

# Phylum Annelida

## Segmented Worms

### Characteristics

- Segmentation
- Chaetae (Hairs made of Chitin)
- 3 Cell Layers
- True Coelom
- Head develops first (Protostomal)

**Annelida**  
(worms, leeches)

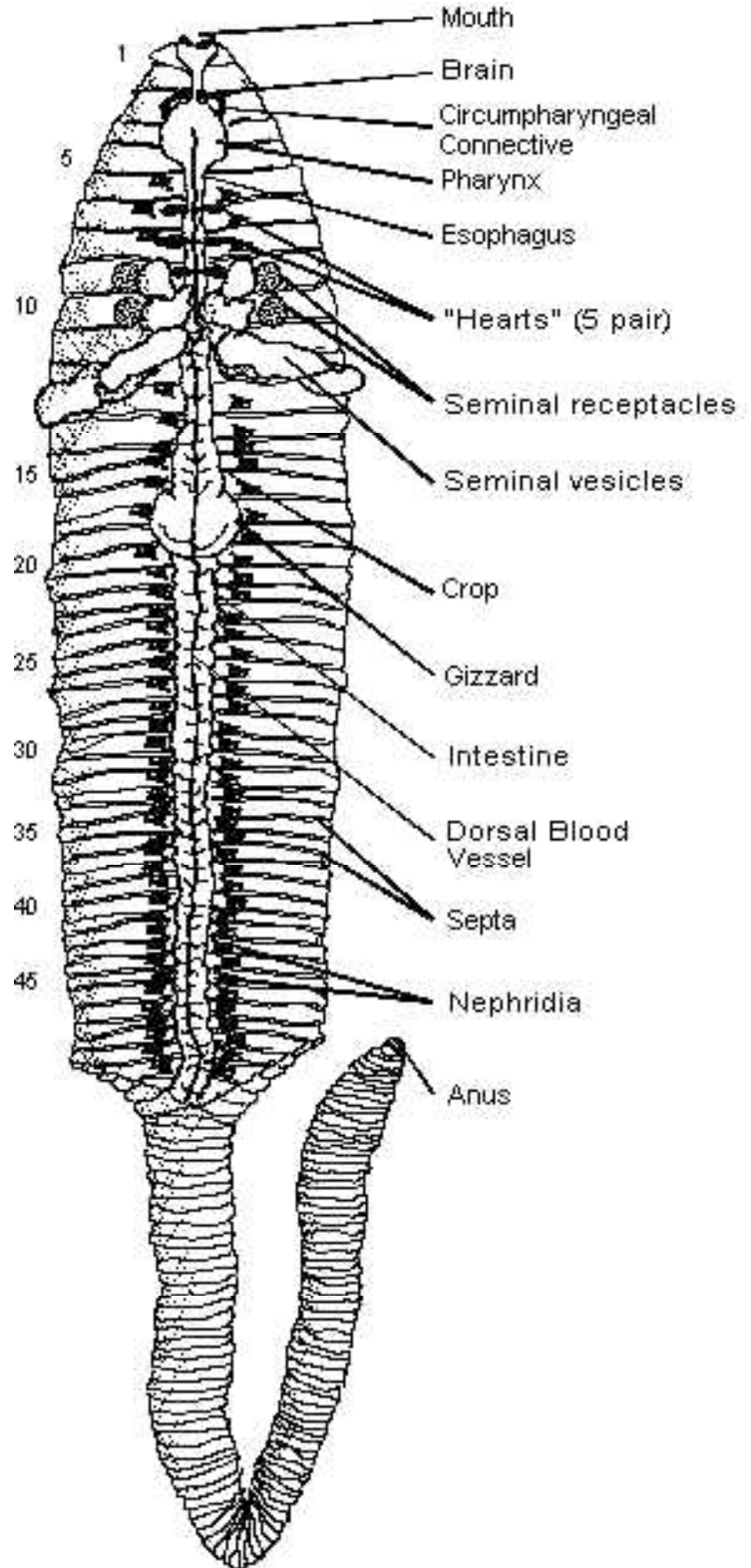


### Annelida Has 3 Major Classes

1. Polychaeta (Poly – keet - a)
  - a. Poly = Many, Chaetae = hairs
2. Oligochaeta (Oligo – keet – a)
  - a. Oligo = few
3. Hirudinea
  - a. = Leeches! (Ectoparasites)

