns, the females none. Their flesh is agreeable and wholesome, and of their skins many articles of clothing are made. Thus the colonists and natives are well recompensed for the occasional depredations of the antelopes in their search after food.

THE HARE AND THE RABBIT TRIBE.

The hare belongs to a very well known and a very useful tribe of the animal kingdom. There are few children who have not seen the timid hare, dead, and exposed for sale in the game dealer's window, even if they have not seen the creature alive scampering over the fields, and generally presenting the very image of fleetness combined with fear. The Latin name given by naturalists to the hare, *Lepus timidus*, points to the fearfulness which is the chief feature in its character; and this timidity and aptitude to discern and fly from the first approach of danger is the means given by Providence to the hare to escape from the many foes who lay snares for its life. Unprovided with any effective weapons wherewith to fight, the hare is admirably furnished with the means of discerning danger, and avoiding it by flight. Its hind legs are much longer than the fore legs, and thus it can readily run up hill, and, indeed, generally seeks a rising ground when flying from its foes. Its ears are peculiarly long, and of tubular shape, and thus are available, like the ear trumpets used by deaf persons, in distinguishing distant sounds. (See *Plate* XI., *a.*) The eyes are placed so far back in the head that the hare can almost literally see the pursuers behind it when it is running straight forward; and however rich the pasture on which it feeds, its body never becomes fat or heavy. Thus its speed is undiminished at all seasons of the year.

But speed is not the only means used by the hare to escape from its foes. When hunted, no animal displays more cunning or greater resources of stratagem to baffle its pursuers. Knowing that the hounds hunt by the scent, the hare will try to baffle them by doubling, or returning on its own traces for a time, so that the hounds become bewildered. At others, it will run for a considerable distance along the top of a quickset hedge, with the same object of baffling the hounds; or will run and take refuge among a flock of sheep, or in the hole, or, as it is called, the *form*, of another hare. Frequently it will return by round-about ways to the place whence it started when first alarmed: and to this fact the poet Goldsmith alludes in those exquisite lines of the "Deserted Village" in which he expresses his hope of returning to his old home. He says:

> "And as a hare whom hounds and horns pursue
> Pants to the place from whence at first he flew,
> I still had hopes, my long vexations past,
> Here to return, and die at home at last."

The hare is found in most parts of Europe and Asia, and there are also American varieties. Its food is vegetables of all kinds, and many garden plants, especially parsley, of which it is extravagantly fond. In winter, when the supply of fresh food fails, it feeds on the bark of young trees, which it gnaws in such a manner as frequently to destroy the tree entirely. Market gardens near towns often suffer from the depredations of the hare, especially when an unusually hard time in winter drives the timid creatures from the fields to the vicinity of the dwellings of man, where they hope to find subsistence.

The hare is not watchful and timid without good cause. Many beasts and birds of prey are among its enemies; and such numbers are slain, that the species would quickly become extinct, but for the number of young brought forth by all the hare and rabbit tribe. A hare will frequently have four sets of young ones, three or four each time, in the course of the year. For about three weeks she feeds the young leverets; and when they are only a month old, they are left to provide for themselves. Still, in spite of their numerous foes, they seem rather to increase than to diminish in number.

Although the flesh of the hare is esteemed delicate food, the Israelites were forbidden by


a
b
c
d
e

the Mosaic law to eat it, as it was not an animal that *parted the hoof*, as well as chewed the cud. The Ancient Britons were likewise prohibited by the Druids from eating the hare. In spite of their natural timidity, "performing" hares have often been exhibited, having been trained by their masters to beat drums, and perform other feats of a noisy and startling kind. Their skin is used in manufacturing hats.

The manner in which the hare chooses different abodes at various seasons is well described in the following lines:

"'T is instinct that directs the jealous hare
To choose her soft abode. With steps reversed
She forms the doubling maze; then, ere the morn
Peeps through the clouds, leaps to her close recess.
As wandering shepherds on the Arabian plains
No settled residence observe, but shift
Their moving camps, so the wise crafty hares
Oft quit their seats, lest some more envious eye
Should mark their haunts, and by dark treacherous wiles
Plot their destruction . . . .
When spring shines forth, season of love and joy,
In the moist marsh, 'mid beds of rushes hid,
They cool their boiling blood. When summer suns
Bake the cleft earth, to thick wide-spreading fields
Of corn full grown they lead their helpless young.
But when autumnal torrents and fierce rains
Deluge the vale, in the dry crumbling bank
Their forms they delve, and cautiously avoid
The dripping covert. Yet when winter's cold
Their limbs benumbs, thither with speed returned,
In the long grass they skulk, or shrinking, creep
Among the withered leaves."

THE VARYING HARE (*Plate* XI., *c*),

Called also the Alpine hare, is much smaller than the common species. It obtains its name from the fact that its summer coat of grey changes in winter to a snowy whiteness. It is found among the rocks in the coldest parts of Europe, Asia, and America, and is also occasionally met with in the highest and bleakest regions of Scotland. Like many other animals, the Alpine hares are sometimes driven by the rigour of winter to quit their mountain haunts, where they hide securely among the clefts of the rocks, and to descend into the plains in search of food. The Alpine hare, unlike the common kind, is easily tamed, and lives contentedly in captivity, distinguishing itself by its playfulness, and its fondness for sweet delicacies, especially honey. Instances have been known in which this kind of hare has been of a coal-black colour.

THE RABBIT (*Plate* XI., *c*)

Is a well-known little animal, bearing a great resemblance to the hare in outward appearance, but far inferior to "Puss" in size. Rabbits also are social creatures, living in large communities in *warrens*, where they dig their holes, in which they hide during the heat of the day, coming out in the morning and evening to feed; whereas the hare crouches solitary in her form, listening for every sound of danger. The rabbit likewise differs from the hare in seeking refuge in his burrow when he is alarmed by an enemy, whereas the hare at once rushes away from her home on the approach of any pursuer.

The rabbit is found in all parts of Europe except the coldest, and in the temperate parts of Asia and Africa. It has been imported into America, where it also thrives well. The peculiarity about the rabbit is in the immense number that may be produced within a short period from a few individuals. The female, or doe rabbit, has frequently no fewer than seven litters of young ones within a year, and generally each litter consists of six or seven rabbits. The common grey wild rabbit is well known as an article of food. Its skin is also used in the manufacture of hats and other articles of dress. A great number of dead rabbits are brought from Belgium and Holland, chiefly by way of Ostend, for the London market. These are a larger species than the English kind. Tame rabbits are often kept for amusement by boys. They are generally white and black. Fancy rabbits are those whose ears, instead of being fixed in an upright position on each side of the head, lap over, or *lop*, as it is called; and according to the way in which the ears fall, either in a *horn-lop*, an *oar-lop*, or in the perfect *lop*, is the rabbit considered valuable. These tame rabbits are much larger than the wild kind. Rabbits feed chiefly on grass, which they nibble off very closely with their sharp teeth; they are also fond of most vegetables, such as carrots, turnips, &c., and of bran and corn. They do not require to drink; and too much moisture in their food is injurious to them, rendering them liable to a disease called the "rot."

THE BEAVER.

The beaver (*Plate* XII., *d*) may truly be called a remarkable animal, and has been often cited as an instance of the marvellous instinct with which certain creatures have been endowed. In some animals this instinct appears most wonderfully in the ingenious manner of procuring food; in others it manifests itself, as in the hare and fox, in the numerous stratagems the creature employs in escaping from danger: in the beaver it is most strikingly shown in the marvellous skill with which he constructs his dwelling. Not content with a mere burrow or form, like the rabbit and hare, or with a nest on a bough or on the ground, like the thrush or the swan, nothing short of a village, built on what is to him a navigable river, will suffice for the beaver; and truly admirable and worthy of study is the labour he will undergo, and the expedients he will adopt, to fashion his village to his liking.

The beaver is about two feet long and a foot high. Its head is round, its fore legs short, the hinder legs long, and the hind feet webbed. The colour of the beaver is a light brown. Its broad singularly shaped tail is covered with a horny skin, in fish-like scales, and is used by the beaver as a rudder in swimming. The sharpness of the beaver's teeth is very remarkable. The little creature can gnaw through the trunk of a tree by perseveringly working with these formidable instruments. Its food is chiefly berries and the bark of young trees. The home of the beaver is in North America, though anciently it also inhabited some parts of Europe.

