

A
DESCRIPTION
OF ABOUT
Three Hundred Animals,
EMBELLISHED WITH
Numerous Engravings on Wood.



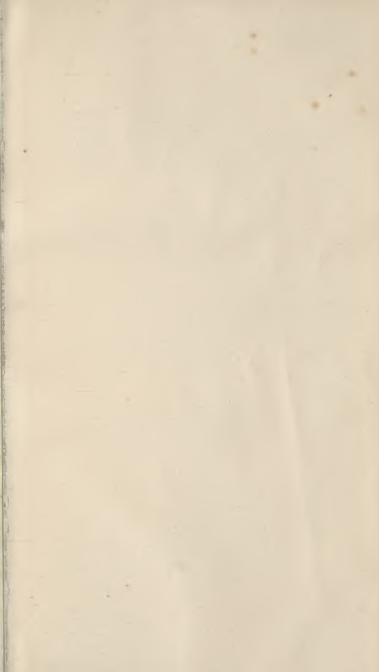
DUNFERMLINE.
PRINTED BY & FOR JOHN MILLER.

1827.

ABS. 1. 81. 11







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Frontispiece,



A
DESCRIPTION

OF

ABOUT 300 ANIMALS:

CONTAINING

A SHORT AND ACCURATE HISTORY

OF REMARKABLE

**Quadrupeds, Birds, Fishes,
Reptiles, & Insects;**

INTERSPERSED WITH

A VARIETY OF INTERESTING ANECDOTES,

Illustrative of their Habits and Economy.

AND

Embellished with numerous Engravings on Wood.

*"Vast chain of being! which from GOD began,
Nature's scarce sentient, up to perfect man;
Beast, bird, fish, insect; what no eye can see,
No glass can reach—from infinite to Thee."*

DUNFERMLINE:

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1827.



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INTRODUCTION.

NATURAL HISTORY is a science most important and extensive. It has for its object the works of Him who is "wonderful in counsel and excellent in working." To observe the operations of these, and to classify their appearances, will be the pursuit of those who take pleasure in them. The general phenomena of the universe, the wonders of the heavens, the form and structure of the earth, with its inhabitants and productions, fall, therefore, under its observation.

It is the irrational portion of creation which forms the subject of the following pages. The subject, when we consider the immense number and variety of animated beings, is most extensive when followed out in its details; and accustomed, as it may be, many have been at an early period, to consider a history of *Three Hundred Animals* as comprising the great portion of the animated creation, including beasts, birds, fishes, and creeping things, how must it astonish such readers to be told that there have been enumerated no fewer than 500 *species* or kinds of quadrupeds, each kind containing perhaps millions of individuals;—of birds the number has been estimated at 4,000;—of fishes, 2,500;—of reptiles, 700;—and of insects, modern discovery has enumerated the prodigious number of 44,000 different kinds; besides many thousands of kinds altogether invisible to the unassisted sight! These are disposed through the different regions of the air, the earth, and the water; and all this vast community of sensitive existence is amply pro-

vided for by the all-bountiful Creator.—“These all wait upon Him, and He giveth them their meat in due season:—He openeth His hand, and satisfieth the desire of every living thing.” What a vast, what a boundless idea does Natural History, then, present to us of the creative power and bountiful care of the Almighty Creator! These, his lower works, not only enjoy life, but give indications of a happy existence. The birds skimming through the air or warbling in the groves, the beasts of the field bounding in the forest, and through the lawns,—the reptiles wriggling in the dust, and the winged insects, by a thousand wanton mazes,—all declare that they are rejoicing in their existence, and in the exercise of those powers with which the Creator has endowed them.

But the study of animated nature is not only suited to gratify the curious, and amuse the idle—it is eminently fitted to entice the mind into habits of piety and virtue. Who can reflect upon that boundless beneficence which causes the grass to grow for the cattle, and which feeds the ravens, without experiencing a strong feeling of gratitude for those mercies we are receiving, and of confidence in his providential care; leading us to regard his doings and the operations of his hand, and thus enlarging our conceptions of the loving kindness of the Lord.

A contemplation of the habits and peculiarities of the brute creation, will also inspire us with feelings of humanity towards the inferior order of animals, and such as are more immediately under our power. For, while we observe how the great Creator of all has so

carefully provided for their wants, and fitted them for enjoyment according to their capacities, it surely becomes us to imitate Him in being kind and useful to such ; and should prevent us from wantonly and needlessly torturing, or depriving them of existence.

Method is a most essential requisite in the study of Natural History. Without it, where there is such a multitude of diversified objects presenting themselves to our sight, we would be in "wandering mazes lost." These must have lain undistinguished, like furniture in a lumber-room ; every thing we wish for is there indeed, but we know not where to find the particular article we want. In the following History, therefore, each kind is classed according to the affinity of the individuals with each other, and in the way they are most commonly arranged. The descriptions of the quadrupeds are not, however, placed in the same numerical order as they appear in the following synopsis.

The first class of quadrupeds is that of the horse kind. The marks of this class are, that they are without horns, and that their hoofs are not divided.

The second class is that of the cow kind, of which there are various species ; the whole of them have cloven hoofs, and chew the cud.

The third class is of the sheep kind. They also have cloven hoofs, and chew the cud in the same manner as the preceding class. This class is numerous ; but the different species are all nearly alike in their outward form.

The fourth class is the deer kind. Their hoofs are cloven ; and they have solid horns, which they shed annually.

The fifth class consists of the hog kind.

The sixth class consists of the cat kind. It is extremely numerous, are all carnivorous, and have strong crooked claws, which they can sheath or unsheath at pleasure.

The seventh class is of the dog kind. They also are carnivorous, and are furnished with claws like the former, but they have not the power of sheathing them.

The eighth class is that of the weasel kind ; having a very long though small body, and on each foot five toes, one of which is divided from the others in the same manner as the thumb.

The ninth class is that of the rabbit kind. This class has two large cutting teeth in each jaw.

The tenth class consists of the hedge-hog kind, having claw feet, and being armed with prickles.

The animals belonging to the eleventh class are covered either with a shell or with scales.

The twelfth is of the otter or amphibious kind.

The thirteenth class is that of the ape and monkey kinds, and is very numerous. Their hands and feet bear a strong resemblance to those of the human species.

The fourteenth class consists of winged quadrupeds, as the bat, and some others.

Exclusive of the above-mentioned, there are many animals which seem entirely distinct from any other species ; and consequently, each forms a distinct species. Under this head are to be ranked the elephant, the rhinoceros, and several others.

THE
NATURAL HISTORY
OF
QUADRUPEDS.

CHAP. I.

Animals of the Cat kind.

All animals of the cat kind are chiefly distinguished by their sharp and formidable claws, which they can hide and extend at pleasure. They also are distinguished by having six front teeth, the intermediate ones of which are equal; the grinders are three on each side in each jaw; the tongue is furnished with rough prickles pointing backwards; and the claws are sheathed and retractile, except in the lion, which has them retractile, but not sheathed. They lead a solitary ravenous life; neither uniting for their mutual defence, like vegetable feeders, nor for their mutual support, like those of the dog kind. The whole of this cruel and ferocious tribe seek their food alone; and, except at certain seasons, are enemies to each other. The dog, the wolf, and the bear, are sometimes known to live upon vegetable or farinaceous food; but all of the cat kind, such as the lion, the tiger, the leopard, and the ounce, devour nothing but flesh, and starve upon any other provision.

The cat kind are not less remarkable for the sharpness and strength of their claws, which thrust forth from their sheath when they seize their prey, than for the shortness of their snout, the roundness of their head, and the large whiskers which grow on the upper lip. Their teeth also, which amount to the number of thirty, are very formidable, but rather calculated for tearing their prey than for chewing it: for this reason they feed but slowly; and while they eat, generally continue growling, to deter others from taking a share.

With all their qualifications for slaughter, this kind nevertheless seem timid and cowardly, and seldom make an attack, like those of the dog kind, at a disadvantage; on the contrary, they fly when the force against them is superior, or even equal to their own; and the lion is sometimes so destitute of courage, that he has been scared away by the cries of women and children.



*THE LION.*

In the burning and desolate regions of the torrid zone, in the deserts of Zara and Biledulgerid, and in all the interior of Africa, the Lion reigns sole master. They were much more numerous in former times than at present, which may perhaps be attributed to the general use of fire-arms. The form of this noble animal is lean, bony, and muscular: his head and neck are covered with a majestic mane, which greatly adds to the grandeur of his appearance. The legs are very strong, the tail is long, having a tuft of hair at the end of it; the colour is tawny, except the belly, which is nearly white. The length of a large lion is about eight or nine feet. The burning climate in which he chiefly lives, and the scarcity of water (of which very little is found in those countries) seem to inflame his nature to the highest state of ferocity, which becomes fatal to every animal he meets. It is therefore a happy circumstance, that these animals are decidedly decreasing. The eyes of the lion are bright and piercing; his paws, teeth, tongue, and intestines, resemble those of the cat;

his magnanimous courage, his grateful disposition, and his unrivalled superiority over other animals, justly entitle him to the sovereignty of beasts. He requires from fifteen to twenty pounds of flesh daily, and will seldom touch it if it is not perfectly sweet. His ears are short and round, and his sense of smelling is by no means perfect. The lion arrives at maturity at five years, and will live from seventy to a hundred years. His skin is firm, compact, and thick. Like other beasts of prey, he is often taken by stratagem; a deep hole is made in the earth, over which some living animal is fixed as a bait. Sometimes he is caught in a strong net work, and becomes so confounded when he finds himself entangled, that he may easily be secured.

The *lioness* is considerably less than the lion: she has neither the mane, the beard, nor the tufted tail which distinguishes the male. When deprived of her whelps, she becomes very fierce, and has been known to pursue the depredators over the most dangerous rocks, and even out to sea. Her fury, at that time, is beyond description; and every animal she meets in her way falls a victim to her desperate ferocity. She goes five months with her young, and produces four or five every spring; they are about the size of a large puppy, and are equally harmless, lively, and playful.

The roaring of the lion resembles distant thunder: it consists of a deep hollow growl; but when enraged, he has a different cry, which is short and reiterated. When young, he generally subsists by hunting in the woods, but when he is old and weak, he comes to places more frequented, attacking the herds and flocks that

shelter near the habitation of man, depending more on his courage than subtilty for success. But even on those occasions, he will not attack a man if he can avoid it. However much the lion is in his native soil, the dread of all other animals, when removed from it, he degenerates in size and courage. In such circumstances he will play innocently with domestic animals, and if his natural ferocity returns, he is seldom known to exert it against his friends.

A remarkable instance of this alteration in natural disposition, occurred in the late lion-fight at Warwick. NERO, the lion, was reared in Edinburgh, and of course had never been out of a cage in his life ; and such was the effect of this domestication, that when three of the dogs were let loose upon the noble brute at once, and attacked him with fury, he never got enraged, and merely acted on the defensive ; but in making this defence he gave the first set of dogs a severe castigation, and shewed himself perfectly able to make quick work with them had his wrath been awakened. In the subsequent attack of a fresh set of dogs, he became quite exhausted, and again defended himself with that agonized gentleness which shewed, that the natural ferocity of his species had forsaken him. He sunk down beside the bars of his cage, and the dogs were declared to be the conquerors. His antagonists, however, seemed to have felt his power : of the dogs let loose upon him, one shortly after died, four were severely wounded, and another slightly.

Although the event of this rencounter turned out so differently to the expectations of those interested in the brutal exhibition, yet the pro-

prietor of Nero was induced to try another. WALLACE, the lion destined for the next combat, was also whelped at Edinburgh, in 1819 ; but appeared as wild as if just caught in a forest, and will let one or two known, to him as feeders, approach him when he is in good temper only. Wallace was turned out from his den on the same stage where Nero fought ; and the match was three couples of dogs to be slipped at him, two at a time. His domestic state of existence did not seem to have abated his ferocity. On the first onset he clapped his paw upon one, and took the other in his teeth, with which he deliberately walked round the stage, as a cat would with a mouse. The other two couples were set on, but the lion was not long in settling them. Indeed it appeared evident, that two or three hours a day at the best dogs in the country, coupled, would be merely amusement to Wallace. The dogs were severely wounded, and the lion declared to have won the battle.





THE TIGER

Is the most rapacious and destructive of all carnivorous animals. Fierce without provocation, and cruel without necessity, its thirst for blood is insatiable. Though glutted with slaughter, it continues its carnage, nor ever gives up so long as a single object remains in sight. Flocks, herds, and man himself, of whom it fears neither the sight nor the opposition, are its indiscriminate prey. The tiger seldom pursues his prey, but bounds on it with the swiftness of an arrow, from thickets and generally by the sides of rivers. It is chiefly a native of Asia, and the scourge of India. It will carry off a deer, or other animal, with ease and no impediment to its flight. Its ferocity can never wholly be subdued. It attacks all kinds of animals, even the lion ; their combats are terrible, and often fatal to both. Its colour is a pale yellow, whitening towards the breast and belly ; and the whole of its body is covered with beautiful streaks or bars of black, which give it a fine appearance. The greatest, or royal species of tiger, is about the height of the lion. Tiger hunting is a favourite amusement in Bengal. The tigress

produces from three to four cubs at a time ; and in the defence of her young she is extremely furious.

In the Sundah Rajah's dominions, a peasant had a buffalo fallen into a quagmire ; and while he went for assistance, there came a large tiger, that, with its single strength drew forth the animal, which the united force of many men could not effect. When the people returned to the place, the first object they beheld was the tiger, who had thrown the buffalo over its shoulder, as a fox does a goose, and was carrying it away, with the feet upward, towards its den ; however, as soon as it saw the men, it let fall its prey, and instantly fled to the woods : but it had previously killed the buffalo, and sucked its blood : and no doubt, the people were very well satisfied with its retreat. It may be observed, that some East Indian buffaloes weigh above a thousand pounds, which is twice as heavy as the ordinary run of our black cattle, so that from hence we may form a conception of the enormous strength of this rapacious animal, that could thus run off with a weight at least twice as great as that of itself.

But though this animal is sometimes found to fly from the approach of man, it is at other times found equally ready to attack the human species ; as appears from the account of the loss of Mr Munro, whose shocking death carries a melancholy interest along with it, which will cause it long to be remembered. This fatal occurrence happened in Bengal, in the East Indies, in the year 1792, and the account, as given by an eye-witness, is as follows :—We went (says the narrator) on

shore on Sangar Island, to shoot deer, of which we saw innumerable tracts, as well as of tigers : we continued our diversion till nearly three o'clock ; when, sitting down by the side of a jungle to refresh ourselves, a roar like thunder was heard, and an immense tiger seized our unfortunate friend, poor Munro, and rushed again into the jungle, dragging him through the thickest bushes and trees, every thing giving way to its monstrous strength: a tigress accompanied his progress. The united agonies of horror, regret, and fear, rushed at once upon us. I fired on the tiger ; he seemed agitated. My companion fired also ; and in a few moments after this, our unfortunate friend came up to us, bathed in blood. Every medical assistance was vain ; and he expired in the space of twenty-four hours, having received such deep wounds from the teeth and claws of the animal, as rendered his recovery hopeless. A large fire, consisting of ten or twelve whole trees, was blazing near us at the time this accident took place, and ten or more of the natives were with us. The human mind can scarcely form any idea of this scene of horror. We had but just pushed our boat from this hateful shore, when the tigress made her appearance, almost raging mad, and remained on the strand all the while we continued in sight.



THE COUGAR.

THIS animal differs considerably from the Eastern Tiger, though some writers have thought proper to class them together. It must be allowed, that it resembles the tiger more than any other creature with which we are acquainted, except in its colour, which is a deep brown, rather darker on the back, but inclining to white under the skin. They are very common in South America, where, making frequent excursions by night, even into the streets of those towns which border on the forest, they carry off poultry and other domestic creatures. The native Indians are extremely active in catching them for the sake of their skins; and the arms they make use of for this purpose, are a lance, formed out of hard wood, and a wretched kind of scimitar nearly a yard in length.

THE LEOPARD.

THIS animal rarely exceeds four feet in length, exclusive of its tail, which, in general, measures about two feet, or two feet and a half. Its skin is exceedingly beautiful, the yellow of it is brilliant, and the spots are disposed in clusters. It is found in Senegal, Guinea, and the interior of Africa, in some parts of China, and a few other places. It is by nature highly ferocious, and will attack, without any distinction, every thing it chances to meet. It chiefly delights in the most impervious forests, but will occasionally come out from its gloomy lurking places, and carry destruction among the flocks and herds on the open plain.

*THE JAGUAR.*

THIS is a fierce and destructive animal, and is generally called the American Tiger, which it much resembles in its habits. It is something larger than the wolf, and when hungry, is extremely formidable, restless, and cruel. On such occasions, it lies in ambush in woods and thickets, to watch for its prey, and will spare neither man nor beast. In its mode of feeding, it is savage and cruel; as it tears its victim to pieces with its talons and teeth, seeming to enjoy the luxury of blood. It is marked on the upper parts with streaks of open oblong spots; the upper part of the back with long interrupted stripes; and the sides with rows of regular open marks. The thighs and legs are variegated with black spots, without central spaces. The ground colour of this animal is of a pale yellow, and the spots are black. The throat, breast, and belly, inclining to white; and the tail, which is marked with broad black spots, is not so long as the body. It is asserted that the Jaguar will not touch carrion, unless driven to do so by absolute starvation. When satisfied in its appetite, it becomes cowardly, and will even fly before a

common dog. It is found in Paraguay, Guiana, Brazil, Mexico, the country of the Amazons, and the whole of south America. Brazil, however, seems to be its native climate, at which place it is now become more scarce than formerly, a price being set upon its head. These animals are generally taken in a pit-fall. The jaguarette is of the same species.



THE PANTHER.

FROM its similarity in size, cruelty, and enmity to all other animals, the panther has frequently been mistaken for the tiger. Its chief distinction consists in its being spotted, and not streaked like the tiger. Buffon asserts, that the specific character of this beast does not properly agree with any other animal of the whole genus. The panther is the same to Africa as the tiger is to Asia. It is said to prefer the destruction of other animals to man, whom it never attacks, unless prompted by extreme hunger. The ground colour of the panther is a bright yellow;

the shoulders, thighs, and all the upper parts of the body, are thickly marked with roundish black spots, placed in circles, consisting of four or five distinct spots, and there is generally a central spot in each circle. On the face and legs, the spots are single; and there is on the back a continuation of long spots, lengthening in shape, as they approach the tail, which is prettily marked with large irregular black spots. The breast and belly are of a whitish ground; the former marked with dusky transverse stripes, and the latter spotted in the same manner as the tail. The panther, says M. A. Vaillant, in the settlements near the Cape, is much more dreaded than the lion. The latter never approaches without dreadful roarings: the former, on the contrary, unites treachery with ferocity. He always approaches without noise, gliding along with dexterity, seizes every advantage; and, springing upon his prey, carries it off before any one suspects that he is near. This animal is from five to six feet long; the ears are short and pointed; the eyes fierce and restless; and the aspect extremely ferocious.

THE OCELOT,

Or Catamountain, is one of the fiercest, and for its size, one of the most destructive animals in the world. It is a native of South America. Two of these which had been brought from Carthagena, having been taken from the dam when young, were afterward suckled by a bitch; but before they were three months old, they

had strength and ingratitude enough to kill and devour their nurse. No art could tame or soften their natures ; when food was given them, the male always served himself, before the female ventured to touch a bit. In their savage state these animals have an unceasing appetite for blood, which they suck with the greatest avidity, but frequently leave the carcase otherwise untouched. They generally continue on the tops of trees, where they make their nest, and often bring forth their young. When they spy any animal they can master, they dart down upon it with inevitable exactness.

THE OUNCE.

THIS animal is much smaller than the panther, and is seldom more than three feet and a half long. Its hair, as well as its tail, is considerably longer than that of the panther. In its disposition, it is mild and tractable, and it is employed in India for hunting. It is carried to the field hooded, and, on being shewn where the game lies, it darts upon it, and instantly seizes it ; but if it happens to miss its object, it remains quite motionless, as if sullen at its want of success. It would be vain to attempt retrieving its disgrace by continuing the pursuit ; for although it bounds with greater agility than most other animals, yet it is slow and awkward in running, and has no means of finding the animal it pursues by the smell, as is common among those of the dog kind.



THE LYNX.

THE general size of this animal is nearly the same as that of a middling dog: It is found, with some small varieties, in all the colder countries of Europe, Asia, and America. It fixes its residence in deep woods and other retired places, preying on such animals as are unable to resist its power. It is smaller and stands much lower on its legs than the wolf, and it differs from the panther in the following points:—It has longer hair, with the spots less vivid, and not so distinct; its tail is much shorter and black at the point; the circle of its eyes is white; and its whole appearance is by no means so ferocious. The skin of the male is much more spotted than that of the female, and it walks and springs exactly in the same manner as the cat. It preys on wild cats, weasels, and ermines: it likewise destroys deer, stags, and hares; and seldom devours any part of the carcase, when it can procure a sufficiency of blood. Its flesh is disagreeable. The formation of the ears of this animal is curious, being long, pointed, and tipped with a tuft of black hair. It is seldom found in a warm or even a temperate climate.

THE CARACAL.

THIS animal, in its size and formation, has a close resemblance to the lynx, particularly in the curious circumstance of having its ears tipped in the same manner. The only difference is, that its hair is not so fine or long, its tail longer, and its nature more ferocious ; and that it is found in warm climates only, when the lynx is only met with in cold countries. This animal is called by some writers, the Syagush. It is used in the same manner as the ounce for hunting ; but it seems to have a property which the other has not, namely, that of being able to overtake its prey by pursuing it. Whether this is performed by having a finer scent than the former, or greater swiftness, is uncertain ; but when it overtakes the game, it leaps upon its back, and getting forward to the shoulders, scratches its eyes out, when it becomes an easy prey to the hunters.

THE SERVAL.

THIS animal, which is both fierce and rapacious, is a native of India and Tibet. By writers it has been denominated the tiger cat. This creature, which is something larger than the wild cat, has a large round head, with a depression on the middle of the forehead. In colour it resembles the panther. The eyes are very brilliant, the whiskers long and stiff, the tail short, and the toes armed with long crooked claws. It is seldom seen on the ground, but is always lurking among the branches of trees, where it forms its nest, and lives on birds and other small animals.

*WILD CAT.*

THE cat in its savage state is somewhat larger than the house cat, and its fur being longer gives it a greater appearance than it really has. The general colour of this animal is a yellowish white, mixed with a deep grey. These colours on a close inspection will be found to be disposed like the streaks on the tiger's skin. This animal inhabits the most mountainous and woody parts of our island, living mostly on trees and feeding only by night. It is the most destructive of the carnivorous kinds in this kingdom.

DOMESTIC CAT.

THE Cat, is the smallest animal of the tiger kind, and is the only one with which we live in perfect friendship. Yet still this animal betrays the ferocity of its species by its selfish character, its disposition to turn wild in summer, and its loud and importunate cry. The cat sees better in twilight than by day; is extremely averse to water, cold, and bad smells; on the contrary,

it is very fond of valerian, marum, and cat-mint. She brings forth twice, and sometimes thrice a-year ; produces five or six at one litter, which she hides from the male, who is apt to destroy them. The cat seems to be under no subjection, but to act entirely for herself. Gratitude will not cause her to prefer a benefactor to an old haunt ; and she frequently deserts both for the woods, in which they are to be found much fiercer, larger and stronger. Cats will meet in the night-time, to the amount of some hundreds, at the call of distress from one of their own species. They assemble in crowds, and with loud yells express their horrid sympathies. They have been known to tear the miserable object to pieces, and, with the most blind and furious rage, to fall upon one another, killing and wounding, till there was scarcely one left. Cats are extremely tenacious of life, and therefore have given rise to a proverb ; yet they soon become old, and seldom reach more than ten years of age. One, however, was known which lived to be thirty-two, and within a week of its death was seen catching a mouse.

In the time of Howel Dda, Prince of Wales, who died in 948, it appears that cats were of considerable value, and consequently must have been scarce. The price of a kitten before it could see, was fixed at a penny ; till proof could be given of its having caught a mouse, at two-pence ; after which it was rated at four-pence ; a very considerable sum in days when specie was so scarce. Among the Mahometans, the cat is a particular favourite ; and was the object of high veneration among the Egyptians. In the eastern countries, indeed, the cat still enjoys a

high degree of respectable protection ; and we are informed, by Baumgarten, that there is a kind of hospital for them at Damascus.

The maternal tenderness of this race of animals is the object of admiration to every observer of nature. But it is not only to her own offspring that the cat will shew kindness. In discharging the duties of a mother, if her own young are destroyed or removed, she will rear a suppositious brood. Instances are known of a cat rearing a leveret, three young squirrels, and even of forming an attachment for a rat, which had accidentally been thrown under her protection.

The following anecdote is a remarkable instance of the sagacity of the cat. A murder having been committed at Lyons, in 1800, on the body of a woman belonging to that city, a physician was called in to investigate the business. He found the deceased extended on the floor, and weltering in her blood. A large white cat, which it seems had been much favoured by her late mistress, was mounted on the cornice of a cupboard, at the farther end of the apartment, where it seemed to have taken refuge, and sat with looks expressive of horror and affright, having its eyes fixed on the corpse. The following morning the cat was found in the same situation and attitude ; and though the room was filled with officers of justice, and the clamour and conversation was very loud, nothing could in the smallest degree divert its attention. As soon, however, as the persons suspected of the matter were brought in, the eyes of the cat glared with increased fury ; its hair bristled ; and darting into the middle of

the room, it took a momentary gaze at them, and then retired under the bed. The assassins, conscious of guilt, began to be disconcerted, and, for the first time, their audacity seemed to forsake them. In this instance the cat proved an auxiliary to justice: it probably witnessed the catastrophe, and its behaviour divulged the atrocious deed.

Though extremely useful in destroying the vermin that infest our houses, the cat seems little attached to the persons of those who afford it protection. All its views are confined to the place where it has been brought up; if carried elsewhere, it seems lost and bewildered: neither caresses nor attention can reconcile it to its new situation, and it frequently takes the first opportunity of escaping to its former haunts. Frequent instances are known, of cats having returned to the place from whence they had been carried, though at many miles distance, and even across rivers, when they could not possibly have any knowledge of the road or situation that would apparently lead them to it. This extraordinary faculty is, however, possessed in a much greater degree by dogs; yet it is in both animals equally wonderful and unaccountable.



CHAP. II.

Animals of the Dog kind.*THE SHEPHERD'S DOG.*

THE services and fidelity of the dog species are coeval almost with the history of man himself. Vigilant, faithful, bold, obedient, and tractable in the extreme, this tribe of animals are the most useful guardians of his property, the most devoted attendants and sharers of his toils and fortunes. The varieties of the dog are almost innumerable: the mastiff, the cur, the bull, the greyhound, pointer, beagle, terrier, setter, spaniel, Newfoundland, pug, lap, and water dog, and many others, are found in this island. The mastiffs of Great Britain were famous in the Roman amphitheatre; three of these, or four at the most, are a match for the

lion ; and they will be cut in pieces and die rather than yield. The sagacity of the large dog, when appointed guardian of houses, gardens, yards, &c. is equal to his strength and fidelity. His forbearance under injury, when offered by an unworthy antagonist, is so great, that he has been known, when insulted by a mungrel on board a ship, to take no other revenge than seizing him in his mouth, and dropping him over deck. The skill and obedience of a shepherd's dog makes him equally manageable, and far more useful, than any man. He will, at a word, collect a whole flock, drive them before him, pursue straggling ones, and reconduct them safe into the main troop, with the most wonderful ability. In short, the dog is a treasure without value, a friend in all situations, capable of sympathy, devoted to his master even in death, often his preserver, always his assistant and comforter. This poor animal is frequently neglected, or actually treated with ill usage ; but he must be thoughtless, barbarous, or stupid beyond expression, who can spurn the humble pitiful look, the servile surrender, the melting gestures and suppliant fawnings of his anxious and trembling slave.—The dog is carnivorous ; its stomach digests bones ; it eats grass for a vomit ; voids its urine sidewise ; smells at a stranger, and dislikes beggars or ill-looking people. He seldom sweats, but lolls out the tongue when hot ; is subject to hydrophobia ; hears very quick ; dreams ; the female goes with young sixty-three days, has a litter of from four to eight. It barks at strange dogs or men ; snaps at a stone thrown at it ; howls at certain musical notes ; when about to lie

down, frequently goes round the place ; fawns at the approach of his master, and will not patiently suffer any one to strike him. He runs before him on a journey, often going over the same ground ; on coming to cross ways, stops, looks back, and waits to observe which of them he takes ; sits up and begs ; and when he has committed a fault or theft, slinks away with his tail between his legs. Dogs, during ill weather look dull, and are troubled with affections of the intestines, &c.

The care of the dog in directing the steps of the blind is highly deserving of notice. Instances have likewise been known of a dog being taught to go to market with money, and carry home provisions in safety. Some years ago, the keeper of a turnpike-gate, near Stratford-upon-Avon, had trained his dog to go to that town for any small articles he wanted.—A note mentioning the things, was tied round the dog's neck, and in the same manner the purchases were returned, and brought to the master with the utmost punctuality. The dancing dogs that once performed at Sadler's Well, shewed how far education can go, in one line.—After storming a fort, and performing various other feats with the address of veterans, one of them was brought in as a deserter, was shot, and carried off, as dead, by his comrades. We have likewise heard of a speaking dog, which, some years ago, was exhibited in Stockholm, that could articulate several complete sentences, in French and Swedish. *Vive le Roi* he pronounced with much grace.

Mr. C. Hughes, had a wig which generally hung on a peg in one of his rooms. To

accommodate a brother player, he one day lent the wig to him ; and, some time after, called on his friend. Mr. Hughes had his dog with him, and the man happened to have the borrowed wig on his head. After some conversation, they parted ; but the dog remained behind, and stood, for some time, looking the man full in his face, then, making a sudden spring, he leaped on his shoulders, seized the wig, and ran off with it as fast as he could, and, having reached his home, with the prey in his teeth, endeavoured, by jumping, to hang it up in its usual place. The same dog, one day, passing through a field in the skirts of Dartmouth, where a washerwoman had hung out her linen to dry, stopped, and surveyed one particular shirt with attention ; then seizing it, he dragged it away, through the dirt, to his master, whose property it happened to be.

A gentleman, of the name of Irvine, who lived near Aberdeen, in walking across the river Dee, when it was frozen, the ice gave way, and he sunk down near the middle of the stream, but kept himself from being carried under the ice, by grasping his gun, which had fallen athwart the opening. A dog who attended him, after many fruitless attempts to rescue his master, ran to a neighbouring village, and took hold of the coat of the first person he met. The man, alarmed, attempted to disengage himself ; but the dog, regarding him with a very kind and significant look, endeavoured to pull him along with such a gentle violence, that he began to think there might be something extraordinary in the case ; and, accordingly, suffered himself to be conducted, by the animal, to the river's

bank, where he arrived soon enough to save his master's life. In this, we see memory and recollection guided by experience, and by what, in a human being, we would call good sense ; but rather let us consider it as an interposition of Heaven.

A singular instance of sagacity lately occurred at Leith. As a child, about four years of age, was playing near the edge of the quay, at the upper drawbridge, a large Newfoundland dog was running furiously along, when it came in contact with the child, which it precipitated into the harbour ; the dog ran on, when a sailor called the dog back and pointed to the child, who was floating, it immediately returned, plunged into the water, and seized the child by the back. One of the spectators, fearing that the child's head might still remain under water, although supported by the dog, plunged in, and endeavoured to take hold of the child ; the dog, however, would not allow him to touch it, and ultimately brought the little innocent, whose life it had unconsciously endangered, safe to the shore.





THE HYÆNA.

THIS ferocious animal has many striking peculiarities. Unlike all other beasts, it has only four toes on each foot. It is nearly of the size of the common wolf, but its head is shorter, approaching nearer to a square, and its nose is blunter; the ears long and almost naked; the hair is of a dingy ash-colour, with black waved stripes running from the back downwards; the tail is very thick with hair, and the eyes and countenance, wild and ferocious. This animal is more savage and untameable than most other quadrupeds; and, even when feeding it keeps constantly growling. Its voice is terrific, and resembles a human voice in distress. This creature will defend itself against the lion, is able to engage the panther, and to kill the ounce.

The receptacles of the dead are violated by this hungry beast, and the putrid bodies appear to afford him a dainty repast. When he can procure nothing else, he will eat the roots of various plants to allay his raging appetite.

The eyes of the hyæna shine with exceeding lustre in the dark. When devouring his prey, he erects his bristly mane, extends his paws, contracts his lips, and shews his teeth; presenting altogether a terrific appearance. These animals are found in almost all the hot climates of Asia, and Africa. In Asiatic Turkey, Persia, Syria, and Barbary, they are very numerous. It is said, that if one of them happens to be wounded, his companions will fall on him, and tear him to pieces.

In Abyssinia and at the Cape of Good Hope, there is another species of this animal, called the spotted or laughing hyæna, which differs but little from the other kind. It is however larger and stronger; its face, which is wholly black, and formed in a constant grin, through which it shews its fangs, is dreadful to behold. Its colour is of a reddish brown, ornamented with black spots; its mane rough and black, and its disposition solitary. Of this animal the following story is related:—At a feast near the Cape one night a trumpeter, who had got his fill, was carried out of doors in order that he might cool himself and get sober again. The scent of him soon drew thither a hyæna, which threw him on his back and dragged him along as a corpse, and consequently a fair prize, up towards table-mountain; during this our drunken musician awoke, enough in his senses to know the danger of his situation, and to sound the alarm with his trumpet, which he carried fastened to his side. The wild beast, as may easily be supposed, was not less frightened in his turn, and thus afforded the trumpeter an opportunity of escaping.



THE JACKALL ;

An animal sharing the figure and qualities of the wolf and fox, is found in almost every part of Asia, and in many places of Africa. Its size varies with its native climate. The smaller sort are about the bulk of a fox. Their common colour is a reddish-brown, or bright yellow. They go in packs of forty or fifty, and hunt for prey, like hounds in full cry, the whole day. They ravage folds, stalls, and courtyards ; devour every thing they can find, their voracity descending even to the vilest carrion, to skins, offals, and every article made of leather. They dig up the repositories of the dead, and feed upon the most putrid bodies. Their scent is keen beyond description ; and they will attend caravans and marching armies in hopes of prey from the stroke of disease or battle. They generally lurk by day, and, marching out in the twilight, by their dreadful howlings spread universal consternation. The lion, the panther, and other scentless beasts of prey, seize the favourable opportunity of following their steps, and bereaving them of their booty. These animals, however, have no plan of mutual support with the jackall, as has been falsely asserted.



THE WOLF.