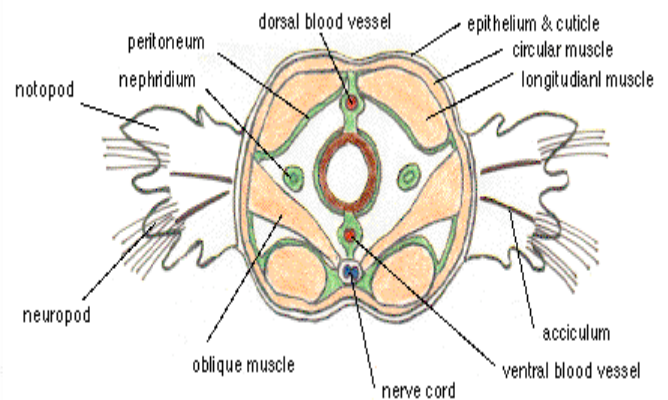
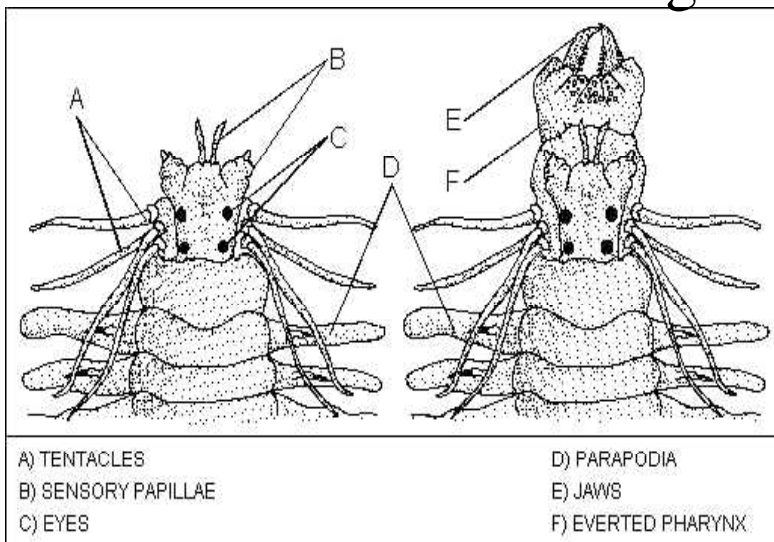
# Segmentation

1. Allows movement with maximum protection.
2. Each segment contains repetition of excretory, movement organs.
3. Each is separated from others by a septum.
4. Segmentation provides an evolutionary framework to build upon.
5. Other major phyla with segmentation are Arthropoda, Chordata.



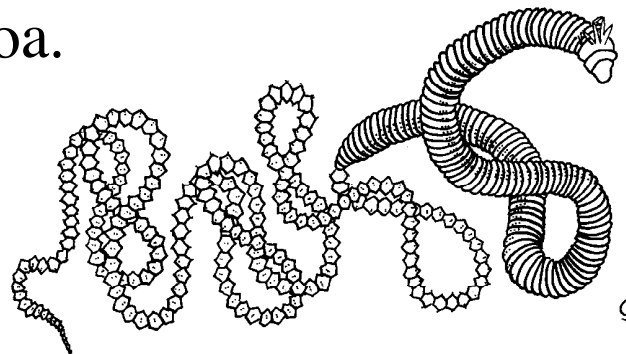
# Polychaetes

1. Live in the ocean (marine).
2. Many chaetae (chitinous hairs)
3. Movement
  - a. Each segment has paired parapodia for swimming/crawling.
  - b. May burrow, using peristalsis
2. Feeding
  - a. Deposit feeders (eat mud, digest organic content)
  - b. Raptorial predators
  - c. Herbivores/Scavengers
  - d. Filter feeders
    - i. With mucous net
    - ii. With feeding arms



### 3. Reproduction

- a. Dioecious -Mostly have two sexes: male, female.
- b. Segmentation allows regeneration.
- c. Also allows Epitoky!
  - i. Posterior (tail) end of worm grows enlarged gonads and eyes; parapodia become modified for swimming.
  - ii. Often, the posterior end will then break off and swim away to reproduce! It is called an epitoke
  - iii. Usually on one or two days of the year, all epitokes of a species will congregate at the surface, with males swarming around females, shedding sperm. Females, once fertilized, shed all eggs into water.
  - iv. Epitokes of the Palolo worm are a delicacy in Samoa.