In the autumn a community of two or three hundred beavers will make systematic preparations for building their village. They invariably choose the side of a lake or stream; and if the water is too shallow for their purpose, or makes them fear that they will be "frozen out" in the winter, they proceed, with the skill of engineers, to deepen it. Just as a stream is dammed up in the neighbourhood of a mill to husband and regulate the water supply, do the beavers construct a dam, sometimes more than a hundred feet long, to keep the water at a proper level. This dam is made of branches of trees, gnawed from the stems by the little architects' sharp teeth, and laid along in lines, with clay and stones intermingled, to render the bank impervious to water. At the base this dam is twelve feet thick, but gradually narrows towards the top till it is only three feet across at the edge. Near the dam, the beavers build their bell-shaped huts, which are inhabited by from a dozen to thirty beavers each, and rise to a height of six feet above the water. The careful beaver also lays in a stock of branches and strips of bark for winter provisions; and takes care, moreover, to construct a curious place of refuge—a hole dug out of the bank, in some spot near his dwelling, whither he may retire if surprised. But all his precautions are often unavailing. His soft fur is of such value, that the hunter pursues him perseveringly; and, tracing him to his retreat, often captures the unhappy beaver with all the young family that share his dwelling.

The following is an account of a tame female beaver, kept for some months in his garden, by a scientific gentleman. "She was about half grown, and, except the tail and hind feet, bore not a very distant resemblance to a great overgrown water rat. She fed on bread and water, and gnawed several vines, jessamines, and hollies that were within her reach. When she ate, she sat on her hind legs, and held the bread in her fore paws, like a squirrel. In swimming, she held her fore feet close under the throat, swimming with her hind feet only, and steering her course with her tail. She would keep under water for two or three minutes, and then come up to breathe. She swam much faster than any water fowl, and under water she moved as fast as a carp. She was very brisk, and throve well upon the food she took, and was turned into a spring to bathe three or four times a week. She was at length killed by a dog."

In former times the beavers were very plentiful in North America; but such numbers of them have been killed by the hunters and trappers that they are now becoming scarcer and scarcer every year.

THE MUSK BEAVER (*Plate* XII., *e*)

Is a much smaller animal than the proper or castor beaver. It does not exceed a foot in length, and, like the common beaver, inhabits North America. The musk beaver does not attempt to construct dams and villages on the grand scale followed by his larger cousin; but he manages to build himself a very neat little cottage of clay and branches, with a dome-shaped roof. He builds a new dwelling every autumn, and at the approach of winter, retires into it with his family, coming out occasionally, through the ice and snow, to feed on roots and the bark of trees; for he has not, like the large beaver, the instinct to lay up a stock of provisions for the winter. The female musk beaver has three families in the year, consisting of three or four little ones each time; thus these creatures would increase rapidly but for the numerous enemies, among man and beasts, with whom they have to contend. The study of the arts employed by the beaver and many other animals to provide for their wants, is replete with instruction. In the words of the poet Pope, we may advise our readers to

"Learn from the birds what food the thickets yield;
Learn from the beasts the physic of the field;
Thy arts of building from the bee receive;
Learn of the mole to plough, the worm to weave;
Learn of the little nautilus to sail,
Spread the thin oar, and catch the driving gale.
Here too all forms of social union find,
And hence let reason late instruct mankind:
Here subterranean works and cities see;
There towns aërial on the waving tree.
Learn each small people's genius, policies,
The ant's republic, and the realm of bees;
How those in common all their wealth bestow,
And anarchy without confusion know;
And these for ever, though a monarch reign,
Their separate cells and properties maintain."

THE FOX.

> "Foxes have holes, and the birds of the air have nests; but the Son of Man hath not where to lay His head."—*Luke* ix., 58.

The fox (*Plate* xiii., *b*) is an animal of the dog tribe. It is found in many varieties, almost every part of the world having its own species, excepting the hottest latitudes. Among the many varieties may be mentioned the arctic fox of the northern regions, the black fox of Siberia, whose fur is exceedingly valuable, and the grey and silvery fox of the warmer parts of North America. All these, and many other species, possess the main features of the fox, namely, the sharp muzzle, long fur, short legs, and bushy tail. The arctic fox is a far less sagacious animal than its relations who dwell in warmer climates.

In England the fox is well known, alike as a favourite animal of the chase, and a very mischievous neighbour to the farmer, for whose poultry he has an especial liking. Indeed, he is such a cunning thief, that were it not for the amusement he affords to the hunter, he would probably have been long ago exterminated. There are three varieties in England, differing in size, but all of the same reddish colour: the cur fox, the smallest of these, is the most common. The fox possesses many qualities of the dog. For his size he is decidedly courageous; he will bite his enemy fiercely, and when once he fixes his teeth in a foe, can hardly be made to let go his hold. The sharpest pain will hardly force a cry from him. He can be tamed without much difficulty, and will attach himself strongly to those who are kind to him; but his temper is always uncertain, and he will often snap spitefully at the hand that caresses him. His food is very various. He will eat small birds and frogs, snails and insects; mice and rats do not come amiss to him; to berries and fruits he is very partial, and his fondness for grapes especially has been proverbial since the days when Æsop wrote the fable of the "Fox and the Grapes." Even in the Bible we find reference to this fact, in the verse of Solomon's Song: "Take us the foxes, the little foxes, that destroy the vines, for our vines have tender grapes." On the sea shore he preys upon the crabs and shell-fish, and is said to entrap the unsuspecting oyster by thrusting a pebble into its open shell, and thus preventing the valves from closing. Frequently hunted himself, he is in his turn a great hunter, destroying young pheasants, partridges, leverets, rabbits, and all small animals that are not strong enough to resist him. Honey also has such charms for him, that he will risk the anger of the bees in his attempt to steal it; but it is in attacking the poultry that he displays all his cunning.

The fox makes for himself a hole or burrow in the earth, generally in a bank, or under the roots of a tree. He takes care to have more than one entrance to this retreat, so that, if danger approaches through one door, he may escape by another. Accordingly the huntsman is careful to stop up the holes, that the fox, who, when first started, generally makes for his hole, may be compelled to flee across the country, finding his usual retreat cut off. Not unfrequently he takes wrongful possession of the hole dug by a badger, and establishes himself and his family therein. He chooses the night-time for his depredations; and thus the poet, in describing the evening operations on a farm, rightly enumerates among the other precautions taken against danger and loss, that

> "The snare for master fox is set."

The female fox is remarkable for the care and affection with which she brings up her young. Instances are known, in which foxes have carried their cubs considerable distances from their former abode, when they suspected the approach of danger; and sometimes they have even been known to climb trees, that they might deposit the cubs in the forks of the branches, out of the reach of the eager hounds.


b
f
d
e
g
a
c

Among other examples of this nature, the following is well authenticated. "A female fox, having a cub, was unkennelled near Chelmsford, by some gentlemen's hounds and friends, and pursued by them a considerable distance, with all the eagerness of sport. The poor animal, at the moment of their approach, felt for the safety of her young one; and snatching it up in her mouth, fled before her pursuers for several miles, panting under the weight of her burden, but resolved to preserve it at the hazard of her own life. At length, exhausted by fatigue and fear, she was attacked by a mastiff in a farmer's yard, and, unable to support her offspring any longer, she dropped it at the farmer's feet, who kindly saved it from destruction, while the mother happily saved her own life from the multiplied dangers by which she was surrounded." The fox has a very strong and peculiar smell, by which the hounds can trace him for a long distance.

