

Chapter 11: Annelida (annulus=Latin: ring) segmented worms

15,000 spp.

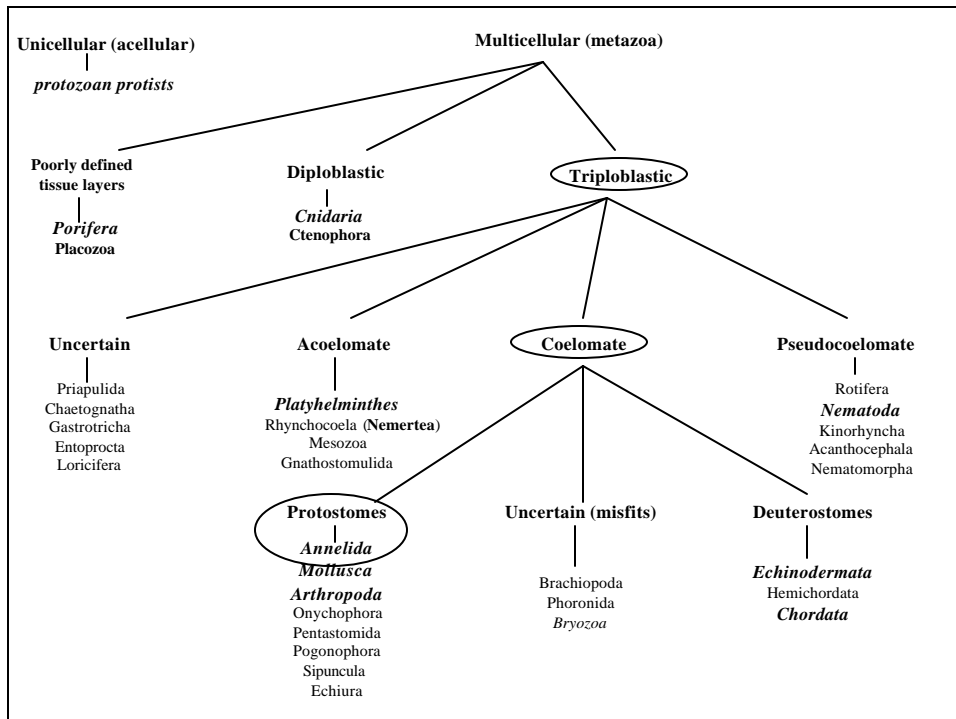


Class

Polychaeta ~10,000 spp.

Oligochaeta >3,000 spp.

Hirudinea (leeches) <2,000 spp.



