

Vernon Morwood

An Easy Guide to Scripture Animals



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"The history of the Church confirms and illustrates the teachings of the Bible, that yielding little by little leads to yielding more and more, until all is in danger; and the tempter is never satisfied until all is lost. – Matthias Loy, *The Story of My Life*

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SCRIPTURE ANIMALS

A DESCRIPTION
OF ALL THE ANIMALS
MENTIONED IN THE BIBLE

ILLUSTRATED



AN EASY GUIDE
TO
SCRIPTURE ANIMALS

BEING

*A DESCRIPTION OF ALL THE ANIMALS
MENTIONED IN THE BIBLE*

WITH THE

SCRIPTURE REFERENCES, NUMEROUS ANECDOTES, ETC.

For Home Use and for Day and Sunday Schools

BY

VERNON S. MORWOOD

AUTHOR OF

"FACTS AND PHASES OF ANIMAL LIFE," "WONDERFUL ANIMALS,"
"BAND OF MERCY GUIDE," ETC. ETC.

WITH THIRTY ILLUSTRATIONS

LONDON

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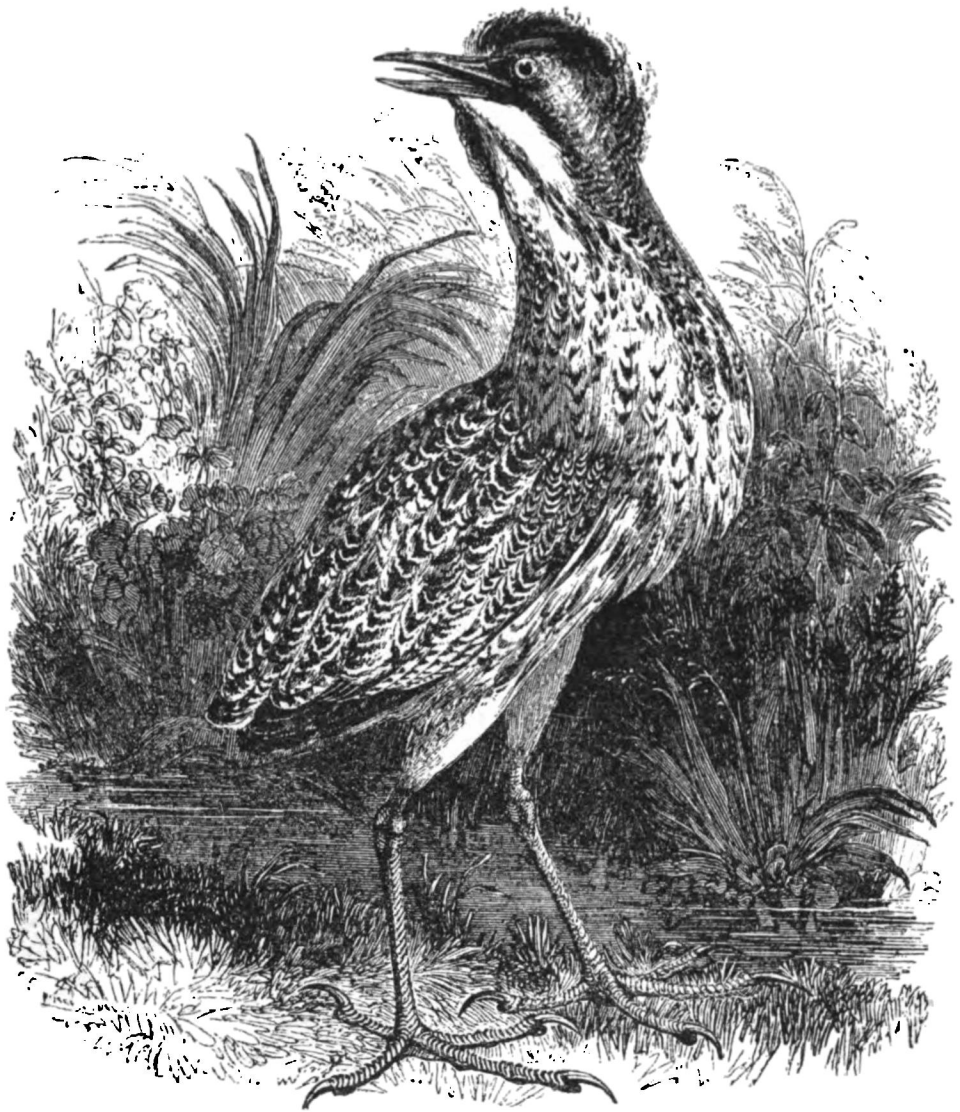
Sydney Partridge

As a reward for early attendance and good conduct
at the Primitive Methodist Sunday School, Midland
Road, Peterborough.

Date...*March 6th*...190...*7*

W. HEWSON, Superintendent.

H. HEWIS, Secretary.



THE BITTERN.

Frontispiece.]

[*See page 32.*



PREFACE.



NO attempt has been made by the author of this work to give anything like an elaborate description of the animals of the Bible, but rather to help its readers in obtaining that amount of knowledge of the structure, life, and habits of the animals mentioned, which may induce a consideration of the rights and claims of animals generally, and to see the extent of our own duty towards them.

If one thing more than another invests the study of animals with interest and importance, it is the fact that these creatures of God are very frequently mentioned in the Old and New Testaments; and because they were identified with many historical events therein recorded, which have reference, not only to nations and peoples, but also to persons individually.

In turning to the Scripture quotations appended to the description given of each animal, it will be necessary for the reader, in order that he may understand the reasons why, and the circumstances

under which, animals are spoken of, to peruse carefully the context as well as the verse or verses cited. He will then see more clearly that certain animals are referred to for the purpose of impressing the mind with enlarged ideas of the power, care, goodness, and love of God for His own people. He will also see that different forms of animal life were, in the early ages of the world, employed as agents of Providence to punish both nations and men, for their disregard of the divine commands, as well as for their idolatry and cruelty to their fellow-men.

It is worthy of special notice that by their ways of life many animals teach useful lessons of forethought, industry, perseverance, and wisdom; and that we all may, if we properly study their character, see in them patterns of gentleness, gratitude, unselfishness, and true parental affection. The writer hopes that the *Anecdotes*, many of which are original, may be found to be not only appropriate, but interesting and useful, together with the *Questions* suggested in nearly every case.

V. S. M.



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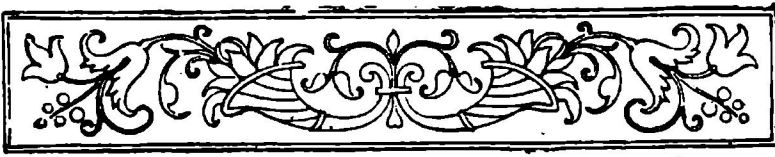


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VOCABULARY

Explanatory of Words used in this Volume.



ABDOMEN. That part of the body between the thorax and the pelvis.

ACCIPITRES. The order of rapacious, or flesh-eating, birds.

AMPHIBIOUS. Having the power to live on land or in water.

ANIMALCULES. Minute animals to be seen only through a microscope.

ANTENNÆ. Something like horns attached to the heads of insects.

APPELLATION. The word by which a thing is called and known.

APPROXIMATE. Approaching, nearest to, next, near to.

APTEROUS. In zoology, being destitute of wings.

AQUATIC. Pertaining to water, anything growing in it.

ARACHNIDA. A class of animals including spiders, mites, and scorpions.

ARANEIDÆ. An order comprising the various genera of spiders.

ARTICULATED. A word applied to an animal having many joints.

ASSIMILATE. To bring to a likeness of something else.

BATRACHIAN. Having reference to frogs, toads, &c., of the order
Batrachia.

BIPED. An animal having only two feet, as man, birds.

BOVINE. Pertaining to oxen and cows of the genus *Bos*.

CARNIVOROUS. Feeding on flesh.

CARTILAGINOUS. Gristly, smooth, solid ; a substance softer than bone.

CETACEA. An order of marine Mammalia, as the whale, porpoise, &c.

CHARACTERISTIC. That which marks the peculiar, distinctive qualities
of a person or thing.

CHRYSAIIDES. Butterflies and moths in their second or pupa state.

COLEOPTERA. Insects of the beetle tribe having wing cases.

CYGNET. A young swan.

DIPTERA. A class of insects with only two wings.

DORSAL. Having reference to the back of an animal, as the dorsal muscles of a horse, and the dorsal fins of a fish.

EDIBLE. That which is suitable to be eaten as food.

EFFLUVIA. Exhalations from decomposing animal matter, &c.

ELYTRA. The wing sheaths of beetles.

EPHEMERA. A very short-lived insect.

EQUIDÆ. A name comprising the horse family.

FETID. Having an unpleasant smell.

GALLINÆ. Domestic fowls, or those of the pheasant kind.

GASTEROPODS. Animals that move by a fleshy apparatus, as the snail.

GENUS. Many species of animals having certain characters in common.

GEOMETRIC. According to the rules or principles of geometry.

GLIRIS. Another name for Rodentia, which includes gnawing animals.

GRANIVOROUS. Eating grain, subsisting on seeds.

HABITAT. The natural abode of an animal, plant, &c.

HERBIVOROUS. Subsisting on herbaceous plants.

HIBERNATE. To pass the winter in seclusion, as the hedgehog.

HYMENOPTERA. An order of insects with four wings.

INCUBATION. The act of sitting on eggs to hatch them.

INSECTIVORA. Quadrupeds that live on insects, as the ant-eater.

INSTINCT. A natural impulse in animals, to seek food, &c.

INTESTINAL. Pertaining to the bowels of an animal body.

INVERTEBRATE. Including animals destitute of a backbone.

LARVA. An insect in a caterpillar, or grub, state.

LEPIDOPTEROUS. An order of insects having four wings each.

LEPUS. A genus of animals including hares of many kinds, &c.

- MACERATE.** To soften the parts of a substance by steeping it in a fluid.
- MAMMALIA.** An animal that suckles its young and brings it forth alive, as the sheep, cow, goat, &c.
- MANDIBLE.** The under jaw of mammals, and both jaws of birds.
- MEMBRANOUS.** Pertaining to a thin, white, flexible skin, formed of fibres interwoven like network, to cover some part of the body.
- METAMORPHOSIS.** Change of form, as of a chrysalis into a winged animal, as butterflies and many other insects.
- MOLLUSCA.** Animals with shell coverings, as oysters, snails.
- NEUROPTERA.** A class of insects having four transparent membranous wings, furnished with many nerves.
- NOCTURNAL.** Done or happening at night.
- OMNIVOROUS.** All-devouring, as the hog, &c.
- OPHIDIA.** An order of reptiles of the serpent kind.
- ORGANIZATION.** The act or process of forming organs or instruments of action; structure.
- ORTHOPTERANS.** An order of insects.
- OVIPOSITOR.** The organ of certain insects by which eggs are deposited.
- OVOVIVIPAROUS.** A mode of generation by the exclusion of a living fœtus from an egg-covering.
- PACHYDERMATA.** An order of thick-skinned animals.
- PARASITE.** An animal that lives and feeds on the body of another animal, as ticks, lice, &c.
- PASCHAL.** Pertaining to the Jewish Passover.
- PATRIARCH.** The head of a family or church.
- PHYSIOLOGY.** The science which treats of organized beings, whether animals or vegetables.
- PREDACEOUS.** Living by prey.
- PREDILECTION.** A prepossession in favour of something.
- PROCLIVITY.** Inclination, propensity.
- QUADRUPED.** An animal with four legs and feet.
- RAPACIOUS.** Given to plunder, seizing by force.
- REPTILIA.** An order of animals, as snakes, lizards, &c.

RODENTIA. Comprising quadrupeds with two incisor teeth in both jaws adapted for gnawing, as rats, mice, &c.

RUDIMENTARY. Consisting of first principles.

RUMINANTIA. An order of herbivorous animals with four stomachs which chew the cud.

SCANSORES. An order including climbing birds.

SERRATED. Notched on the edge like a saw.

STRUCTURAL. Pertaining to the structure of anything.

SUBTERRANEAN. Under the surface of the earth.

SYMMETRICAL. A body having its parts in due proportion.

TESTACEOUS. Consisting of a hard shell.

THORAX. In insects the part of the body between the head and abdomen.

TORRID. Parched, dried with heat, violently hot.

UNGULATA. An order of animals with one hoof on each foot.

VERTEBRATED. Having a backbone.

VESPIARY. A nest or habitation of wasps.

VIVIPAROUS. Producing young in a living state.

ZOOPHYTES. Small forms of life constituting the connecting links between animals and plants.



SCRIPTURE ANIMALS.



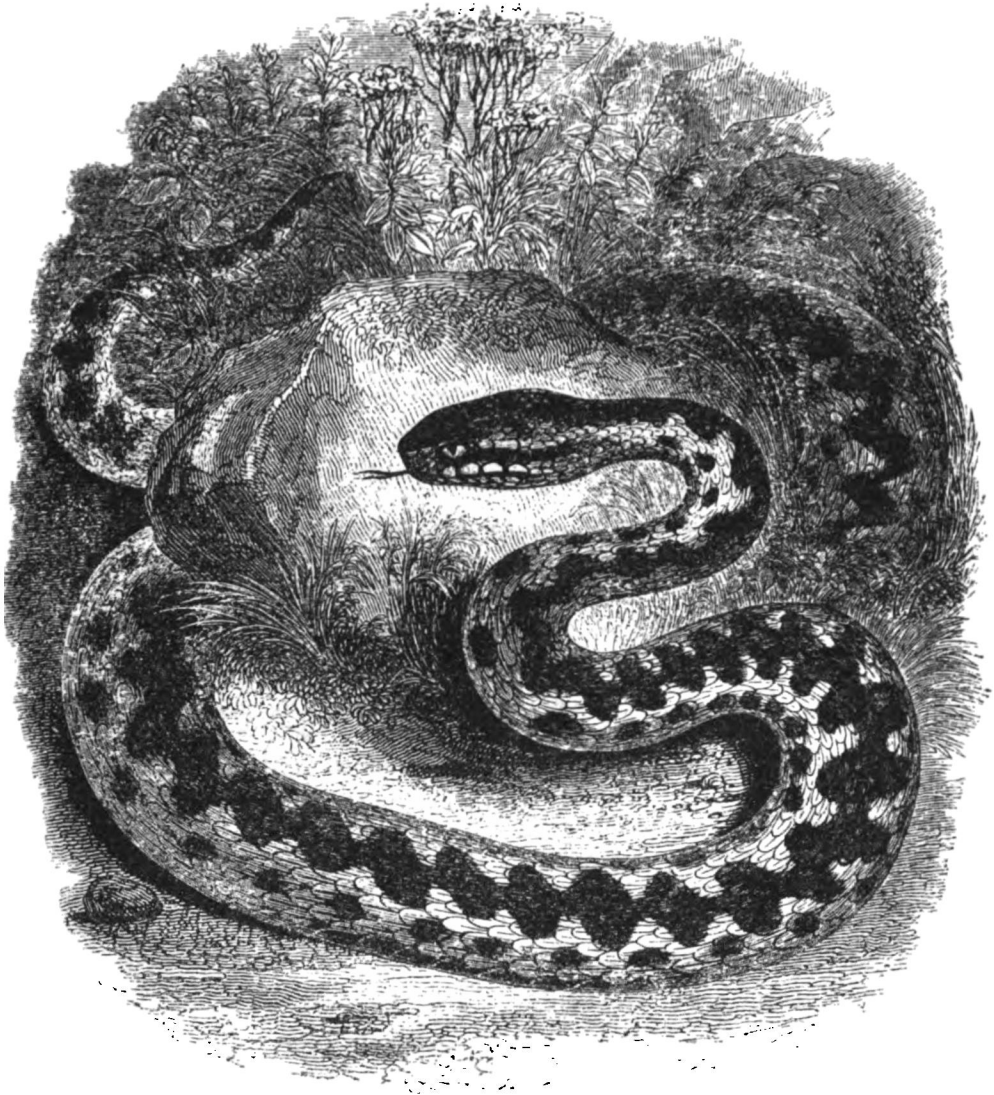
THE Natural History of Animals should be a subject of interest to everybody, especially to those who are by ownership, business, and profit connected with them. It is of essential importance that it should form a part of education, not only in our Day, but in our Sunday Schools. The Animals of the Bible should particularly command their greatest attention.

Although they are commonly known as the "lower animals," they are nevertheless so closely allied to man as to be reckoned members of the same creaturehood in which we ourselves are included. Though many persons are in the habit of saying "Animals and Birds," as if the latter were not animals, yet all living creatures, having more or less the power of voluntary motion, whatever their form or size may be, come under the general name of *Animals*.

While it is true that all insects are animals, all animals are not insects. To make the study of animals as easy, interesting, and comprehensive as possible, the different kinds of them are divided into classes, orders, and families; while those that are included in them are known by names appropriate

to their peculiar organization, life, and habits. The animals we are about to describe are taken exclusively from the Bible. For more easy reference they are arranged in alphabetical order. The first we refer to is the

ADDER.



THIS reptile is found in England, and is widely distributed throughout the East and European Con-

tinent. It belongs to the class Reptilia, is of the order Ophidia, and about two feet long. The female is ovoviviparous, and produces its young from eggs hatched in its inside. Its venom is not so virulent as that of many other poisonous serpents, but often severe enough, when injected in warm climates, to produce fatal results. It is stated that "in Genesis the original word denotes a serpent of the viper kind, the *Cerastes*, which is of the colour of sand, which lurks in the tracks of the wheels, and bites the unwary traveller and his beast."

QUESTIONS.

What is an adder, and where found ?

To what class and order of animals does it belong ?

How does it produce its young, and where ?

What is the nature of its venom, and where is it the most fatal ?

What is the original word in Genesis supposed to denote ?

Bible References.—Genesis xlix. 17 ; Psalms lviii. 4 ; xci. 13 ; cxi. 3 ; Proverbs xxiii. 32.

ANECDOTE.—It is stated, in the "Natural History of Selborne," that immediately after fifteen young vipers (or adders) were excluded from the mother, they twisted and wriggled about, and set themselves up, and gaped very wide when touched with a stick, showing manifest tokens of menace and defiance, though as yet they had no manner of fangs that we could find, even with the help of our glasses.

A N T.

A VERY small insect belonging to the order Hymenoptera. The common ants of Europe are red or black. Some of them sting, others do not. Their eyes are very black, and they have two antennæ, or horns, projecting from their foreheads. They have four wings and six legs each. Ants are far famed for their social and industrious habits, and are patterns of economy. They love order and subordination. There are many kinds of ants, differing, in some respects, in their dwellings and size. The termites, or white ants, found in the tropics, are the largest of their kind, and may be those referred to by Solomon in our Bible references ; but all of them are branches of the same family, and, though differing in size, are alike in structure and habits.

QUESTIONS.

To what genus of animals do ants belong ?

What are their colours ?

How many antennæ, wings, and legs have they each ?

What are the largest kind of ants, and where are they found ?

What lessons do ants teach ?

Bible References.—Proverbs vi. 6 ; xxx. 25.

· ANECDOTE.—Ligou, speaking of ants, gives the following :—“ We sometimes kill a cockroach, and throw him on the ground, and mark what they will

do with him. Although his body is larger than many of theirs put together, yet away they carry him, attended by other ants to take the place of those who tire. Some ants act as officers, who lead the way, and show the hole into which the cockroach must pass. If his body is crosswise and cannot pass into the hole, it is turned endwise about a foot before they reach the hole."

A P E.

THE animals comprised in the *Quadrumania* (four-handed) family are of different kinds, and are known by certain distinctive characteristics. Those having long tails are called *monkeys*, those with short tails are denominated *baboons*, and those with no tails are known as *apes*. The apes are said to resemble man much more than the other two varieties do. They are found in the forests of India and Africa, and are numerous in the peninsula of Malacca. They live in troops, and subsist on fruits, leaves, and insects. Some of them are of a grave and gentle disposition, others are fierce, vindictive, and untractable. In India they have long been regarded as sacred animals, for the worship of which several temples have been erected. One of these is supported by seven hundred columns. The ape was an object of worship among the Egyptians.

Our Scripture quotation implies that the ape was among the articles of merchandise imported from

Ophir in Solomon's ships, probably, it is conjectured, because the king wanted a living specimen for investigation.

QUESTIONS.

What animals are included in the *Quadrumana*?

Which of the varieties of this family the most closely resembles man?

Where are apes found, and on what do they feed?

How have the Egyptians and the people in India regarded the ape, and what have they done to its honour?

What was Solomon's object in obtaining one of these animals?

Bible Reference.—1 Kings x. 22.



ASP.

THE Arabians call this serpent *El-Haje*. It is of a green colour, and marked with brown bands. It is from three to five feet in length. It belongs to the class *Reptilia*, and the order *Ophidia*. When angry it will distend its neck, raise itself on its tail, dart forward with great rapidity and force, and then inject its poison into the body of its victim, who soon dies unless the part is at once cut out, or the limb amputated. This animal is found in Egypt.

QUESTIONS.

To what class and order does the asp belong?

By what name is it known among the Arabians?

What is the length of its body ?

What will it do when angry or irritated ?

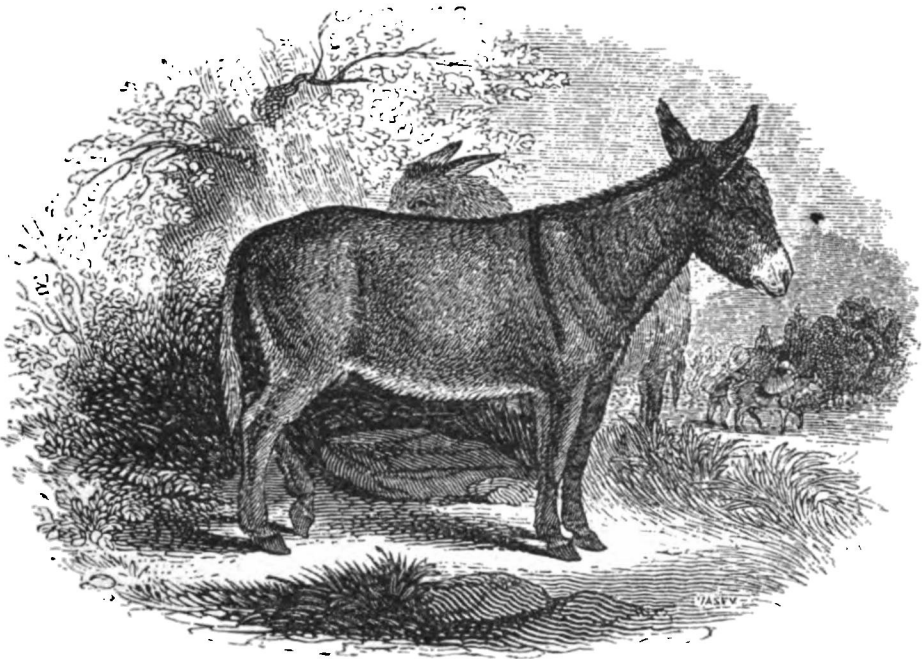
How is the bite of the asp prevented from being fatal to life ?

Where is this reptile found ?

Bible References.—Deuteronomy xxxii. 33 ; Job xx. 14-16 ; Isaiah xi. 8 ; Romans iii. 13.



ASS.



THIS well-known animal is often treated with great neglect and cruelty, and yet no animal was ever more honoured than was one of its predecessors who bore on his back the Redeemer of mankind. The ass is often referred to in the sacred writings, and in ancient times a man's riches were estimated by the number

of asses he possessed. He is very inexpensive in his food, which mainly consists of a few thistles and coarse herbage. He is a model of contentment and resignation, patient, enduring, inoffensive and useful. The ass has been known to live thirty, forty, and even fifty years. The wild ass, supposed to be the progenitor of the domestic one, is taller and more symmetrical in form than the latter. The body of the former is beautifully marked, but he is not easily tamed.

QUESTIONS.

What is supposed to be the origin of the domestic ass?

What is the general character of this animal?

In what way was one of his predecessors more honoured than any other animal?

What ages do asses sometimes attain?

What are the differences between the domestic and wild ass?

Bible References.—Genesis xxii. 3 ; Numbers xxii. 23, 28 ; Judges xv. 16 ; Job vi. 5 ; xi. 12 ; Isaiah i. 3 ; Jeremiah ii. 24 ; John xii. 15.

ANECDOTE.—An ass that was attacked by a bulldog caught hold of the ferocious brute with his teeth in such a manner that the dog could not retaliate. Although he howled fearfully the ass dragged him to the river Derwent, into which he put him overhead and then lay down upon him until the dog was drowned.

BADGER.

THIS animal was at one time numerous in England ; at present it is very rare, but still found in most parts of Europe and Asia. It is of solitary and nocturnal habits, and although deemed by some people to be very stupid, it shows strong affection for its own kind, especially for its young. It is quiet and inoffensive, but when attacked by dogs or any other animals it can defend itself with great resolution. The nose is long and face white. Its body is covered with long hairs of a rusty grey, and measures about two feet and a half in length. The tail and legs are short. It feeds upon roots, fruits, insects, and frogs, &c. The flesh, cured and made into hams and bacon, is much relished in Italy, France and China. Some parts of the hair are used for artists' pencils, and of the bristles brushes are made for common painters. The skin with the hair on is impervious to rain, and makes excellent covers for travelling trunks. The skins of this animal were used as outer coverings for the Tabernacle. The badger is the oldest species of Mammalia in England.

QUESTIONS.

Where is the badger found, and what are its habits ?

What are the mental qualities and moral affections of the badger ?

What is its structure, and on what does it feed ?

Of what uses are the hair, skin, and body of the badger when dead ?

Bible References.—Exodus xxv. 5 ; Numbers xlix. 10 ; Ezekiel xvi. 10.

ANECDOTE.—That badgers are capable of education is evident from the following:—When Lord Belmour went out on his shooting expeditions, he was attended by a badger he had taught to point at game as a pointer dog would do. He would also fish for his master, and bring the salmon out of the water without offering to eat them.

B A T.

OF this animal there are many different kinds, varying considerably in size, and found in many parts of the world, in some of which they are made into soup and eaten. On account of its peculiar structure it may be considered as a link between the small quadrupeds and birds. It is about the size of a mouse, and is furnished with four interior toes attached to the extremities of two expansive wings, and although its gait is awkward and slow, it flies with great rapidity. It feeds on insects, and being a mammal supplies its young with milk, and carries them with her wherever she goes. Its senses of smell, hearing, and feeling are very acute. When the cold weather sets in it retires to some secluded, inaccessible nook, in which it hibernates through the winter, during which time it is supported by the fat of its own inside. Men have been known to fast thirty and forty days, but bats often fast one hundred and twenty days, and

even more. There are several species of bats in England. The Bible speaks of the bat as being an unclean beast.

QUESTIONS.

Where are bats found, and how are some of them disposed of?

To what class of animals does the bat belong?

In what respects does it differ in its structure from other animals?

On what does the bat subsist, and how does it feed its young?

Which of the five senses does it possess in an acute degree?

What becomes of it during the winter, and how kept alive?