THE JACKAL (*Plate* XIII., *a*)

Is a creature closely resembling the fox in many particulars. It is found in great numbers in the central and southern parts of Asia, but cannot, like the fox, endure much cold. In the whole of Africa jackals are to be met with. Its height is from fifteen to twenty inches, and its length from the snout to the tail about two feet and a half. The general colour is dusky on the back, and a tawny yellow below. The tail is bushy, the snout less pointed than that of the fox. The jackal is very easily tamed, and grows as familiar as a dog, running after its master, and sporting and frisking round him, anxious to attract his attention and to be caressed, and readily answering to its name. Their food, like that of the fox, is very various. They are omnivorous, devouring vegetable and animal substances with equal voracity. Unlike the fox, they will feed on carrion without being hard pressed by hunger; nor are they solitary like the fox, who dwells in a burrow with only the cubs for company, and goes out alone for prey. Jackals, on the contrary, hunt their prey in packs of from fifty to two hundred; scouring across the country like a pack of hounds in full cry, barking and yelping noisily, and arousing all the animals in their neighbourhood from nightfall to daybreak. Thievish like the fox, they plunder gardens, outhouses, and poultry yards; but far less fastidious than Reynard in their fare, they devour almost anything that comes in their way, including the hides of oxen, and even leather thongs and saddles. In the desert they will frequently follow the march of a caravan for many days and nights, in order to prey upon any camel or horse that may perish from exhaustion, and be left behind by the troop. The name, "the lion's provider," which has been given to the jackal, from the prevalent idea that it hunts to provide the king of beasts with food, has little foundation in fact. The truth is, that the howling of a pack of jackals rouses up all the beasts of the forest, including the lion, who takes his share of the smaller and more timid creatures as they fly in terror across the plain.

Buffon, the naturalist, gives the jackal a very bad character, asserting that "he unites the impudence of the dog with the dastardliness of the wolf; and, participating in the nature of each, seems to be an odious creature, composed of all the bad qualities of both." This is very hard upon the poor jackal, which, when tamed and properly educated, proves himself a very good-humoured, sportive little fellow.

THE HEDGEHOG.

This little animal, which has sometimes been called the English porcupine, is chiefly remarkable for the prickly coat he wears—a true hauberk or shirt of mail, which protects him against every enemy—and for his strange power of rolling himself into a ball when attacked, and thus completely hiding his head and paws, and presenting to his enemy somewhat the appearance of a large brown prickly chestnut, with which none but the most daring would wish to meddle. This power proceeds from a peculiarly tough and strong muscle with which his back is furnished; and so pertinaciously does he maintain his position when once he has rolled himself up, that hardly anything short of the application of fire will induce him to unroll himself and come out of his natural stronghold. The hedgehog is about ten inches in length, and has a long nose, not unlike the snout of a pig in shape. His legs are very short, and weak in appearance, and his eyes are small. During the day he lies asleep, but sallies out in the evening; and during the night he is very lively, going to and fro in quest of insects, fruits, and herbs, on which he feeds. During the winter he sleeps away most of his time in a bed of moss or dry leaves. He is quite harmless, though superstition has attached him, like the cat, to the service of witches. In Shakespeare's "Macbeth," the whining of the hedge-pig is mentioned by one of the witches, as a signal that it is time to prepare their magic cauldron.

The Rev. Gilbert White, the naturalist of Selborne, in speaking of this animal, says: "Hedgehogs abound in my gardens and fields (in Hampshire). The manner in which they eat the roots of the plantain in my grass walks is very curious. With their upper mandible, which is much longer than their lower, they bore under the plant, and so eat the root off upwards, leaving the tuft of leaves untouched. In this respect they are serviceable, as they destroy a very troublesome weed; but they deface the walks in some measure by digging little round holes. . . . . In June last I procured a litter of four or five young hedgehogs, which appeared to be about five or six days old; I find they are born blind, like puppies, and could not see when they came into my hands. Their spines are quite white at this age; and they have little hanging ears, which I do not remember to be discernible in the old ones."

SHREWS.

Of these little creatures there are no fewer than twelve species, not differing in any very essential particular from each other. They greatly resemble the rat in appearance, and all have sharp muzzles and cutting teeth. The first species is

The Fetid Shrew (*Plate* xiv., *d*). This shrew is only three inches long, and is found in most parts of Europe, and the northern division of Asia. It is very like the common mouse in appearance, and takes up its abode in ruined buildings, or burrows in the ground. Its food is insects, corn, and any refuse it can find. It obtains its name from the offensive odour of its flesh, which is so tainted that the cat and owl, though they hunt and kill it, will not eat it. Its eyes are small and its ears short. It is quite harmless.

The Water Shrew (*Plate* xiv., *e*) is somewhat larger than the fetid shrew. Its colour is black above, and grey or white below. It swims well, and takes up its abode in the neighbourhood of water. The pike and other fish feed upon it greedily. It has a chirruping voice, like that of a cricket. It burrows like a water rat in the banks of streams, and lives upon grubs and other water insects.

The Pigmy Shrew differs from the other species only in the smallness of its size. It is not more than an inch long, and is supposed to be the smallest of four-footed creatures; hence its name Pigmy, from the Pigmies, a supposed nation of dwarfs. There are other species, such as the Mexican, the Perfuming Shrew, &c.

Harmless and inoffensive as is the poor little shrew, the ignorance and superstition of the people in old days gave it a very bad name. The simple villagers asserted that the bite of a shrew mouse was poisonous, and could only be cured by cutting a shrew in two, and laying the halves across the wound. Cattle over whose bodies a shrew mouse had run were supposed to become sick and ailing, and could only be cured by a shrew ash. The superstition is thus explained by Gilbert White: "A shrew ash is an ash whose twigs or branches, when gently applied to the limbs of cattle, will immediately relieve the pains which a beast suffers from the


a
d
b
e

running of a shrew mouse over the part affected; for it is supposed that a shrew mouse is of so baneful and deleterious a nature, that, wherever it creeps over a beast, be it horse, cow, or sheep, the suffering animal is afflicted with cruel anguish, and threatened with the loss of the use of the limb. Against this accident, to which they were continually liable, our prudent forefathers always kept a shrew ash at hand, which, when once medicated, would retain its virtue for ever. A shrew ash was made thus: Into the body of the tree a deep hole was bored with an auger, and a poor devoted shrew mouse was thrust in alive, and plugged in, no doubt, with several quaint incantations, long since forgotten." And then the superstitious villagers thought that an animal injured by a shrew mouse could be healed by the touch of a branch of the shrew ash. The remedy was as imaginary as the evil it was intended to cure.

BIRDS.

"You winged choristers, that dwell in woods, and there maintain a quire,
Whose music doth all art excel, nought can we emulate, but admire;
You, living galleys of the air, that through the strongest tempest slide,
And, by your wanton flight, who dare the fury of the winds divide.
Praise HIM, and in this harmony and love
Let your soft quire contend with that above."

WE have now to speak of a great class of animals very different from those we last considered. After the "beasts of the field," that were made subject to man, we come to the "fowls of the air," or, as we generally call them, the great race of birds; and here again we are struck with the infinite variety of species, and admire the wisdom with which the great Creator has provided each with all that is necessary for its subsistence, from the greatest to the least. "Behold the fowls of the air," the Saviour said to the men to whom He wished to teach reliance on the Divine care, "for they sow not, neither do they reap, nor gather into barns; yet your heavenly Father feedeth them. Are ye not much better than they?" And thus it is, from the lordly eagle in his nest on the lofty crag to which no man can climb, from the great albatross flying over the sea a thousand miles from land, down to the little wren in its tiny nest in the coppice, or the pretty redbreast hopping across the snowy field in winter, the Lord provides for all. Two sparrows are sold for a farthing; but not one can fall without His knowledge.

The classes of birds are as various as those of the quadrupeds, and correspond with the latter in many particulars of disposition and habit. Thus the birds of prey, that live upon flesh, are fierce and cruel, like the cat tribe, living alone, and generally avoiding the neighbourhood of man and of beasts and birds. The gallinaceous birds, or those of the poultry tribe, on the other hand, are sociable and friendly, living together in harmony, and readily submitting to the control and protection of man. Some birds, like the amphibious animals, seem equally at home on land and in the water. Some, like the rabbit among quadrupeds, are remarkable for their rapid increase in number; others astonish us by their swiftness; while many, though strong on the wing, never care to leave the grove in which they have once established themselves. Others, guided by an unerring instinct, wing their way, at the approach of winter, to the warmer regions of the south, returning to their northern haunts when the cold season is past, and heralding by their coming the approach of genial spring and sunshine.