THIS animal, both in his external and internal formation, strongly resembles the dog ; but his disposition is totally different, and no two animals can bear a greater hatred towards each other. A full grown dog, conscious of his own strength, will instantly attack a wolf wherever he meets one, and endeavour by every method in his power, to rid himself of so hateful an enemy. In short, they never meet without fighting. If the wolf conquers, he devours his victim ; but the dog, more noble in his nature, contents himself with the victory. This is the most rapacious of the whole tribe of quadrupeds ; and from the strong texture of the muscles about the jaws and neck, he can carry off with ease animals as large as himself. His teeth, which are strong, sharp, and crooked, wear away as he advances in age, and ultimately becomes useless to him. Wolves are naturally cruel and cowardly ; and will fly from man, unless very hardly driven by hunger : they will then unite in vast flocks and prowl over the country by night, destroying every animal or person they meet, and so fond are they of human flesh, that after they have once tasted it, they give it the preference to all other food. Their appetite is so

voracious, that nothing comes amiss to them ; and they will even devour the dead of their own kind : but the flesh of the wolf is so offensive, that other animals reject it with horror. The wolf seldom makes its appearance by day, unless urged by hunger. Notwithstanding the various endowments given to this animal to enable him to procure his food, it is a well attested fact, that he frequently perishes from hunger. By nature they are not continually gregarious ; but their uniting into herds, is a kind of association, to which they are called by the most dreadful howlings. On these expeditions they all appear actuated by one impulse, and carry every thing before them. When their excursions are ended, the society disbands, and each animal retires to his lonely habitation. They are of various colours, according to the climate in which they live. The female goes with young between three and four months, and retires to the deepest recesses of the forest to bring them forth. The cubs, five or six at a litter, are blind. She deposits them in a soft bed of moss and leaves ; suckles them a month ; afterwards brings small animals alive to them ; and having permitted the cubs to play with them for some time, she kills the unfortunate victims, and gives a portion to each cub. They are natives both of cold and temperate climates, and were formerly abundant in this kingdom ; but by means of a tax laid on their heads in the reign of king Edgar, and followed up by other princes, they were ultimately exterminated. The wolf is so much alarmed at unexpected accidents, that when caught in a pit-fall, he becomes totally incapable of resistance, and will suffer himself

to be quietly secured. It has, with great truth, been remarked, that a wolf has nothing good belonging to him, except his skin: his flesh being rank; his breath offensive; his howl terrible; and himself hateful when living, and useless when dead.



THE FOX.

A well known, crafty, and lively animal, is the next of this tribe. The jackall, the wolf, the dog, and the fox, will all breed with one another, and so testify their related connection. The fox is a native of almost every country; but there are varieties even in Great Britain. In general, however, they possess in common the qualities of extreme cunning, ferocity, and activity. The fox sleeps by day, and roams for his booty over folds, warrens, poultry yards, &c. during the night. His eye is lively, expressive, and significant; he couches on his belly when reposing himself, but when he sleeps he lies in a round form like the dog. His tail is bushy, and much admired by him; he rarely lies exposed, but chooses the cover of a thick brake, or of an inaccessible cliff, to prevent the danger of surprise. The female produces once a year, and from three to six at a litter. If her place be found out, she

carefully removes during the night ; the male aids her in procuring provision, and in protecting the family. The fox, along with a very few other noxious animals, are the only lawful objects of the chase, consistent with humanity, in this island. " The nightly robber of the fold " is always fair game ; and the total extinction of this animal would much gratify the farmer, while it would much abridge the pleasures of the huntsman.

Near the falls in the vicinity of Lanark, is a particular spot, upon the top of an immense precipice, where a fox is said once to have exhibited an extraordinary degree of cunning. Being hard pressed in the chase, he laid hold with his teeth of some shrubs growing at the edge of the rock, and let his body hang down the side ; he then drew himself back, and leaped as far as possible from the place, into a contiguous thicket. Four of the leading hounds, eager in the pursuit of their prey, flew over the edge of the precipice and were dashed to pieces.



CHAP. III.

Animals of the Weasel kind.*THE WEASEL.*

THE Weasel gives name to a kind of which it is itself the smallest species. The bodies of these animals are so flexible, that they are capable of creeping into the smallest holes, in quest of their prey. They are carnivorous, cruel, voracious, and cowardly; living only by theft, and finding their protection in their minute size. They are able to subsist a long time without food, and except when urgently pressed by hunger, they never touch the flesh of their victims, contenting themselves with the blood only. The weasel resembles the ferret in shape, and the pole-cat in colour. Like others of its tribe, it has a most unpleasant smell; and such is its natural attachment to what is corrupt, that a weasel and three young ones has been found in the putrid carcase of a wolf, which had been hung up as a terror to others; in the throat of

of which it had made its nest. It lives in cavities under the roots of trees, and in holes in the banks near rivers, whence it makes its excursions by night, to catch mice, birds, and young rabbits. It is so active and flexible, that it ascends, without difficulty, the sides of walls after its prey. It was formerly supposed, that the weasel was untameable, but this has been proved to be an error. The length of this animal from the tip of the nose to the insertion of the tail, never exceeds eight inches, and seldom reaches even that ; yet this is out of all proportion to its height, which rarely exceeds an inch and a half. The tail, which is bushy, is nearly three inches long, and adds considerably to the apparent length of the body. The eyes are small, black, and piercing ; the ears round and short ; and the nose ornamented with whiskers like those of a cat.

The weasel is apparently in a state of continual agitation when confined, and so fearful of the sight of man, that if prevented from hiding itself, it will die from extreme terror. It generally sleeps during the day, and at night feeds and takes exercise.

THE FERRET.

Is known to us only in a domestic state. It is a mortal enemy to the rabbit, and was brought from Africa to Spain, to reduce the numbers that abounded there. It is used by warreners, &c. to drive these from their burrows ; but it cannot endure a cold climate, and is generally kept in a

box lined with wool, or some soft substance. It sleeps most of the day, and awakens eager for its food, which is bread and milk. Its colour is a pale yellow ; its length about fourteen inches ; its eyes are red and fiery ; it satiates itself by drinking the blood of its prey, and then it falls asleep. The ferret is tame without attachment ; voracious by nature, and easily irritated. It is an instinctive enemy to rats, mice, &c. which it utterly extirpates where it lives.

THE ERMINE OR STOAT.

THIS animal bears a general and strong resemblance to the weasel, but in his body rather longer. The tail also is longer in proportion to the body, and always ends in a black point. Its colour is a light brown, but in the more northern parts of Europe, it becomes white at the approach of winter, at which period its fur is deemed highly valuable, being used for ornamenting regal robes. Its eyes are sprightly, its motions extremely swift, its features pleasant ; but it smells offensive, and is untameable, restless, and discontented.

At Sarson, in Southampton, lately, (1825) a shepherd observed a hawk descend, and rise again immediately with something in its claws, ascending to a considerable height in the air, when it suddenly fell to the ground ; he ran to the spot, and found the hawk dead, and a stoat, which had sucked its blood during its aerial ascension, making off into a hedge.



THE CIVET.

THERE are two species of this animal, one called the Civet, and the other the Zibet; natives of Arabia and the east. The form of the civet is long and slender; its head resembles that of a fox; its ears are upright and strait; its legs are short, and its toes armed with strong claws. It has a bag beneath the tail, containing odorous matter, which exudes from the adjoining glands. The civet is in most instances of an ash colour, spotted with black; it has a long nose and whiskers, and black piercing eyes. It is a native of India, the Phillippine Isles, Guinea, Madagascar, and Abyssinia. The perfume which is taken from the pouch, near the tail, is valuable. In its domestic state this animal is delicate in his food, and is generally fed with fowls, eggs, rice, or raw veal, chopped very small. When the owner wishes to collect the civet, he shuts the animal into a close cage, and uses every art to irritate him; in which state the perfume is stronger. The tail is then drawn out between the bars of the cage, and a scoop carefully introduced into the pouch. The civet or perfume is by this means procured, and put into

a close box, ready for that purpose. It is of a white colour, and, when unadulterated, is of a firm consistence. The zibet differs from the civet, by having a smaller nose, larger and longer ears, and an annulated long tail. It is also longer in the body, and its scent is considerably stronger.

The *Genet* is a smaller variety of the same kind. It is a most beautiful, cleanly, and active animal; and might with proper care and attention, become a useful addition to our stock of domestic quadrupeds.

THE MARTIN.

THIS animal is something longer than the pole-cat. Its tail also is rather longer, and more bushy at the end; its colours are more elegant, and its smell, instead of being offensive, is allowed to be an agreeable perfume. It is a neat beautiful little animal; its head being small and neatly formed, its eyes are sparkling with vivacity, and its ears are broad, round, and open. Its body is covered with a fine downy fur, the roots of which are of an ash-colour, the middle, of a bright chesnut, and the extreme points a fine black: the head is of a reddish kind of brown; the feet and legs are of a chocolate colour; and the breast and throat white; the claws are large, sharp, and well calculated for climbing.

The *Pine-weasel* is a variety of the same kind, somewhat differing in colour.

THE SABLE

Is a weasel of a dark or black colour, inhabiting the snowy regions of the North. The fur of this animal, though so small as only four inches in breadth, has been sold for fifteen pounds. It is almost amphibious; lives in holes near rivers, and under the roots of trees; it feeds upon small birds, rats, woodcocks, squirrels, &c. on fish, pine tops, and fruits; in pursuit of all which it is very active, leaping from tree to tree. The hunting of sables is performed by exiles to the dreary regions of Siberia, or by soldiers sent thither for that purpose. Each man is tasked at a certain number of skins, which are hunted for from November to February among immense snowy woods, where those miserable wretches often wander and perish, and always encounter difficulties and danger. It has happened, by the failure of their provisions, that these poor wretches have been reduced to the necessity of tying thin boards tight to their stomachs to prevent the cravings of appetite. The sable differs from all other furs in this, that the hair turns with equal ease to either side. The best skins have a long glossy black hair, and are found only during winter. Sometimes they are dyed; but such sables are easily discovered, having neither the smoothness nor the brightness of the natural hair. The animals are shot with a single ball, with blunt arrows, or taken in traps to save the fur. The sable is sometimes found white, and such a skin is a great curiosity. Its tail is long and bushy, and is sold by itself.



THE ICHNEUMON.

THE general size of this animal is that of the common cat, its hair is of a reddish grey, variegated with dark spots, which appear in various shades according to the position of the animal. The outside hair is rough, and nearly two inches long, under this it has a thick, soft, brown kind of fur; the nose, legs, and feet, are covered with short smooth hair. The domestic ichneumon is in general, considerably larger than the wild, and has a greater variety in its colours. It is a native of Egypt, where it answers all the purposes of our domestic cat, and in many respects is much more useful. It possesses all the strength and courage of the latter animal, with a greater degree of activity and instinct, and a more voracious appetite for blood. It will attack any inferior creature, even from a minute insect to the most destructive serpent; but what renders it still more desirable and useful, is, that it constantly employs itself in hunting after the eggs of the crocodile, and destroying them. It will also kill the young of these animals as soon as they are hatched. It darts on its prey with great swiftness, and which it seldom misses. Its eyes are vivid, small, and inflamed; its mouth is so extremely small,

that it is unable to seize a very large animal ; but its activity is such, that it will strangle a cat with ease. The ichneumon is an inhabitant of Ceylon, and many other of the Indian islands, It grows rapidly, and dies soon ; it is found in all the southern parts of Asia, from Egypt to Java, and is also found in Africa ; but will not bear a removal to cold climates.

THE FOUMART.

THIS animal, likewise called the *Polecat* or *Fitchet*, strongly resembles the martin, but is easily to be distinguished from it by its horribly offensive smell. The form of this creature is slender, it has short legs, long toes, and sharp claws, and a pointed nose. The body is about eighteen inches long, and the tail about six. The eyes are brilliant and piercing, though small, and when irritated, they shine in the dark with great lustre. The body is of a chocolate colour, excepting at the sides, where the hairs, when separated, have a tawny colour. Its mouth and ears are broad and short, and are tipped with white edges. It is a constant enemy to poultry and young game, and prefers the blood to the flesh. It lives under the roots of trees, in woods and thickets, making burrows of a considerable length.

THE SKUNK

Is called *Chinche* by the Brasilians, and is the size of a common cat. Its nose is long, extending over its nether jaws ; the colour of its back is white, of its belly and legs black ; the

hair is bushy and long, especially on the tail ; It is remarkable for a most intolerable suffocating fetid vapour, which it emits from behind when attacked, pursued, or frightened. The stench of this effluvium is insupportable, and is its best defence. Some turn their tails to their pursuers, and keep both dogs and men at a sufficient distance by the odour. Others eject their urine to the distance of several feet, which is so virulent as almost to occasion blindness, if admitted into the eyes. Clothes retain the smell very long, and cannot be cleansed by washing, but only by burying in the ground. Unaccustomed dogs fly this animal at the first ; bred ones kill, but are obliged to relieve themselves by thrusting their noses into the ground. There are three or four varieties of this animal, which go under the name of the Stinking Polcats ; all of which possess this wonderful faculty of annoying their enemies from the same quarter.

The *Stifling*, or *Squash* which is the second variety, is nearly of the same size with the skunk. Its hair is long, and of a deep brown colour. It lives in holes and cliffs of rocks, where the female brings forth her young. When irritated, it voids the same offensive kind of odour, which no creature dares venture to approach. Professor Kalm was in danger of being suffocated by one that was pursued into a house where he slept ; and it affected the cattle so much, that they bellowed through pain. Another, which was killed by a maid-servant in a cellar, so affected her with its stench, that she lay ill for several days : all the provisions that were in the place were so tainted by the smell, as to be utterly unfit for use.



THE GLUTTON.

THIS animal receives its name from its enormous appetite. It hides in the branches of trees to watch for such creatures as may pass beneath; on whom it darts, fixing itself firmly between the shoulders, from whence nothing can remove it, till the victim of its voracity falls from loss of blood. It will then continue eating, till it is gorged to such a degree as to be incapable of moving. It will even dig up graves to satisfy its insatiate hunger. The body of this creature is thick and long, and its legs short. It is black on the back, and of a reddish brown on the sides. Its fur is much esteemed for its fine gloss and softness. This animal is found in Siberia and the northern parts of Europe, and also in North America. The male and female generally live together in burrows, and will defend their young with great fury.



CHAP. IV.

Animals of the Horse kind.**THE HORSE.**

Is the most beautiful of quadrupeds. The grandeur and elegance of his form, the glossy smoothness of his skin, the graceful ease of his motions, his strength, his activity, and docility, render him one of the principal objects of human curiosity and care, and teach us to consider him as an animal peculiarly interesting.

The horse is produced in almost every country in the known world, more or less in a state of subjection to man. But should we wish to behold him in his original perfection and beauty we must seek for him in the wild and immense deserts of Arabia and Africa. In these he

ranges without control, in a state of entire independency, in full possession of his natural freedom. The wild horses of Arabia are the most beautiful in the world ; their colour is brown ; their mane and tail are of black tufted hair, very short ; they are smaller than the tame ones, exceedingly active, and of extraordinary swiftness. They feed in droves of four or five hundred together ; and in case of danger, upon a signal given by one of their number, who constantly acts as centinel, they fly off with astonishing rapidity. There is scarce an Arabian, however poor, who is not possessed of a horse, to him an invaluable treasure. His only abode being a single tent, his wife and family, his mare and her foal, are often seen lying promiscuously together ; while his little children frequently climb without fear upon the body of the inoffensive animal, which permits them to play with and caress it without injury. The Arabian never beats his horse ; he speaks to him, and seems to hold friendly intercourse with him. He never uses the whip, and seldom, except in cases of necessity, the spur. The agility of these horses in leaping is incredible, and they will stand still in the midst of the most rapid career, should their rider happen to fall. The Arabians reckon up, for an amazing length of time, the genealogies of their horses ; carefully avoid crossing the breed ; and hold in chief estimation those of an unmixed descent under the name of Nobles, of a pure and ancient race, whiter than milk.

Europe had probably once tribes of wild horses ; America received them from those left by the Spaniards on its discovery, but the present European varieties of these animals arise

from the Arabian breed extended into Barbary, and other parts of Africa. The Barbary horses are next to the Arabian in swiftness and beauty, though still smaller. The Spanish are in next estimation. The breed of Great Britain is as mixed as that of its inhabitants. The race-horse by diligent care and superior skill in rearing, excels both in point of violent exertion and fleetness those of the whole of Europe, and perhaps of the world. An ordinary racer will go at the rate of a mile in two minutes, and there have been instances of still greater rapidity; we allude to the famous Childers, the property of the Duke of Devonshire, who was in his day considered as a prodigy, having frequently gone more than eighty-two feet and a half in a second. The hunter, the large black species, the common cart-horse with the small hardy breed of the Scottish Highlands, form so many divisions aptly fitted for every purpose, whether for the field, the carriage, the services of husbandry, or the fatigues of travelling.

It may be adduced in proof of the strength of English horses, that a single one has been known to draw a weight of more than three tons, though the common burden for a horse is from four hundred to a thousand pounds. The mare goes with foal something more than eleven months, and sometimes breeds to the age of eighteen. In four years, the horse attains his full growth; and he seldom lives more than thirty. Though the horse evidently receives satisfaction from pleasing and being useful, he is not unconscious of injury and injustice. He knows his benefactor, and his enemy, and will sometimes show his sense of both by certain demonstrations.

A baronet, one of whose hunters had never tired in the longest chase, once entertained the cruel thought of attempting completely to fatigue him. After a long chase therefore, he dined, and again mounting, rode him furiously among the hills. When brought back to the stable, his strength appeared exhausted, and he was scarcely able to walk. The groom, possessed of more feeling than this brutal master, could not refrain from tears, at the sight of such a noble animal thus sunk down. The master, some time after, entered the stable, when the horse made a furious spring upon him, and, had not the groom interfered, would certainly have dispatched him. Were a few more examples of this kind to take place, it would teach the unfeeling to treat a valuable servant with kindness, and not wantonly to exact what is willingly paid.

THE MULE.

THIS useful and hardy animal is the offspring of the horse and ass, and being generally barren furnishes a proof of the two species being perfectly distinct, and thus preserves the original perfection of each species, which would otherwise rapidly degenerate. The mule is a very healthy animal, and will live above thirty years. It is found very serviceable in carrying burdens, particularly on mountainous and stony places.

The manner in which mules descend the precipices of the Alps, or the Andes, deserves to be noticed. In the passes of those mountains, there are often on one side steep eminences,

and on the other frightful abysses; and, as these generally follow the direction of the mountain, the road forms at every little interval, steep declivities of several hundred yards. These can only be descended by mules, and the animals themselves seem sensible of their danger, by the caution they use. When they come to the edge of one of these descents, they naturally stop, and no force can make them proceed. They seem to contemplate the danger that lies before them, and to prepare themselves for the encounter. At last, having formed their plan, they place their fore feet in a posture, as if they were stopping themselves; next, they put their hind feet close, but a little forward, as if they were to lie down. In this attitude, they slide down with the rapidity of an arrow, while the rider has only to keep his seat on the saddle, without checking the rein, or in the least disturbing the equilibrium of his beast, which would be fatal to both. Such is their address in these rapid and dangerous descents, that they follow exactly the different windings of the road, as if they had previously settled in their mind the route they were to take. Some mules after being long used to these journeys, require a considerable share of reputation and skill, and, in consequence, their value is greatly enhanced.





THE ASS.

THE animals of this species in a wild state, nearly resemble the common tame ass ; except that their colour is generally brighter, and that they have a white streak running from the head to the tail. They are found wild in the deserts of Africa, and so fleet, that the best coursers of the country can scarcely outstrip them. When a man approaches them, they set up a loud braying and stop short till he is very near them ; then, as if by common consent, they fly off with the utmost speed. These asses, if attacked, will defend themselves with their heels and mouth, with so much activity, that they often maim their pursuers, without slackening their pace. They will, on no account, permit a horse to live amongst them ; they always feed together ; and, should a horse stray near them, they attack him with such violence, as generally to kill him on the spot. By this we may perceive, that the ass, in a state of nature, is swift, fierce, and powerful, though he loses all his native spirit when deprived of his liberty, and contracts that dulness for which the race are noted. When tame there is no other animal so gentle and patient, enduring with placidity all the insults and tortures which the

cruel and selfish can inflict on him. The ass is very temperate with respect to food, both in its quantity and quality : he will cheerfully eat what has been left by other animals ; but he is particularly delicate with respect to the water he drinks, always going to the clearest brooks, and avoiding mud of every description. It is singular, but not the less true, that in almost all countries the ass is neglected and ill treated by rustics, and even by children, who annoy him in every possible way. The ass is of a much hardier nature than the horse, and will carry heavy loads. The female like the mare, goes with young eleven months ; is extremely fond of her young, and will make her way through many obstacles to get to them. Her milk is supposed to be very beneficial in consumptive complaints. The colt arrives at perfection in four years, and will live to twenty-five years. When he has the happiness to meet with a humane master, he well repays his kindness.

An old man, who used to retail vegetables round the streets of London, made use of an ass to carry the baskets, containing the commodities in which he dealt. Considering the animal as an useful partner in his toils, he frequently gave it a handful of hay, a piece of bread, or some unsaleable greens, by way of reward and refreshment. In consequence of this, he became so docile, that his master had no occasion to goad him on ; he advanced and stopped at a word. This being noticed by a gentleman, the old man was asked if his ass was always so tractable, and if he was not apt to be stubborn ? " Ah, master," said he, " it is of no use to be cruel ; and as for stubbornness, I have little

reason to complain, for he is ready to do any thing and to go any where : I bred him myself. He is sometimes skittish and playful, and once ran away from me. You will hardly believe it, but there were more than fifty after him, attempting to stop him, but in vain ; when, on looking back and seeing me, he ran up, and kindly placed his head in my bosom.

The following instance of sagacity is extracted from the Tyne Mercury, August, 1825. A few days ago, at Swallowwell, a man set his dog upon an ass, when the ass immediately took the dog up in his mouth, and dragged him to the river Derwent, into which he put him over head, and lying upon him, kept him down till he was drowned.



THE ZEBRA.

OFTEN mistaken for a wild ass, is the wildest, most beautiful, timid, and untameable animal in nature. It is larger than the ass, and resembles rather the mule. Its head is large, its ears longer than those of the horse ; its legs beautifully small ; its body well formed, round and fleshy. But the glossy smoothness of its skin, and the amazing regularity and elegance of its colours, greatly heighten its beauty. These in the male are white and brown, in the

male white and black ; ranged in alternate stripes over the whole body, in a stile so beautiful and ornamented, as to seem rather the effect of art than of nature. The head is striped with fine bands of black and white, forming a centre in the forehead ; the same in circular manner surround the neck ; the whole body is variegated with rings crossing the back, and ending in points at the belly. Even the thighs, legs, and tail are streaked with the same ornaments. The zebra is a native of the south of Africa ; is gregarious ; extremely wild, and has never as yet been brought under the subjection of man. It has been reported, that the Portuguese so far tamed these animals, that four of them were made to draw the king's coach at Lisbon : but one that was kept at the Brazils, having, in spite of every caution, gained his freedom, attacked one of the grooms, and bit him to death

THE QUAGA.

This animal was formerly confounded by naturalists, with the zebra, but is now recognized as a distinct species. It is not only marked with fewer and broader stripes than the zebra, but these are chiefly confined to the foreparts of the animal, while the hind parts exhibit a ferruginous colour, particularly on the thighs and back. Its nature is more docile than the zebra ; in proof of which, it is successfully used in drawing carriages at the Cape of Good Hope ; and the present Mr. Sheriff Parkins, is said to have driven a pair of these animals with safety through some parts of London.

CHAP. V.

Animals of the Ox kind.*THE BULL.*

IN the common acceptation of the term, Ox denotes black cattle in general, without regard to sex. Of all ruminating animals, or those that chew the cud, the cow holds the first rank, both in beauty and general utility. She is more particularly the poor man's blessing, and equally constitutes his riches and support. Her milk is the most proper nourishment of his children; the butter she produces yields him assistance in finding other necessaries; and, if he cannot afford to eat her flesh when dead, she contributes very much to his comfort when living. It is indeed a striking instance of the

goodness of the all-wise Creator, in providing such abundant provision for the human species, that the cow has the peculiar faculty of giving us milk in such abundance, and with so much ease, while most animals refuse it, except their own young or some adopted animal be permitted to partake. Animals of the cow kind are patient and peaceable, of a middle character, between stupidity and docility ; they are affectionate to their young, and even capable of some degree of attachment to those who use them kindly. Bulls, indeed, are sometimes so ferocious, as to attack and gore without provocation; but it is seldom that the cow and the bullock molest any one.

These animals are in their greatest vigour between the age of three and nine years. At the age of four years a ring is found at the root of the horns, and every succeeding year another ring is added, so that by adding three years to the number of rings the animal's age may be known. The cow goes nine months with young, and seldom produces more than one at a time. When it happens to produce two calves, a male and female, the former is a perfect animal, but the latter is incapable of propagation, and is denominated a Free Martin. It resembles the ox in figure, and is consequently larger than the cow. In no animal is there to be found such a great variety than in this kind, several of which are altogether destitute of horns ; and not three centuries ago Scotland contained a wild race of cattle, of a pure white colour, and some of the bulls having a thin upright mane. This race is now, however, only to be found in some parts of England. Frequent mention is

made of the savage nature of our wild cattle, by old writers. In chasing an animal of this kind we are told that King Robert the Bruce was saved from its fury by the intrepidity of one of his courtiers, from which exploit he and his lineage acquired the name of Turnbull.

THE URUS.

THE Urus, or Wild Bull, is generally found in the extensive plains of Lithuania. It arrives at so vast a size, that scarcely any animal, except the elephant, is equal to it in bulk. Its colour is a beautiful black, excepting a single stripe mixed with white, which extends in a direct line from the head to the tail. The horns are short, though very strong and thick, and the eyes have a fierce and fiery appearance. The forehead is overhung with a quantity of curled hair, which adds to the fierceness of their look, and many of them have a beard of the same kind. The neck of this animal is short and muscular, and its skin has a strong scent of musk, particularly when irritated. The female urus is considerably smaller than the male, though she is much larger than the finest of our oxen. It is rather remarkable, that notwithstanding her vast size, her udder and teats are scarcely perceptible. On the whole, it must be allowed, that this animal strongly resembles the tame one, and that any trivial difference we may find in it, originates in a life of constant independence and the rich luxuriance of its native pastures.

THE BISON.

THE Bison, or Bonasus as it has been called, differs from the rest of the cow kind in having a large rising or hump between its shoulders, which give it an ugly appearance. At a distance, it may easily be mistaken for a lion; having a moderate sized head, with wild and fiery eyes, a most furious aspect, a long rough mane, and a long beard. The horns are placed at a great distance apart, and the forehead is of an extreme breadth. These animals are so ferocious, that it is very dangerous to pursue them, except where there are a sufficient number of trees to conceal the hunters from their view. They are generally taken in traps, and in large holes dug for that purpose and covered with boughs and grass. They have an active sense of smelling, are very furious when attacked, and will pursue their opposers with great speed and obstinacy. They live in large herds, feed chiefly in the morning and evening, and, during the heat of mid-day repose under the branches of large trees near some river or stream. The bison, when caught, is easily tamed, and becomes subservient to the will of man. These animals are much valued by the Hottentots, who employ them in protecting their flocks, in the same manner as the sheep-dog is used in Europe. They are also of great service to the Hottentots in their wars; for, being taught to attack with their horns and legs, they carry destruction and dismay into the enemies' ranks, and generally ensure the victory. These animals vary in size and strength in different parts of the world; and are larger and more powerful in a wild state, than when they are tamed.



THE BUFFALO.

THE Buffalo is a large and clumsy animal, and consequently not so beautiful as the cow. Its skin is hard, thick, and black, and has very little hair. The flesh, when dressed is tough, of a very dark colour, and extremely disagreeable to the taste and smell. The milk, though afforded in abundance, is by no means to be compared to that produced by the cow. It is used however to make both butter and cheese. From the hide of the buffalo is prepared excellent leather. These animals possess great strength; four of them being able to draw, with ease, as much as could be drawn by eight or nine horses. The buffalo is perfectly inoffensive when undisturbed; but when he is wounded or alarmed by being fired at, his fury becomes dreadful and knows no bounds. It is curious, that though this creature may be domesticated, it always retains a violent antipathy to the cow. Buffaloes are generally employed in agriculture. Great quantities of them are imported from South America. It is dangerous to approach them in their wild state; as they have been known to cause the death of several travellers, first by disabling them with their horns, and then trampling to death with their

et. Their swiftness is so great, that it is almost impossible to escape from them ; they are so most excellent swimmers, and can cross the widest rivers with great ease. Though these animals are chiefly found within the regions of the torrid zone, yet they are bred in various parts of Europe, particularly in Italy, where they form the chief part of the wealth and food of the lower classes of people.

Some Europeans at the Cape once chased a buffalo, and having driven him into a narrow place, he turned round, and instantly pushed at one of his pursuers, who had on a red waistcoat. The man to save his life ran to the water, plunged in and swam off ; the animal followed him so closely that the poor fellow had no alternative but that of diving. He dipped over head, and the buffalo losing sight of him swam on towards the opposite shore, three miles distant, and as was supposed would have reached it, had he not been shot by a gun from a ship lying at a little distance. The skin was presented to the governor of the Cape, who had it stuffed and placed it among his collection of curiosities.

THE ZEBU,

Is found in Arabia Petrea, and Africa. It is exceedingly tractable when tamed, has fine glossy hair, softer than that of the common cow, and is hunted for its flesh, by the inhabitants of its native countries. The ox, the bonasus or aïson, the urus, the zebu, are all varieties of the same original kind, and differ according to the changes of climate, or the nature of the soil in which they have been reared.

In Persia, there are many Oxen entirely white, with small blunt horns, and humps on their backs. They are very strong, and carry heavy burdens. When about to be loaded, they drop down on their knees like the Camel, and rise when their burdens are properly fastened.

THE MUSK BULL,

INHABITS the interior parts of North America. The Indians eat the flesh and make coverings of the skins. They are brought down in sledges to supply the forts during the winter. Its legs are short, and it has a small hump on the shoulder. Its hair is of a dusky red colour, very fine, and so long as to reach the ground: beneath the hair is a covering of exquisitely fine wool, of which stockings are made, finer than silk. Its tail is only three inches long, and is covered with long hairs; its horns are close at the base, they bend downward, and turn out at the points, they are two feet long, and two feet round at the base, some weighing sixty pounds.



CHAP. VI.

Animals of the Sheep & Goat kind.

THE EWE.

The Sheep when tame, is harmless and defenceless; but when wild, is said to be of vast swiftness, and found only in great flocks. When attacked, they form a ring; the ewes and the weakest in the centre, where they are defended by the rams in a vigorous manner. In this state they will attack dogs, wolves, foxes, men, and even bulls, with success. Their varieties are so numerous, as to be found in almost every country. The attention of the farmer is directed to the improvement of the breed, which is capable of great and important changes. No part of the sheep is without its use, but particularly its wool, which varies in fineness

according to the climate or cultivation of the species, the finest being that of the north of Spain and other temperate countries. In warm climates the fleece degenerates into coarse hair, and the wool-bearing sheep is never a native of the torrid zone. This innocent animal, next to the ox, is the second support of man; continually the source, not only of his most wholesome food, but also of his dress and ornament. A variety of this found in Wallachia, Crete, and in the Archipelago, is the *Strepsicheros*, or sheep with twisted horns, and bearing a long shaggy fleece. The sheep of Guinea are remarkable for their coarse hairy fleeces, as those of Persia, Barbary, Syria, and Egypt, for their large and heavy tails, which are supported by a small wooden machine made on purpose, and fixed on wheels. Rams sometimes live to the age of fifteen or sixteen years. The ewe lives about ten or twelve years, though but few attain that age, the greater part of them being cut off, either to supply the wants of man, or else by some of the many diseases to which they are subject. They carry their young five months; and, it is curious to observe the facility with which every ewe will single out her lamb from the largest flock, when the most accurate inspection of an observer could not discover a difference between it and the others by which it is surrounded.



MUFFLON, OR MUSMON.

This animal has all the marks of being the original stock, from whence all the various kinds of sheep are derived. It is mostly found in the vast deserts of Tartary, and in the uncultivated parts of Greece. Some of them are also met with in Sardinia and Corsica. They bear altogether a very strong resemblance to the ram. The hair is brown, with a red tinge; but that on the belly and the inner parts of the thighs, is of a whitish yellow. Their horns are curious, as they sometimes grow to an incredible size: with these weapons they carry on furious battles with each other, and protect themselves against all other quadrupeds.

*THE GOAT.*

A most lively, playful, and capricious creature; an inhabitant of the highest mountains; hardy, and adventurous in the extreme; climbing the steepest rocks, and standing secure on the verge of the most dangerous precipices. It delights more in the heathy mountain, the shrubby rock, and uncultivated glen, than in the finest field of human preparation.

Its milk is sweet, nourishing, and medicinal especially in cases of consumption. The flesh of the kid is reckoned by many equal to venison. Every mild and temperate climate produces the goat; but in warm countries it assumes an appearance somewhat different; its hair becomes long, fine, and shining; its ears pendulous and its horns twisted and vermicular. She goes five months with young, and generally produces two at a time, sometimes three rarely four. In warm climates four or five are brought forth; but the breed degenerates. An instance has been recorded of a goat having been sucked by a foal. M. Sonnini, asserts that in the year 1780, he saw a foal that had lost its mother, which was placed on a barrel, in order that the young animal might suck with greater convenience. The foal followed its nurse to pasture, as if she had been its parent and was attended with the utmost care and tenderness by the goat, which invariably called it back by her bleatings, when it happened to wander to any distance.

THE IBEX,

A native of the Grison Alps, of the Vallais and Crete, is, according to Buffon, the original stock of the domestic goat. It is very similar to it in shape, having a small head, and dusky beard, with thick hair, of a deep brown colour, mixed with ash. It is extremely wild, and difficult to shoot; the chase of them over their precipitous rocks is very dangerous to the huntsman, whom they will turn upon, and push headlong with their large knotty horns, some of which have been found two yards in length.



ANTELOPE.

The Antelope is chiefly distinguished from the deer and goat, by its twisted and annulated horns, and by the bunches of hair on the fore legs. The lower parts of the sides being streaked with black, brown, or red; and the inside of the ears having three white streaks. Upwards of thirty different varieties of this species have been enumerated. Unlike the deer, they retain their horns, and have a gall bladder. They delight in brouzing on shrubs in preference to grass. In size and form they resemble the roe-buck, having deep pits under the eyes like that animal, and hair of the same colour. The bunches of hair before mentioned, are on the fore legs of the antelope, and on the hind ones of the roe-buck: they, therefore, appear to form an intermediate link between the goat and deer. They are natives of the torrid regions, or the warmer parts of the temperate zone. Asia and Africa are the only countries in which many of them are found,* and there they increase in a great degree, frequently forming herds of several thousands; some of them prefer the plains, while others delight in

ascending and descending the most tremendous declivities, a practice for which they seem adapted by nature, their legs being very slender, and sinewy, their hoofs cloven, and their hind legs longer than their fore ones. This animal is much celebrated for its swiftness. The flesh of those which are taken by hunters is esteemed excellent; that of the tame ones is not less valued. In its disposition it is restless, inoffensive, and cautious.