Bible References.—Leviticus xi. 19 ; Deuteronomy xiv. 18 ; Isaiah ii. 20.

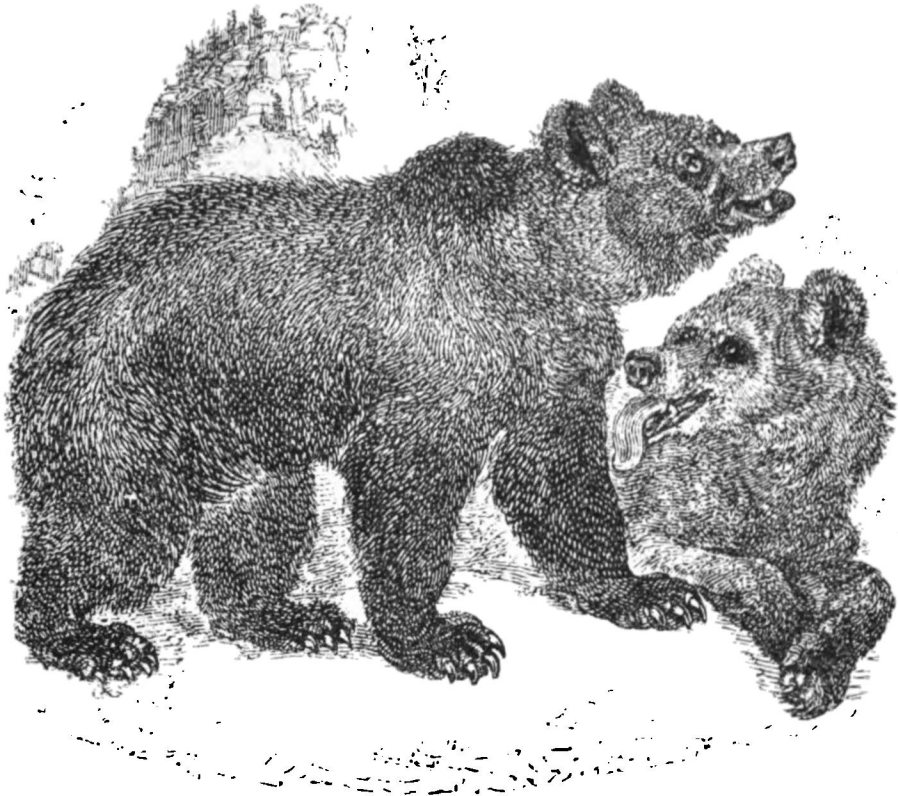
ANECDOTE.—Many years ago, on opening a vault at Blankney, in Lincolnshire, a large grey bat was discovered therein, as it had been on many former occasions. It was calculated to have lived in the tomb for thirty-three years.



BEAR.

THE bear family comprises many varieties, all of which are plantigrade animals—that is, in walking they put their heels on the ground. Although carnivorous, many of them feed on vegetables. They differ considerably in size and in strength. Some of

them are of great power, large and heavy in body. As the *brown bear* is supposed to be the one of Scripture, we offer the following brief description of it. It is found in Asia and the northern parts of Europe. It measures four feet long, and two and a half feet high. It is of a savage disposition and of solitary



BROWN BEAR.

habits. The house, or den, in which it lives is made up of branches of trees lined with moss; sometimes the animal forms its den by digging a place in the earth, and covering it as described. The attachment of the mother bear for her young is very strong, and nothing enrages her so much as to see them taken from her.

QUESTIONS.

What kind of animal is the bear ?

What do most bears feed on ?

What is the bear of Scripture, and where found ?

What is its disposition ?

What is its den, and how constructed ?

What does the mother bear show when deprived of her young ?

Bible References.—1 Samuel xvii. 34, 36 ; 2 Samuel xvii. 8 ; 2 Kings ii. 24 ; Isaiah xi. 7 ; Daniel vii. 5 ; Revelations xiii. 2.

ANECDOTE.—A bear with two cubs was pursued by some sailors. The mother, to save her young from being taken or killed, carried them, or pushed them, alternately forward ; the cubs, soon finding out that by this plan they were getting farther away from their pursuers, would place themselves in turn across the path, to have another pitch onwards, and continued to do this until they effected their escape.



BEAST.

ALTHOUGH this is not exclusively the name of any particular kind of animal, yet the word so frequently occurs in the Bible that it is worthy of notice. A beast means any four-footed animal as distinguished from birds, insects, reptiles, fishes and man.

QUESTIONS.

Is *beast* the name of any particular genus of animals?

Why is it introduced into this list of animals?

What is a *beast*, and how distinguished?

Bible References.—Genesis i. 24 ; Leviticus xi. 47 ; Psalm cxlvii. 9 ; Ezekiel xlv. 31 ; Luke x. 34 ; Acts xxviii. 50 ; Revelations xix. 19.

Beast, Wild—Job xxxix. 15 ; Psalm lxxx. 13 ; Hosea xiii. 8.



B E E.

THIS is the name of a well-known Hymenopterous insect, of which there are many kinds. It has been the study of natural historians for more than two thousand years, and has by its marvellous structure, persevering industry and utility, excited the attention and admiration of mankind in nearly all countries. The honey-bee is not an inch long, but is furnished with four wings, six legs, two antennæ, a sharp-pointed sting the venom of which is so virulent that its injection has sometimes been fatal to life. It works assiduously in collecting the nectar and pollen of various flowers, which it stores in its honey-bag and the pockets in its hind-legs. With these it flies to the hive, in which they are deposited by a worker bee. As bees all contribute to the general good of the occupants of the hive they may be justly denominated a republic, or commonwealth of metho-

dical active workers. Such large quantities of honey and wax are produced annually by these busy creatures that they have become of great commercial importance. The queen bee lays in cells of the hive many thousands of eggs in a season, which are carefully tended by worker bees until they are hatched, become fully developed, and perfected in their structure. The honey-bee is supposed to be the one referred to in the Bible.

QUESTIONS.

To what class and order does the bee belong ?

How long has it been known to naturalists and popular with mankind ?

Name the size and different parts of its body.

From what bee are the eggs produced, and who have the charge of them ?

Bible References. — Deuteronomy i. 44 ; Judges xiv. 8 ; Psalm cxviii. 12 ; Isaiah vii. 18.

ANECDOTE.—“A large brown slug,” says Mr. Jesse, “made its way into a glass hive, where the operations of the bee could be distinctly seen. Having killed the slug, and finding they were unable to get it out of the hive, they covered it over with the thick resinous substance called propolis, and thus prevented its becoming a nuisance to the colony. Into the same hive one of the common garden snails gained admittance. Instead of embedding it in propolis, the bees contented themselves with fixing it to the bottom of the hive by plastering the edge with that substance.”

BEETLE.

THIS Coleopterous insect is found in nearly every part of the world. From 70,000 to 80,000 varieties of the beetle family are known, but they differ in structural arrangements and in size ; some being no larger than a pin's head. They are produced from eggs, many of which are deposited in decaying animal matter, and then become grubs. After a little time they change into *Chrysalides*, and ultimately into perfect insects. Many of them are of singular form, but of beautiful colours. The bodies of most beetles are oval-shaped, and are furnished with two antennæ, four wings and four legs, the first two, in some kinds, being used for burrowing. The sacred beetle, *Scarabæus Sager*, is not only highly prized by the Egyptians, but worshipped by them. "The beetle," says Dr. Clarke, "is eaten by the women of Egypt." Some varieties of the beetle are very destructive, especially to books, and articles made of leather ; but they are good sanitary scavengers, by consuming refuse and the decomposing flesh of dead animals, and so help to clear the atmosphere of effluvia which would otherwise be destructive of human life.

QUESTIONS.

What numbers of the varieties of the beetle family are known ?

To what class and order does this insect belong ?

How does the beetle perpetuate its own kind ?

Of what shape and structure are most beetles ?

By what nation is one kind much valued?
What are the habits and uses of beetles in
Nature?

Bible Reference.—Leviticus xi. 22.

ANECDOTE.—The following story is curious :—A naturalist once took a stick, three or four feet long, which he stuck in the garden soil, and then on the top of it placed a dead toad. Some burying, or grave-digging, beetles scented the lifeless animal and seemed to wish to secure it for interment. But not being climbers, they were in a difficulty as to securing the body. It seemed, however, that reason came to their rescue, for they set to work to loosen the soil at the bottom of the stick, which they did so effectually that the stick and toad fell on the earth together. This done, a grave was made by the beetles, and the defunct toad was buried therein by them.

BEHEMOTH.

THIS animal is supposed to be the hippopotamus, or river horse, a huge amphibious animal found in the rivers of Africa. He belongs to class Mammalia, order Amphibia. He is very long, thick, fat, and clumsy. The legs are so short that the underpart of the animal's body nearly touches the ground. He has a large head, and a very wide, capacious mouth. His size and strength are immense, and his skin is about two inches thick on the back and sides, and

is almost impenetrable, and when dried is made into shields. The tusks are of great value, and because of their hardness are superior to ivory. They are often two feet long, and weigh six pounds each. It is for these the animal is captured.

QUESTIONS.

What animal of natural history is the behemoth supposed to be?

Where is he found?

What is meant by mammalia and amphibia?

What are the peculiarities of this animal's structure?

Are the skin and tusks valuable?

For what is the skin used when dried?

Bible Reference.—Job xl. 15.

ANECDOTE.—Spannan says "that a negro who had irritated a hippopotamus was pursued by it, and had great difficulty in escaping, after a long pursuit." Professor Thunberg mentions, "that while on a hunting party, a female came to land in order to calve. They concealed themselves among the bushes, till the mother and the calf made their appearance, and were approaching the river. They fired at and killed the female, thinking to secure the young one; but it instinctively made the best of its way to the river, and dived to the bottom."



BIRD.

THIS is the general name of the feathered race of animals, of which there are many thousands of different kinds found in every country in the world. They are of all sizes and colours, from the ostrich and emu down to the birds of paradise and tiny humming-birds. Birds are divided into two general classes—*Granivorous* and *Carnivorous*. Some kinds, as common fowls, partake of both, and therefore are denominated *Omnivorous*. These classes contain several orders, each name of which is appropriate to the habits, structure, and habitats of the bird family. Many live much on the water, others on the tops of rocks, in mountainous districts, and in marshy lowlands. Many birds confine themselves to our fields, gardens and forests; while others live in close proximity to houses, and buildings of various kinds. Some wade in shallow water in which they seek their food, as well as in the muddy banks of rivers; others live in deep waters to procure small fish. Some birds fly with great rapidity, others have but rudimentary wings which assist them in running only. All birds exhibit great affection for their young. The nests of many kinds are such wonderful specimens of bird architecture that they vie with the mechanical genius of man. Though destructive in some respects, they are all of service in the economy of Nature.

QUESTIONS.

To what classes do birds belong ?

What is meant by carnivorous, granivorous, and omnivorous ?

What are the habits of different birds ?

Can all birds fly equally well ? Give an example.

In what way do many birds show their ingenuity ?

What moral qualities do they exhibit, and of what uses are birds ?

Bible References.—Genesis vii. 14 ; Job xli. 5 ; Proverbs xxvii. 8 ; Ecclesiastes x. 20 ; Hosea ix. 11 ; Matthew viii. 20 ; xiii. 32.

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

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BITTERN.—(*See Frontispiece.*)

THERE are several species of this bird found both in cold and in hot climates. It is one of our largest wild birds, as the body often measures thirty inches in length and is well covered with feathers,

most of which are of a dull light colour. The tail is short, the legs strong and of a pale green. Its beak is long and pointed, which the female, when sitting on her nest, turns upwards to protect herself and young from the attacks of birds of prey, that have often been impaled thereon. The nest is composed of sticks and leaves in which four or six greenish eggs are deposited. The bittern feeds upon aquatic animals, lizards, frogs, and insects it finds in swamps and marshy places. It is a solitary bird, and seldom flies by day, but usually at dusk. During the night it makes a hollow booming noise, which is not very musical. The supposition that the bittern of Scripture may be either the porcupine, or sea urchin, is without clear proof, or, at least, rests on a very slender foundation.

QUESTIONS.

Where is the bittern to be found ?

What are its size and the peculiarities of its structure ?

How does this bird protect itself and its young ?

Of what is the nest composed ?

On what does the bittern subsist ?

When and what is the noise made by it ?

Bible References.—Isaiah xiv. 23 ; xxxiv. 11 ; Zephaniah ii. 14.

ANECDOTE.—Mr. Markwick once shot a bittern in frosty weather ; it fell on the ice, which was just strong enough to support the dogs, and they immediately rushed forward to attack it ; but being only

wounded it defended itself so vigorously, that the dogs were compelled to leave it, till it was fired at a second time and killed.

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BOAR.—(*See* SWINE.)

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BULL.

THIS ruminant quadruped belongs to the genus *Bos*, and is the male relation of the different varieties of the ox family, which we shall describe in their proper place. The bodies of many bulls are thick and heavy, and the tails long. The horns of one kind are bent down obliquely forward, and being of great length these animals are known as “long-horned bulls.” From the top of the head to the root of the tail the back is almost straight; the chest is large and well developed, but their bodies are not so massive as those of some other kinds. Another variety of this animal includes “short-horned bulls.” The appendages on their crowns are little more than rudimentary horns. The horns of English bulls project sideways in a straight line, which is not the case with the common ox. Bulls are often of a savage and vindictive nature, and dangerous to approach, particularly if a red flag, or garment, be waved before them; but they are susceptible to kindness, and not wanting in intelligence.

QUESTIONS.

To what genus and family does the bull belong ?
 What are the peculiarities of the structure of some
 of them ?
 From what do some of them derive their names ?
 What is their general disposition or temper, and
 by what are they easily excited to anger ?
 To what are they susceptible ?

Bible References.—Psalm xxii. 12 ; l. 13 ; lxxviii.
 30 ; Jeremiah l. 11 ; Hebrews ix. 13 ; x. 4.

ANECDOTE.—A gentleman, near Laggan, had a lead-coloured bull which grazed with the cows in the open meadows. A boy was employed to prevent them from trespassing on the adjoining fields of corn. The boy, however, often slept at his post, and the animals as frequently entered the forbidden ground. For his neglect the boy was severely chastised by his master. The boy, enraged at this, kept a long switch, and with it revenged himself with an unsparing hand if the animals attempted to exceed their boundary. The bull seemed to comprehend the cause of their punishment ; for whenever the cows were likely to cross the limits, or in any way trespass, he would strike the cows with his powerful forehead and drive them back. He set them a good example, as he never afterwards entered the forbidden bounds. "This fine animal's vigilance could only proceed from a desire to keep his companions from punishment, not from any

distinction of property ;” and yet in what he did the bull showed much intelligence, and considerate feeling towards his own kind.

BULLOCK.—(See Ox.)

Bible References.—Numbers xxix. 23 ; 1 Chronicles xxix. 21 ; Psalm li. 19 ; lxvi. 15 ; Hosea xii. 11.

CALF.

THE young of the COW, *which see*.

Bible References.—Genesis xviii. 7 ; Exodus xxxii. 4 ; Leviticus ix. 2 ; Deuteronomy ix. 16 ; Isaiah xi. 6 ; Luke xv. 23 ; Acts vii. 41 ; Revelations iv. 7.

CAMEL.

THIS ruminating animal being the counterpart of the dromedary (*which see*), we need only make a few general remarks concerning it. As it is so well known to the Arabians for its docile disposition and great utility, it is regarded by them as a sacred animal. Its milk makes a part of their nourishment, and its flesh, when young, is much relished by them. It sheds its hair once a year ; of this the Arabians make garments. When the people of the desert

fear an invasion by an enemy their camels serve them for flight, which is often very rapid, as they have been known to travel a hundred miles a day. By means of this animal the trade of Turkey, Persia, Barbary, Egypt, and Arabia is principally carried on. It is easily instructed in the methods of taking up and supporting its burthen, as well as in the plan adopted



THE CAMEL.

to ease it of its load. With the same facilities possessed by the dromedary, it can at pleasure supply itself with water and solid food when crossing the sandy deserts of its native land.

QUESTIONS.

In what respects is the camel well known ?

What are its special uses to the Arabians ?

What is the nature of the instruction it readily receives ?

Bible References.—Genesis xii. 16 ; Exodus ix. 3 ; Judges vi. 5 ; 1 Samuel xv. 3 ; Zechariah xiv. 15 ; Matthew xix. 24.

**CANKERWORM.**

ALTHOUGH natural historians have given no specific information of this form of life under the above name, it is supposed to have belonged to an army of destroying insects by which the land of Judea was laid waste. Some writers are of opinion that it was of the locust tribe. Others think it signifies the young locust in the last stage of its insect changes. In the Book of Jeremiah it is called the caterpillar. It is, however, uncertain what particular insect is meant. Caterpillars and locusts live on herbage and vegetation.

QUESTIONS.

What is the cankerworm mentioned in the Bible supposed to be ?

In what country was it known ?

What were the effects produced by it ?

What is the food of the insects mentioned and referred to in our Bible quotations ?

Bible References.—Joel i. 4 ; ii. 25 ; Jeremiah li. 27 ; Nahum iii. 15, 16.

CATERPILLAR.

OF this creature there are many different kinds, all of them being the grubs, or larvæ, from the eggs of butterflies and moths, belonging to the Lepidopterous order of insects. The largest of these insects are not more than about two inches long, some are very small. They are furnished with hooked feet and a curiously formed structural apparatus by which to secure their food. They live on the leaves of plants, flowers, roots, buds and seeds. The grubs of many of the moths attack woollens and furs, and so damage them that they become useless. They are very voracious, and it is said the cabbage caterpillar will eat four times its own weight of food every day. As moths and butterflies lay four or five hundred eggs in a season they increase with great rapidity, and were they not held in check by our bird scavengers, and by other means, the devastation they would cause to produce could never be estimated. They were used as agents to execute God's judgments on those who were rebellious.

QUESTIONS

From what is the caterpillar produced ?

What is their size, and with what are caterpillars furnished ?

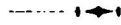
Of what does their food consist, and how much do some of them eat in a day ?

Why is it they increase so rapidly in numbers ?

What are the agencies employed to keep them in check ?

What would be the result to flowers, vegetation, &c., if it were not so? And for what purpose have they been employed?

Bible References.—1 Kings viii. 37 ; 2 Chronicles vi. 28 ; Psalm cv. 34 ; Jeremiah li. 14 ; Joel i. 2, 25.



CATTLE.

THIS word has reference to the numerous varieties of bovine animals, as oxen, cows, and bulls (*which see*). It, however, comprises all beasts of pasture that are used for labour, or for food by man, in which may be included horses, asses, camels, sheep and goats (*which see*).

QUESTIONS.

What are the different kinds of animals included in the word cattle?

What animals does this collective term more especially refer to?

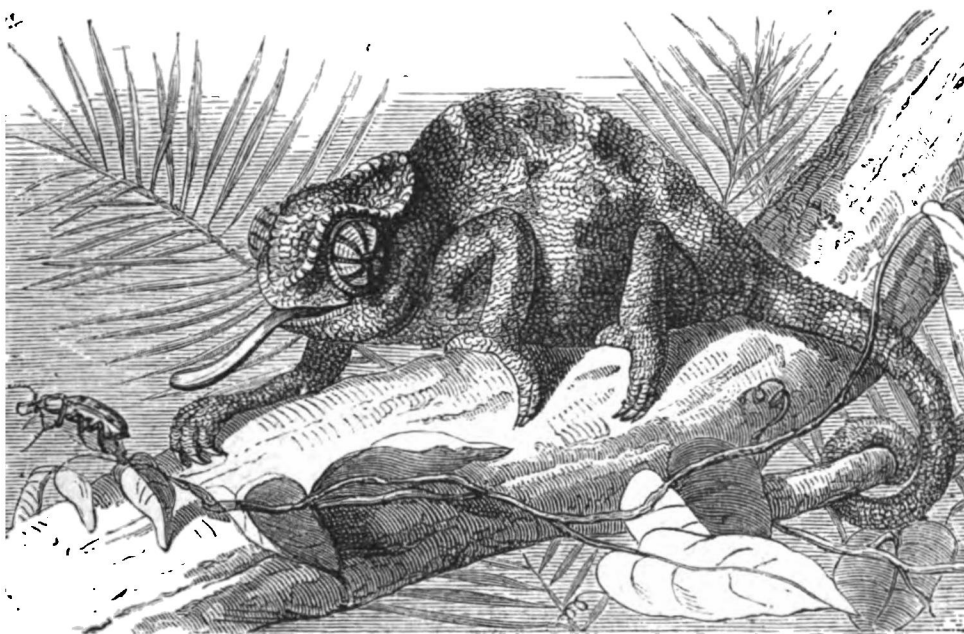
Bible References.—Genesis i. 25 ; xiii. 2 ; xxxiv. 5 ; Exodus ix. 4, 20 ; Numbers iii. 41 ; Joshua viii. 2 ; Job xxxvi. 33 ; Psalm l. 10 ; Jonah iv. 11 ; John iv. 12.

ANECDOTE.—In “Instinct Displayed,” we read that Highland cattle are so kindly treated that a mutual affection exists between them and their owners, who talk and sing to them as if they were members of the family. They acquire a love for music which, when given either vocally or by some

instrument, calms the irritation, especially on cows, produced by heat and insects on a summer's evening, when without it these animals could not be milked in safety. This is a fact so well established, that a girl is not thought fit for a dairymaid unless she can sing; and if it so happens, in some rare instance, that one who has no power of voice is selected for this employment, she takes another with her who can sing, to assist in milking, and to lull the fold with the wonted strains that are peculiar to this avocation.



CHAMELEON.



IT is considered by no means certain that the chameleon known to modern historians is the animal referred to in Leviticus xi. 30, and reckoned unclean by the

ceremonial law. Some Greek translators have taken it for some animal of immense strength. Others think the Scripture chameleon was a kind of Arabian lizard. Be this as it may, the animal known to us by this name has a very singular appearance. Its tongue is nearly as long as its body, and when feeding the animal darts it forward to secure the insects on which it preys. Its tail is long, and curves downwards. It is said that it has the power to change its colours at will, and that it can look in opposite directions at the same time.

QUESTIONS.

What is the chameleon supposed to be?

What is this animal, as known to us, capable of doing?

Bible Reference.—Leviticus xi. 30.

CHAMOIS.

THIS animal belongs to a well-known species of antelope, and is found in Western Europe. It is about three feet in length, and is two feet high. The body is covered with long hair. The tail is short and black, and the horns are seven inches long. It is usually seen in small families inhabiting mountainous regions. Its hearing, sight, and smell are so acute as to render the capture of it a difficult matter to the hunter. It feeds on mountain herbs, flowers, and tender shoots. The flesh is good, and the skin

is pliable; the latter, when dressed, is known as chamois leather. By the Mosaic law it was a clean animal.

QUESTIONS.

To what genus does the chamois belong?

Where is it found?

What are the characteristics of its structure?

Which of its senses are very acute?

On what does it feed?

Why is it difficult to capture?

Of what uses are some parts of its body after death?

Bible Reference.—Deuteronomy xiv. 5.



CHICKENS.

THIS word is the collective name of the young of the common fowl, which, unlike many other kinds of birds, are covered all over their bodies with a sort of down, or embryo feathers, when hatched. It is a curious fact in natural history that the offspring of all those birds who build their nests in hedges, trees, or elevated positions, are all hatched naked, and have to be fed by the parent birds for two or three weeks, or until they are fledged, before they can obtain their own living. After chickens have been liberated from their shelly prisons, their little beaks soon harden to enable them at once to commence an active life by looking for, and picking up, food for their sustenance. Chickens are objects of the most tender

care, affection, and anxious solicitude of the hen mother, who beneath her wings shelters, warms, and protects her progeny from danger.

QUESTIONS.

To what animals does the name chickens refer?

What do the bodies of chickens present as soon as they leave their egg prisons?

Where are those birds hatched that come from the shell with only a skin covering to their bodies?

How are they supplied with food?

How soon can chickens secure their own food?

What does the hen mother show towards her offspring?

Bible Reference.—Matthew xxiii. 37.

COCK.

THE male of fowls, especially of farmyard poultry.
—(See FOWL.)

COCKATRICE.

THIS creature is supposed by some to be the basilisk, a kind of lizard belonging to the family Iguanidæ. Although the name indicates a fabulous origin, the cockatrice of Scripture is no doubt a real animal, supposed to be of the viper kind, or that of the hooded snake, one of the most venomous of serpents, whose

bite is incurable. This serpent, however, was unknown in Judea and the adjacent countries at the time when the Scriptures referred to were written. The cockatrice lays her eggs in the sand, where she leaves them to be hatched by the heat of the sun.

QUESTIONS.

What is the cockatrice by some thought to be ?

What does its name indicate ?

What is the opinion entertained of the cockatrice of Scripture ?

What reason may be assigned for not believing it to be the hooded snake ?

Where does the cockatrice lay its eggs, and how are they hatched ?

Bible References.—Isaiah xi. 8 ; xiv. 29 ; lix. 5 ; Jeremiah viii. 17.



COLT.

A COLT is a young horse, appropriately of the male kind—(see HORSE). The word is often applied to a young, foolish, or inexperienced person. It is sometimes said that such an one “frisks, riots, or frolics like a colt.”

QUESTIONS.

What is a colt ?

To what character of persons is the word sometimes applied ?

Bible References.—Genesis xxxii. 15 ; xlix. 11 ;

Judges x. 4 ; xii. 14 ; Job xi. 12 ; Zechariah ix. 9 ;
Matthew xxi. 2 ; Luke xix. 35.

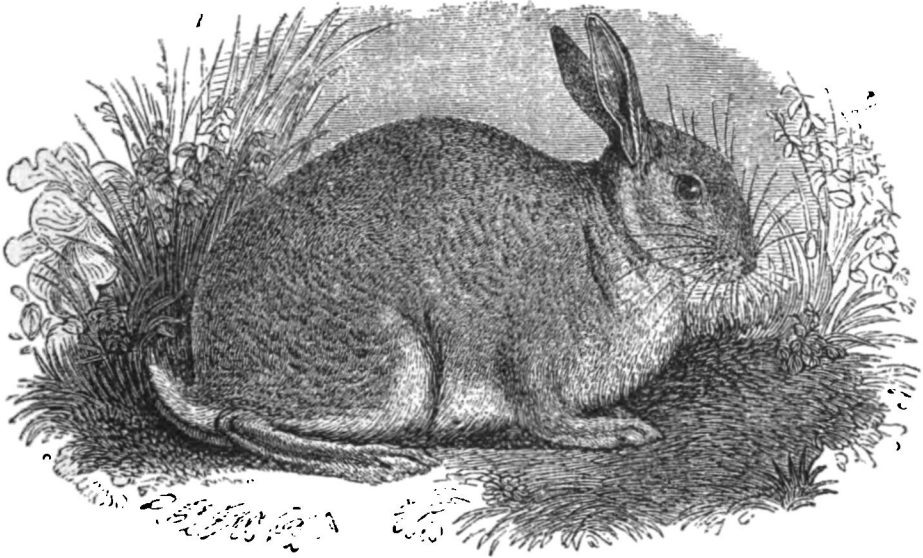
ANECDOTE.—A pony mare and her colt grazed in a field adjoining the Severn. One day the pony made its appearance before the gentleman's house to whom she belonged, and, by clattering with her feet and other gestures, drew his attention. A person being sent out, she immediately started off, and being followed, proceeded through various gates all broken open. She then came to the field, through which she passed directly for a spot in the river, over which she hung with a mournful look, and there the colt was found drowned.



