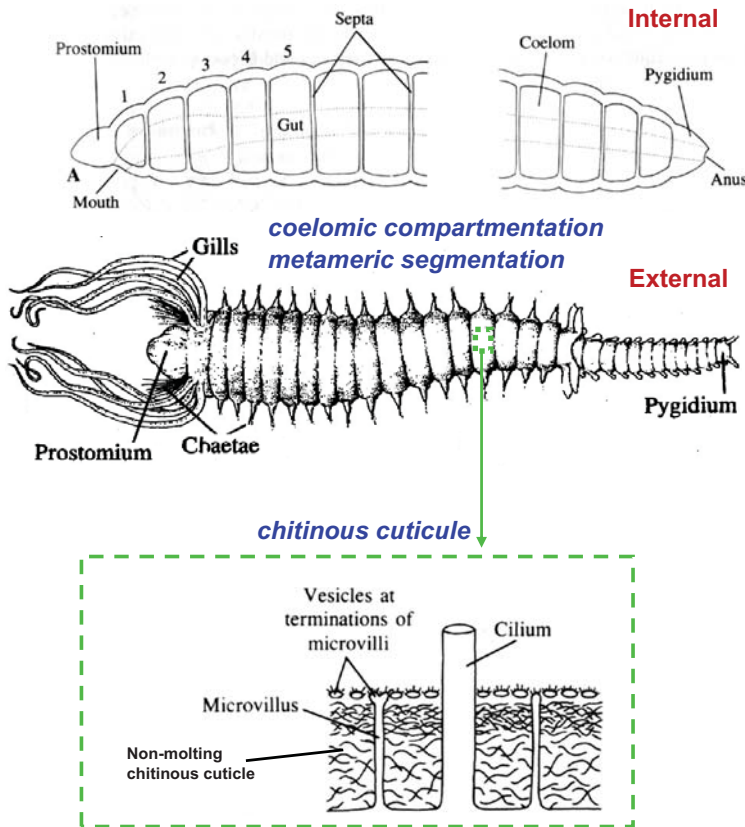


Polychaete: external features



Cephalization

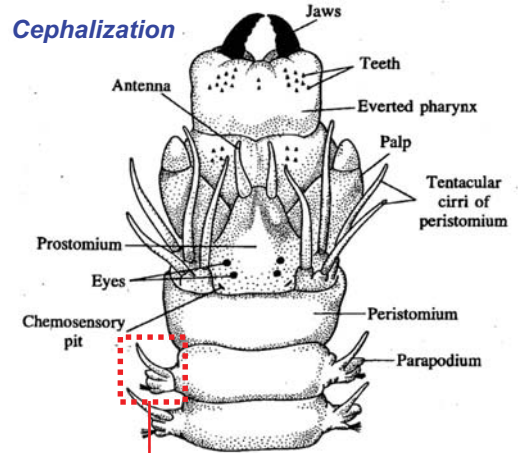
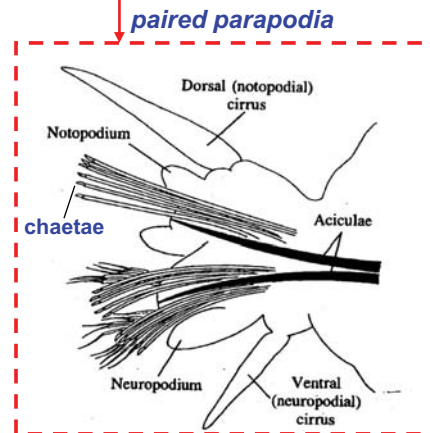


FIGURE 11.11 Head Region of a nereid polychaete, pharynx everted.



