

THE
ILLUSTRATED BOOK
OF
NATURAL HISTORY.

ADAPTED TO THE USE OF
ENGLISH SCHOOLS, INFANT SCHOOLS AND NURSERIES.

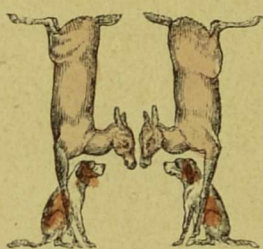
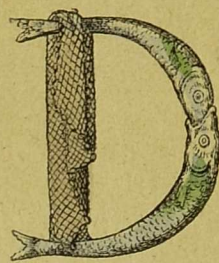
IN WHICH
ABOVE FOUR HUNDRED ANIMALS ARE EXHIBITED IN THEIR COMPARATIVE SIZE,
AND ARRANGED ACCORDING TO THE LINNEAN SYSTEM OF CLASSIFICATION,
ACCOMPANIED WITH SUITABLE LETTER-PRESS DESCRIPTION.



GLASGOW,
DAVID BRYCE, BUCHANAN ST
EDINBURGH, OLIVER & BOYD, & JOHN JOHNSTONE.
LONDON, HAMILTON, ADAMS & CO
MDCCCXLV.

PRICE 3| .

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LITHOGRAPHED BY ALLAN & FERGUSON.—LETTER-PRESS BY S. & T. DUNN.

ANIMAL KINGDOM.

ANIMALS are natural bodies which possess organization, life, sensation, and voluntary motion; and Zoology is that branch of natural science which treats of their systematic arrangement, their structure, and functions, their habits of life, instincts, and uses to mankind. The ANIMAL KINGDOM (scientifically called *kingdom*, to distinguish it as a portion of the *world* of nature in general,) is divided into *vertebrated* and *invertebrated* animals. The term *vertebrated* is derived from *vertebræ*, the Latin name for the bones of the spine. The objects comprehended within the animal kingdom are divided into six classes: *Mammalia*, or Mammiferous Animals, *Birds*, *Amphibia*, or Amphibious Animals, *Fishes*, *Insects*, and *Worms*, which are thus distinguished:

CLASSES.

Body,	{ With vertebræ ...	Hot blood.....	{ Viviparous,	I. Mammalia
		Cold red blood...	{ Oviparous,	II. Birds.
	{ Without vertebræ..	Cold white blood..	{ With lungs,	III. Amphibia.
			{ With gills,	IV. Fishes.
			{ Have antennæ	V. Insects.
			{ Have tentacula,	VI. Worms.

FIRST CLASS.

MAMMALIA.

This class consists of such animals as produce living offspring, and nourish their young ones with milk supplied from their own bodies; and it comprises both the quadrupeds and whales. This class has been distributed into seven Orders, of primates, bruta, feræ, glires, pecora, belluæ, and cete, or whales. The characteristics of these are founded, for the most part, on the number and arrangement of the teeth, and on the form and construction of the feet, or of those parts in the seals and whales which supply the place of feet.

Order 1—PRIMATES.

This order is intended to contain man, and those animals that are nearly allied to him in their structure. They have usually four cutting teeth in the fore part of each jaw, and in the upper jaw these are parallel; and they have one canine tooth on each side of these in each jaw. They have also two breasts, or teats, from which this class derives its name. The two fore feet, in many of the individuals, resemble the hands of the human species, and are employed for the same purposes, having fingers furnished for the most part with oval flattened nails. They chiefly live on vegetable food. Under this order Linnæus ranks four genera, viz. man, the ape tribe, the lemur tribe, and the bats.

Order 2—BRUTA.

These have no front teeth in either jaw; their feet are armed with strong blunt nails like hoofs; they are generally of a clumsy form, and slow in their movements; they feed chiefly on vegetables. This order contains nine genera, of which the principal are the rhinoceros, the elephant, the sloths, and ant-eaters.

Order 3—FERÆ.

These have commonly six front teeth in the upper and under jaw, which are somewhat of a conical shape, and next to these, strong and sharp canine teeth, with grinders that terminate in conical pointed eminences; their feet are divided into toes, which are armed with sharp crooked claws. Almost all the animals of this order are beasts of prey, living chiefly on the flesh of other animals. This order comprehends ten genera, the most remarkable of which are the seal, dog, cat, weazel, and bear tribes.

Order 4—GLIRES.

These have two front teeth in each jaw, which are remarkably long and large, but they have no canine teeth. Their feet are furnished with claws, and appear formed both for running and leaping. Their food consists of vegetables. This order also contains ten genera, the principal of which are the porcupines, beavers, rats, squirrels, and hares.

Order 5—PECORA.

These have several front teeth that are blunt, and have a wedge-like form in the lower jaw, but no front teeth in the upper. Their feet are armed with cloven hoofs. They have four stomachs,—feed entirely on vegetables, and ruminant or chew the cud. There are in this order eight genera, comprehending the camel, the musk animal, the giraffe, and the deer, antelope, goat, sheep, and ox tribes.

Order 6—BELLUÆ.

These have front teeth in both jaws, that are obtuse. Their feet are armed with hoofs, that are in some species entire, and in others subdivided. Most of them live entirely on vegetable food. There are four genera, comprising those of the horse, hippopotamus, tapir, and hog.

Order 7—CETE.

These have spiracles, or breathing-holes, on the head; fins instead of fore-feet; and a tail flattened horizontally instead of hind-feet. This order consists of the narvals, whales, and dolphins.

SECOND CLASS.

BIRDS.

This class comprises all such animals as have their bodies clad with feathers. Their jaws are elongated, and covered externally with a horny substance, called a bill, or beak, which is divided into two parts, called mandibles. Their eyes are furnished with a thin, whitish, and somewhat transparent membrane, that can at pleasure be drawn over the whole external surface like a curtain. Birds respire by air vessels, which are extended through their body, and which, in the abdominal cavity, adhere to the under surface of the bones. Their organs of motion are two wings, and two legs; and they are destitute of external ears, lips, and many other parts which are important to quadrupeds.

I.—LAND BIRDS.

Order I—RAPACIOUS BIRDS, (ACCIPITRES.)

These have the upper mandible hooked, and an angular projection on each side, near the point, as the eagles, hawks, and owls.

Order 2—PIES (PICÆ.)

These have their bills sharp at the edge, somewhat compressed at the sides, and convex on the top, as the crow.

Order 3—PASSERINE BIRDS, (PASSERES.)

These have the bill conical and pointed, and the nostrils oval open, and naked, as the sparrow and linnet.

Order 4—GALLINACEOUS BIRDS, (GILLINÆ.)

These have the upper mandible arched, and covering the lower one at the edge, and the nostrils arched over with a cartilaginous membrane, as the common poultry.

II.—WATER BIRDS.

Order 5—WADERS, (GRALLÆ.)

These have a roundish bill, a fleshy tongue, and the legs naked above the knees, as the herons, plovers, and snipes.

Order 6—SWIMMERS, (ANSERES.)

These have their bills broad at the top, and covered with a soft skin, and the feet webbed, as ducks and geese.

THIRD CLASS.

AMPHIBIA.

Under this class are arranged such animals as have a cold, and, generally, naked body, a lurid colour, and nauseous smell.

ANIMAL KINGDOM.

They respire chiefly by lungs, but they have the power of suspending respiration for a long time. They are extremely tenacious of life, and can repair certain parts of their body which have been lost. They are also able to endure hunger, sometimes even for months, without injury.

The bodies of some of them, as the turtles and tortoises, are protected by a hard and horny shield or covering; those of others are clad with scales, as the serpents, and some of the lizards; whilst others, as the frogs, toads, and most of the water lizards, are entirely naked, or have their skin covered with warts. Many of the species shed their skins at certain times of the year. Several of them are furnished with a poison, which they eject into wounds that are made by their teeth.

They chiefly live in retired, watery, and morassy places; and, for the most part, feed on other animals, though some of them eat water plants, and many feed on garbage and filth. None of these species chew their food; they swallow it whole, and digest it very slowly. The offspring of all the tribes are produced from eggs, which, after they have been deposited by the parent animals in a proper place, are hatched by the heat of the sun. The eggs of some of the species are covered with a shell, those of others have a soft and tough skin or covering, not much unlike wet parchment; and the eggs of several are perfectly gelatinous. In those few that produce their offspring alive, as the vipers, and some other serpents, the eggs are regularly formed, but are hatched within the bodies of the females. This class is divided into two orders:

Order 1—SERPENTS.

These have neither legs, wings, nor fins, yet they are, notwithstanding, tolerably swift in their movements.

Order 2—REPTILES.

These have four legs, and walk with a crawling pace, as the tortoises, frogs, and lizards.

FOURTH CLASS.

FISHES.

These are all inhabitants of the water, in which they move by certain organs called fins. These, when situated on the back, are called dorsal fins; when on the sides, behind the gills, they have the name of pectoral fins; when on the belly, near the head, they are ventral; when behind the vent, they are anal; and that at the posterior extremity of the body is called the caudal fin. Fishes breathe by gills, which, in most of the species, are situated at the sides of the head. In some of the flat-fish, however, as the skate, they are on the under part of the body. Fish rise and sink in the water generally by a kind of bladder in the interior of their body, called an air bladder. Some of them, as the skate, and other flat-fish, do not possess this organ, and consequently are seldom found but at the bottom of the water. Several of them are enveloped with a fat and oily substance to preserve their bodies from putrefaction, and also to guard them from extreme cold.

These fishes are divided into *cetaceous*, or the whale kind, the *cartilaginous*, or gristly kind; the *spinous*, or those fishes whose bones resembles sharp thorns; and *shell-fish*, or such as are covered with shells instead of scales.

Order 1—CETACEOUS FISHES.

(See Order 7, of Mammalia.)

Order 2—CARTILAGINOUS.

These have bones always soft and yielding; and age, that hardens the bones of other animals, rather contributes to soften theirs.

Order 3—SPINOUS.

These are distinguished from the rest by having a complete bony covering to their gill; by their being furnished with no

other method of breathing but gills only; and by their bones being sharp and thorny.

Order 7—SHELL-FISH.

These are of two kinds, 1st, the testaceous fishes, which have hard shells, of a stony substance, which serves to protect the fish it incloses, 2dly, the crustaceous, which have a shell, not quite impenetrable, but rather resembling a firm crust, and in some measure capable of yielding.

FIFTH CLASS.

INSECTS.

These are so denominated from the greater number of them having a separation in the middle of their bodies, by which they are, as it were, cut into two parts. The science which treats of them is called Entomology.

Nearly all insects go through certain great changes at different periods of their existence. From the egg is hatched the larva, grub, or caterpillar, which is destitute of wings; this afterwards changes to a pupa, or chrysalis, wholly covered with a hard shell, or strong skin, from which the perfect or winged insects, burst forth. Spiders, and some other wingless insects, issue from the egg nearly in a perfect state.

Order 1.

These are such as have shells to cover the wings, as the beetle tribe.

Order 2.

These are half-winged insects, as the cock-roach, locust, grasshopper, bug, &c.

Order 3.

These are scaly-winged insects, as the butterfly and moth.

Order 4.

These are nerve-winged, or fibre-winged insects, as the dragon-fly, &c.

Order 5.

These are four-winged insects, and have a sting, as the bee, wasp, &c.

Order 6.

These are two-winged insects, as the gnat, common fly, &c.

Order 7.

These are insects without wings, as the spider, flea, scorpion, &c.

SIXTH CLASS.

WORMS OR VERMES.

These are slow of motion, and have soft and fleshy bodies. Some of them have hard internal parts, and others have crustaceous coverings. In some of the species, eyes and ears are very perceptible, whilst others appear to enjoy only the senses of taste and touch. Many have no distinct head, and most of them are destitute of feet. They are, in general, so tenacious of life, that parts which have been destroyed will be reproduced.

Order 1.

These are simple and naked, without limbs; some live within other animals, as the tape-worm; others in water, as the leeches; and a few in the earth, as the earth-worm.

Order 2.

These are simple animals, and furnished with limbs, as the star-fish.

Order 3.

These are composite animals, and appear to hold a rank between animals and vegetables, though they are in fact true animals, and possess sensation and voluntary motion. The coral, sponge, and polypes are instances of this order.

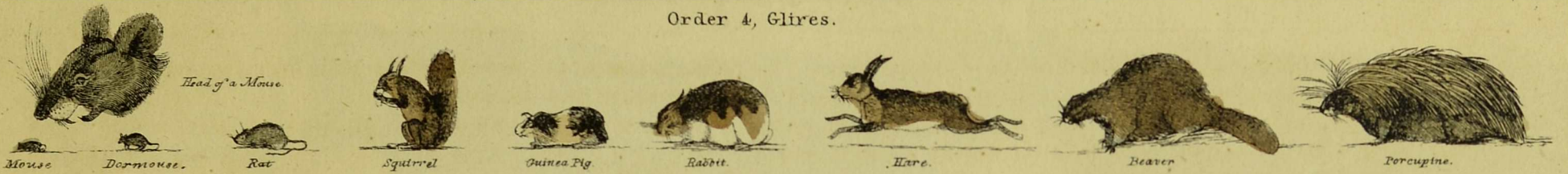
Order 4.

These are generally so minute as to be invisible to the naked eye.

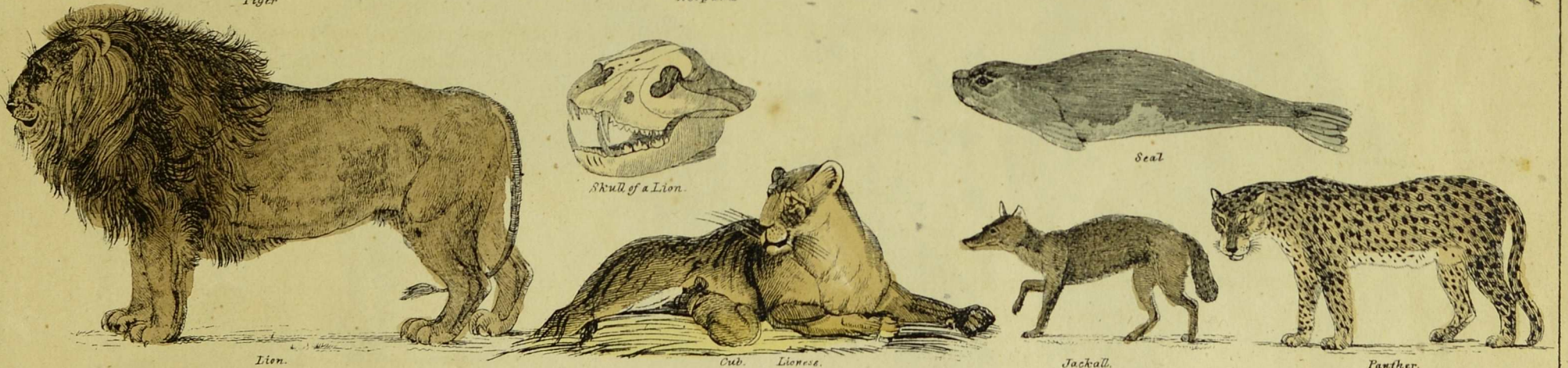
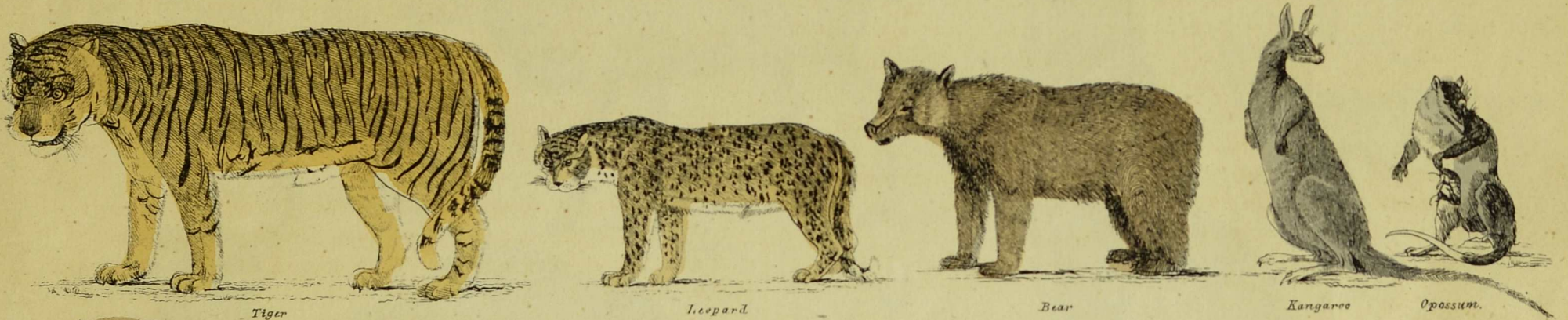
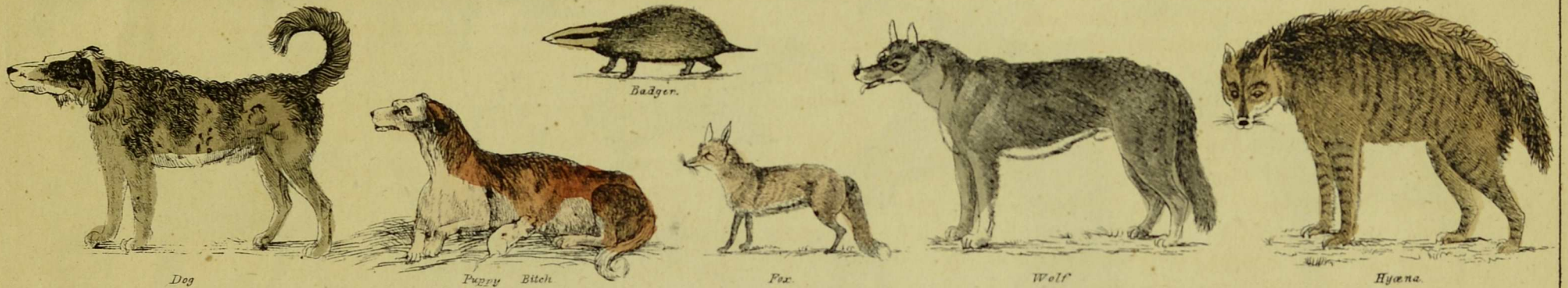
ANIMAL KINGDOM. (Vertebrated)
CLASS FIRST.
MAMMALIA.

