

Classification of the Included Phyla

Note:

Groups that occur in the book are coloured. Chapter headings are written in blue.

Green text indicates the taxa occurring in the book.

Phylum Porifera

1. Class Calcarea (Calcareous sponges)
2. Class Hexactinellida (Glass sponges)
3. Class Demospongiae (Demosponges)

Phylum Cnidaria

1. Class Anthozoa
 1. Subclass Hexacorallia (Anemones, corals, and their kin)
 1. Order Ceriantharia (Tube anemones)
 2. Order Antipatharia (Black corals)
 3. Order Zoantharia = Zoanthidea (Colonial and encrusting anemones)
 4. Order Actiniaria (Sea anemones)
 5. Order Corallimorpharia (Jewel anemones)
 6. Order Scleractinia (Stony corals)
 2. Subclass Octocorallia¹ (Soft corals, sea pens)
 1. Order Alcyonacea (Soft corals and gorgonians)
 1. Suborder Calcaxonia (Gorgonians without hollow, cross-chambered central axis)
 2. Suborder Holaxonia¹ (Gorgonians with hollow, cross-chambered central axis)
 3. "Subordinal group" Alcyoniina (Fleshy soft corals)
 4. "Subordinal group" Protoalcyonaria (Solitary polyps)
 5. "Subordinal group" Scleraxonia (Gorgonians with axis of sclerites)
 6. "Subordinal group" Stolonifera (Soft corals united by stolons)
 2. Order Pennatulacea (Sea pens and sea pansies)
 3. Order Helioporacea (Blue corals)
2. Class Cubozoa (Sea wasps, box jellyfish)
3. Class Scyphozoa (Jellyfish)
 1. Order Coronatae
 2. Order Semaestomeae
 3. Order Rhizostomeae
4. Class Staurozoa (Stalked jellyfish)
 - Order Stauromedusae
 1. Suborder Cleistocarpida
 2. Suborder Eleutherocarpida
5. Class Hydrozoa (Hydrozoans)
 1. Subclass Trachylina
 1. Order Limnomedusae
 2. Order Trachymedusae
 3. Order Narcomedusae
 4. Order Actinulidae

¹ Classification after Daly et al. (2007), for reference see Introduction Anthozoa; suborder Holaxonia not accepted by all researchers

2. Subclass Hydroidolina
 1. Order Anthomedusae
 1. Suborder Filifera
 2. Suborder Capitata
 2. Order Leptomedusae
 1. Suborder Conica
 2. Suborder Proboscoida
 3. Order Siphonophorae
3. Subclass Polypodiozoa

Phylum Platyhelminthes (Flatworms, flukes, tapeworms)

1. Class Turbellaria (Free-living flatworms)
 - Order Polycladida (Marine flatworms)
2. Class Monogenea (Monogenetic flukes)
3. Class Trematoda (Digenetic and aspisogastreaan flukes)
4. Class Cestoda (Tapeworms)

Phylum Nemertea (Nemerteans, ribbon worms)

1. Class Neonemertea
 1. Order Pilidiophora
 - Suborder Heteronemertea
 2. Order Enopla (Hoploneumertea)
 1. Suborder Monostilifera
 2. Suborder Polystilifera
2. Class Palaeonemertea

Phylum Sipuncula (Sipunculans, peanut worms)

1. Class Phascolosomatidea
2. Class Sipunculidea

Phylum Echiura (Echiurans, spoon worms)

Class Echiuroidea

Phylum Mollusca (Molluscs)

1. Class Solenogastres
 2. Class Caudofoveata
 3. Class Polyplacophora (Chitons)
 4. Class Monoplacophora
 5. Class Bivalvia (Clams, mussels etc.)
 6. Class Scaphopoda (Tusk shells)
 7. Class Cephalopoda (Octopuses, squids etc.)
 8. Class Gastropoda (Gastropods, snails, slugs)
 1. Subclass "Prosobranchia"
- Unranked taxon Euthyneura
1. Subclass Opisthobranchia (Sea slugs)
 2. Subclass Pulmonata

Phylum Annelida (Segmented worms)