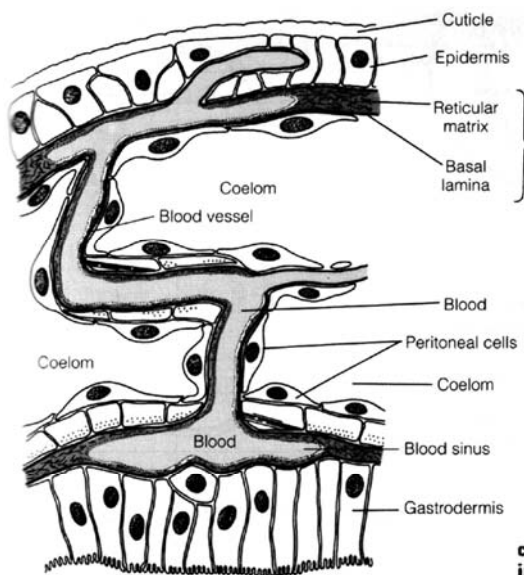
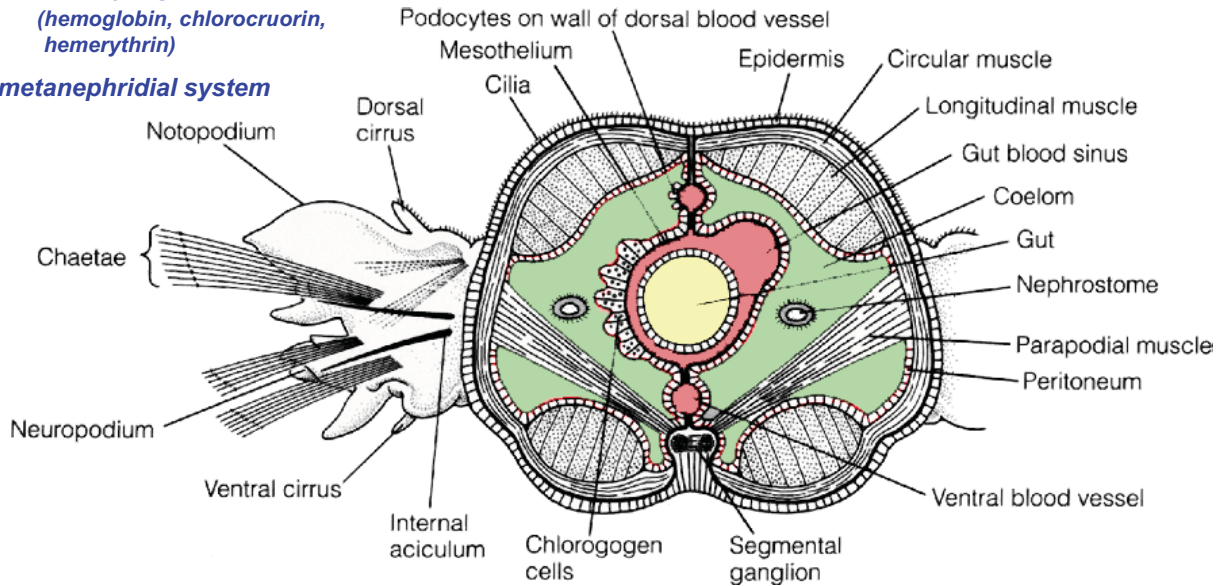
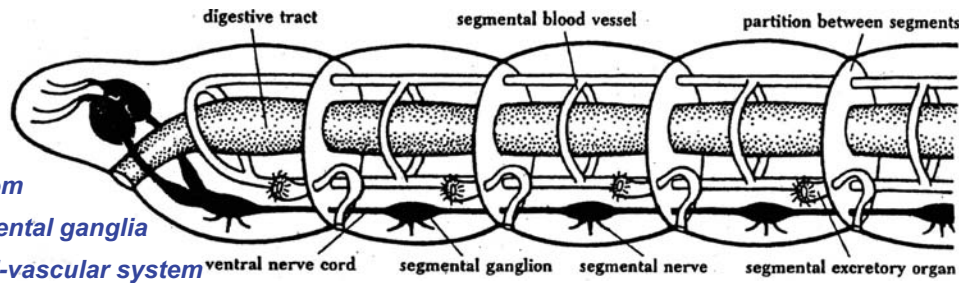
Polychaete: internal features