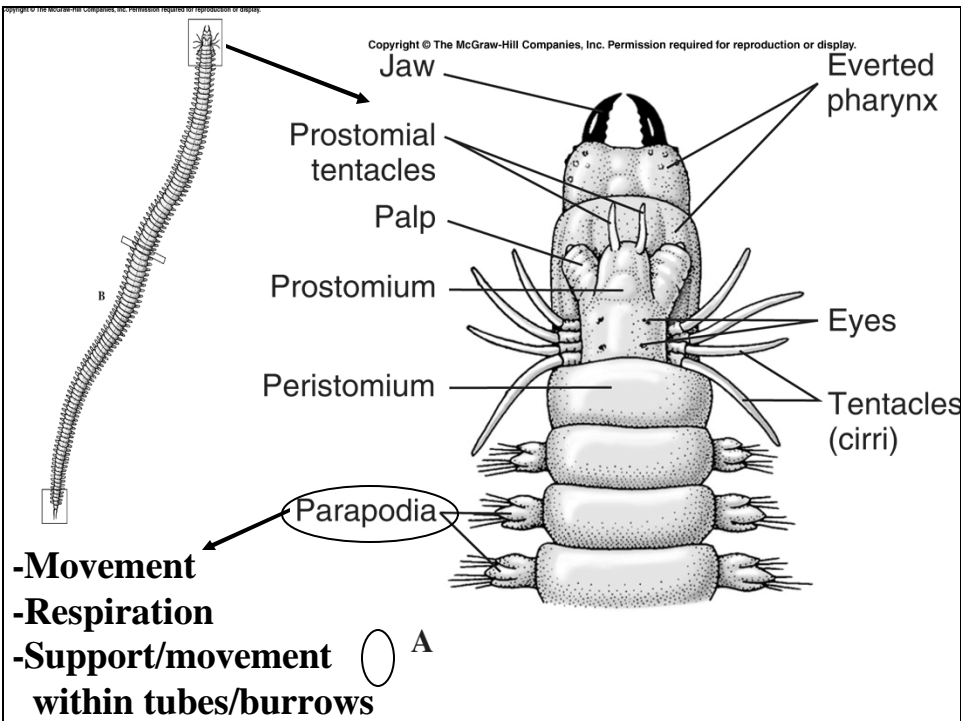
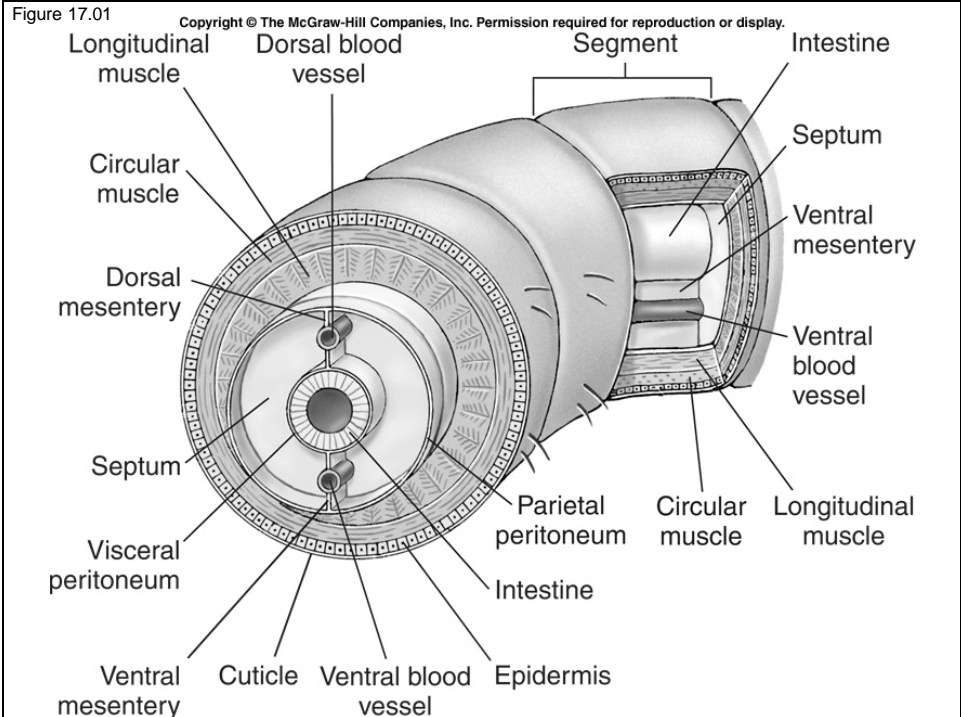
General Annelidan Characteristics

- 1) *bilateral symmetry*
- 2) true *protostome coelomates* w spiral cleavage & mosaic development
- 3) segmentation
 - a) body segments marked by circular grooves = *annuli*
 - b) *metamerism*: repetition of organs in segments (metameres/somites)
 - 1) homologous to arthropods
 - 2) evolved independently in vertebrates
 - c) walls called *septa* to separate segments
- 4) **nervous system** more centralized
- 5) **circulatory system** more complex
- 6) *metanephridium* system (true kidney system connected to coelom with filtration by podocytes)
- 7) *setae* tiny chitinous bristles (except leeches)
 - a) short setae anchor earthworm segment to prevents slippage
 - b) long setae help aquatic worms swim
- 8) complete gut