Plate 1.

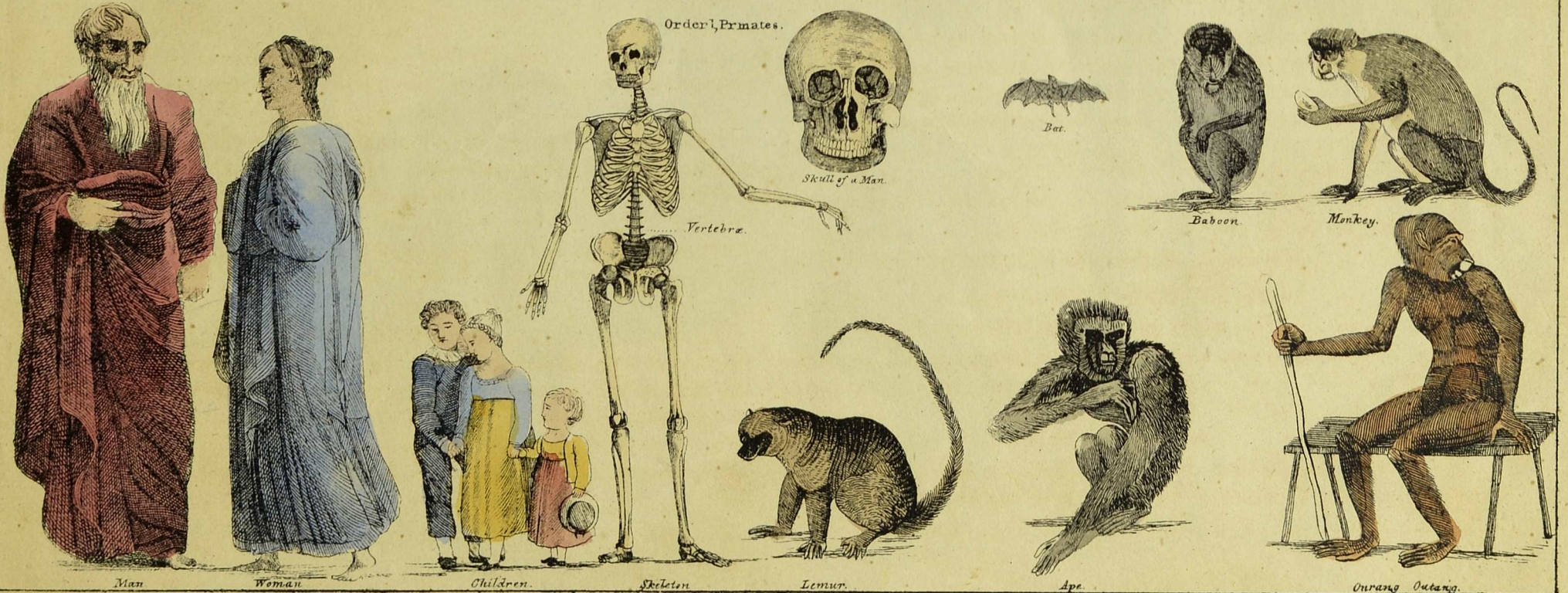
Order 4, Glires.



Order 3, Ferre.

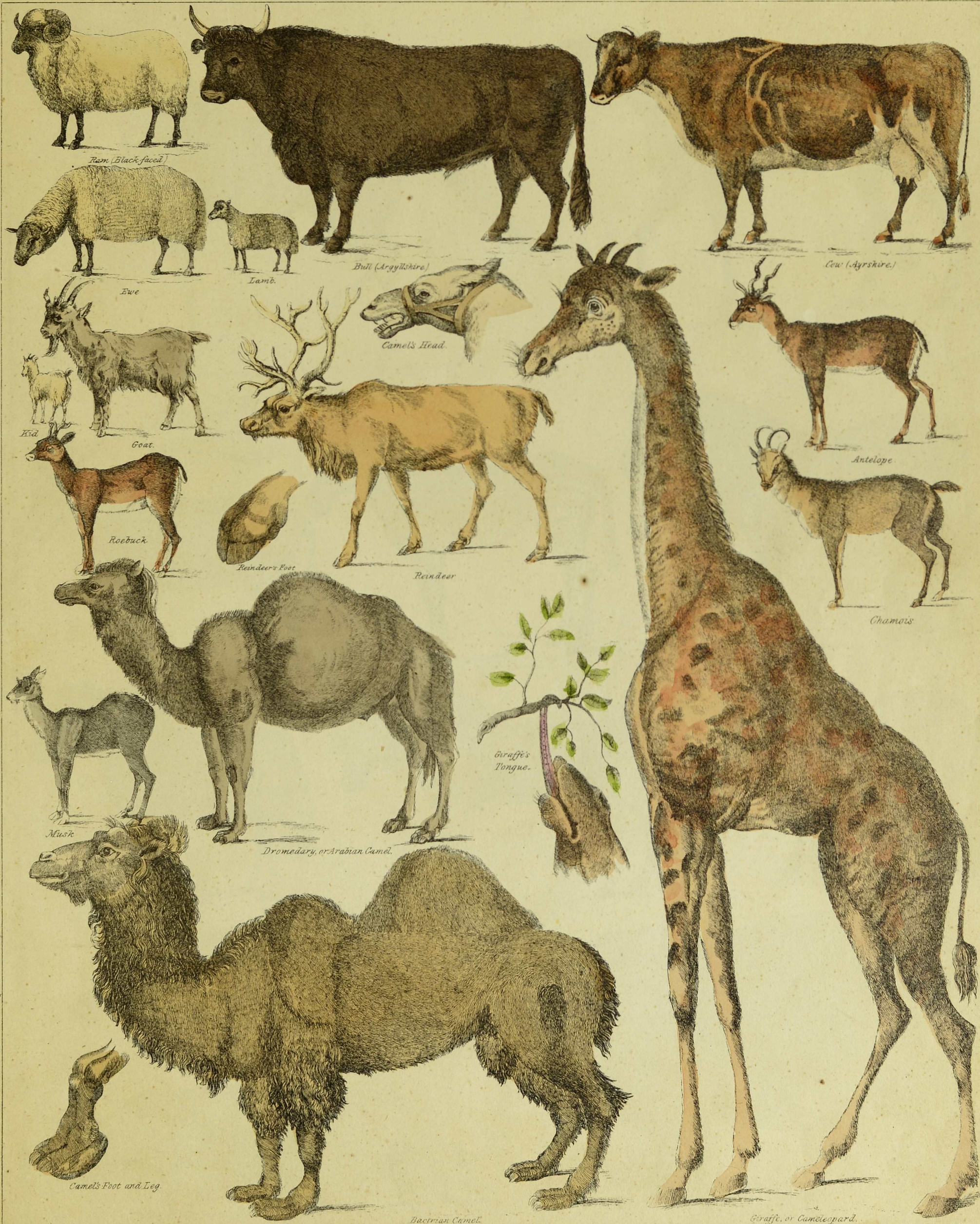


Order 1, Primates.



ANIMAL KINGDOM. (Vertebrated.)
CLASS FIRST.
MAMMALIA.

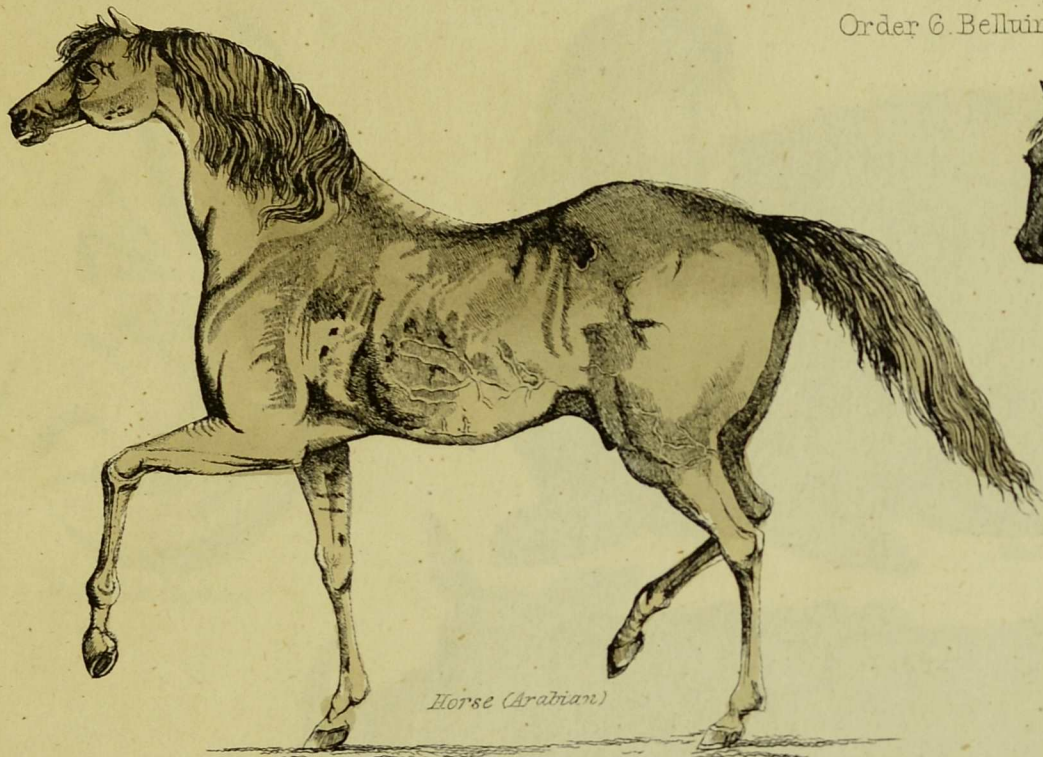
Plate 2



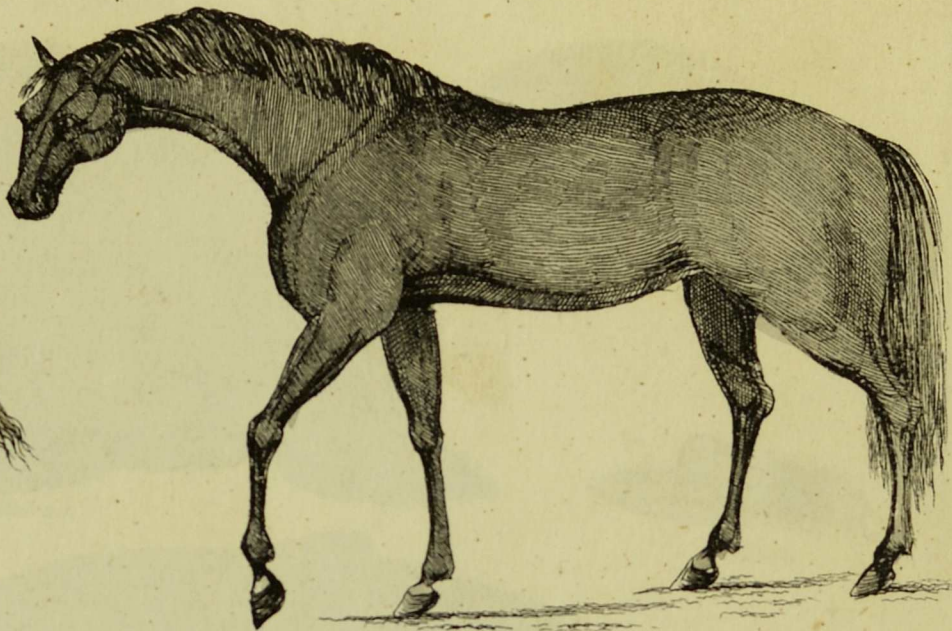
ANIMAL KINGDOM. (Vertebrated.)
CLASS FIRST.
MAMMALIA.

Plate 3.

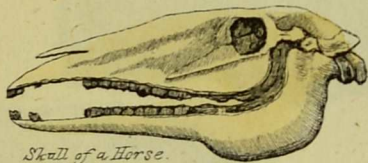
Order 6. Belluinae



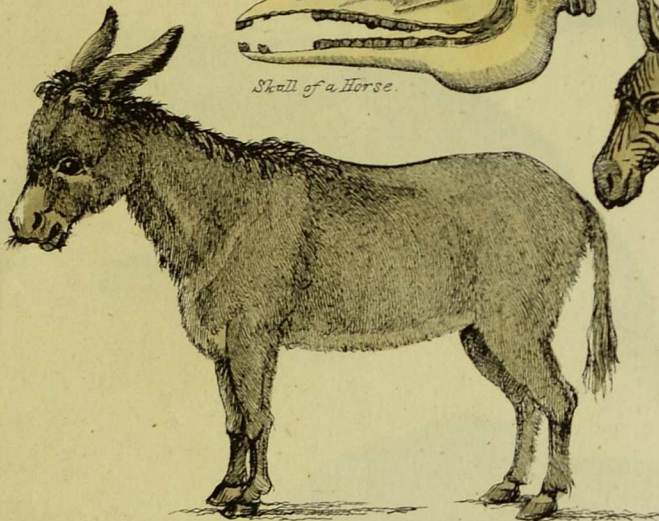
Horse (Arabian)



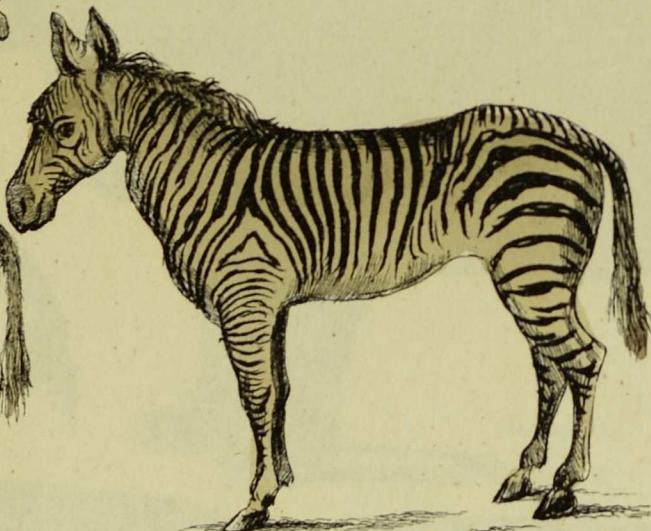
Mare (Barb)



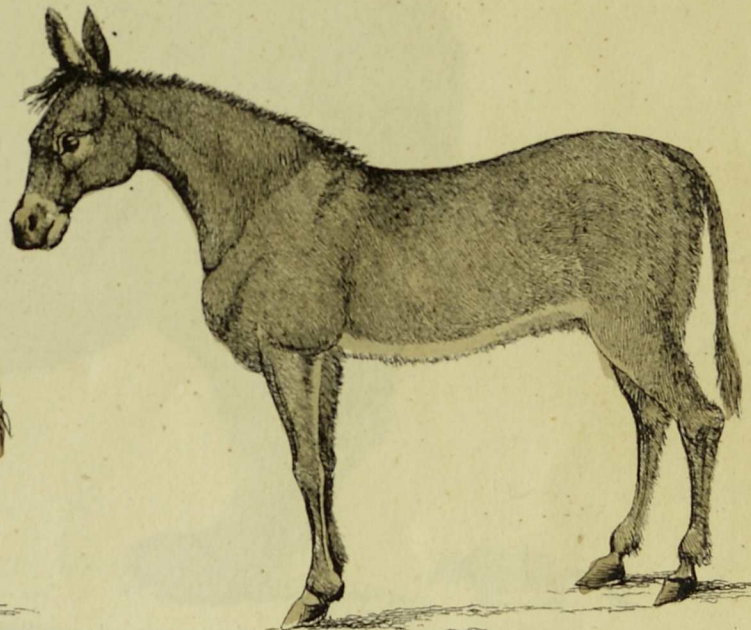
Skull of a Horse.



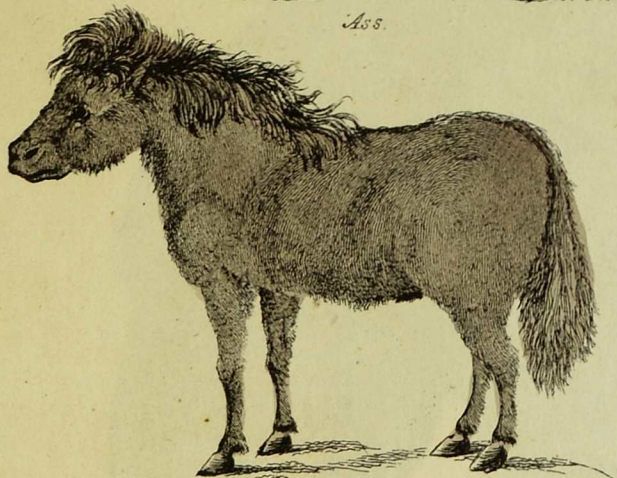
Ass.