complete gut
 partitioned coelom
 cerebral & segmental ganglia

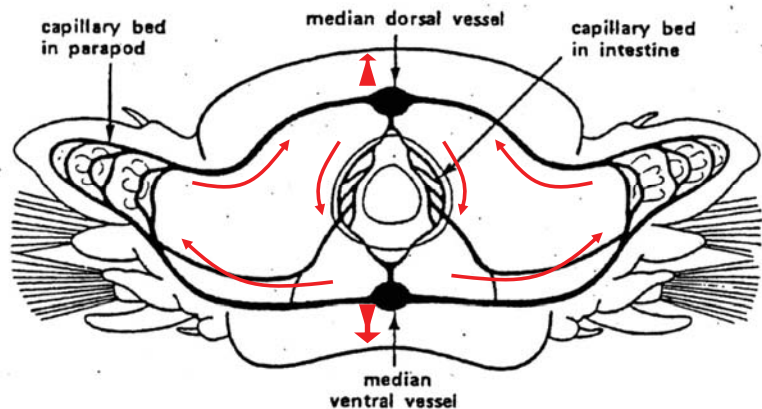
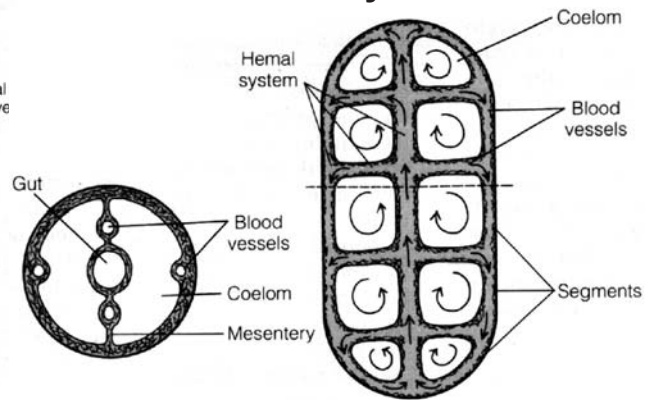
contractile blood-vascular system
 respiratory pigments

(hemoglobin, chlorocruorin, hemerythrin)

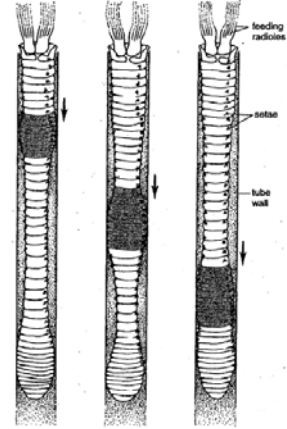
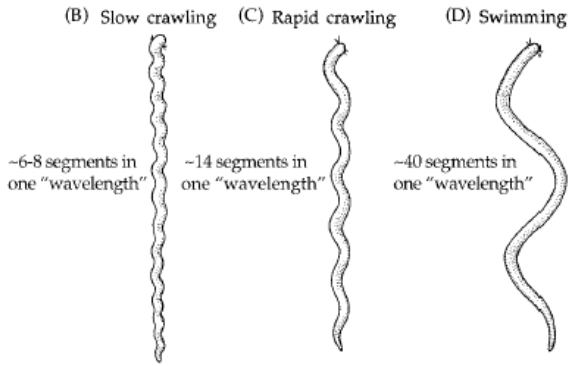
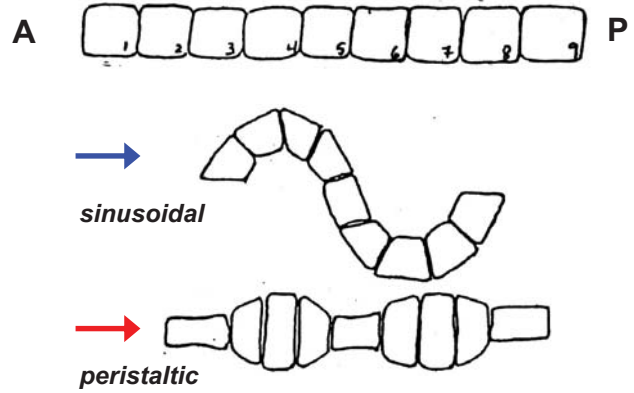
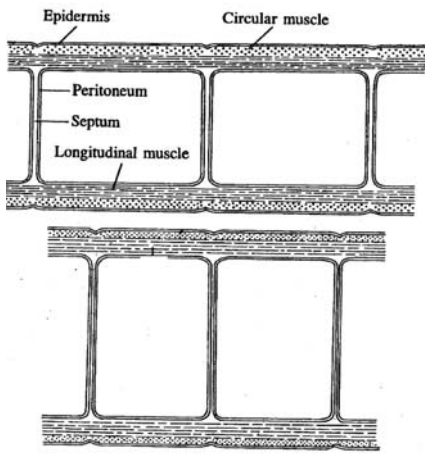
metanephridial system