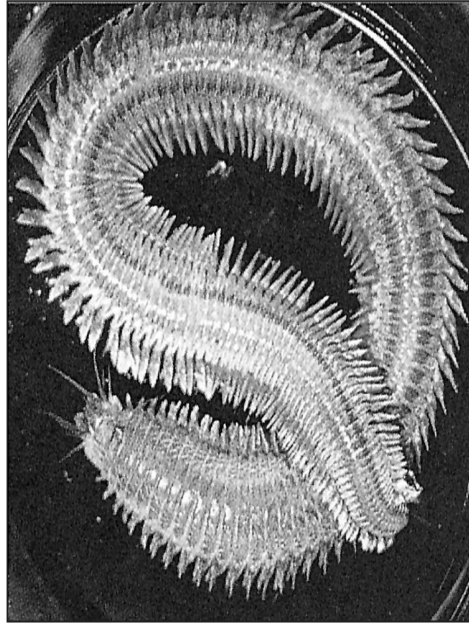
Polychaeta

mainly marine & usually benthic





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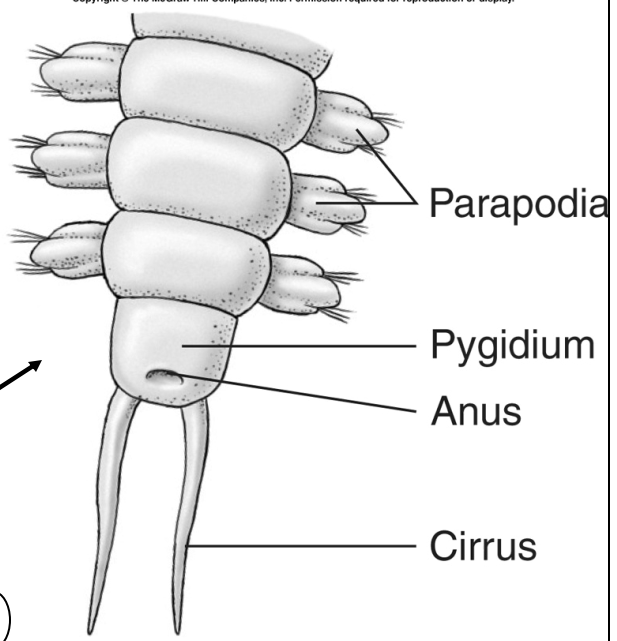
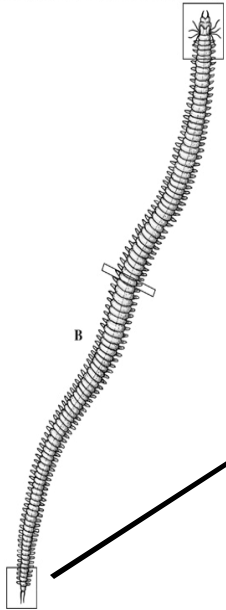