MEMINNA.

The Meminna resembles the fallow deer. It is of a grey colour, beautifully spotted with white, and is very little larger than a hare. The ears are long, pointed, and open, and the tail is short. From their extreme delicacy, it is difficult to bring them alive into a temperate climate, and even when they are brought, they survive their arrival but a very short time. They are natives of Ceylon. The hunting of them is a favourite diversion with all the Eastern Princes. The Chevrotain closely resembles this animal, but is smaller. The Guib, the Garella, the Condoma, the Bubulas, and the Grimme, are all varieties of the same species.



*THE MUSK.*

The natural history of this race of animals, is not, till lately, been well understood, and the number now discovered amounts but to seven. They are found in warm climates, where they wander in the most mountainous parts, and are endowed with great activity. The perfume which they produce is contained in a small bag hanging from the middle of the belly, and this is supposed to be found only in the male. The ears are large, the upper jaw considerably larger than the under, and armed on each side with a strong incurved tusk, which extends beyond the mouth; the colour of this animal is an iron grey, and its tail is very short. The musk which is brought to Europe is contained in small bags; it is a hard reddish substance, but as these animals are excessively rare, genuine musk is very scarce, and great part of that imported is mixed with other substances. We receive it from Muscovy, Bengal, China, and Thibet, the last of which is the best, and always obtains the highest price.

Animals of the Deer kind.*THE FALLOW DEER.*

THE fawn, or young deer, is called in his first year, a pricket, in his second, a sorel; in his third, a sore; in his fourth, a buck of the first head; in his fifth, a buck of the second head; and a great buck in his sixth. Buck is also the general name by which the male is known. It is perfectly domesticated in most gentlemen's parks, and is rarely to be found wild in the forests. The deer appears to be designed for temperate regions; for it is scarcely known in the northerly and frigid climates. In Spain they grow very large. There are two kinds of deer in this country, said to be of foreign extraction; the finely dappled, from India, and the dark, from Norway. This animal sheds its horns annually. The skins and flesh are highly valuable, so are the horns, from which spirit of hartshorn is chiefly made. The

do great injury to the young trees, stripping them so completely, that they seldom recover. They will fight with considerable courage, to possess or retain a favourite spot for pasture, and the battle will sometimes continue for several days. The doe, or female, is called in her first year, a fawn, and in her second, a tegg. She goes eight months with young, and seldom produces more than one at a time. She is fruitful from two years of age to sixteen. Her form is more delicate than that of the male, and she is more domestic.

THE STAG OR RED DEER.

IT is a curious fact that although no two animals can be more nearly allied than this and the fallow-deer, yet none keep more distinct, or keep greater hatred to each other; their animosities being so great, that they will on no account associate together. The stag is larger, more courageous and savage than the fallow-deer. The voice of the stag becomes stronger, louder, and more tremulous, in proportion as he advances in age: and when in search of the female it is even terrible. At that season he seems so transported with passion that nothing obstructs his fury: and when at bay he keeps the dogs off with great intrepidity. Several instances of this animal's boldness have, indeed, been recorded: and on one occasion, the late Duke of Cumberland caused a stag and a hunting tiger to be enclosed in an area upon Windsor Forest; when the stag made so gallant a defence with his horns, that his

antagonist eventually gave up the combat, and, leaping over the enclosure, rushed into an opposite wood, where he made a victim of one of the fallow deer.

THE ROEBUCK,

FORMERLY common in Britain, is now only found in the Highlands of Scotland. The roebuck is the smallest of all the deer kind, being only three feet four inches long, and sometimes more than two feet in height. The form of this animal is elegant, and its motions light and easy. It bounds seemingly without effort, and runs with great swiftness. When hunted, it cunningly confounds the scent by the most subtile artifices, then springing aside, it squats down upon its belly, and permits the hounds to pass by. The roebuck lives in families, but is not gregarious. It endeavours much to hide its young ; but numbers of fawns are taken by the peasants ; many more are worried by dogs, foxes, and other carnivorous animals ; and this beautiful creature is in most places become extinct, in all becoming more scarce.

THE ELK,

Is the largest and most formidable of all the deer kind. It is a native of both the old and new continents, and in the latter is called the Moose Deer. It is found in the wildest woods of Russia, Norway, Poland, and Siberia, and is

common in North America. Many of its horns, of an enormous size, are dug up in the morasses of Britain and the neighbouring countries. Its size is variously reported ; by some it is said to be twelve feet in height, by others much lower. The gigantic moose is said to have horns six feet long, and measuring from tip to tip about ten. The European elk is about seven or eight feet in height, and about ten long. Its hair is long and rough, like that of the bear, and hoary-brown, like that of the ass. Its pace is a shambling trot of great swiftness ; and in Sweden it was formerly yoked to the sledge. It is timid and inoffensive, except in autumn, about the time of rutting. It is hunted by the Canadians over the frozen snows, and taken when entangled in them, after their surface has been melted by the beams of the sun.

THE REIN DEER,

is a native of the icy regions of the North. In the countries near the pole, this animal seems to have been destined by Providence to relieve the wants of a hardy race of men, whose rigorous climate can admit of no other useful animal. It supplies the place of the horse by being yoked to the sledge ; of the cow by its milk ; of the sheep and goat by its skin and flesh, to the inhabitants of dreary Lapland. It will run, upon being hard pushed, to the distance of sixty miles without stopping ; in general about thirty, without any great or dangerous effort. The horns of the rein deer are large and

slender, with brow antlers, broad, and palmated. The colour is dark brown, sometimes shaded with a little white. It lives chiefly on the lichen, and other mossy shrubs; they are milked twice a day by the Lapland women who are obliged to light large fires to keep the insects off. In their wild state, they are very mischievous. The female begins to breed at two years of age, goes with young eight months, and has generally two at a time, and are remarkable for their attachment to their young, who follow them from two to three years, and acquire their full growth at four; they are then broke in and continue serviceable four, five, or six years longer. When they become aged, they are killed for the skin and flesh, the latter of which is generally dried by smoke, and preserved. The blood is used for sauce, the horns for making glue, the tongues are dried and sold to the more southern nations, and their bowels, are highly estimated by the natives. It is found in North America, in Spitsbergen, and Greenland, and in Asia as far as Kamschatka. They live in herds, but are detached and kept by the natives separately near their cottages. The attempts to introduce it into warmer climates have all hitherto been without success.



Animals of the Hog kind.*THE WILD BOAR*

the original of the whole species, and is constantly of a brindled or dark, inclining to black. He is much smaller than the domestic one; has a longer snout, with short, round, and black ears, along with two formidable tusks fixed in either jaw for procuring his food, which is mostly of vegetables, or for defence. His courage is fearless; his rage, when provoked, is fierce beyond conception. He moves to the combat of his enemies, the hounds, or the wild beasts of the forest, equally undaunted; seldom unites with his kind for the sake of assistance, nor does he ever dread a single foe, nor turn from his way, even for man himself. Yet the boar, though intrepid, is not injurious to the peasant; as he is not carnivorous, so he never begins the attack. The African wild boar is extremely furious, and as dangerous as the lion. The flesh of this animal is reckoned excellent food; and he makes a dangerous, but exceedingly magnanimous chase.

THE COMMON HOG,

Is well known both for its hideous form, disagreeable manners, and its uses in domestic purposes. There are many breeds, all of which preserve the general character of the species; uncleanness, coarseness, and gluttony in feeding, and a disposition above any other animal to fatness, which is greatly favoured by the mode of living. It is clumsy and disgusting in form; voracious in appetite; naturally stupid, inactive, and drowsy; and, useless during life it is only valuable when deprived of it. The sow produces young twice a year, and from ten to twenty at a litter. Not only the male, but even the mother, must be carefully watched, else she will devour her own offspring.

THE PECCARY,

Is of a grizly colour; his bristles hard, and variegated with black and white. At the ridge of the back, it is much stronger than at the sides, and is more than five inches long. A large tuft of long black bristles grows between the ears, which gives it a terrific appearance. Its ears are about three inches in length, and quite upright. Its eyes are less than the common hog, but bright and piercing; the snout, though small, is exactly like that of the hog. On a close inspection, it differs widely from the hog, as well externally as internally. It has shorter legs, is not so corpulent, and the intestines are differently formed.

Instead of a tail, it has a mere fleshy protuberance. Its bristles are thicker and stronger than those of the hog. On the rump nearest the buttocks, it has a curious lump, with an opening, which discharges an ichorous humour, extremely offensive to the smell. In America these animals are very numerous. It is easily tamed, and in its domestic state acquires the manners of the common hog. But, upon the whole, is in every respect greatly inferior to it.

THE CAPIBARA.

IN the formation of its body, and the nature of its hair, it may be compared to a young hog. It has, like that animal, a short thick neck, with a bristly round back; it loves marshy grounds, and will feed both on animal and vegetable substances. In all these circumstances it resembles the hog; but when it is narrowly examined, the head is found to be longer, the eyes larger, and the snout is divided like that of the rabbit or hare, and set round with stiff thick whiskers; the mouth is not so wide as the mouth of the hog, and the teeth differ; the jaws have no tusks. It is without tail, and partly web-footed, like a Newfoundland dog, by which means, it swims with facility. In consequence of this, it has been called by some naturalists, the water hog. It swims like the otter, and searches for the same prey. It seizes fish with its feet and teeth, and then carries them on shore in order to devour them at pleasure. Its voice is similar to the

braying of an ass. It is said, that these animals always keep in pairs, and never desert each other, except in cases of the most pressing necessity, although they are by nature wild and timid. From the formation of its legs, it is precluded from running with much speed; it therefore endeavours to escape from its pursuer by plunging into the water, from which it never strays far, and generally remains at the bottom till the hunter loses his patience and gives up the chase. It seldom produces more than one young one at a time. It is gentle and inoffensive, and never quarrels either with its own species, or other animals. It is readily tamed, and feeds in its domestic state on bread, milk, and vegetables. If killed in this state, its flesh is excellent; but if killed when wild, it is rank and fishy. It grows extremely attached to its owner. It inhabits South America and Brazil. When this animal is feeding, it sits up in the same manner as a squirrel, holding its food in its fore-paws.



Animals of the Hare kind.*THE HARE.*

A timid, defenceless, feeble inhabitant of the thicket, the prey of almost every creature of the carnivorous tribe, itself offensive to none. Yet the hare has not been wholly deserted by the preserving hand of Nature; besides the amazing fecundity of its kind, its long ears, moveable in any direction, convey an immediate perception of the least motion or approach of danger. Its swiftness and finesse in running can outstrip most of its persecutors. Its hind legs excel in length the fore ones, and being furnished with strong muscles, it has great advantages in running up an ascent, a course which it generally takes. Many of their arts used to avoid their pursuers denote a very strong degree of instinct. This animal breeds three or four times in the year; the female goes thirty days with young, and produces three or four at a litter. They sleep or rest in their seats by day, and venture out to feed by night. Their fur is of great use to hatters, &c. They are white in cold climates, and are found over the whole world with very little variety.



THE RABBIT.

AN animal similar to the hare in many particulars, but of a different species. It burrows in the ground, where it brings forth its young and flies from the fear of danger. The fecundity of the rabbit is truly astonishing. It breeds seven times in a year, and generally produces about eight at a time ; whence it has been calculated, that one pair may, in the course of four years, increase to the amazing number of 1,274,840 : so that, if deductions were not made by many different ways, it might be apprehended that they would soon exceed the means of their support, and overrun the face of the country. But besides those taken by man, they are eagerly destroyed by wolves, foxes, weasels, fougarts, and other beasts of prey. The rabbit is capable of procreating at the age of five or six months. The female goes with young about thirty days. Previous to her bringing forth, she makes a bed with down, which she pulls off her own coat. She never leaves her young but when pressed by hunger, and they are carefully secreted from the male. They live to the age of eight or nine years, and prefer warm and temperate climates. It is stated by a Spanish writer, that some settlers, on discovering a small island, which they named Puerto Santo, turned out a couple of rabbits, which increased so prodigiously, that in a few years they compelled the settlers to quit the island, by destroying the corn and other plantations.

*THE SQUIRREL*

THIS beautiful animal is about the size of a small rabbit, but its ears are shorter, and its tail elegantly bushy, and when thrown up, covers its whole body. The eyes are large, black, and full of vivacity; the legs are short and muscular. The colour of the Squirrel is a reddish brown, except on the breast and belly, where it fades into white. The ears are much darker than the other parts of the body, and are prettily embellished with tufts of fine hair. This little creature may easily be tamed. Its food consists of nuts and fruit. It lives chiefly among the branches of trees, leaping from one to another with astonishing activity. But though it is fond of frolic, and has few enemies to fear, this little animal is not improvident, but lays by in autumn a stock of provisions sufficient for the supply of winter. It builds its nest with surprising ingenuity among the branches of a tree, generally preferring a forked arm of the tree as being the most secure. In this little bode, which is made sufficiently strong to resist both rain and wind, the playful inhabitant brings forth her young, and resides during summer and winter.

THE FLYING SQUIRREL.

THIS animal is considerably less than the common Squirrel. Its skin (which is extremely soft) is beautifully adorned with dark fur. It receives its name from the long leaps which it takes, and which resembles flying. Its leaping is assisted by a skin, which extends from its fore-feet to its hinder ones. These animals are numerous in America; but in Europe they are rarely found. They live chiefly among the branches of high trees, and have many enemies.

THE MARMOT.

THIS animal is nearly as large as the common hare, but is very corpulent, and its long hair makes it appear much larger than it really is. Its colours are black and grey; its tail tufted and well supplied with hair. When taken young it may be taught a great variety of amusing tricks. It is harmless, and seems to be on friendly terms with all other animals except the dog, to which it bears a natural enmity. Like the hare kind, this animal goes much more swiftly up hill than down: it climbs trees with perfect ease, and will even run up the walls of houses. In October this creature prepares its winter dwelling, which it seldom quits till the early part of May. Several of them live in one apartment, which they completely coat round with moss, hay, &c. collected during the summer. This is a work of such magnitude, that the whole community are employed at it, some cutting grass, others carrying it, and

the remainder dragging it home. They acquire no food during the winter, as they become torpid, and of this circumstance they seem aware, for they never lay by any provisions. Their first object after they enter their new abode, is to close up the entrances, which they execute with remarkable solidity; then rolling themselves into balls, they become so senseless, that they may even be put to death without appearing to feel much pain.

THE JERBOA,

A native of Egypt, Barbary, and Palestine, somewhat less than a rat, and remarkable for the singular construction of its legs. Its head resembles greatly that of a rabbit; its eyes are large and full; the fore legs are only one inch in length, and are used as hands; its hind legs are naked and like those of a bird, having only three toes on each, and the middle one longest, its tail is much longer than its body, and terminated with a black tuft, the tip of which is white, and its hair is long and soft, reddish on the back, and white on the under parts of the body. It is a lively, harmless animal; lives on vegetables, and burrows in the ground like a rat. It is the coney of the Scriptures; our rabbit being unknown in Palestine. It makes its nest of the finest and most delicate herbage; rolls itself up and sleeps during the winter, without taking any food. When pursued, it springs so nimbly that its feet scarcely seem to touch the ground. It is easily tamed, is fond of warmth, and seems to be sensible of the approach of bad weather by wrapping itself up in hay.



THE GUINEA PIG.

OR Restless Cavy, is a native of Brazil, and will live in any country of a moderate climate. Great numbers are kept in a domestic state, but for what purpose is uncertain, as they are neither beautiful nor valuable, for their furs nor flesh. They are void of attachment even to their own offspring, and allow them to be devoured as soon as brought forth, without the smallest effort to defend them. The males frequently destroy their own young, and are so stupid as to suffer themselves to be killed by cats, without resistance. They are by nature gentle and tame; they do no evil, and they seem to be equally incapable of good. This animal is less than the rabbit; its upper lip is only half divided; it has two cutting teeth in each jaw, large and broad ears; hair of different colours; white varied with orange and black, in irregular patches. It has no tail, is a restless animal; feeds on bread, grain, and vegetables, and makes noise like the grunting of a pig. It is capable of breeding at the age of two months, and produces from four to twelve at one time. Its innumerable offspring are diminished by cats, by the males, the severity of the climate, and want of proper care.

CHAP. X.

Animals of the Rat kind.*THE RAT.*

THIS race of animals are numerous and mischievous. At the head of the class we may justly place the great brown, or Norway rat, as the most destructive. This creature is supposed to have come originally from the Levant. It dwells in holes of its own forming in the banks of rivers, ponds, ditches, &c. and does great injury to them, but this is only its summer abode, for as the winter approaches, it comes nearer to farm houses, where it destroys the poultry and eggs. This animal measures from eight to ten inches in length ; its eyes are black, large and piercing ; the upper part of the body is of a light brown, intermixed with an ash colour ; the belly, throat, and extremity of the nose, are of a dingy white. These rats are very prolific, producing from eight to sixteen at a time, and commonly bringing forth their young three or four times in a year, so that they would very soon overrun the country, did they not destroy and feed on each other. Exclusive of

this, dogs, cats, weasels, and other carnivorous animals are in perpetual hostility with them but their most potent enemy is man, by whom multitudes of them are annually destroyed. The black rat has a strong likeness to the preceding animal in its form and rapacity, but is neither so large nor so noxious. It was formerly very common in England, but since the importation of the brown rat into this country it has been nearly extirpated by it. The black water rat is nearly the size of the black rat, but its head is larger, its eyes smaller, and its nose rounder; it is invariably found near rivers, ponds, and ditches, where it feeds on fish and insects.



THE MOUSE.

A well known little animal, found in almost every country in great abundance. It seems a constant attendant on man, and is found only near his dwelling. Its minuteness and amazing fecundity are the best securities of the species, which otherwise would be totally extinguished. The mouse brings forth a litter of from six to ten several times in the year. The young are produced without hair, and in little more than fifteen days can subsist by themselves, so that the increase is prodigious; but their life is

proportionately short with their early maturity ; few of them living more than three years. All their actions seem to spring from fear and necessity. The mouse, apprehension and natural aversion apart, is a beautiful little animal. Its skin is sleek and soft ; its eyes brisk and lively ; all its limbs are formed with exquisite delicacy, and its motions are quick and active. A few of the species are of a pure white colour ; but whether this be accidental or permanent is difficult to determine. Such an appearance is, however, very beautiful : its fine full eyes of a red colour form an agreeable contrast with the snowy whiteness of its fur. There are many varieties of this animal, as the long and short tailed field mouse ; the shrew ; water and dwarf mice, &c.

THE SHREW MOUSE.

The shrew mouse is to be found in most parts of Europe. It is something less than the common mouse, and varies from it in the formation of its nose, which is much longer than the jaw bone. Its eyes are smaller than those of the common mouse, its tail is short and bare, its ears rounded, and its two upper fore-teeth of very curious construction, having a small barb on each side. Its colour is a sandy brown, with a white belly. It generally resides in fields, and feeds on insects, roots, and grain ; it will also eat putrid flesh. Its smell is so highly offensive, that cats will not eat it, though they constantly chase and kill it. In the month of August, numbers of shrew mice annually die.

THE DORMOUSE.

THIS pretty little animal is commonly called the sleeper. It generally makes its nest in woods and hedges, at the roots of hollow trees and at the bottom of bushes, forming it of grass, moss, and broken leaves. When the cold weather sets in, they roll themselves up in balls with the tail turned over the nose, but warmth will soon awaken them from this state of lethargy. During the summer, they take great care to lay up a store of beans, nuts, acorns, &c. that they may not be obliged to go abroad in search of food immediately on their re-animation. They mostly sleep during five months of the year, and are then seldom to be found except by woodmen. In the spring they breed, but are by no means so prolific as the common mouse. It has two cutting teeth in each jaw, naked ears, four toes before, and five behind; the tail is long, and hairy towards the extremity. It is nearly of the size of the domestic mouse, but more plump; the sides and back are of a tawny red; the belly and throat entirely white.

*THE MOLE.*

THIS little animal is singular from its form, manners, and disposition. The body is thick and round, without the appearance of a neck; the nose is strong and slender, and the legs

port. It seldom exceeds six inches in length, and the tail is commonly an inch long; its skin is thick, and its fur resembles the finest black velvet. There are but few varieties of this animal; some, however, are found in Ireland entirely white, and in Virginia, of a black and dark purple intermixed. It is asserted, that none of these animals are to be found in England. It is now ascertained that the mole has eyes, seated at a great distance from the brain, the optic nerve is long, delicate, and tender, and perfectly fitted to the life the animal is destined to lead. The form of its body is perfectly contrived to suit its mode of life; the fore part is thick and muscular, which enables it to force its way under ground with great rapidity. Anatomists mention, that this animal has, by a certain muscle, the power of drawing back its eyes whenever it is in danger. When it has once buried itself in the earth, it seldom comes out again, unless forced to do so by floods. This little animal always chooses a loose, soft soil, beneath which it can move with facility; it lives entirely upon worms and insects. The female brings forth her young in May, and commonly produces from three to six at a time.



CHAP. XI.

Animals of the Hedge-hog kind.*THE PORCUPINE.*

THIS animal, formidable in its appearance would be still more so, if it possessed the fabulous power of darting its quills at a distance, and transfixing its enemies. It is about two feet long, and fifteen inches high. The head, belly and legs, are covered with strong bristles; whiskers are long, the eyes remarkably small and the ears are like those of a man. Its body is armed with sharp and strong quills, which are from ten to fifteen inches in length, thick in the middle, and extremely sharp at the end. These quills are more for self-defence than for attack. It is an inoffensive animal, living on fruits, roots, and vegetables; and it sometimes preys on serpents, which it destroys with its quills. This animal is found in most countries, though originally a native of Asia and Africa only. Its flesh is eaten in Italy, and sold commonly in the markets. The Conane and Urson are varieties of this animal.

*THE HEDGE-HOG.*

The Hedge-hog is generally about six or eight inches in length, exclusive of its tail, which seldom exceeds an inch, or an inch and half in length. The back, head, and sides, are covered with innumerable prickles, exceedingly sharp, and white at the points; but the belly, nose, and breast are covered with a very fine soft hair. The legs are short, the toes long, and divided. This little animal, though it is thus armed at all points, is one of the most harmless creatures in existence. But the instant it is alarmed by the approach of any thing hostile, it rolls itself into a round ball, by which mode it presents an impervious mass of spines on every side; and when in this state, its enemies soon find the futility of their attempts, and quickly retire from the hopeless contest. The hedge-hog commonly dwells in ditches that are covered with bushes or long grass, where it forms a small hole and fills it with moss, leaves, and grass, among which it wraps itself up. It is much attached to fruit, and it also destroys multitudes of noxious worms and insects, by which it merits the protection of man, though it seldom finds it, being commonly most cruelly persecuted. The *Tauree* and *Tendrae* are varieties of this kind.

CHAP. XII.

Quadrupeds covered with Scales and Shells.*THE ARMADILLO.*

THIS singular animal is found in the hottest parts of south America. Nature, in the formation of this curious quadruped, seems to have deviated from the usual uniformity of her operations, having given it a perfect coat of mail, composed of shells, instead of hair. Its size, in general, is from one to four feet in length. Its shells, by which it is defended, resemble a bony substance, and entirely cover the head, neck, sides, rump, and tail; and, the whole being neatly jointed, the animal is enabled to move beneath it with perfect ease. The usual colour of this singular shell-work is a dirty grey. The armadillo is indolent, and, indeed, incapable of much exertion; it cannot therefore, make a great resistance against its enemies. But Nature, ever provident in defence of her creatures, has given it the power of

withdrawing its legs and head within its shell, and of rolling itself up like the hedge-hog ; in which state it presents an impenetrable round surface to its enemies. It delights in fruit, and if it finds its way into a garden, it does incredible mischief. Though a native of warm climates, it may, with a little care, be kept in temperate ones.

THE PANGOLIN.

THIS singular animal is defended by a coat of mail, which protects it from the attacks of the most powerful animals. All the upper parts of its body are closely covered with scales of different sizes, which it can erect at pleasure, opposing to its adversary a formidable row of offensive weapons. The tiger, the panther, and the leopard, in vain attempt to force it.

The pangolin chiefly resides in the most obscure parts of the forest, and digs itself a retreat in the clefts of rocks, where it brings forth its young in security. It is about three or four feet long, or, taking in the tail, from six to eight. Like the lizard, it has a small head, a very long nose, a short thick neck, a long body, short legs, and a tail of considerable length, thick at the insertion, and terminating in a point. It has no teeth, but its feet are armed with long white claws. It is found in the warm latitudes of the east, as well as in Africa.

CHAP. XIII.

Amphibious Animals.

THE BEAVER.

THIS animal is the only one that has a broad flat tail, covered with scales, which enables it to steer itself in swimming, and serves also as a vehicle to convey the materials with which it builds its habitation. It is curious, that the hind feet of this animal are webbed, whilst the fore feet are not so. It is perhaps so formed by the unerring wisdom of Providence, that it may be enabled to use its fore feet as the human species do their hands. The beaver appears to be the only animal of that species of ingenuity in animals, which, though infinitely inferior, as to its principle, to that of man, supposes, however, certain common projects, certain relative ends in view; projects, which having for their end society, in like manner supposes some particular mode of understanding one another, and of acting in concert. Vast numbers of these animals are found in North

merica, though they are natives of all the northern countries of Europe and Asia. The beaver when it attains its full growth, measures about three feet in length. The hair on the body is of a fine chesnut colour, approaching to black, and exceedingly smooth and soft. The hairs are short, and level with the fur, from which they cannot be perceived at a very small distance. Beavers usually form themselves into societies of three or four hundreds, in the months of June and July. After a sufficient number of them are assembled, their first object is to fix on a fit place to form their habitation. This is invariably chosen close to some lake or river. Should the stream be subject to fluctuation, they immediately commence a dam across the narrowest part of it, to break the force of the water in the parts above and below. And they have been known to carry on their gigantic work more than a hundred feet in length, and fourteen or fifteen in breadth, at the base. They generally single out a large tree near a shallow part of the river, and appoint a select party to cut it down, who execute their work in a very short time, though they have no tools but their teeth, and the tree is sometimes five or six feet in circumference. They begin as near to the ground as possible, and work entirely on the side nearest the water, till they find it incline that way: they then shift their stations, and continue working on the opposite side till the tree falls into the water. A second party is now appointed to lop off the branches, and to make the principal beam to their building. During the whole of these operations, a third party is busily engaged in cutting down smaller trees, which

they convey by means of their teeth, to the places at which they are required. When they have collected enough for their purpose, they fix a great number of stakes into the bed of the river, carefully filling up the interstices with wicker work. Another party is employed in procuring a sufficiency of stiff clay, which they bring on their broad flat tails, and with their tails they also lay it on their fabric, using them as masons do their trowels. This curious building, when finished, generally resists the utmost violence of the water ; but should it happen to be injured, they immediately repair it. After the dam is finished, they proceed to make their habitation, which is invariably round or oval, and furnished with two outlets ; one towards the water, and the other facing the land. They commonly build their structures two or three stories high, and about five feet in diameter, with a vaulted roof and thick walls. These animals providently lay by, in a store room, a sufficient quantity of provisions to supply them in winter. During the summer, they amuse themselves by rambling to some distance from their abodes, and sporting among the bushes ; but they have the precaution to plant a number of centinels to warn them of the approach of danger. The female goes with young four months, and rarely produces more than three at one time. The skins of the beaver are a valuable article of commerce, and from the glands situated in the groin is extracted the drug known by the name of castoreum. There is another species of this animal in North America, known by the name of the Musk Beaver, which, in its manners and habits, nearly resembles the common beaver.

THE OTTER.

THE otter is an amphibious animal, that lives both on land and in the water, yet it never goes up the sea. It abounds in all nations where there are rivers or fish-ponds. It is less than the beaver, and resembles it in most parts except the tail. It has a rough skin, and the hair on it is very soft and neat, like the hair of the beaver; its feet and tail are like a dog's, and both very sharp. Though it lives in and upon the water, yet it is forced to take breath. It is exceedingly swift in pursuit of its prey, which is mostly fish, with which he fills his den so full that it stinks to that degree as to corrupt the air. In the winter-time it lives chiefly upon land, and feeds upon fruit, bark of trees, &c. The female goes with young about nine weeks, and generally produces three or four at a time. It is hunted with dogs, and by men with sharp spears.

*THE SEAL.*

THIS singular creature resembles a quadruped in many respects and a fish in others. It is a native of almost every climate, but is mostly found on the shores of the icy seas; the head is round and broad, the eyes very large and brilliant, and the neck of a moderate length,

from which part the animal tapers away to the tail in the same manner as a fish. It is entirely covered with a thick shining hair. Its feet are different from those of all other quadrupeds, for they are fixed to the body in a curious manner, and so covered with a membrane, that they are more like fins than feet, and did not the claws point out the difference they might easily be mistaken for the fins. In length, these animals measure from three to ten feet, and in their colours there is a great variety. They are gregarious and migratory, retiring from the northern shores of Greenland, in June and July, and returning in September. It is noticed, that on their return, they are always in a very reduced state. The female produces her young during the winter, and has seldom more than three. These animals subsist entirely on fish, which they are very active in catching. They are very furious when attacked, and will fight with great courage. Their skin and oil are valuable articles of commerce, but their flesh is not much esteemed.



THE WALRUS,

MORSE, or Sea-horse, is a large amphibious animal, of about eighteen feet in length, and twelve

a circumference at the thickest part. It is remarkable for two large tusks in the upper jaw, which sometimes exceed two feet in length, and weigh from three to twenty pounds each. It is found chiefly in the northern seas, where it is hunted for its teeth and oil. Great herds of them are seen together on the shore, or sleeping on an island of ice. When alarmed, they instantly plunge into the water, and sometimes, wounded, unite for their common defence. The white bear and this animal have often doubtful and mortal combats. The female walrus produces two young, which she suckles on land. The Manati, Ursine Seal, and Sea-ion, are all varieties.

THE PLAYTYPUS.

THIS singular creature differs in its whole appearance from every other known animal. Its body which is much depressed, greatly resembles that of a very small otter, and is covered with a fine thick brown fur on the upper part, and a kind of iron white beneath; the head is flat, and the nose is exactly like that of a broad-billed duck. The tail is flat, and the colour of its fur is the same as that on the body. The length of this animal, including the tail, seldom exceeds fifteen inches, its legs are short and in a broad web. On each side of the head are two small oval white spots, in the lower part of which the eyes are placed. It is found in New Holland, and is not yet sufficiently known to warrant our attempting a full description of its nature.

Animals of the Monkey kind.

WE now come to a numerous tribe that, leaving the brute creation, seem to make approaches even to humanity ; that bear an awkward resemblance of the human form, and discover some faint efforts at intellectual sagacity.

Animals of the monkey class are furnished with hands instead of paws ; their ears, eyes, eye-lids, lips, and breasts, are like those of mankind ; their internal conformation also bears some distant likeness ; and the whole offers a picture that may well mortify the pride of such as make their persons alone the principal object of their admiration. These approaches, however, are gradual ; and some bear the marks of this our boasted form more strongly than others.

In the Ape kind we see the whole external machine strongly impressed with the human likeness, and capable of the same exertions : these walk upright, want a tail, have fleshy posteriors, have calves on their legs, and feet nearly like ours.

In the Baboon kind we perceive a more distant approach to the human form ; the quadruped mixing in every part of the animal's figure ; these generally go upon all-fours ; but some, when upright, are as tall as a man ; they have short tails, long snouts, and are possessed of brutal fierceness.

The Monkey kind are removed a step farther ; these are much less than the former, with limbs as long, or longer, than their bodies, and flat faces.

Lastly, the Maki and Opossum kind, seem to lose all resemblance of the human figure, except in having hands ; their noses are lengthened out like those of quadrupeds, and every part of their bodies totally different from the human.



THE OURANG-OUTANG.

THIS truly surprising animal bears, in its figure, and in its habit of walking erect, a strong resemblance to man. Its face resembles that of a man, but the eyes are sunk deep into the head, and the hair on each side is very long : the face, ears, and hands are without hair, and

perfectly naked ; the body is lightly covered with hair, and the animal is scarcely to be distinguished from man, except in its having no calves to the legs. This creature has sagacity enough to build himself a hut for protection from the violent rains of his native tropical climate. When a fire is made in the woods, he will draw near to it and warm himself ; but he has not the ingenuity to keep it alive by supplying it with fresh fuel, In his wild state, he subsists entirely on fruits and vegetables. These animals will admit no stranger into those parts of the forests in which they reside ; and should any animal, even the elephant, presume to intrude, they will attack him with clubs, and compel him to make a hasty retreat. They also use every art to decoy the negro women, and if they can once secure them, they confine them to their own society. It is a native of the interior parts of Africa, and is found on the islands of Borneo, Java, and Sumatra. There are other varieties of this animal ; but from their gigantic size and strength, they cannot be taken alive.



*THE APE.*

THIS animal is a native of India, Asia, and the continent of Africa, except Egypt, where none of them has ever yet been seen ; there are so great numbers of them at Gibraltar, but in the woods of Barbary they are innumerable. They are frequently brought into this country, and taught to perform many singular antics. The body of this animal rarely exceeds four feet in length ; its face has a strong resemblance to that of a dog, the upper parts of its body are of a dirty green colour, and the belly of a pale yellow ; the nails on its toes and fingers resemble those of the human race, and its cheeks are furnished with pouches, in which it can conceal a quantity of food. This creature is also curious from its want of a tail ; the female is strongly attached to her young.

Caubasson, a French clergyman, relates a laughable anecdote of an ape, which he brought up tame, and which became so attached to him as to be desirous of accompanying him where-

ever he went ; whenever, therefore, he had perform divine service, the animal was shut up. One day, however, it escaped, and followed him to church, where, mounting on the top of the sounding board, it lay quiet till the sermon commenced ; it then crept to the edge ; and imitated the gesture of the preacher in a grotesque a manner, that the congregation found it impossible to keep from laughter. Caubasson, offended at their levity, and unconscious of the cause, began to reprove them, and, in the warmth of his exhortations, redoubled his action, which the ape perceiving imitated them to so ludicrous a degree, that a respect for the pastor was lost, and his hearers burst into a roar of continued laughter ; when at length a friend stepped up to him, and pointed out the cause of their undecent conduct, and he himself could scarcely command his countenance till the animal was removed.