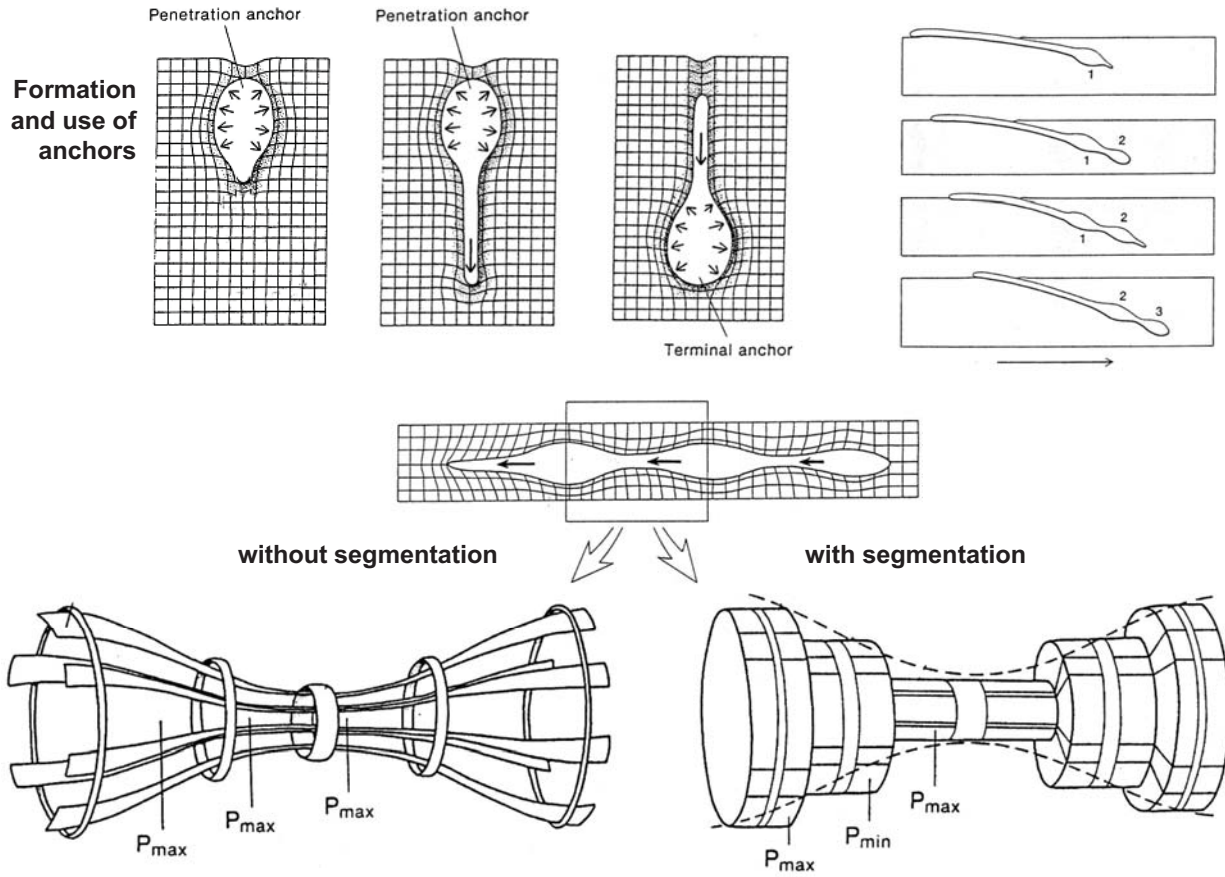
Blood-vascular system



Coelom: locomotion



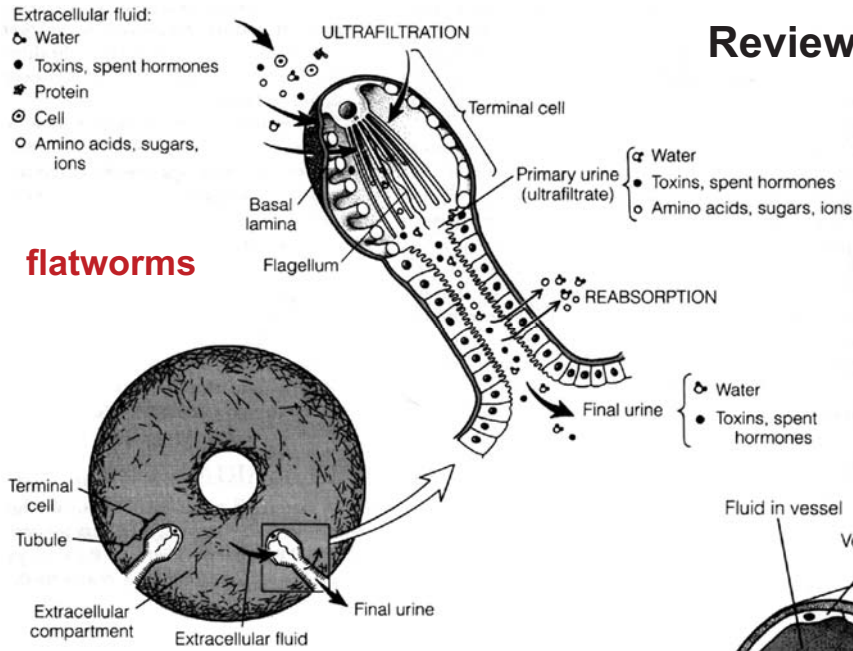
How do worms burrow?