Figure 17.03d

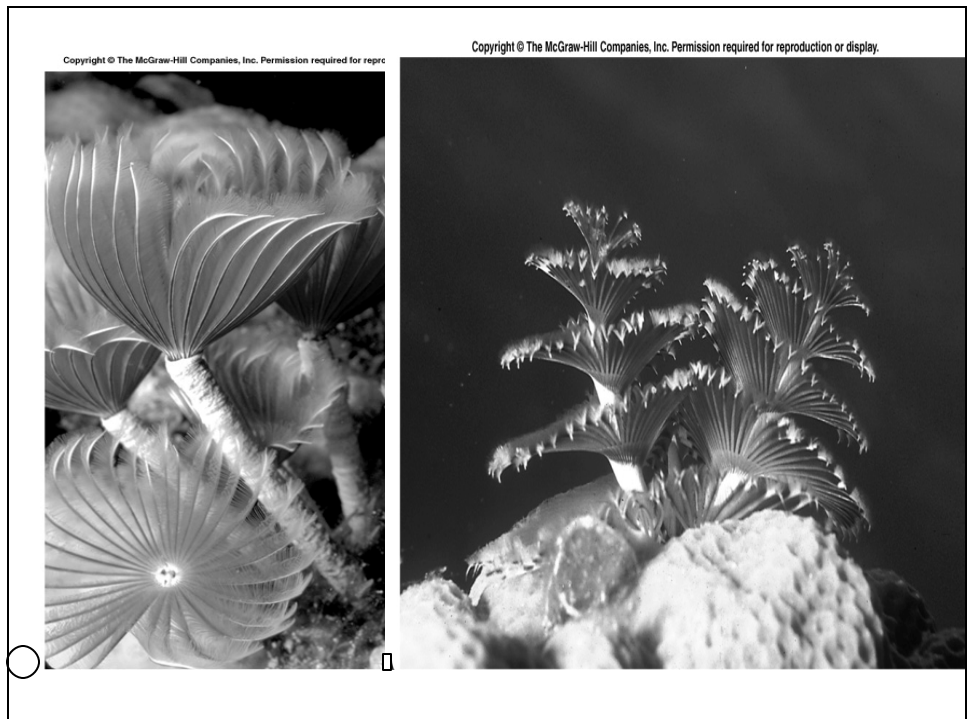
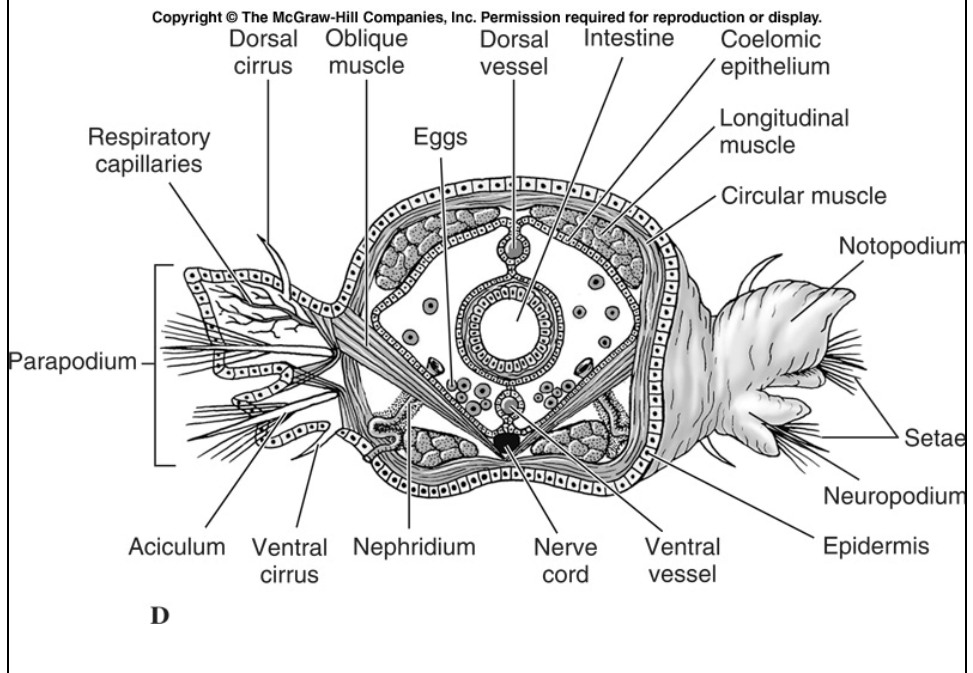