Some general features, however, all birds have in common. If we notice the shape of their bodies, we shall see that they are admirably adapted for quick movement. From the shape of the swimming birds the first ideas of the form of a ship have doubtless been taken, while the swallow careering through the air has no small resemblance to an arrow or bolt shot from a bow. The bones of all birds are hollow, and very light compared with the size of the bird, and the muscles of the wings are very large and strong; the senses, too, are highly developed. Some birds have the faculty of seeing at a great distance with marvellous acuteness. The hawk will discern his prey at a great distance; and in the cities of the East, where the wild birds are sometimes fed by the inhabitants as a matter of duty, if a man goes out upon the flat roof of a house, and strews food around him, in a few moments he will see the storks and other birds careering through the air towards him, though when he went up not a single bird was in view. Though they have no external ears, the sense of hearing is very fine in birds, for many of them can not only hear sounds at a great distance, but can distinguish the difference between the various notes and modulations. This is shown by the fact that bullfinches learn to whistle tunes, and many birds of the parrot and pye tribe to utter words and sentences.

In sagacity, too, and the faculty of imitation, some birds are not inferior to the most teachable of quadrupeds. Every one in our large towns has seen the "performing canaries," trained to draw little waggons, to fire tiny cannon, to fall down as if shot, and to go through many similar feats and tricks; and an instance is recorded in which a stork played at hide-and-seek with a party of children, taking his share in the amusement with an air of grave enjoyment very ludicrous to behold. The affection of many species for their young is also very remarkable. Some will lure the hunter or the dogs away from their nest by affecting to be wounded, and thus tempting their enemy to pursue them by the hope of capture; until, when they consider they have placed a sufficient distance between the pursuer and their nest, they rise suddenly in the air and speed away home, leaving the baffled foe gazing after them in astonishment. One of our great writers, Joseph Addison, especially notices the care and attention bestowed by the hen upon her domestic concerns. "With what caution," he says, "does the hen provide herself a nest in places unfrequented and free from noise and disturbance! When she has laid her eggs in such a manner that she can cover them, what care does she take in turning them frequently, that all parts may partake of the vital warmth! When she leaves them, to provide for her necessary sustenance, how punctually does she return before they have time to cool and become incapable of producing an animal! In the summer you see her giving herself greater freedom, and quitting her care for above two hours together; but in winter, when the rigour of the season would chill the principles of life and destroy the young ones, she grows more assiduous in her attendance, and stays away but half the time. When the birth approaches, with how much nicety and attention does she help the chick to break the prison — besides covering it from the injuries of the weather, providing it with proper nourishment, and teaching it to help itself!"

In this book there will not be space to describe with any completeness the vast variety of birds found in different parts of the earth. But we shall have something to say concerning the principal families and their habits and customs, so that our young readers may have a general idea of this beautiful part of the living creation, and may afterwards pursue the subject more at length in more advanced books on the subject. But whether the account be shortened or extended, one thing cannot fail to strike the observer; namely, the infinite goodness and beneficence of the great Creator, by whom all things were made, and by whose power and mercy every living being is sustained.

> "HE hears, and feeds their feathered families;
> HE feeds his sweet musicians, nor neglects
> Th' invoking ravens in the greenwood wide;
> And though their throats' hoarse rattling hurt the ear,
> They mean it all for music—thanks and praise
> They mean, and leave ingratitude to man.
> Oh, HE is good, HE is immensely good!
> Who all things formed, and formed them all for man;
> Who marked the climates, varied every zone,
> Dispensing all His blessings for the best,
> In order and in beauty."

ON SOME RAPACIOUS BIRDS.

"True to the season, o'er our sea-beat shore,
The sailing osprey high is seen to soar
With broad unmoving wing; and circling slow
Marks each loose straggler in the deep below;
Sweeps down like lightning! plunges with a roar!
And bears his struggling victim to the shore."

In this book we proposed to speak especially of Domestic Animals, or of those which man has tamed for his use, and taught to live in a sociable manner around his dwelling-place. In speaking of birds we shall follow the same rule; but here it is necessary to make a slight alteration in our plan. In many of the great classes into which birds are divided, some individuals have been tamed; others have lived in a half domesticated state around the dwellings of man; while others of the same tribe have always maintained their independence. Thus, while the lordly eagle soars in wild freedom above his mountain crag, the falcon, who belongs to the same family, namely, that of the rapacious birds, has been for ages tamed and used in the chase; thus again, while the turkey struts about in our poultry-yards, the largest, and certainly the most conceited of its denizens, his cousin, the turkey buzzard, flies about in freedom in the American forests.

Rapacious birds in general are distinguished by the same features which mark the beasts of prey. They live alone, and have none of the social qualities exhibited by birds of other classes. Goldsmith, in his "Animated Nature," well describes their dispositions. He says:

"Formed for war, they lead a life of solitude and robbery. They inhabit, by choice, the most lonely places and the most desert mountains. They make their nests in the clefts of rocks and on the highest and most inaccessible trees of the forest. Whenever they appear in the cultivated plain or the warbling grove, it is only for the purposes of depredation, and are gloomy intruders on the general joy of the landscape. They spread terror wherever they approach: all that variety of music which but a moment before enlivened the grove, at their appearing is instantly at an end: every order of lesser birds seek for safety, either by concealment or flight; and some are even driven to take protection with man, to avoid their less merciful pursuers."

The largest birds of this class are the different species of eagles and vultures. These birds are known by their lofty flight, their large powerful wings, and their wild fierce natures. They live on small quadrupeds and birds of every kind; and when they have young ones to feed, they often commit great depredations among the flocks, carrying off many a young lamb to their nest on the lofty crag, to feed the sharp-beaked hungry eaglets who scream for prey. The fierce warlike nature of the eagle made it a fit emblem or sign of the Roman power; and therefore the Romans carried figures of eagles, carved in gold, in front of their armies, as we now carry flags or ensigns; and every Roman soldier had to take an oath that he would never on any account desert his standard. The Romans also considered this bird as sacred to the god Jupiter, who was always represented with an eagle by his side.

The chief species of the eagle are—the GOLDEN EAGLE, which in former times was sometimes trained to the chase, being taught to pursue and capture other birds; until the falcon, a smaller and lighter bird, was found much better adapted for this duty;—the COMMON EAGLE, which measures about three feet from the bill to the tail, and is found in most of the northern and central countries of Europe, in mountainous desolate regions, but which disappears, like all birds and beasts of prey, before the advance of man;—the BALD EAGLE, which takes its name from the head and neck being white, and thus presenting an appearance of baldness as contrasted with the deep brown colour of the body: this bird is found chiefly in North America;

the White Eagle, the Black Eagle, and the Spotted Eagle, all distinguised by, and named after, their peculiar colour.

THE OSPREY, OR SEA EAGLE (*Plate* xvi., *c*),

Is worthy of particular mention. This bird is an admirable example of the way in which the great Creator has fitted every creature for the kind of life it is intended to pursue. The sea eagle, as its name implies, dwells near the ocean, building its nest upon a crag on the shore, whence it can skim across the waters, catching the fish as they swim near the surface; for fish are its chief food, though it occasionally flies inland, robbing the farmyards, and seizing any bird or small quadruped that comes in its way. As fishes are slippery creatures, apt to wriggle and writhe themselves out of the grasp of their enemies, the osprey is furnished with long sharp talons, curving downwards in a half circle; and with these sharp talons it holds its prey as with hooks, and soars away towards its nest, while the poor captive struggles in vain to escape. Its legs, too, are devoid of feathers, as, from its manner of seeking its prey, they are almost always wet. The osprey is a large kind of eagle, measuring from three to four feet from the beak to the tip of the tail. An instance is recorded of an eagle of this kind in Westmoreland, that swooped down and seized an unfortunate cat, who was harmlessly sunning herself in the fields; but Puss showed she had talons as well as the eagle, and with her claws and teeth she made such a brave fight of it, that the osprey was dragged down to the ground, and was at last glad to make his escape, wondering, perhaps, what this new kind of *hare* might be, that tore and scratched so savagely.

THE VULTURES

Have a general resemblance to the eagle, but their featherless heads and naked legs give them a disagreeable appearance. Unlike the eagle, the vulture lives on carrion or putrid meat; and were its head covered with feathers like that of the eagle, it would become still more repulsive than it is, for the feathers would quickly become clogged and matted together with the disgusting food on which it lives. The vulture is confined to the hot latitudes, and in many Eastern countries is very useful in clearing away the dead animals whose carcases are left to rot in the city or on the plain, and would infect the air, if the vultures did not devour them. The largest species of vulture is the American condor, a bird of great size, but heavy, stupid, and cowardly.