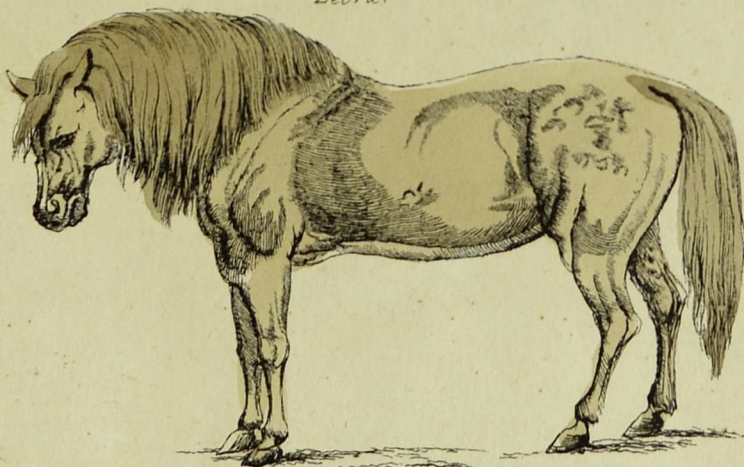
Zebra.



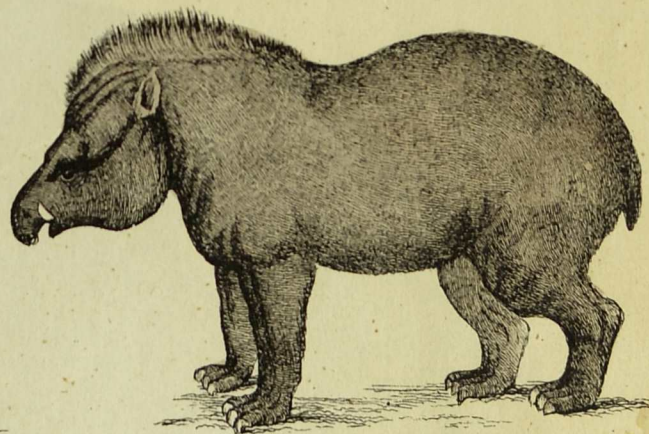
Mule



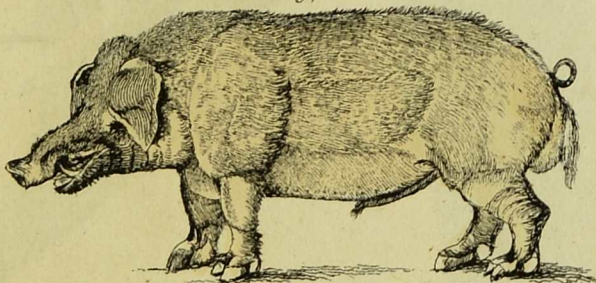
Shetland Pony, or Sheltie.



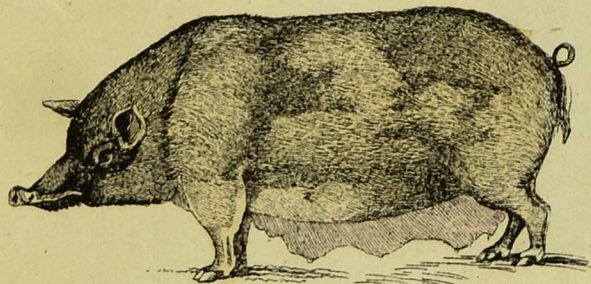
Falloway.



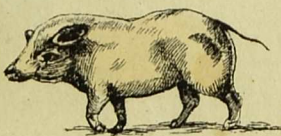
Tapir.



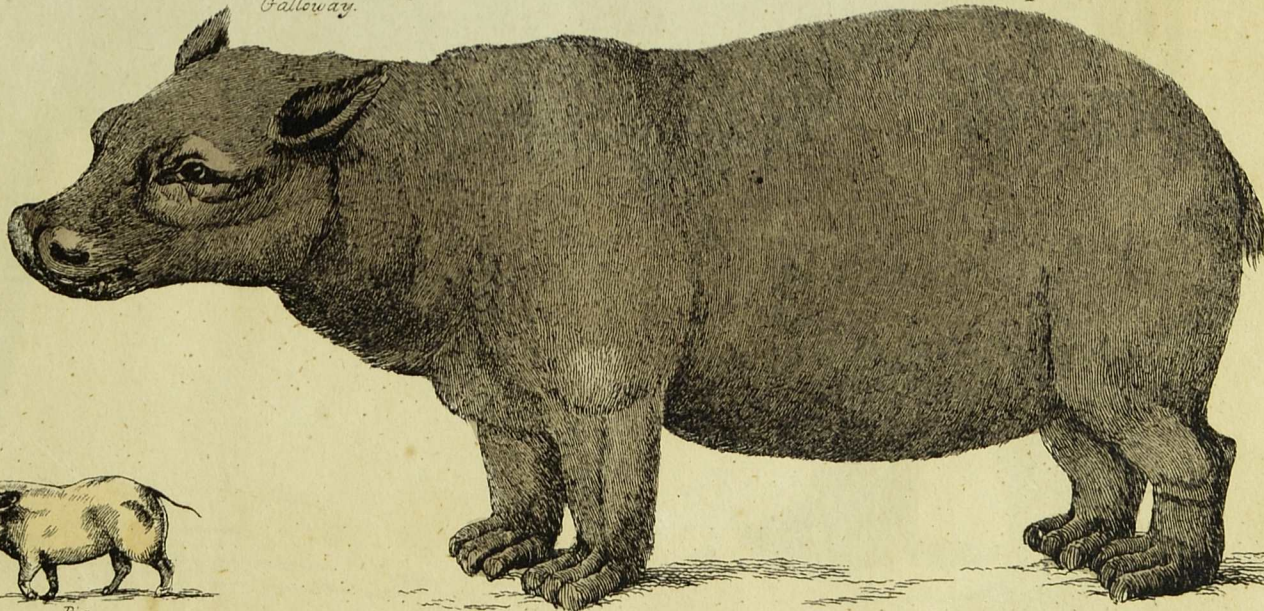
Boar.



Sow



Pig.

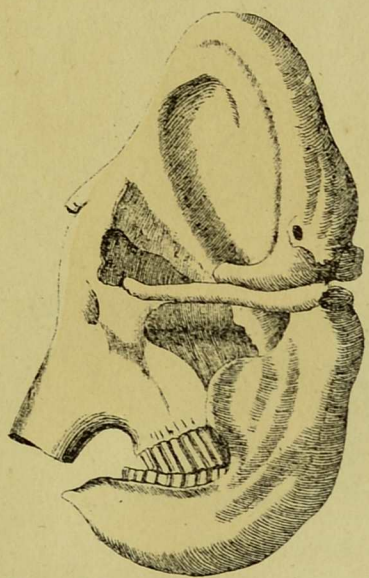


Hippopotamus.

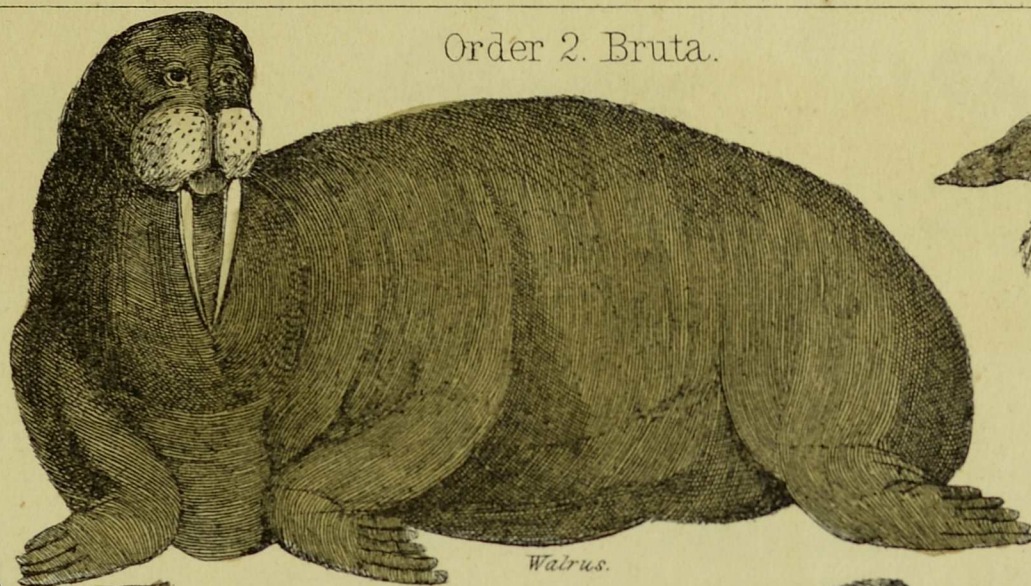
ANIMAL KINGDOM. (Vertebrated.)
CLASS FIRST.
MAMMALIA.

Plate 4.

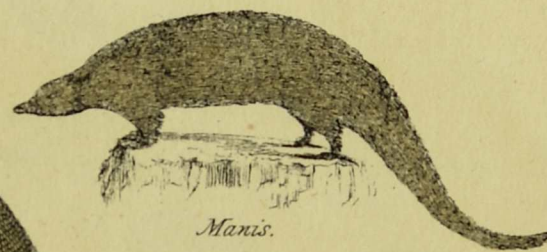
Order 2. Bruta.



Skull of an Elephant.



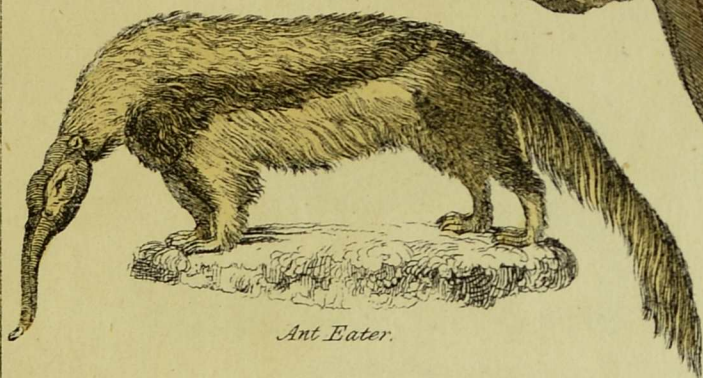
Walrus.



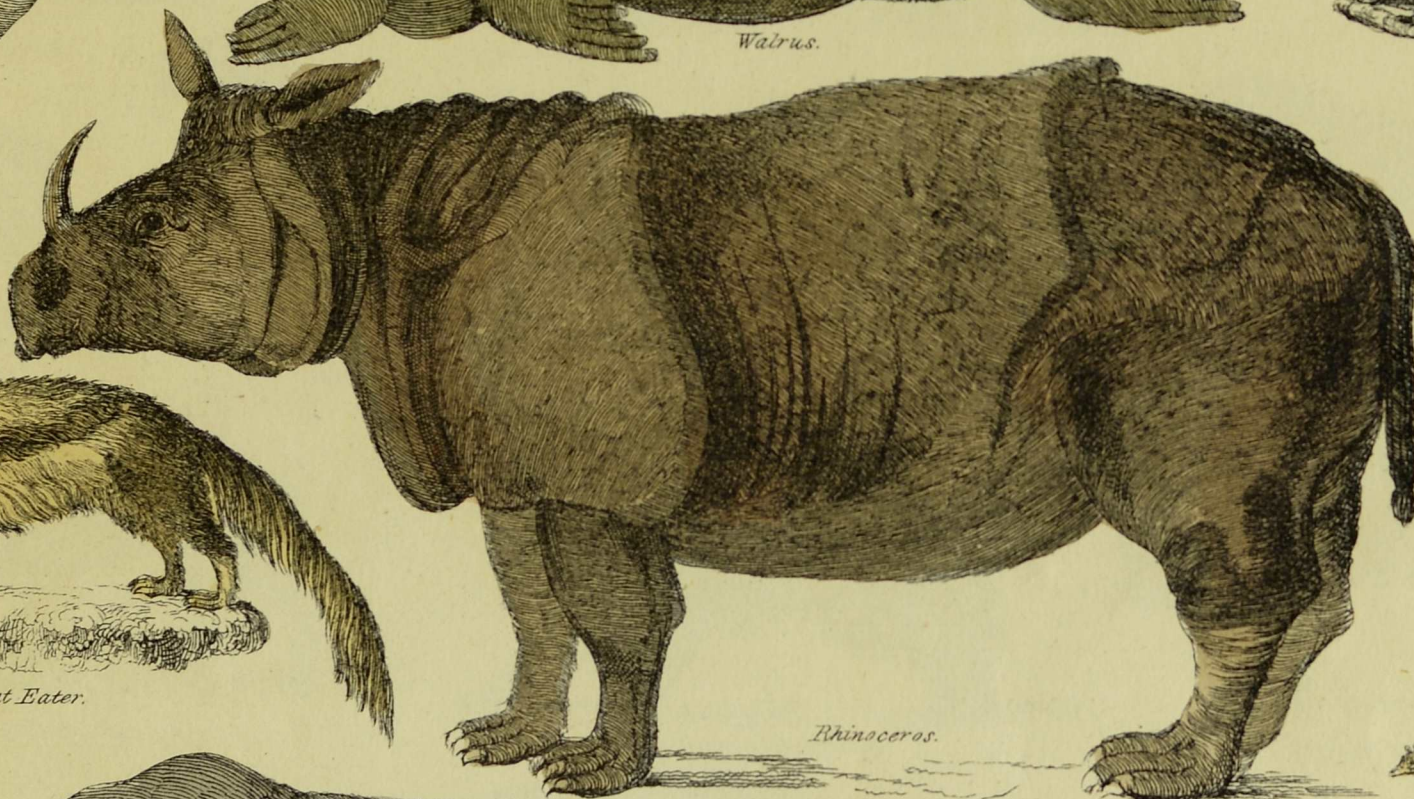
Manis.



Sloth.



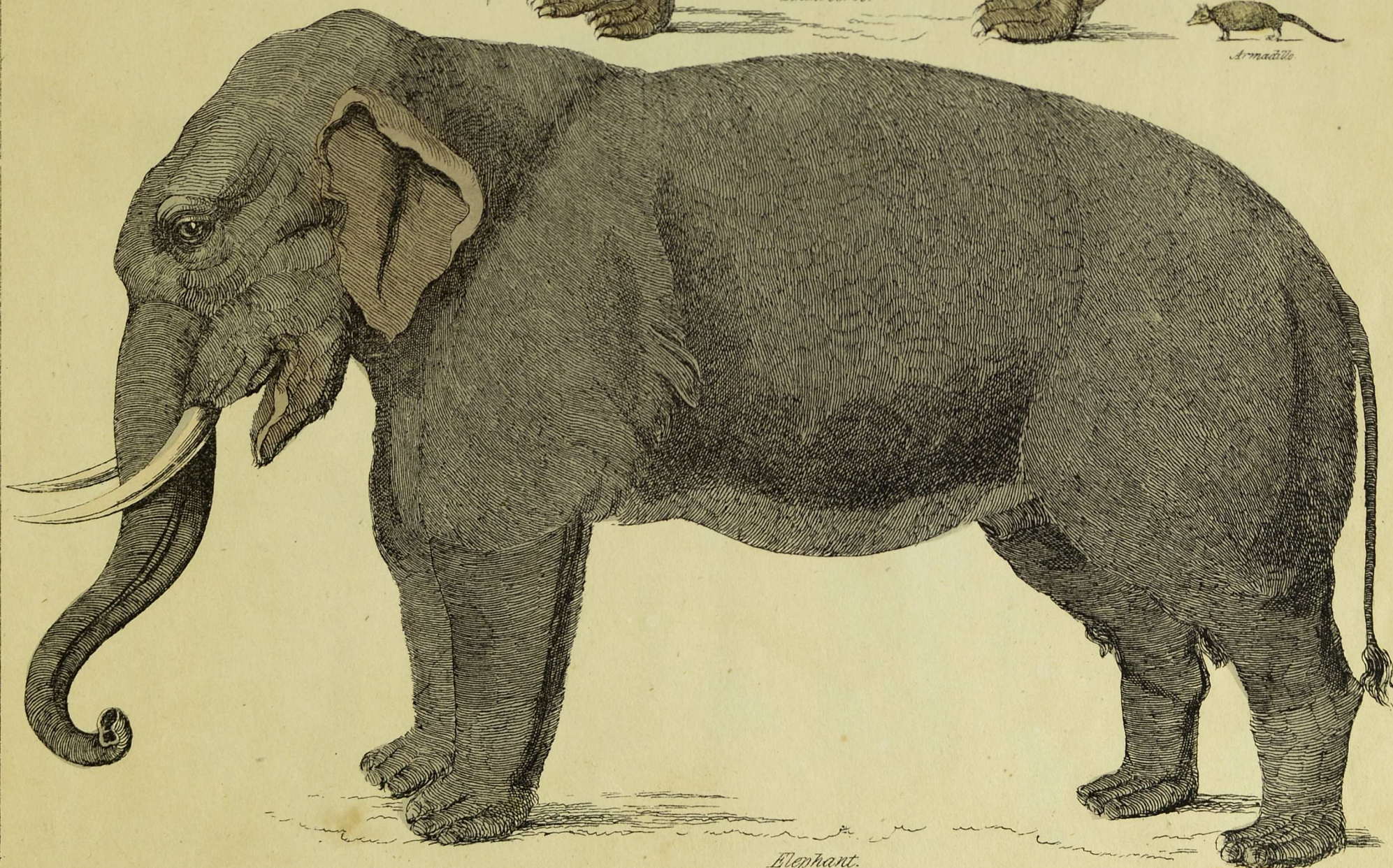
Ant Eater.