The gibbon, or long armed ape, of which a figure is annexed, is remarkable for its long arms, which will touch the ground when it stands erect.



THE BABOON.

THIS animal is from three to three feet and a half in height. It has a thick body and

long limbs, the tail is crooked, thick, and generally about seven or eight inches long; it has a pouch on its cheek, in which it deposits its provisions. This animal occasionally walks upright, its feet and hands are armed with claws instead of nails, which render it extremely formidable to the enemies which it meets, when in quest of provisions. The female produces but one at a birth. The baboon is not carnivorous, but subsists entirely on fruit, roots, and corn. It has large callosities behind, which are quite thick and very red. It is covered with a reddish brown hair. When these animals determine to rob an orchard, they commence their work with a large body, with great deliberation. On these occasions, a party of them enter the orchard, and the rest standing without, form a complete line to their rendezvous, which is commonly in some craggy mountain. Every thing being thus disposed, the animals within the orchard throw the fruit to those that are without, these catch it with the greatest activity, and silently pitch it from one to another, till it is safely deposited at head quarters. All this time, a centinel is constantly on the watch, and when he perceives any one coming, instantly sets up a loud cry, when the whole party scamper off as fast as their legs will carry them.





THE MONKEY.

THESE animals keep entire possession of every forest in which they reside ; neither the tiger nor the lion will attempt to dispute their dominion. The only animal that ventures to attack this insolent and mischievous set of creatures, is the serpent. Monkeys in their wild state, subsist almost entirely on birds, eggs, fruits, succulent roots, and the buds of trees, and are particularly fond of any thing that is sweet. When their ordinary food fails, they will live on worms, insects, and shell fish. In the tropical climates, the oysters are considerably larger than ours, and the monkey employs a very curious trick to procure them. He goes down where the oysters are found, and waits patiently till they open ; as soon as he perceives this, he picks up a stone, and fixes it in such a manner as to prevent the shells from closing, he then puts in his paw and draws out the fish. The monkey seldom breeds in our latitude, but when it does, both the parents are remarkably attentive to their young, and it is laughable to observe their conduct towards them. If the cubs are stubborn or disobedient, they correct

em with the greatest severity ; but when their rage is spent, they fondle the little animals, and endeavour to soothe their distress with the strongest marks of returning affection.

These animals, when attacked, will instantly collect their forces, and employ their mutual strength in defence of each other, and should any person enter the woods in which they reside, they instantly unite to expel him ; while he is passing beneath the trees, they keep up a constant war-whoop, and, leaping from tree to tree, continually pursue him, throwing down a succession of withered branches on his head. In this unequal contest, numbers of them may be killed, before they can be made to retreat. The negroes hate them for their mischievous tricks, and are highly gratified in attending Europeans who go out to shoot them ; what increases this gratification is, that negroes are excessively partial to monkeys' flesh, though it is extremely disgusting to a European, from the great similitude it bears to that of a young child. The monkey, when in company with animals of inferior instinct, will often make them the dupes of his mischievous dexterity.



Animals of the Opossum kind.*THE OPOSSUM,*

Is found in great numbers in various parts of North and South America, and varieties of it are produced in several of the East Indian islands. The Saragoy, or Molucca Opossum, is about the size of a cat; its head is long; nose sharp and pointed; ears large, thin, and naked; eyes small, black, and lively, having a white spot above each of them; its fur is soft, long, and of a dusky ash colour; its belly white; its tail is similar to that of a rat, naked and scaly, except a small part near the body, which is covered with hair; its legs are short, and its feet not unlike those of a monkey. But the peculiar and distinguishing characteristic of

The opossum is a pouch or false belly, in which the female deposits her young immediately after they are brought forth, until they are able to provide for themselves. Into this the young are conveyed, to the number of from five to eleven, and maintained there, attached to the mother by a canal entering the mouth, which in the course of six weeks they can forsake and resume, as it were a pap, at pleasure. The opossum is weak and helpless on ground, but climbs trees with great ease and quickness, hangs itself to them by the tail, and darts on its prey. It feeds on birds, reptiles, insects, roots, leaves, and the bark of trees. It is easily tamed, and is not ferocious ; but it is both of an ugly figure and disgusting smell. The Marino opossum of South America produces fourteen young at a time ; but, instead of a bag, has two longitudinal folds under her belly, in which the embryos are secured, from the size of a nut, till they can provide for themselves.





THE KANGAROO.

THIS extraordinary quadruped has raised curiosity, which has at length been fully gratified; the Kangaroo having been, of late years commonly exhibited in this country. Its size when at maturity, is nearly that of the common sheep; its upper parts are extremely slender, when compared with the lower, but as this increase of its size takes place in a gradual manner, it rather adds elegance to the animal's whole form. The formation of the feet is curious, the middle claw being of great size and strength, and the whole foot bearing a strong resemblance to that of a large bird. The difference also between its fore and hind legs is remarkable; the former seldom measuring more than eighteen inches in length, while the latter is three feet six inches. This animal sometimes uses all its four legs in running, but its chief progressive motion is by leaps, which commonly exceed twenty feet each time. Kangaroos burrow in the ground like rabbits, digging with

their fore feet, and with them also they convey their food to their mouths. They are chiefly hunted with greyhounds, and when attacked, will fight with desperate courage, using both their teeth and claws. The kangaroo has the curious faculty of separating, at pleasure, the two front teeth of the lower jaw. In their native state these animals are gregarious, and feed chiefly at night ; their flesh is eaten, but is generally considered as very coarse. It is a native of New South Wales, where its was discovered by Capt. Cook.

There are two varieties: the silver haired kangaroo, and the rat kangaroo: the former is remarkable for its elegance, and is much smaller than the common kangaroo ; it is also noted for the extreme delicacy of its limbs, and the superior fineness of its hair. The latter differs from the common species, in being not larger than a rabbit, and it has only four toes on the fore feet. It has also several long whiskers on each side of the upper lip, and is altogether less pleasing and elegant.



CHAP. XVI.

Animals of the Bat kind.*THE BAT*

Is an animal very much allied to the mouse species. So different is it from any of the winged creation, with which it has sometimes been confounded, that the whole of its skeleton, its intestines and habits, ascribe it to that of quadrupeds. It produces its young alive, and suckles them; it has teeth and lungs like a quadruped; but the awkward and struggling motion which it makes to support itself in the dusk of the evening, has gained it the name of a bird. This is effected by the four interior toes of the fore feet being extended to a great length, and connected by a membrane which also is joined to the hind legs and the tail. The foremost toe of the fore feet is short and unconnected, and serves for a heel when walking and a hook when climbing. The hind feet which are divided into five toes, resemble those

a mouse. The skin and membrane by which it flies is of a dusky colour ; the body is covered with a short mouse-coloured fur, tinged with red ; the eyes are very small ; the ears short, and the extent of the wings nine inches.

In Britain the bat appears early in summer, and haunts the sides of woods, glades, and shady walks ; and frequently skims along the surface of water in pursuit of gnats and other insects. It flies not in a regular direction, and with much labour ; when on the ground it cannot speedily raise itself, and is then easily taken. It alone can remain in caverns and frightful subterraneous abodes, without any inconvenience, in a state of torpidity, and unaffected by any change of weather. It is in general offensive, and though it will prey by times on bacon, tallow, &c. in a larder, yet from its destruction of insects and other vermin, it is rather useful than otherwise.

THE VAMPIRE.

THIS animal, in its flight, appears about the size of a common pigeon. Its body is entirely covered with long ash-coloured hair. It is destitute of a tail, and at the end of its nose it has a membrane of a conical form, which gives it a most frightful appearance. These animals will suck the blood of the largest quadrupeds, and even of man, should they thoughtlessly sleep in the open air. This operation they perform without causing pain, or even awaking the person on whom they fix ; it is supposed that they draw blood by the mere action and re-action of

their rough and sharp tongues. The following circumstance happened to Capt. Stedman during his expedition to Surinam:—On awaking at an early hour one morning, he was greatly alarmed at finding his hammock wet through and himself weltering in blood, though freed from pain. On his ringing for assistance, he was discovered, that he had been bitten by a vampire. While it is sucking the blood of its victim, it keeps up a continual fanning with its wings. It is a native of South America.

THE ROUSETTE.

OF foreign bats the largest we have any satisfactory account of, is the roussette, or great bat of Madagascar. This formidable animal is nearly four feet broad, when the wings are extended; and about a foot long, from the tip of the nose to the insertion of the tail. It resembles the common bat in the form of its wings, in its manner of flying, and in its internal conformation; but its colour is red, like that of a fox, and its head and nose resemble those of that animal; whence some writers have styled it the flying fox. When they repose they adhere to the tops of the tallest trees and hang with their heads downward: but when in motion, they are seen in clouds darkening the air; devouring indiscriminately fruits, flesh and insects, and sometimes settling upon animals, and man himself.

Animals of a distinct race.

THE ELEPHANT.

(See Frontispiece.)

THE largest, the wisest, and most obedient of all the animal creation, the elephant has been employed for the purposes of war, labour, or parade, from time immemorial. It is found in Asia, and particularly Africa. They feed in herds of many hundreds together; are shot by the colonists at the Cape of Good Hope, and entangled in snares by the hunters of the eastern sovereigns to supply the great use of them in a tame condition in the Asiatic countries. In a servile state they never breed; but, losing all their wildness, become the most tractable, sagacious, and useful animals in the world. Their trunk is the organ by which they feed, and which serves to defend themselves; this can not only tear up trees from the very roots, but even lift the smallest article. They are sensible of injury even to human acuteness, and of kindness in an equal degree. Patient of labour, a word or a look will command them, and they will die rather than disobey. In short, what is known for certain of this animal can scarcely be credited without being actually seen; to such a degree its submission and sagacity surpass the most sanguine expectation. It stoops to take on its load, and helps to load its-

self with its trunk. It feeds on grass, herbs and leaves of trees ; in a domestic state it requires about one hundred pounds weight of food daily, and forty or fifty gallons of water and is commonly fed with raw or boiled rice. The female goes two years with young ; is from ten to fifteen feet high ; is thirty years in attaining its full growth, and is said to live, even in captivity, one hundred and twenty, or on hundred and thirty years.

This animal is subject to a kind of dry leprosy and also to fits of madness ; of which an instance has recently occurred in the stupendous elephant exhibited in Exeter 'Change, and which has rendered the destruction of the noble animal necessary.*

* This enormous animal, which for many years past has been the pride and boast of the well-known Menagerie at Exeter 'Change, was on Wednesday (March 1st) destroyed by order of the proprietor (Mr Cross), in consequence of its having exhibited signs of madness. This elephant was a male animal and had been an inmate of the menagerie for 17 years. It was brought from Bombay, where it was caught when quite young, and was supposed to be about five years old when purchased by Mr Cross, consequently its present age is about 22. The effect of its unavoidable seclusion had displayed itself in strong symptoms of irritability, during a certain season, from the first, and these symptoms had been observed to become stronger each succeeding year as it advanced towards maturity. The animal was always kept at this season very low, and also plentifully physicked ; for which latter purpose, no less than one hundred weight of salts was frequently administered to him at a time. Notwithstanding, however, these precautions, the animal within the last few days had shown strong proofs of irritability, refusing the caresses of his keepers, and attempting to strike at them with his trunk on their approaching him, as also at times rolling himself about his den, and

In order to take them wild in the woods, a spot of ground is fixed upon, which is surrounded with a strong palisade. This is made of the thickest and strongest trees; and strengthened by cross-bars, which give firmness to the whole. The posts are fixed at such distances from each other, that a man can

scarcely battering its sides. About one o'clock on Wednesday afternoon he became more ungovernable than at any former period, and commenced battering the bars of his den with his trunk. Serious fears began to be entertained lest he should break out, in which event the amount of damage, or the loss of life which he might occasion, would have been incalculable; there being several lions, tigers, and other ferocious beasts confined in the same apartment, all of which he might easily have liberated; as their dens, although made very strong, would have presented feeble barriers when opposed to his irresistible strength. Under these circumstances, notwithstanding the value of the animal was at least £1,000, the King at once determined on having him destroyed, and after some consideration as to the mode in which this should be effected, it was resolved to give him a quantity of corrosive sublimate in a mess of hay. The sagacity of the animal was, however, proof against this attempt, for he no sooner tasted the mixture than he rejected it, and it was therefore determined to shoot him. Accordingly, a messenger was sent to Somerset-house, where two soldiers, as usual, were on guard, who, on a suitable representation being made, were allowed to go over to the menagerie, taking with them their muskets. Several rifle-guns were also obtained from different places in the neighbourhood, and put into the hands of such of the persons about the establishment as had courage enough to remain in the room. In this manner, in all about twenty persons, were armed, but before commencing operations it was deemed prudent to secure the front of the den, by passing bag cords around those bars against which the animal's violence had been principally directed. This having been done, and the muskets loaded, about a third of the party advanced to the front of the den, till within about five yards of the animal, and discharged their pieces at the tender part of the

easily pass between them ; there being only one great passage left open, through which an elephant can easily come, and which is so contrived as to shut behind as soon as the beast is entered. To draw him into this inclosure

neck below the ear, and then immediately retreated to a recess at the lower end of the room for the purpose of re-loading. The animal, on finding himself wounded, uttered a loud and piercing groan, and advancing to the front of the den struck his trunk several times with all his fury against the bars, one of which he succeeded in forcing out of its place. Having in this manner at last exhausted his fury, he became quiet upon which another detachment of the party approached his den, and after firing upon him, retired into the recess as before. The animal, on receiving the fire, again plunged most violently against the front of the den, the door of which he actually lifted from off its uppermost hinge, but was prevented from getting out by the strong manner in which the ropes bound the different bars together. On his becoming more tranquil, preparations were made for firing a third volley, but no sooner were the muskets about to be levelled, than the animal, as if conscious of their being the cause of his wounds, and also of the vulnerable parts against which they were intended to be directed, turned sharp round and retreated into the back of the den and hid his head between his shoulders. It in consequence became necessary to rouse him, by pricking him with spears, which being effected, the muskets were discharged at him, and although several balls evidently took effect in the neck on this as well as on the former occasions, still he did not exhibit any signs of weakness, beyond abstaining from those violent efforts which he had previously made against the front of the den : indeed, from this time he kept almost entirely at the back of the den, and although the blood flowed profusely from the wounds he had received, he gave no other symptom of passion or pain, than an occasional groan, or kick against the side of the den. For about an hour and a half in this manner, a continued discharge of musquetry was kept up against him, and no less than 152 bullets were expended before he fell to the ground, where he lay nearly motionless, and was soon dispatched

is necessary first to find him out in the woods: and a female elephant is conducted one into the heart of the forest, where it is

with a sword, which, after being secured on the end of a rifle, was plunged into his neck. The quantity of blood that flowed from him was very considerable, and flooded the den to a considerable depth. This is the same elephant which was the accidental cause of the death of its keeper, a German, the name of Tietjen, whose ribs it crushed, about four months back, while in the act of turning round in its den.—The following is a correct account of the quantity of food daily consumed by this stupendous beast:—about two trusses of hay, ten or twelve bunches of carrots, or an equal quantity of tares, a truss of straw, (given as a bed but generally eaten), and from thirty to thirty-five gallons of water. The rest taken by the elephant was about four hours in the twenty-four, during which he slept well, but upon the least strange noise he would rise with agility. Several anecdotes, are related of his sagacity. Four or five years ago, the hide of the animal having become tight and sore the keeper rubbed the back daily with marrow. Chuny (the name by which the animal was addressed), was so much pleased with this mode of relief, that, subsequently, whenever he had a sore place, he would take water in his trunk and throw it upon the sore, to direct the attention of the keeper, whom he was very fond.—The Elephant was as sensible of injury as he was of kindness. About seven years ago the keeper having entered the den in a strange dress, he was not recognized, and the animal rushed upon him, fixing him to the wall between his tusks, and nearly crushed him with his trunk; a bystander, in the laudable anxiety to save the life of the keeper, thrust a pitchfork into the thigh of the elephant. This had the effect of diverting his attention from the keeper, who was able to make his escape; but the assailant was recognized, and from that day has had frequent proofs of Chuny's recollection. On some occasions the beast has taken dirty water into his trunk and thrown it over the offender. The difficulty of destroying this elephant was foreseen by the proprietor, and every means were adopted which humanity should suggest, to do the act speedily; but it is never an easy matter to destroy so powerful an animal. 1826.

obliged by its keeper to cry out for the male. The male very readily answers the cry and hastens to join her, when she leads the animal into the inclosure already described, which shuts the moment he is entered, and proceeding forward it grows narrower all the way until the poor animal finds himself completely shut up, without the power of either advancing or retreating; the female, in the mean time being let out by a private way, which she has previously been accustomed to. The wild elephant, upon seeing himself entrapped in this manner, instantly attempts to use violence; in the mean time, the hunters, having fixed him with cords, attempt to soften his rage, by throwing buckets of water upon him in great quantities, rubbing the body with leaves and pouring oil down his ears. Soon after two tame elephants, a male and a female, are brought that caress the indignant animal with their trunks while they still continue pouring water to refresh it. At last a tame elephant is brought forward and an officer riding upon it, in order to show the new captive that it has nothing to fear. The hunters then open the inclosure and, while this creature leads the captive along, two more are joined on either side of it and these compel it to submit. It is then tied by cords to a massy pillar, provided for that purpose, and suffered to remain in that position for about a day and a night, until its indignation be wholly subsided. The next day it begins to be somewhat submissive: and, in a fortnight, is completely tamed like the rest.



THE RHINOCEROS

is only inferior in size to the elephant, and in strength to none. He is covered with a skin impenetrable to all the attacks of the elephant and tiger, and which will fold the edge of a scimitar, and resist the ball from a musket. A hard and solid horn grows from its nose, with which it tears up trees, raises stones, and throws them behind it to a considerable distance. With this it often braves the fiercest animal of the forest, and conquers him. The legs of the rhinoceros are short; the body is everywhere covered with small tuberosities of the skin, which form its armour. The belly is only vulnerable, which is large, and hangs near the ground. It is found in the south-east of Asia, and in Africa; it feeds on the grossest vegetables of all kinds; is fierce, solitary, fond of wallowing in moist places, and is not very numerous. Its hearing is acute in the extreme; it is liable to paroxysms of fury, which nothing can appease. A species of this animal has two horns, and has no fore teeth. The rhinoceros is thought to be the unicorn of the scriptures.



THE HIPPOPOTAMUS.

THE hippopotamus is a large and formidable animal, in magnitude only inferior to the elephant. A full grown male will measure seventeen feet in length, from the extremity of the snout to the insertion of the tail, seven feet in height, and fifteen in circumference. The head is enormously large, and the jaws extend upwards of two feet. The body is of a lightish colour, thinly covered with hair, which at first sight is scarcely perceptible. Though amphibious, the hoofs, which are cloven into four divisions, are unconnected by membranes; and the whole figure exhibits something like a mixture between an ox and a hog. Indeed, its voice too bears some mingled resemblance to the bellowing of the one and the grunting of the other. This quadruped, which is thought to be the Behemoth mentioned in the book of Job, resides chiefly at the bottoms of the great rivers and lakes of Africa, from the Niger to the Cape of Good Hope. It is found also in Upper Egypt and in the lakes and fens of Ethiopia.

THE TAPIR.

THIS animal is a native of the New Continent. It is amphibious, and resides chiefly in the water; but it feeds entirely on the pastures, by the river side. Its snout is very long, and it has the singular faculty of extending or contracting it at pleasure. It is an extremely timid creature, and will rush into the water, hearing the least noise.

*THE CAMELEOPARD*

AN animal of questioned existence; known formerly to the ancient Romans, and now found to be a native of the wild and unfrequented deserts of Ethiopia. The enormous disproportion of its parts, its height from the crown of the head to the ground being seven-

teen feet, while at the rump it only measures nine ; its long neck of seven feet, and its legs raising it so far from the earth, disqualify this curious production of Nature for feeding on level grounds, which it does with great difficulty. It browses chiefly on the leaves and tender branches of trees. It is timid and gentle ; not swift. The male is light grey, interspersed with large dark brown spots over the whole body ; those of the female are pale yellow. It lies on its belly, and has hard protuberances on its breast, like the camel. It is cloven footed ; has no teeth in the upper jaw ; is a ruminating animal, and has long ears, with large and beautiful eyes.



THE DROMEDARY.

THE appellations of Dromedary and Camel have been in use from time immemorial ; they do not, however, designate two distinct genera of quadrupeds, but a variety of one and the same genus. The chief differences are, that the dromedary has but one hunch upon his

...k, while the camel has two, and the former animal is inferior in size and strength to the other: being unable to carry more than seven hundred weight. Of the two varieties the dromedary is the most numerous: its manners, disposition, and habits, are nearly similar to those of the camel. The dromedary is often employed on pilgrimages, after which it is ever esteemed as a sacred animal, and treated with the greatest veneration.

THE CAMEL.

This animal is a native of Arabia and various other countries, and is by the Arabs esteemed one of the most bountiful gifts of the Almighty. Its height, when measured to the extremity of the hunch on the back, rarely exceeds seven feet; the hair on this protuberance is of a black colour, and that on the other parts of a reddish ash. The head is short, the countenance dull, and the neck slender, long, and bending. The Camel has a long tail, small hoofs, and flat soft feet, divided above, but not quite through, so that they are capable of passing the burning sands with ease. It has a large callosity at the bottom of the breast, one on each knee, one on the inside of each hind leg, and another on the inside of the fore leg. These animals are particularly useful in Arabia, which is, in almost every part, dry and sandy. As is said, that camels can travel fifteen or sixteen days without requiring any beverage whatever. This singular power does not originate from the force of custom, but from the for-

mation of the animal's stomach ; for exclusive of the four stomachs, commonly found in ruminating animals, the camel has a fifth peculiar to itself, which answers the purpose of a reservoir, to contain water. When the animal is desirous of drinking, it possesses a power of causing part of this water to reascend into its throat. Camels' milk is much esteemed by the natives, who also cloathe themselves with its hair, which is invariably shed once a year. In Turkey, Persia, Arabia, Barbary and Egypt commerce is entirely carried on by the assistance of camels. Merchants and other descriptions of people, when preparing to travel, provide themselves with their camels, and form a large company, to prevent the attacks and depredations of robbers. This assemblage is called a caravan, the numbers of which have been known to amount to ten thousand. The largest camels are able to carry half a ton weight when loaded, they seldom travel more than thirty miles a day ; and when they arrive in the evening, at some verdant spot, they are permitted to feed, and will then supply themselves with as much as will prevent hunger the next twenty-four hours. They are extremely fond of the thistle, and all other prickly vegetables, preferring them to the most luxuriant pasturage. But when there is little verdure to be found on their way, the drivers supply them with a certain kind of paste, which is exceedingly nourishing. On approaching a spring, they scent it at a considerable distance, and quicken their pace to arrive at it. Travellers in the desert, when highly distressed for water, frequently kill one of their camels for the sake

the water found in its stomach. The flesh of the young animals is considered as a great delicacy. The pace of this creature is a kind of high trot, extremely disagreeable to such riders as are not accustomed to it. Though naturally wild and docile, the camel is subject, like the elephant, to periodical fits of rage, at which times it requires the utmost caution to manage him. This animal is also extremely sensible of treatment, which he rarely forgets, and seldom fails to revenge. The young camel sucks milk till it is a year old: it commences labour at four years of age, and lives between forty and fifty years. The value of one in Egypt is about twenty-five pounds sterling.



THE LAMA.

THIS animal is the camel of Peru and Chili, but is not generally scattered over all America. Its neck is about three feet in length; the head is small, and well formed; the eyes large; the ears about four or five inches long; the tail small and curved; and the body is covered with a kind of brown wool. In Peru, they form the

chief riches of the Indians and Spaniards, who rear them, their flesh being very delicate, and their wool manufactured into excellent clothing. They are able to carry considerable burdens through the most dangerous roads. In their native state, they are gregarious, and assemble in herds of two, three, and four hundred. When a stranger approaches them, after having surveyed him for some time, they fly to the top of the mountains. This animal is inferior to the camel, in size, strength, and perseverance, yet it has its advantages, requiring neither care nor expence in providing for its subsistence. It is supplied by nature with a warm covering, and does not, therefore, need a stable; and being perfectly contented with grass and common vegetables, it requires neither corn nor hay. Of all known quadrupeds, it seems to need the smallest quantity of water, being provided by nature with so copious a supply of saliva, that its mouth literally overflows with it. Indeed the saliva appears to form the animal's only defence; for when treated inhumanly by its keeper, it falls on its belly, and emits against him a quantity of this fluid, which the Indians assert, will cause very dangerous eruptions.

There is a variety of this animal called the paco; it is smaller, and by no means so strong. Its wool, however, is extremely valuable, being the colour of a dried rose-leaf. It is formed into the most beautiful quilts and carpets.

THE GNU.

THE Gnu is a native of the southern parts of Africa, and is about the size of a common horse; its length seldom exceeds five feet, and its height

our. The body is of a fine brown ; the mane and tail grey ; the beard black ; and the horns strong, smooth, and pointed. In its wild state, is extremely fierce and dangerous. These creatures are gregarious, and are commonly seen in very large herds. They are caught by the natives in pit-falls, for the sake of their hides and flesh, the latter of which is supposed to be equal in flavour to the finest venison. The Hottentots employ many other methods to ensnare them, and generally destroy a great number.

THE NYL GAU.

THIS animal is also known by the name of the white-footed Antelope. It is about four feet high, and as many long, from the base of the tail to the bottom of the neck. It seems to partake of a mixed nature, between the cow and the deer ; its body, tail, and horns, being similar to the former, and its head, neck, and legs, resembling those of the latter. It has a short black mane ; the general colour of its body is grey ; its horns are tapering, terminating in a blunt point ; its ears are elegantly formed, the edge being laced with white, and the inside lined with the same : they spread to a considerable breadth. The female has no horns ; she is smaller than the male ; in her form and colour, she strongly resembles the common deer ; and she goes nine months with young.



THE BEAR.

OF this animal, there are three different kinds, the brown bear of the Alps, the black bear of North America, which is smaller, and the great Greenland or white bear. These, however, are all probably of the same original, and principally owe their varieties to food and climate; as they have all the same habitudes; their voice is a sort of growl interrupted with rage; and they are equally carnivorous, treacherous and cruel.

The brown bear is a solitary animal, inhabiting the most horrid chasms and dangerous precipices, and frequently choosing for its abode the hollow of some tree; there it exists for some months in the winter without provisions, seeming to subsist on the exuberance of its former flesh, which it had acquired in the summer.

The black bears are common in Canada, and inhabit those trees which are hollow at the top; but when hunted are forced from their retreats by setting fire to the tree, by which means the old one generally issues out first, and is shot by the hunters: and the young ones as they descend are caught in a noose, and are either kept, or killed for provision. Their hams and paws are considered a great delicacy.

The white or Greenland bear differs greatly both in figure and dimensions from these already mentioned ; and though it preserves, in general, the external form of its more southern kindred, yet it grows to nearly three times the size. They principally live on fish, seals, and dead whales: they seldom remove far from the shore ; sometimes, however, they are seen on ice-floats, several leagues at sea, and are often transported in this manner to Iceland : where they no sooner arrive than all the natives are in arms to receive them.

The female bears bring forth two or three young, and are very jealous of their offspring. Though the males of the brown species devour their young when they have an opportunity, the females love them to a ferocious distraction. When they have brought forth, their fury is more violent, and more dangerous, than that of the males.

The crew of a boat, employed in the whale fishery, shot a young bear, on which the dam set up a dreadful roar, and ran over the ice towards the boat ; another shot fired by the crew, wounded the animal, and increased her fury. She now left the ice, and, plunging into the water, got so near the boat, as to lay her fore paw upon the gunnel, when one of the crew taking up a hatchet, chopped it off. In this maimed condition, the infuriated animal still continued to follow the boat, though several times wounded by musket balls, till it reached the ship, and she actually got on the deck, to the extreme terror of the crew ; when one of them with great presence of mind, fired on her from the shrouds, and laid her dead on the spot.

THE ANT-EATER.

A native of the woods of Brazil and Guiana is, from the nose to the tail, about three feet ten inches long. It has a long slender nose small black eyes and short round ears, the tongue is very slender, about 30 inches long and it lies double in the mouth. Its feet are armed with strong hooked claws; the hair on the back is of a black colour mingled with grey. It conceals itself under the fallen leaves, and seldom ventures from its retreat; but when it does, the industry of one hour serves it for several days. It feeds entirely on ants and insects. Approaching an ant hill, it creeps slowly on its belly, taking every precaution for concealment, till it have reached a convenient distance, then thrusting its tongue across the paths of the ants; these animals allured by its appearance, which is red and round, come forth and swarm on it in great numbers; when the tongue being covered with a slimy substance like bird-lime, entangles every creature that lights on it, and being sufficiently covered, the ant-eater draws it in and devours them all.

Helpless as this animal may appear, it is fierce and dangerous, and when driven to extremity, will fight with its claws so vehemently, that if once its fore feet get entangled with any antagonist, there is no disengaging them. The panthers of America are often unequal to the combat, it fixes its talons in their sides; they both fall and perish together, for such is its stupidity, or obstinacy, that it will not extricate itself, even from a dead enemy.



THE BADGER.

THIS animal is very common in various parts of England, and, when taken young may be easily tamed. It will then associate with dogs and cats, and follow its master in the same manner as the former. The legs of the badger are so short, that its belly appears to touch the ground. It is a stupid, solitary animal, and prepares itself a deep winding hole, in which it dwells, and from which it seldom ventures far. When attacked by dogs, it makes a desperate resistance, and seldom dies unrevenge'd, as it bites dreadfully, and the wounds thus made, are a considerable time in healing. This poor animal adds another to the list of the many that are tortured in this country, in the brutal and inhuman sport of baiting. The badger is carnivorous, and devours every description of flesh. It sleeps the greater part of its time, and is particularly fat during the winter season. Its flesh is rank and ill-tasted.

THE COATI MONDI.

THE coati mondi is a native of Brazil, and not unlike the racoon in the general form of the body. Its eyes are small, but full of life, and when de-

mesticated, this creature is very playful and amusing to his master. A great peculiarity belonging to this animal is the length of his snout which resembles in some particulars the trunk of the elephant, as it is moveable in every direction. The ears are round, and like those of a rat; the fore feet have five toes each. The hair is short and rough on the back, and of a blackish colour; the rest is a mixture of black and red. The tail is marked with rings of black. The upper jaw is an inch longer than the lower, and the nose turns up at the end. When it sleeps it rolls itself into a lump, and often remains immoveable for fourteen or fifteen hours together. This animal has a practice of eating its own tail, which, when not mutilated is longer than its body.



THE RACCOON.

THIS animal is smaller than the badger. Its body is short and thick, and its nose resembles that of the fox, excepting that it is rather more pointed. Its fur is long and thick, of a blackish

lour on the surface, and grey beneath. The tail is thick, tapering, and neatly ornamented with rings of black. It has five sharp claws on the toes, and the fore feet are much shorter than the hind ones. In its manner it is sportive, active, and swift. Racoons are very numerous in the southern parts of America, and some of the West India islands, particularly Jamaica, where they do incredible mischief to the sugar plantations. But they are easily tamed, and become both harmless and diverting.

THE SLOTH.

THERE are two varieties of this animal; the first of which has claws on each foot, and is without a tail. The second has three claws on each foot, and has a tail. The sloth is of nearly the same size as the badger, and has a long coarse fur something similar to dry grass. The tail of this creature is very short, and its mouth extends from ear to ear. The formation of its limbs is so remarkable, that it can only move at the rate of sixty yards in twenty-four hours, and to move, is a work of so much labour to this miserable looking animal, that it is rarely induced to change its place, unless compelled by extreme hunger. The sloth can, with considerable difficulty, climb up a tree; but it has not the power of descending without forming itself into a ball, and dropping to the ground, where it remains some time inactive, from the violence of its fall. So indolent is this creature,

that to travel from one tree to another at the distance of one hundred yards, is commonly a week's journey. The sloth subsists entirely on vegetable food, and when it once ascends a tree it will never again quit it until it has totally stripped it of leaves and bark.

ANONYMOUS ANIMAL.

THIS animal, which is mentioned in Bewick's history of quadrupeds, has not yet received a name from naturalists, and is not sufficiently known to be well described. In its shape and size, it bears a very strong resemblance to the common bear, and is clothed with long black shaggy hair. The feet are armed with five crooked claws, and the tail is so short as to be scarcely visible. In its motions, it is slow and languid, though occasionally lively. It subsists almost entirely on vegetables, and particularly delights in honey. It is a native of India.



NATURAL HISTORY

OF

BIRDS.

THE extensive region of the air, though too elevated for the power of man to explore, is populated with a numerous race of animated beings; many of which delight the eye by their variegated plumage, and charm the ear with their song. In no portion of creation is the wisdom and power of Omnipotence more apparent, than in the wonderful adaptation of their form and habits to the element in which they are destined to move. In point of form, the body of a bird is sharp above; it swells in height from the shoulders to the tail, which being fully expanded, serves, along with the wings, to buoy it up, and also as a rudder to direct its course. The clothing of a bird is feathers; each composed of a quill, containing itself a considerable quantity of air, and edged on either side with a most volatile substance, which, with the concavity of the wings, make their bodies considerably lighter than air. In sight, the eye of a bird is less convex or prominent than in creatures confined to the earth. Hence, it is less injured by the repulsive force of the air in rapid flight, and less obnoxious to the points of thorns, bushes, trees, &c. during their progress among them. They have a membrane with which they occasionally cover their

eyes, which protects them from the glare of sunbeams as well as mists, fogs, and clouds in the air. The power which they possess of extending the optic nerve endues them with acuteness of distinctness, and length of vision, beyond all other animals. They hear without any external ear, which would only impede them; their smell is so acute, that they are speedily apprised of the approach of their enemies both natural and artificial; their bones, though strong enough for the support of the body, are extremely light and are calculated to increase its surface beyond the proportion of its solidity; the lungs and windpipe are dilated into large receptacles for air; their crop, the store-house of superfluous food, aids them in long flights with provision, and as these are generally dry, hard, and crude they have a gizzard which, with the help of sand and other strong particles, assists the digestion. Birds annually renew their plumage, and about moulting time, as it is called, they are sickly. They pair in the spring to propagate their species, and mutually, with great tenderness, make their nests and rear their young. Many, as rooks, red-breasts, &c. never quit the place of their nativity, and many emigrate in great companies into warmer or safer regions for the sake of heat, food, protection to their young, or other advantages: such are termed *birds of passage*; and the seasons of emigration are regular in point of time, annually; these companies darken the air, not in a promiscuous crowd, but in all the regularity of an organized army. They are ranged in a long column thickening towards the rear; and some of the strongest birds are found in the extremities for the sake of leading or bringing up the march.

single bird flies in the van ; and, after some time, he falls back and another supplies his place, who, in his turn, is relieved by a third. They depart, and return so regularly, that in the course of five years, the average of difference is not exceeded more than a single day. The time, the place, the necessity, and the regular means of emigration, are pointed out to these animals with greater certainty and propriety by the innate endowments of Heaven—by which “the stork in the heaven knoweth her appointed times ; and the turtle-dove, and the crane, and the swallow, observe the time of their coming” *—than are the circumstances even of the best concerted plans of human wisdom, though directed by the more glorious faculty of looking before and after.