Figure 17.04

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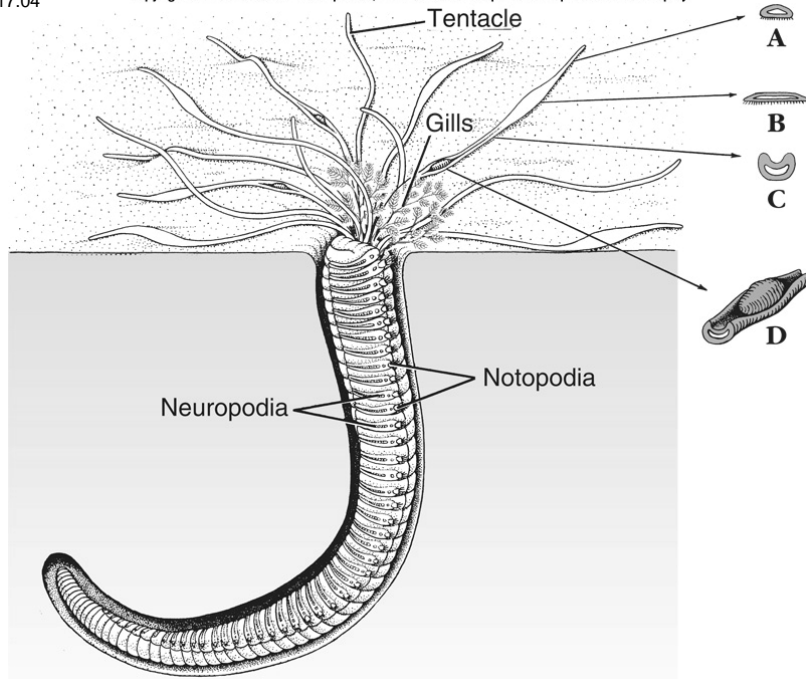
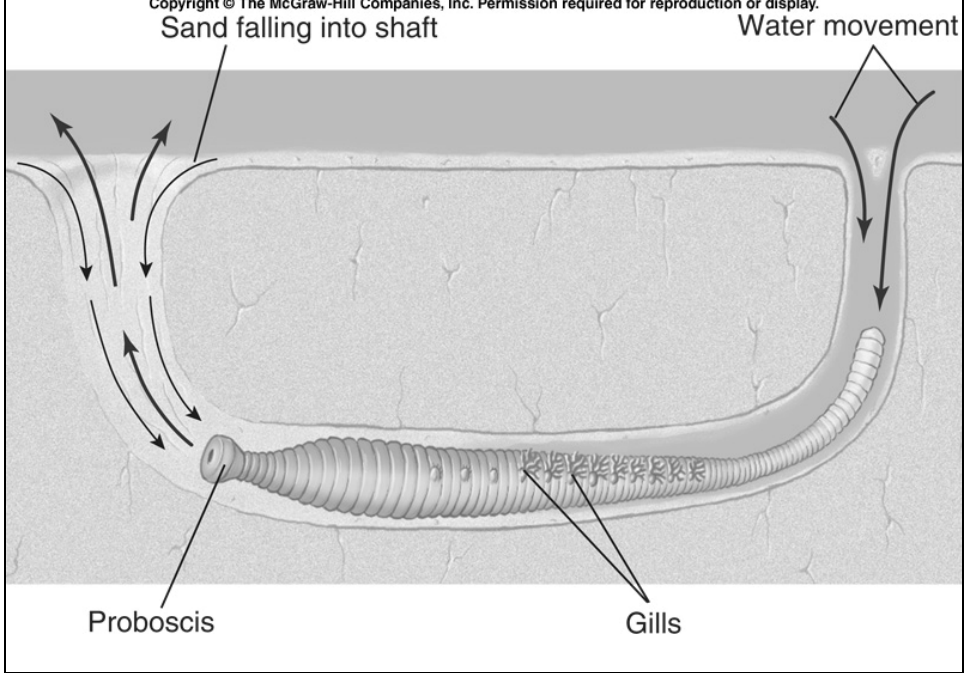
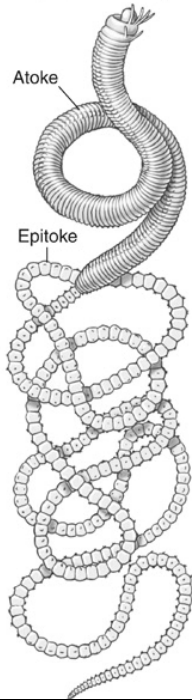