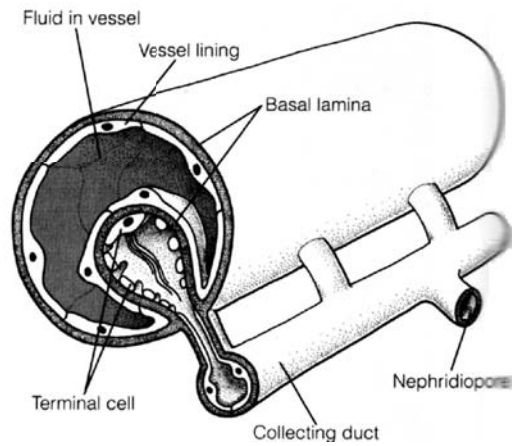
Review: protonephridia

- Extracellular fluid:
- Water
 - Toxins, spent hormones
 - Protein
 - ⊙ Cell
 - Amino acids, sugars, ions

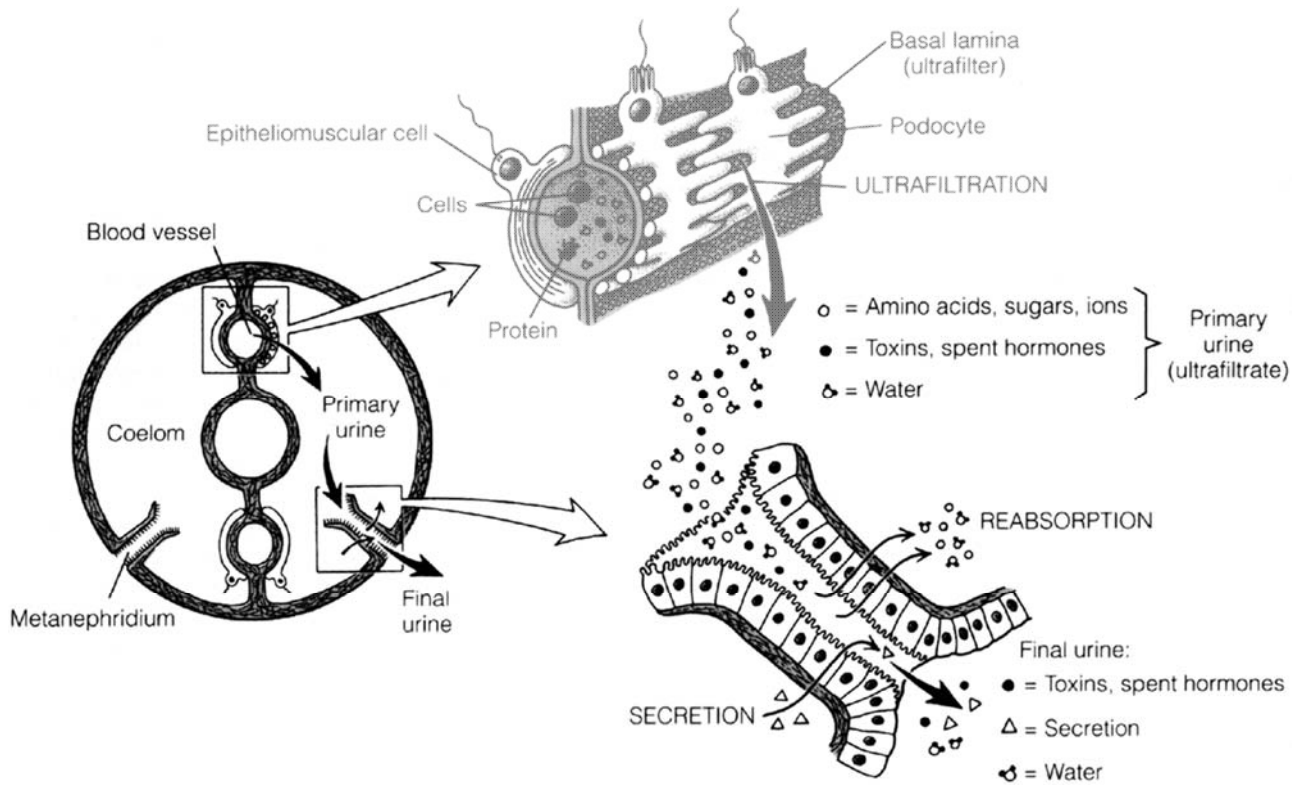
flatworms