Birds of the same species do not always make their nests of the same materials, though in general there is a uniformity. The red-breast in some parts of England, makes its nest with oak leaves where those leaves are plenty ; in other parts it makes it with moss and hair. Where the eggs are numerous it is necessary to make the nest warm. Hence the wren, which is a small animal and able to cover but a very small compass, and yet lays many eggs, makes her nest remarkably warm. On the contrary, the plover, the eagle, the crow, &c. which lay but two or three, are not equally solicitous in this respect.

Birds have been divided by Linnæus into six classes.

1st. The RAPACIOUS KIND, which are carnivorous, preying on other birds, or the flesh of

dead animals. Their beak is strong, hooked and notched at the point; their legs short and muscular, their toes strong, their talons crooked. They are also distinguished by strength of body, impurity of flesh, kind of food, and ferocious cruelty.

2nd. The **PIE KIND**, known by their miscellaneous food, and their females being supported during the breeding season by the males.

3rd. The **POULTRY KIND**, having fat muscular bodies and pure white flesh; and being also promiscuous in the choice of their mates.

4th. The **SPARROW KIND**, a vocal and beautiful class, supported by seeds or insects, and while rearing their young remarkably fond and faithful.

5th. The **DUCK KIND**, whose bills serve as strainers to their food, and which are web-footed for the purpose of swimming.

6th. The **CRANE KIND**, with long and penetrating bills, by which they seek their food in fens and watery places; and with long legs and necks adapted to their habits of life.

In these classes are not reckoned the ostrich, cassowary, dodo, &c. which being of extraordinary size, and incapable of flying, may be called feathered animals.



CHAP. I.

*THE OSTRICH.*

THE Ostrich appears in some measure to connect the class of quadrupeds with birds, and is the largest of the winged tribes. It is from seven to nine feet high, measuring from its head to its feet ; but of this height, its long neck constitutes a full half. The head of this bird is small in proportion to its body, and is covered, like the neck, with a fine white hair. The feathers of the body are loose and black ; but those of the wings and tail are beautifully white and are wavy, long, and elegant. The wings are armed at the extreme points, with two hard spurs ; the thighs and flanks are bare, the legs coated with scales, and the feet cloven, strong, and of a grey brown colour. The wings of the

ostrich are by no means sufficiently expansive to buoy it off the ground, and their only use is to assist it in running. Its eggs commonly weigh fifteen or sixteen pounds; but the notion of this bird's leaving her eggs to be hatched by the sun, is erroneous; for the male and female sit alternately, till the young are produced. Ostriches are found wild in Asia, in the burning deserts of Africa, and in the neighbouring islands. Dates and vegetables are their favourite food, yet they will eat almost anything they meet with; for they even devour iron, lead, and leather. The male invariably attaches himself to three or four females, who collectively produce fifteen, twenty, and sometimes as many as thirty eggs. When the young are hatched, the females assiduously supply their wants, and guard them from danger. Of this an instance is given by Thunburg, who relates, that he once rode by a place where an ostrich was sitting on her nest. The bird sprang up, and endeavoured to attract his attention from her young to herself; and whenever he turned his horse towards her, she retreated a few paces: but as he rode on again, she would pursue him; and in this manner she continued to act, till he was at a considerable distance from her nest. The eggs are very hard, and yellow. It is remarkable, that a number of small oval pebbles, of the size of a large pea, are found in them. These birds, if taken young, are easily tamed, and become so attached to their keeper, as to follow him about like a dog: they may also be taught many amusing tricks. It is said, on very good authority, that, at several places, they are used instead

of horses.* Although the ostrich considerably exceeds the horse in swiftness, yet it is generally hunted and taken by that animal. This is, however, a very laborious business, and requires considerable patience and perseverance. As soon as the hunter discovers the bird, he commences his pursuit by a gentle gallop, so as to keep within sight, without alarming it; for were it pressed at first, it would soon run out of the sight of its pursuers. Unfortunately for the poor bird, it never runs off in a direct line, but makes its way forward in circles, while the hunters, taking a shorter course within the circle, go over much less ground, though they always keep at the same distance. This method continues sometimes for two days, when, the bird being exhausted by hunger and fatigue, the hunters gallop in and kill it with sticks, that the beautiful whiteness of its feathers may not be soiled with blood. The flesh of the young birds is said to be very wholesome.

THE CASSOWARY.

THIS bird is a native of the southern parts of India. Its height is about five feet and a half; it has a crest on its head, something like a helmet, about three inches high; and the wings

* Adanson asserts that, at the factory of Podore, he had two young ostriches, the strongest of which ran swifter than the best English racer, although he carried two negroes on his back. As soon as the creature perceived it was loaded, it set off running with all its force, and made several circuits round the village, till at length the people were obliged to stop it, by barring up the way.

are so small as to be scarcely perceptible, and are armed with five strong prickles. The feathers are generally double, having two long shafts issuing from a short one, which is fixed in the skin. The beards at the end of the long ones are entirely black, under which there is a kind of grey down. In short, this bird is said to have the head of a warrior, the eye of a lion, the defence of a porcupine, and the fleetness of a courser: but though it is thus formidably provided, no bird can be more inoffensive. It neither walks, runs, jumps, nor flies, but, throwing up one leg behind, it springs forward on the other, with such velocity, that the fleetest courser would be unable to keep in sight of it. This bird is as rapacious as the ostrich, and will swallow glass, iron, and stones, without injury. If taken when young, it may be rendered moderately tame. The most singular part of this creature is the head, which is entirely bare of feathers, and armed with the horny helmet, previously mentioned. The colour of the eye is a very bright yellow, and the globe, which is nearly an inch and a half in diameter, gives a terrible appearance to its whole countenance. The bill is of a greyish colour, the neck of a violet kind of slate colour, and the claws black without, and white within.

THE EMU.

THE Emu is rather smaller than the ostrich, and is the largest bird produced on the New Continent. It measures six feet from the head to the ground. It moves very swiftly, but in running it uses a singular kind of motion,

raising up one wing, which it keeps elevated for some time, and on letting it drop, it raises the other. In this manner it pursues its course with such velocity, that neither horses nor dogs can overtake it. This bird is a native of New South Wales.

THE DODO.

THE dodo, instead of appearing to be swift, seems to be most unwieldy and inactive. Its body is massive, almost round, and covered with grey feathers: it is just barely supported upon two short thick legs like pillars. The neck, thick and puffy, is joined to the head, which consists of two great chaps, that open far behind the eyes, which are large, black, and prominent. Hence the animal when it gapes seems to be all mouth. The bill therefore is of an extraordinary length, not flat and broad, but thick, and of a bluish white, sharp at the end, and each chap crooked in opposite directions. From all this results a stupid and voracious physiognomy; which is still more increased by a border of feathers like a hood round the root of the beak. The dodo is furnished with wings, covered with soft ash-coloured feathers, but they are too short to assist it in flying. Its tail consists of a few small curled feathers, but it is disproportioned and displaced. Its legs are too short for running, and its body too fat to be strong. It is a simple bird and very easily taken. Three or four dodos are sufficient to feed a hundred men. It is a native of the Isle of France.

Rapacious Birds.

BIRDS of this order are all carnivorous ; they associate in pairs, build their nests in the most lofty situations, and the female is generally larger than the male. They consist of eagles, vultures, hawks, and owls.

THE EAGLE.

(See Frontispiece.)

THE Golden Eagle is among the feathered race, what the lion is among beasts ; and in Buffon the points of likeness are described. The disposition of this bird is so noble, that it will even pass over the insults offered to it by birds of an inferior size, unless provoked to an extreme degree, when it generally punishes the offender with death. If it cannot procure a sufficiency of live or fresh prey, it will rather endure extreme hunger, than touch carrion. It is also tenacious of its own territory, and will never suffer another of its own species to reside in the same tract of mountain with it. It is about three feet nine inches in length, and the extent of its wings when spread, is from seven to eight feet and a half. Its bill is sharp, strong, and curved ; and the eye is defended by four lids to guard it against external injuries : the

oes are coated with scales, and the claws are excessively strong and terrible. It is chiefly found in the mountainous parts of Ireland. It is impossible to tame these birds, unless taken when very young, they being averse to society, high spirited, and astonishingly ferocious. Even when tamed with every possible care, it becomes a dangerous inmate to those around it, and even to its master. The bill and claws are extremely formidable, and the whole figure is robust, compact, and strong. The aëry, or nest of the eagle, is quite flat, and is generally found in some almost inaccessible situation. When once constructed, it commonly serves the owner during life; and, indeed, it is put together with such solidity, that it may well do so. The female rarely lays more than two eggs, which she hatches in thirty days, but she seldom brings more than two young ones up, even when she lays three or four eggs. This is undoubtedly so ordained by the wisdom of Providence, that we may not be overstocked with so destructive a creature. This bird will carry off with ease, geese, lambs, kids, and will even attack fawns and calves. After, destroying them, and gutting himself on their blood, he transports their remains, piece by piece, to his aëry.* Many

* Some time ago, a peasant formed the resolution of plundering an eagle's nest, built on a small island in the beautiful lake of Killarney. He accordingly swam to the island while the parents were away; and after robbing the nest of its young, he was preparing to swim back, with the eaglets tied in a string; but while he was yet up to his chin in the water, the old eagles returned, and, missing their family, fell upon the invader with such fury, that in spite of his resistance, they dispatched him with their beaks and claws.

instances have occurred of children having been carried off by eagles to their young. In 1727, a boy, in the parish of Norderhongs in Norway, upwards of two years old, was going from the house to his parents, who were working in a field close to it, when an eagle seized on the child, in their sight, and bore it off in triumph, notwithstanding their screams and efforts to prevent it. Exclusive of the preceding fact there are many others related of a similar nature. It is supposed that the natural age of this bird is about one hundred years.

THE CONDOR.

THIS large bird possesses, even in a greater degree, than the eagle, all the powers which nature has bestowed on the most perfect of this class of beings. His size is enormous; the breadth across the wings, when extended, is upwards of eighteen feet, and his body, beak, and talons, are large and strong in proportion. These birds always reside in the mountains, and never descend to the coast, but in the rainy season, when, being very sensible of the increasing cold, they repair thither for a greater degree of warmth. The body of this bird is covered with black feathers, excepting the back, which is white. The neck is surrounded with a white ruff, about an inch long, composed entirely of white feathers. The head is covered with a scanty portion of short hair. The eyes are black, and the irides of a reddish cast. The bill is four inches long, and extremely thick and crooked, white at the point, and black at the base. The largest feathers in the wings

are almost three feet, and an inch in diameter. The female is considerably smaller than the male, and is destitute of the ruff round her neck: she has, however, a small crest on the back part of the head. The condor lives on carrion, and such animals as it can destroy, such as sheep, goats, and calves. The natives employ many stratagems to take it, and are often successful. They are chiefly found in the mountains of Peru.



THE VULTURE.

THE golden vulture, which seems to be the foremost of the tribe, is about four feet and a half long, from the end of the beak to that of the tail. The head and neck are only covered with a few scattered hairs, and the eyes are more prominent than those of the eagle. The plumage on the breast and belly is of a reddish colour: the back is black, but the tail and wings are of a yellowish brown.

This cruel, unclean, and indolent bird, though totally unknown in England, is common in many parts of Europe; and in many parts of Africa, Asia, and South America, vultures are found in great abundance. In Egypt, and particularly in Grand Cairo, there are great flocks of them, which render a most important service to the inhabitants, by devouring all the filth and carrion, which might otherwise render the air pestilential.* In Brazil these birds may be deemed peculiarly serviceable, from the circumstance of their checking the increase of the crocodile tribe, by devouring great numbers of their eggs.

Vultures make their nests in the most remote and inaccessible rocks, and produce but once a year. Those of Europe, indeed, seldom come down into the plains except when the rigours of winter have banished from their native retreats all living animals but themselves. Their flesh is lean, stringy, and altogether nauseous.

The varieties of this tribe are the ash-coloured and the brown vulture of Europe; the spotted and the black vulture of Egypt; the bearded vulture, the Brazilian vulture, and the king of the vultures, of South America.

* Those who have witnessed their mode of anatomising a dead body, inform us, that no artist in the world could have done it more cleanly. Their manner of performing the operation, is this: They first make an opening in the belly of the animal, whence they greedily pluck out and devour the entrails; then entering into the hollow which they have made, they separate the flesh from the bones, without ever touching the skin. Upon coming near the carcase, therefore, one would not suppose it thus deprived of its internal substance; but on examination it appears to be, literally speaking, nothing but skin and bone.

THE FALCON,

A BIRD that once formed one of the most dignified amusements of the old English nobility. The practice of hunting with this bird was brought by the Normans, the fathers of the British noblesse, from the mountains of Norway, and the shores of the Baltic. It was introduced into England by the Conquest. For many ages after, the being able to wind a horn, and carry a falcon with grace, were the criteria of noble birth and good breeding. Stealing of a hawk was made felony by Edward III. An unqualified person taking its eggs, though upon his own ground, was subject to an arbitrary fine and imprisonment; and even in the reign of James I. a thousand pounds were paid for a cast of them. This generous hawk is known from the viler race of kites, sparrow-hawks, and buzzards, by the second feather in the wing being the longest, while the fourth is so of the rest, and by their swiftness and confidence in pursuit, their generosity of temper, tractable nature, and affection to their feeder. The falcon soars perpendicularly in pursuit of the heron, kite, or woodlark, and thus affords the best diversion. Other birds, by flying horizontally, diminish the pleasure of the sportsman, and endanger the loss of his hawk. Of all the varieties, the largest is the Gyr-falcon, elegant in appearance, and nearly as large as the eagle. The bill is hooked and yellow; the plumage mostly white; the feathers of the back and wings have black spots like a heart; the thighs are clothed with long feathers of the purest white; the legs are yellow, and feathered below the knees; and some of this species have been found entirely white.



THE KITE,

Or Glead, may be easily distinguished by its slow floating motion and forked tail. The kite is almost continually on the wing. When flying, it appears to rest on the bosom of the air, making no use of its wings, in consequence of which, every bird is capable of eluding its pursuit; the kite is, therefore, reduced to subsist on carrion, or whatever it can find, and is generally so pressed by hunger, that nothing comes amiss to it. When driven to extremity, it will sometimes muster up courage to attack a strayed chicken, or wounded bird, but its natural disposition is cowardly and indolent.

THE BUZZARD.

THE Buzzard or Puttock is possessed of a great degree of strength and agility. yet it is cowardly and slothful; and if attacked, even by a sparrow-hawk, will soon yield to the superior courage of its adversary. This bird is commonly about twenty inches in length, and our feet in breadth, when the wings are ex-

ended ; the bill is of a lead colour, the eyes of a faint yellow, and the upper part of the body of a dirty brown. The legs are yellow, and the tail black ; but there is occasionally a great variety in the colour of these birds, as scarcely any two are to be found alike. His food consists of birds, small quadrupeds, insects, and reptiles. The female rarely lays more than two eggs, and is remarkably attentive to her young. It is asserted, that if the female buzzard is killed, the male will then take charge of the young, and be equally attentive to them, till they become sufficiently strong to provide for themselves.



THE SPARROW HAWK.

THIS is a small bird, having a short and hooked bill, and a long tail. It is bold, courageous, and active ; and commits many depredations on young poultry. It is so common in all parts of this country, as to require no farther description. The Merlin is a still smaller species of this kind.

THE BUTCHER BIRD.

THIS bird is about the size of a large black-bird, and from its carnivorous appetite, seems to partake of the nature of birds of prey : whilst from its slender legs, feet, and toes, it is similar to those that feed on grain and insects. When it has succeeded in killing its prey, this creature hangs it upon a thorn, in the same manner as a butcher would a carcass, and divides it with his bill ; from this circumstance it takes its name. Its general food consists of small birds, which it seizes by the throat, and kills in an instant. It is about ten inches in length, fourteen inches in breadth, and weighs from three to four ounces. There are three varieties of it.

*THE OWL.*

THIS bird is as rapacious at night, by the preceding ones are by day. They are chiefly to be distinguished from all other birds by their eyes, which are better adapted to the shades of

night, than the glare of a mid-day sun. They are endowed by nature with a capacity of discovering their prey at a period when we should suppose it impossible for them to see any thing. The vulgar idea of their seeing better in total darkness is certainly erroneous ; twilight being the time when they can discover objects best. The voice of the owl is horrible, and the smaller birds bear such a hatred to it, that if they discover one during the day, they will surround him in great numbers, and insult him. It is, however, extremely useful in destroying mice ; and it is calculated that one owl will destroy as many mice, as six cats would in the same period. It is for this reason that farmers generally encourage them to dwell in their barns and outhouses. The white owl is the most domestic of the species, but the brown owl possesses the strongest sight. The great or horned owl is another variety, and is almost as large as the eagle, and has a certain portion of feathers rising from his head, which he can elevate at pleasure ; hence arises his name. It is a native of Cheshire, Wales, and the north of England ; and resides in ruined buildings, hollow trees, or caverns. They are sometimes bold and even furious in defence of their progeny.*

* A carpenter, some years ago, passing through a field in Gloucestershire, was suddenly attacked by an owl, which had a nest of young near the path. It flew at his head ; and the man struck it with a tool that he had in his hand, but missed his blow. The enraged bird repeated the attack, and, fastening her talons in his face, lacerated him in a most shocking manner.

Birds of the Poultry kind.

UNDER this class of birds may be ranked all those that have white flesh and bulky bodies. They are furnished with short strong bills, for picking up grain, which constitutes their principal sustenance ; their wings are short and concave, for which reason they are not able to fly far ; and their toes are united by a membrane as far as the first articulation ; being afterward divided, as in those of the former class. The females generally make their nests on the ground, and lay a great number of eggs.

Our domestic fowls are not originally natives of the country. We owe them, as well as many more of our common enjoyments, to very distant nations. The common cock has arrived to us from Persia, where he is found wild ; the peacock and the pheasant came from India ; the turkey from America. The common character of the poultry class is voracity and indolence, and consequently they become very fat. While the wilder species refuse to eat, and pine away in confinement, they readily part with the place where they have been reared, and their usual companions, without any strong marks of regard or solicitude. Though naturally fond of society, their sensual appetites admit of no connubial fidelity, and the amiable characteristic of conjugal affection, which softens the stern ferocity of the eagle, and supports the toils and weakness of the wren, is quite lost in this species.



THE COCK & HEN.

THE Cock, when in full plumage, is extremely beautiful : his head is small, and ornamented with an elegant red comb ; his eyes are piercing, and sparkle with fire ; and his whole appearance is significant of courage and freedom. The feathers on his neck are long, and fall gracefully down upon his body, which is very compact ; his tail is long, and so curved as to form a beautiful arch ; his legs are strong, and furnished with sharp spurs. The bravery of this bird is very great, and in this country is shamefully perverted to an evil and cruel purpose, being bred up to fight in the most bloody and ferocious manner. In his wild state, as seen in the woods on the coast of Malabar, the plumage of this bird is yellow and black, and his comb and wattles are yellow and purple ; the bones, when boiled, become perfectly black. This bird, of which there are numerous varieties, is singularly attentive to his females, and very courageous in the defence of his young ;

of this many instances are recorded.* The cock is very prone to jealousy, and will not only furiously attack any other cock which comes near him, but will even chastise the hens, if they shew the least inclination to infidelity. The hen lays a great number of eggs, and continues to lay during the greater part of the year. When she has produced about thirty, she is commonly inclined to incubat; about three weeks after which the young brood appears, to whom she is very attentive. At this time a complete change takes place in the temper of the hen. Naturally timid and voracious, she now becomes courageous, that she may defend, and abstemious, that she may procure a sufficiency for her offspring. As the chickens hatched by the hen are very few in proportion to the number of eggs which she lays, various experiments have been made to procure them by artificial means; and in some parts of Egypt this art has been carried to great perfection.

* Buffon relates the following anecdote, as a proof of the natural courage of this bird: "He beheld a sparrow hawk alight, in a populous court yard: a young cock instantly attacked him, and threw him on his back. In this situation the hawk defended himself, with his talons and bill, and having recovered himself, he rose, and was going to escape. The cock, perceiving this, rushed on him a second time, and held him down till he was caught."





THE PEACOCK.

THE Peacock, of which there are several varieties, from the extreme brilliancy and elegant formation of its plumage, is, without exception, the most beautiful bird known in the world. Its size is about the same as that of a young turkey cock of a year's age. It is so well known, that there is no occasion to describe it. The peahen is considerably smaller than the cock, and her plumage is far inferior in brilliancy. Their flesh being hard and dry, is not much esteemed; they are chiefly kept by noblemen and gentlemen, not for any useful purpose, but as an ornament to their lawns, from the beauty and elegance of their appearance. In its habits the peacock is cleanly. There is a very singular property attached to the flesh of this fowl, as it appears from a variety of experiments that it has the peculiar qualities of resisting the advances of putrefaction for a number of years. There is a proverbial adage in Italy, that the peacock has the plumage of an angel, the voice of a demon, and the appetite of a chief.



THE TURKEY.

THIS bird was originally a native of the northern part of the New World, and was introduced into England during the reign of Henry the Eighth. There is a vast variety of colour in these birds, the most prevailing, however, is black. The head is destitute of feathers, and is covered with a kind of bluish skin; a piece of loose flesh hangs from the bottom of the bill to about one third of the length of the neck, and from the upper extremity there is a protuberance, which, when contracted, is about an inch long. But when the bird is alarmed, or pleased, his neck and head become greatly dilated, and the protuberance before mentioned increases to such a length as to hang two or three inches below the bill, which it entirely covers, and the fleshy excrescences, which were previously of a purple colour, become of a fine bright red. The flesh of this bird is extremely delicate, and highly esteemed. In its domestic state, it is very difficult to rear the young turkey, yet there are great numbers of them in their wild state in the forests of Canada, which are covered with snow during three parts of the year. These birds have an unconquerable aversion to any thing red, and also to whistling. Though

turkies will fight with great obstinacy among themselves, yet their cowardice is great when opposed to other animals; but though the turkey cock will fly from almost every animal that has the courage to oppose him, yet he will insolently pursue those that are afraid of him; hence he commonly attacks children, and will often pursue them.* The turkey hen is smaller than the cock, and differently formed, having no spurs, and being without the tuft of hair on the breast, while the fleshy excrescences of the head and neck are much smaller, and incapable of extension. She seems of a milder disposition than the cock: hunts about in quest of grain and insects, and is particularly fond of the eggs of ants and caterpillars. She lays about eighteen or twenty eggs, and when her young begin to follow her in search of food, she rather warns them of danger than prepares to defend them. These birds are bred in vast quantities in the counties of Norfolk and Suffolk, in order to supply the London markets, to which they are driven in flocks of several hundreds. In its wild state, the turkey grows to a much greater size than it does when tame, some of them weighing between thirty and forty pounds.

* The following is a proof that there are instances of their courage: A turkey cock and hen were feeding near a barn door with a couple of bantams, when a large hawk darted at the bantam hen, who instantly gave the alarm by a noise peculiar to those fowls on such occasions; the turkey cock aware, no doubt, of the hawk's intentions, flew to the assistance of his old friend, and gave her enemy so violent a blow with his spurs as to stun him, and thus saved the poor bantam from an untimely end.



THE PHEASANT.

NEXT to the peacock, is the most beautiful of birds, as well for the vivid colour of the plumes, as for their happy mixture and variety. It is far beyond the power of the pencil to draw any thing so glossy, so bright, or points so finely blending into one another. Nothing can satisfy the eye with greater variety and richness of ornament than this beautiful creature. The iris of the eye is yellow; the eyes themselves are surrounded with a scarlet colour, sprinkled with small specks of black. On the fore part of the head are blackish feathers, mixed with a shining purple. The top of the head, and upper part of the neck, are tinged with a darkish shining green. In some, the top of the head, and the head itself, is of a shining blue or green, as differently exposed to the eye of the spectator. The feathers of the breast, the shoulders, the middle of the back, and sides under the wings, have a blackish ground, with edges tinged of an exquisite colour, appearing sometimes

black, and sometimes purple, according to the difference of lights ; and under the purple there is a transverse streak of gold. The tail, from the longest plume to the root, is about eighteen inches. The legs, feet, and toes, are the colour of horn. There are black spurs on the legs, shorter than those of a cock. A membrane connects the toes ; and the male is more beautiful than the female.

This bird, so delicate to the eye, is also the most delicate food. The flesh of the pheasant was to old physicians the standard of salubrity ; and it attains a higher flavour in a state of freedom. The hen lays from eighteen to twenty eggs in her native forests, but in a tame state only ten. The fecundity of this bird, like that of the peacock, is sufficient to stock the woods. It feeds indiscriminately on any thing, even on carrion, and according to some, on its own species. There is a bastard pheasant, of a mixed breed with the cock, and it is also said with the turkey. Eight varieties of this species are found in China and India, of which the most remarkable are the Golden, the Argus, and the Superb.

THE BUSTARD.

THIS bird is a native of Britain, and grows to a considerable size, frequently weighing upwards of twenty-five pounds. Its length is about four feet, and its breadth nine ; the neck and head are of an ash colour, and the back is barred with black, bright, and rust colour ; the feathers on the belly are white, and the tail, consisting of twenty feathers, is variegated with

black and red stripes. The large size of this bird renders it an easy mark to sportsmen, being consequently unwieldy and slow in its flight. They are commonly found on Salisbury Plain and as far north as East Lothian, in Scotland. The female is considerably less than the male, her colours are not so bright, and she has not the pouch which is situated in the fore part of the neck of the male, and which is large enough to contain six or seven quarts. The entrance of this curious bag is immediately under the tongue. These birds are excessively timid, and on the smallest alarm, even from the most insignificant object, will take to flight. They subsist on herbs, grain, various kinds of berries, and large worms.



THE GROUSE.

THERE are four kinds of the bird known by this name: the Wood Grouse, or cock of the wood; the Black Grouse, the Red Grouse, or moor cock; and the White Grouse. The wood grouse is nearly the size of a turkey, and com-

monly weighs fifteen or sixteen pounds. The female is considerably smaller than the male, and differs in colour. This species is extremely rare in Great Britain, and delights in woody and mountainous places. They are very common in North America, Russia, Sweden, Norway, and other northern climates. The female on an average lays about seven eggs, as large as ducks'; these are soon hatched, and the young are possessed of great activity from the moment they burst the shell. The bill of the male is black, the eyes of a dark blue; below each eye there is a spot of a dirty white colour, and above, a larger one of bright scarlet, reaching almost to the top of the head. The common colour of the plumage is a deep black, shaded with green and violet. There are great varieties in the plumage of this bird, which our limits will not admit of specifying.

The black grouse is considerably smaller than the wood grouse, seldom exceeding in weight five pounds. The female is much less than the male. These birds derive their name from the colour of their plumage, and in their manners and habits resemble the cock of the wood. They are common in the northern parts of England and Scotland, and in the New Forest in Hampshire. The manner in which the males meet the females in the spring is very remarkable, as they do not pair in the manner of other birds. The black cocks repair every morning to the tops of their favourite mountains, where a furious conflict ensues, and continues with extreme obstinacy till one party is routed, when the conquerors, expanding their tails and clapping their wings, set up a peculiar kind of triumphant cry, and all the females within hear-

ing immediately resort to the victors, and associate with them.

The red grouse is something larger than partridge, and takes its name from the colour of the plumage, which strongly resembles that of woodcock, only that it is of a deeper red. There are vast numbers of them on the wild mountains and heaths in the north of England and Wales, and the Highlands of Scotland. The female lays on an average eight eggs, on the open ground. Their food consists of pine cones, buds of trees, and wild berries.

The white grouse, or ptarmigan, is nearly the same size as the preceding. During the winter months, this bird is almost entirely white, with the exception of two very small black spots situated between the bill and the eyes; from this circumstance arises its name. In summer the plumage is white, variegated with brown spots, mottled with chesnut, and marked with transverse black lines. They are found in Scotland, and the high hills of Cumberland and Wales. The female lays about the same number of eggs as the red grouse, and in the same manner, on the open ground. Their flesh is very delicate.

THE QUAIL.

THIS bird rarely exceeds half the size of the partridge, to which it bears a strong resemblance. In its nature and habits it is like the generality of the poultry kind. It is a migratory bird, and possesses a great share of natural bravery. Its flesh is esteemed as a great delicacy.



THE PARTRIDGE.

THIS bird is much esteemed for its flesh, and also for the excellent amusement it affords to sportsmen. It is chiefly an inhabitant of temperate climates, and is no where found in such numbers as in this country, where it is protected by the game laws; were not this the case they would very soon become extinct. The length of this bird is about ten inches, the breast is ornamented with a crescent of a dark chesnut colour, under each eye there is a granulated red spot, which extends behind the eye; the sides of the head are yellowish, and the colour of the remaining parts is brown and ash, neatly intermixed with black. These birds pair at an early period in the spring, when the female makes her nest of grass and dry leaves on the ground, and will lay from twelve to twenty-five eggs; the young ones are so active that they will run about the moment they burst the shell. The female is extremely careful of her young, and will make use of many very curious stratagems to call off the attention of the dogs and sportsmen from them.

THE TRUMPETER.

THE trumpeter, so called from the singular noise it makes, is a native of the dry and mountainous forests of South America. It is about the size of a large fowl; and the general plumage of the body is black, with the front part of the neck, and upper part of the breast of a fine changeable green. The legs are naked and scaly above the knees, with three toes placed before and one behind.

This bird is easily tamed, and discovers a considerable degree of attachment to those who notice and feed it. When bred in the house it loads its master with caresses, and even follows him through the streets like a dog. M. Vosmaer relates that he reared one himself, and had frequent opportunities of witnessing its affection. "When I opened its cage in the morning," says he, "the kind animal hopped round me, expanding its wings, and trumpeting as if to wish me good morning. He shewed equal attention when I went out and returned; for no sooner did he perceive me at a distance, than he ran to meet me; and even when I happened to be in a boat, and set my foot on shore, he welcomed me with the same compliments, which he reserved for me alone, and never bestowed upon others."

In a state of nature, these animals associate in numerous flocks, feed on wild fruits, and walk and run with great celerity.

CHAP. IV.

Birds of the Pie kind.

BIRDS of the Pie kind are by no means formed to carry on war, but are chiefly distinguished by the delight they seem to take in mischief, and the readiness which they always show in annoying other birds. They are a noisy, restless, and impertinent tribe, at the same time they are very acute and docile.

THE RAVEN.

THIS bird is a native of almost every part of the globe, and is so generally known in this country as not to require a long description. He is active and greedy, and his appetite is satisfied either with a living prey, or the most putrid carcase. When he finds any dead animals, he falls to his repast with a most voracious appetite; and after having eaten till he can absolutely swallow no more, he flies to some of his fellows that they also may enjoy a portion of his prize. In some of the colder regions these birds become white during the winter, which is the only change observable in them; whether the climate they reside in be extremely warm, or very cold, it does not appear to check their activity, or to make any alteration in their general manners and habits. They are so extremely docile, that they may be readi-

ly tamed, and at the same time so acute, that they may be taught to sing, to speak, and to fetch or carry any thing they are desired. In this state they are very amusing, from the busy and inquisitive spirit which they manifest; and also for their government of the dogs and cats belonging to the house, whom they seldom fail to keep in great subjection. The raven is supposed to live more than one hundred years. The carrion crow is much less than the raven but resembles it in its appearance and habits and has its name from the filthy nature of its food.



THE ROOK

THE rook is about the size of a carrion crow, and, excepting its more glossy plumage, very much resembles it. They are useful in preventing a too great increase of that destructive insect the chafer or dor-beetle, and thereby make large recompense for the depredations

They may occasionally commit on the corn-fields. Flocks are gregarious, and fly in immense flocks morning and evening to and from their roosting places in quest of food. During the breeding time they live together in large societies, and build their nests on trees close to each other, frequently in the midst of large and populous towns. These rookeries, however, are often the scenes of bitter contests; the newcomers are frequently driven away by the old inhabitants, their half-built nests torn in pieces, and the unfortunate couple forced to begin their work anew in some more undisturbed situation. The female lays five or six eggs.



THE MAGPIE.

THIS bird, which gives its name to the whole species, is in its appearance very pretty and fantastic; but it is vain, restless, quarrelsome, and excessively mischievous; these qualities attend it even when domesticated, and neither punishments nor kindness can eradicate them. Its food consists chiefly of worms, insects, and such small birds as he may be able to procure. His disposition is so extremely insolent, that when it can be done without danger, he will insult the largest and

most noble animals. It is however of a docile nature, and may be taught to speak many sentences. The female generally lays from five to eight eggs, of a light green colour, spotted with brown; and forms a nest, in the construction of which much labour and ingenuity is shewn.

THE TOUCAN.

The Toucan is chiefly remarkable for his immense bill and large head. It is about twenty inches in length, and the bill is as much as six inches long, and nearly two inches thick at the base; the upper part of the body and neck are of a shining black, tinged with green; the breast is a beautiful orange; the sides, belly, thighs, and the short feathers of the tail, are red, and the legs and claws, black. It may be tamed with great ease, and its chief food is pepper, of which it is extravagantly fond. In its motions and voice, it bears a strong resemblance to the magpie. It is a native of the warmest parts of South America, where it is highly esteemed for the delicacy of its flesh and the elegance of its plumage.

THE JACK-DAW.

THIS bird is considerably smaller than the crow, and its colour is a fine shining black, intermixed on the breast and belly with an ashy colour. The bill is black, and the head large and whitish. This bird is possessed of a great degree of art, but at the same time is very

docile and may be easily tamed, and taught a variety of amusing tricks. It frequents ruins, towers of churches, and hollow trees. Its food generally consists of worms and insects.



THE ROLLER.

THIS rare bird is distinguished by a plumage of most exquisite beauty ; it vies with the parrot in an assemblage of the finest shades of blue and green, mixed with white, and heightened by the contrast of graver colours, from which perhaps it has been called the German parrot, although in every other respect it differs from that bird, and seems rather to claim affinity with the crow kind. It is about the size of the jay. Its bill is black, sharp, and somewhat hooked. The head is of a sordid green, mingled with blue ; of which colour is also the throat, with white lines in the middle of each feather ; the breast and belly are of a pale blue, like those of a pigeon. This is the only species of its kind found in Europe. It is very common in some parts of Germany, but it is extremely rare in this country.