THE ERNE (*Plate* xv., *a*)

Is distinguished by its iron colour, dark above and yellowish below. It is a small species, but flies very swiftly, and is said to discern its prey at a great distance.

THE FALCON AND HAWK KIND,

Among the rapacious birds (See *Plates* xv. and xvi.), though smaller than the eagle, are more like that royal bird, in form and in character, than is the heavy loathsome vulture. In the days of old, when all kinds of field sports were the chief delight of kings, princes, and nobles, when learning and study were considered as unimportant and foolish in comparison with a knowledge of hunting and hawking, the falcon was highly prized, and to kill a bird of this kind was a more serious matter than the slaying of a mere peasant. Immense sums were given for falcons; and though the people grew up in utter ignorance, the falconers were thoroughly educated and trained.

Great attention was paid to the breed of falcons, and the office of falconer was one of importance and profit. Our ancestors distinguished not only the various species, but the smaller varieties of the tribe, calling each by its separate name, as the kestrel, the ger-falcon, the lanner, the merlin, &c. They are distinguished from the meaner kinds of the same family, the kites and buzzards, by the length of the wing-feathers, which enables them to fly with great swiftness, while the short-winged buzzards and kites are heavy and slow in comparison. The falcons are also more courageous and more teachable than the meaner birds of prey.

THE GOSHAWK (*Plate* XV., *e*)

Is a handsome bird, though he does not belong to the "generous" or "noble" tribe of falcons, his wings being too short to entitle him to that rank. But he is a courageous handsome bird, very fierce and predatory, and a great pest to the farmyard. He may be trained like the nobler falcons, though he will never equal these in speed and docility. Buffon, the naturalist, once kept a couple of these hawks together for some months, but they never showed any affection for each other, and at last the male killed the female in an access of fury.

THE GER-FALCON (*Plate* XVI., *a*)

Is nearly as large as the osprey, and is said to have been originally brought from Iceland and the northern parts of Europe. He is a beautiful bird, the greatest of the falcon tribe, and likewise the most generous and docile. Accordingly, in the days when lords and ladies rode out to enjoy the sport of falconry, while other and meaner kinds of falcons were trained to pursue the smaller birds, the ger was started at the lordly heron, whose sharp beak would soon have proved fatal to an assailant of less courage and address. The stork and the crane, large and formidable birds, likewise fall victims to the ger-falcon. Strange to say, the female of the falcon tribe was always preferred, for purposes of the chase, to the male; for, contrary to the general rule, according to which the male bird is superior in size and brilliancy of plumage to the female, among the falcons the female is always the larger and handsomer bird; and thus the male was called by the falconers a *tiercelet*, which signifies that it is a third smaller than the female.

THE BUZZARD (*Plate* XVI., *b*)

Is a dull heavy bird of its kind, common enough in the English forests, where it frequently takes possession of an old crow's nest, which it lines with wool, and then it lays its eggs, and brings up its young in the ill-earned domicile. Goldsmith, in his "Natural History," gives the following account of the buzzard: "He is a sluggish, inactive bird, and often remains perched whole days together upon the same bough. He is rather an assassin than a pursuer; and lives more upon frogs, mice, and insects, which he can easily seize, than upon birds which he is obliged to follow. He lives in summer by robbing the nests of other birds and sucking their eggs, and more resembles the owl kind in his countenance than any other rapacious bird of day. His figure implies the stupidity of his disposition; and so little is he capable of instruction from man, that it is common to a proverb to call one who cannot be taught, or continues obstinately ignorant, a *buzzard*. The honey-buzzard, the moor-buzzard, and the hen harrier are all of this stupid tribe, and differ chiefly in their size, growing less in the order I have named them. The goshawk and sparrow-hawk are what Mr. Willoughby calls short-winged birds, and consequently unfit for training, however injurious they may be to the pigeon-house or the sportsman. They have been indeed taught to fly at game; but little is to be obtained from their efforts, being difficult of instruction and capricious in their obedience."

THE POULTRY KIND.

"The careful hen
Calls all her chirping family around,
Fed and defended by the fearless cock,
Whose breast with ardour glows, as on he walks,
Graceful, and crows defiance. * * * The turkey nigh,
Loud threatening, reddens; while the peacock spreads
His many-coloured glory to the sun,
And swims in radiant majesty along."

Birds of the poultry kind were intended by nature to live among men in a domestic state, and they occupy among birds the place filled by the horse and ox tribe among quadrupeds. Unlike the rapacious birds, they are sociable and cheerful, delighting in each other's society, and shunning solitude as much as the eagle or falcon would seek it. Their wings are generally short and their bodies plump, so that they are neither able nor willing to fly far from their abodes, or to seek inaccessible solitudes among the rocks. As they feed on grain and seeds, their legs and claws are strong; not formed, however, like those of the rapacious birds, for seizing and holding prey, but for scratching up the ground in search of food. The gizzard with which they are provided enables them to digest the hard seeds they swallow; and the numerous chicks they produce render them very valuable to the farmer's wife, whose poultry-yard forms an important part of the domestic economy of the farm.

THE COCK AND HEN

Are too well known to need any long description. They have been introduced into almost every country in the world, and, like the horse and ox, appear to thrive almost wherever man can live. There are many different species, varying in size and plumage, but all present the same general features.

Just as among the falcons some kinds are more courageous and noble than others, so we find that some breeds of cocks will fight courageously with adversaries twice their own size, while others will succumb after a short resistance. A little game cock, for instance, will boldly attack a farmyard or, as he is sometimes called, a dunghill cock twice his own size, and put him to flight by mere rage and fury. The farmyard cock, however, until he has been beaten by an enemy, rules in a despotic and determined manner among the poultry, and expects deference and obedience from every feathered fellow creature he meets.

The cock and hen are said to have come from Persia, but they were known all over the Old World in very remote times. Cæsar found them in Britain when he landed half a century before our Saviour's birth, and even to Iceland they had made their way in early times.

In White's "Natural History of Selborne" occur the following interesting remarks respecting the habits of poultry:—"Many creatures are endowed with a ready discernment to see what will turn to their own advantage and emolument, and often discover more sagacity than could be expected. Thus, my neighbour's poultry watch for waggons loaded with wheat, and running after them, pick up a number of grains which are shaken from the sheaves by the agitation of the carriages. Thus, when my brother used to take down his gun to shoot sparrows, his cats would run out before him, to be ready to catch up the birds as they fell. The earnest and early propensity of the *gallinæ* to roost on high is very observable, and discovers a strong dread impressed on their spirits respecting vermin that may annoy them on the ground during the hours of darkness. Hence poultry, if left to themselves and not housed, will perch the winter through on yew trees and fir trees; and turkeys and guinea-fowls, heavy as they are, get up into apple trees; pheasants also in woods sleep on trees to avoid foxes; while pea-fowls climb to the tops of the highest trees round their owner's house for security, let the weather be ever so cold or blowing. Partridges, it is true, roost on the ground, not having the faculty of perching; but then the same fear prevails in their minds, for, through apprehension from pole-cats and stoats, they never trust themselves to coverts, but nestle together in the midst of large fields, far removed from hedges and coppices, which they love to haunt in the day, and where at that season they can skulk more secure from the ravages of rapacious birds."

THE PHEASANT

Has long been known in England as the chief among our game birds. In years when no especial inclemency or wetness of the weather thins their numbers, pheasants abound in the woods and coppices where the game animals are preserved by the owners; and with the 1st of October commences the time when they fall victims to the sportsman's gun. For beauty and brilliancy of plumage the pheasant is unsurpassed, except by the peacock. The poet Pope has described

> "His glossy varying dyes,
> His purpled crest, and scarlet-circled eyes,
> The vivid green his shining plumes unfold,
> His painted wings, and breast that flames with gold."