1. Class Polychaeta (Fan worms, tube worms, polychaetes)
2. Class Clitellata (Earth worms, leeches)

Phylum Arthropoda

1. Subphylum Cheliceriformes
 1. Class Chelicerata
 2. Class Pycnogonida (Sea spiders)
2. Subphylum Myriapoda (Centipedes, Millipedes and their kin)
3. Subphylum Hexapoda (Insects and their kin)
4. Subphylum Crustacea
 1. Class Remipedia
 2. Class Cephalocarida
 3. Class Branchiopoda
 4. Class Maxillopoda
 1. Subclass Thecostraca (Barnacles and their kin)
 Infraclass Cirripedia (Barnacles)
 2. Subclass Copepoda
 3. Subclass Ostracoda
 5. Class Malacostraca
 1. Subclass Phyllocarida
 Order Leptostraca
 2. Subclass Eumalacostraca
 1. Superorder Hoplocarida
 Order Stomatopoda
 2. Superorder Syncarida
 3. Superorder Eucarida
 1. Order Euphausiacea (Krill)
 2. Order Decapoda (Crabs, shrimps and lobsters)
 1. Suborder Dendrobranchiata (Prawns)
 2. Suborder Pleocyemata (Shrimps, true crabs, lobsters)
 1. Infraorder Caridea
 2. Infraorder Brachyura
 3. Infraorder Anomura
 4. Infraorder Astacidea
 5. Infraorder Palinura
 6. Infraorder Thalassinidea
 4. Superorder Peracarida (Isopods, amphipods, and their kin)
 1. Order Mysida
 2. Order Amphipoda
 3. Order Isopoda
 4. Order Tanaidacea
 5. Order Cumacea

Phylum Ectoprocta = Bryozoa (Moss animals)

1. Class Phylactolaemata (Ectoprocts with statoblasts)
2. Class Stenolaemata (Archaic tubular ectoprocts)
 Order Cyclostomatida
3. Class Gymnolaemata (Non tubular ectoprocts)
 1. Order Ctenostomatida (Uncalcified gymnolaemata)
 2. Order Cheilostomatida (Calcified gymnolaemata)

Phylum Brachiopoda (Lamp shells)

1. Class Rhynchonellata
2. Class Lingulata
3. Class Craniforma

Phylum Echinodermata (Echinoderms)

1. Class Crinoidea (Sea lilies, feather stars)
2. Class Asteroidea (Star fish)
3. Class Ophiuroidea (Brittle and basket stars)
4. Class Echinoidea (Sea urchins, sand dollars)
 1. Subclass Cidaroidea
 2. Subclass Echinoidea
5. Class Holothuroidea (Sea cucumbers)
 1. Order Aspidochirotida
 2. Order Dendrochirotida
 3. Order Dactylochirotida
 4. Order Molpadiida
 5. Order Apodida

Phylum Chordata

1. Subphylum: Cephalochordata / Acrania
2. Subphylum Urochordata / Tunicata
 1. Class *Asciacea* (Ascidians, sea squirts, tunicates): stem group
 2. Class Thaliacea (Salps)
 3. Class Sorberacea
 4. Class Appendicularia (Larvaceans)
3. Subphylum Craniata
 1. Class: Myxinida (Hagfish)

All remaining: Vertebrata

2. Class: Petromyzontida (Lampreys)

All remaining: Gnathostomata (Jawed vertebrates)

3. Class Chondrichthyes (Sharks, skates, rays)

All remaining: Choanichthyes (Choane fishes)

4. Class: Actinopterygii (Ray-finned fish)

All remaining: Sarcopterygia

5. Class: Coelacanthia: *Latimeria*

All remaining: NN

6. Class: Dipnoi (Lung fishes)

All remaining: Tetrapoda (Four leg animals)

7. Class Amphibia (Amphibians: frogs, salamanders, newts)

All remaining: Amniota (Amniote animals)

8. Class Sauropsida (Reptiles and birds)
9. Class Synapsida / Mammalia (Mammals)

Agnatha: Myxinida & Petromyzontida

Osteichthyes (bony fish): Actinopterygia, Coelacanthia & Dipnoi

Pisces (Fish): Myxinida to Dipnoi

*: paraphyletic