THE GREEN WOODPECKER.

OF this bird there are many kinds, and several varieties in each kind. We shall describe the green woodpecker, to which all the others bear a strong affinity. Their food consists entirely of insects, to enable them to procure which, nature has provided them with a curious tongue. It is long and slender, and strengthened by a sharp bony substance at the extremity; they possess the power of thrusting it a great depth into the bark of trees, whence they extract such insects as they live upon. On discovering a rotten tree, it gives a loud cry, which alarms the insects within it, and puts them into the greatest confusion, by which means it is the better enabled to catch them. The green woodpecker rarely exceeds thirteen inches in length, and about twenty-one inches in breadth, and weighs about half a pound. The bill is extremely hard and strong; in its shape, it resembles a wedge; the back, neck, and smaller coverts of the wings, are of a beautiful green, and the rump is of a faint yellow.



THE HOOPOE

The length of this bird is twelve inches, and the breadth nineteen. The head is ornamented with a crest, consisting of a double row of feathers, of a pale orange colour, tipped with black, the highest about two inches in length; the neck is of a pale reddish brown; and the breast and belly are white. The female is said to have two or three broods in the year. She makes no nest, but lays her eggs in the hollow of a tree, and sometimes in a hole in a wall, or even on the ground. It is a solitary bird, two of them being seldom seen together. In Egypt, where they are very common, they are seen only in small flocks. It is found in various parts of Europe and Africa. The Swedes consider its appearance as ominous of war. In our country, likewise, it was formerly deemed the harbinger of some calamity. Its crest usually falls behind on its neck, but it stands erect when irritated.

THE BIRD OF PARADISE.

THESE birds are truly beautiful. The feathers about the beak, which are brown and green below, and black above, are as soft and glossy as silk. The upper part of the neck is of a fine gold colour, which lower down gradually intermixes with a bright lively green. The long feathers on the sides are of a gold colour, and the remaining parts of a pale yellow. The most singular parts of this bird are—the two long filaments, which grow from under the tail, and the great quantities of long feathers that grow on the sides of the bird, between the wing and thigh, and which, by reason of their extreme length, reach beyond the tail and become confounded with it. They lose the elegant feathers of which their tails are composed every year, during which season they carefully conceal themselves; but immediately after they are re-feathered, they are seen abroad again in large flocks. These birds are natives of the interior parts of Asia. It is stated, that they have a king, who is known from his subjects, by the superior lustre of his plumage. The natives employ several methods of killing these birds, without inflicting any outward wound, by which their beautiful feathers might be injured; after they are dead, they are preserved in such a manner, as to keep up the appearance of life, and in this state the Asiatics sell them to Europeans at a high price.



THE CUCKOO

THIS bird is known in almost every part of the world. It is to be distinguished from all other birds by the peculiarity of its note, which exactly resembles the pronunciation of its name. Its nostrils are round and prominent, the head, wings, and upper part of the body are elegantly marked with tawny colour and transparent black; the legs, which are short, are covered with feathers close down to the feet. The female cuckoo is remarkable from the circumstance of never preparing any nest for her eggs, nor does she even sit on them, but always lays her eggs in the nest of some other bird, generally preferring that of the hedge-sparrow, by pushing them out of the nest. They are carnivorous and migratory, generally coming in about the middle of April, and leaving us in July.

THE PIGEON.

ALL the numerous and beautiful varieties of this tribe derive their origin from the stock-dove, or wood-pigeon; which is of a deep bluish ash colour; the breast dashed with a fine changeable green and purple; the wings marked with two black bars; the back white, and the tail barred near the end with black. Such are the colours of the pigeon in its natural state; and from these simple tints the effects of domestication has produced a variety that words cannot describe, nor even fancy suggest.

The *Ring-dove* is considerably larger than the former, and derives its appellation from a beautiful white circle round the neck. This bird builds its nest with a few dry sticks, in the boughs of trees; and is so strongly attached to its native freedom, that all attempts to domesticate it have hitherto proved ineffectual.

The *Turtle-dove* is a smaller bird than either of the preceding, and is easily distinguished by the yellow iris of the eye, and by a beautiful crimson circle that encompasses the eye-lids. The fidelity of these birds has furnished poets and sentimental writers with the most beautiful allusions; and it is generally asserted, that if a pair be put in a cage, and one happen to die, the other will not long survive it.

The *Carrier-pigeon* is distinguished from all others, by a broad circle of naked white skin which surrounds the eyes; and by the colour of the plumage, which is of a dark blue inclining to black. From their attachment to their native place, these birds are employed in several countries as the most expeditious carriers of letters.

In the year 1785, the velocity of flight in these birds was tolerably well ascertained by an experiment. A gentleman, for a trifling wager, sent a carrier-pigeon from London, by the coach, to a friend in St. Edmondsbury; and along with it a note, desiring that the pigeon, two days after its arrival there, might be thrown up precisely when the town clock struck nine in the morning. This was accordingly done; and the pigeon arrived in London, and flew into the Bell inn, Bishopsgate street, at half-past eleven o'clock the same morning: having flown seventy-two miles in the space of two hours and a half.



THE PARROT.

THE parrot is the best known amongst us of all foreign birds, as it unites the most beautiful plumage with the greatest docility. Its voice also is more like a man's than any other: the raven is too hoarse, and the jay and magpie too shrill to resemble the truth; but the parrot's note is of a true pitch, and capable of a variety of modulations.

In their native woods these birds live together in flocks, and generally breed in hollow trees where they make a round hole for the accommodation of their young ; but do not take the trouble of lining it within. They lay two or three eggs, about the size of those of a pigeon, marked with little specks. The natives are very assiduous in seeking out their nests, and usually take them by cutting down the tree. By this means, indeed, the young parrots are liable to be killed ; but if one of them survive, it is considered as a sufficient recompence. The old ones are shot with heavy arrows headed with cotton, which knock them down without killing them.

The facility with which the parrot is taught to speak, and the great number of sentences it is capable of repeating, are equally surprising. We are assured by a grave writer, that one of these was taught to repeat a whole sonnet from Petrarch ; and a parrot belonging to a distiller, who had suffered pretty severely from an informer that lived opposite to him, was taught to pronounce the ninth commandment—*Thou shalt not bear false witness against thy neighbour*, with a very clear and articulate voice ; and being generally placed in its cage, opposite to the informer's house, it amused the whole neighbourhood with its persevering exhortations.

THE COCKATOO.

THE cockatoo is a beautiful bird of the parrot kind : his plumage is white, his beak round and crooked, and his head is adorned with a crest of long feathers, which is capable of being erected or lowered at pleasure, and

gives the animal a strikingly fine appearance. It is a native of the Molucca islands and other parts of the East Indies, where it is frequently known to build on the tops of houses.

The varieties of this bird are very numerous; but are generally classed and distinguished into three or four sizes; the largest being known by the name of Macaw; the next Parrots, then White Lories, and the smallest Paroquets.

THE JAY.

The Jay is an extremely elegant and beautiful bird. The head is clothed with long feathers, which it possesses the faculty of erecting into a crest; the forehead is white, striped with black; the back, breast, and neck, are of a pale purple intermixed with a fine grey. The wings are charmingly diversified with various lines of black, white, and blue, and the tail is entirely black. In its general manners and habits, it resembles the magpie, and, like it, may be taught to perform a variety of amusing tricks, and also to speak.



Birds of the Sparrow kind.*THE BLACKBIRD*

Is the largest songster in Britain; is undoubtedly a native, and is very harmonious. The cock is blackest, when young, of the two; the circle round his eye is yellow; his bill black, and not turning perfectly yellow till he be a year old. His feathers, of a dark russet or brown, at length turn coal-black. The bill of the cock turns quite yellow, while the hen's has the tip and upper part black. They breed extremely soon in the year, and have young often by the middle of March. They may be taken up at ten days of age; must be kept clean in the nest and fed with any lean fresh meat minced very fine and mixed with bread, every two hours or so. When too big for the nest, put them into a cage or basket upon clean straw, and when grown feed them with any sort of fresh meat.

either dressed or raw, provided it be neither stale nor sour, and set them water to prune and wash their feathers. The cock brought up in cage (for they never do well in taming), will sing all the spring and summer season in a very pleasant natural note; and when taught, will whistle and play a tune to a pipe with great exactness.

THE FIELD-FARE & RED-WING.

THESE birds are migratory; are seldom seen in this country till October, and they leave again early in the spring. They constantly associate in large flocks, and appear to be very watchful for the general safety of the whole. In this country they never sing, but in the more northern climates their notes are said to be beautiful.



THE THRUSH.

THIS pretty bird is superior to all the sparrow tribe in its size, being about twelve inches long from the point of the bill to the end of the tail. This bird is migratory in some parts of Europe,

but continues in our country the whole year. Its food principally consists of various kinds of wild berries. In its disposition it is extremely quarrelsome, and its courage is so great, that it will venture to attack the sparrow hawk. Even the kite and buzzard will retreat when they perceive a single bird of this species approaching them.

THE STARLING.

THIS bird is about nine inches in length. The whole of its plumage is dark, and glossed with blue, purple, copper, and green. They are, in general, birds of passage. During the winter they associate in large flocks, and subsist on worms and insects; but on the approach of spring they retire to other climates. This bird is extremely docile, and may be taught to imitate the human voice to a great degree of perfection. So fond are they of society, that they will associate with birds not of their own species, such as red-wings, field-fares, rooks, crows, jack-daws, and pigeons. The female seldom makes a nest, but generally seizes on that of some other bird. In this she lays from four to six eggs, on which she sits about twenty days. They rarely live more than nine years. They are found in almost every part of the Old World, without any remarkable variety. When taken early, and properly bred, they will fetch a considerable price.



THE NIGHTINGALE

BEGINS to sing in November, and holds his song till July; the best time to catch them is in April, on chalky or sandy hills, or in a wood, or a coppice, or a quickset hedge. When first taken, the ends of their wings should be tied, and the feathers cut from the vent to prevent their clogging. Feed them with sheep or birds hearts (skinned), and eggs chopped very small moistened with water, and put ant's mould at the bottom of the cage. Their colour is a dusky brown, the breast and lower parts are considerably lighter.

THE MOCKING BIRD.

THIS bird is a native of the woods of America, and is of nearly the same size as our blackbird. Its plumage is plain, the upper part of the body being grey, and the under part white; but though its appearance may not be so brilliant as that of many others, its qualities are superior. There is no bird which surpasses this in the beauty and variety of its notes, it being the nature of the mock bird to imitate the

song of other birds. One of these being confined in a cage, was heard to imitate the mew-ing of a cat, the chattering of a magpie, and the creaking which a sign made, when the wind was high. It can with facility assume the tone of every animal, from the wolf to the raven : and it is asserted, that it takes particular pleasure in enticing other birds towards it, by a call similar to that of their mates ; and when they approach, it terrifies them with the cry of some bird of prey. It seems particularly fond of man, as the mere sight of the human species is sufficient to excite it to sing. It fixes its habitation as near as possible to the abode of man, whom its melodious notes delight through the greatest part of the year. They subsist on various kinds of berries.



THE CANARY

Is said to have come from the islands of that name into Europe. It is now imported in great numbers from Germany, and plentifully bred at home. In its native climes, the canary

of a dusky grey, and so different from the European ones, that it is doubtful whether they be of the same species. They have with us various colours, white, mottled, a shade of green, &c. but what is more prized is their high piercing pipe, which they can long continue in one breath without intermission, and gradually raise higher and higher with infinite variety. It is certainly one of the finch tribe, and the most celebrated song bird after the nightingale. It is easier reared than any of the soft-billed birds, and continues its song through the year, which causes it to be very common. A healthy bird may be discovered by his lively and bold manner, by his sprightly air, and the cheerfulness of his looks. The melody should also be attended to, some will begin with the notes of the nightingale, running through a variety of that bird's modulations, and with the song of the titlark. Others begin like the skylark, and by a soft melodious turn fall into the notes of the nightingale. All these are, however, lessons acquired when young, for their natural note is loud, shrill, and piercing. Though they sometimes breed all the year round, yet they most frequently pair in April, and breed in June and August.





THE GOLDFINCH.

THIS elegant bird is known and esteemed in every part of England, as well for its singing as the beautiful appearance of its plumage. A ring of fine scarlet feathers encircles the forehead of its head, and from the eyes to the bill a black line is drawn on each side. The jaws are white; the top of the head black, from which a broad line of black extends along both sides; and the wings are ornamented with beautiful transverse streak of gold colour. In their dispositions they are mild and gentle, and may be easily reconciled to confinement, and taught a great number of very amusing tricks. They are greatly delighted to view themselves in a looking-glass, and will dress themselves before it with the utmost attention. They fly together in large flocks, and feed upon various kinds of seeds, particularly that of the thistle, of which they are extremely fond. The hen may be easily distinguished from the cock, by the inferior brilliancy of her feathers. The female builds her nest in April, in the construction of which she manifests great ingenuity; she lays six or seven eggs.



THE LINNET

Is so generally known, that a particular description is unnecessary. For the sweetness of its singing, the linnet is so much esteemed, that, by many, it is thought to excel all small birds. The cock may be known by being brown on the back, and having the second, third, or fourth feather in the wings white up to the quill. They are fed and treated in the same way with the greenfinch. If kept under canary birds or larks (when young), they will take the notes of those birds, and fetch a high price. Early bred birds of this and every other species are reckoned the best.

THE BULLFINCH.

THOUGH these birds are highly esteemed for their piping, yet in a state of nature, they have but three cries, all of which are unpleasant. They are extremely docile, and as they have no regular note of their own, the hen will learn, after a pipe, or whistle, to sing, with as much ease as the cock: they never forget what they have once learned.—Some of them have even been taught to speak. Their food consists of the buds of fruit trees, consequently they do great mischief in gardens, for this reason they are so much persecuted, that they are considerably

less numerous than other singing birds. The hen may be easily known from the cock, by the inferiority of her plumage; she forms her nest very coarsely, and lays four or five eggs late in the spring, seldom producing the young till the early part of June.

THE SKY LARK

Is stout and lavish in song, so as to be accounted too loud and harsh. He lives fifteen or twenty years, is very healthy, and sings at least eight months every year. He is a perfect mocking bird, and will take the notes of all, therefore, to prevent his rambling in song, you must bring him up from the nest under some fine song-lark. The nest of this bird is very homely, a few bents or so in a cleft of the earth in any place of the field. The young must be taken in eight or nine days; fed on a poultice of milk and bread mixed with rape seed well boiled and bruised. They may also get sheep's heart or other fresh meat minced very fine. Cage them in a week's time, and give them fresh hay daily. Let their food be then a hard egg grated very fine with bruised hemp seed. Sift dry gravel instead of hay in the cage, and fresh turf now and then to perch on. A spider or two, a few wood-lice, or a blade of saffron once a-day, will help any indisposition.





THE RED-BREAST.

THIS bird derives his name from the colour of his breast, which is of a fine red, and is so universally known, as not to require a long description. Its song is highly esteemed for its melodious sweetness, and is by many persons thought but little inferior to the nightingale. In its disposition, this bird is solitary and timid, but this is only shewn during the summer months, for as winter approaches, he draws near to the habitations of man, and will even enter them with great confidence, and take his food from the hand which offers it. The female may be easily distinguished from the male, by the red on her breast being considerably paler, and not reaching so far upon the head. The upper part of the male's body is of a darker olive. These birds form their nests in barns, banks, and woods, about the early part of May, of moss, wool, leaves, straw, and small sticks, in which the female generally lays about five eggs, of a cream colour, variegated with a reddish kind of spot.

THE YELLOW-HAMMER.

THE yellow-hammer is of the bigness of a sparrow. Its head is of a greenish yellow,

spotted with brown ; the throat and belly are yellow ; the breast and sides, under the wings, are mingled with red ; and it has a pretty note, not unlike that of the linnet. They build their nests on the ground, near some bush, where the female lays five or six eggs. This bird feeds on various sorts of insects, and all kinds of seeds, and is common in every lane, and on every hedge, throughout the country, flitting before the traveller, and fluttering about the bushes on the side of the road. This bird is often seen perched on the finger of some poor man or woman in the streets of London, in a state of apparent tameness ; but this is only the transitory effect of intoxication ; for the bird dies soon after it is purchased, being overcome by the laudanum that has been given it.



THE WREN.

THIS little bird, with the exception of the golden-crowned-wren, is the smallest bird our country produces ; its weight seldom exceeds three and a half drachms ; and its length, from the point of the bill, to the extremity of the tail, is about four inches : it rarely takes a long flight, and is generally seen creeping about hedges and holes. Its notes are extremely fine, and much louder than

such a small bird could be supposed to produce. It may be easily tamed, and, when confined in a cage, will sing the greater part of the year. In this state, a great degree of attention is requisite to provide proper food for it. The female constructs a very curious nest, in the shape of a sugar loaf, composed of moss on the outside, and wool, hair, and feathers, on the inside. In the middle of this nest she makes a small hole for passage to go in and out; and notwithstanding her diminutive size, she frequently lays fifteen or sixteen eggs, of a white colour, variegated with small red spots. These are generally hatched in May.



THE SPARROW.

THE sparrow is a bird so generally known in this country, that it is almost superfluous to mention it. It constantly remains near the habitations of men, and is always detested by farmers and gardeners, from the mischief it does; yet the services it renders by the destruction of insects, more than compensates for the injuries committed by it. It has been calculated, that a single pair of sparrows, during the time they have to feed their young, destroy, weekly, up-

wards of 33,000 caterpillars, besides a great variety of winged insects. They may be easily domesticated, and taught many amusing tricks and when under the protection of man, they will become exceedingly impudent.



THE SWALLOW.

THESE birds are migratory, and appear in England early in the spring. The female generally forms her nest on the tops of chimnies, and will often produce two broods yearly. In September, the major part of these birds leave us, and the remainder retire to secret places, where they become torpid during the winter. This bird, and its varieties, may be readily distinguished by their short and slender feet, and their enormous mouth, which they always keep extended, when flying, in readiness to swallow such insects as they may meet with. Their wings are large, beyond all proportion, when compared to their bulk, and their plumage is black, finely shaded with a deep rich purple.

THE HUMMING BIRD.

THESE birds are found to vary in size from that of a small wren to that of an humble-bee, and consequently are the smallest of the feathered race. They live only in warm countries, as the East Indies and America, where the flowers are always growing. Their colours are more beautiful than can well be imagined; they are extremely brilliant and shining; many seem spangled with gold and precious stones; and some have little crests on their heads. At sun-setting the humming birds of different kinds utter about the flowers, their wings moving very quickly, and continuing perpetually in motion. They fly like butterflies from flower to flower, and, with their little tongues, which are tubular and forked at the end, suck the honey, their only food. The time of brooding is twelve days, and the young are no larger than a great blue fly.



Birds of the Crane kind,

BIRDS of the Crane kind are chiefly remarkable for their long necks and legs, and from being, in general, inferior in cunning and ingenuity to other birds.



THE FLAMINGO.

THE body of this curious bird seldom exceeds that of a goose in size, but it is remarkable for its legs and neck, which are of such an extraordinary length, that when it stands upright, it measures six feet in height. Its plumage

is soft, and glistens with different tints of brilliant red. The feathers which compose the wings are invariably black, and the large and small wing coverts glow with a brilliant flame-colour both inside and out. This beautiful colour extends over the greater part of the body, continually varying in its shades. The flamingo is a bird of passage, but it seldom quits the tropical climates. The natives of Africa are superstitiously attached to this bird, and will on no account disturb or injure it. Some of these birds are found in the West India islands, and likewise in all the tropical countries of South America. Their food consists of fish, the spawn of fish, and aquatic insects; they are always seen in troops of two or three hundred, and when viewed from a distance, ranged in their usual manner side by side, they have the exact appearance of a regiment of soldiers; when they repose, they continue in the same posture, only taking the precaution of placing one of their number as a centinel, who, in case of any danger, instantly makes a loud cry, resembling the sound of a trumpet, and the whole flock instantly take wing and fly off. Yet when they are unexpectedly surprised, they become so stupified with terror, that they will suffer themselves to be knocked down one after another, without attempting to escape. The flesh of the flamingo is valuable, and considered as a particular delicacy. They may be easily tamed, and will become obedient and affectionate.

THE CRANE.

THE crane is tall and slender, being about three feet and a quarter in length, and nearly

as much in height. The upper part of the head is covered with black bristles, and the back part of it is bald, and of a red colour. The plumage is generally of a greyish ash-colour, and it is remarkable from having two large tufts of finely curled feathers, growing from the pinion of each wing. They are not to be found in this country, though they inhabit almost all other parts of Europe; but their favourite retreats seem to be in the arctic regions. They do considerable injury to farmers, trampling down more corn than they consume; and are so extremely shy, that it is almost impracticable to shoot them. The female forms a very simple nest, and rarely lays more than two eggs. These birds are but seldom domesticated, being perfectly useless. Their food consists of grain, fish, and insects.

THE STORK.

THE conformation of this bird is exactly similar to that of the crane; the only difference consisting in the colour, disposition, and habits. The plumage of the crane is of an ash-colour, that of the stork white and brown: the voice of the former is loud and piercing, while the latter is silent: the former subsists chiefly upon grain and vegetables; the latter preys entirely upon frogs, fishes, small birds, and serpents: and while the crane sedulously avoids the habitations of man, the stork generally resides in towns and other populous places.

Storks are birds of passage, and it is very remarkable that on their quitting a country

They all assemble on a particular day, and never leave one of their company behind. They generally appear in Europe about the middle of March, and make their nests on the tops of houses and chimneys, as well as on high trees. The female lays from two to four eggs, and when the young are excluded, she is particularly assiduous for their safety. In autumn they retire into Egypt, and the marshes of Barbary, where they enjoy a second summer, and bring a second brood.

This bird is easily trained to reside in gardens, which it will clear of insects and reptiles; and, when become familiar, it will even sport and play with children. In a garden where some children were playing at hide and seek, a stork joined the party, ran in its turn when touched, and distinguished the child whose turn it was to pursue the rest, so well, as, with the others, to be on its guard.

THE HERON.

THE Heron is less than either of the preceding, and its bill is much longer than theirs in proportion to its size. There are several varieties of this bird. Though it is excessively voracious, it is always lean and hungry, and rarely weighs more than three pounds: they are three feet in length, and five in breadth. In its disposition it is extremely cowardly, and will fly before the smallest birds. Their principal subsistence consists of fish and frogs. It has been stated, that one of these birds will destroy fifteen thousand carp in six months.

The female commonly constructs her nest in very high trees, or on cliffs which overhang the sea ; she lays four eggs of a faint green colour and the young, when hatched, are so very voracious, that the parent birds are constantly on the wing to procure them a necessary supply. Their flesh was formerly held in great estimation but it is now as much detested. These birds will live fifty or sixty years.

THE BITTERN.

THIS bird is nearly the size of a tame pigeon but the neck is out of all proportion to the body, being eight inches in length ; the bill is yellow, and the upper part of the head of steel-colour, intermixed with light brown feathers ; the belly, breast, and neck are whitish, and the back is black and brown whilst the wings are of a greenish cast, with a white spot at the extremity. The common bittern is of the same species, and is chiefly remarkable for the horrid sound of its evening call, which strongly resembles the bellowing of an angry bull, but is much louder. The bird, however, that makes this noise is less than the heron ; its colour is a faint yellow, spotted with black, and its flesh is generally esteemed as a particular delicacy. In its disposition it is timid and inoffensive. It lives entirely on frog vegetables, and insects, and lies remarkably close, so that it will seldom take wing unless trod upon. The female forms a simple nest of dry rushes, and lays six or seven eggs of greenish colour.

THE SPOON-BILL.

THIS strange bird is remarkable from the singular shape of its bill, which is about eight inches in length, and flat from one end to the other; but it differs from all other birds, in being broadest at the point and narrow at the base, and greatly resembles the bowl of a spoon, from which circumstance originates its name. These birds subsist upon frogs, toads, and serpents, of which they destroy an immense number. The female constructs her nest in high reeds, and lays four or five eggs. They are common in Europe, and frequent lakes and hedgy rivers; the colour is a dull kind of white, and it has an agreeable appearance.

THE SCOOPER.

THIS bird is readily distinguished from all others, because its bill, which is thin and flexible, and resembles whalebone, turns up instead of down. The greatest part of the body is white, and the tail is formed of twelve white feathers. This bird receives its name from scooping out of the sand the worms and insects on which it lives. They are frequently seen on the lakes of Shropshire, and Romney Marsh, in Kent. The female lays two eggs, of a whitish green colour, speckled with black. They are about the size of a pigeon's eggs.

THE CURLEW.

THESE birds are well known in this country, as they frequent our coasts in very large flocks

during the winter, where they walk on the sand in search of prey, and in summer retreat to the mountainous parts of the country, where they pair and breed. The curlew is about thirty inches in length, from the extremity of the bill to the end of the claws, and the breadth between the wings when extended is three feet and a half. These birds are much valued on account of their flesh, which is generally thought very excellent, though there are many who think it is rank and fishy.

THE WOODCOCK.

THE Woodcock in its size is rather less than a partridge, being fourteen inches in length and twenty-six in breadth; its bill is quite straight, and between three and four inches in length, the upper one extending a little beyond the other; the forehead is ash-coloured, and a black line reaches from the bill to the eye. The remainder of the body is irregularly barred with black, grey, and ash colour; but on the head, the black is predominant. During the summer they dwell in the northern parts of Europe, and rarely come into this country till the winter commences. Their flesh is esteemed as a peculiar luxury.

CHAP VII.

Water Fowl.

THE chief distinction between land and water fowl is, that the latter are web-footed. Their legs are in general extremely short, in consequence of which they walk with difficulty, and rarely breed at any considerable distance from the ponds and rivers in which they dwell.

*THE SWAN.*

No bird makes a worse figure out of water, nor a more majestic one in it, than the swan. It has long been made domestic. It is white all over, and quite silent; but the wild or whistling swan is ash-coloured on the back and tips of the wings, and, while flying, has a

sharp loud cry. The tame or mute swan feeds on corn, bread, water-herbs, or roots and seeds found near the margin. In some retired places of the bank, particularly where there is an islet; it composes its nest of water-plants, long-grass, and sticks. It lays seven large white eggs, sits two months, and the young are ash-coloured at the time of exclusion, and for some months afterwards. This bird takes a year to arrive at maturity, and is said to be remarkable for its longevity. A goose has been known to live a hundred years; and a swan, from its superior size, and greater firmness of body, may live much longer.

THE PELICAN.

THE pelican is large and unwieldy, and is chiefly remarkable for the singular construction of the beak, which is nearly a foot in length, and as big round as a man's wrist, being sharp at the point, and of a bluish yellow colour. In other respects this fowl resembles the swan both in shape and colour, but far exceeds it in size. The lower chap consists of two long flat ribs, with a pouch or bag hanging to them, and extending to the throat, which will hold from fifteen to twenty quarts of water. The cry of this bird is extremely harsh, and may with great propriety be compared to the braying of an ass. The pouch we have described, though capable of containing so much food or water, is scarcely perceptible when contracted and empty. This bird is naturally indolent and stupid, but if taken when young may be easily

tamed; there are greater numbers of them found in Africa than in any other part of the world, and it is supposed they will live from fifty to one hundred years.



THE PUFFIN.

THIS bird, like the penguin, seems very little calculated either for flying or walking, as it finds much difficulty in getting on the wing, and as its legs are placed too far backwards to enable it to walk. It may be easily distinguished from all other birds by the singular formation of the bill, which is of a triangular figure, and sharp at the point, and hence it is sometimes called the coultarneb; the upper chap being indented at the part where it joins to the head, and a callos substance, similar to that round the head of a parrot, encompassing its base. It is ash-coloured at the thickest part, and red at the point, and is impressed with three furrows; the colour of its body is chiefly black and white. The female puffin at the breeding season repairs to the land, and endeavours to find out a rabbit's burrow, which she boldly enters, and forces the timid owner to fly from his abode. In the hole of which she has thus acquired

possession, she lays her eggs, and hatches her young, in defence of which she evinces a great degree of courage ; and in supplying them with food she shows an equal portion of affectionate attention. They are migratory birds, and invariably quit our shores on the approach of winter, nor do they again return in any numbers until the early part of May.

THE PENGUIN.

THIS bird seems intended by nature to reside entirely upon the water, as it can be scarcely said to have the faculty of flying, and its legs are still less calculated for walking, being placed so very far back that they seem to be an appendage to the tail ; but when in the water, it possesses considerable activity and velocity. Its plumage is also formed for being constantly in the water, being warm, close, and compact ; some of these birds are as large as a full grown goose ; they subsist entirely upon fish, of which they destroy a vast quantity. In their dispositions they are social and gregarious. During the breeding season they repair to the shore, where the female makes a small hole in the ground, without the least regard to the situation, in which she lays a single egg.

THE GULL.

THE bill of the gull is long, straight, and incurvated at the extremity ; the tongue is slightly cloven ; the body is light, and covered with thick plumage ; the wings are large ; and the

legs are short. These birds, which are almost incessantly on the wing, feed upon fish, and are extremely clamorous along the shores which they frequent. The British islands, particularly the northern parts of them, furnish several species. The common gull, or sea-mew, the most numerous of the kind, breeds on the ledges of cliffs that overhang the sea, and, during the winter season, frequent almost every part of our shores where the boldness of the cliffs presents a favourable situation. Like other rapacious birds it lays but few eggs; which circumstance, added to the numbers continually destroyed for subsistence, has considerably thinned the breed in many places.

THE PETREL.

THE petrel is not larger than the swallow; and its colour is entirely black, except the coverts of the tail, the tail itself, and the vent feathers, which are white. Its legs are long and slender. They are not often seen in fair weather, for which reason the sailors call them storm finches, and think they presage a storm when they come about a ship. In a storm they will hover in the wake of a ship, close under the stern, where the water is smoother, and there, as they fly gently, they pat the water alternately with their feet, as if they walked upon it, though they are still upon the wing; hence the seamen call them petrels, in allusion to St. Peter's walking upon the lake of Gennesaret. In the Faro islands, the body of the petrel is prepared to answer the purpose of a candle, a wick being drawn from the mouth to the tail, where it is lighted, and the flame is fed by the oily viscera of the body.

THE CORMORANT,

SHAG, or **Scart**, is considerably larger than a common duck ; its toes are united by membranes, and the centre one is notched, which enables it to hold its prey with security. The figure of its body is thick and heavy, and its general colour, particularly the head and neck of a brownish kind of black. During the winter they are seen in vast quantities along our shores. They are extremely voracious and destructive among the fishy tribes, and they build their nests in the same situations and manner as the gull.

The **Corvorant** is a variety of this species, some of which it is said have been rendered subservient to the use of man, by being trained to fish ; but to prevent the bird swallowing what it takes, a ring is placed round its neck.

THE SOLAND GOOSE,

THE **gannet**, or **soland goose**, differs from the cormorant in size, being larger ; in its colour, which is chiefly white ; and in having no nostrils, but in their place a long furrow, that reaches almost to the end of the bill. A narrow slip of black naked skin extends from the corner of the mouth to the hind part of the head ; and beneath is another, that, like the pelican's pouch, is dilatable and capable of containing five or six herrings, which this animal, during the breeding season, frequently carries at once to its mate, or its craving offspring.

These birds are commonly found on uninhabited islands, where they find an ample supply of food, and are but seldom disturbed by the intrusions of mankind. But they are particularly numerous on the Bass island in the Frith of Edinburgh. The surface of this island, is almost covered, during the months of May and June, with their nests, their eggs, and young ; so that it is scarcely possible to walk without treading upon them. The flocks of birds upon the wing, also, are so numerous, as to darken the air like a cloud ; and their noise is such, that one cannot without difficulty be heard by the person next to him. It is said, that the inhabitants of St. Kilda consume annually near twenty three thousand young birds of this species, besides a prodigious quantity of their eggs. On these they principally subsist throughout the year, and preserve both the eggs and fowls in small pyramidal buildings, covering them with turf-ashes, to prevent the evaporation of their moisture. Nor is this food easily procured ; for those who go in quest of it are let down from the top of stupendous precipices, and hang dangling in the air, sometimes two hundred fathoms from the ground. They are frequently in danger from the tumbling down of loose stones, and sometimes from the unsure footing of those who hold the rope by which they are suspended. When this happens the wretched fowler is precipitated from one projection to another, and falls mangled among the rocks, or is forever buried in the abyss beneath. The soland goose is a bird of passage.

THE EGYPTIAN GOOSE.

THIS bird has a handsome plumage, rich and enamelled, and prettily variegated; on the breast there is a large spot of fine red, and the fore part of the body is ornamented with irregular lines of a reddish ash-colour, on a light grey ground; the back is adorned in the same manner, but is rather darker; the throat and the top and sides of the head are white, and the rest of the neck of a lively red. The female may be distinguished from the male, by her colours being fainter and the spot on the breast being considerably less. These birds are nearly the size of a Muscovy duck, and are natives of Egypt and Abyssinia, and construct their nests upon trees; they are occasionally found in France and Spain.

*THE COMMON GOOSE.*

THIS bird is valuable, from its disposition as well as from the many uses to which it can be applied; it is neat, social, grateful, and affectionate; its flesh and grease are in universal estimation; its feathers and down form the best of beds; and its quills supply us with pens. It is a bird that may be kept with great ease and profit, as it may be fed at a very slight expence, and brought up without much

are. Their abode should be in the neighbourhood of water, and adjoining a spacious common, on which they may sport and feed at liberty, as nothing contributes so much to the successful rearing of geese, as liberty and an abundance of water. The female will frequently lay from twenty to thirty eggs. The gander is excessively attached to his young brood, and renews a thousand significant marks of his joy, when parading at their head, or when he beholds them feeding. In the fens of Lincolnshire, immense flocks of these birds are kept purposely for their quills and feathers; being stripped, while alive, once a year for the quills, and four times for the feathers; and strange as it may appear, the birds do not suffer much pain from this operation, unless it is done in the winter season, when vast numbers of them perish. With a proper degree of care, they may be taught to perform many curious actions. These birds are divided into two families; the tame, and the wild: there is no other difference between them, except such as there being bred up under the protection of man may reasonably account for.

The wild geese breed in Lincolnshire and Cambridgeshire, and each female generally produces seven or eight young ones. They commonly fly in flocks, to the number of a hundred, when they continue their course at a very great height, and very rarely rest themselves by any, and marshalled as it were by geometrical instinct. Shaped like a wedge, they cut the air with less individual exertion, and the occasional change of form, it is conjectured, arises from a change of leader in the van, who is succeeded by another. They are to be found

in almost every part of the world ; and are observed to reside in burning climates and frozen ones, without the smallest variation in their appearance. These birds possess a great degree of mutual tenderness, of which many affecting instances are recorded.*



THE DUCK.