Figure 17.05

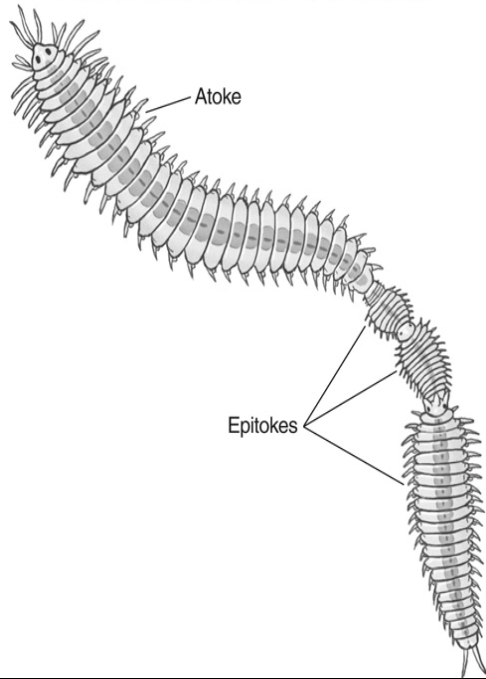
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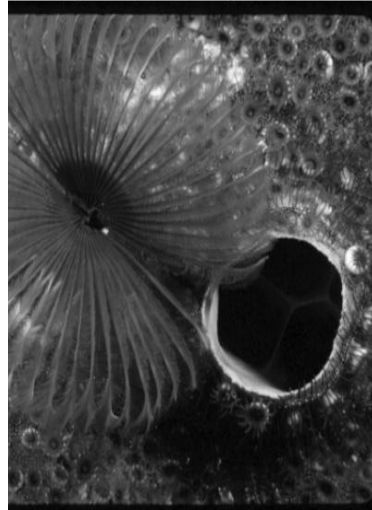
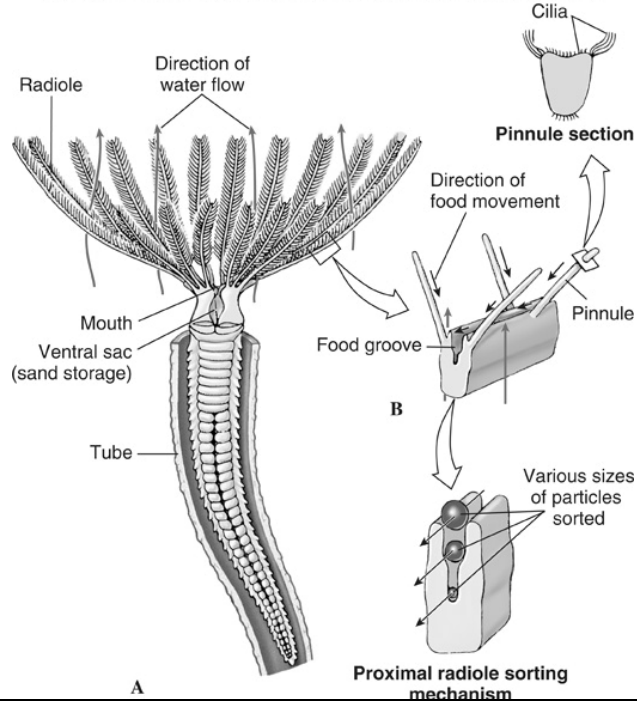


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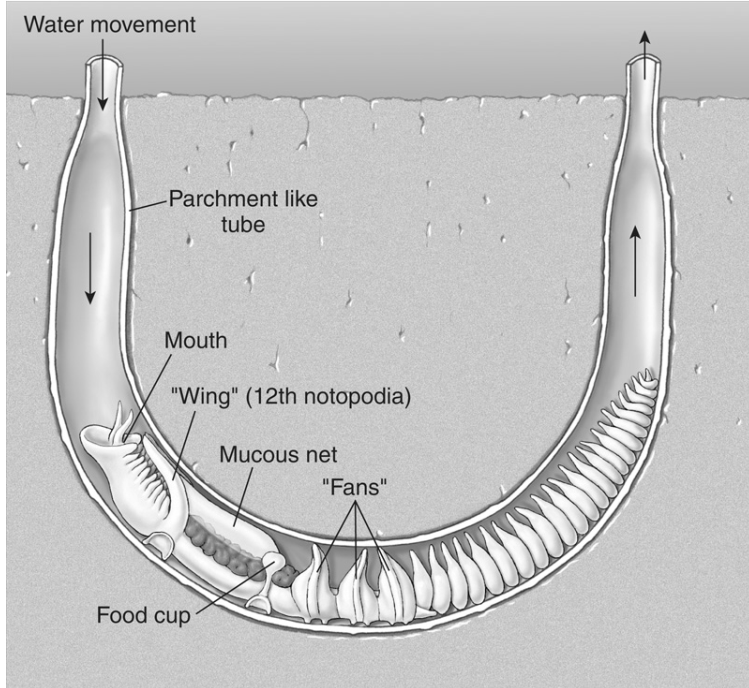
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Figure 17.11

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Oligochaeta

freshwater or terrestrial

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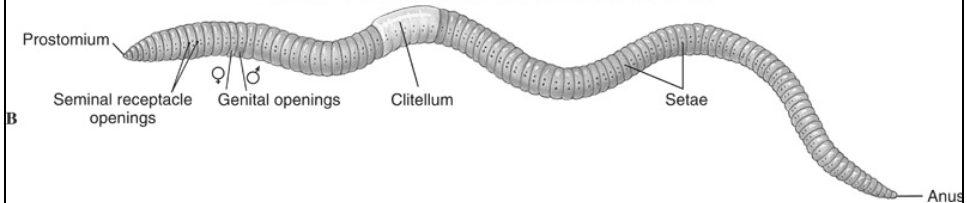