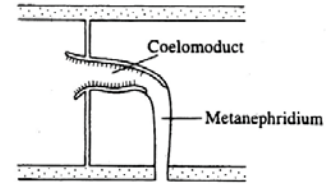
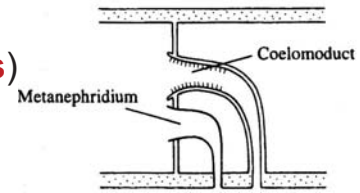
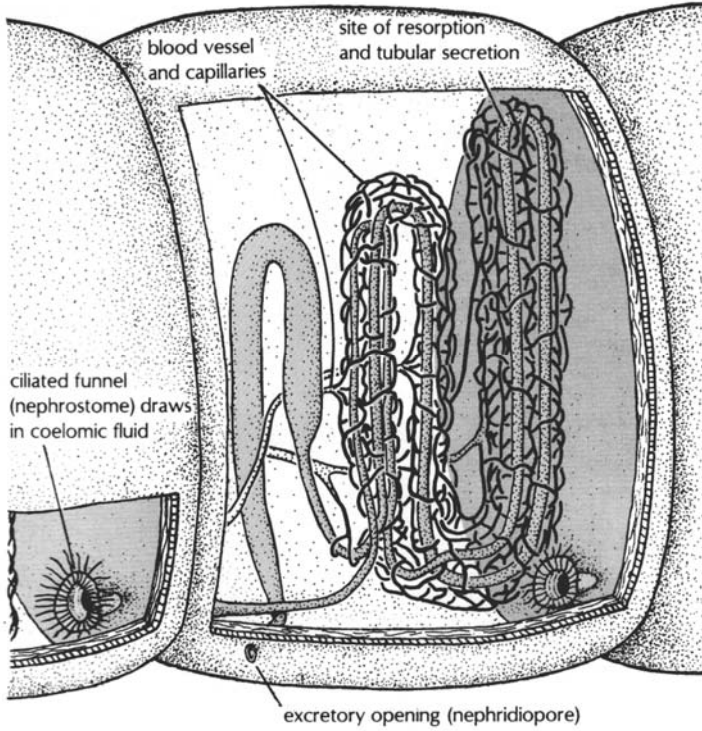
nemertean



Metanephridia (large coelomate organisms)



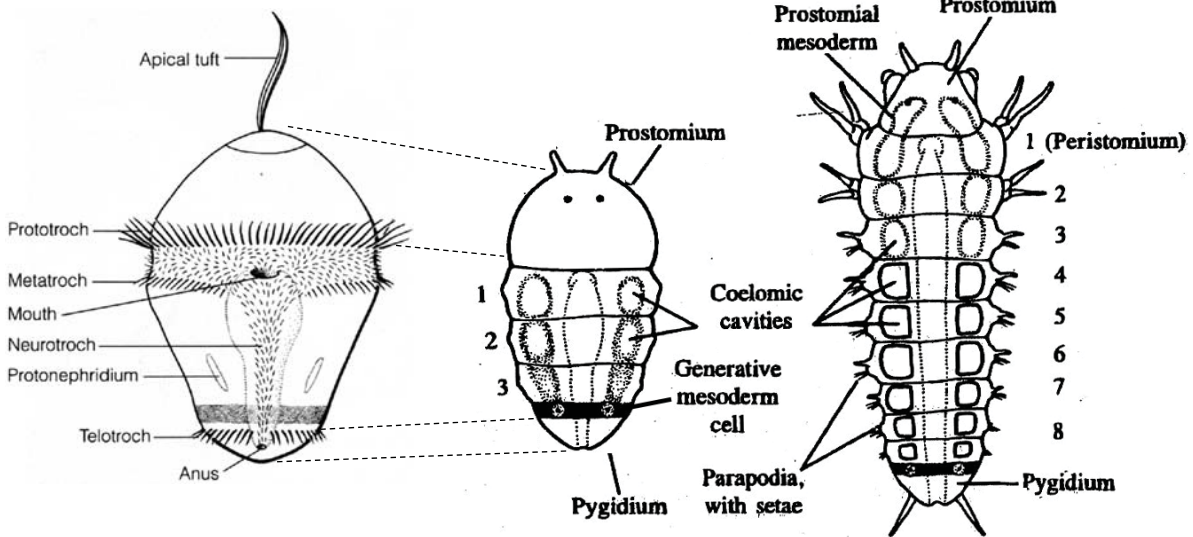
Metanephridia (large coelomate organisms)