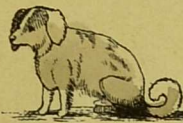
Rhinoceros.



Armadillo.



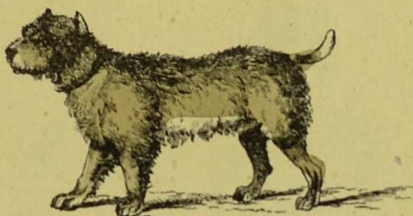
Elephant.



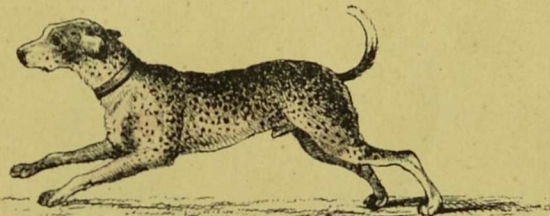
Lap Dog.



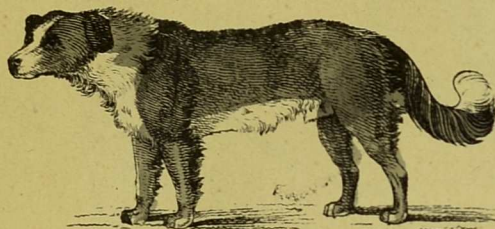
Pug Dog.



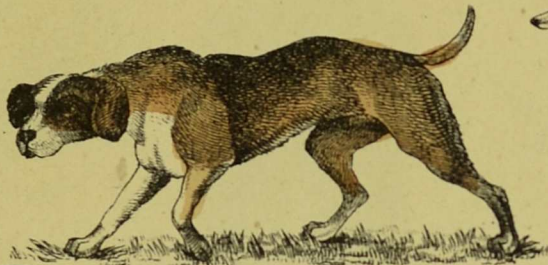
Terrier.



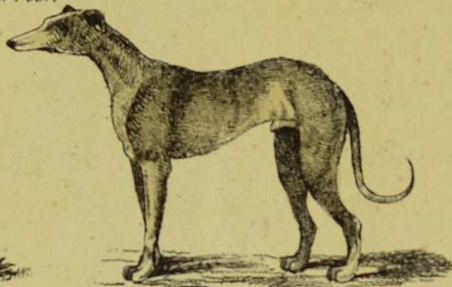
Coach Dog.



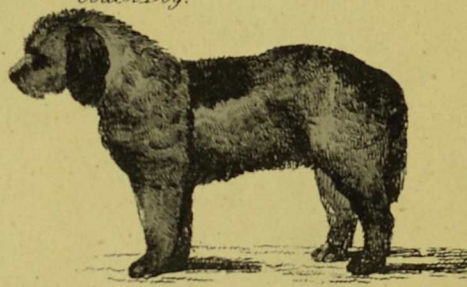
Shepherd's Dog.



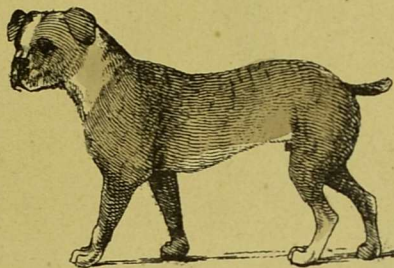
Pointer.



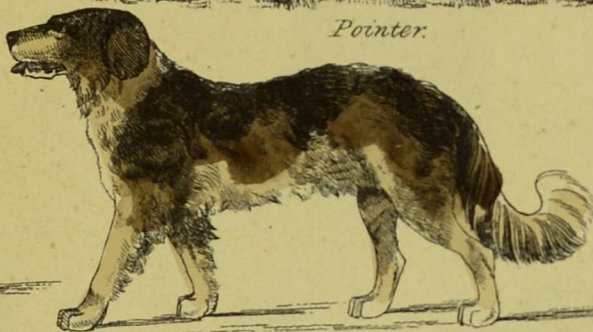
Greyhound.



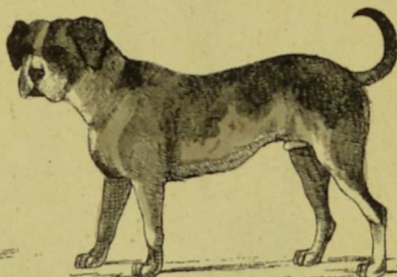
Water Dog.



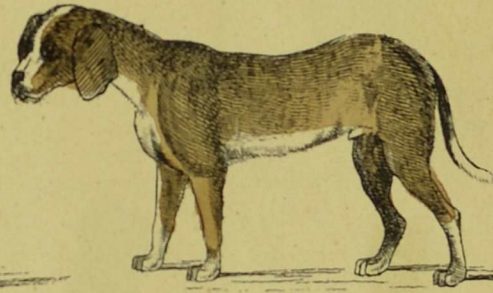
Bull Dog.



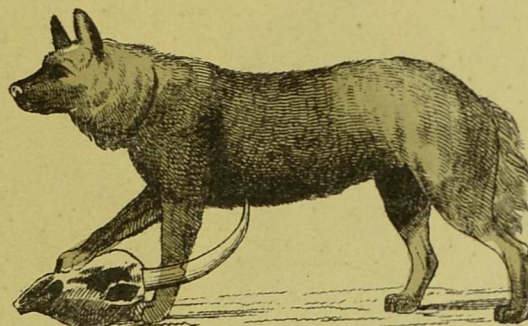
Newfoundland Dog.



Mastiff.



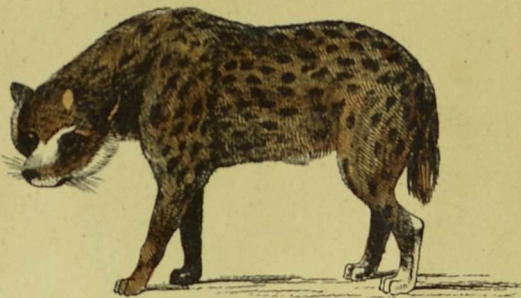
Bloodhound.



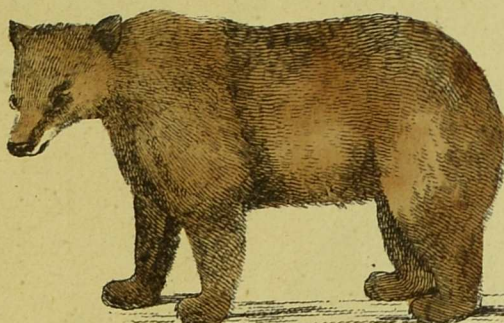
Hyena Dog.



Striped or Untameable Hyena.



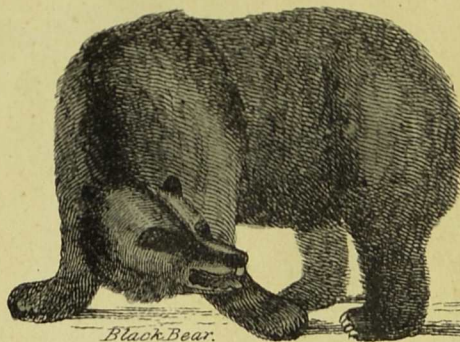
Spotted or Laughing Hyena.



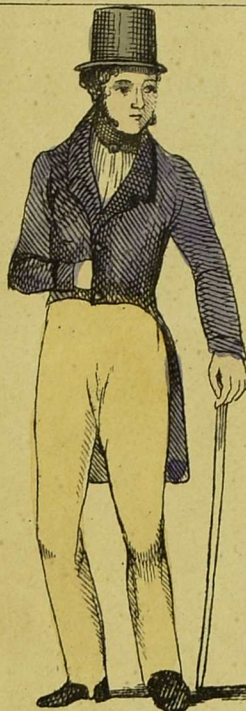
Brown Bear.



Polar or White Bear.



Black Bear.



European.



Turk.



Moor of Africa.



Circassian.

WHITE RACE.

(Cuvier's Varieties)



Persian.



Hindoo.



Jew.

Lapland Race.



Negro Race.



Mongul Race.

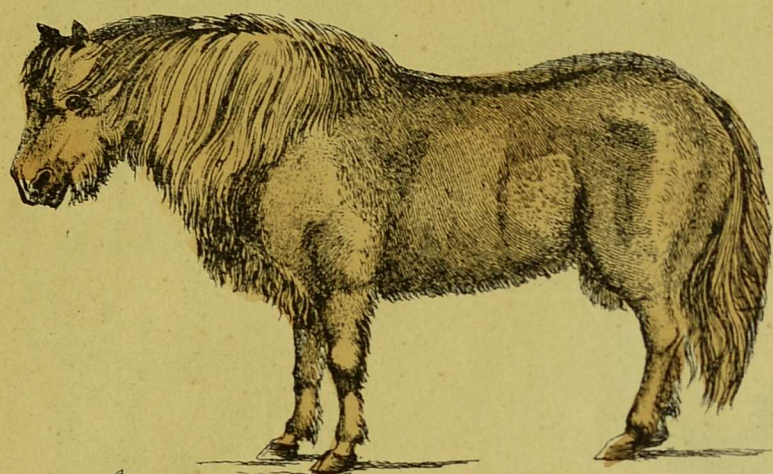


Copper Race.

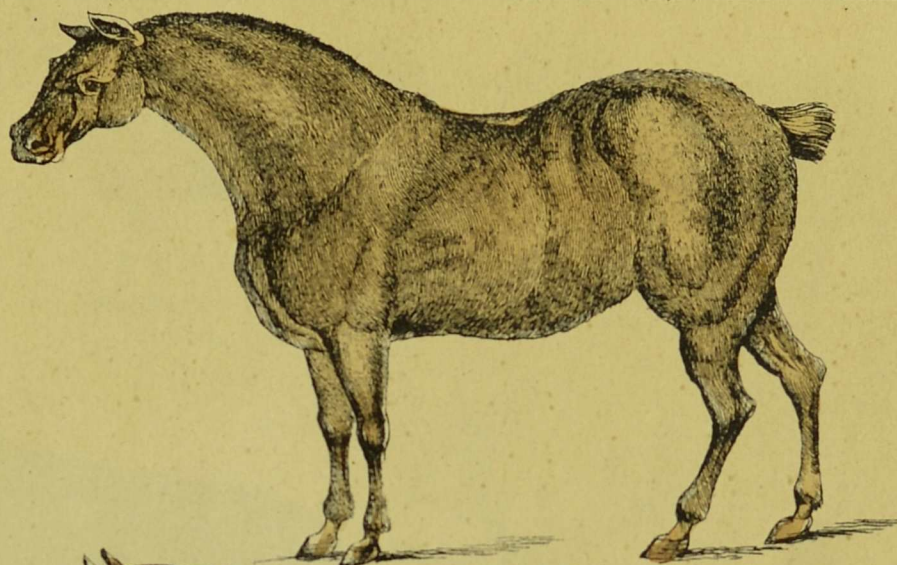


Monsters.

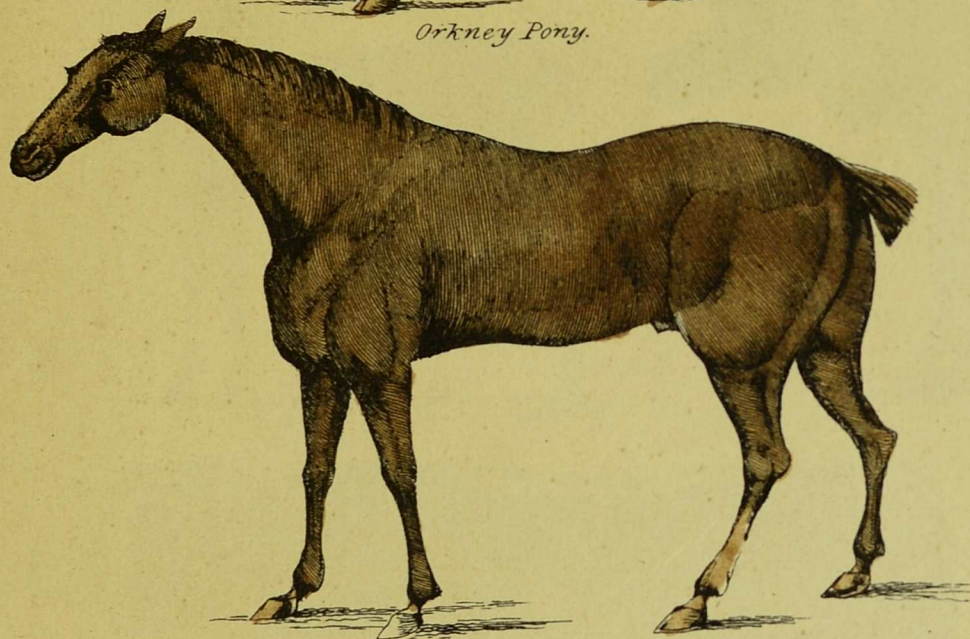




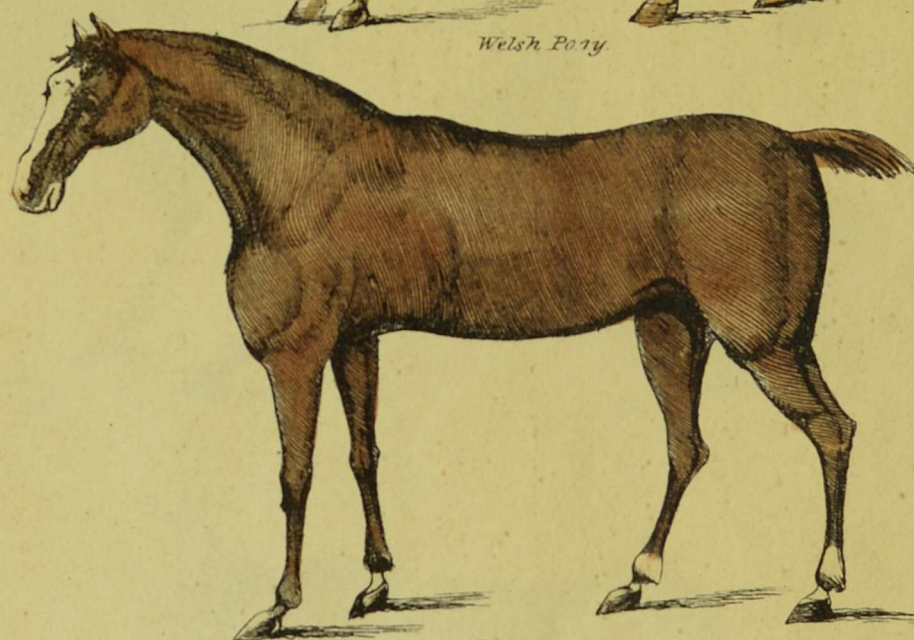
Orkney Pony.



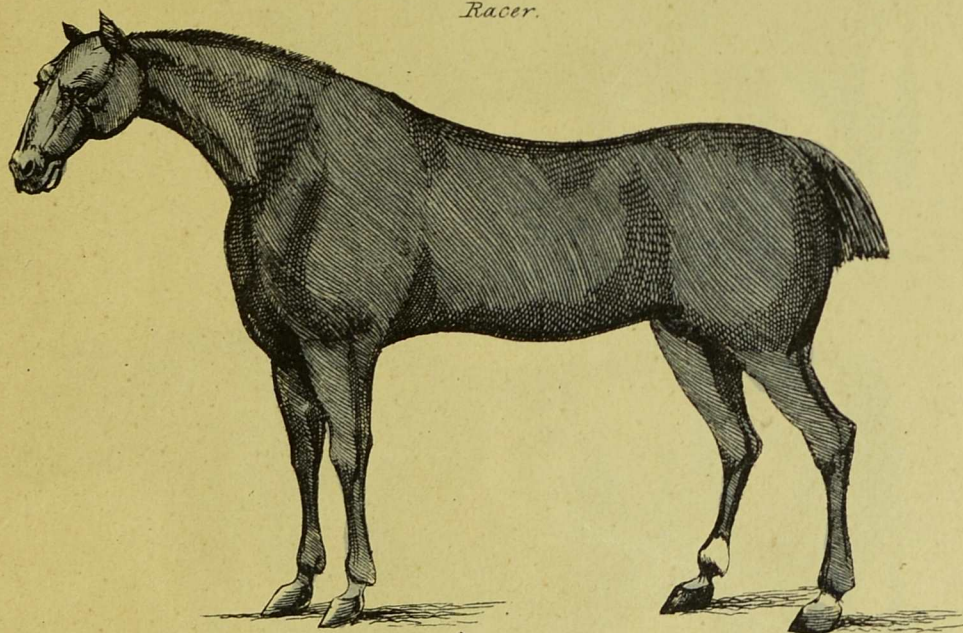
Welsh Pony.