The pheasant is a harmless sociable bird, and readily adapts itself to various climates. Asia Minor seems to have been its first home; but it spread from one country to another throughout the Old World, and thus there are various species in different countries. In England the pheasant thrives in its wild state, feeding on berries and acorns, and making a nest of dried leaves in the forest. When taken young, the birds become as tame as chicks, and may be kept in the poultry-yard, and fed on the food given to the poultry generally. At night, as already observed, they roost on high trees to be out of the way of danger; and, when disturbed, they usually fall an easy prey to the sportsman, for their flight is heavy, and they rise with a loud whirring noise that at once directs attention to them. The delicacy of the pheasant's flesh is well known. Among the varieties of this class of birds may be mentioned the GOLDEN PHEASANT (*Plate* XVII., *b*). This is the most beautiful kind. It is a native of China. Its brilliant plumage is one blaze of gold colour above, and of rich deep red below.—The SILVER PHEASANT (*Plate* XVII., *a*), the male of which species is of a fine silvery-grey above, with delicate serpentine lines, and of a violet colour below, while the female is of a reddish-brown hue, delicately shaded with green, and with black bands.—The GLEAMING or LOPHOPHOROUS PHEASANT (*Plate* XVI., *e*), with a crest of feathers on its head like the peacock. This is a splendid pheasant, its plumage gleaming with emerald tints intermingled with red and gold. The male pheasant of this variety is one of the most gorgeous of birds; but in this, as in every kind of the pheasant tribe, the plumage of the female is plain and homely compared with that of her mate.—Lastly, the ARGUS PHEASANT (*Plate* XVIII., *c*), so called from the numerous black and white spots, reminding the spectator of the hundred eyes of Argus, with which the tail feathers are adorned. This pheasant comes from Sumatra and the islands of the Malay Peninsula.

THE TURKEY (*Plate* XVII., *f*.)

This well-known bird is supposed to be a native of North America, where it is still to be found commonly enough, in a wild state, in the dense forests of the Western States. It does not appear to have been known in Europe until some time after the discovery of America; and this fact strengthens the supposition that the turkey was first brought by some of the Spanish discoverers of the New World to Europe. Considering his heavy build and slow short flight, it is certainly very unlikely that he could ever have found his way across the ocean, except in a ship. The turkey is valued for his flesh. His delight is to wander with his wives about the precincts of the farmyard in search of insects and larvæ, especially the eggs of ants, of which he is immoderately fond. This peculiarity is cleverly noticed in Gay's fable of "The Turkey and the Ants," where the old hen turkey is represented as having forsaken the barn with her infant train in quest of a change of diet. She comes unexpectedly upon an ant-hill, and while devouring as many of the eggs as she can swallow, she bursts out into a rapturous speech, inciting her brood to eat freely, and assuring them that "an ant is most delightful meat." And then she goes on to allude feelingly to the vile gluttony of man, who eats turkeys, "until," she says, "Christmas shortens all our days."

The quarrelsome and yet cowardly disposition of the turkey cocks is aptly described by Goldsmith in the following paragraph:—"Though so furious among themselves, they are weak and cowardly against other animals far less powerful than themselves. The cock often makes the turkey keep at a distance, and they seldom venture to attack him but with united force, when they rather oppress him by their weight than annoy him by their arms. There is no animal, how contemptible soever, that will venture boldly to face the turkey cock, that he will not fly from. On the contrary, with the insolence of a bully, he pursues anything that seems to fear him, particularly lap-dogs and children, against both which he seems to have a peculiar aversion. On such occasions, after he has made them scamper, he returns to his female train, displays his plumage around, struts about the yard, and gobbles out a note of self-approbation."

THE PEACOCK (*Plate* XVIII., *a*)

Is a native of India. This most brilliant of birds was known in very ancient times; for in the Bible it is mentioned as being imported into Judæa by the fleet of King Solomon. The peacock shows the adaptability to various climates characteristic of the species to which it belongs, and consequently we find it domiciled in every country, as far north as Sweden and Norway.

Among the Romans it was considered the height of splendour to crown a banquet with a peacock, and among our English ancestors the peacock formed the gorgeous centre-dish at many a great feast. The bird seemed, however, to be introduced more for ornament than use, for its flesh was not very highly esteemed; and thus it was regarded rather as a distinguishing decoration of the board than a dish whose flavour might delight the guests; therefore the peacock appeared at the table with his magnificent train spread out for the admiration of the beholders, and not, like the humbler poultry, to be plucked and deprived of his feathers, and to be judged merely by the merits of his flesh.

The food of the peacock, like that of the turkey, consists chiefly of barley and other kinds of grain; but, when kept as an ornament in the park or pleasure-ground of a rich man, it will frequently reduce the gardener to despair by effecting an entry into the garden, where it commits great havoc among the choicest flower-beds in its search after insects. The cry of the peacock is extremely harsh and disagreeable: it seems as though nature had granted extra beauty of plumage to the bird as a compensation for its utter want of melody.

The following remarks from White's "Natural History of Selborne," upon the voices of various birds of the poultry kind, may interest our young readers. The reverend author says:

"No inhabitants of a yard seem possessed of such a variety of expression, and so copious a language, as common poultry. Take a chicken of four or five days old, and hold it up to a window where there are flies, and it will immediately seize its prey with little twitterings of complancency; but if you tender it a wasp or a bee, at once its note becomes harsh, and expressive of disapprobation and a sense of danger. When a pullet is ready to lay, she intimates the event by a joyous and easy soft note. Of all the occurrences of their life, that of


b
a
d
e
f
c

to itself, so that a schoolboy would at once pronounce on the sort of nest before him. This is the case among fields, and woods, and wilds; but in villages round London, where mosses and gossamer, and cotton from vegetables, are hardly to be found, the nest of the chaffinch has not that elegant, finished appearance, nor is it so beautifully studded with lichens, as in a more rural district; and the wren is obliged to construct its house with straws and dry grasses, which do not give it that rotundity and compactness so remarkable in the edifices of that little architect. Again, the regular nest of the house martin is hemispheric; but where a rafter, or a joist, or a cornice may happen to stand in the way, the nest is so contrived as to conform to the obstruction, and becomes flat or compressed."

Among English singing birds

THE GOLDFINCH (*see Plate* XX., *a*)

Has always been a great favourite. Bechstein, the German naturalist, truly says, "This is the most delightful of all chamber birds, remarkable alike for the beauty of its plumage and the excellence of its song, its proved docility and cleverness." The pretty touch of yellow on its wings, and the bright scarlet on its head, its graceful form and rapid movements, all contribute to its beauty; while its cheerful, sociable nature, the readiness with which it knows the hand that feeds it, and the comparative ease with which it can be reared, all combine to make it popular. The goldfinch is found in most countries of Europe. In Central Germany it breeds in great numbers. Goldfinches fly in little flocks of twenty to thirty in the spring and autumn, and at those periods of the year great numbers of them are captured in nets by the bird-catchers, especially in Sussex and Kent, on the Downs. Their nests are perfect models of bird architecture. They generally build in high situations, in the forks of the smaller branches of tall trees. The nest is very firmly fixed in its place, that it may resist the winds which shake the slender branches to and fro. Grahame, the Scottish naturalist and poet, speaking of the position of the nest, says:

"Sometimes, suspended at the limber end
Of plane tree spray, among the broad-leaved shoots,
The tiny hammock swings to every gale;
Sometimes in closest thickets 't is conceal'd;
Sometimes in hedge luxuriant, where the brier,
The bramble, and the crooked plum tree branch
Warp through the thorn, surmounted by the flowers
Of climbing vetch and honeysuckle wild,
All undefaced by Art's deforming hand.
But mark the pretty bird himself! how light
And quick his every motion, every note!
How beautiful his plumes! his red-tinged head;
His breast of brown: and see him stretch his wing—
A fairy fan of golden spokes it seems.
Oft on the thistle's tuft he nibbling sits,
Light as the down; then 'mid a flight of downs
He wings his way, piping his shrillest call."

To lure the little songsters into their toils, the bird-catchers use bunches of thistles, in autumn; for the goldfinch, at that season, feeds principally on thistle seeds. In spring a tame goldfinch in a cage serves as a decoy to lure his wild brethren into captivity.

Among the other finches, a very numerous and melodious family, a few must be mentioned. First—

THE BULLFINCH,

A burly fat little fellow, with a round black head, a short beak, and a delicate red breast. He is very fond of picking the buds off the fruit trees, so that the gardener accounts him an enemy.

He is a sociable little fellow among other birds, and has a good ear for music. Accordingly, bird fanciers sometimes teach him to whistle a tune; and of course this musical accomplishment greatly increases his value. His term of life extends from six to eight years.

