Phylum Annelida

The Segmented Worms
Classes of Annelida

- Class **Polychaeta** (fanworms, clam worms)
- Class **Oligochaeta** (earthworms)
- Class **Hirudinea** (Leeches)

- Classes not covered
  - Class **Branchiobdellida**
  - Class **Acanthobdellida**
General Characteristics

- Annelids are to be found in **marine, freshwater, and terrestrial habitats**
- The body is vermiform, **bilaterally symmetrical**, and **segmented**
- Each segment is separated from contiguous ones by a transverse septum
- The body is triploblastic with a well developed **coelom**
- The body is covered with a flexible **non-chitinous cuticle**
General Characteristics

- Most forms have **setae**, hard, bristle-like chitinous structures
- **Digestive system** is complete
- **Circulatory system** is closed,
- **Excretory** system typically consists of a pair of **nephridia** per segment
Class - Polychaeta

Nereis, Aphroditia, Chaetopterus, Arenicola, Amphitrite
General Characteristics

- Mostly **marine** and **free-living**
- **Many setae**, on fleshy lateral outgrowths of the body wall known as **parapodia**
- Well developed **head bearing appendages**
- **Sexes separate**, with a free-swimming **trochophore larva**
Some Polychaetes
Nereis

Clam Worm (Nereis)

PHOTO BY GORDON PEACHEY
Parapodia
Class Oligochaeta

Lumbricus  Tubifex

Earthworms and Freshwater Worms
General Characteristics

- Are **terrestrial** with a few freshwater species
- Have **few setae**
- **No parapodia**
- **No distinct head appendages**
- **Clitellum present**
- **Hermaphrodites**, with copulation required
- Eggs are deposited in a **cocoon** and development is direct
Mating earthworms
Mating and reproduction in earthworms:

- **A** Sperm exchange (copulation) in earthworms
- **B** Deposition of eggs in mucous sac
- **C** Fertilization
- **D** Cocoon slipping off
- **E** Fertilized eggs
- **F** Worm emerging

Mating earthworms
Some Oligochaets
Figure 17

Aeolosoma
Figure 17.18

Dero
Class Hirudinea

Hirudo, leech
General Characteristics

- **Ectoparasites**, not all - many feed on organic debris
- Usually dorso-ventrally flattened with fixed number of body segments (34)
- **No setae or parapodia**
- **Clitellum** present **only during reproduction**
- **Two suckers** – anterior and posterior