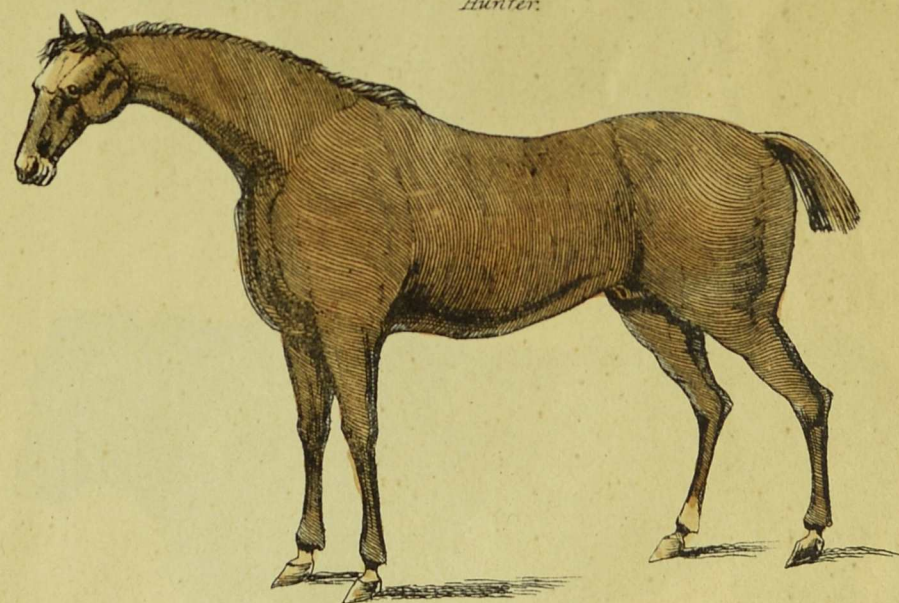
Racer.



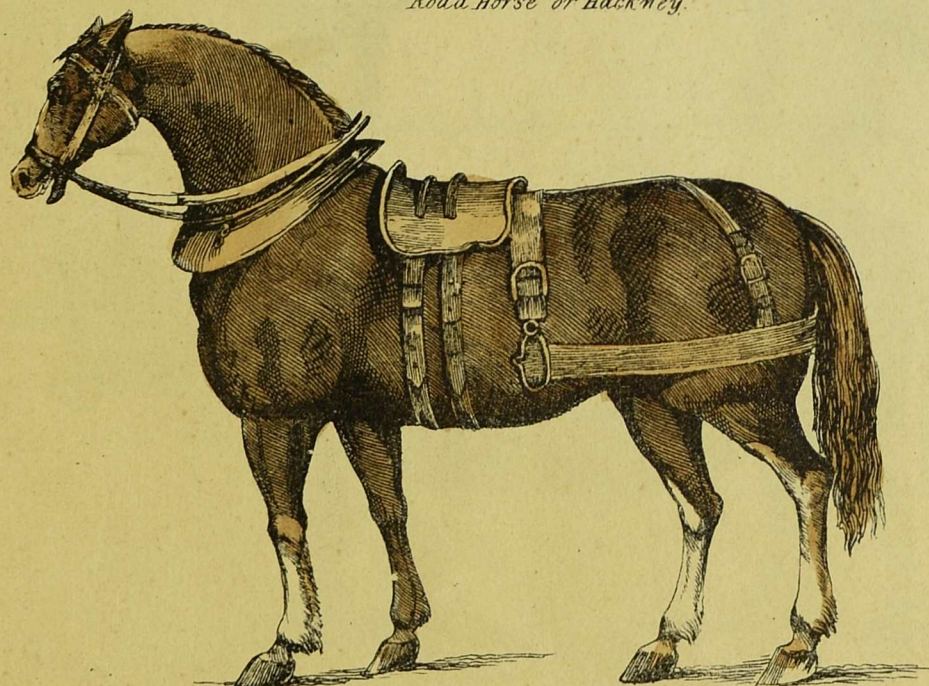
Hunter.



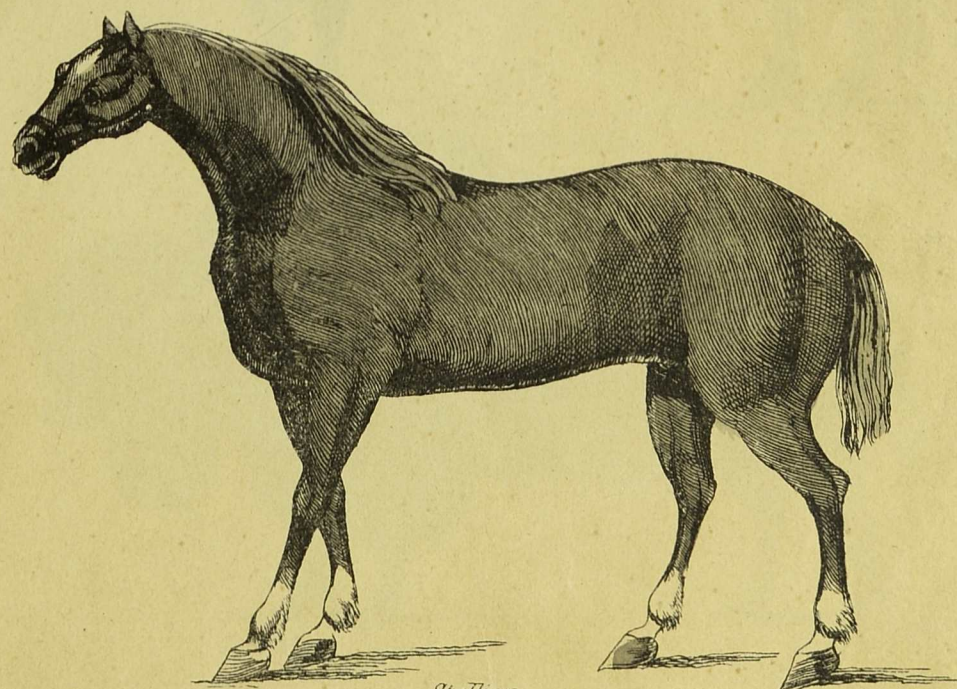
Road Horse or Hackney.



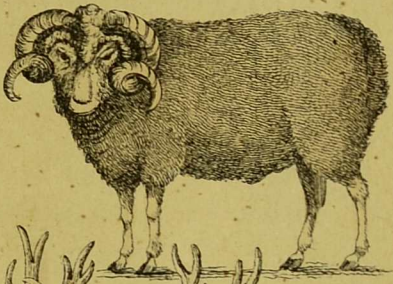
Coach Horse.



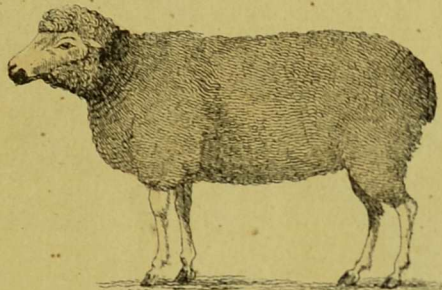
Cart Horse.



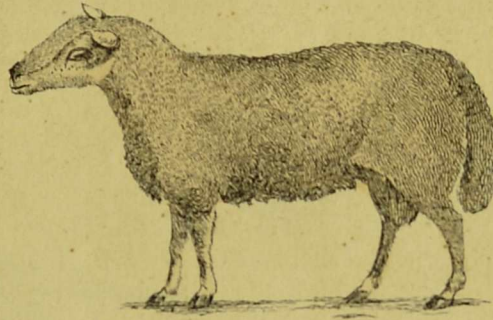
Stallion.



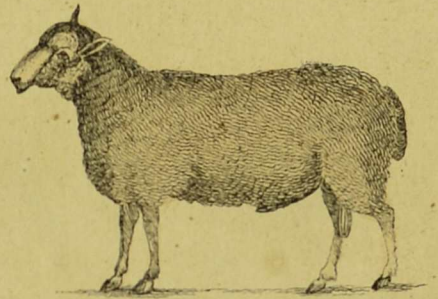
Merino Ram.



Merino Ewe.



Cheviot Ram.



South Down.



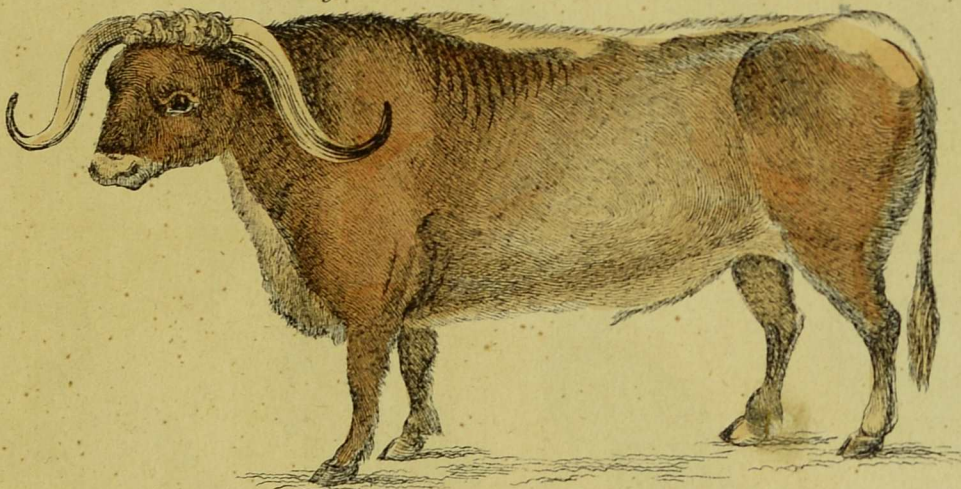
Stag.



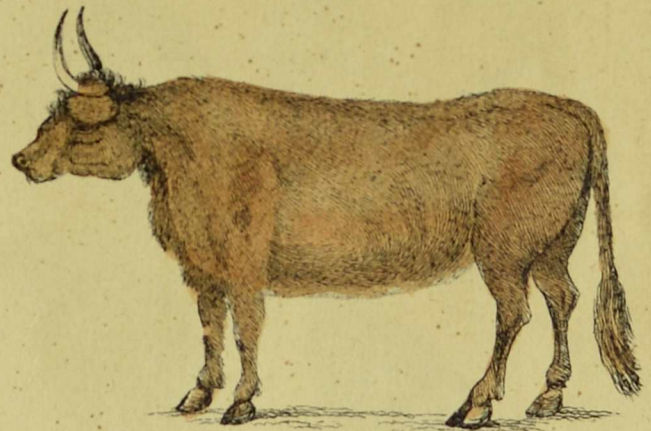
Elk.



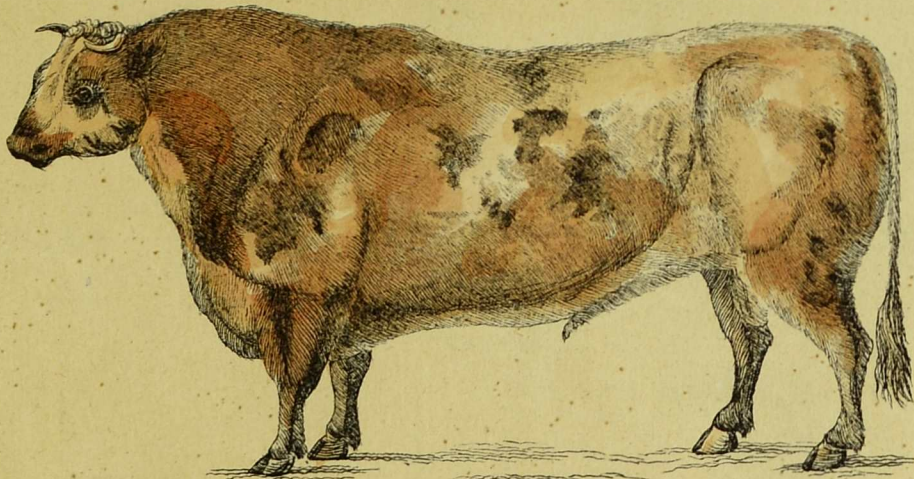
Fallow Deer.



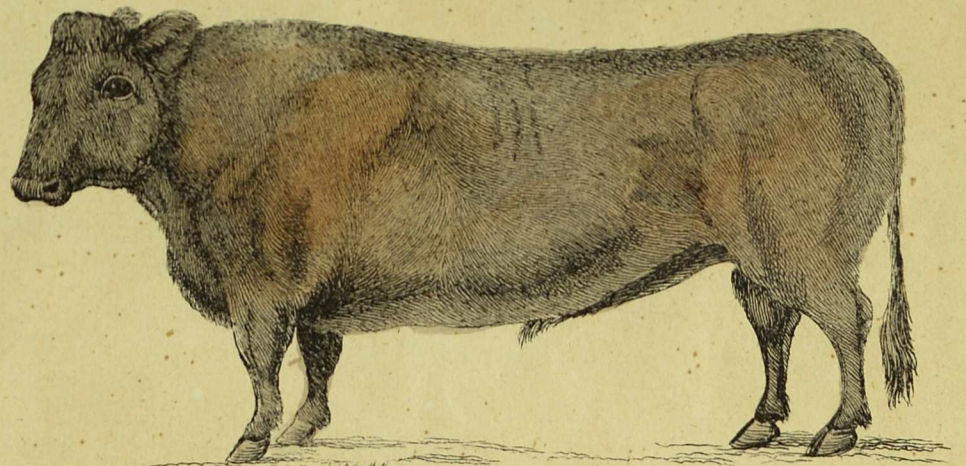
Ox.



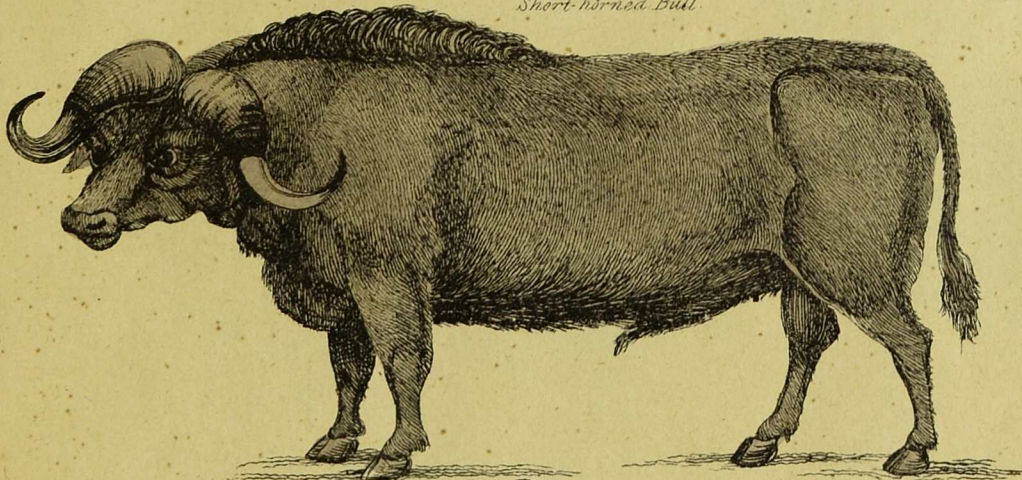
Kyloe Ox.



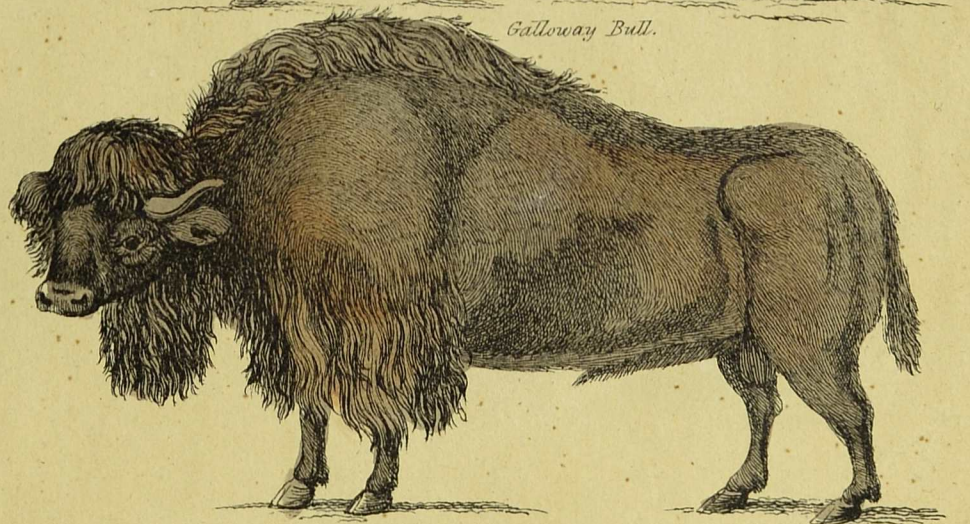
Short-horned Bull.



Galloway Bull.

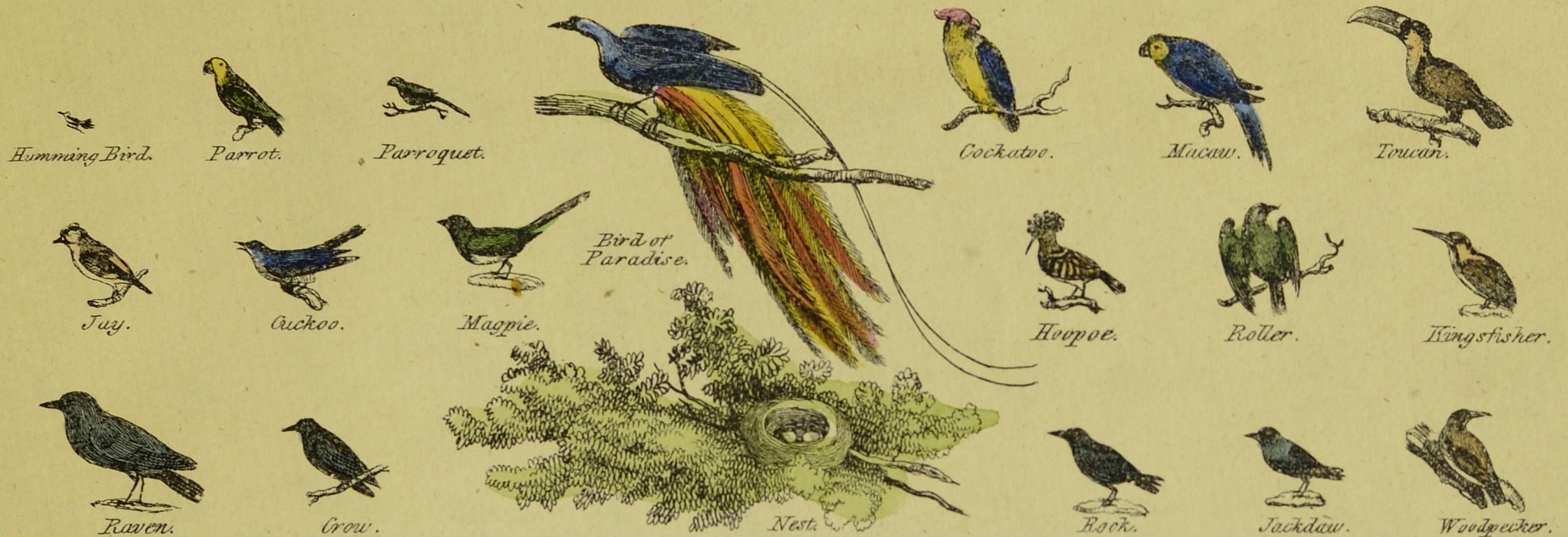


Buffalo.