Then there is

THE CHAFFINCH,

A merry little fellow, whose piping cry, "Spink! spink!" often breaks the silence of the autumn fields and hedgerows. This bird, like the bullfinch, can be taught to pipe a melody, and the patient German trainers take great pains to develop this talent. Such great value, indeed, is attached to this artificial song, that Bechstein mentions an instance in which a cow had been given in exchange for an accomplished chaffinch; hence the German proverb, "A chaffinch is worth a cow." Bechstein also says, "It is remarkable that the song of these birds varies according to the district they inhabit, so that different songs are sung in the forest from what are sung in the Hartz; and by this the task of amateurs is regulated." Those birds which can execute the "double trill" are most highly valued. In England we have not yet become so critical, and a chaffinch is cheap enough to be within the means of purchase of most schoolboys.

THE CITRIL FINCH (*Plate* xx., *e*)

Is most like the canary in form and plumage. It is found chiefly in the south of Europe, and many are said to be sold for green or grey canaries, the difference being so small that unpractised purchasers may readily mistake a good citril for a real canary.

THE SISKIN, OR ABERDEVINE (*Plate* xx., *d*),

Is another of those birds whose song can be much improved by education. In an aviary it will frequently imitate the notes of the canary and of other exquisite songsters. Indeed, nearly all the finches are in one respect like children, namely, in being much influenced, so far as their manners and accomplishments are concerned, by the company among whom they are thrown by circumstances. They will adopt a good clear note as readily as they will catch up a bad and defective one. In Germany the aberdevine breeds freely, building its nest on a lofty pine tree, and attaching the tiny structure firmly by means of moss and insect cocoons to the extremity of a waving bough. It lays five or six grey eggs, sprinkled with purple dots. Its colour is generally a mixture of greenish yellow and black. The aberdevine is a migratory bird, and only stays in England from April to September. It feeds chiefly on seeds of trees and wild flowers, preferring those of the fir and beech, the thistle and dandelion.

The most general favourite among the English birds of this class, after the goldfinch, is, however,

THE LINNET (*Plate* xix., *c.*)

This well-known little songster is found all over England and Scotland, and stays with us all the year. It has but a plain brown coat, though some of the males are prettily tinged with red on the head; but its voice is so sweet and mellow, that it is rightly preferred to many a gorgeously-attired but harsh-voiced competitor. When the male linnet has become thus marked, which occurs in the third year of its little life, it is known as a redpole. Linnets are often found in flocks, in the autumn, about rick-yards, which they visit in quest of the seeds on which they live. The female does not exhibit the red tinge displayed by the male.

But the king of all the finch tribe is undoubtedly

THE CANARY (*Plate* XIX., *b*),

So called from its supposed original abode, the Canary Islands. The first canaries seen in Europe are said to have been brought wild from the island of Elba; and the manner of their introduction into that island is related in the following account:

"A ship, bound for Leghorn, having on board a number of these beautiful finches, then first made an article of merchandize, was wrecked near the island of Elba, on which island the released birds found the climate so congenial to their nature that they settled and bred there, and would probably have become completely naturalized, had not their beauty and powers of song attracted the attention of bird-catchers, who hunted them so assiduously, that, after a while, not a single specimen was left on the island. It was natural that the birds thus caught should be sent first into Italy; and from that country, accordingly, we have the earliest accounts of tame canaries. There and in Germany they are still bred in greater numbers than in any other part of the European continent. It is from the Rhineland, and about Thuringia especially, that we now derive our principal supply of imported birds; but some of the choicest canaries are those bred in this country."

In its wild state the canary is of a greyish brown colour, tinged with green. The bright yellow birds, that are esteemed the most valuable, are only bred in captivity, and are not nearly so strong as the green varieties. The canary has always held his place as prime favourite as a cage bird. His song is exquisite in its melody and variety; but the little fellow is so well known among us that a lengthened description of him would be quite unnecessary. The docility of this pretty bird has been frequently seen. He seems, equally with the monkey, capable of exhibiting feats of skill and dexterity; and several exhibitions of the kind have been shown, in which the pretty little canary was the chief actor. The most remarkable of these exhibitions was that of a Belgian lady, Mdlle. Vandermeersch, shown in London some years ago, which astonished every spectator. The little conjurors seemed to perform their parts with a display of quite human reason. The following account appeared in a London newspaper at the time:

"The birds are in a cage with several compartments. In front of the cage is arranged a platform filled with cards, each exactly similar to the other on the side presented to the birds, but bearing various inscriptions on their prefaces, such as the letters of the alphabet, the numerals singly and in combination, the days of the week, month, or year, the months, the seasons, &c. On the bidding of any one of the company the birds tell the day of the week, month, or year; the seasons; the time by any one's watch; or they will spell any word indicated, provided it does not contain any one letter twice over. All these things are done with the most perfect precision, and there is no apparent collusion. Mdlle. Vandermeersch does not touch the birds or the cards, and the little animals hop out of their cages and pick out the cards with their beaks, seemingly with a very serious effort at recollection and calculation."

We have here described the finches somewhat at length, because they are the birds, among our English songsters, with which our young friends who live in cities have most to do; but it would take a much larger book than this to speak of the many varieties of birds we have here in England; from the blackbird, or, as our great poet Shakspeare calls him, the ousel-cock, to the wren.

> "The ousel-cock so black of hue, with orange-tawney bill,
> The throstle with his note so true, the wren with little quill."

There are the varieties of


c
a
b
d
e
f

THE LARK,

The **Skylark**, **Titlark**, and **Woodlark**, the first being especially renowned for the strength and beauty of his song; the large handsome family of

THRUSHES OR THROSTLES,

with their rich melodious voices, which they lift up when the snow of winter lies thick upon the ground in the bleak month of January; singing as if to announce to us that spring is coming, in spite of the cold wind and dark weather; so that Burns, the Scottish poet, says:

> "Sing on, sweet thrush, upon the leafless bough;
> Sing on, sweet bird; I listen to thy strain.
> See, aged Winter, 'mid his surly reign,
> At thy blithe carol clears his furrowed brow."

Nor must we omit all mention of the king of the English song birds, the clear-voiced

NIGHTINGALE,

A small plain brown creature, that has the gift of charming every hearer as it sits warbling in the leafy covert, but whose song is confined to a short season of the year, that the treat may be the more valued for its rarity. Then there is the merry

BUNTING (*Plate* xix., *f*),

With his stout body and bullet head, reminding one somewhat of a jolly well-to-do farmer. But enough has certainly been said to convince every young reader that there are, in every hedgerow and in every forest of England, creatures as wonderful in beauty and as worthy of notice as any that inhabit the far-off islands of the tropical seas.

THE BUTCHER BIRD (*Plate* xxi.)

Strictly speaking, this sprightly little fellow should be classed among the rapacious birds, for he is a very pugnacious, fierce little fellow, boldly fighting against birds more than double his size, and making them flee before him by the fierceness of his attacks and the energy of his pursuit. His name "Butcher Bird," would lead us to imagine him a very big, formidable-looking individual, who flies about, putting his fellow birds to death as a butcher slaughters oxen and sheep; but his butchering propensities are mostly exercised upon insects and little birds, of which he destroys a large number. His courage, however, is undoubted; and though the largest species is not bigger than a lark, while the smallest does not exceed a sparrow in size, all the three kinds of butcher birds are alike remarkable for courage and fierceness. Goldsmith in his "Natural History" says:

"It is wonderful to see with what intrepidity this little creature goes to war with the pye, the crow, and the kestril, all above four times bigger than itself, and that sometimes prey upon flesh in the same manner. It not only fights upon the defensive, but often comes to the attack, and always with advantage, particularly when the male and female unite to protect their young and to drive away the more powerful birds of rapine. At that season they do not wait the approach of their invader; it is sufficient that they see him preparing for the assault at a distance. It is then that they sally forth with loud cries, wound him on every side, and drive him off with such fury that he seldom ventures to return to the charge. In these kinds of disputes they generally come off with the victory; though it sometimes happens that they fall to the ground with the bird they have so fiercely fixed upon, and the combat ends with the destruction of the assailant as well as the defender. For this reason, the most redoubtable birds of prey respect them; while the kite, the buzzard, and the crow seem rather to fear than seek the engagement."

The French call the butcher bird *ecorcheur*, or strangler; while one species is called by the Germans *Neuntödter*, or nine-killer, in allusion to the number of creatures that fall victims to the fierce little robber. In fact, the butcher bird is a sort of feathered "Jack the Giant Killer," and is feared accordingly.

