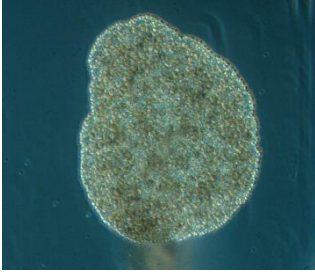


Animal Kingdom



Placozoa ("Plate animals", Trichoplaxes)

The Placozoa are a basal form of free-living (non-parasitic) multicellular organism. Simplest in structure of all animals, the body consists of an outer layer of simple epithelium enclosing a loose sheet of stellate cells resembling the mesenchyme of more complex animals. Three genera have been found: *Trichoplax adhaerens*, *Hoilungia hongkongensis*, and *Polyplacotoma mediterranea*. The last two were found only in 2017 and 2019. 3 species.



Porifera ("Pore bearer", Sponges)

Poriferans have bodies full of pores and channels for taking in water and nutrients, and an osculum ("little mouth") at the top for ejecting wastes. The body consists of jelly-like mesohyl sandwiched between two thin layers of cells. Sponges were first to branch off the evolutionary tree from the common ancestor of all animals, making them the sister group of all other animals. 10800 species.



Cnidaria ("Stinging nettle")

The distinguishing feature of Cnidarians is cnidocytes, specialized cells that they use mainly for capturing prey. Their bodies consist of mesoglea, a non-living jelly-like substance, sandwiched between two layers of epithelium. Cnidarians form four main groups: Anthozoa (sea anemones, corals, sea pens), Scyphozoa (jellyfish), Cubozoa (box jellies) and Hydrozoa (hydra). 16000 species.



Ctenophora ("Comb bearer", Comb jellies)

Ctenophores are the largest non-colonial animals that use cilia ("hairs") as their main method of locomotion. Most species have eight strips, called comb rows, that run the length of their bodies and bear comb-like bands of cilia, called "ctenes", stacked along the comb rows. 100 - 150 species.



Rhombozoa (Dicyemida "Lozenge animal")

Rhombozoa is a phylum of tiny parasites that live in the renal appendages of cephalopods. The organism's structure is simple: a single axial cell is surrounded by a jacket of twenty to thirty ciliated cells. The anterior region of the organism, the calotte, functions to attach the parasite to the surface of its host's renal appendages. 100+ species.



Xenacoelomorpha ("Strange hollow form", Acoels, xenoturbellids)

Xenacoelomorpha is a new phylum named in 2016, and consists of two sister groups: acoelomorphs and xenoturbellids. All species are bilateral. While they are triploblasts (i.e. they have three germ layers: ectoderm, endoderm and mesoderm), they do not have a true gut (coelom). They have no circulatory, respiratory or excretory system. 400+ species.



Platyhelminthes ("Flat worm")

Platyhelminthes are a phylum of simple bilaterian, unsegmented, soft-bodied invertebrates. They are acoelomates (having no body cavity), and have no specialized circulatory and respiratory organs. The digestive cavity has only one opening for both ingestion (intake of nutrients) and egestion (removal of undigested wastes). 29500 species.



Nemertea (named after the sea-nymph "Nemertes", Ribbon worms, proboscis worms)

Nemertean worms are long, thin, animals without segments. They are distinguished by the presence of an eversible proboscis, which lies in a cavity (the rhynchocoel) when inactive, but everts (turns inside-out) to emerge just above the mouth and capture the animal's prey with venom.

1200 species.



Gnathostomulida ("Jaw orifice", Jaw worms)

They are often slender to thread-like worms, with a generally transparent body. The mouth is located just behind the head, after a rostrum, on the underside of the body. It has a pair of cuticular jaws, supplied by strong muscles, and often bearing minute teeth.

100 species.



Gastrotricha ("Hairy stomach")

Gastrotrichs are bilaterally symmetrical, with a transparent strap-shaped or bowling pin-shaped body. At the posterior end of the body are two projections with cement glands that serve in adhesion. The whole ventral surface of the animal may be ciliated or the cilia may be arranged in rows, patches or transverse bands.

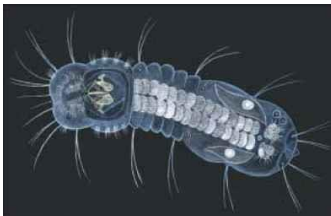
690 species.



Rotifera ("Wheel bearer")

The most distinctive feature of rotifers (in females of all species) is the presence of corona on the head, a structure ciliated in all genera except Cupelopagis. The coronal cilia create a current that sweeps food into the mouth, the motion which resembles a wheel (though the organ does not actually rotate).