CONEY (RABBIT).

THIS is a small rabbit-like animal known as the "rock rabbit," or hyrax. It has been classed with the genus *Lepus*, but some historians include it in the family of pachydermatous quadrupeds. These animals live in small companies, and their habitats are the hollows of rocks in the mountainous districts of Syria, Arabia, and Abyssinia. They leap with great agility, although their walking pace is not very quick. The coney, or hyrax, differs from the rabbit, inasmuch that the muzzle and ears are very short, and that the tail is wanting, or has only a small tubercle in its place. They are clean animals when domesticated ; docile, lively, and active, but very inoffensive creatures, and often become the victims of beasts and birds of prey, who would soon exterminate them

were it not that the conies seldom, if ever, go far away from the caves and crevices of the rocks into which they run for shelter and safety. They live



THE RABBIT.

on grain, fruit, roots, and young shoots of shrubs, herbs, and grass. Wilson states that he has seen the coney, or hyrax, in the Holy Land.

QUESTIONS.

- What is the coney, and where found ?
- What animal does it resemble ?
- What is the temper or disposition of this animal ?
- To what dangers is it specially exposed ?
- What does it do when thus threatened ?
- On what does it feed ?
- In what class do some historians include it ?

Bible References.—Leviticus xi. 5 ; Deuteronomy xiv. 7 ; Psalm civ. 18 ; Proverbs xxx. 26.

ANECDOTE.—The Zulus say that the reason why the animal called the hyrax has no tail wherewith to

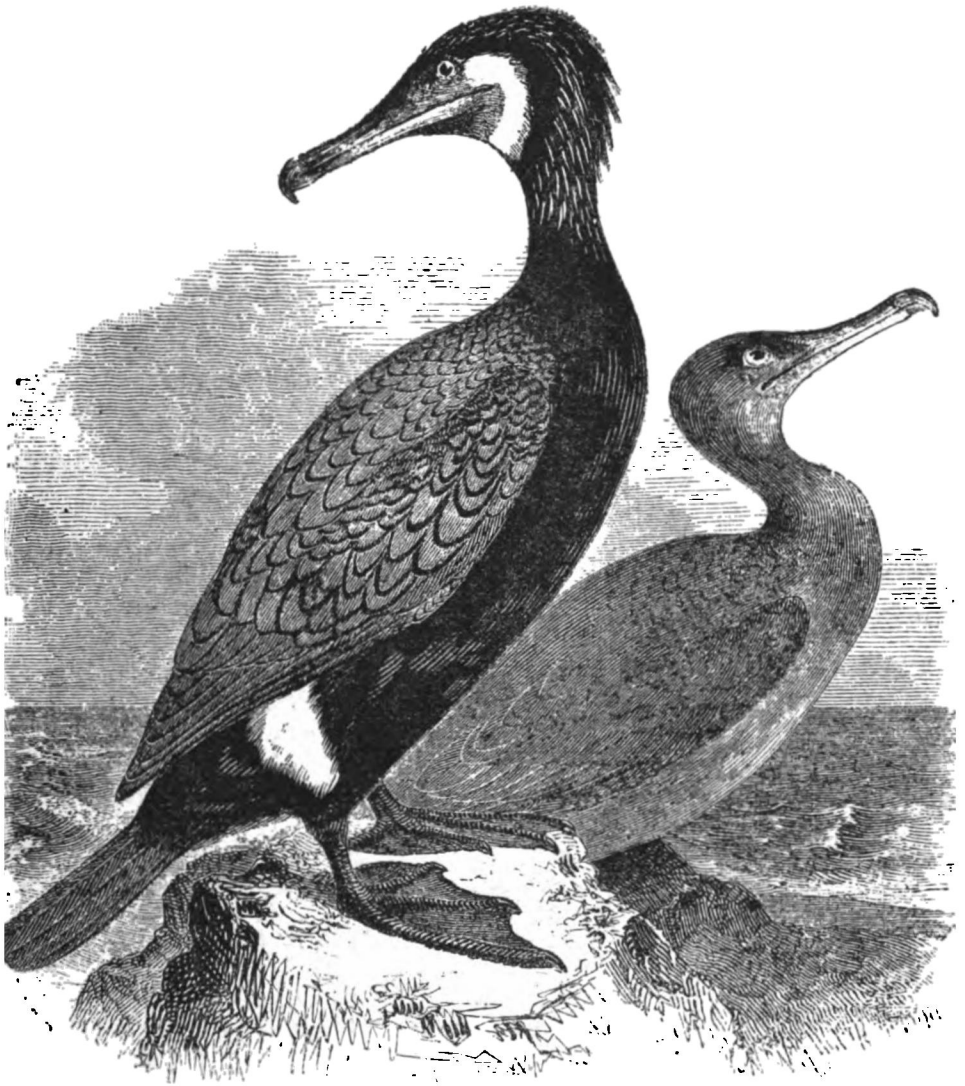
drive away the flies is, that on the day when tails were distributed the hyrax, fearing it was going to rain, refused to go out of his lair, and begged the other animals to bring him his tail to save him the trouble of going. So that the proverb to this day addressed to a Zulu, who from laziness asks another to do, or bring something, for him, is—"The hyrax went without a tail because he sent for it."

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C O R M O R A N T.

THIS bird is found in almost every climate, and is usually seen in large flocks on the inaccessible parts of rocks overhanging the sea, where they lay eggs of a greenish colour, and about the size of those of a goose, in nests of withered sea-weeds, sticks and grasses. This bird is the most voracious of the web-footed family, and preys much on fish. The black cormorant, found in England, weighs about seven pounds, and is from two to three feet long. In extent of wings it measures nearly five feet. The Chinese train cormorants to fish in their rivers and to bring their prey to their owners. To prevent these feathered fishers from swallowing the fish they capture, a bone or metal ring is placed on the neck of each of them. They are great plunderers, unrelenting tyrants, and insatiate gluttons. They, however, fill the place, and follow the instincts, given and assigned to them by Nature.

The Bible represents the cormorant as an emblem of ruin and desolation.



THE CORMORANT.

QUESTIONS.

Where is the cormorant found ?

Of what is its nest made, and what are the colour and size of its eggs ?

On what does it feed ?

Describe the size and extent of its wings.

To what uses do the Chinese put this bird ?

What is its general character ?

Bible References.—Leviticus xi. 17 ; Deuteronomy xiv. 17 ; Isaiah xxxiv. 11 ; Zephaniah ii. 14.

ANECDOTE.—It is stated in “Anecdotes of the Animal Kingdom,” that a gentleman visited P. Neill, Esq., of Edinburgh, in whose garden several different kinds of animals were kept ; amongst them were a cormorant and solan-goose. The visitor was anxious to see the last-mentioned birds feed. A servant threw a haddock into the water, which was first seized by the solan-goose. When it was half down its throat the cormorant laid hold of the tail of the fish, and by means of the crooked point of his bill, fairly pulled it up the goose’s throat, and putting it into the water, with the quickness of lightning, turned it and swallowed it in an instant.



C O W.

AN animal belonging to the bovine race of the class Mammalia, which furnishes, in great abundance, milk, food, and profit to the farmer.—(See OX.)

QUESTIONS.

To what class and race does the cow belong?
 In what does much of its value consist?

Bible References.—Leviticus xxii. 2; Numbers xviii. 17; Job xxi. 10; Isaiah vii. 21; xi. 7; Amos iv. 3.

ANECDOTE.—When in Hampshire, on our humanity mission of kindness to animals, we visited a farm where a large number of cows were grazing in a field. The cowherd was noted for his great kindness to, and the power he had over, those animals he had under his care. To prove this he said that he not only had a name for each cow, but that all of them would answer, in some way or other, when he mentioned their names. He did so one by one, when each animal raised its head and looked towards the cowman, whose voice they all knew. "Poll," he said to one of them, "come here." She obeyed at once. He then said to her, "Kiss me." She did so in her way by placing her head on one of his shoulders, and her lips near the man's cheek. Here was a proof of what kindness can do.



C R A N E.

THE crane is found all over the north of Europe and Asia. In the winter it visits Syria, India, and Egypt. These birds were wont, at one time, to assemble in the marshes and fens of England.

There are the Siberian crane, and the brown crane of America. The common crane is five feet long, and about ten pounds in weight. The bill measures four inches. All cranes are migratory, fly high in the air, and often take long journeys. They live on frogs, herbs, seeds, slugs and worms. They lay two eggs each, and are very affectionate to their young.

QUESTIONS.

Where is the crane found ?

What is the size of the common crane, and how much does it weigh ?

What are its powers of flight ?

On what does it feed ?

What do cranes show to their young ?

Bible References.—Isaiah xxxviii. 14 ; Jeremiah viii. 7.

ANECDOTE.—Some years ago a gentleman in England had two cranes. One of them died, in consequence of which the other became disconsolate, weak, and emaciated. The owner placed a looking-glass in the aviary, in which the crane could see his own image reflected. Thinking it was his lost mate which had returned to him, he kept close to the glass, plumed his feathers, and showed every sign of happiness. By this simple scheme the crane recovered health and spirits, passed nearly all his time before the mirror, lived many years longer, but at length died from an accidental injury.





THE CRANE.

C U C K O O .

THIS annual visitor to our country is well known for its peculiar note, and its singular habit of laying its eggs in the nests of some other birds. It is an insect-feeder, and is therefore useful in the economy of Nature. It was considered unclean, but some historians have some doubt as to the modern cuckoo being that of Scripture. The common opinion is that it was the sea-mew or gull. It seems, however, improbable, as the cuckoo and the sea-mew differ so, not only in size, but considerably in their structure, habits and food.

QUESTIONS.

What is the modern cuckoo ?

What do some suppose the cuckoo of Scripture refers to ?

Bible Reference.—Leviticus xi. 16.



D A M .

THIS word has various significations, but in reference to animals it means a female parent, chiefly applicable to quadrupeds, especially to those of the order Ruminantia, class Mammalia.

QUESTIONS.

What are the different meanings of the word dam, and to what animal is it applied ?

To what order and class do they belong ?

Bible References.—Exodus xxii. 30 ; Leviticus xxii. 27 ; Deuteronomy xxii. 6, 7.

DEER, FALLOW.

THERE are about twenty different kinds of deer, but the fallow deer is the animal referred to in the Scriptures, and was a clean animal by the Levitical law. It is a ruminating animal, and belongs to the family Bovidæ. The venison of this deer is rich and delicate, and the skin very soft and durable. Its horns are manufactured into handles for knives and forks, &c., and from the shavings of them ammonia (commonly known as hartshorn) is obtained. The fallow deer is represented in sculpture from Nineveh. Some have supposed the fallow deer of Scripture to be the buffalo of modern times.

QUESTIONS.

- How many kinds of deer are known ?
- What kind of deer is referred to in the Bible ?
- To what family does it belong ?
- What are its uses when dead ?
- In what country has it been represented in sculpture ?
- What do some suppose the fallow deer of Scripture to be ?

Bible References.—Deuteronomy xiv. 5 ; 1 Kings iv. 23.

ANECDOTE.—It is said that, at Wonersh, the seat of Lord Grantley, a fawn was drinking in the lake, when one of the swans flew upon it, pulled it into the water, and it was there drowned. This act was noticed by the deer in the park. A few days afterwards this swan, happening to be on land, was surrounded and attacked by the whole herd, and presently killed. Before this time they were never known to molest the swans.

DOG.

THIS animal is very frequently mentioned in the Scriptures, and is referred to for the purpose of illustrating many important points touched upon by the sacred writers. The varieties of this animal are very numerous, but they all belong to the class Mammalia, and to the sub-order Carnivora. Some breeds are very large, and when standing upright on their hind-legs their fore-paws reach from five to eight feet high ; while others are so small that, when full grown, they can pass through the stirrup of a riding saddle. Excepting some of the islands of the Pacific Ocean, they are found in every part of the world, not only in a wild state, but also domesticated, and are used for very many purposes. It is said that their internal organization more closely resembles that of man than that of any other known quadruped. In eating they cannot move their jaws sideways, but swallow their food in lumps, and they

perspire through their tongues, which they protrude when much heated. The dog is courageous, intelligent, and affectionate, and so faithful that he will follow his master wherever he goes. He is swift of foot, and his powers of endurance are considerable. By the Jewish law the dog was held in contempt, and considered unclean. In some countries dogs were offered in sacrifice, and worshipped in Egypt.

QUESTIONS.

In what writings is the dog often referred to, and for what purposes ?

In what class and order is the dog included ?

How much do dogs vary in size ?

Where are they found ?

What are the peculiarities of their structure ?

What are the mental and moral qualities of most dogs ?

What are the dog's physical capabilities ?

How was it estimated by Jewish law, &c. ?

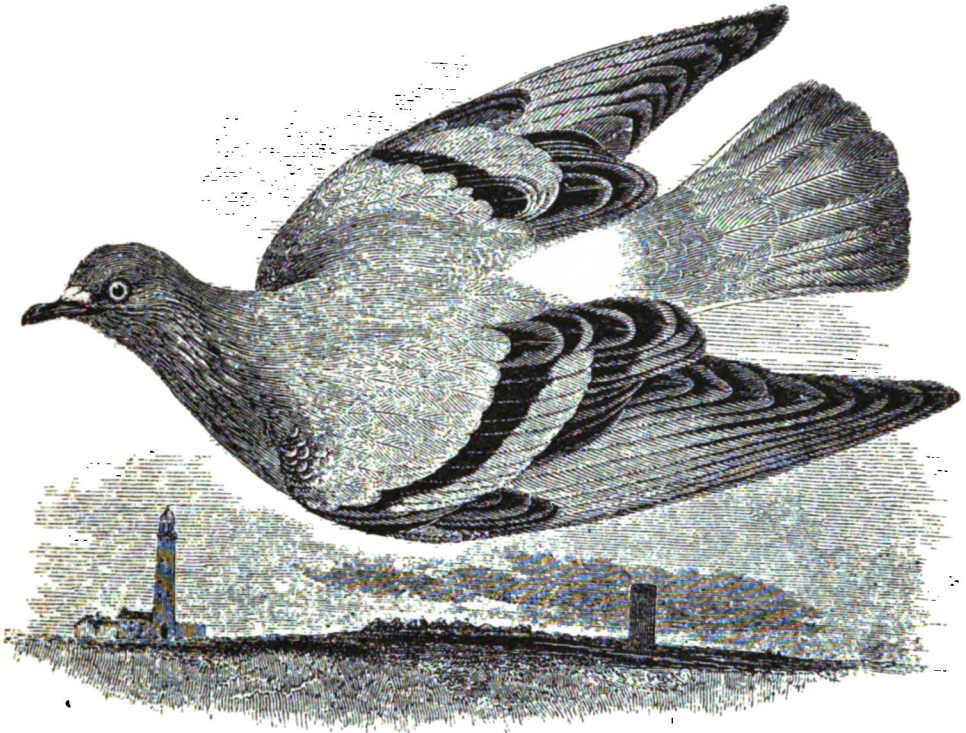
Bible References.—Exodus xi. 7 ; Deuteronomy xxiii. 18 ; 1 Samuel xvii. 43 ; xxiv. 14 ; 2 Kings viii. 13 ; Psalm xxii. 20 ; Ecclesiastes ix. 4 ; Matthew xv. 27 ; Mark vii. 27 ; Luke xvi. 21.

ANECDOTE.—The following information was given to the author by a gentleman who knew the dog to which we are about to refer. It appears that in one of the cities in the west of England, a certain tradesman very regularly attended one of the churches, and was in the habit of taking his dog Pincher with him,

which usually lay down outside the pew-door opening into the middle aisle. Pincher was evidently a quiet attendant, and an observer of what was going on. He never gave any cause of complaint, until one Sunday morning, when a strange clergyman entered the pulpit to plead the cause of some charitable object. He had no sooner begun his discourse than Pincher growled an objection to the preacher proceeding any further in his ministerial duty. Whether he regarded him as an intruder usurping the honour and right of the vicar, who usually occupied the pulpit, or whether Pincher did not like his appearance, or the tone of the stranger's voice, we cannot tell; but notwithstanding the many "be quiet, Pincher," uttered by his master, the dog not only growled, but began to bark. He was therefore carried out, put into the street, and the church-door closed upon him. No coaxing, no persuasion on the part of his owner, could ever induce Pincher to enter the church afterwards. One Sunday morning, seeing a mechanic he knew going to the Wesleyan chapel, the dog followed him to the seat the man occupied in the gallery, under which Pincher remained, never in any way disturbing the congregation. This he continued to do for five years, when unfortunately his life terminated by a cab running over him, breaking two of his legs.



DOVE.



THE ROCK-DOVE.

THIS bird belongs to the pigeon family, which is divided into a great number of different kinds, both wild and tame. The doves are known as ring-doves, the largest of the pigeon tribe ; stock-doves, or wild pigeons ; rock-doves, supposed to be the parent stock ; and turtle-doves, often referred to in the Bible, of which the following description may be taken in general points as applying to the other species of doves. The turtle-dove is about twelve inches long, eyes yellow, encompassed with a crimson circle. The bill is brown, and the top of the head is of an ash-grey and olive colour. It lives in thick

woods, and builds its nest in the highest trees, in which it seldom deposits more than two eggs. It is a migratory bird, and usually reaches this country late in the spring, and departs in August, but during the interval it lays its eggs and rears its young. When cooing it makes a gentle noise, while the endearing habits and show of affection of the male and female towards each other, are so remarkable that these birds are considered to be perfect emblems of connubial bliss. But few birds are more frequently mentioned in the sacred writings than the dove.

QUESTIONS.

How many kinds of doves are included in the pigeon family ?

What description can you give of the structure of the turtle-dove ?

What are its habits, and when does it rear its young ?

What are the moral qualities of this bird ?

Bible References.—Genesis viii. 8, 9 ; Leviticus xiv. 22 ; Psalm lxxviii. 13 ; Isaiah lix. 11 ; lx. 8.

Turtle-dove.—Leviticus i. 14 ; xii. 6, 8 ; Psalm lxxiv. 19 ; Solomon Songs ii. 12 ; Jeremiah viii. 7 ; Matthew iii. 16 ; x. 16 ; Luke ii. 24.

ANECDOTE.—The following information has been given to us by a lady who can vouch for its accuracy. A gentleman residing in the south of England, and near the sea, had given to him, by the captain of an Austrian ship, a very young turtle-dove, which was to be presented to his little daughter at home, who was

a great lover of birds. As the dove grew in size it became exceedingly interesting to all the members of the family. It was, however, devotedly attached to the father, on whose knee it would often perch, and there remain a long time. That it never liked being separated from him was evident from the fact that, whenever he put on his hat and coat, and made other preparations for a walk, the dove would fly on to his shoulder, on which it remained during a walk of nearly two miles. It would then make its way home, there to await the return of the father. As soon as his voice was heard the bird would hasten to the door to meet him, then follow behind, cooing his delight, bobbing its beautiful head up and down, and at the same time would spread out its tail feathers, by which every now and then it would sweep the floor of the passage and the room, as if to give as strong a proof as it could of the pleasure it felt in seeing him back, and of its hearty, sincere, and affectionate welcome to the master it loved so well.



DRAGON.

THIS name is often used in the works of writers of fiction, who have represented this animal as a kind of monster whose body is made up of the feet of a lion, the long thick tail of a serpent, and a throat from which issue flames of fire, and also parts of the bodies of other animals. One modern natural historian refers to a dragon (*Draco Fimbriates*) which he describes as a sort of sand lizard, not more than a

foot long, with a small head, a long neck, underneath which is a triple pouch, a tail of great length, whose four legs terminate with long sharp claws, and as having two wings, which, as well as other parts of the body, are beautifully marked. There is, however, no evidence to show that the above are the dragons mentioned in the Scriptures.

The author of "Hours with the Bible," on page 339, says, "the crocodile='the dragon,' is stamped on Roman-Egyptian coins as a symbol of the country." The author of the "Biblical Cyclopædia," referring to Psalm lxxiv. 13, and Ezekiel xxix. 3, says, "In the first two of these passages, it seems to refer to the crocodile, an emblem of Egypt, as is apparent from the second passage" (*which see*). The word dragon used in the Revelations no doubt has reference to the spirit of evil.

QUESTIONS.

What is the dragon of ancient writers of fiction?
Describe the dragon of modern natural historians, &c.

What is probably the dragon of Holy Writ?

Bible References.—Deuteronomy xxxii. 33; Psalm lxxiv. 13; Job xxx. 29; Isaiah xlii. 22; xliii. 20; Jeremiah ix. 11; Ezekiel xxix. 3; Malachi i. 3.



DROMEDARY.



THIS animal is closely allied to the camel, but in external structure they are distinguished from each other by the dromedary having only one hump on the back, while the other (the camel) has two. The dromedary is found in Arabia, Africa, and India. It measures about six feet and a half from the fore-feet to the top of the head. It is, like the camel, furnished with a reservoir for water, from which it obtains supplies of it in its long journeys across arid deserts. It has also a store of digestible food, which serves it for some time. When this has passed away it can draw sustenance from the fat

found in the hump. This animal is swift of foot, has great powers of endurance, is patient, laborious, and of great value to the natives.

QUESTIONS.

To what animal is the dromedary related ?

In what part of its external structure does it differ from the camel ?

Where is the dromedary found ?

How is it supplied with water and food in its journeys through the deserts ?

What are its physical properties and moral qualities ?

Bible References.—1 Kings iv. 28 ; Jeremiah ii. 23 ; Esther viii. 10 ; Isaiah lx. 6.



EAGLE.

THIS bird is referred to in the Bible as an example of forethought, tender care, and affection for its young. One of its habits represents the regard the Divine Being shows towards his own people ; and its rapacity illustrates the punishment which God threatened to inflict upon sinful and disobedient men. Such are the characteristics of this bird, that as the lion is denominated the “king of beasts,” so the eagle may be called the “king of the feathered race.” The eagle belongs to the class Aves, order Accipitres, which include all raptorial or carnivorous



THE GOLDEN EAGLE.

birds, of which there are many different kinds. The eagle family comprises the white-headed sea-eagle, white-tailed eagle, cheela eagle, superb eagle, crowned eagle, vulturine eagle, wedged-tailed eagle, royal eagle, ringed-tailed eagle, imperial eagle, and the golden eagle. It is highly probable that the last-mentioned eagle is the one referred to more particularly in the Scriptures. It is found in the mountainous parts of Europe and Asia, and also in Great Britain. The body measures about three feet six inches in length, and weighs from twelve to fifteen pounds. Its feathers are beautifully coloured, hence its name. The eyes are strong enough to bear the full glare of the sun, and on this account it soars higher than any other bird. Its beak is large and strong, the feet are covered with scales, and armed with sharp, formidable claws. The nest is large, and composed of rushes, heath, and twigs, and is built on the top of a high rock. The female lays two or three eggs. When the young first learn to fly they are pushed out of the nest, followed, however, by the parents, who fly just underneath the fledglings in order to catch them on their wings in the event of any failure in their first attempts at flight, and bear them back in safety to their nest. Many eagles live to a great age, some to a hundred years. By the Levitical law the eagle is considered unclean.

QUESTIONS.

To what class and order of animals does the eagle belong?

How many kinds of eagles are there?

What are the physical characteristics of the golden eagle?

What kind of nest does it make?

Where does it place it?

How do eagles teach their young to fly?

To what age have they been known to live?

Bible References.—Exodus xix. 4; Leviticus xi. 13; Deuteronomy xxviii. 49; xxxii. 11; Job xxxix. 27; Psalm ciii. 5; Proverbs xxiii. 5; Isaiah xl. 31; Jeremiah xlix. 16; Matthew xxiv. 28.

ANECDOTE.—It is stated, in “Anecdotes of the Animal Kingdom,” that there was a young golden eagle, kept for some time at Thrampton Hall, the seat of J. E. Westcombe, Esq. It was very fierce and in fine feather. Having obtained its liberty, it flew to a gate some distance from its place of confinement, where a public path came through. A foot passenger, who was a stranger to the place, and consequently unacquainted with the bird, wishing to pass through, the bird seemed determined to dispute the passage, and offered battle; the man, in self-defence, struck the bird over the crown, and caused almost immediate death by fracturing the skull.



EWE.

THE female of the sheep kind.—(See SHEEP.)

Bible References.—Genesis xxi. 28; xxxii. 14; 2 Samuel xii. 3; Psalm lxxviii. 71.

FALLOW DEER.—(See DEER.)

FATLINGS.

LAMBS, kids, or other young animals fattened for slaughter ; fat animals.

Bible References.—1 Samuel xv. 9 ; 2 Samuel vi. 13 ; Psalm lxvi. 15 ; Ezekiel xxxix. 18 ; Matthew xxii. 4.

FERRET.

THIS is one of the animals the Israelites were forbidden to eat on account of its being included in the list of those unclean. It is found in Europe and Africa, and measures about thirteen inches in the length of the body, which is so lithe that it can wriggle itself through a very small aperture when in search of its prey, such as rats, rabbits, or mice. It is not only a carnivorous animal, but very blood-thirsty. The head is small, and the eyes are red. It is fierce, vindictive and cruel, and when irritated will emit an offensive fluid. It, however, has its use in killing rats infesting corn-ricks, to which they are often destructive. Its fur is valued as trimmings for ladies' cloaks. Some suppose the ferret referred to in our Bible quotation was an animal of the lizard

species. This, however, is improbable, as the lizard is separately mentioned in the same verse as ferret is.

QUESTIONS.

In what list of animals is the ferret included ?

Where is it found ?

Of what size is it, and on what does it feed ?

What are its characteristics ?

Of what special use is it ?

Bible Reference.—Leviticus xi. 30.

ANECDOTE.—A remarkable circumstance occurred during 1887, with which a ferret was closely identified. One of the gamekeepers in the employment of a well-known nobleman went out one day into the park surrounding the mansion, for the purpose of securing some rabbits. The man took with him a ferret to assist him in the accomplishment of his object. The little quadruped, however, liberated itself by some means or other from its custodian, and immediately ran to one of the old large oak-trees (with which the park abounds) and ran up the bole of it on to one of the branches. It was followed by the gamekeeper, who had just reached the top of the trunk, when placing his feet upon what he thought was solid wood, the bark gave way and he was precipitated a distance of eight feet down the hollow of the tree, which had been caused by old age and decay. The gamekeeper was literally imprisoned so securely that he was unable to extricate himself. He shouted for help for an hour and a half before assistance arrived. Two or three men were at length attracted thither by

the man's cries. They at once procured a ladder, by which they mounted the tree, then lowered a rope to the keeper, who fastened it round his body. After great difficulty they succeeded in liberating the nearly exhausted man. The ferret was nowhere to be seen, and, perhaps, not to blame, although it had been unconsciously the cause of so much fright and trouble.