There are three species of this terrible little fellow. The GREAT ASH-COLOURED BUTCHER BIRD (*Plate* XXI., *a*) is seldom seen in England, but is numerous enough in France. Like most birds of its kind, it hides in the woods during the summer months, when food is plentiful; but in the winter it sallies forth into the plains, and hunger increases its natural fierceness. All butcher birds are remarkable for their attachment to their young. The female feeds the little ones first with insects, afterwards with morsels of flesh; and the male bird flies to and fro most indefatigably to provide meat for the hungry little brood. Through all Central and Southern Europe the butcher bird is found. The RED-BACKED BUTCHER BIRD (*Plate* XXI., *b*) differs from the former in its more diminutive size, and in having a beautiful reddish tint piercing through the general grey tone of its plumage. This is a bird of passage, not unfrequently found in England during the summer, but flying away, when the autumn mists arise, to the warmer regions of Africa. This species is the "nine-killer" of the Germans. The SMALL BUTCHER BIRD (*Plate* XXI., *c*) has a yellowish tone. It is hardly bigger than a titmouse, and is decidedly the smallest of the birds of prey, though as fierce as the larger varieties. There are several foreign kinds, distinguished from each other by a slight difference in colour.

And now we must conclude our sketch of the feathered portion of the creation with a description of a kind of bird often kept in captivity, and one which seems to adapt itself so well to the society of man, that it even imitates his speech: we have a few words to say respecting

THE PARROT TRIBE

(*Plate* XXII.)

These birds are found in wonderful variety in all the tropical parts of the Old and New World; and as they cannot fly far, and are utterly unable to cross the seas, each region has its own peculiar species. There are almost a hundred varieties; but the three general classes are the COCKATOOS, known by the crest on their heads; the MACAWS, known by their large size, bright colours, and their fleshy, featherless cheeks; and the PARROTS, smaller in size than the macaws and cockatoos, and with feathers covering the whole of the head to the base of the beak.

The ancient Greeks were acquainted with one or two species of the parrot tribe; and among the Romans, under the luxurious emperors, these birds became such favourites that enormous prices were given for them, and they were provided with regular tutors, whose office it was to develop their speaking powers to the utmost, and who were frequently obliged to wield that tree of knowledge, the birch, to make their feathered scholars attend to the instruction given. When Columbus discovered the New World, his companions were greatly astonished and delighted at the gorgeous aspect of the parrots, then seen for the first time; and in the triumphal procession in which the spoils of the West India Islands were carried to the foot of the throne of Ferdinand of Arragon and Isabella of Castile, the parrot bore a distinguished part and attracted general admiration. In disposition, birds of the parrot tribe are generally much more spiteful than courageous. They will fight if compelled to defend themselves, but evidently consider that the better part of valour is discretion, and seem to act upon the old saw, that "He who fights and runs away will live to fight another day." Therefore, when attacked, they look for an opportunity of escape, and only confront their foes when retreat is cut off.

A WONDERFUL PARROT—CONCLUSION.

The parrot is especially adapted for climbing. Of his four toes two are pointed backwards, and thus he is enabled to grasp the bough on which he sits and to clamber from one branch to another, sometimes swinging head downwards from his perch: his strong bill also assists him in this exercise. He is sociable in disposition, living in his wild state in companionship with many of his own kind. Both the upper and lower part of the beak are moveable, and thus the parrot is enabled to seize and hold a much larger object than his beak could otherwise grasp. The following account of the sagacity of a Brazilian parrot is taken from the voyage of a naturalist in South America:

"A certain Brazilian woman, that lived in a village two miles distant from the island on which we resided, had a parrot of this kind, which was the wonder of the place. It seemed endued with such understanding as to discern and comprehend whatever she said to it. As we sometimes used to pass by that woman's house, she used to call upon us to stop, promising, if we gave her a comb or a looking-glass, that she would make her parrot sing and dance to entertain us. If we agreed to her request, as soon as she had pronounced some words to the bird, it began not only to leap and skip on the perch on which it stood, but also to talk and to whistle, and imitate the shoutings and exclamations of the Brazilians when they prepare for battle. In brief, when it came into the woman's head to bid it sing, it sang; to dance, it danced. But if, contrary to our promise, we refused to give the woman the little present agreed on, the parrot seemed to sympathize in her resentment, and was silent and immoveable; neither could we, by any means, provoke it to move either foot or tongue."

On *Plate* XXII. a specimen is given of each of the three chief classes of the parrot tribe. Letter *d* represents the great Red and Blue Macaw, the most gorgeous of all the family. His plumage glitters with mingled carmine, gold, and azure. He is a native of the West Indies and the adjoining coasts of the mainland, especially Guiana and Brazil. The natives of those regions eat the flesh of the macaw with great relish. The macaw builds its nest in the hollow of a lofty tree, and lays one or two eggs twice in the year. It is easily tamed, and is often seen in captivity in England. The Small Green Parrot is designated by letter *e*, while *f* marks the Great Black Cockatoo, which has sometimes, from its noble colour, been termed the Indian Crow.

CONCLUSION.—THE ARCTIC REGIONS.

Lastly, that our young friends may quit this book with an idea of the infinite variety of creation, we turn from the birds of gorgeous plumes inhabiting the torrid zone, to a very different class of creatures, denizens of the frozen polar regions, where snow and ice cover the iron ground during the greater part of the year, where the sun for half a year at a time does not appear above the horizon;

> "Where, for relentless months, continual night
> Holds o'er the glittering waste her starry reign.
> Here Winter holds his unrejoicing court;
> And through his airy hall the loud misrule
> Of driving tempests is for ever heard:
> Here the grim tyrant meditates his wrath,
> Here arms his winds with all-subduing frost;
> Moulds his fierce hail, and treasures up his snows,
> With which he now oppresses half the globe."

But, even here, a kind Providence has cared for man; and the dwellers in these frozen zones have their meat given to them in due season, just as the denizen of the burning climes beneath the equator finds in his own land the food he needs. For these arctic seas swarm with creatures peculiar to them. Animals of the seal kind, in a great variety of forms, are eagerly chased by the fisherman; and their flesh, their oil, and their sinews provide him with the necessaries of life.

WALRUSES AND SEALS

Are, therefore, to the Esquimaux as important as the horse, ox, and sheep are to the inhabitants of the temperate regions of the earth, or the patient camel to the Arab of the desert; and, therefore, a book which treats of the animals most useful to man, may fitly conclude with a few words upon the tribe of seals, or *Phocæ*.

The *Phoca* tribe is found in all the great seas, but the larger kinds are confined to the cold regions near the poles. In the tropics we can meet only with little sea dogs; we must go to the regions of perpetual ice and snow if we wish to see the huge sea elephant and sea lion. The form of these creatures and the shape and position of their paws show that they are intended by nature for a life in the waters. Their movements on land are very clumsy and ungainly. They seem rather to jerk themselves along than to run or walk, but they can swim with great ease and swiftness. To the Greenland Esquimaux the seal is a great treasure. He eats the flesh and the fat; he makes his tent, his boat, and clothes of the skin. The sinews furnish him with thread for sewing, a string for his bow, and twine for his fishing-nets; and with the larger bones he strengthens his frail boat, while the smaller ones do duty as nails and needles. Consequently, the hunting of the *Phoca* is the one art in which the Esquimaux excels. He pursues his prey with untiring patience and industry, watching in his boat for hours till a seal appears, and then piercing it with a spear or harpoon. To chase the creature over blocks of ice or on the frozen shore is a harder task, for, clumsily as the seal shuffles along, it gets quickly over the ground; so here the Esquimaux employs stratagem, and sometimes dresses himself in seal-skin, so that the *Phocæ* may take him for one of their own kind, and allow him to approach and throw his unerring harpoon. The hardy sailors who chase the Greenland whale also have frequent combats with the larger kinds of seal.

In *Plates* XXIII., XXIV., the following specimens of the seal tribe are shown: *a* is the COMMON SEAL; *b*, the GREAT SEAL, differing from the former chiefly in size; *c*, the SEA LION; *d*, the ARCTIC WALRUS, or MORSE; and *e*, the ELEPHANT SEAL.

J. Ogden and Co., Printers, 172, St. John Street, E.C


d
e
a
b
c

Junk