200 species.



Micrognathozoa ("Tiny jaw animals", Limnognathia)

Limnognathia maerski is a microscopic platyzoan freshwater animal, discovered living in warm springs on Disko Island, Greenland in 1994. With an average length of one-tenth of a millimeter, it is one of the smallest animals known. L. maerski has very complicated jaws, with fifteen separate elements.

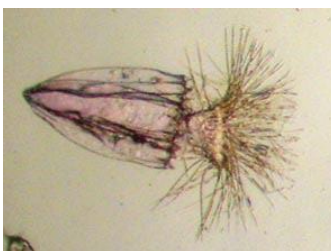
1 species



Kinorhyncha ("Moving snout", Mud dragons)

Kinorhynchs are segmented, limbless animals, with a body consisting of a head, neck, and a trunk of eleven segments. They have a number of spines along the body, plus up to seven circles of spines around the head. These spines are used for locomotion, withdrawing the head and pushing forward, then gripping the substrate with the spines while drawing up the body.

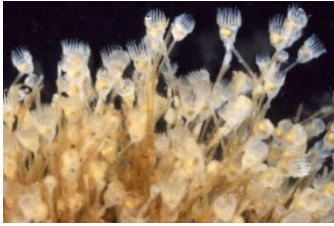
150 species.



Loricifera ("Corset bearer", Brush heads)

Loriciferans have an armor-like outer case called a lorica, consisting of a protective external shell or case of encircling plicae. The phylum was discovered in 1983 by Reinhardt Kristensen, in Roscoff, France. They are among the most recently discovered groups of Metazoans. They attach themselves firmly to the substrate, and hence remained undiscovered for so long.

122 species.



Entoprocta ("Inside anus", Goblet worms)

Most species are colonial, and their members are known as "zooids", since they are not fully independent animals. Mature individuals are goblet-shaped, on relatively long stalks. They have a "crown" of solid tentacles whose cilia generate water currents that draw food particles towards the mouth, and both the mouth and anus lie inside the "crown". The superficially similar Bryozoa (Ectoprocta) have the anus outside a "crown" of hollow tentacles.
150 species.



Cycliophora ("Wheel carrying", Symbion)

They have sac-like bodies, and three distinctly different forms (asexual, male and female) in their two-stage life-cycle (asexual feeding stage and sexual stage). They appear so different from other animals that they were assigned their own, new phylum Cycliophora shortly after they were discovered in 1995.
3+ species.



Nematoda ("Thread like", Round worms, thread worms)

Nematodes are unsegmented worms with long, thin bodies that narrow at both ends, and a thick outer cuticle which is both tough and flexible. Nematodes have adapted to nearly every ecosystem: from marine to fresh water, from the polar regions to the tropics. They are the most numerically abundant animals on Earth; four out of every five animals on Earth is a nematode.
25000 species.



Nematomorpha ("Thread form", Horsehair worms, gordian worms)

Nematomorpha are a phylum of parasitoid animals superficially similar to nematodes, hence the name. The adult worms are free-living, but the larvae are parasitic on arthropods, such as beetles, cockroaches, mantids, orthopterans and crustaceans.
320 species.



Bryozoa (Ectoprocta "Moss animals")

Bryozoans are filter feeders that sieve food particles out of the water using a retractable lophophore, a "crown" of hollow tentacles lined with cilia. The superficially similar Entoprocta have their anus inside rather than outside the base of the "crown". Individuals in the colonies are called zooids, and are not fully independent animals.
6000 species.



Phoronida (named after Zeus's mistress "Phoronis", Horseshoe worms)

Phoronids are a small phylum of marine animals that filter-feed with a lophophore (a "crown" of tentacles), with upright tubes of chitin to support and protect their soft bodies. The bottom end of the body is an ampulla, which anchors the animal in the tube. The gut runs from the mouth to the stomach at the bottom of the ampulla, and then up the other side of the body, up to the anus below the lophophore.
11 species.



Brachiopoda ("Arm foot", Lampshells)

Brachiopods have hard "valves" (shells) on the upper and lower surfaces, unlike the left and right arrangement in bivalve molluscs. The brachial (dorsal) valve bears on its inner surface the brachia ("arms") from which the phylum gets its name, and which support the lophophore, used for feeding and respiration.
300 - 500 species.



Mollusca ("Soft")

Mollusca is the second-largest phylum of invertebrate animals after the Arthropoda, and the largest marine phylum, comprising about 23% of all the named marine organisms. They include Gastropods (snails and slugs), Bivalves (clams and oysters) and Cephalopods (squids, cuttlefish and octopuses). The most universal feature of Molluscs is a mantle with a cavity used for breathing and excretion. 85000 species.