Bison.

Order 2. Pies.



Order 1. Rapacious Birds.



Order 5. Waders.



ANIMAL KINGDOM. (Vertebrated)

CLASS SECOND.

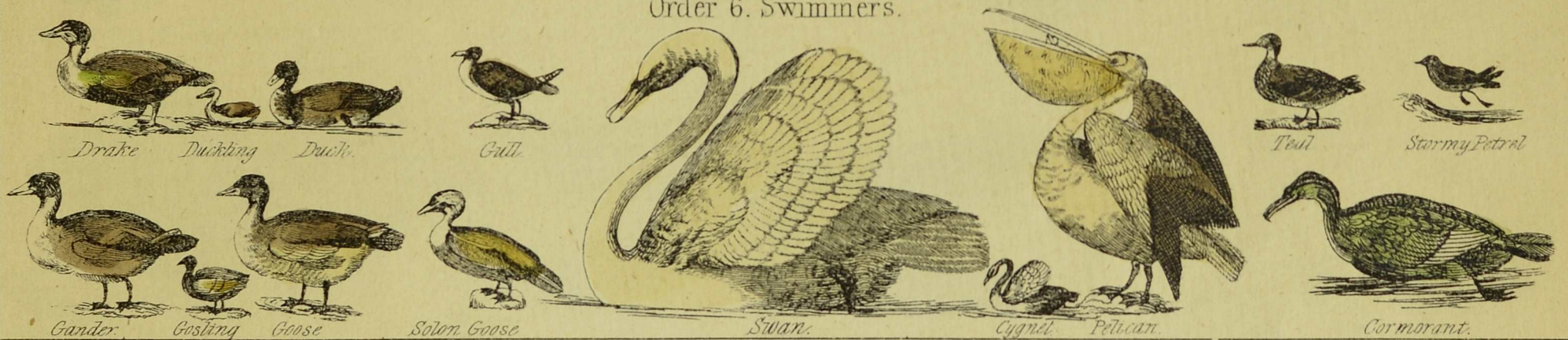
BIRDS.

Plate 10.

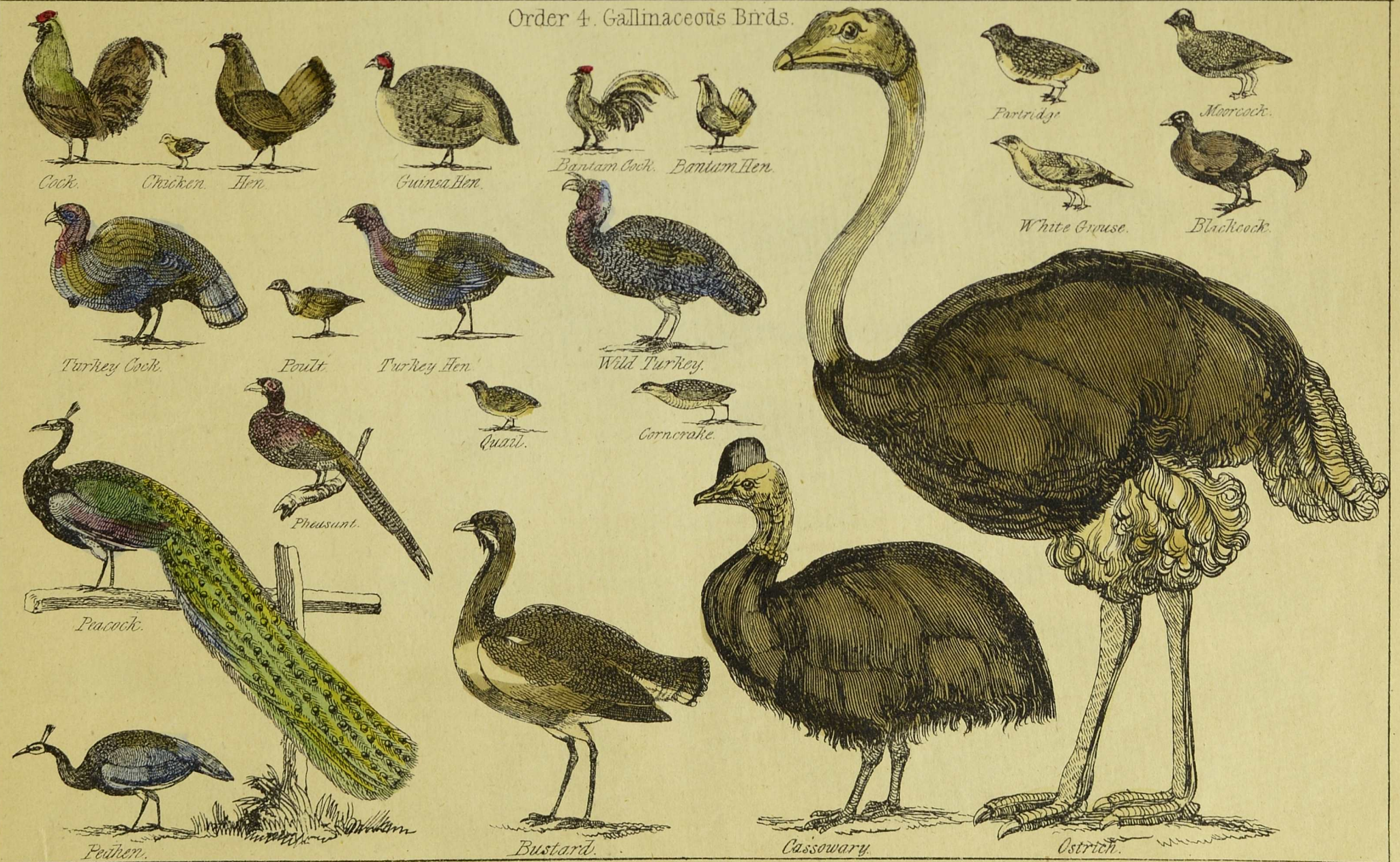
Order 1. Passerine Birds.



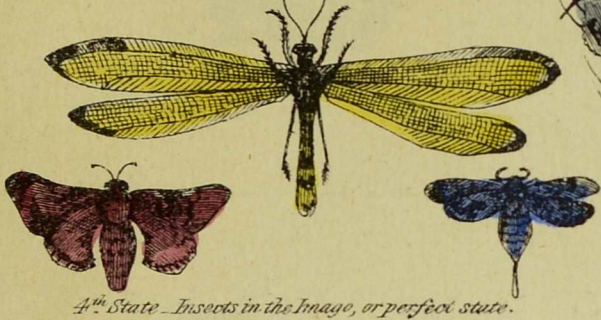
Order 6. Swimmers.



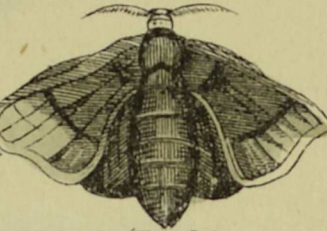
Order 4. Gallinaceous Birds.



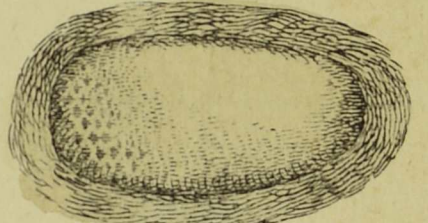
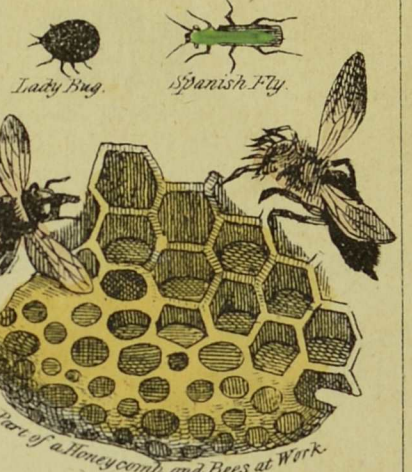
Useful Insects.



Drone (Male)

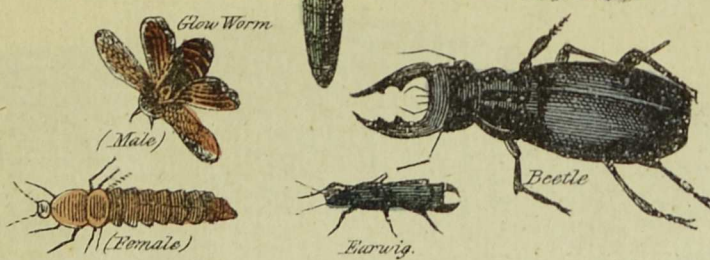
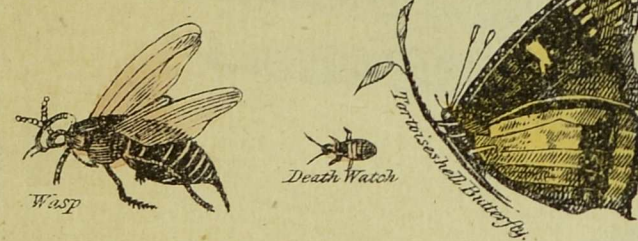
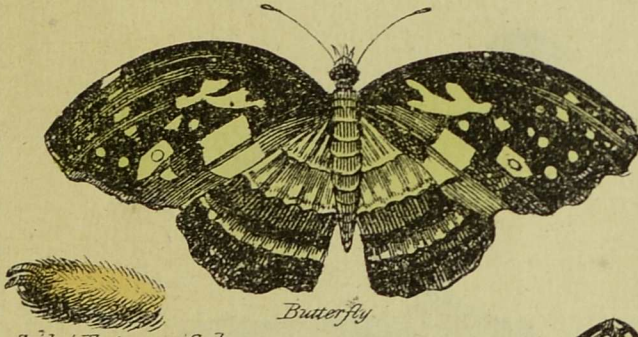
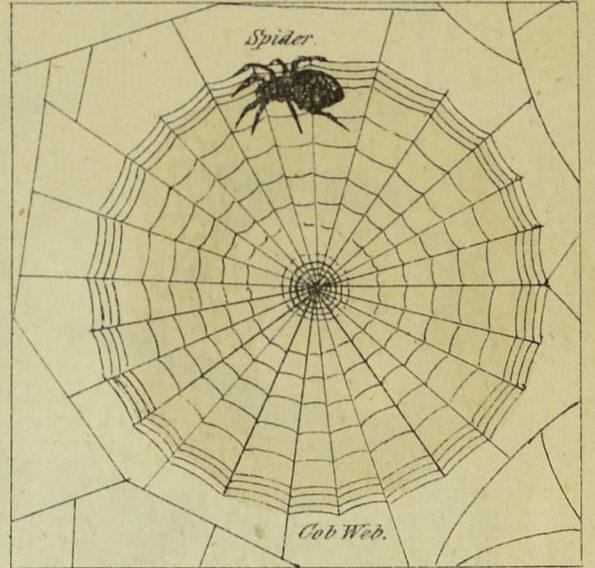
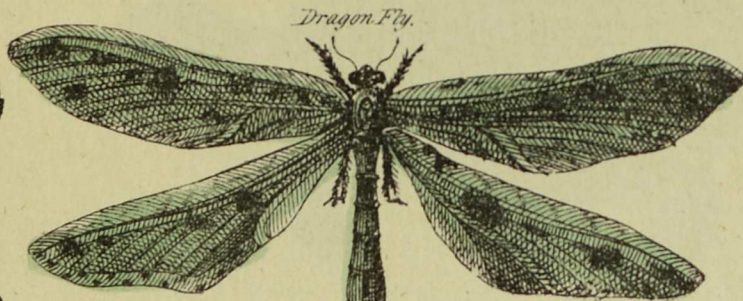


Silk Worm.

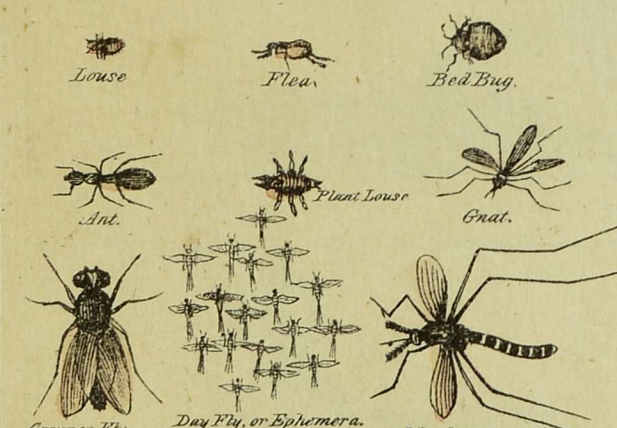
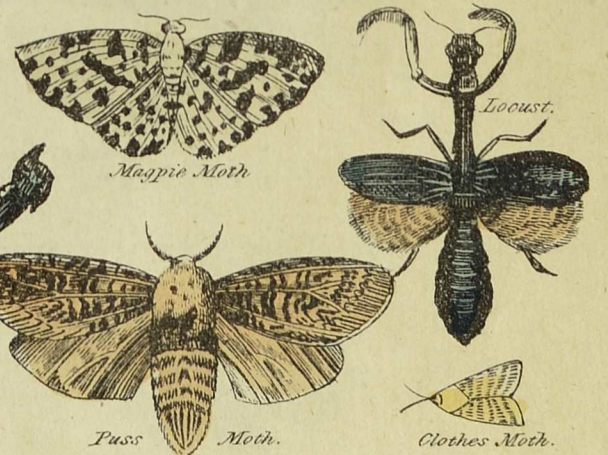
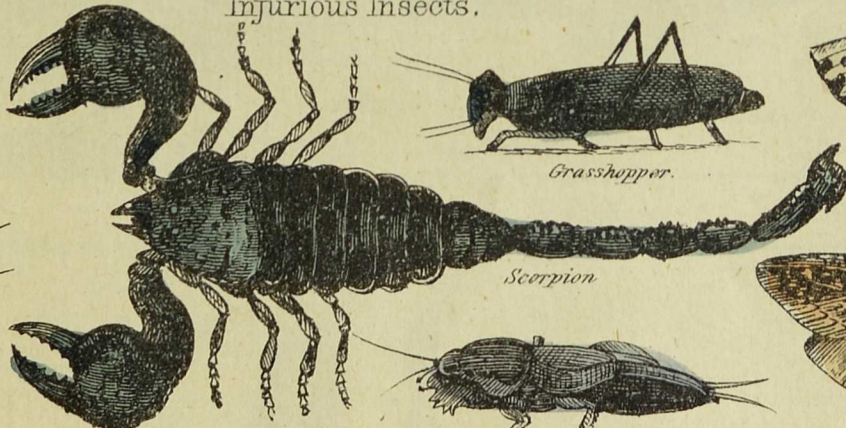


Silk Ball, or Cocoon.

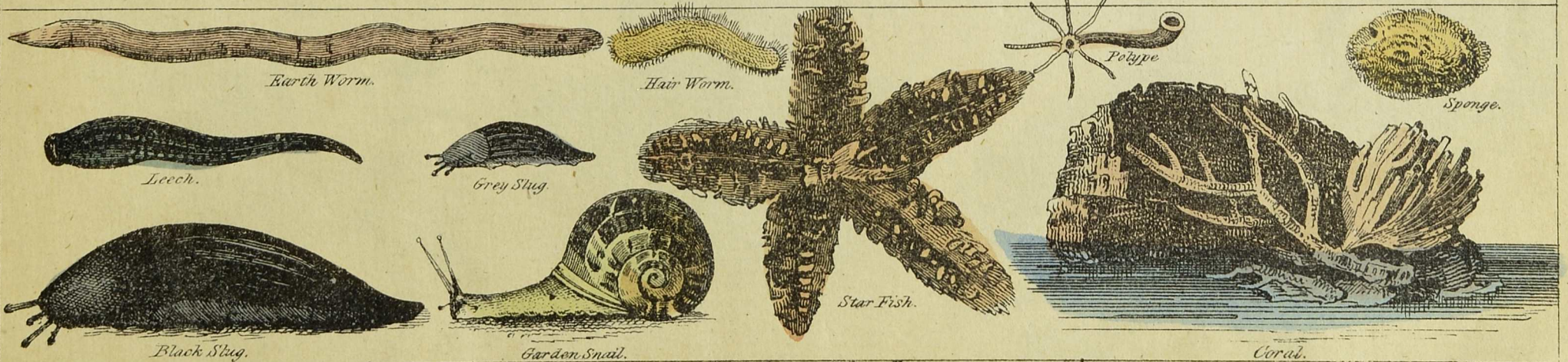
Useless Insects.