THIS is the most easily reared of all our domestic birds. The young will, by the force of instinct, advance into their favourite element even when hatched by a hen, which is commonly the case. It is a laughable scene to see how eagerly their foster parent will endeavour to prevent them from plunging into, what t

* Mr IRVINE in the account of his voyage up the Red Sea, relates the following :—One of our Arabs, to prove his dexterity in hitting a mark at a great distance, with a single ball, fired at a wild goose, which he succeeded in killing. His death was followed by a circumstance equally new and surprising ; for upon the report of the piece, the other birds flew away but one of them soon returned to the dead goose, and by his gabbling, and various other arts, endeavoured to prevail on her to follow him, and avoid the danger. At this sight, which would have touched any other hearts than those of our insensible Arabs, each of them levelled his piece successively, and fired at the unfortunate bird, yet they could not prevent him from continuing his pious office to his deceased mate : upon each fire he flew to the distance of a few paces, returning almost immediately to throw himself beside the object of his grief. The scene now became truly affecting ; when observing that the Arabs were again charging their muskets with the utmost composure, we galloped up to the spot, and took away the prey, by this means compelling the unhappy object of their cruelty to retreat.

her appears so dangerous a situation, and when she finds every effort is vain, she will frequently walk in after them, till she is absolutely obliged to swim for her life. There are many varieties of the tame duck, and a still greater number of the wild. Ducks may be kept with a very little expence, as they chiefly subsist on waste corn, snails, worms, and insects, for which reason they are very useful in gardens. Wild ducks are taken in decoys, and in such immense numbers, that upwards of £30,000 worth have been sent from Wainfleet to London, in one season.* The chief difference between wild and tame ducks consists in the colour of their feet, those of the tame being yellow, and the wild, black. The varieties of both kinds are very numerous, but they all agree in their general manners and habits, and merely differ in the colour of their plumage; among these the eider duck is remarkable for the valuable down it produces.

* The decoy is a large pond, commonly situated in a marsh, and surrounded with quantities of reeds, and wood, in order to make it appear as retired as possible. The ducks sleep in this place during the day time, and at the approach of evening, the decoy rises, and the wild fowl feed during the night. The decoy ducks, which are bred up purposely for this office, subsist on hemp-seed, oats, &c. and are taught to appear the moment their owner whistles. In taking the wild birds, hemp-seed is thrown over the screens, which allures them into the pipes leading up a narrow ditch, and ultimately ending in a funnel net: over these pipes there is a continued arch of netting, supported by hoops: sometimes a little dog is taught to play backwards and forwards, between the screens, which excites the attention of the birds, and draws them farther towards the entrance of the pipes. The man then appears, and the

THE WATER OUZEL.

THE water ouzel, called also the water rail, is in size somewhat less than the blackbird. Its bill is black, and almost straight; the upper parts of the head and neck are of a deep brown, and the rest of the upper parts, the belly, vent, and tail, are black. This bird frequents the banks of springs or brooks, which it never leaves; preferring the limpid streams whose fall is rapid, and whose bed is broken with stones and fragments of rocks. But the most singular trait in its character is that of its possessing the power of walking in quest of its prey on the pebbly bottom of a river with as much ease as if it were on dry land. The female makes her nest on the banks of rivulets, and lays four or five eggs, which are white, lightly blushed with red. It is common in various parts of Europe.

THE KING FISHER.

THIS is the most beautiful of all British birds. It is seven inches in length, and eleven in

ducks being afraid to pass him, press forward to the end of the funnel net, which terminates on the land, where a person is always ready to receive them. The decoy ducks, however, never enter the net with the others, being taught to dive under the water as soon as the others are driven in. During all these operations, the man is obliged to keep leeward of the wild fowl, and to carry a piece of burning Dutch turf in his hand, as the birds would otherwise discover him by his scent, and instantly take wing. They are general migratory, and in performing their journeys, they both fly and swim.

breadth. The bill is nearly two inches long, and black. The top of the head and sides of the body are of a dark green, marked with transverse spots of blue; the tail is of a deep blue, and the other parts of the body are dusky orange, white, and black; the legs are red; the wings are short, but they fly very swiftly. Its habits and manner of living are wholly confined to the water. It preys on the smaller fish, and sits frequently on a branch projecting over the current; there it remains motionless, and often watches whole hours to catch the moment when a little fish springs under its station. It dives perpendicularly into the water, where it continues several seconds, and then brings up the fish, which it carries to land, beats to death and then swallows. This bird lays about seven eggs of a transparent white colour. in a hole in the bank of the river it frequents.



NATURAL HISTORY

OF

FISHES.

THE number of those inhabitants of "the vast deep," with which we are acquainted, and to which names have been given, are something more than four hundred. The extraordinary fecundity of some of the species is truly astonishing; and a single fish is well known to be capable of producing eight or nine millions of its kind in a season. Some, as whales, bring forth their young alive, and are termed *viviparous*; others of the spinous tribes dig holes in the sand of rivers, ponds, shores, and the like, where they deposit their spawn, which the male impregnates by a seminal fluid. Their numbers are diminished by their disposition to prey upon one another; the subsistence of one species depends on the destruction not only of another species, but even of its own; hence a universal warfare. Either in quest of prey, of change of climate, or of refuge from enemies, many of these finny travellers make long migrations; the cod pursues the whiting from Newfoundland to the shores of Spain; and the herring, which is produced in the polar seas, annually arrives in the British Channel.

Fishes are divided into the *celaceous* or whale kind, the *cartilaginous*, and the *spinous*. Under the second are comprehended some of the spawning or *oviparous* kinds, and also of those which

bring forth their young alive. The third are so called, because they have small sharp bones to support their muscles, while the viviparous have only a very soft sort of cartilages or gristles. Their form is in general similar; the head is taper; the tail is broad and flexible, by which means they strike the water on either side, and easily propel their bodies. The fins serve to poise them, or to stop their course; when they would turn to the left, they move their fins on the right side; and when to the right, the contrary. Their bodies are surrounded with scales, sometimes with prickles, and the whole skin is covered with a slimy liquor without, while an oily substance below the scales affords vigour and warmth. They raise or fall themselves by an internal air-bladder, which is dilated or contracted at pleasure. They have teeth to retain or catch, but not for chewing their prey; their tongues seem neither to serve for taste, voice, nor eating, as the organ is gristly and hard, they are quite silent, and swallow by gulps their prey. Though water be their natural element, some, as carps, may be kept and fattened out of it. The flesh of fishes yields, it is said, little nourishment, and soon corrupts. It is, however, very light, and easy of digestion.



CHAP. I.

Cetaceous Fishes.*THE WHALE.*

OF the whale, properly so called, there are no fewer than seven different kinds; all distinguished from each other by their external figure, or internal conformation. They are of the cetaceous order of fishes, and produce their young alive. They are found in the northern seas ninety feet in length, and twenty in breadth; but formerly they were taken of a much greater size, when the captures were less frequent, and they had time to grow. Such is their bulk within the arctic circle; but in the torrid zone, many are seen one hundred and sixty feet long. There are many turnings and windings in this fish's nostrils, and it has no fin on the back. The head is very much disproportioned to the size of the body, being one-third the size of the fish; and the under lip is much broader than the upper. The tongue is composed of a soft spongy fat, capable of yielding five or six barrels of oil. The gullet is very small for so vast a fish, not exceeding four inches in width.

This fish varies in colour; the back of some being red, the belly generally white. Others are black, some mottled, others quite white.

Their colours in the water are extremely beautiful, and their skin is very smooth and slippery. Every species of the whale propagates only with that of its kind, and does not at all mingle with the rest : however, they are generally seen in shoals of different kinds together, and make their migrations in large companies from one ocean to another. Whales are chiefly taken in the northern seas. The English send out with every ship six or seven boats ; each of these has one harpooner, one man at the rudder, one manager of the line, and four seamen to row it. In each boat there are also two or three harpoons, several lances, and six lines, each one hundred and twenty fathoms long, fastened together.

As soon as the whale is struck with the harpoon, it darts into the deep, carrying the instrument off in its body ; and so rapid is its motion, that if the line should entangle, it would either snap like a thread, or upset the boat : one man therefore is stationed to attend only to the line, that it may go regularly out, and another is also employed in continually wetting the place it runs against, that the wood may not take fire from the friction. On the whale's return to breathe, the harpooner inflicts a fresh wound, till at length, fainting from loss of blood, the men venture the boat quite up to it, and a long steeled lance is thrust into its breast and other parts, which soon puts an end to its existence. The capture of the whale is attended with much danger, and frequently dreadful accidents occur.*

* Capt. LYONS of Leith, while prosecuting the whale-fishery on the Labrador coast, in 1802, discovered a large

A whale, the longest blade of whose mouth measures nine or ten feet, will yield about thirty butts of blubber; but some of the largest will yield upwards of seventy. One of the latter is generally worth about one thousand pounds sterling; and a full ship of about three hundred tons burden will produce more than five thousand pounds from one voyage.

The whale fishery begins in May, and continues through the months of June and July, but whether the ships have had good or bad success, they must get clear of the ice by the end of August.

The whale goes with young nine or ten months, and generally produces one at a time. When she suckles her young, she throws herself on one side, and the young one attaches itself to the teat. Whales feed on a black insect of the size of a small bean, which is seen floating in those seas. They pursue no other animal, and are very harmless in proportion to their strength to do mischief.

whale at a short distance from the ship. Two of his boats succeeded in approaching it so closely together, that two harpoons were struck at the same moment. The fish descended a few fathoms in the direction of another of the boats, which was on the advance, rose accidentally beneath it with its head, and threw the boat, men, and apparatus about fifteen feet into the air. It was inverted by the stroke and fell into the water with its keel upwards. All the people were picked up alive by the fourth boat, which was just at hand, excepting one man, who having got entangled in the boat, fell beneath it, and was unfortunately drowned.

THE CACHALOT.

THE cachalot, or spermaceti whale, has several teeth in the under jaw, but none in the upper. This tribe is not of such enormous size as the whale properly so called, seldom being above sixty feet long, and sixteen feet high. In consequence of their being more slender, they are much more active than the common whale; they remain a longer time at the bottom; and afford a smaller quantity of oil. The tongue of this animal is small, but the throat is very extensive. The cachalot is, therefore, as destructive among the smaller fry as the whale is harmless; and can at one gulp swallow a shoal of fishes down its enormous gullet. It is by far the most valuable of the tribe, and consequently the most sought after by man, as it contains two very precious drugs, spermaceti and ambergris. The use of these, either for the purposes of luxury or medicine, is well known.

THE NARWHALE.

This great animal is sufficiently distinguished from all others of the deep by its tooth or teeth, which stand pointing directly forward from the upper jaw, and are from nine to fourteen feet long. The extreme length of these instruments has induced some to consider them rather as horns than teeth; but they in every respect resemble the tusks of the boar and the elephant. Notwithstanding all its appointments for combat, the narwhale is one of the most harmless

and peaceable inhabitants of the ocean. The Greenlanders call the narwhale the forerunner of the whale; for wherever it is seen, the whale is shortly after sure to follow. This may arise as well from the natural passion for society in these animals, as from both living upon the same food. They are always seen in herds of several at a time; and whenever they are attacked, they crowd together, and are often entangled by their tusks till they are taken.



THE DOLPHIN,

THE GRAMPUS, AND THE PORPESSE.

ALL these fish have teeth, both in the upper and lower jaw, and are much less than the whale: the grampus, which is the largest, never exceeds twenty feet. It may also be distinguished by the flatness of its head, which resembles a boat turned upside down: the porpoisse resembles the grampus in most things but it is seldom above eight feet long; its snout too is rather like that of a hog: the dolphin has a strong resemblance to the porpoisse except that its snout is longer and more pointed: they have all fins on the back: they all have heads very large, like the rest of the whale kind and resemble each other in their appetite, their manners, and conformations; being equally voracious, active, and roving.

The great agility of these animals makes very difficult to take them. They seldom re

remain a moment above water ; and when they are seen to bound and leap out of the sea, their gambols are generally considered as portending a storm. Sometimes, indeed, their too eager pursuits expose them to danger ; and a shoal of herrings often allures them out of their depth. In such a case, the hungry animal continues to flounder in the shallows till knocked on the head, or till the returning tide affords it relief. Instances have occurred in which numbers of porpoisses have been thus taken in rivers, and are a valuable prize, from the large quantity of oil they yield.

These animals are said to go with young ten months ; that, like the whale, they seldom bring forth above one at a time, and that in the midst of summer.* They are said to live to a considerable age, though some restrict it to about thirty years : and they sleep with the snout above the water.

* In the poems of Waller, a story (founded in fact) is recorded of the paternal affection of these animals.—A grampus and her cub had got into an arm of the sea, where, by the desertion of the tide, they were enclosed on every side. The men on shore saw their situation, and ran down to them with such weapons as they could at the moment collect. The poor animals were soon wounded in several places, so that all the immediately surrounding water was stained with their blood. They made many efforts to escape ; and the old one by superior strength, forced itself over the shallow, into the deep of the ocean. But, though in safety herself, she would not leave the young one in the hands of the assassins. She therefore again rushed in ; and seemed resolved, since she could not prevent, at least to share the fate of her offspring. The story concludes with poetical justice—for the tide coming in conveyed them both off in triumph.

CHAP. II.

Cartilaginous Fishes.

WHILE fishes of the cetaceous kind bear a strong resemblance to quadrupeds in their conformation, those of the cartilaginous kinds are one remove separated from them: they form the shade that completes the imperceptible gradations of Nature.

The first great distinction which this tribe of fishes exhibit, is their having cartilages or gristles instead of bones. The size of all fishes increases with age; but from the pliancy of the bones in this tribe, they seem to have no bounds set to their dimensions; and it is supposed that they grow larger every day till they die.

In the conformation of cartilaginous fishes the principal properties of both the other classes are united. Like the cetaceous tribes, they have organs of hearing and lungs:—like the spinous kinds, they have gills and a heart without division. From this structure of their gills, they are enabled to live a longer time out of water than other fishes. The cartilaginous shark, or ray, live some hours after they are taken; while the spinous herring, or mackarel, expire a few minutes after they are brought on shore. Some of this kind bring forth their young alive; and some produce eggs, which are afterwards brought to maturity.

THE SHARK.

THE shark is sometimes seen to rank even among whales for magnitude ; and is found from twenty to thirty feet long. Some assert that they have seen them of four thousand pounds weight ; and we are told particularly of one, that had a human corpse in its belly. The head is large, and somewhat flattened ; the snout long, and the eyes large. The mouth is enormously wide ; as is the throat, and capable of swallowing a man with great ease. But its furniture of teeth is still more terrible : of these there are six rows, extremely hard, sharp-pointed, and of a wedge-like figure. These the animal has a power of erecting or depressing at pleasure. When the shark is at rest, they lie quite flat in his mouth ; but when he prepares to seize his prey, he erects all this dreadful apparatus, by the help of a set of muscles that join them to the jaw. And the animal he seizes dies, pierced with a hundred wounds, in a moment.

Nor is the fish less terrible with respect to the rest of his form : his fins are large in proportion ; and he is furnished with great goggle eyes, that he turns with ease on every side, so as to see his prey behind him as well as before. His whole aspect too is marked with the character of malignity : his skin also is rough, hard, and prickly : being that substance which covers instrument cases, called shagreen.

As the shark is thus formidable in his appearance, so is he also dreadful from his courage and activity. No fish can swim so fast as the shark, he outstrips the swiftest ships. Such amazing powers, with such great appetites for destruction, could quickly unpeople

even the ocean ; but providentially the shark's upper jaw projects so far above the lower, that he is obliged to turn on one side to seize his prey. As this operation requires some time the animal pursued seizes that opportunity to make its escape.

Still, however, the depredations he commits are frequent and formidable. The shark is the dread of sailors in all hot climates ; where like a greedy robber, he attends the ships, in expectation of what may drop over-board. A man who unfortunately falls into the sea at such a time, is sure to perish.*

The common method by which our sailors take the shark, is to bait a great hook with a piece of beef or pork, which is thrown out into the sea by a strong cord, strengthened near the hook with an iron chain. He approaches it, examines it, swims round it, seems for a while to neglect it, perhaps apprehensive of the cord and the chain. When the sailors have sufficiently diverted themselves with his different evolutions, they then make a pretence, by drawing the rope, as if about to take the bait away. It is then that the glutton's hunger excites him ; he darts at the bait, and swallows it,

* A sailor that was bathing in the Mediterranean, near Antibes, in the year 1744, while he was swimming about fifty yards from the ship, perceived a monstrous fish making towards him and surveying him on every side, as fish are often seen to look round a bait. The poor man struck with terror at its approach, cried out to his companions in the vessel to take him on board. They accordingly threw him a rope with the utmost expedition, and were drawing him up by the ship's side, when the shark darted after him from the deep, and snapped of his leg.

hook and all. When he finds the hook lodged in his maw, his utmost efforts are then excited, but in vain, to get free ; he tries with his teeth to cut the chain : he pulls with all his force to break the line : he almost seems to turn his stomach inside out, to disgorge the hook. At last, however, being quite spent, he suffers his head to be drawn above water, and the sailors confining his tail by a noose, in this manner draw him on ship board, and dispatch him ; but this is not effected without difficulty and danger : the enormous creature, terrible even in the agonies of death, still struggles with his destroyers ; nor is there an animal in the world that is more difficult to kill.* The shark, when living, though a very formidable animal ; when dead, is of very little value. The flesh is hardly digestible by any but the Negroes, who are fond of it to distraction ; the liver affords three or four quarts of oil ; some imaginary virtues have been ascribed to the brain ; and its skin is, by great labour, polished into that substance called shagreen.

*This is the manner in which Europeans destroy the shark ; but some of the negroes along the African coast take a bolder and more dangerous method to combat their terrible enemy. Armed with nothing but a knife, the negro plunges into the water, where he sees the shark watching for his prey, and boldly swims forward to meet him. Notwithstanding this, the voracious animal suffers the man to approach him, but just as he turns upon his side to seize the aggressor, the negro watches the opportunity, plunges his knife in the fish's belly, and pursues his blows with such success, that he entirely vanquishes the ravenous tyrant. Upon this he fixes the fish's head in a noose, and drags him to shore, where he makes a noble feast for the adjacent villages.

THE RAY.

ALL those of the ray kind are broad, cartilaginous, swimming flat on the water, and having spines on different parts of their body, or at the tail. They all have their eyes and mouth placed quite under the body, with apertures for breathing, either about or near them. They all have teeth, or a rough bone, which answers the same purpose. But they are chiefly distinguished by their spines or prickles, which the several species have on different parts of their body. These prickles in some are comparatively soft and feeble; those of others strong and piercing. Of all the larger fishes of the sea, these are the most numerous; and they owe their number to their size. They have been found in England to weigh above two hundred pounds; but that is nothing to their enormous bulk in other parts. They are found in such parts of the sea as have a black muddy bottom.

THE TORPEDO.

THE body of this fish is almost circular, and thicker than others of the ray kind; the skin is soft, smooth, and of a yellowish colour, marked, as all the kind, with large annular spots; the eyes are very small; the tail tapering to a point; and weighs from a quarter to fifteen pounds. To all outward appearance, it has no muscles formed for particularly great exertions; yet such is that unaccountable power it possesses, that, the instant it is touched, it numbs not only the hand and arm, but sometimes also the whole body. The nerves are so

affected, that the person struck imagines all the bones of his body, and particularly those of the limb that received the blow, are driven out of joint. Probably the shock proceeds from an animal electricity, which this fish has some hidden power of storing up, and producing on its most urgent occasions. It is found in great numbers on the coasts of France: and is there in common request as an article of food. The Skate and Thornback are varieties of this species.

THE STURGEON

Is a timid, temperate, and defenceless fish, frequenting by turns the large rivers and the sea, and at different seasons visiting all the European, and even some of the American regions. There are three varieties. Of the common, the flesh is ordinarily pickled; the roe of the second is particularly salted and preserved, under the name of caviare; and of the third, the Huso, is formed isinglass. Those which are found in our rivers are rather small; but when they have liberty of visiting the sea, they become extremely large. Though very innocent, and supported on insects, and sea-plants rooted up at the bottom of the sea, the sturgeon has a formidable appearance. It is long, pentagonal, and covered with five rows of large bony knobs, one row on the back, and two on each side, with a number of fins to give it greater expedition. The nose is long, slender, and pointed; the mouth is small, and without teeth; on the lower part of the nose are four beards. It ascends the larger rivers to span, and is taken only in nets by the inhabitants of all the northern nations. The sturgeon, though cartilaginous, is an oviparous fish.

THE LAMPREY.

THIS animal resembles the eel; but is of a lighter colour, and a clumsier shape. The mouth is round, and placed rather obliquely below the end of the nose. It has an aperture at the top of the head, through which it spouts water like the cetaceous fishes. On each side are seven apertures for respiration; and the fins are rather formed by a prolongation of the skin than by any peculiar bones or spines. It possesses the singular property of adhering by suction to any substance to which it is applied. It sticks to stones so closely, that it is with difficulty removed. This power is supposed to arise from the animal's exhausting the air within its body, while the mouth is so entirely attached to the object as to exclude any from entering. It usually quits the sea about the beginning of spring, for the purpose of spawning; and, after an absence of a few months, returns to its original abode. Its flesh is esteemed according to the season in which it is caught. In April or May it is thought to be in the greatest perfection.

THE SEA ORB.

THE Sea Orb is almost round, has a mouth like a frog, and is from seven inches to two feet long. Like the porcupine, it is covered over with prickles, which point on every side, whence it is sometimes called the sea porcupine; and when it is enraged, it can blow up its body as round as a bladder. Of this extraordinary

creature there are many kinds. Some threatening only with spines, as the *Sea Hedge-Hog*; others defending with a bony helmet that covers the head, as the *Ostracion* &c. Of these scarce one is without its peculiar weapon of offence. The *centriscus* wounds with its spine, the *ostracion* poisons with its venom; the orb is impregnable, and is absolutely poisonous if eaten.

THE GALLEY FISH.

To these animals we may add the galley fish, which Linnæus degrades into the insect tribe, under the title of the *Medusa*. To the eye of a careless spectator, this fish seems a transparent bubble swimming on the surface of the sea, or like a bladder variously and beautifully painted with vivid colours, where red and violet predominate, as variously opposed to the beams of the sun. It is, however, an actual fish; the body of which is composed of cartilages and a very thin skin filled with air, which keeps the animal floating on the surface, at the pleasure of the winds and waves. But what is most remarkable in this extraordinary creature, is the violent pungency of the slimy substance with which its legs are smeared. If the smallest quantity but touch the skin, its quality is so caustic, that it burns like hot oil dropped on the part affected. The pain is most violent in the heat of the day, but ceases in the cool of the evening.

Above all others, the cartilaginous class exhibits a variety of shapeless beings, the deviations of which from the usual form of fishes are beyond the power of words to describe, and almost of the pencil to draw. In this class we have the Pipe-fish, that almost tapers to a thread; and the Sun-fish, that has the appearance of a bulky head, but the body cut off in the middle: the Hippocampus, with a head somewhat like that of a horse; and the Water Bat, whose head can scarcely be distinguished from the body. In this class we find the Fishing Frog, which from its deformity some have called the Sea Devil; the Chimera, the Lump fish, the Sea Porcupine, and the Sea Snail. Of all these the history is but little known; and naturalists supply the place with description.



CHAP. III.

Spinous Fishes.

THE third general division of fishes is into that of the spinous or bony kind. These are obviously distinguished from the rest by having a complete bony covering to their gills; by their breathing with their gills only; by their bones, which are sharp and thorny; and their tails, which are placed in a situation perpendicular to the body. This order is extremely numerous, and has been divided into two grand divisions—prickly and soft finned fishes.

THE SWORD-FISH.

THE sword-fish is about fifteen feet in length. The body is of a conical form, black on the back, and white under the belly; the upper jaw is prolonged into a weapon resembling the blade of a sword; the mouth is large, but without teeth, and the tail is forked. It generally weighs about one hundred pounds, and is often taken off the coast of Italy, in the bay of Naples, and all about Sicily, and sometimes in other European seas. It is the whale's most formidable enemy. At the sight of this animal the whale seems agitated in an extraordinary manner, leaping from the water as with affright, and flies from it in the opposite direction.

THE WEEVER.

THIS fish grows to the length of twelve inches. The back is straight, the sides are flat, and the belly is prominent. The covers of the gills are armed with a very strong spine. It buries itself in the sand, leaving only its nose exposed; and if trodden upon, it immediately strikes with the spines that form its dorsal fins, which are venomous and dangerous. Notwithstanding its noxious qualities the flesh is excellent food.

THE MACKAREL.

THERE are several varieties of this fish, some of which grow to a considerable size. They are found in the German ocean, the Baltic, and Mediterranean seas; but of all the varieties, the common mackarel, the horse mackarel, and the tunny, are the only ones which are found on our shores. The body of the common mackarel is thick and round, and terminates in a forked tail, and is elegantly proportioned, being neatly tapered towards the tail, and beautifully variegated with brilliant shades of blue, green, and white. The female leaves her spawn on the shores in June and her fecundity is truly surprising, as a single fish will produce upwards of five hundred thousand eggs. It is a gregarious fish and they appear periodically in immense shoals near our shores, to which they come for the purpose of depositing their spawn; they are taken in incredible numbers, and are generally esteemed for their particular delicacy and flavour.

The horse mackarel is in every respect like the common mackarel, except that it is much larger, and that it has on its sides sixty-eight bony plates placed over each other, in the same manner as tiles are on a house; its flesh is also coarser, and consequently not in great esteem.

THE DACE.

THIS fish has a lengthened body, small head, and forked tail. It is of a silver colour, except the back, which is brownish, and rounded. This fish is found in the south of Germany, as well as in France, Italy, and England.

THE PERCH

Is a firm and delicate fish, delighting in deep holes and gentle streams. It is very voracious, bites eagerly, and an angler who has found a shoal of them may easily take them all. When well grown, it is generally twelve or fourteen inches long; the body is deep; the scales very rough, and the back very much arched. The iris of the eye is yellow or gold coloured; the mouth is wide; the teeth are small; the edges of the coverts of the gills are serrated; and on the lower end of the largest is a sharp spine. The colours are beautiful; the back and part of the sides are dark green marked with five broad black bars; the belly is white tinged with red; the ventral fins a bright scarlet; the anal fins and the tail are the same, but a little paler; the tail is somewhat forked. The pike

is said to avoid the spiny fins of this fish, when full grown. Its flesh is very wholesome and light; the bones, pulverized, are used as absorbents in medicine; they spawn in latter end of February, and dwell together mostly in lakes, roving about, particularly under banks or in rapid streams of middling depth.

THE STICKLEBACK.

SOME naturalists enumerate eleven species of this kind of fish, but there are but three of them found in our rivers and near our shores. These are the three, ten, and fifteen spined sticklebacks, which derive their names from the number of spines which they can elevate or depress at pleasure.—These formidable weapons are undoubtedly wisely supplied by nature to these fish, as they would otherwise very soon become extinct, being weak, short lived, and by no means fecundive. The three spined sticklebacks are so very numerous in the fens of Lincolnshire, that they are often purchased by the farmers to manure their land, but they seldom appear in those parts above once in seven years. The female spawns in April and June, they grow to about three inches in length, and feed on other young fish, worms, and insects; they are extremely numerous on the Prussian coast, and are used for making oil, feeding ducks, and fattening swine.

The ten spined stickleback is supposed to be the smallest of fish, and is quite useless to mankind. It is a native of the Baltic sea and German ocean, and all the rivers, bays, and creeks, that communicate with them.

The fifteen spined stickleback is the largest kind of this genus ; its body is slender, and its length seldom exceeds ten inches. They are common in the Baltic sea, and German ocean.

THE SILURUS, OR SHEAT-FISH.

THE silurus, or sheat-fish, grows to a large magnitude, some of them weighing sometimes eighty pounds, and measuring about sixteen feet in length. In colour it resembles the eel, and has no scales. It has only one small fin on the back, and a forked tail. Its flesh is esteemed next to that of the eel, and has a similar flavour. This fish is a great depredator and makes considerable havoc among the smaller inhabitants of the rivers and lakes which it inhabits. They are found in the Danube and several other rivers of Germany.

THE SALMON.

THIS highly esteemed fish is a native of the North sea. Its colour is grey, sometimes spotted with black, and the belly is of a silvery colour ; the nose is sharp pointed, and the under jaw sometimes turns up in the form of a hook. They receive their existence in the fresh water, and then retire to the sea, where they attain maturity, and ever after pass the summer in rivers, and the winter in the ocean.

The season of spawning in this country, as well as in all the southern countries, commences in the month of May, but more to the northward it does not take place till July, and it

rarely continues more than eight or ten days. These fish possess great power in leaping frequently rising to the height of fifteen feet and they will spring three times that distance in a horizontal direction. The Salmon live chiefly upon small fish, insects, and worms; and this food seems calculated to forward its growth as salmon have been taken in England weighing between seventy and eighty pounds. The season for catching them in the Tweed, commences on the 30th of November, and terminates on Michaelmas day. There are on the Tweed forty-one considerable fisheries, which extend more than fifteen miles from its mouth. They are rented at the annual sum of five thousand, four hundred pounds, and the expence of wages, nets, and boats, amounts at the lowest calculation to as much more; to defray all this there must of course be an amazing number of salmon caught. When taken out of the water these fish very soon die, and it is necessary, in order to make them retain their flavour, that they should be killed the instant they are taken; this is easily effected by piercing them near the tail with a pointed knife which quickly occasions their death. The flesh of these fish will keep a long time without spoiling.

THE TROUT

Is a well-known fish, of excellent taste, covered with small scales, and usually streaked with red. It differs according to its various place of abode; it is clear, silvery, dark, black, according as its haunts are fair, muddy, or mossy.

It resembles the salmon more than any other fish ; it is finely spotted with vermillion ; hears with amazing acuteness ; feeds upon worms, slime, mud, insects, and small fishes, which it pursues so eagerly to the surface that it often falls into boats passing by. It is a voracious fish, and delights in cool and small streams descending from rocky hills, and seems very fond of swimming against the stream. They are found in the Alpine rivulets, the streams of which are so cold that no fish can accompany them. Trouts are fattest in July and August ; they spawn in October and November, and are very lean, sick, and unwholesome in winter, breeding a worm with a large head resembling a clove. In March, however, he rouses from his lethargy, rubs off his ill-bred foes, and recovers his wonted vigour. The trout is the best of all river fish.

THE CHAR

Is a fish only found in the lakes of the north. Winander-mere, and some Welsh lakes, are the only places where it is taken in England. It is longer and slenderer than a trout ; the back is of an olive green colour, speckled with whitish spots ; the belly is generally red or white ; the scales are very small ; the mouth is wide ; the lower part of the fins are of a vermillion dye ; and the gills are four, and double. Its flesh is in very high esteem, and is exceedingly scarce. The inhabitants of Westmoreland, near Winander, are wont to send them, potted, in presents to their friends ; but they cannot be taken in sufficient quantity for sale, even at an unreasonable price.

THE CARP.

THIS fish is a native of almost every country in Europe, and is universally known by the name of carp. Its head is broad and large, its jaws strong and provided with barbs; there are also two others at the nose: the body is thick, the scales are large, and of a yellowish hue. These fish reside in rivers, lakes, and ponds. but those which live in the rivers are always allowed to be the finest. The carp is extremely tenacious of life, and may be carried a considerable distance without receiving any injury. It is very quick in its growth, and some have been caught weighing upwards of sixty pounds; but this immense size is not so surprising when we consider the great age to which they live, for it has been clearly ascertained that carp will live two hundred years. Buffon declares that he saw some which were known to be upwards of one hundred and fifty years old. Carp chiefly subsists on insects, mud, worms, and plants. Their spawning time is in May and June, when each female is attended by two or three males. When kept in ponds, these fish require considerable attention, particularly during the winter. When a pond is frozen, it becomes requisite to let off some of the water, so as to leave a space between it and the ice, otherwise the fish would be suffocated for want of air. When the frost commences the carp retire to the deepest part of the pond, where they make holes in the mud, in which they bury themselves, and in this situation pass the winter without food or motion.

THE GOLD FISH.

THIS fish is a species of carp, and receives its name from the brilliancy of its red colour, which renders it one of the most beautiful fishes with which we are acquainted. It is a native of China, and has been transported over most parts of the world. They are carefully preserved in glass vases, that their beautiful colours may be seen through it. The body of this fish is covered with large scales, the tail forked, and the nostrils double and wide, and are situated near the eyes. It changes its colour with its age, being at first black, then of a silver colour, and ultimately red and gold colour, which increases in brilliancy as the fish advances in age. They were first brought into England in the year 1691, since which period they have become perfectly naturalized, and breed in the open waters as freely as the common carp; they are chiefly fed on white bread, hard yolks of eggs, and snails. They spawn in May, and are extremely tenacious of life; in size they very rarely exceed twelve or fourteen inches in length, but when kept in vases they seldom grow to half this size.

THE BARBEL.

THIS fish is found in all the southern countries of Europe, and receives its name from the four beards at the mouth. In form this fish strongly resembles the pike, the head terminates in a point, and is of an oblong shape. The upper lip is strong, and the fish possesses the faculty of projecting it at pleasure; the beards are

fixed on the upper jaw ; the scales are of a light gold colour, and edged with black. The back is of a pale olive colour, and the belly is silvery, and runs in a straight line, without any protuberance. From the centre of the back rises one dorsal fin with ten rays, and between the tail and the arms is another fin with seven rays. These fish are very tenacious of life, and their flesh is delicate and wholesome. It was formerly thought that the roe of the barbel possessed a poisonous quality, but this idea has been proved to be erroneous. Like the trout, it delights in rapid streams, running over a gravelly bottom, and its principal food consists of snails, worms, small fish, and insects. The size of this fish varies in different climates, but few of them are found to exceed forty pounds in weight, and in Russia a barbel of that size may be purchased for a very small sum.

THE PIKE

Is the tyrant of the fresh waters; a most voracious enemy, not only of all other species of fish, but even of his own. His body is roundish oblong, with a flat head ; a square back ; a prominent snout and lower jaw ; small eyes ; and a mouth beset with rows of teeth. He is covered with small thick scales, moistened with a greenish slime ; his back and sides, turned towards the light, have a golden hue ; the sides are spotted with yellow, and the belly is white. Instances of his voracity are needless to be mentioned, it is so well known. He will swallow a fish as large as himself ; seize young ducks and water rats , and even the head of the swan, when under water. Pike are said to live upwards of a hundred years ; they spawn in March ;

are exceedingly prolific, no fewer than 48,000 eggs having been found in one of their roes. They are very wholesome eating, and will agree with all ages and constitutions. A large pike will quite unpeopple a pond or canal; he loves a quiet, shady, unfrequented water, and lurks in the midst of weeds, flags and bulrushes. From thence he frequently ranges about in search of prey, in cold weather he lies deep and seeks the bottom, but as the weather grows warm, he frequents the shallows. A large fish of this description was once caught with a tail sticking out of his mouth, which proved to be that of another pike of one pound weight, which, when pulled out, was still alive.