Priapulida ("Little Priapus", Penis worms)

Priapulids are cylindrical worm-like animals, with a main trunk or abdomen and a somewhat swollen proboscis region ornamented with longitudinal ridges. The body is ringed and often has circles of spines, which are continued into the slightly protrusible pharynx. 20 species.



Annelida ("Little ring", Segmented worms)

The basic annelid form consists of multiple segments, each segment has the same sets of organs and, in most polychaetes, has a pair of parapodia for locomotion. The annelids include Polychaetes (bristle worms), Oligochaetes (earthworms) and Hirudinea (leeches). 22,000 species.



Tardigrada ("Slow step", Water bears, Moss piglets)

Tardigrades are a phylum of segmented micro-animals, each with four pairs of legs, ending in claws or suction disks. Tardigrades are among the most resilient animals known, able to survive extreme conditions — such as extreme temperatures, extreme pressures, air deprivation, radiation, dehydration, and starvation. 1000 species.



Onychophora ("Claw bearer", Velvet worms)

Onychophorans are segmented animals with rows of stub feet known as oncopods or lobopods. On each foot is a pair of retractable, sclerotised chitin claws. Onychophorans form an evolutionary link between the annelids and the arthropods. 200 species.



Arthropoda ("Jointed foot")

Arthropods have jointed limbs and an external chitin skeleton, which in many crustaceans are biomineralised with calcium carbonate. They form the largest phylum in the animal kingdom; about 84% of all known animal species are arthropods. The phylum include insects, arachnids (spiders, scorpions), myriapods (millipedes, centipedes) and crustaceans (shrimps, lobsters, crabs, etc.). 1,250,000 species.



Echinodermata ("Spiny skin")

The adults are recognizable by their (usually five-point) radial symmetry. The phylum contains Asterozoa (starfish), Ophiurozoa (brittle stars), Echinozoa (sea urchins, sand dollars), Holothurozoa (sea cucumbers) and Crinozoa (feather stars, sea lilies). 7500 species.



Chaetognatha ("Longhair jaw", Arrow worms)

Chaetognaths are transparent or translucent dart-shaped animals covered by a cuticle. There are between four and fourteen hooked, grasping spines on each side of their head, flanking a hollow vestibule containing the mouth. The trunk bears one or two pairs of lateral fins. 100 species.



Hemichordata ("Half cord", Acorn worms)

Hemichordata is generally considered the sister group of the echinoderms, and they include Enteropneusta (acorn worms) and Pterobranchia. The body of acorn worms is divided into an anterior proboscis, an intermediate collar, and a posterior trunk. The proboscis is a muscular organ used to collect food and to burrow. 130 species.



Chordata ("With a cord")

During some period of their life cycle, chordates possess a notochord, a dorsal nerve cord, pharyngeal slits, and a post-anal tail. Chordates are divided into: Cephalochordata (lancelets also known as amphioxus), Tunicata or Urochordata (sea squirts, salps) and Vertebrata (fish, amphibians, reptiles, birds, mammals). 55000 species

Mammal Orders

Subclass Prototheria



Order Monotremata (echidnas, platypuses)



Microbiotheria (monitos del monte)



Notoryctemorphia (marsupial moles)



Order Macroscelidea (elephant shrews)

Infraclass Metatheria (marsupials)



Didelphimorphia (opossums)



Dasyuromorphia (numbats, Tasmanian devils)



Order Diprotodontia (koalas, wombats, kangaroos)



Order Tubulidentata (armadillo)



Order Paucituberculata (shrew opossums)



Peramelemorphia (bandicoots, bilbies)

Infraclass Eutheria (placentals)



Order Afrosoricida (tenrecs, golden moles)



Order Proboscidea (elephants)



Order Sirenia (dugongs, manatees)



Order Hyracoidea (hyraxes)



Order Pilosa (sloths, anteaters)



Order Cingulata (armadillos)



Order Dermoptera (colugos)



Order Scandentia (tree shrews)



Order Primates (lemurs, monkeys, apes, human)



Order Rodentia (squirrels, beavers, mice, rats)



Order Lagomorpha (rabbits)



Order Erinaceomorpha (hedgehogs)



Order Soricomorpha (shrews, moles)



Order Chiroptera (bats)



Order Pholidota (pangolins)



Order Carnivora (cats, wolves, bears, seals)



Order Perissodactyla (horses, tapirs, rhinoceroses)



Order Artiodactyla (pigs, hippopotamuses, camels, deer, giraffe, cattle, goats)



Order Cetacea (whales)