FIRSTLINGS.

THIS word refers to the first produce of oxen, sheep, herds of cattle, and even of human beings.

QUESTION.

What are firstlings as mentioned in the Scriptures ?

Bible References.—Genesis iv. 4 ; Numbers iii. 41 ; Deuteronomy xii. 6, 17 ; xiv. 23 ; Nehemiah x. 36.

FISH.

THIS word comprehends the numerous species of the lowest order of vertebrated animals, found in the fresh and salt waters of every part of the world. It is supposed there are more varieties of fish than of any other known tribe of animals. They vary in size, from the huge whale of eighty or ninety feet long, called "the leviathan of the deep," down to the

whitebait and stickleback, which measure only an inch or two in length. Fishes breathe through gills, and in most cases are covered with scales. As well as being furnished with fins, which are used to assist them in steering their course through the water, they have an air-bladder which enables them to float on and in the water, and to rise and fall according to their pleasure. Many kinds of them are very voracious and consume great numbers of the "small fry." Crabs, oysters, and crayfish, &c., have a thick, hard shell covering, to protect them against the attacks of larger fish. These animals of the waters are a great treasure of usefulness, by affording wholesome food to the inhabitants of every part of the globe. Some kinds of fish show great affection for their young, and are not devoid of intelligence.

QUESTIONS.

What does the word fish comprise ?

What can be said of their varieties and sizes ?

What are some of the peculiarities of their structure ?

What do some kinds of fish feed upon ?

How are other species of fish protected ?

What are the benefits derived from fish ?

What moral qualities do fish exhibit ?

Bible References.—Genesis i. 26 ; Deuteronomy iv. 18 ; Nehemiah xiii. 16 ; Psalm cv. 29 ; Isaiah xix 10 ; Ezekiel xlvii. 9 ; Jonah i. 17 ; Matthew xvii. 27 ; John xxi. 9.

ANECDOTE.—Miss Wakefield, quoting from Hayley's "Life of Cowper," says: "In one of our

rambles along the edge of the river, I perceived something at the bottom of the water, which had the appearance of a flower. I remarked it to my companion. Observing it attentively, we found that it consisted of a circular assemblage of minnows; their heads all met in a centre, and their tails diverging at equal distances, and being elevated above their heads, gave them the appearance of a flower half blown. One was longer than the rest, and as often as a straggler came in sight, he quitted his place to pursue him, and having driven him away, he returned to it again, no other minnow offering to take it in his absence. This we saw him do several times. The object that had attracted them all was a dead minnow, which they seemed to be devouring."

F L E A.

THIS insect of the order Aphaniptera, which includes many kinds, is universally known as a pest, not only to human beings, but to animals of various kinds. The structure of the house-flea, which is of the most wonderful character, is in all respects suitable to enable the creature to obtain sustenance. It comes from an egg, and in about six days is hatched. The grub, or larva, then feeds, but ceases to do so after ten or twelve days. The skin is then thrown off, and the creature changes to an oval-shaped chrysalis, and in twelve days more is a perfect insect. It is lively in its motions, and tormenting in its habits. It

employs its sharp proboscis to perforate the skins of human beings, birds and other animals, on whose blood it feeds. It has a small head, large eyes, and a rounded body which is covered with a shelly sable armour. Its antennæ are hairy, and its legs six in number, with which it can leap with great force. Fleas have been furnished with trappings, and trained to draw very small carriages.*

QUESTIONS.

- To what order of insects does the flea belong?
 How is it produced, and how many days are required to form it a perfect insect?
 How does it obtain its food, and of what does its food consist?
 What is the structure of the flea, and what can it do?

Bible References.—1 Samuel xxiv. 14 ; xxvi. 20.

FLOCK.

THIS words means an assemblage of birds, sheep, or small animals of different species. It also has reference to a crowd of people; a congregation.

QUESTION.

What is the meaning of the word "flock"?

* This refers to the house-flea.

Bible References.—Genesis iv. 4 ; Exodus ii. 16 ; Leviticus i. 2 ; Job xxx. 1 ; Isaiah xl. 11 ; Amos vi. 4 ; Micah ii. 12 ; Matthew xxvi. 31 ; Acts xx. 28 ; 1 Peter v. 2.

FLY.

NO insect is better known than the house-fly of this country. It belongs to the order Diptera. It may be said that, as the family to which it belongs comprises an immense number of varieties, they are almost ubiquitous, being found in every part of the world, especially in hot climates, where they are not only troublesome, but very detrimental to the health and pleasure of many other animals. Although there is some uncertainty as to the particular fly referred to in the few Scripture quotations given below, we may justifiably suppose from one verse that the common house-fly is the one mentioned, of which we offer the following description. The structure of most flies is very wonderful and complex. The body is divided into three parts, the head, the thorax, and the abdomen. The eyes are large, and, so far as the house-fly is concerned, each eye contains an assemblage of very small eyes which appear to be capable of receiving an individual impression of the same object. The mouth is furnished with a proboscis, lancet, or prober, with which it perforates the skins of animals, of fruit, and other things, on the blood and juice of which the creature subsists. The wings are naked and transparent. Although the

house-fly, and many others, are considered to be great pests and annoyances, they are useful scavengers in the economy of Nature, and help very considerably in keeping the air pure, which, were it not for flies, would become impregnated with the effluvia arising from decomposing animal and vegetable matter, often fatal to the health and life of man and other animals.

As flies of different kinds abounded in Egypt and Judea, we may state that one kind, noticed by modern travellers as found in the vicinity of the Nile, and called the Abyssinian fly, is as large as a bee, and is so terrible an annoyance to cattle and other large animals, as to compel them to leave their pastures, and flee to some place where they can roll themselves in the mud or sand as a protection against them. As this fly is probably specially referred to in the Scriptures, the above remarks seem to give significance to the Bible references we have given ; and will convey the idea that the nature of the inflictions mentioned in Exodus viii. 24 was of the most terrible kind.

QUESTIONS.

Where are flies found; and to what order do they belong ?

How are they regarded by people generally ?

What peculiarities of structure do they possess ?

On what do they feed ?

What are their uses ?

What is the Abyssinian fly ?

Bible References.—Exodus viii. 21, 22 ; Psalm lxxviii. 45 ; cv. 31 ; Ecclesiastes x. 1.

FOAL.

THE young of the equine quadrupeds, as the female horse, ass, and kindred animals, all of which belong to the class Mammalia, order Solidungula. A colt is the male offspring; filly the female.

QUESTIONS.

To what class and order does a foal belong?

By what names are male and female foals known?

Bible References.—Genesis xxxii. 15; xlix. 11; Zechariah ix. 9; Matthew xxi. 5.

FOWL.

THIS word is to be understood in the same general sense as the word birds, but applies more particularly to the larger kind, both domestic and wild, reared or pursued for purposes of food. Fowls include all the denizens of the poultry-yard, with pheasants, partridges, and all other kinds of winged game.

QUESTIONS.

In what sense is the word fowl to be understood?

What particular kinds of the feathered race are known as fowls?

Bible References.—Genesis i. 26 ; Leviticus xi. 46 ; Deuteronomy iv. 17 ; Psalm viii. 8 ; Jeremiah ix. 10 ; Matthew vi. 26 ; Mark iv. 32 ; Luke xii. 24 ; Revelation xix. 17.

ANECDOTE.—That animals have good memories is evident from the following short story. A hen who had reared three broods of ducks, in three successive years, became habituated to their taking the water, and would fly to a large stone in the middle of the pond, and patiently and quietly watch her brood as they swam about it. In the fourth year she hatched her own eggs, and finding that her chickens did not take to the water as the ducklings had done, she flew to the stone in the pond, and called them to her with the utmost eagerness. This recollection of the habits of her former charge, though it had taken place a year before, shows this hen had a good memory.



F O X.

OF this animal there are several varieties inhabiting different countries, from the Frozen Ocean in the North to those in Asia. It is probable that the fox referred to in the Scriptures is the Corsac fox (*Canis Corsac*), which, belonging to the fox family, possesses at least many of those characteristics we find in other varieties of foxes. The jackal resembles foxes in so many particulars that some writers think the fox of Scripture means the jackal, hundreds of which animal are found concealed in gardens, ruins, and

tombs of Syria. Jackals, however, go about in large numbers ; but foxes do not. These animals, however, slightly differ from each other, not only in size, but in the colour of their fur. As there are many particulars in which they resemble one another, the following description will convey to the student an approximate idea of what these animals are. They are all carnivorous, very voracious, crafty, and sagacious, and seem to possess sufficient brain-power to resort to various stratagems in order to obtain food and escape from danger. The common fox measures about three feet six inches from the nose to the root of the tail, which is often sixteen inches long. He is a nocturnal animal, and during the night sometimes makes sad havoc amongst the poultry of farm-yards, and game of many kinds. In the daytime he hides in his burrow, where he rests and sleeps on until the cravings of appetite compel him to seek food in his night rambles. His tail and fur are highly valued for their softness. Foxes show great affection for their young, and nourish them with the most tender care. To hunt and to mercifully kill an animal for food, or other legitimate uses, may be tolerated, but to hunt it for sport is not a practice to be commended. Training the hounds for hunting the fox is nothing less than cruelty to both these kinds of animals.

QUESTIONS.

How many kinds of foxes are known, and where are they found ?

What are the physical and mental characteristics of the fox ?

What is the food of the fox, and when obtained ?
Is it right to hunt the fox for sport ?
How does the fox treat its young ?

Bible References.—Judges xv. 4 ; Nehemiah iv. 3 ; Ezekiel xiii. 4 ; Matthew viii. 20 ; Luke ix. 58 ; xi. 32.

ANECDOTE.—The following account is given on the authority of a friend who was an eye-witness of what we are about to describe, and will show that the fox referred to was not deficient in reasoning power, and that his physical abilities were of no ordinary kind. Early one morning, in the month of August, a large fox was leisurely running along the towing-path of the Gloucester and Berkeley Canal. At some distance behind him he saw two men following in his track, which caused him to quicken his pace. When he turned the obtuse corner formed by a bend in the canal, the fox discovered two other men about three hundred yards ahead. He was now in a difficulty, as he was evidently making towards a bridge spanning the water which he intended to cross in order to reach a fox cover on the opposite side of the canal, and nearly two miles off. He was seen to stand, then to look behind and before him, as if deliberating as to the plan he should adopt to avoid contact with the men, and to reach his home in the wood. As foxes are able not only to run swiftly, climb trees, leap great distances, burrow in the ground, but also to swim, the fox we refer to plunged into the water, swam across the canal, jumped over a garden stile, and then crossing

the high-road close by, he in a few minutes disappeared over a distant hill, and no doubt soon reached his old haunt, where he most likely rejoined his family, who in all probability were glad to give him a hearty fox welcome, and he as well pleased with the result of his morning's adventure.



FROG.

OF this well-known animal there are many different kinds found, not only in England, but in America, France, Italy, Germany, and other parts of Europe. The bull and Argus frogs are the largest. The early existence, and numerous transformations the common and other frogs undergo before they are fully developed, or become perfect in form, are both marvellous and interesting. In early spring-time patches of a jelly-like substance may be seen floating on the surfaces of ponds of water, in the centre of which is a black speck. This is the frog's egg, which, when hatched, produces a curious-looking creature with a large head and long tail. This is called a tadpole, and has a very voracious appetite. In the course of time rudimentary legs and feet appear at each side just behind the head, then two more legs may be seen towards the end of the tail. As the fore-legs grow the head assumes its proper shape, and as the hind-legs develop the tail is absorbed, or drawn, into the body, which leaves it a tailless Batrachian known

as the frog. It is a light nimble creature, and can jump a considerable distance. If the body be held before a strong light, so transparent is the skin, or cuticle, that the circulation of its blood is clearly perceptible. It can live either in or out of the water. It subsists mostly on insects, and the only sound it produces is a kind of croaking.



THE FROG.

The frogs in Egypt existed in swarms, even in houses, beds, and kneading-troughs, as well as out of doors ; and when they died, as they often did in great numbers, they filled the air with an offensive effluvium, thus causing a nauseous plague.

QUESTIONS.

In what countries are frogs found ?

What changes do they undergo in the first stages of their existence ?

What are the peculiarities of their structure ?

On what do they feed, and what is the noise they make ?

What effects were often produced by the frogs in Egypt ?

Biöle References. — Exodus viii. 2, 7 ; Psalm lxxviii. 45 ; cv. 30 ; Revelation xvi. 13.

ANECDOTE.—It is said that a butcher in Glasgow found an ordinary-sized living frog in the stomach of a cow which he had just killed. When laid down it was full of spirits, and leapt about the slaughter-house, to the astonishment of a considerable crowd. The cow was killed between three and four o'clock in the afternoon ; and, supposing she had swallowed the frog when drinking, it must have remained a considerable time alive in her stomach, as the cow had got neither meat nor drink since before six o'clock in the morning.



GIER EAGLE.—(See EAGLE.)



GLEDE.

SUPPOSED to be a rapacious hawk or a bird of the vulture kind. A Biblical writer says, "the original word is rendered *vulture* in Leviticus xi. 14."

QUESTION.

What is the glede supposed to be?

Bible References. — Deuteronomy xiv. 13; Leviticus xi. 14.

**GNAT.**

THIS is a very small insect of the Dipterous order, comprising very many different kinds. Gnats are found in southern climes, and during the short summer Lapland abounds with them, to the natives of which they are much more troublesome than to us in England. Their mouths are furnished with bristly stings, which they use to perforate the skins of animals in order to suck their blood. Their stings have been known to prove fatal to life. They are produced from eggs, which they lay on a leaf or blade of grass floating on the surface of still waters. When the eggs are hatched the grubs sink to the bottom, where they undergo certain transformations. In due time they ascend to the surface, escape from their prisons, and take their flight in the warm sunshine.

QUESTIONS.

To what order of insects do gnats belong ?

Where are they found ?

With what are their mouths furnished ?

How are gnats produced, and what processes do they pass through before they become perfect insects ?

Bible Reference.—Matthew xxiii. 24.



G O A T.

A WELL-KNOWN animal, of which there are several species, all belonging to the class Mammalia, order Ruminantia. It is found in great numbers in England and Wales, also in Norway, Holland, Asia Minor, Judea, Syria, and North America. It is reasonable to suppose that the animals of this family spoken of in the sacred writings were those of Angora and Syria, which countries are in the East. The ears of the Syrian goat are about two feet in length, and somewhat troublesome to the animal when feeding. The colour of its hair is like that of a fox. The Angora goat is the most elegant of all the varieties. It is of a milk-white colour. Its hair is of fine quality, and hangs from the body in long pendant spiral ringlets. It is from the hair of this animal that the finest camlets are made. "The goat was a clean animal by the Jewish law, and the hair of it was spun by the Hebrew women for the curtains of the

Tabernacle, and the skin was made into vessels or bottles."

Although belonging to the same family, goats have distinctive and peculiar characteristics. In many respects, however, they resemble each other. The male has horns, a long beard, and a shaggy coat. The goat is a lively animal, but fond of the solitude of rocks, from crag to crag of which it can leap with great agility. It is playful, intelligent, and sociable when domesticated and kindly treated. It is much attached to its young. Although the goat emits an unpleasant odour it is a useful animal. Goats' milk, and cheese made therefrom, are not only nutritious, but constitute considerable articles of commerce. From the skins of adult goats morocco leather for bookbinding is made, and gloves from that of the kids. Of the hair, wigs for gentlemen in the legal profession are manufactured. The scapegoat was intimately associated with the religious observances of the Jews in ancient times.

QUESTIONS.

To what class and order does the goat belong ?

Where are goats found ?

What is the peculiar structure, and what are the physical capabilities of this animal ?

What are its mental and moral qualities ?

What are its uses alive and dead ?

With what religious rites and ceremonies was the goat anciently associated ?

Bible References.—Genesis xv. 9 ; Leviticus iii. 12 ; xvi. 8, 9, 22 ; Numbers xxviii. 22 ; 1 Samuel xxiv. 2 ; Psalm civ. 18 ; Ezekiel xliii. 25.

ANECDOTE.—Useful lessons are often taught by animals. This anecdote is one. In "Instinct Displayed," it is stated that, "on the crag of a high rock overhanging the sea, are the ruins of an ancient castle, once the seat of feudal grandeur, but now serving only to heighten the romantic wildness of the prospect. One of the bastions remains nearly entire, along which, at a great height, runs a projecting ledge, perhaps a foot wide. A couple of goats, grazing about the ramparts, by some means got down upon the ledge, and one of them advancing till it arrived at an angle, was enabled to turn; but in its way back met its companion, which produced a most perplexing dilemma, for it was impossible to pass each other. . . . The poor animals were sensible of their unfortunate situation and uttered the most doleful cries. . . . After a considerable time, one of the goats was observed to kneel down with great caution, and crouch as close as it could lie; which was no sooner done, than the other with great dexterity walked over him, and they both returned the way they came, in perfect safety."



GRASSHOPPER.

THIS is a curiously organized insect which belongs to the order Orthoptera. It abounds in meadows and cornfields, both in the temperate and torrid zones, where the male may often be heard giving forth a shrill sound supposed to be uttered to attract the

notice of the female. This insect is about two inches long, and usually of a green colour. It has four wings, which are overlapped by a thin membrane forming tabords, which rubbed one against the other produce the sound referred to. It has three pairs of legs, the hind ones being very much longer than the others. Towards the latter end of autumn the female is full of eggs. In order to deposit them in the proper place, Nature has furnished her with an instrument at the end of her body. With this she makes a hole in the earth several inches deep, and then drops her eggs therein, where they remain until the following spring, without being affected by the severity or changes of winter weather; and then after undergoing some changes come forth perfect grasshoppers. The mother dies before the winter has passed away. Grasshoppers live upon plants, and when irritated will bite severely. According to our first Bible Reference given below, the Jews were allowed to use it as food.

QUESTIONS.

Where is the grasshopper found?

How does the male call the female?

How is this sound produced?

Where does the female lay her eggs?

How long a time is necessary to produce a young grasshopper in a complete and perfect state?

What becomes of the mother after laying her eggs?

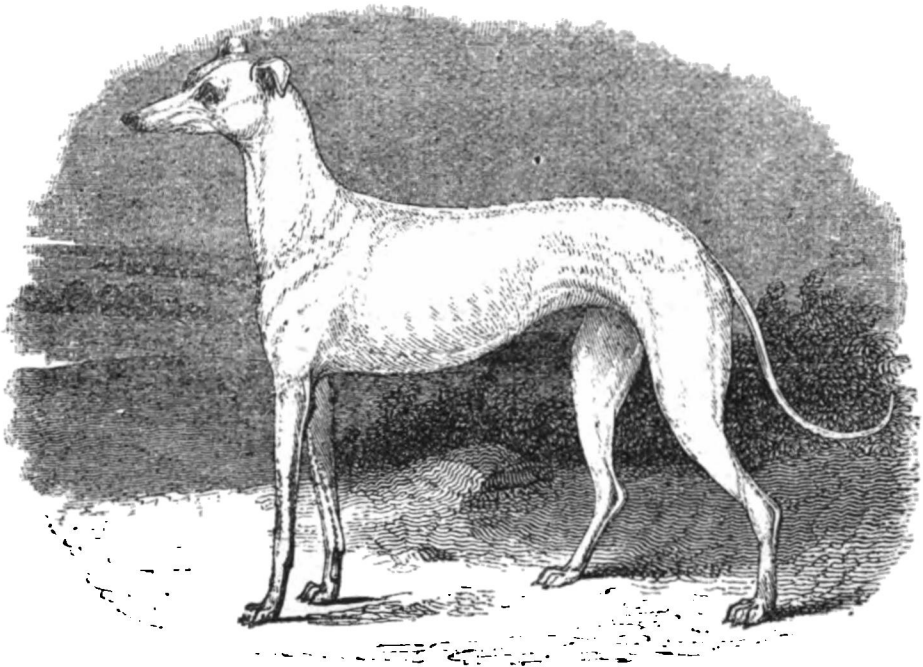
On what does the grasshopper feed?

For whom did it in ancient times constitute an article of food ?

Bible References.—Leviticus xi. 22 ; Judges vi. 5 ; Job xxxix. 20 ; Isaiah xl. 22 ; Jeremiah xlvi. 23 ; Amos vii. 1 ; Nahum iii. 17.

—♦—

GREYHOUND.



OF this animal there are a few kinds. The one known in England, the Italian greyhound, and the Irish greyhound. The latter is a cross between the greyhound proper and the large Danish dog, and was at one time used in wolf-hunting, from which it was called wolf-hound. Greyhounds are distributed

over a wide area of the globe. They are found in Arabia, Egypt, Greece, Persia, Syria, and other countries of Europe and Asia. All these resemble each other in general characteristics, but a distinctive difference exists in the length and quality of the hair of the breeds found in the above countries. The true greyhound has a long tapering head, ears drooping at the points, small eyes, back broad and muscular, body lank and contracted beneath, chest capacious and deep, and limbs of remarkable power. It is used in hare-hunting, and is very swift of foot, but hunts more by sight than scent. It is said that, in the time of Canute, no gentleman was allowed to keep a greyhound within the limit of two miles from a forest, or unless two of the dog's toes were cut off.

QUESTIONS.

How many kinds of greyhounds are there?

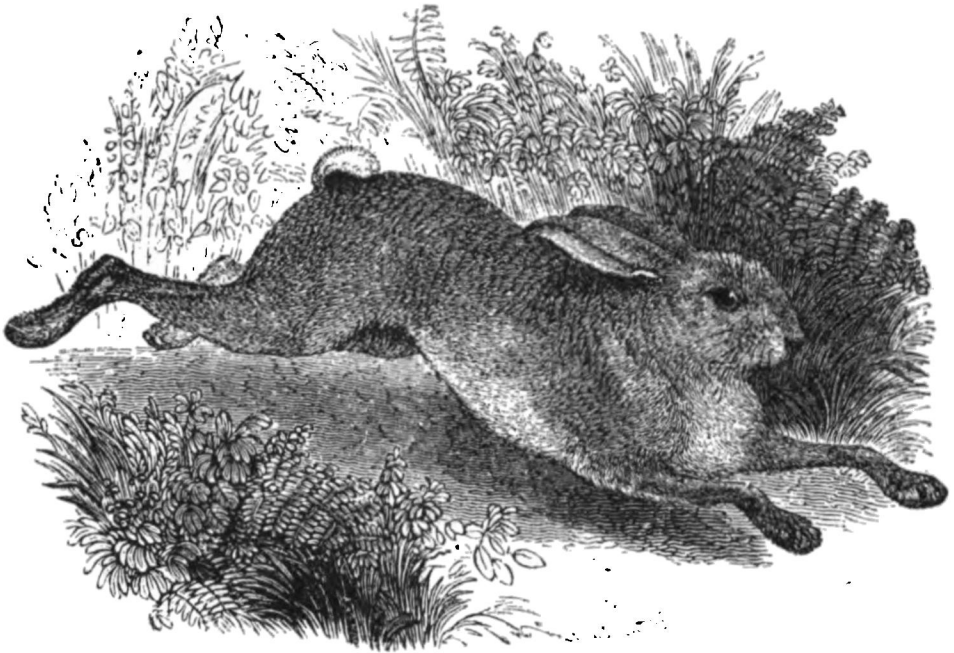
What are the physical peculiarities of this dog?

For what is he the most remarkable, and what was the command of Canute respecting him?

Bible Reference.—Proverbs xxx. 31.

ANECDOTE.—King Charles the First was so very partial to a dog of the greyhound breed, that Sir Philip Warwick ventured to say one day to his Majesty, who had commanded him to let in his dog Gipsy, that had been scraping at the door, "Sir, I perceive you love a greyhound better than a spaniel." "Yes," said the king, "for they equally love their masters, and yet do not flatter them so much."

H A R E.



THIS well-known animal belongs to the order Rodentia, and the genus includes many varieties, which differ in size, in some of their habits, and in the colour and quality of their fur. That of the American hare is nearly white. The fur of the Baikel hare resembles that of our own common hare. It is also the same in the Cape hare, excepting the fur on the outside of its ears, which is rose-coloured. The Irish hare has a reddish-brown tinge. The fur of the Polar hare is white, and that of the hare in the North of Scotland is of a tawny colour in summer, and white in the winter. As the hare mentioned in the Bible as the Syrian hare is not described, it is difficult to ascertain to what particular variety it

belonged. It no doubt possessed mainly most of the features of other kinds of the hare family. A descriptive outline, however, of the common hare, as known in England, may suffice to convey a tolerably correct idea of that animal referred to in the Scriptures. The common hare is about two feet long. It has keen sight and hearing, and can run with great rapidity. It usually has three or four young ones at a birth, and breeds several times in a year. It feeds upon herbage, is highly esteemed as food in England, and by the Romans, but forbidden to be eaten among the Jews and Mahomedans. "The fur, until of late years, when silk became so generally used, was of great importance in the manufacture of hats; and in some parts of the Continent it is also woven into cloth."

QUESTIONS.

Name the varieties of this animal, and the differences in the colour of their fur?

What two of the five senses does it possess in a great degree?

How many young ones does it bring at a time, and how often through the year?

On what does it feed, and by whom is its flesh esteemed?

Who are forbidden to eat it?

For what purposes is the fur used?

Bible References.—Leviticus xi. 6; Deuteronomy xiv. 7.

ANECDOTE.—Dr. Townson, the traveller, when in Gottingen, brought a young hare into such a state of

domestication, that it would run and jump about his sofa and bed. It leapt on his knees, patted him with its fore-feet; and frequently, while he was reading, it would knock the book out of his hands, as if to claim, like a fondled child, the preference of his attention.

“At the sound of the hunter’s horn a hare once ran towards a pool of water, at a considerable distance, plunged in and swam to some rushes in the middle, where it lay down and concealed itself from the pursuit of the dogs.”



HART.

THIS is the name of the stag, or red male deer, given after it has attained its fifth year. It is of the class Mammalia, order Ruminantia. It is graceful and agile in its motions, and by the Levitical law is a clean animal. The hart, when hard run, pants like a dog, and is soon exhausted by hunger.

QUESTIONS.

What is the hart, and when is its name given to it?

To what class and order does it belong?

For what special things is it noted?

Bible References.—Deuteronomy xii. 15; 1 Kings iv. 23; Psalm xlii. 1; Isaiah xxxv. 6; Lamentations i. 6.

HAWK.

THIS name comprises those of different kinds of birds of prey, such as the sparrow-hawk, goshawk, &c. These birds resemble the falcons in their general structure. The beak is curved from the base, and, being very sharp, is well adapted for securing and cutting the flesh of those animals on which they feed. The hawk is found in the hilly districts of cold countries. Rapacious and cruel as the hawk is said to be, it nevertheless teaches a lesson of instinctive mercy by striking its victim at once in a vital part, thereby preventing needless torture and lingering suffering.