Injurious Insects.



CLASS SIXTH. WORMS.



ANIMAL KINGDOM. (Vertebrated.)

CLASS THIRD.

AMPHIBIOUS ANIMALS.

Plate 12.

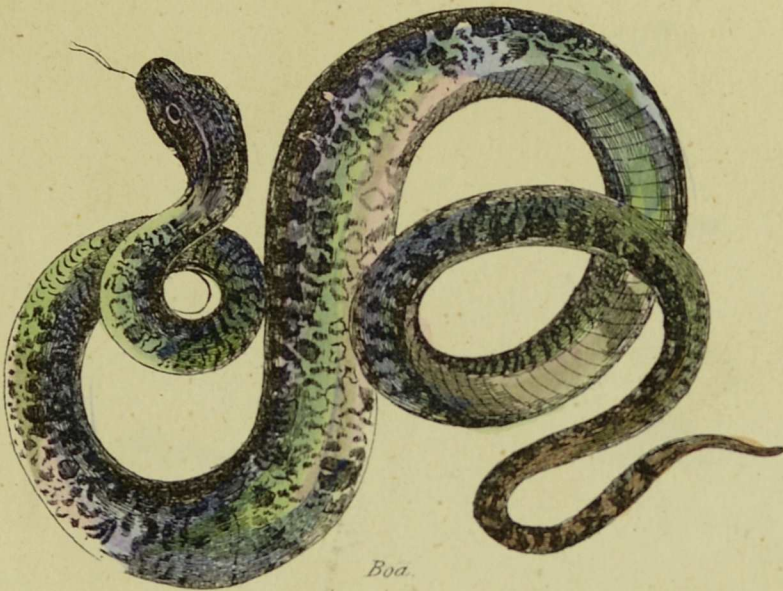
I. Serpents.



Snake.



Rattlesnake.



Boa.



Viper or Adder.



Asp.

II. Reptiles.



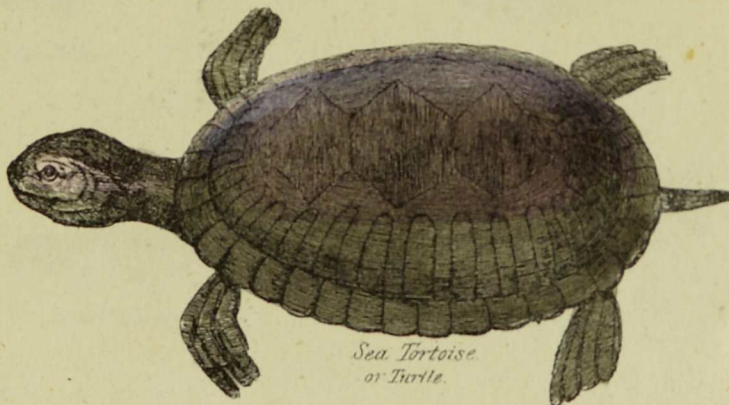
Frog.



Land Tortoise.



Toad.



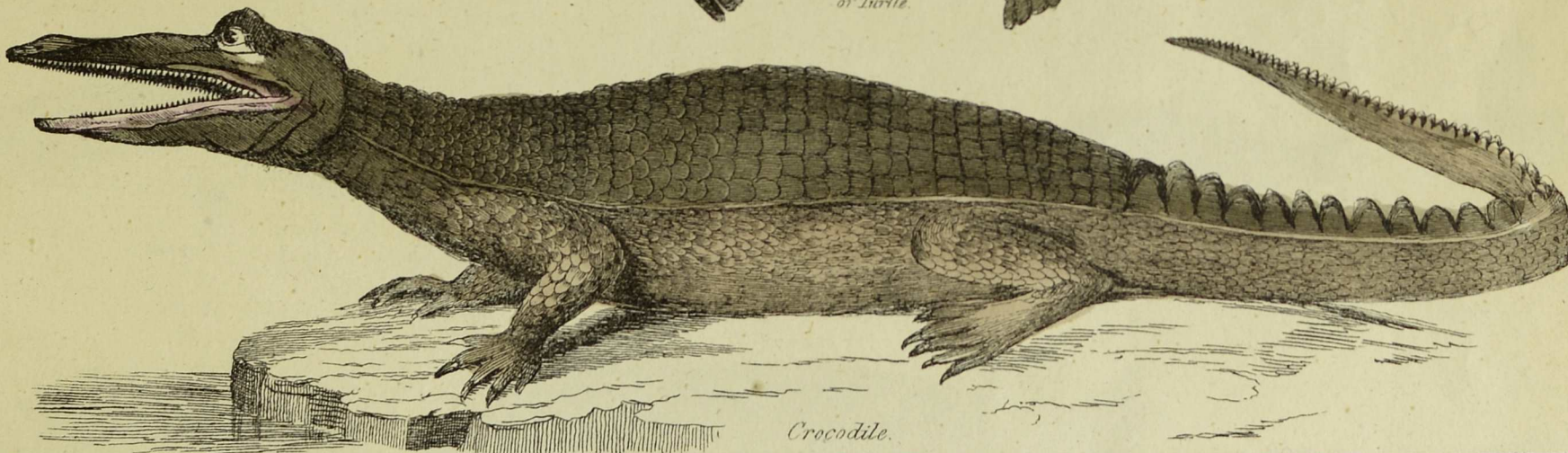
Sea Turtle or Turtle.



Chameleon.



Lizard.



Crocodile.

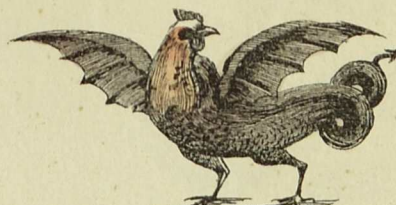
Fabulous Animals.



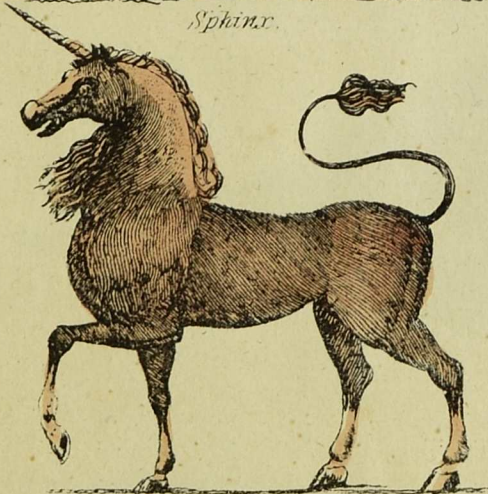
Sphinx.



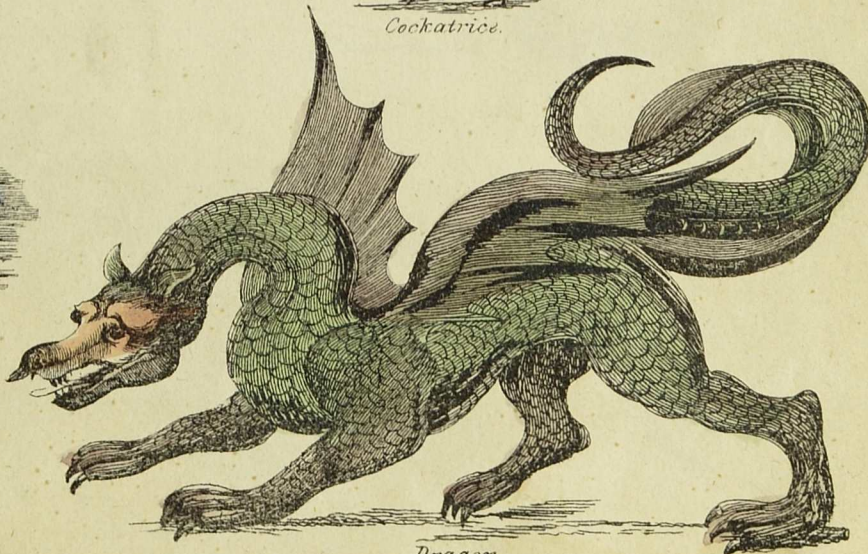
Mermaid.



Cockatrice.



Unicorn.



Dragon.

Order 3. Spinous Fish.

Minnow.



Anchovy.



Goldfish.



Sprat.



Herring.



Smelt.



Roach.



Trout.



Whiting.



Mackerel.



Perch.



Chub.



Trout.



Flounder.



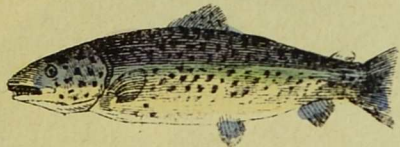
Sole.



Plaice.



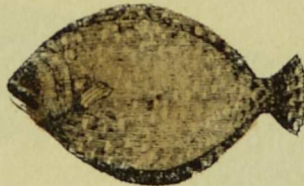
Salmon Trout.



Haddock.



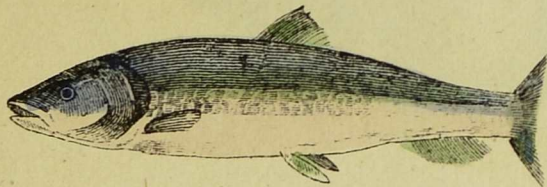
Turbot.



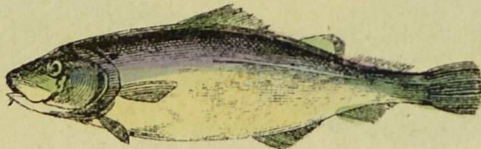
Bream.



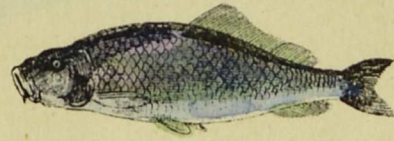
Salmon.



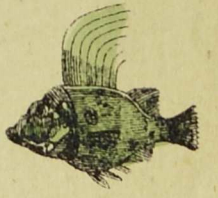
Cod.



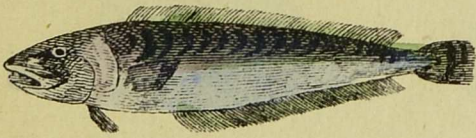
Carp.



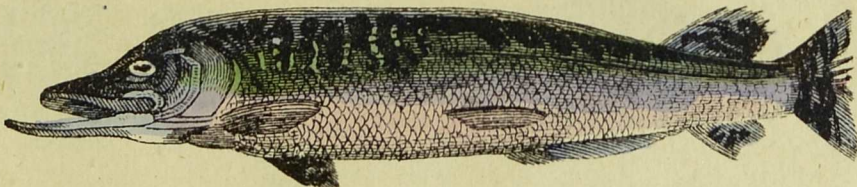
John Dore.



Trout.



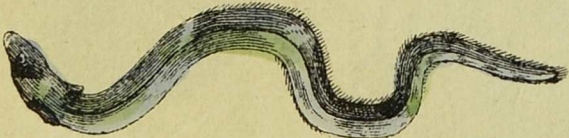
Pike.



Garfish.



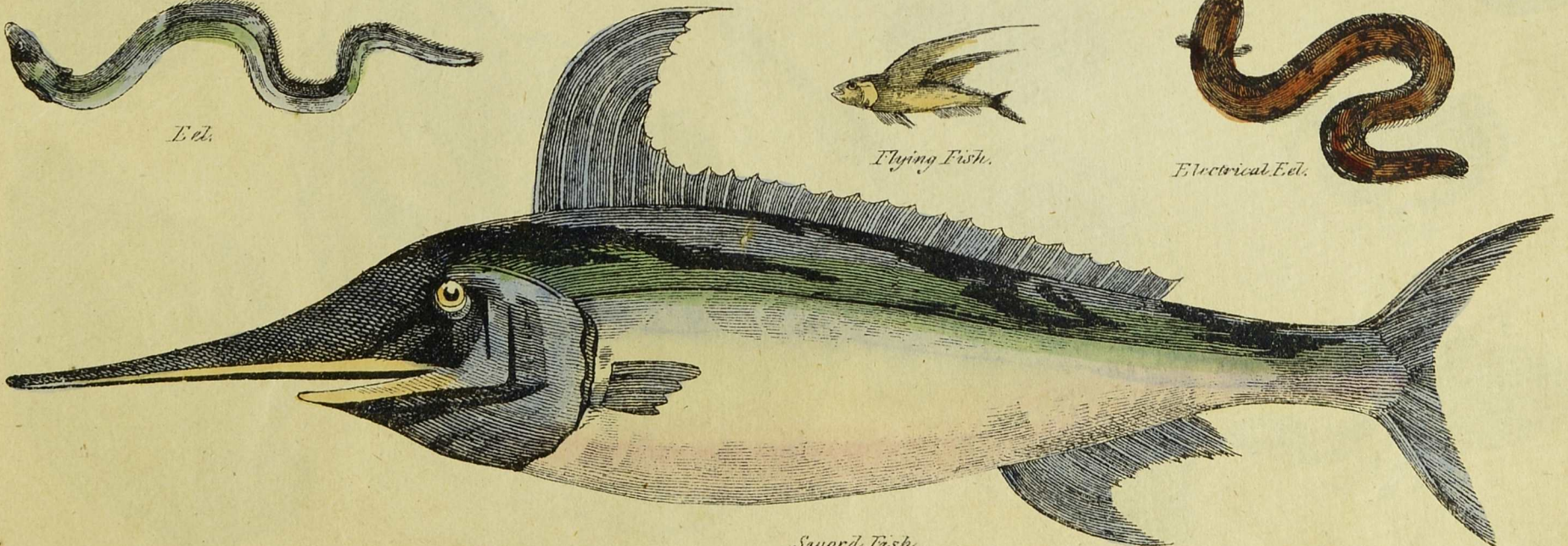
Eel.



Flying Fish.



Electrical Eel.

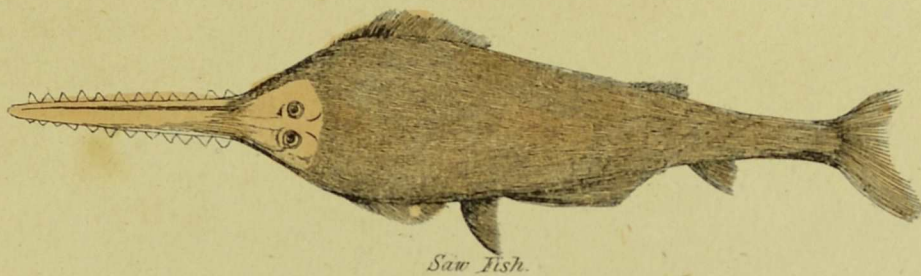


Sword-Fish.

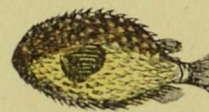
Order 2. Cartilaginous Fish.
(On Half scale.)



Toadfish.



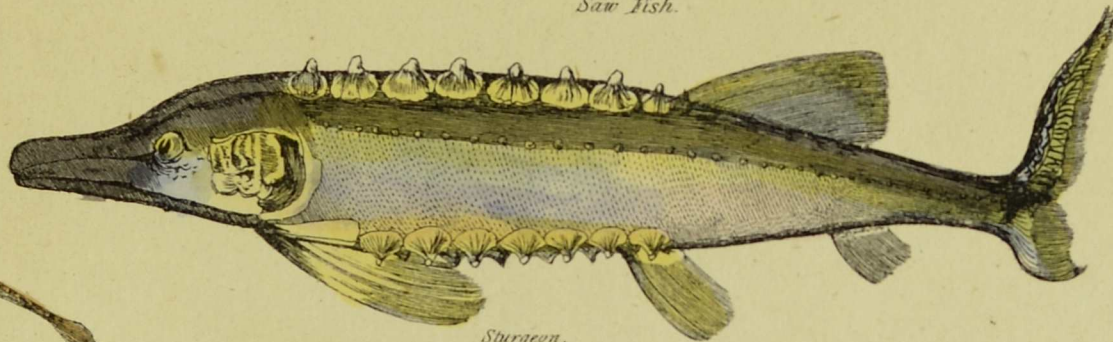
Saw Fish.



Sea Porcupine.



Torpedo.



Sturgeon.



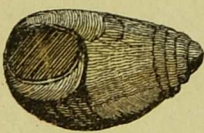
Skate.



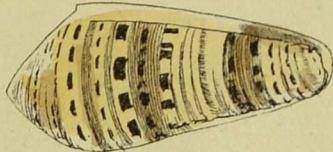
Shark.

Order 4. Shell Fish. (natural size.)

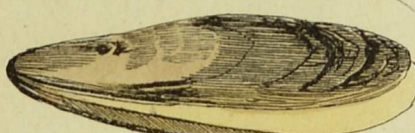
Crustaceous.



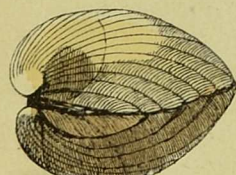
Periwinkle.



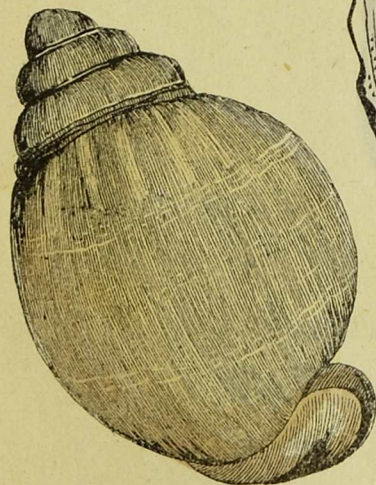
Admiral.