THE FLYING FISH.

THIS fish is generally about nine inches long. The head is scaly; the belly is angular, and the pectoral fins, the instruments of flight, are very large. When pursued by any other marine animal, it raises itself from the water by means of these long fins, and can support itself in the air till they become dry, when it again drops into its native element. It seems to lead a wretched life, being constantly pursued by fishes of prey; and when it has recourse to flight, it frequently meets its fate from the gull or the albatross, or perhaps drops down again into the mouth of its original pursuer. Between the tropics they are common, and there their enemies are the most numerous. In those climates they are seen springing out of the deep by hundreds; and sometimes throw themselves on board of ships, in order to escape their various assailants. They are of a whitish colour, and their flesh is reported to be palatable and nourishing.

THE HERRING

HAS great differences in point of size, but the usual length is from nine inches to a foot. The back and sides are green, varied with blue, and the belly is silvery. A scaly line from head to tail, running along the belly, is the principal distinction between this and other fish. The scales are large, thin, and fall off with a slight touch ; the eyes are very large ; the gill-covers are loose, and open wide, which occasions its immediate death upon being taken out of the water.

The Herring is a native of the northern ocean ; its winter rendezvous is the arctic regions ; immense shoals are found in the seas of Kamtschatka, and on the coasts of America even as low as Carolina. There they recruit after the fatigues of spawning ; in April and May they bend southward, and appear off the Shetland islands ; their number alters the appearance of the very ocean ; they are divided into distinct columns of five or six miles in length, and three or four in breadth ; and they drive the water before them with a kind of rippling ; sometimes they sink, and rise again to the surface, and in fine weather reflect a variety of splendid colours. The grand shoal appears in June ; they continue in full perfection till the beginning of winter, when they begin to spawn, and return to the polar regions to repair their vast destruction, occasioned by man, fishes, and fowls. The herring-fishery is of great antiquity ; it was entered upon by the Dutch as early as 1164 ; and their diligence and skill still surpasses those of the English, who are the next in pursuing this article of trade. The Yarmouth herring-fair was regulated by

Edward III. and this, as well as several other English towns, are famous for their fisheries. Immense quantities are taken annually, and are either consumed fresh, or salted, pickled, or smoke-dried, and sold over the whole of Europe. The herring feeds on worms and small fish, which it comes or goes in pursuit of, in its different emigrations from one place to another.

THE ANCHOVY.

THE anchovy is a fish about four or five inches long. It has a long slender body with small scales; the whole is nearly transparent; the back is of a mixture of green and ash colour; the belly of a silvery white, the nose sharp, the eyes large, and the tail forked. They are taken on the coasts of Italy and in the Mediterranean, salted, preserved in barrels, and so brought to Great Britain, and to all parts of the Continent; where they are esteemed a very agreeable relish in sauces and sallads.

THE COD.

THIS fish is short in proportion to its bulk, and the belly is very large and prominent. The back and sides are cinerous, spotted with yellow, and the belly is white. But the cod varies considerably not only in colour but also in shape; though all are distinguished by having a small beard at the extremity of the lower jaw, and an unfurcated tail. On the banks of Newfoundland, the coasts of Cape Breton, Nova

Scotia, and New England, they abound in an extraordinary degree; being lured thither by the quantities of worms and small fish which the bottom supplies; and the vicinity to the polar seas, whither they resort to spawn. They are found also in abundance on the coasts of Norway, in the Baltic, and in most parts on the British seas; but never farther south than the straits of Gibraltar. The cod-banks of Newfoundland are a sort of submarine mountains; and of more real and beneficial value to Great Britain than the gold-mines of Potosi to Spain. The fishing season generally commences in February, and ends in May; the fish being then in the highest perfection, and, from the state of the atmosphere, most capable of being properly cured. The cargoes are chiefly disposed of in the catholic countries of Europe during Lent; but from the decline of papal influence, the trade is somewhat falling off.

Providence has bountifully ordained that this fish, so beneficial to mankind, should, by its astonishing fecundity, keep pace with the annual depredations that are made amongst its race. By the help of a microscope, nine millions three hundred and eighty-four thousand eggs have been counted in a cod of only a middling size. They generally weigh from fourteen to forty pounds.



THE DUGONG

SHOULD have been noticed in the chapter on cetaceous fishes. It is a native of the Indian seas, and from its peculiar formation, is supposed to have given rise to those fabulous stories related concerning the Mermaid. It is about eight feet in length, and bears a strong resemblance to the common seal. The fins terminate, externally, in a structure like the human hand; the breasts of the female are very prominent; and in suckling its young, not only this appearance, but their situation on the body, must cause that strange appearance which has led to the popular belief. In other respects the face is far from looking like that of the human race; and the long hair is as entirely wanting as the glass and comb. It is seldom found but in shallow bays, where it can have easy access to those sea weeds on which it browses. The dugong is usually taken by spearing, during the night, and the first object is to secure the tail, when the animal becomes entirely powerless. The young when taken are said to utter a sharp cry, and even to shed tears. Its flesh, is esteemed delicate, and is eagerly sought after. A specimen of this animal is in the College Museum of Edinburgh.

From the most accurate descriptions that have been obtained of mermaids seen in our northern seas, there can be no doubt that such are a species of the Indian dugong.



CHAP. IV.

Shell Fish.

THERE are two classes of animals, inhabiting the water, which commonly receive the name of fishes, entirely different from those we have been describing, and also very distinct from each other. These are divided by naturalists, into Crustaceous and Testaceous animals. Crustaceous fish, such as the crab and the lobster, have a shell not quite of a stony hardness, but rather resembling a firm crust, and in some measure capable of yielding. Testaceous fishes, such as the oyster or cockle, are furnished with a shell of a stony hardness; very brittle, and incapable of yielding. Of the crustaceous kinds are the lobster, the crab, and the tortoise. Of the testaceous sorts is that infinite tribe of oysters, muscles, cockles, and sea-snails.

*THE LAND TORTOISE.*

THE land tortoise is found from one to five feet in length, from the end of the snout to the ex-

tremity of the tail ; and from five to eighteen inches across the back. The head is small, somewhat like that of the serpent kind ; and may be either protruded or concealed under the shell at pleasure : the eye has no upper lid ; the tail is long and scaly, like that of the lizard ; and the exterior covering is composed of several pieces of shell, united in the firmest and most compact manner.

Though this animal is of the most pacific disposition, it is admirably formed for defence, and seems to be almost endowed with immortality. Scarcely any violence can deprive it of life. It will retain the vital principle after it is deprived of the brain, and even of the head. It is remarkable for its longevity. During winter, the tortoise lies torpid in some cavern three or four feet under ground, and from this state it does not awake till the return of the genial heat of spring.

THE TURTLE, OR SEA TORTOISE.

THE turtle, or sea tortoise, is of various species, most of which are highly celebrated in the annals of epicurism. The green turtle in particular, forms an important article of commerce, and our West India ships are generally supplied with conveniences for importing it alive. A common sized green turtle will weigh two hundred weight, and some have been caught that exceeded eight hundred. The turtle seldom quits the sea, except to deposit its eggs in the sand ; which are hatched in about twenty-five days by the heat of the sun. The young, as soon as they burst from the sand, guided by instinct, run toward the sea.

THE LOBSTER.

THE lobster is an animal of so extraordinary a form, that those who first see it are apt to mistake the head for the tail ; but it is soon discovered that the animal moves with its claws foremost ; and that the part which plays within itself by joints, like a coat of armour, is the tail. The two great claws are the lobster's instruments of provision and defence ; these, by opening like a pair of nippers, have great strength, and take a firm hold. It has eight legs, four on each side, and these, with the tail, serve to give the animal its progressive and sidelong motion. The lobster is a hermaphrodite, and is supposed to be self-impregnated. Lobsters cast their shells once a-year. This operation is so violent and painful, that many of them die under it ; those which survive are feeble, and their naked muscles soft to the touch, being covered with a thin membrane ; but in less than two days this membrane hardens in a surprising manner, and a new shell, as impenetrable as the former, supplies the place of that laid aside. Of this animal there are many varieties, with some difference in the claws, but little in the habits or conformation. These all live in the water, and can bear its absence but a few hours. The shell is black when taken out of the water, but turns red by boiling.

THE CRAB.

THE crab is an animal found equally in fresh and salt water. Its shape differs very much from the lobster, but entirely resembles it in

habits and conformation. It resembles the lobster in the number of its claws, which are two; and its legs, which are eight, four on each side. Like the lobster, it is a bold voracious animal, and resembles it in every thing but the amazing bulk of its body compared to the size of its head, and the length of its intestines, which have many convolutions. These animals are found on most of the rocky coasts of Great Britain.

▼ CHAP V.

Amphibious Animals.



THE FROG.

THE common frog is known throughout Europe. In colour it varies considerably, but its general tinge is brown, variegated on the upper parts of the body and limbs with irregular blackish spots. Its spring, or power of leaping, compared with its bulk, is remarkably great; and it is by far the most expert swimmer of all quadrupeds. While in a tadpole state, it is

wholly an inhabitant of the water, and it is also produced in that element : but, as soon as the young animal is transformed into its mature state, it immediately takes to the land. A single female is capable of producing a thousand eggs at a time. They subsist on insects, and are themselves devoured by a variety of other animals. During the frosts of winter, they lie in a state of torpidity, either deeply plunged in the soft mud at the bottom of stagnant waters, or in the hollows beneath their banks, till they are awakened from their slumber by the return of spring.

THE TOAD.

THE toad bears a general resemblance to the frog ; but is much more unsightly in its appearance, and seldom can be viewed without disgust. Its natural deformity, and the abhorrence with which mankind generally regard it, have given rise to many fictitious qualities that confirm the prejudices conceived against it. Its very look has been supposed fatal ; of its entrails fancied poisonous potions have been composed ; and it has been deemed a principal ingredient in administering the incantations of nocturnal hags. But all these fables have been long exploded ; and, if it cannot be allowed to be agreable, it has at least been proved to be innoxious. Like the frog it is amphibious, and lives on worms and insects, which it seizes by darting out its tongue. It crawls about chiefly towards the close of day, in moist weather. During the severity of winter, like all the frog kind, it becomes torpid.



THE SNAIL.

THE snail, to the more transient observer, appears to be little more than a lump of inactive matter, but, on a more close inspection, it will be found to be possessed of every faculty requisite for the life it is formed to lead. When the snail is in motion, four horns are distinctly seen; but the two uppermost and longest deserve particular consideration, both on account of the various motions with which they are endued, and because they have their eyes fixed at the extreme ends of them. This animal can direct its eyes by a regular motion out of the body; and sometimes it hides them, by a very swift contraction in the belly. Eighteen days after coition, the snails produce their eggs, and hide them in the earth with the greatest solicitude and industry. But some are not only viviparous, but bring forth their young with the shell upon their backs. The snail is possessed not only of a power of retreating into its shell, but of mending it when broken. The same substance of which the shell is originally made goes to repair the ruined habitation. It subsists chiefly upon the leaves of plants and trees; but is very delicate in its choice. At the approach of winter, it buries itself in the earth, or retires to some hole, to continue in a torpid state during the severity of the season.

THE CROCODILE.

(See Frontispiece.)

THIS formidable animal frequently exceeds twenty feet in length, and five feet in circumference. The general colour is a dark brown on the upper part, and a whitish citron below; with large spots of both colours on the sides. The skin is defended by a suit of armour, almost impenetrable to a musket-ball. The female deposits her eggs in the sand, and leaves them to be hatched by the heat of the sun.

It abounds in the Nile, the Niger, the Ganges, and other great rivers of Asia, Africa, and America. In upper Egypt it is extremely destructive; lying in wait near the brink of the Nile for animals that come to drink; and sparing neither man nor the fiercest quadrupeds that come within its reach. It seizes the victim with a spring; and draws it into the water, where it devours it at leisure.* The natives of some countries, however, pursue the crocodile for the sake of its flesh, of which they are extremely fond, nor are its eggs reckoned a less delicious treat by some palates. This helps to diminish their numbers; but all the arts of an-

* In a late Madras gazette we have the following account of a fight between an Alligator and a Tiger.—By a part of the Sunderbunds, called Athara Baki, a very thick jungle, but through which a creek runs, a boat was passing lately, when the crew observed a large tiger come to the water's edge to drink; an alligator on the bank seized hold of him, but the tiger resisted, and a contest ensued which lasted for two hours, each seizing and grappling with the other, and the tiger alarming the whole forest with his roar. At last the alligator succeeded in dragging the tiger into the water, who then became alarmed, and letting go his hold of the alligator, the latter seemed glad to be released, and the tiger made off.

noyance which man can exercise would be ineffectual, did not every beast and bird of prey, particularly the ichneumon and the ibis, conspire to devour the eggs and young with unremitting assiduity. Of this family there are several varieties ; as the open-bellied crocodile ; the alligator, or American crocodile ; and the cayman, or Antilles crocodile. They all agree, however, in strength, size, and ferocity ; and are justly objects of terror in every country where they are found.

THE GREEN LIZARD.

THE colours of this species are subject to variety, becoming pale at certain seasons of the year, and more particularly after the death of the animal. The upper parts of the body are of a beautiful green, more or less variegated with yellow, grey, brown, and even sometimes with red. In warm regions it grows to a larger size than in more temperate countries, being sometimes found thirty inches in length. The inhabitants of Africa eat the flesh of this animal.

THE CAMELEON

Is one of the lizard tribe, and retains their characteristic figure. Its head somewhat resembles that of a fish, and is joined to the body by a very short neck, covered on each side by cartilaginous membranes resembling the gills of fishes. There are no ears to be discovered ; the eyes are globular and large, and it can

move one, or point it in a particular direction, while the other is at rest, or differently employed; nay, sometimes one eye will seem to look forwards and the other backwards, one towards the sky and the other towards the earth.

The size is not at all times the same, it has a power of blowing up its whole body; the skin is cold to the touch, and unequal, resembling shagreen, but much softer. It is thickly studded with protuberances which seem to be highly polished, all of which, and the skin, are covered with faint little spots of a pale red and yellow colour, which at the death of the animal become greyish brown. It is very slow, and sits on trees to avoid serpents. It feeds on insects which it catches with an exceedingly long tongue, broad at the top. When at rest in a shady place, the protuberances are a bluish grey; when in the sun, they are greyish brown or tawny; and that part of the skin which the sun does not affect is changed into much brighter colours, forming spots about the size of half a finger in breadth. Sometimes it will assume a greenish colour; and if wrapt up in a white linen cloth for two or three minutes, its colour will appear much lighter. The grey is the natural colour, but they frequently change; and some are found, generally, to assume a beautiful green spotted with yellow. The moist, elastic nature of the skin which they can stretch or contract at pleasure, along with the blood or fluids poured under different circumstances into its extreme vessels, seem to be the causes of the change of colour.



THE VIPER.

THE viper is found in many parts of this island, but abounds most in dry, stony, and chalky, soils. Its usual length is about two feet: the ground colour of the male is a dirty yellow: that of the female is deeper.

This animal is slower in its motions than the snake, and brings forth its young alive. It has often been asserted that the young of the viper, when terrified, will run down the throat of the parent for shelter; and hence some have imagined that she is so unnatural as to devour her own young. But this deserves no credit, as these animals live on frogs, lizards, and young birds, which they swallow entire, though the morsel is frequently three times as thick as their body. The viper is capable of supporting abstinence for a considerable length of time. The bite is attended with sudden inflammation and swelling, but its ill effects may be obviated by a free use of olive-oil applied to the wound, as well as taken inwardly. There are various other specifics, which seldom fail when speedily administered. When at liberty, they remain torpid throughout the winter; yet when confined, they have never been observed to take

their annual repose. The viper casts its skin generally twice a year ; and the new one appears superior in beauty. The *adder* is the only one of the serpent tribe we have in this country from whose bite we have any thing to fear ; and instances have occurred in which the malignity of its venom has been evinced on its own body.

THE RATTLE-SNAKE.

THERE is a material difference betwixt the viper and snake. The latter being generally oviparous, and deposit their eggs, which are either hatched by themselves or by the heat of the sun. The rattle-snake is a native of the American continent. It is sometimes found as thick as a man's leg, and six feet long. In most particulars it resembles the viper. Like that animal, it has a large head and a small neck, and its colours are nearly the same ; but it differs in having a large pendulous scale over each eye, and a nictitating membrane ; besides, that singular mark of distinction the rattle in the tail. With this instrument it makes a very loud noise ; and it appears to have been assigned by Providence for the purpose of warning other animals of its approach, and thereby enabling them to avoid the danger. This rattle is composed of several thin, hard, hollow bones, linked together, and which sound on the least motion of the animal. It has been supposed that it acquires an additional bone every year, from which circumstance its age may be indicated ; at least, it is certain that the young are totally destitute of this appendage. No sooner is this harsh and alarming rattle heard than the other classes of animals testify

their fear by speedy flight. The almost inevitable death that ensues from the bite of this terrible animal creates a kind of solitude around its haunts. It is, however, very inactive and indolent, unless when provoked; and conscious of its superior powers of annoyance, is seldom the aggressor, except when impelled by hunger to attack its natural prey. Rattle-snakes are viviparous, producing their young, generally about twelve in number, in the month of June, and by September these acquire the length of twelve inches.

THE BOA, OR OX-SERPENT

THERE are several species of this enormous serpent. They are all terrible for their magnitude and bite, but destitute of venom. Their length often exceeds thirty feet; the colour is a dusky white, sprinkled with spots of various colours. The boa frequents caves and thick forests, where it conceals itself till its prey comes within its reach. When it seizes large animals, it twists itself perfectly round them, so as to involve their body and impede their motions; while, by the vast force of its circular muscles, it breaks all their bones. The boa has been observed with the horns of a stag sticking out of its mouth; these being too large and complicated for it to swallow, as well as too hard to digest. For some days after it has swallowed a stag or a tiger, it is fixed to the spot, being disabled to move by repletion, and then the natives easily kill it. When exasperated it makes a loud hissing noise. It is found in the East Indies and some parts of South America.

NATURAL HISTORY

OF

INSECTS.

THE chain of animal life ends not with the reptile tribes. Almost innumerable species of living creatures, some obvious to the eye, and even delighting it with their various colours; others too small for the powers of vision to perceive, and either all or mostly perceptible only by means of the microscope, people the waters and the earth, and fill up the chasm in nature between fishes and the half-vegetable polypus. Of these the bodily organs, modes of living, and of propagation, are widely diversified and varied; while their minuteness removes them from familiar observation, and amazes prying curiosity no less with the exquisite wisdom of the Creator in the meanest than in the most exalted of his works.

The general nature of insects consists in the following facts:—They breathe through vent-holes along their sides, having a hard bony skin. Their body is composed of a head, trunk, and abdomen, and these of joints, muscles, tendons, and nerves; but they have no bones and very little flesh; they are generally guarded by a curious coat of mail, and at some period of their life endowed with wings. They have eyes, brain, stomach, and entrails; the first of which are two little immoveable caps round the head full of minute eyes interwoven like lattice work.

They therefore see in every direction, and the two antennæ or long feelers projecting from their heads, are thought by naturalists to relieve or protect, in some manner or other, this construction of the sight. Water insects have swimming organs; and whether destined to creep, walk, bound, or fly, all tendons, muscles, and wings suitable to each particular purpose. With regard to food, they prey on vegetable or animal substances, particularly on the former; and in propagation, they generally undergo several states;—first, that of the *egg*, which is carefully deposited by the parent in a situation where it can be safe and warmly hatched; next, in the state of a *worm* or caterpillar; thirdly, in a torpid, dead state, in which they are called *chrysalis*, and from which they rise with the spring in their last and most glorious stage, adorned with membranaceous painted wings, and inhabiting the air. We shall proceed to detail a few particulars of some of the most remarkable of the numerous species.

BEETLES

ARE that class of insects having cases to their wings, and horns on their head and breast. There are many kinds, all having cased wings fitted for their living below ground without damage, and which produce the loud buzzing noise when the animal rises in the air. The Stag Beetle, so called from its two projecting maxillæ resembling a stag's horn, is the largest in this country. It is of a deep brown; pinches severely with its horns; feeds on the oozeings from oaks, and lays its eggs under the rotten

bark. The Elephant Beetle, the largest known, is found in South America; it is nearly four inches long, is black and covered with a very strong shell. The proboscis is an inch and a quarter long, and it has a horn or prominence rising out of the head something like the horn of a rhinoceros. Another species of large beetles is likewise called by that name. The Lady-cow, or arnot, are small, and chiefly remarkable for the colours of their wing covers, which are red, with seven, or two black spots, or black with two red spots on the exterior. They are often found on thistles, alders, maples, &c.

THE SILK WORM,

WHICH furnishes from its body, during its insect transformations, the materials of the finest robes in the world. This creature is deposited in a proper place on the leaves of some tree, especially the mulberry, in the form of an egg, by the parent fly, who will lay 500 more of the same kind. When disclosed in the state of worm, it is fed with the same leaves, until after several changes of its skin, it prepares for its *chrysalis* or torpid state, from which it is to pass into an *aurelia* or moth, and then into a *butterfly*. It spins a tomb for itself out of two little bags above its intestines, filled with a clammy yellow fluid. The instrument through which the thread comes, performs the office of a wire-drawer's machine; the thread is rolled up in a conical form for its own habitation, in which it lies until it burst through it in the shape of a moth. Before this happens, the keepers

generally kill the moth ; then they throw the clue or cone into warm water ; when an end thread appears, which they seize, and so wind off the whole clue. The grounds are left to moisten, and are then carded and made into inferior stuffs. A single worm will produce between 900 and 1000 feet of thread, so fine and light that the whole weighs no more than two and one half grains. From this humble origin is obtained, one of the greatest ornaments of human pride.

BEEES.

OF these there are several kinds : the Humble Bee, which is very large and solitary, forming its nest in the ground ; the Wood Bee ; the Mason Bee ; the Ground, Leaf Cutting, and Wall Bees ; all of which, the Humble Bee excepted, only form a kind of wax or paste, not honey, for their subsistence. But the Social or Tame Bee is the wonderful insect, whose united labours rise to such a surprising extent as we every day cannot fail to observe. According to Reaumur, there are three kinds in every hive :

1st, The Labouring Bees, which are neither male nor female, but born merely for the purposes of providing for the young in their helpless state.

2nd, The Drones or Males, which gather no honey, are larger than the Labourers, and have no sting.

3rd, The Queen Bee, the largest in the hive, and who lays all the eggs which are hatched into the future offspring.

The Working Bee has a trunk formed to sweep or lick away the honey from the plants ; and teeth, with which it collects pellets of wax, which it sticks into two cavities in its hind legs, and retains them there till it return to the hive. The belly is divided into six rings, and, besides the intestines, contains the honey bag, the venom bag, and the sting. All the honey it sweeps off from the flowers, excepting what is taken for food, is conveyed into a large transparent vesicle, and there kept till it be emptied into the cells. Its sting is a sheath, containing two very small, penetrating, barbed darts; which are supplied by a venomous bag, and stuck into the offender, through the sheath, which being pointed makes the first impression. The social order and toils of Bees are amazing. They divide into companies ; one roves the fields for materials ; a second is laying out the bottom and partitions of the cells ; a third is making the inside smooth from corners and angles ; and a fourth is gathering food for the rest. They often change tasks ; and even seem to have signs by which they understand one another's wants : their labours are unremitting and rapid, for in the space of a day they will make cells sufficient to contain 6000 bees. In these cells the Queen deposits her eggs, which first produce a maggot or worm, fed continually by the old bees ; it is next closed up in the state of an aurelia, and last of all breaks its shell in the shape of a complete bee. As the hive is not capable of containing the young, they are expelled by the old, in quest of new habitations, at several periods during the summer. Bees are nearly alike in all parts of the world. In Guadaloupe there is a less species, which form a very fine honey almost like dew.

THE WASP.

THE wasp is well known ; it resembles the bee in some particulars ; hatches its eggs in a nest framed for that purpose, and is a natural enemy to the laborious insect just mentioned. Wasps, like the Bee, are also social ; they are much larger ; the most active of all the fly kind, as well as the most fierce and voracious. They have their Labourers, Drones, and Queens, like Bees ; and their nest is nearly as curiously constructed as that of the Bee. Their cells are merely for the young ; and the whole race, which increases rapidly, makes a plentiful tribe of pillaging dangerous wanderers before the beginning of winter. But then their miseries begin ; cold and hunger generally destroy the whole hive, leaving scarcely a single female to repair the loss.

THE ANT

Is a patient, parsimonious, frugal, and gregarious insect, which, under the best subordination and order, gives an instinctive instance of a well governed commonwealth. Its body is divided into the head, breast, and belly ; the eyes are black ; the breast is covered with a fine silky hair, and sends from it six pretty strong hairy legs, with claws for seizing or climbing. It is extremely active, bold and enterprising. They are divided, like the bees, into the Male, Female, and Working or Neutral Ants : the wingless Ants work for the rest, while the Males and Females with four wings are seldom seen, and remain shut up. They cast up hills of earth, composed of various substances ; and from the beginning of March, to

the fall of winter, these republicans labour continually. The Female Ants deposit the eggs of the hive, which are very small, and not very visible; the substances which they carry with them not being their eggs, but their young in the aurelia state; the Labourers completely support the brood, and feed the maggot after breaking its egg, and protect it in the aurelia state. Near winter the Female loses her wings, the Males fly off, and it is likely perish for want, while the rest retire far into the hillock, become torpid and motionless, and use their stores only for dry fences to exclude the cold; and in this situation they await the returning spring. In warm countries Ants are extremely large, and are subject to laws different from those of cold climates. In Guinea they have been known to attack a sheep in the night, and invariably destroyed the animal; and so expeditious were they in their operations, that in the morning the skeleton only remained. Indeed the common ants are such expert anatomists, that a mouse or any small animal put into an ant-hill, a perfect skeleton is very soon produced.

GRASHOPPER, OR MANTIS TRIBE,

HAS for characteristics, the head bent inwards, armed with jaws, and palpe or spiral tongues. The wings are so deflected as to wrap round the sides of the body; all the feet are armed with two crotchets or nails, and the hinder are formed for leaping.

The GRASSHOPPER is green like the meadows it frequents, excepting a brown line on the back. Its chirp is a call to courtship; and

they often fight violently about the female. She deposits her eggs, of which she lays about 150, in the ground towards the end of autumn, and expires with age, cold, and fatigue. Each produces an insect about the size of a pea, next May, which bounds about till it arrive at maturity, among the thick long grass. They will bite fiercely if ill used.

The LOCUST, a rapacious and terrible insect, bred in dry and desert countries; sometimes lays waste the fairest regions of the world. Their swarms are numberless, and obscure like a black cloud the horizon; they follow, it is said, a leader, and wretched is the district whereon they settle. They ravage the pasture grounds; strip the trees and fruits; in short, in the emphatic language of Scripture, "while the land is as the garden of Eden before them, behind is a desolate wilderness." They have been found lying four feet deep on the ground; they appear in March, deposit their eggs in May, and the young appear in June in many compact hodies of several hundred yards square; but their ravages are not so fatal in their own native regions, for these repair their losses by their tropical fertility, but in Europe they consume the verdure of a year.*

* Of the innumerable multitudes that infested the interior of South Africa, in the year 1797, scarcely any adequate conception can be formed. Mr Barrow says, that in the part of the country where he then was, for an area of near 2000 square miles, the whole surface of the ground might literally be said to be covered with them. The water of a very wide river was scarcely visible on account of the dead carcasses that floated on the surface, drowned in the attempt to come at the reeds that grew in it. They had devoured every blade of grass and every green herb except the reeds.

The CRICKET is very like the grasshopper ; it ruminates, chirps, and propagates like that insect. The colour is rusty brown, and it lives in the warmest chinks, about a peasant's hearth, being a chilly little animal, The males only are vocal ; it lives in the dark ; is very voracious, and devours greedily bread, flour, meat, and particularly sugar. The warmth of their situation always increases their loquacity.

FLIES.

OF this class is the Lantern Fly, a native of China. The head and breast are muddy brown ; the cases of the wings are a lively green, spotted with yellow ; the wings are yellow, bordered with a glossy black. When it flies, the waving of the wing-cases causes the transparent spots to appear in the dark like radiant flashes, forming various figures, according to the fancy of the wondering beholders. The West Indian Fire Fly is of this species, and shines like a star by night in the woods. The East Indian Lantern Fly is transparent ; red, green, and yellow, are its most common colours ; and it emits a flame like a torch, reflecting a lustre on all surrounding objects. The Day Fly, so called from living only a single Day, nay often only a single hour, is aquatic for more than two or three years in its larva or chrysalis state ; and a female will lay in an hour seven or eight eggs, which sink in the water ; and this operation of nature being performed, they die in heaps. They are considered by the fishermen to be manna sent by Providence for the preservation of the fishes ; and the bounty of nature is no where more conspicuous than in the history of that insect.

THE LIBELLULA, OR DRAGON-FLY.

DRAGON flies are the most various and beautiful of all the race; some have such a variety of vivid tints as view with the colours of the rainbow. These insects are produced from eggs, which the female deposits in the water. The caterpillars that issue from them feed on water insects, increase in voracity and boldness as they acquire strength. These beautiful flies, while they appear so idly and so innocently employed, are the greatest tyrants of the insect tribe; there being none, of whatever magnitude, which they will not attack and devour.

THE BUTTERFLY.

BUTTERFLIES may be said to consist of three parts; the head, the corslet, and the body. The body is the hinder part, and is composed of rings, which are generally concealed under long hairs with which that part of the animal is clothed. The corslet is more solid than the rest of the body, and in this the fore wings and the legs are fixed. They have six legs, but only make use of four. The two fore feet are covered by the long hairs of the body, and it is difficult to discover them. The eyes of butterflies have not all the same form; but in all of them, the outer coat has a lustre, in which may be discovered all the various colours in the rainbow. It has, likewise, the appearance of a multiplying-glass, having a great number of sides, or facets, in the manner of a brilliant cut diamond. In this particular the eye of the butterfly and of most other insects correspond. Butterflies have four wings, and are very different from those of any other fly. They are, in their own

substance, transparent, but owe their opacity to the beautiful dust with which they are covered. Some delight in the sunshine, and others seem to avoid it, for which reason they are divided into two sorts, the diurnal and the nocturnal: the former are called butterflies, and the latter moths.

THE LOUSE,

IN one or other form, is an attendant on every animal. The human louse, when magnified, has a disgusting appearance; the fore part of the head is somewhat oblong, the hinder part is round; its skin is hard, and when stretched is transparent, with several bristly hairs appearing; its proboscis or sucker is seldom visible, but its long antennæ with five joints are very obvious. The neck is short; the breast is divided into three parts, on each side of which are placed six legs, consisting of six joints, covered also with bristly hairs. The ends of the legs are covered with two smaller and larger ruddy claws, serving to lay hold of any thing; the end of the body terminates in a cloven tail; it is quite transparent, and the stomach is easily seen when filled with blood. It gluts itself so much as to be quite distended and easily crushed. It is amazingly prolific; the nits or eggs are soon hatched in a warm moist state, which is much promoted by a neglect of cleanliness.

THE FLEA

HAS a small head, large eyes, and a roundish body. It has two short horns of four joints, between which lies the trunk; the body is adorned with a sort of rough sable armour; it

has six legs, the joints of which fold up within one another; and when it leaps, the whole spring out at once, and the body is raised above two hundred times its diameter. The young fleas are first round smooth nits, from which come white pearl-coloured worms, that, if touched, roll themselves up in a ball; they then seek a place to lie in; spin a silken thread from their mouths, and with this enclose themselves in a small, round, dirty-coloured case, in which they continue a fortnight, and at last spring from their confinement complete, and with powers sufficient to disturb the peace of an empire.

THE SPIDER

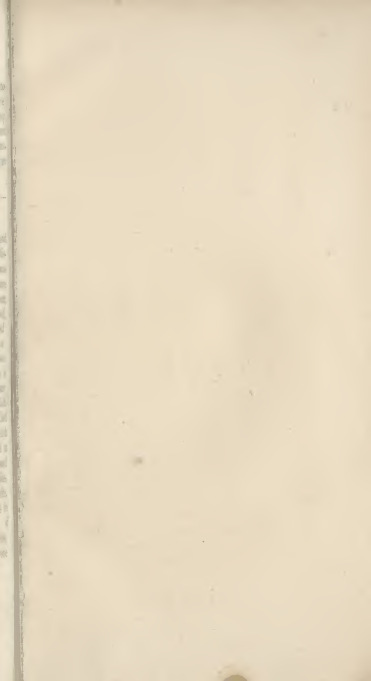
Is found with great differences in most parts of the world. Formed for violence, it is dark, cunning and deceitful. The head and breast is separated almost from the hinder part, excepting for a very slender thread; they have six bright, brilliant eyes all round the head; two rough strong pointed pinchers, toothed like a saw, and terminating in claws like those of a cat. A little below the point of the claw is a small hole, through which the animal emits a poison, harmless to us, but instantly fatal to its prey. They have eight jointed legs like a lobster's, which if torn off will grow anew. From a tenacious, gluey substance, contained in a bag with five teats, it spins five different small threads, which instantly coalesce into one; and of these the animal forms a web to catch flies, &c. and which it weaves with amazing skill and dexterity. As it has only a certain quantity of this fluid, and a fine web is apt to

be ruined by accidents, it is often forced into great extremities, such as seizing by violence the web of some weaker one, or famishing by casual depredation. Spiders devour and eat one another, and are therefore extremely unsocial. In the east they grow to a very large and dangerous size.

THE SCORPION,

Is a viviparous insect, of hideous figure and mortal sting. There are nine different kinds, distinguished by their colour. The head seems jointed to the breast, in the middle of which are seen two eyes, and a little onward two eyes more, but very small, placed on the fore part of the head; the mouth has two jaws, which are notched into one another, and serve to chew worms and insects. On each side of the head are two four-jointed arms, the last joint of which is strong and muscular. Below the breast are eight six-jointed legs, the hindmost of which have two crooked claws. The belly is divided into seven little rings, from the lowest of which is a tail of six joints or globular knots, and at the end is a crooked sting. It is hard, and pierced near the base by two small holes, through which it emits a drop of poison, white, caustic, and fatal. The Scorpion lurks in houses behind furniture; is the plague of Spain, Italy, and some other European countries; but especially of Asia. They devour one another with amazing ferocity.

THE END.









X

