

# Annelida Classification upto orders

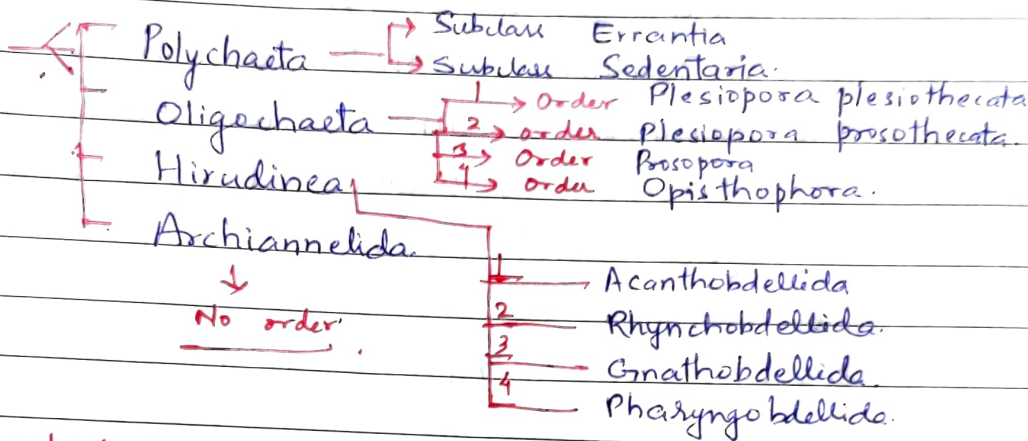
classmate

Date \_\_\_\_\_

Page \_\_\_\_\_

About 8700 known species of annelida are divided into four main classes, primarily on the basis of the presence and absence of parapodia, setae, metameres and other morphological features.

4 classes



Polychaeta + Oligochaeta = Chaetopoda

## CLASS 1. Polychaeta.

(Gr. Polys, many + chitae, hair)

1. Chiefly marine, some in freshwater.
2. Segmentation internal and external.
3. Head distinct with eyes, palps and tentacles.
4. Setae numerous, on lateral parapodia.
5. Clitellum absent.
6. Sexes separate. Gonads temporary and in many segments.
7. Trochophore larva present.

Attempts to arrange families into orders has not proved satisfactory. It is usual, therefore, to divide polychaetes into two subclasses, Errantia and Sedentaria after Fauvel (1959). However, according to Dab (1963), this subdivision is artificial and not a natural one.

### Subclass I = Errantia

1. Free swimming, crawling, burrowing or tube-dwelling and predatory polychaetes.
2. Segments numerous and similar, except for head and anal region.
3. Prostomium distinct with sensory structures. Para
4. Parapodia with acicula and compound setae.
5. Pharynx protrusible, enlarged and usually with jaws and teeth.

6

Examples: Aphrodite (Sea mouse), Polynoe, Phyllodoce, Tomopteris, Syllis, Nereis, Glycera, Eunice, Diopatra, Hirsutiobdella.

### Subclass II = Sedentaria.

1. Sedentary polychaetes living in burrows or tubes.
2. Body made of two or more regions, with dissimilar segments and parapodia.
3. Prostomium small.
4. No acicula <sup>and</sup> or compound setae.
5. Pharynx without jaws and teeth.

Examples: Chaetopterus, Arenicola, Oweria, Sabella, Sabellaria, Terebella, Amphitrite, Pomatoceros, Spiroorbis, Serpula.

### Class 2. Oligochaeta.

Gr., oligos, few + chaete, hair).

1. Mostly terrestrial, some in freshwater.
2. Segmentation external and internal.

3. Head distinct, without sensory organs.
4. Setae few, embedded in skin. Parapodia absent.
5. Glandular clitellum present for cocoon formation.
6. Hermaphroditic. Testes anterior to ovaries.
7. Fertilization external (in cocoon); development direct, no larval stages.

### Order 1. Plesiopora plesiothecata.

1. Mostly aquatic.
2. Male gonopores on segment immediately following that which contains testes.
3. Spermathecae in the testes-containing segments or nearby.
- 4.

Examples : Aelosoma, Nais, Dero, Chaetogaster, Tubifex.

### Order 2. Plesiopora prosothecata.

1. Spermathecae far anteriorly to the segment containing testes.

Example : Enchytraeus.

### Order 3. Prosopora

1. Mostly aquatic.
2. Male gonopores on the same segment containing testes, or on the segment containing the second pair of testes.

Example : Branchiobdella (Parasitic).



## Order 4. Opisthophora.

1. Mostly terrestrial earthworms.
2. Male gonopores some distance behind the testes containing segments.

Example : Lumbricus, Eisenia, Pheretima, Megascelus, Allolobophora, Dendrobaena.

NOTE: Chaetopoda (Gr., chaite, hair + pou, foot).

Chaetopoda is a supergroup which includes both polychaeta and oligochaeta. This creation is because of the fact that both the classes are provided with setae.

## Class 3. Hirudinea.

(L., Hirudo, leech)

1. Freshwaters, marine or terrestrial. Generally ectoparasite, blood - sucking or carnivorous.
2. Body with fixed number of segments (33). Each segment subdivided externally into annuli.
3. Segmentation external without internal septa. Parapodia and setae absent.
4. Both anterior and posterior ends of body with suckers.
5. Coelom much reduced due to its filling by botroidal tissue, and forms haemocoelomic sinuses.
6. Hermaphroditic with one male and one female.

gonopore. Fertilization internal. Development in cocoons, direct without larval stages.

### Order 1. Acanthobdellida.

1. Primitive, without anterior sucker, proboscis and jaws.
2. Setae present in 5 anterior segments.
3. Coelom with compartments.

Example: A single Russian genus and species (Acanthobdella) parasitic on salmon.

### Order 2. Rhynchobdellida.

1. Only aquatic leeches, ectoparasitic.
2. A protrusible proboscis with no jaws.
3. Coelom without compartments.
4. Body vascular system separated from coelomic sinuses. Blood colourless.

Examples: Glossiphonia, Placobdella, Helobdella, Piscicola, Pontobdella, Branchellion, Ozobranchus.

### Order 3. Gnathobdellida.

1. Aquatic or terrestrial. Ectoparasitic blood-sucking leeches.
2. Pharynx non-reversible with 3 pairs of jaws.

Examples: Hirudo, Hirudinaria, Haemadipsa.

## Order 4. Pharyngobdellida.

1. Terrestrial and aquatic. Some predaceous.
2. Pharynx non-protrusible. No teeth but one or two styles may be present.

Examples: Eryobdella, Dina.

## Class 4. Archiannelida.

(Gr., arch, first)

1. About one dozen genera of small, marine worms of unknown affinities.
2. Segmentation chiefly internal. No parapodia and setae.
3. Sexes usually separate.
4. Usually trochophore larva.

Examples: Polygordius, Dinophilus, Protodrilus.