# Oligochaeta

1. Live in freshwater, land, ocean
2. Few chaetae (chitinous hairs)
3. Movement

- a. Most burrow with peristalsis.

Muscular contractions of body, using both longitudinal and circular muscles.

- b. Use chaetae as anchors.

4. Feeding

- a. Deposit feeders (earthworms)

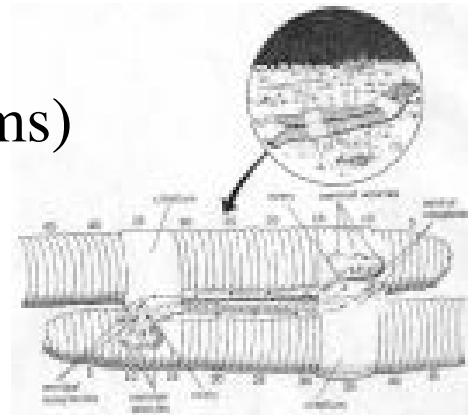
- b. Herbivores/scavengers

5. Reproduction

- a. Hermaphroditic

- b. Worms reproduce by holding clitella (singular is clitellum) together, and exchanging sperm.

- i. Clitellum provides mucus for transfer of sperm, also creates a cocoon for eggs, a few days later.



# Hirudinea

1. Mostly freshwater, some marine.  
Like to live in ponds.

2. No chaetae

3. Movement

a. Have suckers on both ends

b. Move like inchworms

4. Feeding

a. 3/4 blood-sucking ectoparasites

b. 1/4 predators

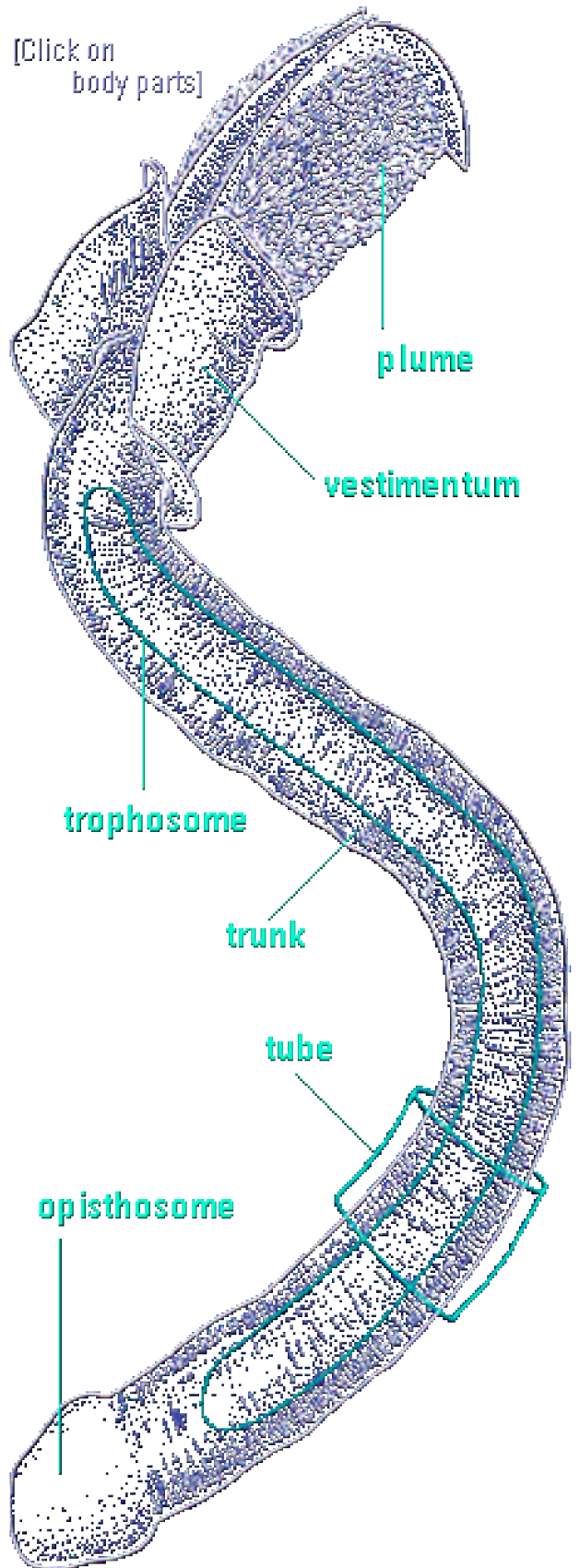
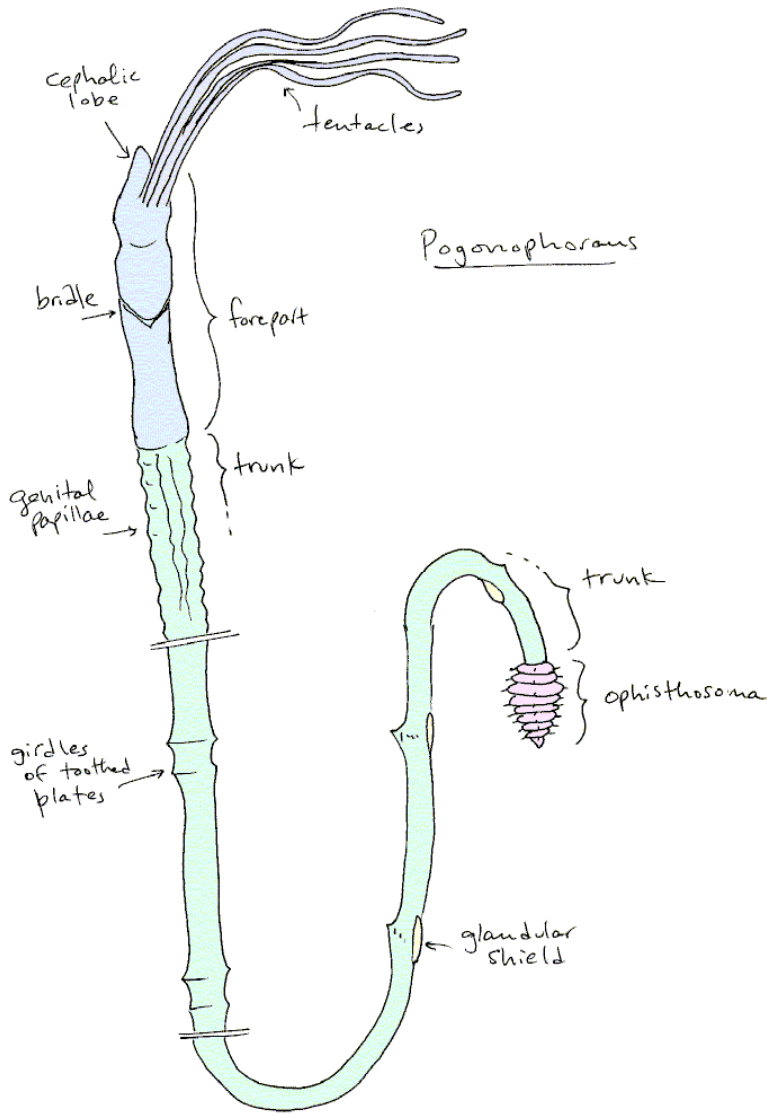
c. 3 Triangular teeth slice skin, proboscis is forced in, along with anticoagulant, blood is sucked through proboscis by pumping of pharynx.

5. Reproduction

a. Hermaphroditic

b.





Pogonophorans  
(Weird Worms at  
deep sea vents)