QUESTIONS.

What other birds does the word hawk include?

What is the form of the beak, and for what adapted?

Where is the hawk found, and what does it teach?

Bible References.—Leviticus xi. 16 ; Job xxxix. 26.

ANECDOTE.—The wonderful results of domestication, and the power of kindness over even carnivorous birds when taken young, are evident from the following short story, the gist of which is taken from "Anecdotes of the Animal Kingdom." "A gentleman named Clarke possessed a large number of tame pigeons, among whom he introduced a young sparrow-hawk. The pigeons at first did not like the company of the new-comer, but in time became less

fearful, and even more sociable with the hawk, so much so that they seemed quite at ease with him in their cot, and also in their flights during the day, when they were usually accompanied by this raptorial stranger, who would always return with them at night to their cot, and there remain until the following morning without ever exhibiting in any way his own instinct, so opposite to that of the pigeons. On being separated from them one day he showed many signs of unhappiness, which did not cease until he was returned to the pigeons in the cot. He was much admired by all the household, to whom he became much attached, as he was playful as a kitten, and as loving as a dove."

HEIFER.

THIS is the name of a young cow, which belongs to the class Mammalia and the order Ruminantia. It is frequently mentioned in the Bible, and is represented as a wild, sportive, but docile animal, especially when well fed. It makes a somewhat mournful sound, which may be heard at a great distance. It may be inferred that in the early ages of the world it was held in great repute, as it was selected as a sacrifice to be used on certain special occasions. It was to be of a red colour, which, says Eadie, was the symbol of sin. After it was slain the body was taken to the outside of the camp, where it was burned, and the ashes, mingled with water,

sprinkled on the people. “This was an impressive sin-offering, and the Apostle argues, in Hebrews xi. 13, 14, that it showed the superior efficacy of the sacrifice of Christ.”

QUESTIONS.

To what class and order does the heifer belong?
 For what purposes was it used in the rites and religious observances of the Jews?
 What special object does the Apostle Paul say the sacrifice of the heifer pointed to?

Bible References.—Genesis xv. 9 ; Numbers xix. 2 ; Deuteronomy xxi. 3 ; Isaiah xv. 5 ; Jeremiah xlvi. 20 ; 1. 11 ; Hosca iv. 16 ; Hebrews ix. 13, 14.



H E N.

THIS is the general name of the females of birds, but is more especially applied to the females of poultry and other fowls after depositing their first egg.—(See FOWL.)

As birds of prey were very numerous in the East, hens were kept in continual alarm, and so, to protect their offspring, would gather them under their wings.

QUESTION.

To what is the word hen applied?

Bible References.—Matthew xxiii. 37 ; Luke xiii. 34.

HERON.

THIS bird is allied to the crane and the stork, but is rather less in size. There are many varieties of it. It frequents the rivers of different countries, especially the Severn, where several of them are often seen fishing together. When seen at a distance it appears to be a bulky bird, but does not weigh more than three pounds and a half. As a bird-fisher it has a long bill, and a serrated claw on each foot, by which it secures its slippery prey. Although very partial to fish, it feeds upon frogs, field-mice, insects, snails, and worms. It has long wings, and the flight is rather heavy. Herons build several nests together on the tops of high trees. These are called heronries, to which the parent birds carry small fish, with which they feed their young. Numerous fish-bones may often be seen at the bottoms of the trees. The heron was well known to the ancients living in the East, especially those in Palestine, and was one of the animals the Jews were forbidden to eat.

QUESTIONS.

To what birds is the heron related ?

Where is it found, and on what does it feed ?

How does the heron obtain and secure fish ?

Where do herons build their nests, and what are they called ?

To whom were this bird known, and who were forbidden to eat it ?

Bible Reference.—Leviticus xi. 19.



THE HERON.

ANECDOTE.—A young bird, belonging to a heronry at Walton-on-Thames, having fallen out of its nest, was taken by a gentleman and put in his garden, many miles off. The next morning one of the old birds was seen to feed it, and did so day by day until it made its escape. This bird must have gone a considerable distance in search of the young heron, a fact which proves the great solicitude of the parent bird.

H I N D.

THE female of the red deer or stag.—(See DEER.)

Bible References.—Genesis xlix. 21; 2 Samuel xxii. 34; Job xxxix. 1; Psalm xxix. 9; Jeremiah xiv. 5.

H I P P O P O T A M U S.—(See BEHEMOTH.)

H O R N E T.

MUCH as the common wasp is to be dreaded, the hornet may be more so; and, as it is considerably larger and more formidable than the wasp, it may be regarded as a flying viper. It belongs to the

order Hymenoptera. It has four wings, and flies with great velocity. It is voracious and omnivorous, very eagerly devours fresh animal substances, and consumes fruit, honey, &c. The sting is severe, and sometimes fatal. It is the dread of horses and cattle, who run off in as much terror on its approach to avoid its tormenting sting as wild animals would do the destructive fire of a burning prairie. The nest is built in the cavity of some decayed tree.

QUESTIONS.

Why should the hornet be dreaded ?

To what order of insects does it belong ?

How many wings has it, and on what does it feed ?

What is sometimes the effect of the sting of this insect ?

Where does it build its nest ?

Bible References.—Exodus xxiii. 28 ; Deuteronomy vii. 20 ; Joshua xxiv. 12.



HORSE.

ALTHOUGH there are many varieties of this animal, even in England, as well as in other countries, and differing as they do in size, weight, fleetness, powers of endurance, and utility, they possess, in a smaller or greater degree, many features in common. In trying to trace the origin of this

animal, some difficulties arise on account of the differences of opinion entertained by historians on the subject. We may assert, however, that the horse was known in very remote ages, particularly in the East; and it is said that it was the Egyptians who first reduced him to obedience. The character of the horse is beautifully portrayed by the following description. "His courage, strength, fleetness, his symmetrical form and grandeur of deportment, are unalloyed by any quality injurious to other creatures, or calculated to create the aversion of man, whose orders he implicitly obeys, whose severest tasks he undertakes with a cheerful alacrity, and whose pleasures he contributes to with animation and delight." Horses have been known to form very strong attachment one for another. But few animals have better memories than they have, and none are more susceptible to, or grateful for, acts of kindness shown them than horses are. By proper treatment they become willing and obedient workers. In almost every kind of labour and pleasure they are everywhere found to be useful. Even in war they take a prominent part. The hard hoofs of the horse in ancient times, as well as now, were well adapted for rocky countries; hence Isaiah says, of the Assyrian invaders, "that their horses' hoofs shall be counted like flints."

QUESTIONS.

Are there many varieties of the horse, and in what respects do they differ?

To what country may his origin be traced, and who first reduced this animal to obedience?

What are some of the characteristics of this animal ?
 In what do horses take a prominent part ?
 What is said of the Assyrian horses ?

Bible References. — Genesis xlvii. 17 ; Exodus ix. 3 ; 1 Kings x. 25, 28 ; xxii. 4 ; 2 Kings v. 9 ; ix. 33 ; Isaiah ii. 7 ; xxx. 16 ; Jeremiah iv. 13 ; Ezekiel xvii. 15 ; Hosea i. 7 ; Habakkuk i. 8 ; iii. 15 ; Zechariah xiv. 20 ; Revelation ix. 7, 17 ; xviii. 13 ; xix. 14, 18.

ANECDOTE.—That gentle and kind treatment are far more effectual in making a horse willing and obedient than rough usage and hard words are, is evident from what came under our own notice some time ago. After giving a lecture on humanity to animals, we were walking down Grove Road, St. John's Wood, accompanied by a friend, when our attention was attracted by something in the road, from which direction proceeded the sound of human voices raised almost to their highest pitch. We hastened on, and discovered a noble well-bred horse, attached to a two-wheeled trap, and who, we soon learnt, refused to proceed further, on account of the driver having given him what was, no doubt, a needless cut with the whip. The groom was then ordered by his master to get down and to punch the animal's nose, which he did do with all the force he could command. Still the horse refused to go. We remonstrated against this cruelty, and suggested another plan, which we said would be more effectual than theirs. "Get up into the trap," we said to the groom, "and leave the horse in our hands." He did so. First we spoke in soothing tones to the animal,

patted his neck, and called him "a good fellow ;" we then passed our hand several times down his fore-legs, speaking gently to him all the time. The horse seemed to say, "that is the treatment I want, now I'll go." And he did go, too, for he trotted off at a quick pace and was soon out of sight.



HORSE-LEECH.

A KIND of worm very remarkable for its thirst for blood. The leech, formerly much used in medical practice to lessen inflammation in human and animal patients, is furnished with a suctorial apparatus at both ends of its body, which it uses until the body is completely filled with blood. These leeches are closely allied to each other both in habits and uses, and seem to set forth the insatiable craving of lust, avarice, and cruelty.

QUESTIONS.

What is the horse-leech ?

What are the purposes for which leeches are used ?

What do leeches, as mentioned in Scripture, seem to set forth ?

Bible Reference.—Proverbs xxx. 15.



K I D.

THIS word is almost exclusively used to represent the young of the goat, and is not only so understood by natural historians, but is also, in all Scripture references to it, applied to the offspring of the last-named animal. The kid is often eaten. (*See* GOAT.)

QUESTIONS.

What is a kid ?

Where is it mentioned, and what are its uses ?

Bible References.—Genesis xxvii. 9, 16 ; xxxvii. 31 ; Exodus xxiii. 19 ; Leviticus xvi. 5 ; Judges vi. xix ; iii. 19 ; 1 Samuel xvi. 20 ; Isaiah xi. 6 ; Luke xv, 29.



K I N E.

THE plural of cow, but the word *cowes* is now generally used to denote numbers of this animal. (*See* OX.)

QUESTIONS.

In what sense was the word *kine* formerly used ?

What constitutes the plural of *cow* now ?

Bible References.—Genesis xxxii. 15 ; xli. 2, 3, 26, 27 ; Deuteronomy vii. 13 ; xxviii. 4 ; xxxii. 14 ; 2 Samuel xvii. 29 ; Amos iv. 1.

K I T E.

THIS bird belongs to the hawk family (*which see*), and is very rapacious. It is about four feet long, and has a forked tail. It is unclean by the ceremonial law.

QUESTIONS.

To what family is the kite allied, and what is its size, &c.?

Bible Reference.—Leviticus xi. 14.



L A M B.

VERY few animals are better known than the lamb. Scarcely need the smallest village child be told that it is the young of the sheep. Lambs are much admired on account of their lively gambols, frolics, and the races they run with each other. They are not only regarded as being harmless creatures, but as personifications of gentleness and innocence. Scripture references to this animal are very numerous, which should invest the study of it with importance and interest. It is highly honoured by its name being given to the Redeemer of mankind, who is called "the Lamb of God," who was typified by the Paschal lamb which was identified with the religious rites and ceremonies of the Jews in ancient times.

QUESTIONS.

What is a lamb ?

Why are lambs much admired ?

What are their moral qualities ?

What should make the study and a knowledge of these animals so necessary and interesting ?

Bible References.—Genesis xxii. 7 ; Exodus xiii. 13 ; Leviticus iii. 7 ; xiv. 12 ; Numbers vi. 14 ; 2 Samuel xii. 4 ; Isaiah xi. 6 ; lxxv. 25 ; Ezekiel xliv. 15 ; John i. 29 ; Acts viii. 32 ; 1 Peter i. 19 ; Revelation v. 6 ; xix. 7 ; xxii. 1.



LAPWING.

THIS is a prettily marked bird, and is sometimes called the peewit. It belongs to the snipe and plover tribe. It is found in this country in large flocks, except during the pairing season, when it separates for the purposes of incubation. The female lays four eggs of an olive colour spotted with black. Its nest is a very artificial one, and is made on the ground. This bird is a swift runner, very agile, and frolicsome. If any one is likely to disturb her nest or young, the mother bird will fly away from her nest some distance, then alight on the ground and feign lameness for the purpose of attracting the intruder towards her, and drawing him away from her young. The lapwing of the Bible is an unclean bird, and supposed to be the hoopoe of modern days, and about the size of a pigeon. But of this no proof is given.

QUESTIONS.

To what tribe of birds does the lapwing belong?
Where is it found, and what is the number and
colours of its eggs?

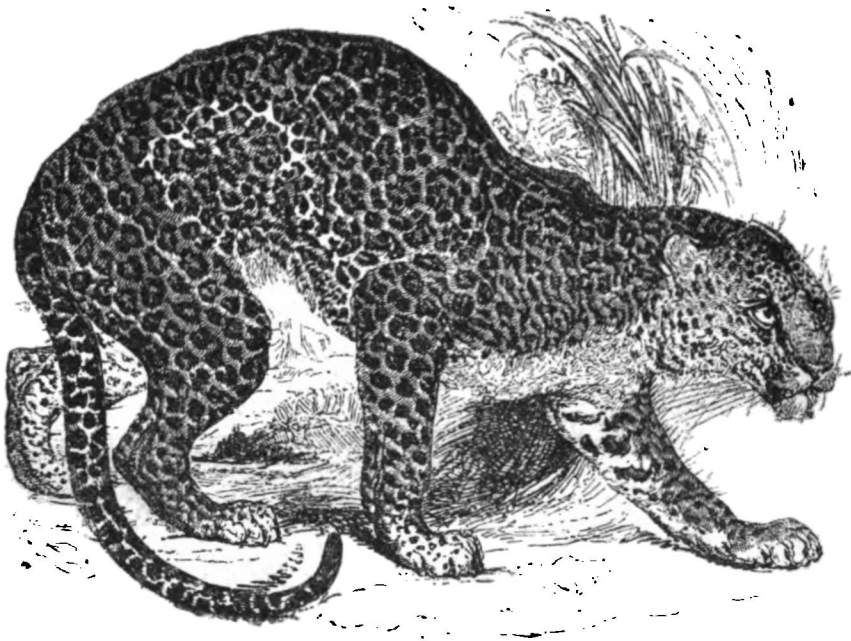
What are its characteristics as seen in some of its
habits?

What is the Bible lapwing supposed to be?

Bible Reference.—Deuteronomy xiv. 18.



LEOPARD.



A CARNIVOROUS animal of the feline tribe found in the tropical regions of the old world, especially in China, India, Persia, and Africa. It measures from

nose to tail four feet, and the tail two feet and a half. It is lithe, strong, and nimble in body, can take surprising leaps, and crawl like a snake, especially when after its prey. Its general character is that of fierceness and rapaciousness; but although it is ever devouring the flesh of some other animal, it always appears lean and emaciated. These animals are taken in pitfalls, covered over with slight hurdles on which a bait of flesh is placed. The skins are highly valued, and extensively used as rugs. The Bible allusions to this animal have reference to its watchfulness for its prey, its fleetness, cruelty, and fierceness. "In the Book of Daniel it is made the emblem of a great power."

QUESTIONS.

To what tribe of animals does the leopard belong?

Where is it found?

What is its size, and what are its physical abilities?

What is the general character of the leopard?

How is it taken, and what are its uses?

Bible References.—Daniel vii. 6; Isaiah xi. 6; Jeremiah v. 6; xiii. 23; Hosea xiii. 7; Revelation xiii. 2.

ANECDOTE.—The mischievous and destructive proclivities of the leopard may be seen in the following anecdote given by Captain T. Brown. "There are at the present time in the Tower* a pair of these animals, from Asia, confined in the same den.

* The *Tower Menagerie* does not now exist.

The female is very tame, and gentle in her temper, and will allow herself to be patted and caressed by the keepers, while she licks their hands and paws. She, however, has one peculiarity, that she cannot bear many of the appendages which visitors bring with them to the menagerie. She has a particular predilection for the destruction of parasols, umbrellas, muffs and hats, which she frequently contrives to lay hold of, before the unwary spectator can prevent it, and tears them to pieces in an instant. She has been five years in the Tower, during which time she has seized and destroyed several hundreds of these articles, as well as other parts of ladies' dress. While this creature is in a playful mood, she bounds about her cell with the quickness of thought, touching the four sides of it nearly at one and the same instant ; so rapid are her motions, that she can scarcely be followed by the eye."

LEVIATHAN.

THIS animal is supposed by many to belong to one of the largest kinds of whales. Although some of the Bible references given below seem to favour this opinion, there is, we think, better reason for believing the leviathan to be the crocodile of the sacred writers, especially considering the description of it in the forty-first chapter of the Book of Job. The crocodile is found in the Nile and other rivers, and is very voracious, strong, and fleet. It will attack even men and the largest animals.

QUESTIONS.

What do many suppose the leviathan to be ?

Why may it be considered to refer to the crocodile ?

Where is it found, and what are its characteristics ?

Bible References. — Job xli. 1 ; Psalm lxxiv. 14 ; Isaiah xxvii. 1.



LICE.

THE mind naturally associates with these creatures all that is loathsome and objectionable. We can scarcely conceive anything more distressing than a plague of them falling upon men and animals, especially if sent among them as a punishment for man's disobedience. Our Scripture quotations, given below, clearly show that such was the case with Pharaoh, who refused to let the Israelites depart from the land of Egypt according to God's command. Lice is the plural of louse, a parasitic animal too well known to require minute description. There are many different kinds of them. Some are found on human bodies, and others infest those of quadrupeds, fish, birds, and plants, on the blood and juice of which they live. Their existence in some cases is indicative of dirty habits, and unpardonable indifference to necessary ablutions, and the use of other means to keep the body free of them. Lice constituted the third plague of the Egyptians.

QUESTIONS.

For what purpose were swarms of lice sent to the land of Egypt in the time of Pharaoh, and for what reason?

By what other designation are lice known?

Where are they found, and on what do they live?

What does their existence on human bodies imply?

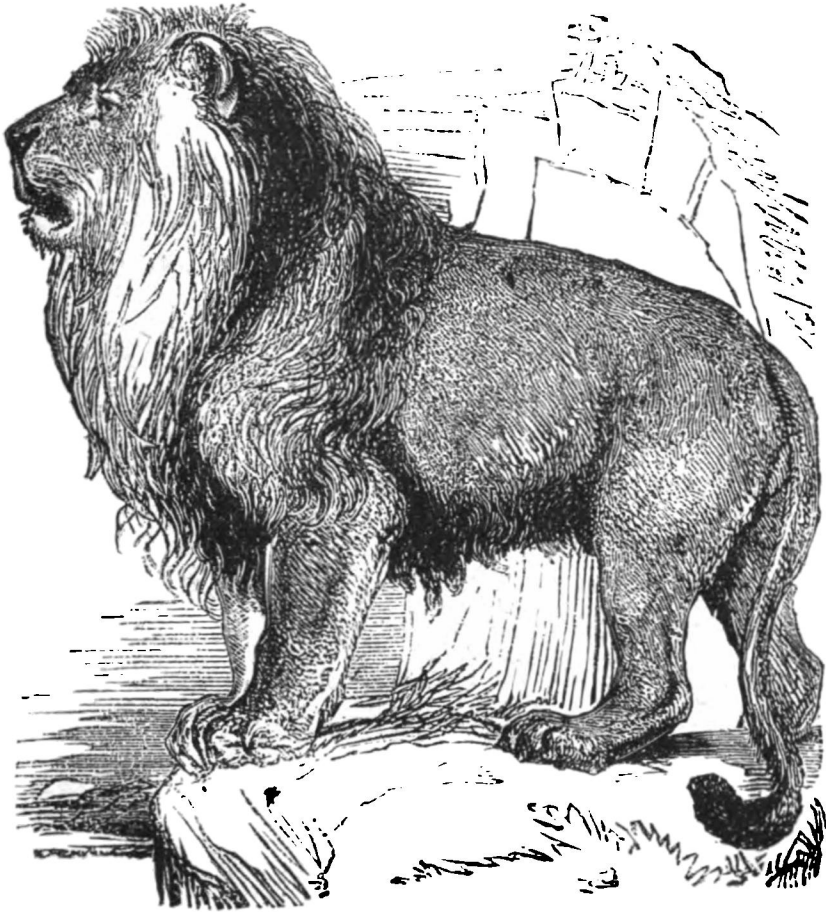
Bible References.—Exodus viii. 16, 17, 18; Psalm cv. 31.



L I O N.

THIS is a beast of prey, of the class Mammalia, order Carnivora. He is often called "the king of the forest." He is found in the interior of Africa, and in the hotter regions of Asia. He is much larger than the leopard, and has a fine flowing mane, which adds considerably to his majestic appearance. His body is eight feet long, and his tail measures four more. The shoulders, neck, and legs have remarkable power. The claws are long and sharp. With these he holds firmly down the body of his victim, which he cuts and tears with his teeth, that are so strong as to enable him to crack a large bone with them. It is said that by one stroke of his paw he can break the back of a horse, while his strength is so great that he can carry off in his mouth an antelope, and even larger animals, as easily as a cat can

carry off a rat. His roaring, especially when hungry, is so loud and tremendous that he puts to flight every animal within the sound of it. Dreaded, however, as he is both by man and animals, the tribe to which he belongs constitutes a useful link in Nature's



THE LION.

chain. His skin is of great commercial value. Lions show great affection for their young.

QUESTIONS.

To what class and order does the lion belong?
What other appellation does he bear, and where is he found?

What are his size and structure ?

On what, and how, does he feed ?

What does his great strength enable him to do ?

What is the effect produced on other animals by his roaring ?

What commendable trait of character do lions present ?

Bible References.—Genesis xlix. 9 ; 1 Kings xiii. 24 ; xx. 36 ; Job iv. 10 ; Psalm vii. 2 ; xvii. 12 ; Proverbs xix. 12 ; xx. 2 ; Isaiah v. 29 ; Jeremiah xii. 8 ; Joel i. 6 ; Amos iii. 4 ; Revelation x. 3.

ANECDOTE.—That even lions may be favourably influenced by kind treatment, and that they retain a recollection of it after the lapse of years, is clearly evident from the story we are about to relate. It appears that Sir George Davis visited a menagerie in Florence, where a lion was kept, said by the keeper to be untamable. Sir George insisted upon entering the den, which he had no sooner done than the lion exhibited marks of extreme joy. The Grand Duke having heard of this dangerous venture, and sending for Sir George, wished him to state the reason of the lion's conduct towards him. Sir George explained that "a captain of a ship from Bombay had given him a lion when quite a whelp. He brought him up tame, but when he thought him too large to run about the house, built a den for him in the courtyard. From that time he was never permitted to be loose, except when brought to the house to be exhibited to friends. When five years old he did some mischief by pawing, and playing with people in his frolicsome moods. Having

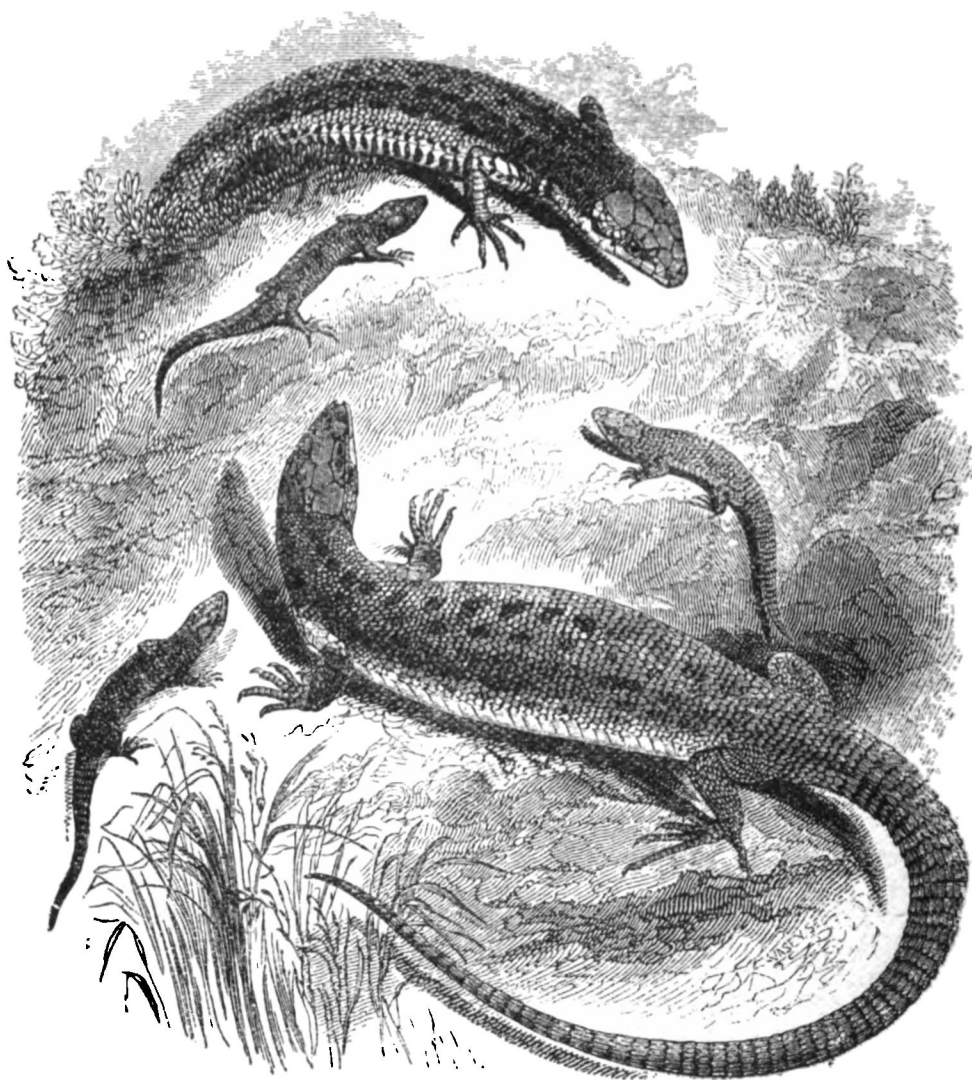
gripped a man one day a little too hard, Sir George ordered him to be shot, for fear of incurring any guilt. On this, a friend, dining with Sir George, begged him as a present ; that friend had presented him to the Grand Duke, in whose possession he had remained three years, when he so singularly recognized his old master."

LIZARD.

THIS animal belongs to the order Sauria, of the class Reptilia. Lizards not only differ much from all other animals, but they also vary widely from one another, particularly in size. While the alligator and crocodile, belonging to the same order, measure several feet in length, some lizards are only a few inches long. The smaller kinds of this reptile abound on our walls, banks, and in our copses. The true lizards are adorned with brilliant colours, have very bright eyes, and are remarkably active. The green lizard is, in all probability, the kind referred to in the sacred writings. It is about fifteen inches in length. The head is green, and the body is marked with scaly rings. It lives on worms and insects, and can be easily tamed. It is uncertain to what modern species of lizards the one in Scripture belongs. It is likely to be one that adheres to the earth. It was unclean by the Mosaic law.

QUESTIONS.

To what class and order does the lizard belong ?
 How much do the different kinds of this family vary in size ?



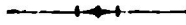
THE LIZARD.

Where are small lizards usually found ?

What is the general appearance of true lizards ?

What is probably the lizard of Scripture, and on what does it feed ?

Bible Reference.—Leviticus xi. 30.



LOCUST.

