Lab 2: Annelid Anatomy

Phylum Annelida

- coelomate body cavity, hydrostatic skeleton, complete digestive tract
- segmented body (segments = **metameres);** new segments arise from **pygidium**
- non-chitinous **cuticle**
- **setae:** chitinous bristles (except leeches)

Class Polychaeta **(largest class of annelids)**

- mostly marine
- **parapodia:** paired appendages that function in locomotion, respiration, and, anchoring, usually with bundles of setae
- mostly dioecious; external fertilization; indirect development- **trochophore** larva
  Ex. *Nereis* (if available)

Class Oligochaeta

- mostly freshwater and terrestrial
- no parapodia
- few setae (reduced in size) per segment
- mostly monoecious; internal fertilization, **clitellum** present; direct development
  Ex. *Lumbricus* (earthworm)
  Tubifex

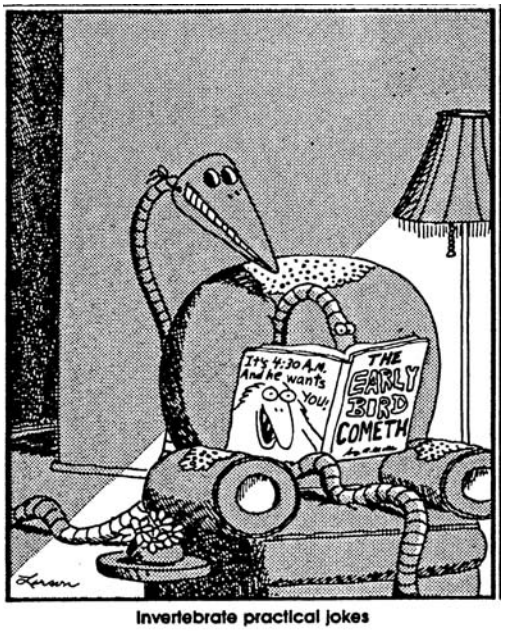
Class Hirudinea

- mostly freshwater
- no parapodia
- no setae
- dorsoventrally flattened
- anterior, posterior suckers
- monoecious; internal fertilization, **clitellum** present; direct development
  Ex. *Hirudo medicinalis* (medicinal leech)
  other leeches as available

To do:

l) *Lumbricus* observe external anatomy and movement. *Lumbricus* dissection and x-section prepared slides (for dissection protocol and diagram, see lab manual).
2) Observe live leeches. Note locomotion, external anatomy. How do they swim? (Remember, leeches live in freshwater, so use D.I. H_20!)
3) Observe live *Tubifex* worms. Under a dissecting scope, note circulation. Which way does the blood flow?
4) (If available) *Nereis* – examine external anatomy. Compare with diagrams in lab manual.

** Be sure to check out the annelid comparison table in your lab manual!



Invertebrate practical jokes

Vocabulary (define during the lab!):

coelom
hydrostatic skeleton
prostomium
peristomium
pygidium
parapodia
-notopodia
-neuropodia
acicula
cirri
clitellum