"Mixonephridium"

*coelomic collection of primary urine
coelomic gonad*

Larval biology and development



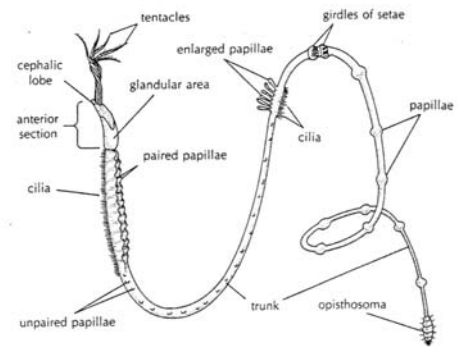
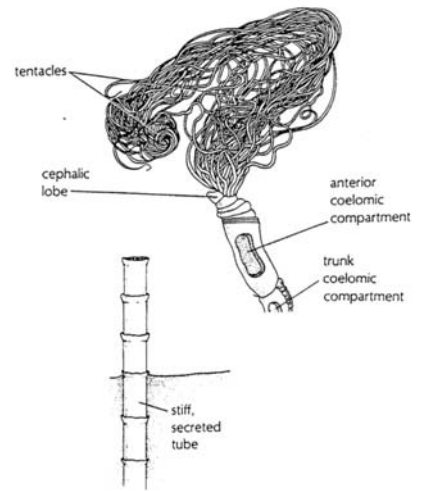
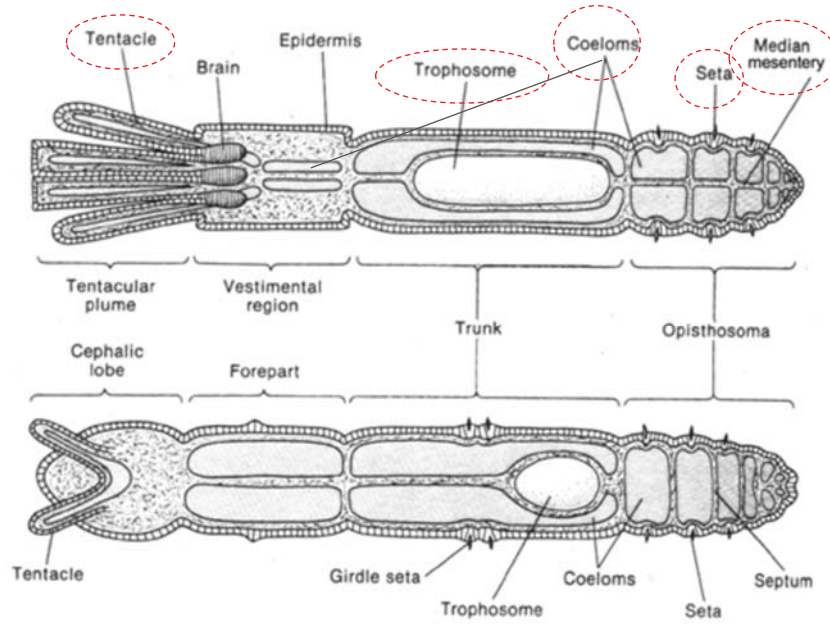
"Trochophore-type" larva

- polychaete annelids ("trochophore")
- molluscs ("trochophore")
- sipunculans ("planktosphaera")
- nemerteans ("pilidium larva")

Ph. Annelida, Cl. Polychaeta

F. Siboglinidae

vestimentiferans (large gutless worms, live at hydrothermal vents)



pogonophrans (long thin gutless worms, live in anoxic basins)