A MIGRATORY insect of the order Orthoptera, and in some degree allied to the grasshopper. It exists in Syria, Egypt, and in almost all the south of Asia, in which countries legions of them sometimes make their appearance, destroying every vestige of herbage before them, and thereby, in a few hours, giving the once green and flourishing landscapes the appearance of a barren, desolate wilderness. The largest of all the locusts are known as the *Gryllus cristatus*. It is of a bright red colour, and otherwise beautifully marked in the body, which is about four inches long ; the wings, when open, are seven inches in expanse. These locusts, with other large kinds, are eaten, and sold, both fresh and salted, in the markets of some parts of the Levant. At the present time locusts are roasted and eaten by the Arabs. These facts render it highly probable that John the Baptist fed upon locusts and honey. The eighth plague sent as a punishment to Pharaoh was swarms of locusts.

QUESTIONS.

What is the locust ?

In what countries does it appear in great numbers ?

What are the devastations locusts cause when they alight for food ?

What is the size of the largest kinds of this insect ?

Of what uses are locusts to the people of those countries in which they are found ?

On what did John the Baptist feed ?

Bible References.—Exodus x. 4, 15, 19 ; Leviticus xi. 22 ; Deuteronomy xxviii. 42 ; Psalm cix. 23 ; Joel i. 4 ; ii. 25 ; Matthew iii. 4 ; Mark i. 6.

M O L E.

THIS small quadruped is a burrowing animal ; lives mainly underground, and belongs to the genus *Talpa*. It is about six inches in length, has a rather long cartilaginous nose, with which it can burrow in the earth as easily as a carpenter can bore through wood with an auger. Its shoulders, which are of remarkable strength, and its long trenchant claws, are of great assistance to this animal in its mining operations. The eyes are small, deep-set, and covered with fur to protect them from injury. Molehills consist of the soil thrown up by the animal in different parts of the runs or tunnels it makes and traverses in search of the larvæ of the cockchafer and other insects, and of red and white wire-worms, on which it feeds. Its home, or place of rest and security, is called a fortress, usually situated in a bank under the roots of some large tree. Near this it makes a well in which to deposit worms, &c., for future

use. The fur of the mole is softer than that of any other animal, and is used for various purposes. Moles are not vegetarians, but carnivorous animals, and have been known, in the absence of other food, to kill and eat one another. Some writers suppose that the mole mentioned in our first Bible reference means the chameleon. This notion can hardly be supposed to be correct, because both animals are mentioned separately in the same verse.

The habits of the mole are well known, and as its abode is a subterranean one, the expression in Isaiah ii. 20 seems to denote that the caverns and desolate places of the earth which moles inhabit are the fittest locality in their darkness for idol gods.

QUESTIONS.

What is the mole, and where does it live ?

What is its size, and in what respects is its structure adapted for burrowing ?

On what does it feed ?

In what way does it show its forethought and provident habits ?

In what particular is the mole useful ?

What reason can be assigned that the mole described is the one of Scripture ?

Bible References.—Leviticus xi. 30 ; Isaiah ii. 20.

ANECDOTE.—“ Mr. Bruce, in company with the Earl of Airlie’s butler, saw, at a short distance from them, upon the smooth water of the Loch of Clunie, some animal paddling towards a small island belonging to his lordship, who had on it a castle and small

shrubbery. The men referred to soon closed with this feeble passenger, and found it to be the common mole, led by a most astonishing instinct from the castle hill, the nearest point of land, to take possession of this desert island, which, for the space of two years, had been quite free from any subterraneous inhabitant ; but the mole has, for more than a year past, made its appearance again, and its operations, says Mr. Bruce, I have been witness to." Considering that moles are not water animals, and that they even dread heavy rainfalls, it is remarkable that the mole above mentioned should engage in such an enterprise on the water.



MONSTERS.

THIS word in its general acceptance has reference to any unnatural production, something greatly deformed ; a person very wicked or vicious. This meaning, however, cannot be strictly applied to the word as used in our Scripture quotation given below. There can be no doubt that certain animals, inhabitants of the deep, are referred to therein, which are known to historians as belonging to the class Mammalia, order Cetacea, and that they give milk to their young in the same way that the offspring of quadrupeds are supplied with that sustenance. The monsters referred to in our quotation are probably those creatures belonging to the genus *Manatus*, or sea-cow ; those of the genus *Dugong*, of the genus *Dolphinus*, and of the genus *Monodon*, or Narwhals, and different kinds of whales. For a detailed description of these

animals the student should consult any popular natural history dictionary, in which he may find much that is instructive and interesting about the structure and habits of these so called "monsters of the sea" mentioned in the Bible.

QUESTIONS.

What is the general meaning given to the word "monster"?

To what animals may the word be applied?

Why may "monsters of the sea" be supposed to mean the animal you have mentioned?

Bible Reference.—Lamentations iv. 3.



M O T H.

A CREATURE belonging to the Lepidopterous order of insects. The one referred to is, no doubt, that known as the clothes moth, which, as soon as it quits the egg, begins to form a nest, composed of a thin coating of silk wrapped round the body. It then feeds by putting out its head at either end of this covering. It is said that moths never attack unwashed wool, or that which has just come from the sheep's back. After it has attained its full size, it changes into a chrysalis, and in three weeks appears as a small nocturnal moth of a silvery grey colour. The moth in its larva, or caterpillar, state is exceedingly destructive to fur and woollen cloths, &c.

QUESTIONS.

- To what order of insects does the moth belong ?
 What does the grub begin to do as soon as it
 leaves the egg ?
 To what is the moth destructive ?
 After it has attained its full size, what does it be-
 come ?

Bible References.—Job iv. 19 ; xiii. 28 ; Psalm vi. 7 ;
 xxxix. 11 ; Isaiah li. 8 ; Matthew vi. 19, 20.

M O U S E .

THE varieties of this little rodent quadruped are the harvest mouse, a pretty animal but destructive to corn, not only when ripening, but when housed in the barn or stacked in the farmyard. The wood mouse, also found in fields and gardens, which makes its nest in a hole amongst brushwood, or under the roots of trees. There is likewise the Barbary mouse, found in Africa. It is larger than the ordinary mouse, and smaller than the rat. Its body is beautifully marked with longitudinal stripes. There is also the dormouse, found in dense thickets, bushy dells, and tangled hedgerows ; it resembles the squirrel in some of its habits. The common mouse is an inhabitant of every part of the world. It is a playful, lively, intelligent creature, but destructive to the larder. It is an almost unerring judge of the best cheese, and generally feeds upon the very

choicest of those viands for which it has the greatest partiality. The fecundity of this animal is marvellous, but the numbers are kept down by snakes, hawks, owls, weasels and rats, who feed upon them. Were it not so these active creatures would cause great ravages in field, garden, and storehouse produce. The opinion that the Bible mouse is the jerboa is, we think, without foundation. There is better reason for believing the Barbary mouse is meant.

QUESTIONS.

- What are the varieties of the mouse family?
 How widely are they distributed?
 In what respects are they destructive?
 By what means are they kept in check?
 What evils would follow if their numbers were not decimated?
 What mouse is probably the one referred to in the Scriptures?

Bible References.—Leviticus xi. 29 ; Isaiah lxvi. 17.

ANECDOTE.—The following interesting account of a mother mouse and her young one is taken from the "Animal World." "A mouse-trap made of wire, nearly round, with a flat wooden bottom, at the sides of which are placed two or three holes which mousy has to push through to reach the bait inside ; but once through, the points of the wires would close upon her to prevent her return. . . . A tiny young mouse was seen in such a trap, once placed in a kitchen, from which it did all it could to get away, but at every attempt failed. 'I was,' says the writer

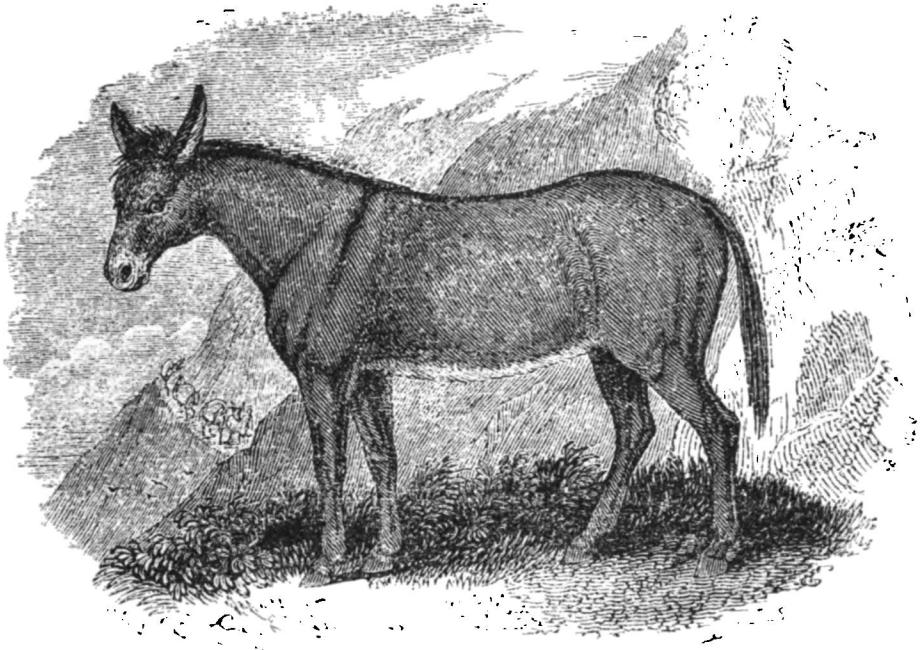
of this anecdote, 'just about to take pity on the youngster, and let it escape, when, lo! an older one appeared on the scene, evidently the parent. She appeared to examine the trap all over, and seemed to try to coax her offspring after her, but to no purpose. At last she left, giving up her little one, as I thought, for lost; but no, she soon returned from amongst the rubbish in the cupboard with a piece of string in her mouth. One end of this she deliberately pushed between the wires into the cage, and soon made the young one to understand what it was to do. Whether the young one really understood itself, or whether the old one made it understand by a certain language of their own, I cannot say; but, however, the youngster soon took hold of the end of the string, and the moment the old one saw she had a good hold, she pulled away with a will, and got her out almost in a second. The wire at this particular part was a little more open than in any other part of the cage; whether this was seen by the old one, or was an accident, is another problem.'"



M U L E.

AN animal of mixed breed, or what is commonly called a "hybrid." It is the offspring of the male ass and female horse, or mare. Some mules are very large, and stand fifteen or sixteen hands high. The mule is found in England, Spain, Portugal, Italy,

Cape of Good Hope, Egypt, and other parts of the East. They are also to be seen in America, especially in New Orleans, where they are employed in many kinds of labour. The mule lacks the symmetry of the horse, but its powers of endurance are greater than those of the latter animal. It has a large, clumsy head, long erect ears, a short mane, and a thin tail. It is, however, very sure-footed, and on this



account is much used in the countries above mentioned for drawing carriages, and is much valued for the saddle. We know of a nobleman in England who has two teams, each consisting of four mules, which are employed in agriculture, and in hauling timber, coals, &c. In ancient times mules were highly prized and honoured, as kings and most distinguished Jewish nobles were accustomed to ride on them.

QUESTIONS.

What is the mule ?

What is the height of the largest kind ?

Where is the mule found, and what are its physical peculiarities ?

In what particular is it inferior to the horse ?

What quality does it possess in a higher degree than the horse ?

For what purposes is the mule often used ?

In what way were mules distinguished in olden times ?

Bible References.—Genesis xxxvi. 24 ; 2 Samuel xiii. 29 ; xviii. 9 ; 1 Kings i. 33 ; x. 25 ; xviii. 5 ; 1 Chronicles xii. 40 ; Ezra ii. 66 ; Esther viii. 10 ; Isaiah lxvi. 20 ; Ezekiel xxvii. 14.



NIGHT HAWK.

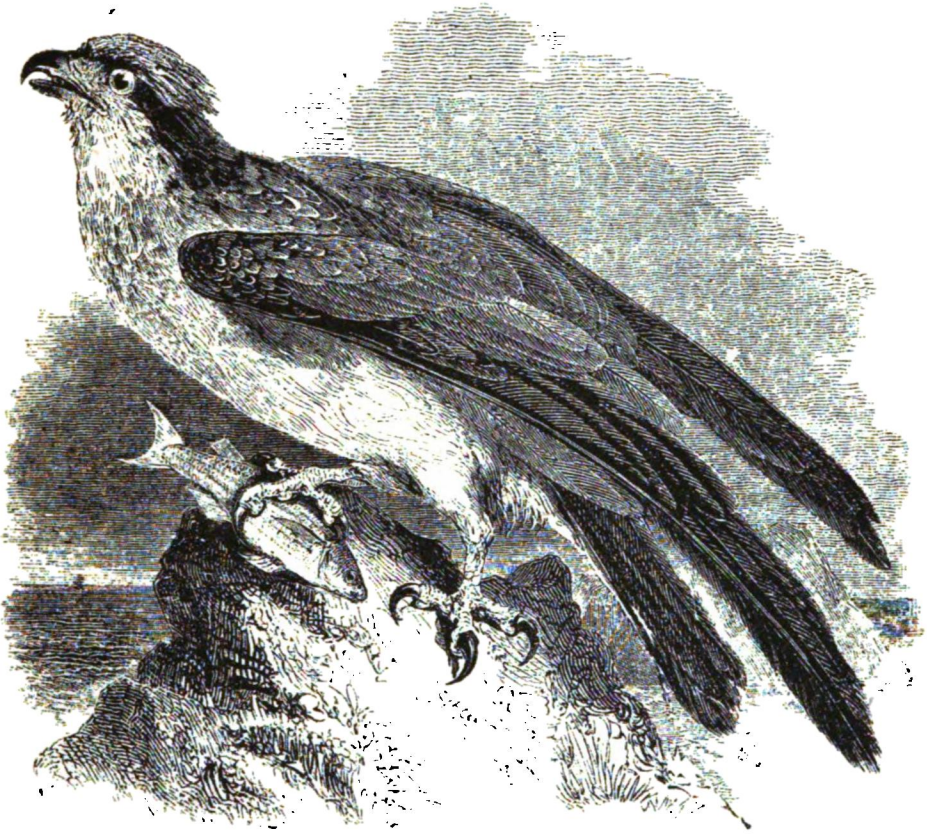
THIS is supposed to be the night owl which lodges in the large buildings or ruins of Egypt and Syria. It is very voracious, and considered unclean.

QUESTIONS.

What is this bird supposed to be, and where is it found ?

Bible Reference.—Leviticus xi. 16.

OSPRAV.



THIS somewhat graceful and pretty-looking bird belongs to the order Accipitres, which includes all kinds of carnivorous, or flesh-eating, birds. It is known all over Europe, the rivers and lakes of which it frequents to obtain its food, principally consisting of fish. The body is about two feet long, the head small, and the upper mandible hooked downwards over the lower beak. The legs are short, thick and strong, the wings long and beautifully marked. Its claws are black and pointed. The outer toes are larger than the inner ones. By turning these out-

wards it can secure and hold its slippery prey very firmly. It builds its nest on a rock, or in a fir-tree, and produces three or four young ones in a season. In Leviticus the ospray is reckoned among unclean birds.

QUESTIONS.

To what order does the ospray belong?

What places does it frequent, and for what purposes?

What is the length of its body?

What description can you give of its wings, beak, head, legs, and claws?

What is the special use of the outer toes?

Where does the ospray make its nest?

How many young ones does it produce in a season?

Bible References.—Leviticus xi. 13; Deuteronomy xiv. 12.



OSSIFRAGE.

THERE is some uncertainty as to what bird the ossifrage really is. Rymer Jones says that to the family of vultures "belongs the lämmer geyer, the largest bird of prey found on the Eastern continent, the higher mountain chains of which it inhabits. It attacks lambs, goats, and chamois. Generally, it makes its victims throw themselves from precipitous rocks, and devours them after they have been killed by their fall, hence it was called by the Romans *Ossifraga*, or bone-breaker." Some authors think the sea-eagle is meant in our Bible reference given below.

Assuming this to be the case, we may notice that the ossifrage shows many of the characteristics of the eagle family, not only in its structure but in its voraciousness. This is particularly seen in one method it adopts to obtain food. The sea-eagle keeps a sharp eye on the ospray, or fishing hawk, when looking for prey. The moment the latter appears with a fish in his beak, the former bird pounces upon it, and by sundry efforts generally succeeds in robbing the bird-fisher of its prize. It is certain that the ossifrage of Scripture was numbered with unclean birds.

QUESTIONS.

What is the lämmer geyer, and on what does it feed ?

What family of birds do some suppose the ossifrage belongs to ?

Why should it be thought that it belongs to the eagle family ?

What are the plans adopted by the lämmer geyer and the sea eagle to obtain food ?

What does the verse quoted below say of the ossifrage ?

Bible Reference.—Leviticus xi. 13.

OSTRICH.

THIS bird may be called one of the giants of the feathered race, belonging to the order Cursores. The true ostriches abound in Africa, where they are bred

on what are called "ostrich farms." They are also found in the sandy deserts of Arabia, where they are often seen in flocks. They avoid as much as possible the presence of man, but seem to like the society of other animals. The ostrich stands from seven to eight feet high from its feet to the top of its head, which it usually carries in an erect position, except when feeding. Its body and legs are of such remarkable strength that the bird can run swiftly with a man on its back. Its wings being only rudimentary it cannot use them for flying, only to assist it in running. The plumes are highly valued as ornaments for ladies' hats and bonnets. The female lays ten or twelve eggs in the sand, where she leaves them all the day to be nourished by the heat of the sun, but she sits on them during the night. The eggs weigh about three pounds each. The ostrich has a strong gizzard, and although it feeds on grass it can digest leather, metal, and the hardest wood.

QUESTIONS.

To what order of birds does the ostrich belong ?

In what countries are ostriches numerous ?

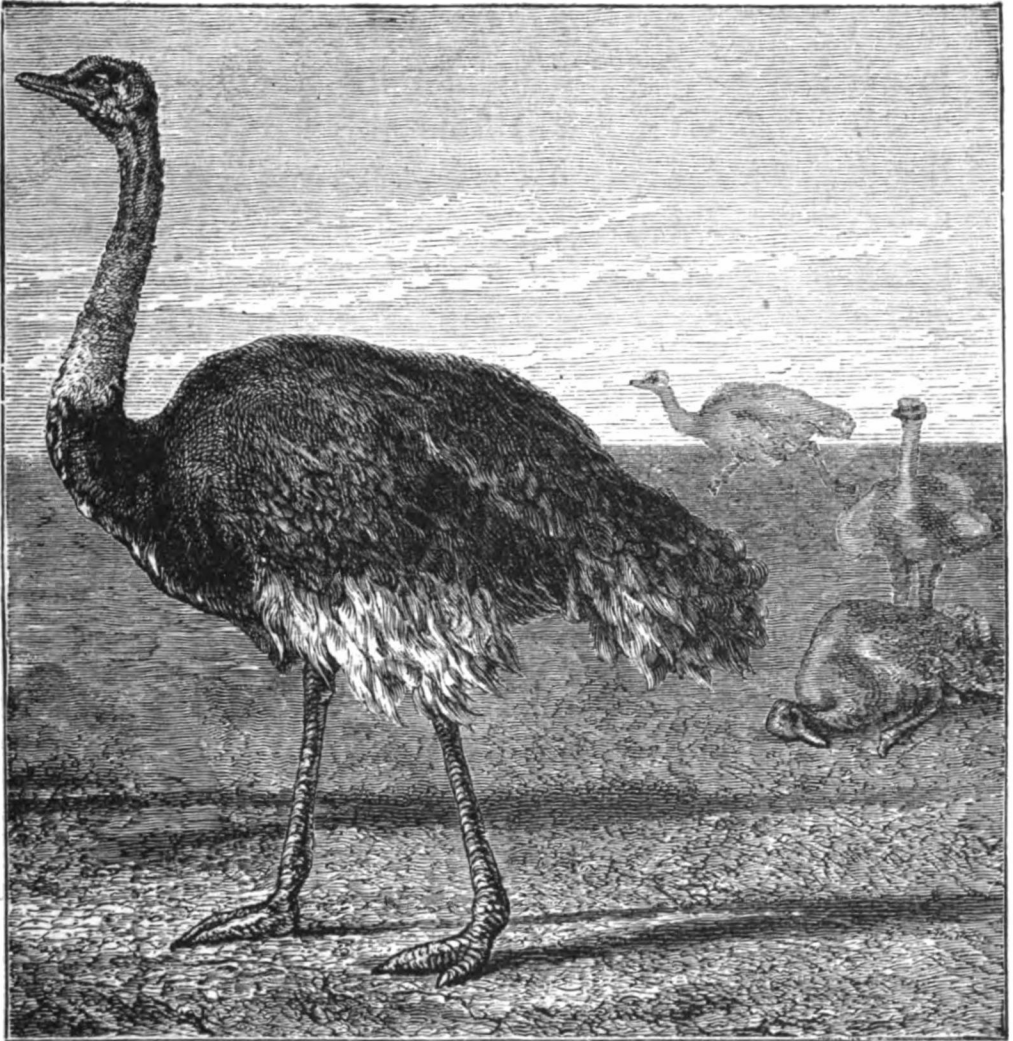
What are the size and height of these birds ?

For what are the wings used, and what does the strength of the body and legs enable an ostrich to do ?

How many eggs does it lay, where, and how hatched ?

On what does the ostrich feed ?

Bible References.—Job xxxix. 13 ; Lamentations iv. 3.



THE OSTRICH.

ANECDOTE.—A female ostrich, kept in confinement in Paris, caused her own death by swallowing some sharp-pointed pieces of glass, which severely lacerated her stomach before she could digest them. "From the moment his companion was taken from him, the male bird had no rest ; he appeared to be incessantly searching for something, and daily wasted away. He was removed from the spot, in the hope that he would forget his grief ; he was even allowed more liberty ; but nought availed, and he literally pined to death." Was not this a proof of strong bird attachment ?

OW L.

ALTHOUGH there are many varieties of the owl family, we shall confine our remarks to three kinds, only stating first, however, that all of them are of nocturnal habits, and show in many points of structure a near relationship to each other. The eyes are large, and the body well covered with feathers.

The Barn Owl is about thirteen inches long, and is of a bright yellowish colour. It is spread over many parts of the old world, especially in the most temperate countries of Europe, India, Japan, Cape of Good Hope, and Great Britain. It lives upon rats, mice and shrews, and is therefore a great friend to the farmer. It is sometimes called the *Screech Owl*.



THE BARN OWL.

Tawny Owl.—This bird is much like the barn owl in size and many of its habits. It forms a nest in a decayed tree, and makes a noise like the utterance “To whit, to whoo,” which has been mistaken for “Who are you?” This bird is also widely distributed throughout Europe, and is found in Smyrna and Japan.

The Long-eared Owl.—The body of this bird is elegantly marked with black, and dark brown upon pale brown. It is no nest-builder, but occupies the deserted nest of a crow or squirrel. This owl is very distinguishable from its relations by its long ears, which stand almost erect from the top of its head. It inhabits all Europe, Astrachan, Trebizond, Southern Egypt, and Africa. It may, we think, be supposed that the sacred writers knew something of the owls we have described. It appears certain that the owl of the Bible loved solitary and desolate places, and the same may be said of the owls of different countries, as described by natural historians. The Scripture references favour this idea.

QUESTIONS.

What are the three kinds of owls we have described ?

What are the habits of owls ?

On what do most of them feed ?

What countries do they inhabit ?

What is the distinguishing feature of the last owl we have described ?

Bible References.—Deuteronomy xiv. 15, 16 ; Isaiah xxxiv. 11, 14, 15 ; Psalm cii. 6 ; Micah i. 8.

ANECDOTE.—We have been informed on good authority that a short time since one of the porters at a railway station in Sussex was sent, one afternoon in the month of November, with a parcel to a gentleman's house about four miles off. To reach it as quickly as possible he took a footpath through a wood, by which he saved both time and distance. When he arrived at the mansion, and had delivered the parcel, he was invited into the kitchen to take some refreshment. This he gladly did, not forgetting to make rather free with some strong nut-brown ale. As the day was rapidly declining, and the darkening shades of night were now spreading over the landscape, he was reminded by one of the servants of his journey back to the station, and that there were two or three paths diverging from the stile at the entrance to the wood through which, he said, he should return. "If you take the wrong path you may lose yourself," said the servant. The ale had so excited the brain of the porter, that he almost indignantly ignored the possibility of a man like himself making such a blunder. "Pooh! pooh!" said he, "that's all right enough, I am sure to take the proper path." The stile was reached and a path was taken. The porter should have been through the wood in about five minutes, but after walking on for more than a quarter of an hour the man became bewildered, for though no light shone on his path, a little did on his brain, as he discovered, to his annoyance, that he was in the wrong path. The darkness had so increased that he could not examine his surroundings so that he might devise some means by which he could extricate himself from his

difficulty. He was deliberating as to what course to take when, to his joy, a voice close by said, "Who are you? who are you?" "Oh, thank you, sir," said the perplexed man, "my name is Jemmy Palmer; I am porter at the —— Railway Station; but I must have taken the wrong path, and I know not which way to go. Help me if you can." No reply was made, but the question, "Who are you? who are you?" was repeated. "I've told you once," said the porter, "that my name is Jemmy Palmer; if you possess any human kindness, help me, I beg of you." Another "Who are you? who are you?" fell upon Jemmy's ears, which so aggravated him that he shouted in anger at being thus tantalized. The loud sound of Jemmy's voice attracted the attention of a labourer who was just then returning from his work.

He at once made his way to the porter to see what was amiss. The excited Jemmy said he had lost his way, and that some man close by, although he could not see him, had asked him two or three times over "Who are you? who are you?" The labourer could not refrain from laughing at the excited and bewildered porter, to whom he said, "Why, my good man, it was no human being at all that spoke to you, it was only the cry of a tawny owl up in one of the trees near at hand, uttering its notes, which seem to say, 'To whit, to whoo, To whit, to whoo,' which your fear and want of knowledge of the habits of this bird led you to construe it into 'Who are you? who are you?'" The labourer, however, soon got Jemmy Palmer out of his dilemma by putting him in the right road for the station. The porter was doubly grateful for his timely rescue from

the terrible fear he had felt of having to spend a night in the wood, but he never forgot that he had on that day made two or three mistakes. One was that he, being too sure of his own cleverness, had taken a wrong path ; and the other was that he knew so little of animals that he did not know the voice of a bird from that of a man. Jemmy foolishly told his adventure to the men at the station, who, whenever he boasted of himself, would say to him, " Who are you ? who are you ? " It would be well for all of us to make ourselves acquainted with the voices of animals, even those of the bird family.



O X.