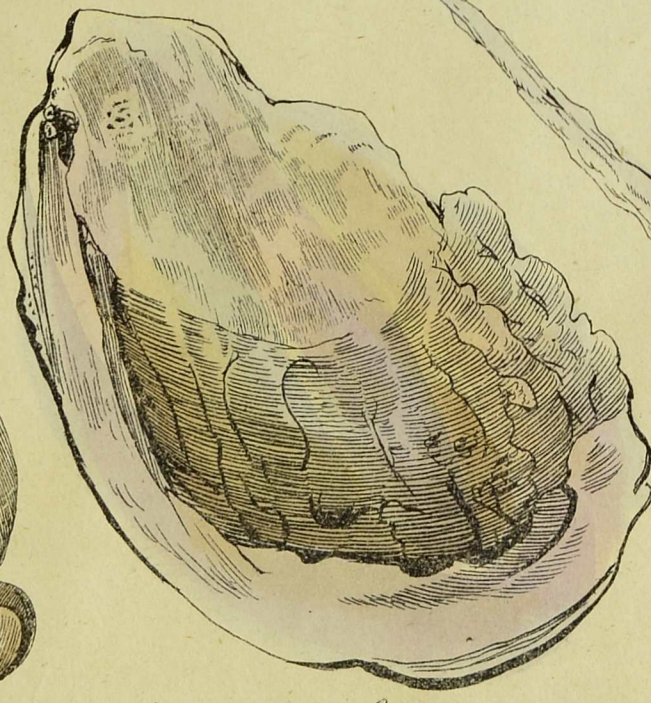
Mussel.



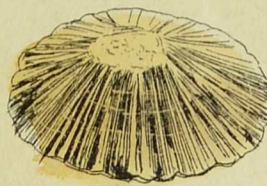
Cockle.



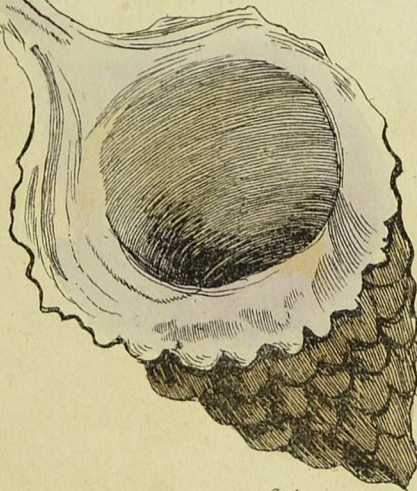
Wink.



Oyster.



Limpet.

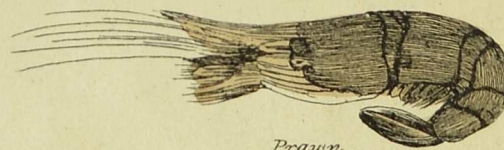


Snipe.

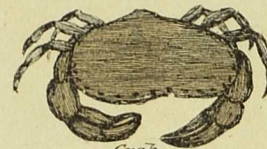
Testaceous.



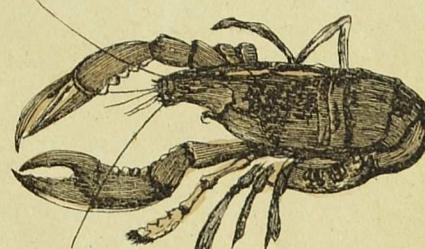
Shrimp.



Prawn.

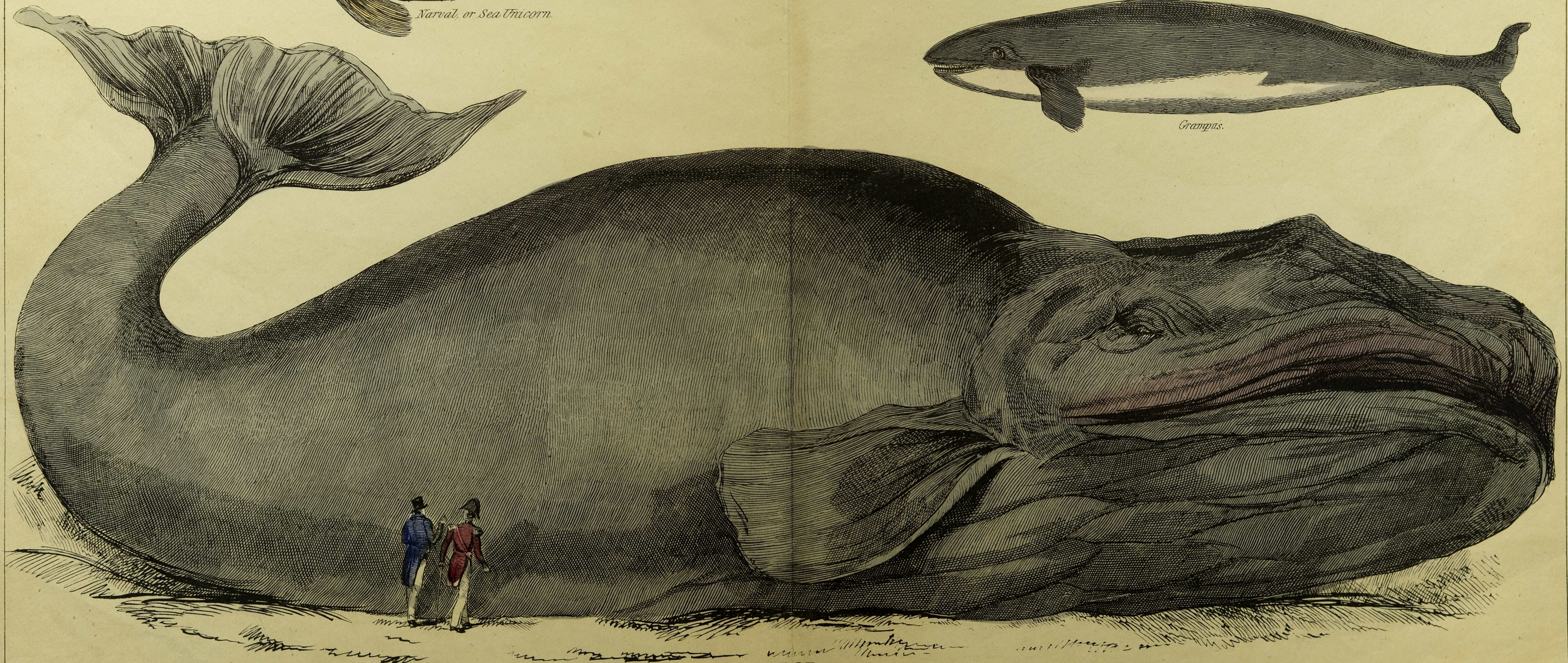
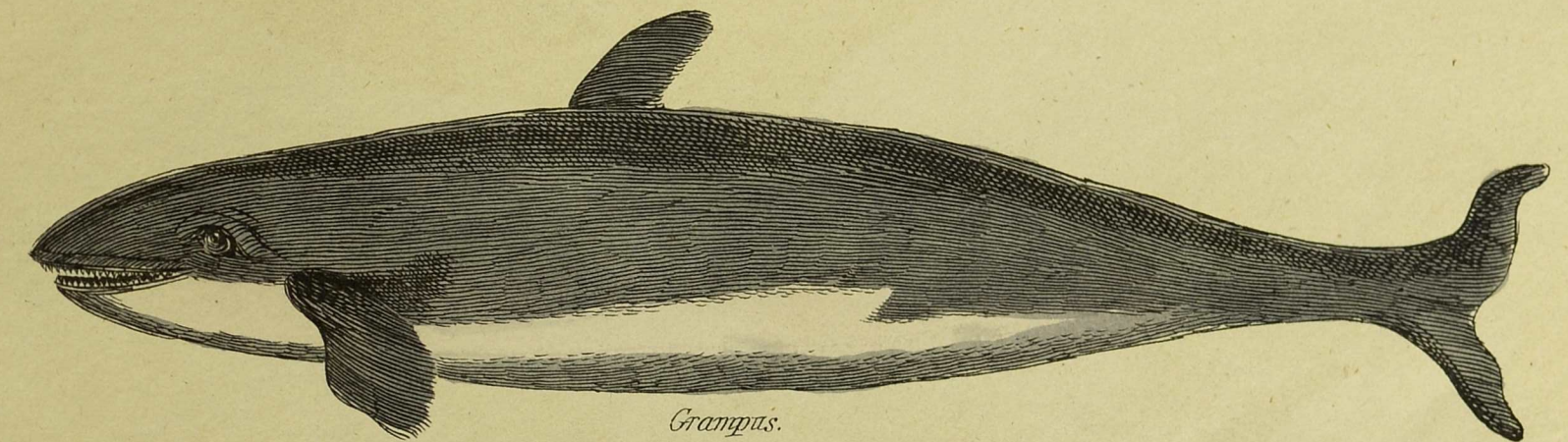
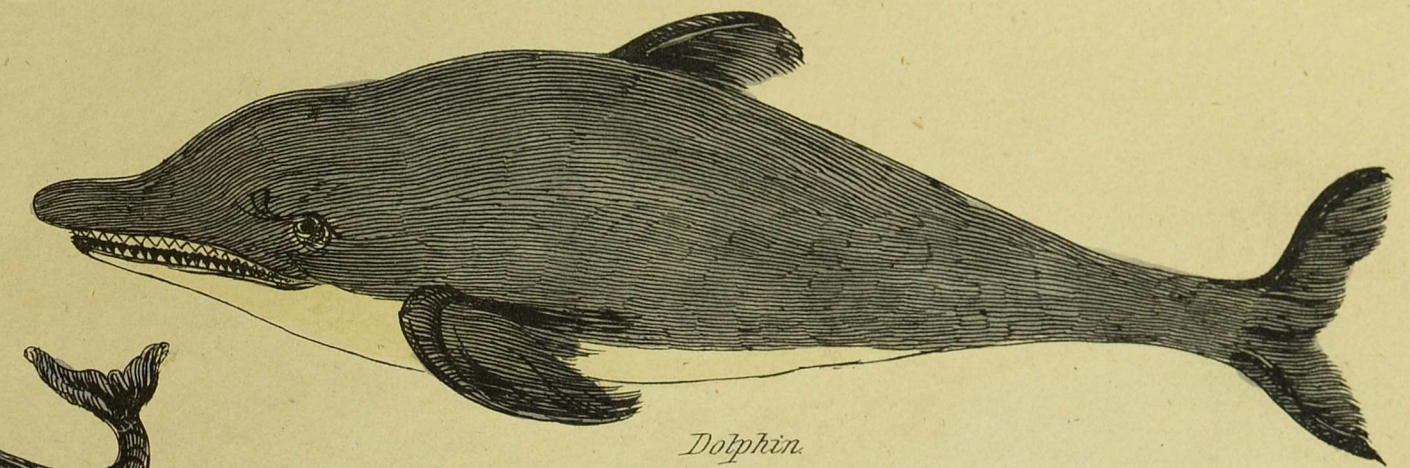
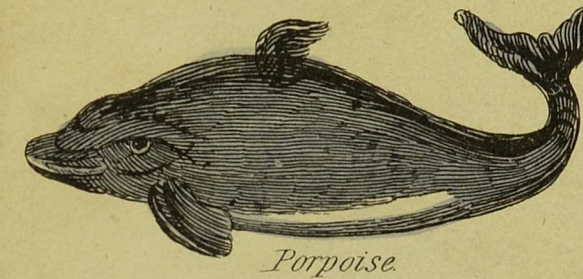
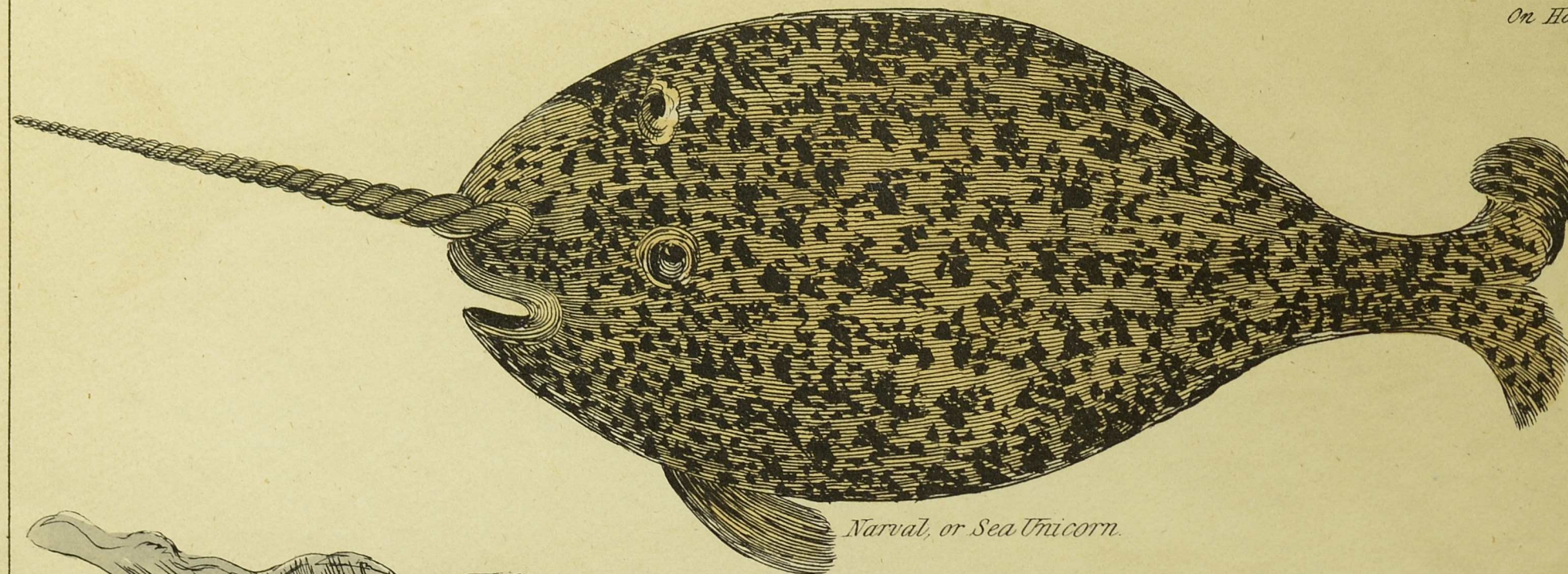


Crab.
(to the Scale)



Lobster.
(to the Scale.)

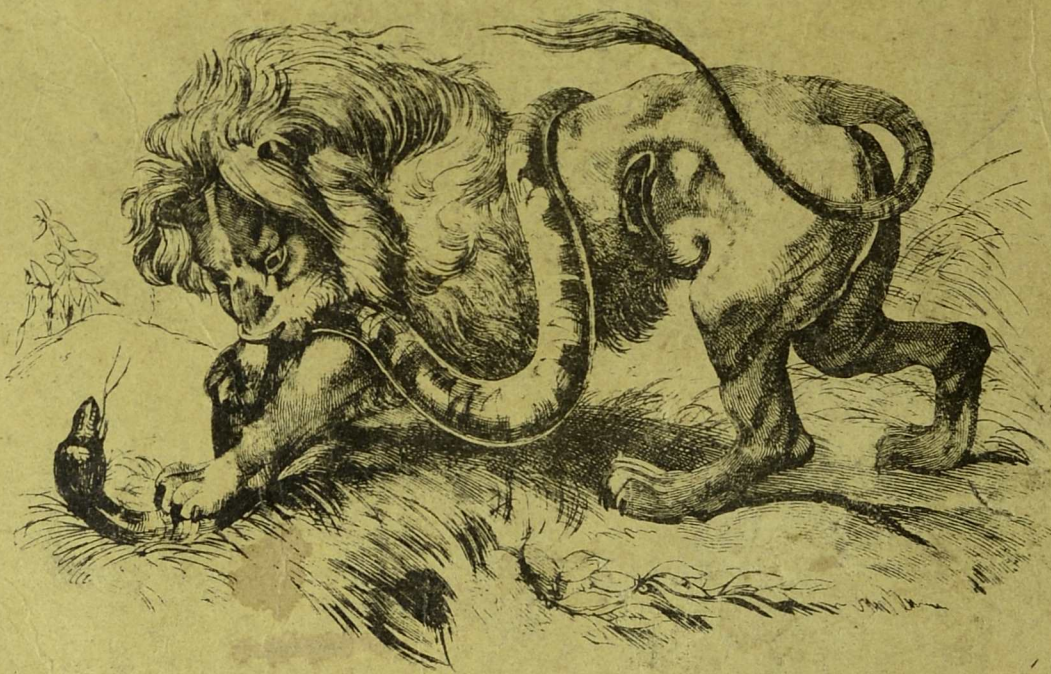
Order 1. Cetaceous Fish.
(Order 7. Cete of Mammalia.)
On Half scale.



THE
ILLUSTRATED BOOK
OF
NATURAL HISTORY.

ADAPTED TO THE USE OF
ENGLISH SCHOOLS, INFANT SCHOOLS AND NURSERIES.

IN WHICH
ABOVE FOUR HUNDRED ANIMALS ARE EXHIBITED IN THEIR COMPARATIVE SIZE,
AND ARRANGED ACCORDING TO THE LINNEAN SYSTEM OF CLASSIFICATION,
ACCOMPANIED WITH SUITABLE LETTER-PRESS DESCRIPTION.



GLASGOW,
DAVID BRYCE, BUCHANAN ST.
EDINBURGH, OLIVER & BOYD, & JOHN JOHNSTONE.
LONDON, HAMILTON, ADAMS & CO
MDCCCXLV.

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