A WELL-KNOWN animal belonging to the order Ruminantia, which contains a great number of varieties. The castrated male calf is, during the first year, an ox or bull calf ; a steer until he is four years old ; and after that an ox or bullock. Whether considered dead or alive, there is no tribe of animals more useful or profitable to man than the ox family. In ancient times, particularly in Eastern lands, the ox was much used for agricultural and other purposes, and may even now be seen in the employment of farmers in some parts of England. When dead, the ox is useful in many ways : the flesh for food—even the skin, the horns, the hoofs, the blood, the hair, and the refuse of all these have

their separate uses. The Brahmin bulls, belonging to the ox family, are regarded by the Hindoos as animals worthy of veneration, and consider it sinful to slaughter them, or to use their fat to grease cartridges for their rifles. They do not, however, object to work them. The ox is considered clean by the Levitical law.—(See BULL, CALF, COW.)

QUESTIONS.

To what order does the ox belong?

By what names is this animal known during the first stages of its existence?

In what kind of labour has the ox been engaged, when, and where?

What are its uses when dead?

What is the value attached by the Hindoos to Brahmin bulls? and by what law is the ox declared to be clean?

Bible References—Exodus xxi. 28, 29, 32, 36; xxii. 1; Leviticus xvii. 3; Numbers vii. 3; Deuteronomy v. 4; xxii. 1, 10; xxv. 4; 1 Samuel xii. 3; Job xxiv. 3; Isaiah i. 3; xi. 7; Luke xiv. 5.

PALMER-WORM.

ONE natural historian says that this is “an appellation given to larvæ of very different species and genera of Coleoptera,” which include many varieties

of exceedingly small beetles known as corn-moths and grain-weevils. These, insects especially the latter, bore holes with their proboscis into grains of wheat, and therein deposit their eggs, which, when hatched, produce small grubs that ravenously devour the inside of the grain, leaving only the husk or outer covering. It is highly probable that the palmer-worm is one variety of this beetle family which preys, not exclusively on corn, but upon the produce of gardens, vineyards, fig-trees, and olive-trees. The Scripture references to these creatures are supposed to point to destructive insects of the caterpillar or locust tribe, that were sent as a punishment on the children of Israel for their disobedience to the divine commands. Considering the voracity of the locust and caterpillar, it is very probable that the palmer-worm of the Bible was one of the two insects just mentioned. The vast numbers of these insects rendered it very difficult to keep them in check.

QUESTIONS.

What may the palmer-worm be supposed to be?

To what produce of Nature is this worm destructive?

For what purpose was it sent in ancient times?

Why are the efforts of man so futile in trying to destroy them?

Bible References.—Joel i. 4 ; ii. 25 ; Amos iv. 9.



PARTRIDGE.

THIS well-known bird is found in every country and in every climate. It may be seen in the cold north, as well as in tropical lands. It belongs to the order Gallinæ. The feathers are of a brown-grey colour, but on the breast are some of a deep brown, which are arranged in the shape of a horseshoe. The upper beak is short and hooked, the head small but chubby, the neck and tail are short, and the legs are strong, furnished with four toes each. Wherever it resides it can adapt itself to the climate. In Greenland it is brown in summer, but white in the winter, and is clothed with a warm down beneath. In some of its habits it resembles the domestic poultry, but its cunning and instincts are much superior. Partridges make no nests, but deposit their eggs in any slight depression in the ground that may suit their purpose. A covey of partridges often numbers fifteen or sixteen young ones. They live much in cornfields, and even after the crop is garnered they frequent the stubble fields. As game it is extensively eaten, and valued for the delicacy of its flesh.

QUESTIONS.

Where is the partridge found ?

What is the colour of its feathers, and what are the peculiarities of its structure ?

What variety of the same family does it resemble in its habits ?

Where does the female lay her eggs?

What places do these birds reside in to feed and to rear their young, and what are their uses?

Bible References.—1 Samuel xxvi. 20; Jeremiah xvii. 11.

ANECDOTE.—It is recorded by Mr. Jesse that “a farmer discovered a partridge sitting on its eggs in a grass field. The bird allowed him to pass his hand down her back without moving or showing any fear; but if he offered to touch her eggs, the poor bird immediately pecked his hand. Another has been known to fly at, and attack, a person who picked up one of her young in a road, on hearing its cry.”



PEACOCK.

THIS bird has been specially noticed and admired for its remarkably graceful appearance. It is of Eastern origin, but is not uncommon in England. There are great numbers of it in many parts of Asia, Africa, and India. In the days of Solomon, peacocks were imported into Judea by the fleets which that monarch equipped on the Red Sea. “In the days of chivalry it was common for the knights to make their vows of enterprise at a solemn feast on the presentation to each knight, in turn, of a roasted peacock on a golden dish.” The most

prominent feature of this bird is the great beauty of its plumage. From the tip of the bill to that of the tail is about four feet. The head is small, surmounted by a tuft of feathers twenty-four in number. The covert feathers of the male, underneath which is the tail, are more than three feet long. At the end of each feather is a spot or circlet of yellow, with shades of green running into blue and violet. The feathers of the body are of various colours, as green, gold, blue, bronze, and black. The peacock is a vain bird, and when pleased will raise his covert feathers or train erect, and then spread them out like a large fan, which presents a very gorgeous appearance. He, however, has no power of song, but makes a very discordant noise.

QUESTIONS.

What is the origin of the peacock, and where found?

Under what circumstances was this bird introduced into Judea?

What custom, in the days of chivalry, was observed in reference to the peacock?

What are the most prominent features of this bird?

What length are the covert feathers, and how marked?

What are the passions or mental characteristics of this bird?

Bible References.—1 Kings x. 22 ; 2 Chronicles ix. 21 ; Job xxxix. 13.

ANECDOTE.—Some peacocks belonging to a nobleman in the county of Kent appear to have an idea of exclusive right, over animals not of their own kind, to the use of any yard or ground appropriated to them. Some weeks ago they were put into the laundry drying-ground, which was almost entirely surrounded by trees, in which the peacocks were in the habit of perching even during the daytime. Whenever a dog entered the ground, it was the signal for a terrible screeching uproar amongst the birds, who would at once descend from the trees, join the others that happened to be pecking about for any kind of food they could find on the grass, and then all together run towards the intruding quadruped, whom they would chase up and down with feelings of apparent annoyance, and would not cease doing so until the dog was driven by them fairly out of the field.



PELICAN.

A VERY curiously formed water-bird found in Egypt, the Black Sea, on the shores of Greece, and in Persia. The female is about five or six feet long; expanse of wings twelve or thirteen feet. The beak is about one-third the length of the whole body. Underneath the beak is an enormous pouch, in which the pelican stores its prey, consisting principally of fish, part of which the bird eats herself, and the other she mace-

rates in the pouch as food for her young. She has also been known to bring twenty pints of water to give to her nestlings. Pelicans frequent and breed in marshy places, and may be called lovers of the isolation of deserts. The Jews were forbidden to eat this bird.

QUESTIONS.

Where is the pelican found ?

What is the size of its body, and expanse of wings ?

What is the peculiarity in the structure of the beak of this bird ?

For what purposes is the pouch used ?

What is the food of the young, and how is it prepared ?

In what places do pelicans make their nests and rear their offspring ?

Bible References.—Leviticus xi. 18 ; Deuteronomy xiv. 17 ; Psalm cii. 6.



PIGEON.

OF this bird there are many varieties, wild and tame, for a detailed description of which the reader may be referred to "The Treasury of Natural History" or other works on the subject. For Bible references, *see* DOVE.

P Y G A R G.

SOME of the best and most popular natural historians make no mention of this animal under the name pygarg. A Biblical writer, however, says that it is considered by some to be of the eagle kind, but he himself is of opinion that the animal was either one of a species of gazelle, or a mountain goat found in Africa and Asia; which is not improbable, as the name of pygarg is comprised in the list of quadrupeds mentioned in our Bible reference. But as the verse quoted gives the name only, without any intimation of the size or habits of the pygarg, its identity with either of the three animals referred to is, to say the least, uncertain.

QUESTIONS.

What is the pygarg supposed to be?

What reason is there to suppose it was a quadruped of some kind?

What leaves the identity of this animal uncertain?

Bible Reference.—Deuteronomy xiv. 5.



Q U A I L.

THIS bird belongs to the order Gallinæ, of the class Aves, and is closely related to the partridge, but much smaller. It abounds in Asia, Africa, and the

southern parts of Europe. It is beautifully marked, and in the season is esteemed a great delicacy at the table. It is supposed that the quails by which the Israelites were fed in the wilderness were driven there, on their passage to the north, by a south-west wind sweeping over Europe and Egypt towards the shores of the Red Sea. Quails are brought in great numbers to England, and are well known for their pugilistic propensities.

QUESTIONS.

To what order and class does the quail belong ?

In what countries is it found in great numbers ?

What was the cause of so many quails being driven into the wilderness, and what purpose did they serve ?

Why are they sent to England ?

Bible References.—Exodus xvi. 13 ; Numbers xi. 31, 32 ; Psalm cv. 40.



R A M.

THE male of the sheep or ovine genus. The ram of consecration was sacrificed when the priests were invested with their office.—(See Exodus xxix. 26. See also SHEEP.)

QUESTION.

What is the ram ?

Bible References.—Genesis xxxi. 10; xii. 38; Exodus xxix. 26; Deuteronomy xxxii. 14; 1 Samuel xv. 22; 2 Kings iii. 4; Ezra vi. 9; Psalm lxvi. 15; Isaiah i. 11; Ezekiel xxxix. 18; Micah vi. 7.

RAVEN.

THIS bird is widely distributed in Europe, and other parts of the Eastern hemisphere, as well as in America. It is the largest of all the passerine birds, being about two feet two inches in length. Its colour is black, finely glossed with blue, and the body is symmetrical. As a carnivorous bird it feeds upon carrion, worms, insects, and small animals. It sometimes eats fruits and seeds. This bird is of mischievous habits, and often a great torment to other animals, especially to dogs and cats, with whom it will dispute their right to the food placed for them, and so beats them off. In times of ignorance it was looked upon with an evil eye, and considered to be a bird of ill omen, especially as it emits a fetid odour. It sometimes lives to a hundred years old. The nest is built in lofty trees, and in the holes of rocks. Although the raven is often tamed, that of the Bible is represented as delighting in deserted and solitary places, and as an unclean bird.

QUESTIONS.

In what countries is the raven found?



THE RAVEN.

Of what size is it, and what is the form of the body?

On what does it feed, and to what order of birds does it belong?

What are its habits, and how was it regarded in times of ignorance?

Where does it build its nest, and to what age has the raven been known to attain?

In what is the raven of Scripture represented as delighting?

Bible References.—Genesis viii. 7; Leviticus xi. 15; Deuteronomy xiv. 14; 1 Kings xvii. 4, 6; Job xxxviii. 41; Proverbs xxx. 17; Luke xii. 24.

ANECDOTE.—Lord Bacon gives an account of a raven that filled up with pebbles some hollow in a tree containing water, in order to make the liquid rise up to a point within its reach. Lord Brougham brings it under the head of animal intelligence.

ROEBUCK.

THIS animal is a ruminant, and belongs to the Bovidæ, or deer family, found both in the old and new worlds. There are many kinds of deer, differing in size and colour, and variously estimated in the countries which they inhabit. Although the roebuck was at one time common in England, it is

now seldom seen except in the north of Scotland. It is about two feet three inches high, and is covered with long hairs tipped with grey, but in summer it is of a reddish colour. Roebucks go together in small families, and feed upon herbs and tender shoots of underwood. Its flesh is delicate food. The horns and skin, after death, are utilized for many purposes. There can be no doubt that in ancient times the roebuck was well known in the East, as it is referred to in the sacred writings of the Old Testament, and, by the Mosaic law, was allowed to be eaten. Roebuck is another name for the hart. Some think the roebuck of the East was of the gazelle kind.

The Roe.—It is said that the roe of the Scriptures is a gazelle of later times found in Asia and Africa. Its agility and grace, and the beauty of its eyes, are famed in Eastern poetry. The roe is often referred to in the Bible, and was considered by the Levitical law to be a clean animal.

QUESTIONS.

What is the order to which the roebuck belongs ?

What countries does it inhabit ?

What are its size and colour ?

On what does it feed, and of what use is it when dead ?

Where was this animal well known in ancient times ?

What is the roe of Scripture supposed to be ?

Bible References.—Deuteronomy xii. 15, 22 ; xv. 22 ; 1 Kings iv. 23 ; Proverbs vi. 5 ; Isaiah xiii. 14.

SATYR.

IN Greek mythology this is a fabulous creature, having a body partly of a man and partly of a goat. It is supposed to be the deity of woods and forests. From the Bible references below it will be seen that the word satyr is sometimes rendered devils, and they seem to indicate that, whatever the animal was, it may be regarded as a strange monster of some kind inhabiting a rude and desolate place. Satyr is translated devils in the last Bible reference.

QUESTIONS.

What is the satyr of Greek mythology ?

What inferences respecting it may be deduced from the Scripture passages given below ?

What appears to be certain about this animal ?

Bible References.—Leviticus xvii. 7; Isaiah xiii. 21; xxxiv. 14.

SCORPION.

THIS somewhat dangerous creature belongs to the class Arachnida, which comprises the numerous varieties of the spider family, and of other small animals. Although it is found in many countries, it abounds more particularly in the torrid zone. It is

about six inches in length. From its lower jaws are two projecting palpi, resembling those of the lobster, and terminated by a pair of pincers, or nippers, with which it secures its food, as wood-lice and other insects under stones, wood, or loose refuse. These it first pierces with its sting. It has eight legs, the abdomen is articulated, and the tail is jointed, at the end of which is the sting, often fatal to life, even to that of human beings. It runs with great rapidity, and when doing so curves its tail over its back. Some scorpions have six eyes each, but the larger kind have eight. The female is attentive to her young, and carries them on her back for several days at first without quitting her abode. After this she takes care of them for a month, by which time they are able to take care of themselves.

QUESTIONS.

To what class does the scorpion belong ?

Where is it found in the greatest numbers ?

What are its peculiarities of organization ?

Of what does its food consist, and where does it find it ?

What renders contact with the scorpion so dangerous ?

How does it serve its young, and what does the female show towards them ?

Bible References—Deuteronomy viii. 15 ; 1 Kings xii. 11, 14 ; 2 Chronicles x. 11, 14 ; Luke xi. 12 ; Revelation ix. 5.

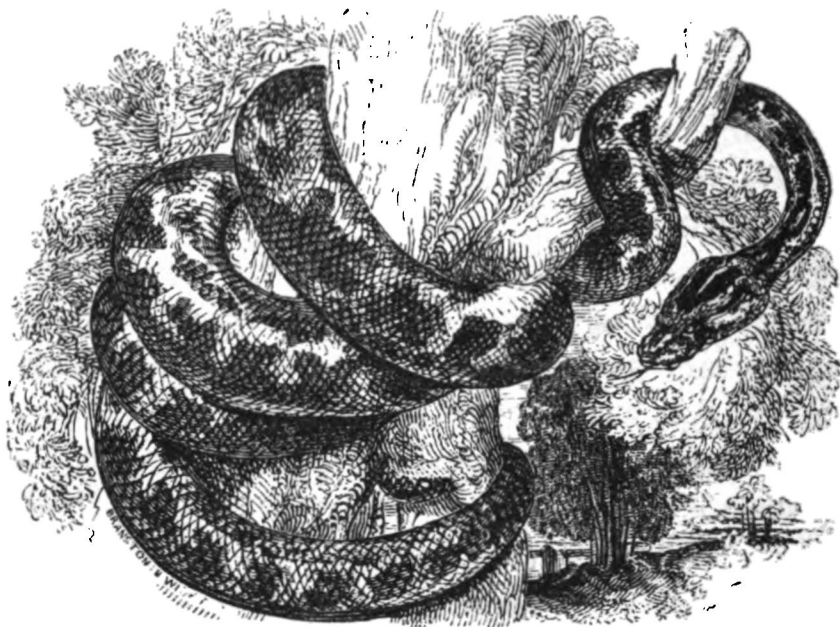
ANECDOTE. — The following story is authentic.

Some years ago a Marine, named Henry Grant, was one night keeping watch on board a man-of-war ship lying at anchor near a seaport town in China. It was in the height of summer, and as the weather was very warm Grant was lightly dressed in wide cotton trousers, and a loose jacket of very thin material; such apparel being indispensably necessary for comfort and convenience in so hot a climate. It was about the middle of the still hours of night, and when the stars were throwing their pale light on the calm waters, that he felt something crawling up one of his legs under his trousers, which he had reason to suppose was a scorpion. He was horror-stricken, as he well knew that the dangerous nature of the scorpion's sting had, in many cases, been fatal to human life. His painful apprehension of danger so increased that the perspiration ran down his face. He was afraid to move, but what to do to prevent the creature's progress he could not at first imagine. Cautiously and as quietly as possible he drew his handkerchief from his pocket, and then tied it tightly round his thigh just above the knee. Slowly but surely the scorpion ascended, and as certainly were the fears and alarm of the Marine becoming intensified. The creature, however, soon stopped. "Now," said the terrified man, "it can ascend no higher, and on that account may become irritated, perhaps pierce my flesh with its poisonous sting, and I shall soon be a dead man." As those dreadful thoughts revolved in his mind the scorpion moved gradually downwards, without doing the man any harm. In a few moments it was on deck, when, with almost lightning rapidity, the Marine raised his foot, and instantly stamped the life out of

the animal which he had before felt certain would be the means of ending his life. Although the dreaded creature was now lifeless on the deck, and Henry Grant's fears had evaporated, he never forgot that he had, on that occasion in that far-off land, a very narrow escape from the grasp of death.

SCREECH OWL.—(See OWL.)

SERPENT.



As the word serpent is mentioned almost at the beginning of the account of the Creation, and as it

very frequently occurs in the sacred writings, the study of its structure and general characteristics should be considered, not only of importance, but as being invested with considerable interest. The serpent family includes many varieties, all of which belong to the class Reptilia, order Ophidia. They differ considerably in size. The bodies of some are several feet in length and of enormous thickness, strength, and weight. When one of these giant serpents seizes an antelope or other animal as its prey, it coils itself round the body of its victim, and presses with such weight and strength that the bones crack, and make a noise like the report of a pistol. When life is extinct, the serpent licks and covers the body with a kind of slime, and then proceeds to swallow it whole. Although these Ophidians have teeth they do not use them for mastication, only to hold their prey securely. The bodies of some serpents are beautifully marked ; yet notwithstanding this some people regard them with horror because of their repulsive appearance, which is no doubt one reason why they are so universally unpopular. About one-fifth of the whole number of serpents are venomous, and dangerous to life. The young are produced from eggs, and in venomous serpents are hatched before they are excluded. The offspring are born alive. In the Bible the devil is called "the serpent" and "the old serpent," probably in allusion to his subtlety and malice in tempting our first parents to disobey God. On which occasion, some think, he either appeared in the form of one, or employed a serpent for that purpose. This animal is used by the sacred writers as an emblem of

wickedness and treachery. "In Egypt and other Eastern countries the serpent was the common emblem of power. Hence it was embroidered on the robes of kings. It was also an object of religious worship." Because of the murmurings of the children of Israel, referred to in the Book of Numbers xxi. 5, 6, 7, 8, 9, God sent fiery serpents among the people, who were severely bitten by them. This caused them to ask Moses to pray to the Lord to take them away. Moses did so, and was commanded to make of brass the representation of a fiery serpent, and to put it on the top of a pole, and to tell the people that if those who had been bitten would look to the brazen serpent they should live. In speaking of Himself, Christ refers to the circumstances above stated. See John iii. 14, 15.

QUESTIONS.

- In what do we find the word serpent often used ?
 What duty on our part does this imply ?
 To what class and order does the serpent belong ?
 What are the size and thickness of some of the largest serpents ?
 How do they secure their prey ?
 What is the special use of the teeth of these reptiles ?
 How many tribes of serpents are venomous ?
 How do they produce and treat their young ?
 In what way is the serpent spoken of in the Scriptures ?
 What importance has been attached to it ?

Bible References.—Genesis iii. 1, 13 ; xlix. 17 ;

Numbers xxi. 8 ; Job xxvi. 13 ; Psalm lviii. 4 ; Proverbs xxiii. 32 ; Ecclesiastes x. 8, 11 ; Jeremiah xlvi. 22 ; John iii. 14 ; Revelation xii. 9.

ANECDOTE.—As serpents are supposed to exercise a very fascinating influence over some animals, especially birds, the following anecdote affords proof that the idea is well founded. It is stated in the "Philosophical Transactions," that "a viper-catcher, who had more than sixty living vipers in a chest, put a living mouse in among them. It is well known that these creatures never feed whilst in confinement, unless it be a female that is with young. One of the vipers in the chest happened to be in this situation. None of the others paid any attention to the mouse ; but she raised up her head a little, and looked furiously at it. The terrified mouse stood still for a considerable time ; though the viper continued rolled up in a spiral form, only raising up her head and looking at it, vibrating her tongue at the same time. The mouse at length took courage to move, but without running away, only walking, as if terrified, round and round the viper, squeaking frequently as it went ; till at length it came before the head of its enemy, which was still in an erect posture, with the mouth open. The unfortunate mouse after some time drew nearer, and at last crept into the viper's mouth, where it was gradually swallowed without obliging her to alter her position."

S H E E P.

THIS animal is found in all hot as well as in cold climates. It is a ruminant, and belongs to the mammals. It is harmless, inoffensive, and easily controlled. The sheep is the first mentioned quadruped in the Bible, and was used in the sacrifices of the old dispensation. In the Jewish ceremonies or religious observances it was offered as an atonement. In the early ages of the world, the sheep family formed the principal wealth of the patriarchs. In ancient times Eastern shepherds were wont to train their sheep to follow them instead of being driven. The relation which existed between the patriarchal shepherds and their flocks was indeed of so intimate and affectionate a nature, as to have afforded the subject of many of the most beautiful and touching parables and moral illustrations in the sacred writings. It is needless to say that of this animal there are many different kinds, but all of them are, more or less, treasures of usefulness wherever they are found. The milk, flesh, skin, and especially the wool, are valuable products of this animal. The mother sheep has been known to become almost inconsolable when she has lost her offspring by death, and then to bleat mournfully over its remains during many days, or until their removal from her sight.

QUESTIONS.

Where is the sheep found, and to what class does it belong?

In what way was the sheep used in the early ages of the world ?

How did the ancient Eastern shepherds train their sheep ?

What is the nature of many of the references made to this animal in the Scriptures ?

In what particulars are sheep useful ?

In what way does the mother sheep sometimes show its affection ?

Bible References.—Genesis iv. 2 ; xxix. 6, 9 ; Exodus ix. 3 ; xxii. 1 ; Leviticus i. 10 ; vii. 23 ; Numbers xviii. 7 ; Deuteronomy vii. 13 ; xxii. 1 ; xxviii. 4 ; 1 Samuel viii. 17 ; 2 Samuel vii. 8 ; xvii. 29 ; 1 Kings viii. 5 ; 2 Chronicles v. 6 ; xxx. 24 ; Psalm cxix. 176 ; Jeremiah xxiii. 1 ; Zechariah xiii. 7 ; Matthew x. 6 ; xii. 11 ; xxv. 32 ; John x. 2 ; xxi. 16 ; Hebrews xiii. 20.

ANECDOTE.—The author of “Our Dumb Neighbours” states that “a Highland lamb was a discriminating admirer of music was delighted at brisk and lively airs, such as are set for polkas, quadrilles, and other dance tunes, but abhorring all slow and solemn compositions. It had the deepest detestation of the National Anthem, and would set up such a continuous baa-baa, as soon as its ears were struck with the unwelcome sounds, that the musician was fain to close the performance, being silenced by mirth, if not by pity.”

Attachment of Sheep to their Birthplaces.—It is said that “a ewe that was driven from Scotland

into Yorkshire made her escape, and after passing through towns, crossing rivers, &c., revisited her native spot in the hills of Annandale. Another from Perthshire came back to Hundishope, a store-farm twenty-three miles distant from Edinburgh. When she reached Stirling, it was fair-day; she durst not venture through the town amongst the populace, but rested herself at its north side till the fair dispersed, and came through late in the evening."

SNAIL.

THE common snail, which is almost universally known, belongs to the class Mollusca, order Gasteropoda. It is numerous in our gardens, and is seen more especially in rainy seasons. This creature hides itself in a shelly house or covering of its own manufacture, which, when it essays to crawl along, it bears on its back. The snail is its own tell-tale as to the peregrinations it may please to make on gravel paths, stone pavements, or brick walls, as it always leaves a slimy track behind it. The snail is produced from eggs, each about the size of an ordinary field pea, which it deposits under large stones in damp places. From its head proceed something like horns, which it pushes out when on its travels. The eyes are at the end of the two longest horns, so that, being elevated above the body, it may see the way it is going. The slime from the under

part of the body is considered to possess a healing property for a skin disease called eczema, and when the body of the creature is taken in boiled milk, it is said to impart strength to weak lungs. If any part of the body has been cut off, it has the power of reproducing it. It can also repair a broken shell. The edible snail was at one time considered to be by the Romans one of their table luxuries. The snail is found throughout the continent of Europe, Asia, and Africa, as well as elsewhere.

QUESTIONS.

To what class does the common snail belong ?

How is it protected, and how produced ?

Where are its eyes situated ?

What are the supposed uses of the snail ?

What estimate did the Romans form of this
Gasteropod ?

Where is the snail found ?

Bible References.—Leviticus xi. 30 ; Psalm lviii. 8.

ANECDOTE.—“I was surprised,” says Mr. Woodward, “one evening with what I supposed to be the note of a bird on my window-sill. . . . It somewhat resembled the notes of the wild duck in its nocturnal flight, and, at times, the twitter of a red-breast in quick succession. I carefully removed the shutter, and, to my surprise, found it was a garden-snail, which, in drawing itself along the glass, had produced sounds similar to those elicited from the musical glasses.”

S O W.---(See SWINE.)**S P A R R O W.**

OF this bird there are the tree or mountain sparrow, the hedge sparrow, the reed sparrow, and the common house sparrow. As the latter is, no doubt, the bird referred to by the Psalmist and the Saviour, we may observe that it is found in all parts of Europe, and almost throughout the Eastern continent, enduring equally well severe cold and intense heat. It is a familiar bird, and very industrious, especially in procuring food for itself and young. It has a dash of the robber and poacher about it. It filches grain from the pig-trough, and will contend for its food with other birds; even the large turkey forms no exception. The nest is built in a secure place, but shows very little architectural ingenuity. The sparrow is sometimes an invader, as it has been known to take possession of an old swallow's nest before the return of its rightful owner. In harvest time this and other kinds of sparrows may be destructive to ripening grain, but they are useful in helping to keep down the preponderance of caterpillars and other ravenous insects.

QUESTIONS.

How many kinds of sparrows are there?

Where is the sparrow found ?

What propensity does it show in procuring its food ?

What kind of nest does this bird sometimes occupy ?

In what respects is it destructive, and useful ?

Bible References. — Psalm lxxxiv. 3 ; cii. 7 ; Matthew x. 29 ; Luke xii. 6.

ANECDOTE.—Miss Wakefield says in her book, "Instinct Displayed," that "a lady who was residing at Fulham had brought up a sparrow tame from the nest. On one occasion she went for the winter to her house in London, which was situated near the Thames, taking her sparrow with her, having covered his cage, in the carriage. After some months, the window of the drawing-room was one day left open, and, as the bird was suffered to fly about the room, it took its flight and was lost without hope of recovery. About ten days after this circumstance, she had occasion to send a servant to Fulham, who told the maid left there of the unfortunate accident of losing the sparrow, and his mistress's concern on the occasion ; upon which she observed that for a day or two a sparrow had come constantly into the kitchen, and, with unusual familiarity, had placed itself upon the chairs and dressers. It proved to be the sparrow that had escaped from London, and had been a week finding its way to Fulham. . . . The same bird, the following spring, formed an attachment to a female of his own kind, and made a nest ; and, in order to gather materials for it, frequently

visited the house for bits of rag or thread, which he carried away in his beak. Sometimes he brought his wife into the parlour, and once was accompanied by his little ones, but they were soon alarmed and flew away. When they were able to take care of themselves, he returned to his kind protectress, and lived in the room as before. This faithful creature met with an unfortunate end, being accidentally crushed in a window-shutter."

SPIDER.

SPIDERS constitute a numerous family, divided into many different kinds. There are hunting, leaping, wandering, trap-door, geometric, water, harvest, and common house spiders. They all belong to Araneidæ, the third order of the class Arachnides. They are produced from eggs, and hatched in perfect form, although very small. They breathe through lungs, are amazingly predaceous, and live on any insects they can overcome. They have eight legs each, some of them have six eyes, and others eight eyes each, which appear like a locket of diamonds. If a spider should lose a limb, or limbs, in a few days new legs will appear. Many species lay their eggs in September, and in order to keep them warm envelop them in a strong silky web. The webs woven by spiders are composed of silky threads, the material of which is produced from their own bodies

as a thick gum, issuing from four or six little swellings on the abdomen. These form the spinning apparatus that makes thread like rope-spinning. In each spinner are five tubes through which the smallest threads are spun; these united make the strongest lines. To accomplish this the weaver places a thread between the claws of its feet, then begins a rotatory movement which brings them all together in one strong thread. Spiders are no respecters of places; they would as soon weave their webs in the palace of a grandee as in the hovel of the poor. When a mother spider fears danger to her young or herself, she will intimate by certain sounds and movements that they are to get on her back, and the moment they do so off she runs with her living load to some place of safety. When the web of an aged and infirm spider is broken, the younger ones will repair it for her, and also supply her with food when too feeble to provide itself with necessary sustenance. In this respect spiders teach a very useful lesson.

QUESTIONS.

How many kinds of spiders are there?

How are they produced, and how do they keep their eggs warm?

Of what are spider's webs composed, and from whence do they obtain the material for them?

What is the spinning and weaving apparatus of spiders?

What moral qualities do spiders possess?

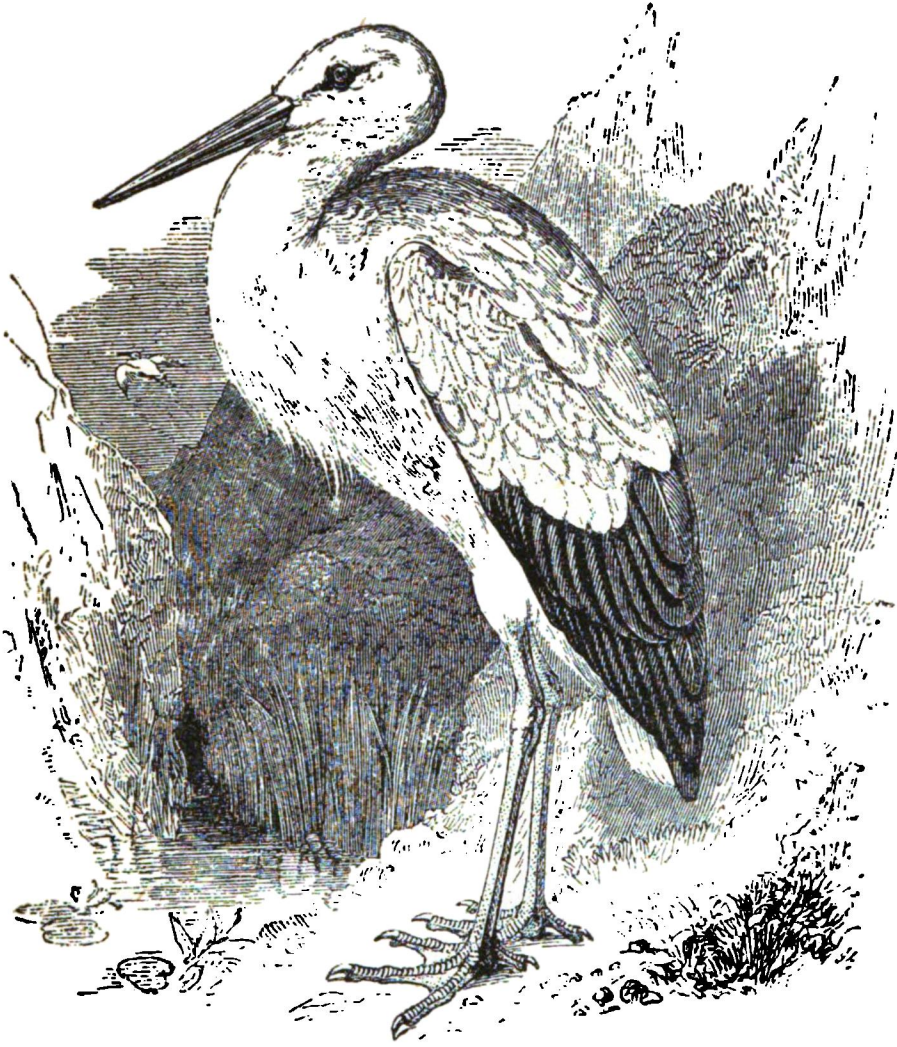
Bible References.—Job viii. 14 ; Proverbs xxx. 28 ; Isaiah lix. 5.

ANECDOTE.—“ To test the ingenuity of the spider, a gentleman placed one on an upright stick, and surrounded the base with water. After having reconnoitred and discovered that the ordinary means of escape were cut off, it ascended the stick, and standing nearly on its head, ejected its web, which the wind soon carried to some contiguous object. Along this the sagacious insect effected its escape, not, however, until it had ascertained by several exertions of its whole strength that its web was securely attached at the other end.”



STORK.

THE common or white stork inhabits the temperate climates of the old Continent, though it is rarely seen in England. In Holland and France numbers of them walk familiarly in the streets, breed on the housetops, where boxes for their use are placed by the inhabitants. The nest is composed of sticks, in which the female lays three or four eggs, each about the size of that of a goose, and of a dull white colour. Both parents show great concern and affection for their young, and equally attend to their training. The food of the stork consists of frogs, mice, and other small animals. These birds sleep on



THE STORK.

one leg, and just before the time of migration make a very peculiar noise with their beaks. Before they depart for warmer climates they assemble in flocks, make a great fuss and noise, and, after taking several excursions as if to test their strength, set out at once and in silence. Stork in the Hebrew means mercy or piety; in English it signifies natural affection, which is a strong characteristic of this bird.—(See ANECDOTE.)

QUESTIONS.

What countries do storks inhabit ?

How are they treated in Holland and France ?

Of what is a stork's nest composed ?

How many eggs does it lay, and what is their colour ?

What is the treatment of parents to their young ?

On what do storks feed ?

What are their movements just prior to their migration ?

What does stork mean in the Hebrew and English languages ?

Bible References.—Leviticus xi. 19 ; Deuteronomy xiv. 18 ; Psalm civ. 17 ; Jeremiah viii. 7 ; Zechariah v. 9.

ANECDOTE.—The following is a German stork story. “ It appears that some time ago, during a great storm, the lightning struck a barn in the village of Lowenberg, and a stork's nest, in which there were some storklings, was threatened by the flames. The two parent birds contemplated the horrible situation

from a distance with evident distress. At last the mother bird darted down upon the nest, and seizing one of her young family with her beak, bore it off to a safe spot upon a meadow. The father followed her, and settled down to keep watch over his offspring. When the mother returned to the scene of danger the fire had reached the nest, in which one bird still remained ; but while she was flying round it, preparing for a descent, the young one fell through the charred nest into the burning barn. It was no moment for thought. Down darted the mother into the smoke and fire, and, coming up with her *Sprössling* in her beak, flew off, apparently unhurt." In this anecdote is a lesson which some parents might learn with profit.

SWALLOW.

THERE are but few families of birds more interesting than that to which the swallow belongs. Its annual return to this country is very suggestive of a revival of the life and beauties of spring ; its stay with us during the warm summer-time, its graceful gyrations, its rapidity of flight, its almost ceaseless activity in building its nest, procuring food and rearing its young, as well as the beautiful markings and blending of the colours of its little feathery body, cannot fail to draw out our admiration, and to afford to us lessons fraught with useful instruction, gratitude, and pleasure. There are many kinds of swallows, of which those that periodically visit England may be

taken as types. The house or chimney swallow is about six inches long. Its nest is composed of a mixture of hair, straw, and mud, lined with a few feathers, and placed about three or four feet from the top of the inside of a chimney. The barn swallow attaches its nest to the rafters in barns. Although there are other varieties of this bird, we may notice more particularly the window swallow, which abounds in England, other parts of Europe, and Asia. It is about five inches long, and forms its nest beneath the eaves of a house or other building, against rocks or cliffs. Swallows are of great utility in devouring small insects they catch while on the wing. In the autumn of the year they migrate to a warmer climate, first passing over the English Channel, flying southward, crossing the Mediterranean, and finally remaining in Algeria as long as the winter continues in northern countries.

QUESTIONS.

Of what is the appearance of swallows on their arrival in England suggestive ?

What kinds of swallows are there ?

Where do they build their nests, and of what are they made ?

In what way are swallows useful ?

When do they leave England, and whither do they migrate ?

Bible References.—Psalm lxxxiv. 3 ; Proverbs xxvi. 2 ; Isaiah xxxviii. 14 ; Jeremiah viii. 7.

ANECDOTE.—*The Animal World* publication

states, on the authority of *The Tages Post* of Linz, that "a fire broke out in the Hotel Zurweessen Ganz, and when the flames were raging most fiercely, a swallow, which had her nest under the eaves of the building, came flying hurriedly along to the spot, and darting through a thick smoke to save her little ones, was driven back by the flames, which were spouting from the frame of the roof over her nest. Three times did this tender little bird renew her attempt. The fourth effort was fatal, the fire caught her, and she fell dead at the feet of the spectators, who had sympathized without being able to help." What are the feelings of these little feathered parents when their nests are rifled, or destroyed by thoughtless children!



S W A N.

THE swan is one of the most beautiful, graceful, majestic-looking water-birds we have in England. There appears, however, some doubt as to whether the modern swan is that of Scripture, in the translations of which it has been rendered ibis and *purple* bird. Although it is uncertain what bird, if not the swan known to us, it may be supposed to be, it was unclean by the ceremonial law.

QUESTIONS.

What is the modern swan?

What is that of Scripture supposed to be?

How was the swan estimated by the ceremonial law?

Bible Reference.—Leviticus xi. 18.

SWINE.

THIS word is frequently mentioned both in the Old and New Testament Scriptures, and is the plural of hog or pig, a pachydermatous animal, whether it be wild or tame. The wild boar is distributed throughout Europe and Asia. It was at one time common in England, where it served as a beast of chase, as it now does in India and Germany. It is fierce and powerful, being armed with long curved and sharp tusks, with which he can easily rip up the body of a horse or his rider. It is supposed the wild boar was the progenitor of the many varieties of the domestic hog, or pig, now bred in nearly all countries. These animals are omnivorous, and not by any means epicures, as they will devour almost anything, not objecting even to feed upon the blood of their own kind that have been slaughtered. They are usually spoken of as "dirty animals," because they often wallow in mud, and soft dirt of any and every kind. In summer-time this habit is more from necessity than choice. These animals are liable to a layer or layers of an irritating scurf, which covers their bodies, and causes much uneasiness. To get rid of this they

plunge into mire or mud, a coating of which adheres firmly to the scurf. When the mud is sufficiently dry, these animals rub their bodies against a tree or post, which brings not only the mire, but the scurf clean from their bodies ; they are then relieved of the irritation. Swine value a clean bed of straw as much as other animals do. The Jews and Mahomedans consider themselves defiled if they even touch the flesh, because the eating of it is prohibited by their laws.

QUESTIONS.

What do you understand by swine ?

Where is the wild boar found, and how was it formerly treated in England ?

What is the true character of the wild boar, and what are some of the peculiarities of its structure ?

Why do swine wallow in mud and mire ?

What is the estimate that Jews and Mahomedans form of swine ?

Bible References.—Leviticus xi. 7 ; Proverbs xi. 22 ; Isaiah lxxv. 4 ; lxxvi. 3, 17 ; Matthew vii. 6 ; viii. 30-32 ; Mark v. 11 ; Luke viii. 32 ; xv. 15.

ANECDOTE.—Defective as hogs are supposed to be in intelligence, or brain-power, instances are not wanting to show that they sometimes possess a considerable amount of sagacity, seen in the effectual way they learn, and know what they are taught to perform. "A gamekeeper of Sir Henry Mildmay broke a black sow to find game, back, and stand to

her point, nearly as steadily as a well-bred dog. The sow was a thin long-legged animal of the New Forest breed." It appears that some time afterwards this sow assimilated her manners so much to those of the dogs with whom she had lived, that she became a destroyer of sheep.



TORTOISE.

THIS animal is included in the class Reptilia, and is found in the different countries of the East. Some are aquatic, others live on the land. Their bodies are enclosed in a kind of twofold shell or hard covering, through which protrude the head and neck, the four curiously formed legs and feet, terminated by claws, and the short tail. They are slow in their movements, quiet, inoffensive, and very tenacious of life. They are vegetable feeders, and in the height of summer are very voracious. They are fond of milky plants, such as lettuces, dandelions, sow thistles, &c. Towards autumn they decline eating, but drink much water. During the winter they hibernate under refuse, very loose earth, or in any other solitary place that may be available to them. They are not devoid of intelligence, and in a domesticated state have been known to answer to their names when called.

QUESTIONS.

To what class does the tortoise belong?

By what is its body enclosed ?
 What are its structure and character ?
 On what does it feed ?
 How does it pass the winter ?
 What proof does it give of its intelligence ?

Bible Reference.—Leviticus xi. 29.

ANECDOTE.—Some time ago a lady went into her garden to take up a root she wished to preserve, and whilst thus engaged thought she saw something moving slowly towards her ; this was Bob the tortoise. He came close beside her, and she took him up, saying, “ What is the matter, Bob ? what has brought you out of your comfortable house this cold day ? ” The cause was soon explained. A snail had inserted itself between poor Bob’s head and his shell, so that he could not draw his head in and out, which must have caused him much discomfort. The snail was removed, and Bob trudged back home. There he remained during the winter. Bob knew his kind friend, and that he had only to go to her to be released from his enemy. Learn the lesson from the tortoise and his friend, to treat every living creature with tenderness. These poor mutes are sensible to kindness, and in many loving ways repay your care and consideration for them.—C. S. W., *Animal World*.

—♦—

TURTLE-DOVE.—(See DOVE.)

UNICORN.

WHATEVER uncertainty there may be as to the particular animal to be understood as the unicorn, it is very certain that the passages of Scripture which have the name unicorn in them have no reference to the animal represented on the Royal coat-of-arms, as having the body of a horse with a long horn projecting from the head of it. Bible references favour the supposition that the rhinoceros is the unicorn spoken of by the sacred writers. Certain it is that the former animal is of great strength, ferocity, and wildness, and that the horn growing out of the nasal bone of the head is erect.

QUESTIONS.

What animal is supposed to be the unicorn of Scripture?

What are the physical characteristics of the rhinoceros?

Bible References.—Deuteronomy xxxiii. 17 ; Isaiah xxxiv. 7.



VIPER.—(See ADDER.)

Bible References.—Job xx. 16 ; Isaiah xxx. 6 ; lix. 5 ; Acts xxviii. 3.

VULTURE.



THIS is, without doubt, one of the most voracious of birds, yet it is a very useful and necessary scavenger, especially in tropical climates, where putrefaction is most rapid and injurious to health. No sooner is the dead body of an animal discovered, than it is surrounded by great numbers, who come from nearly all directions. The head and neck of the vulture are usually naked of feathers, which, to the bird, is a great convenience on account of its habit of plunging

its head into the entrails of the animal on which it feeds. The upper mandible is hooked, and both beaks are well adapted for tearing and cutting. The claws are sharp and strong, by which, as with a carving fork, it can hold its victim securely. It is not unlikely that the vulture mentioned in Scripture is the Egyptian one, sometimes called "Pharaoh's chicken." It is found on the shores of the Mediterranean Sea. The plumage is white, excepting the quill feathers, which are black. This bird is the smallest of the vulture tribe. The nests are usually on the tops of high rocks and the loftiest trees. There are many kinds of the vulture family.

QUESTIONS.

What are the special uses of the vulture ?

What are the peculiarities of its structure ?

What vulture is supposed to be mentioned in the Bible ?

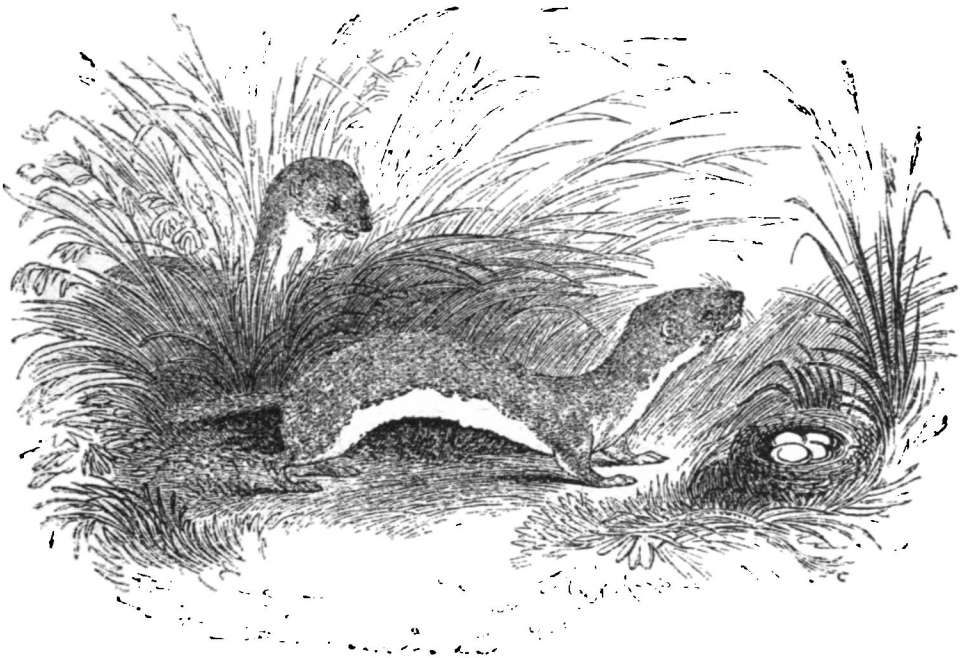
Where is it found, and of what colour is it ?

Where do vultures build their nests ?

Bible References.—Leviticus xi. 14 ; Deuteronomy xiv. 13 ; Job xxviii. 7 ; Isaiah xxxiv. 15.



WEASEL.



THIS animal is not only known in Great Britain, but is found in all the temperate countries of Europe. It belongs to the class Mammalia, order Feræ. It is about six inches long in the body, with a tail about two inches more. The head is large in proportion ; upper jaw is furnished with long hairs like those of a cat's whiskers. The neck is long, legs short, and the body lithe. When alarmed it will leap four or five feet high, when it makes for a tree, up which it climbs almost as nimbly as a squirrel. It lives upon small animals, as moles, rats, field-mice, birds, and any other creature it can overcome. Although very voracious, it is supposed to be the farmer's friend by destroying what are called vermin, which infest corn-ricks and

granaries. It is said that some writers believe the weasel of Scripture means the mole, but we have seen no reason assigned for this opinion.

QUESTIONS.

To what class and order does the weasel belong ?

Where is it found ?

What can you say about its structure ?

How does it escape injury when alarmed ?

Upon what does it feed ?

In what way is it useful, and to whom ?

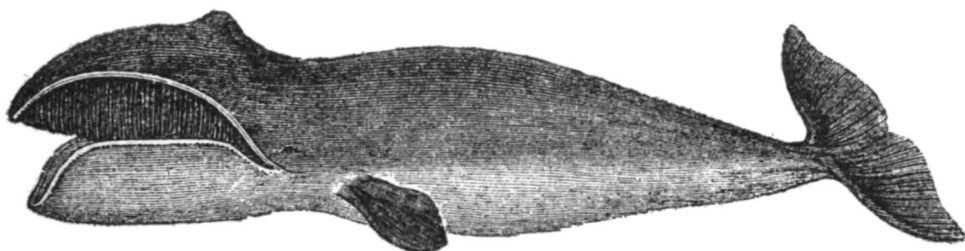
Bible Reference.—Leviticus xi, 29.

ANECDOTE.—The workmen in the engine-house of the New Haven Railroad were greatly amused, a few days ago, by the movements of a weasel that had killed a rat, nearly as large as himself, in one of the engine-pits. The side of the pit being perpendicular and the rat too heavy for the weasel to carry up in his teeth, the question arose how he should get him out. It looked like a difficult task, but the weasel was equal to the emergency. After several unsuccessful attempts to shoulder the rat and climb up the side, he laid him down and went about to the different corners of the pit on a tour of inspection. Finally selecting one in which sufficient dirt had accumulated to make an elevation of several inches, he went back, dragged the rat to the corner, and stood him upon his hind-legs. He then clambered out of the pit, and going to the corner where he had left the rat, let himself down by his hind-feet from above,

clasped the rat around the neck with his fore-paws, pulled him up, and trotted off with him to his hole.
—*Our Dumb Animals.*



W H A L E .



OF this Cetacean, belonging to aquatic Mammalia, there are so many different kinds, that the young student is referred to some book on Natural History for a detailed description of these “inhabitants of the deep.” We may merely observe that in addition to their marvellous structure, their remarkable size may well fill the mind with wonder and amazement. Some of them measure from twenty to ninety feet in the length of their bodies, those of the largest being so great in circumference as to require the aid of a ladder for any one to reach their backs. These are supposed to be the leviathans mentioned in the Scriptures. There is, however, a difference of opinion amongst natural historians and Biblical students as to the whale of Scripture being one of the many kinds of whales known to modern writers.

The author of the Biblical Cyclopædia says "that the word whale used in Genesis i. 21, and Job vii. 12, probably means no particular species of animals, but the largest class of creeping things, whether inhabiting the land or the water. The geological investigations of the present day determine such to have existed, of a character different from any now known; and comparative anatomy proves their nature to be most accurately described by the term 'great creeping things.' This use of a general word to denote some huge monster is supposed by some to occur in Psalm civ. 26, Ezekiel xxxii. 2, and Matthew xii. 40."

The passage last quoted mentions the word whale, by whom, we are informed, Jonah was swallowed; but in the Book of Jonah i. 17, it is stated that "God prepared *a great fish* to swallow Jonah." This seems to afford a plausible reason for believing it was not a Cetacean known at the present time as the whale in whose inside Jonah was said to have been imprisoned during three days and three nights, seeing that the gullet of the whale is not large enough to admit anything the size of a man. "The common opinion, since the time of Bochart, has been that the fish was of the *shark* species, or the *sea-dog*. In some fishes of this kind human bodies have been found entire, &c." The words "great fish" may therefore refer, if not to the whale, to some other huge monster of the deep.

QUESTIONS.

To what class and order does the whale belong?

What are the sizes of different kinds of whales?
By what other name is the largest kind of whale
known?

Bible References.—Genesis i. 21; Job vii. 12;
Ezekiel xxxii. 2; Matthew xii. 40.



WOLF.



WOLVES are in many respects related to the dog family, and are distributed in the countries from Egypt to Lapland. They are found in considerable numbers in Sweden, Norway, Russia, Spain, the Alpine mountains, and in America. They were once common in the forests of England, and became so

predaceous that criminals had to hunt, to destroy, and to secure a certain number of the tongues of these savage animals, in order to have their punishment commuted. The general characteristic of the wolf is bloodthirstiness and terrible ferocity.

QUESTIONS.

To what animal are wolves, in some respects, related ?

In what countries are they found ?

What was the duty at one time of criminals in England in reference to wolves ?

What are the prominent features of their character ?

Bible References.—Genesis xlix. 27 ; Isaiah xi. 6 ; lxxv. 25 ; Jeremiah v. 6 ; John x. 12.

Wolves.—Ezekiel xxii. 27 ; Habakkuk i. 8 ; Zephaniah iii. 3 ; Matthew vii. 15 ; Luke x. 3 ; Acts xx. 29.

ANECDOTE.—Although the wolf, in its wild state, is very savage and fierce, yet instances are known of the power of kindness over it when domesticated, and the strong affection it has evinced towards those by whom it has been tended and fed. Cuvier speaks of a gentleman who had a tame wolf that became strongly attached to him, as the following story will show. “As this gentleman was compelled to leave home for some time, he handed over his pet wolf to the Paris Menagerie. After the lapse of three years his master returned. It was evening, and the wolf’s den was shut up from any external observation ; yet the instant the man’s voice was heard the faithful animal

set up the most anxious cries, and, the door of his cage being opened, he rushed towards his friend, leaped upon his shoulders, licked his face, and threatened to bite his keepers when they attempted to separate them. When the man left him, he turned sick, and refused all food ; and from the time of his recovery, which was long very doubtful, it was always dangerous for a stranger to approach him. He appeared as if he scorned any new friendships."



W O R M.

THERE are five distinct orders of worms, including Animalcules, Intestinal worms, Molluscous worms, Testaceous worms, and Zoophytes. "Nearly all the species of this, the lowest class of animal being, have slow locomotive powers. Their bodies are soft, fleshy, and destitute of articulated members. Some of them have hard internal parts, and others have crustaceous coverings. Many of them have arterial and venous vessels, in which the blood undergoes a real circulation, but those are by no means common to the whole class. In some of them eyes and ears are perceptible, while others seem to enjoy only the senses of taste and touch, which are never wanting. Many of them have no distinct head, and most of them are destitute of feet. The whole of these creatures are very tenacious of life. In most of them, such parts as have been destroyed will afterwards be

reproduced." Intestinal worms are, no doubt, those referred to in our Scripture quotations. These are simple, naked animals, without limbs, that live, some of them within other animals, some in water, and a few in the earth.

QUESTIONS.

How many orders of worms are there ?

What are the peculiarities of their organization ?

What are the worms referred to in the Scriptures ?

Where do some of them exist ?

Bible References.—Exodus xvi. 24 ; Job xvii. 14 ;
Isaiah xiv. 11 ; li. 8 ; Micah vii. 17 ; Acts xii. 23.



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