Figure 17.12a

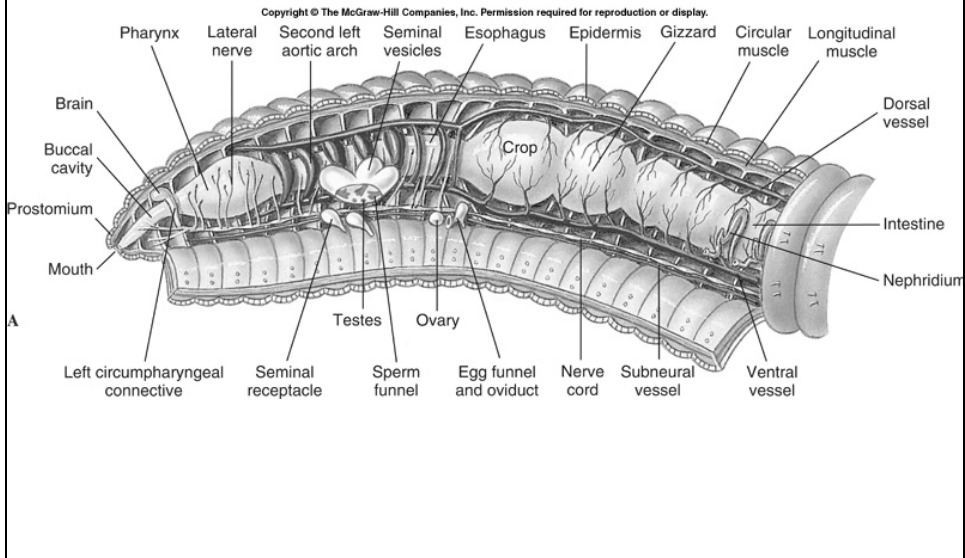


Figure 17.12c

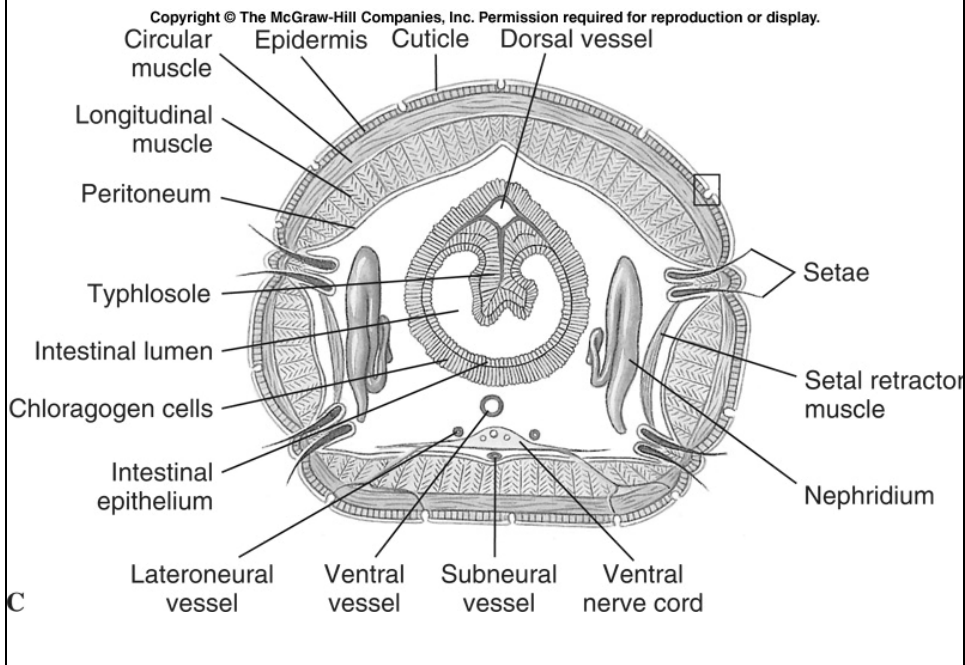


Figure 17.12d

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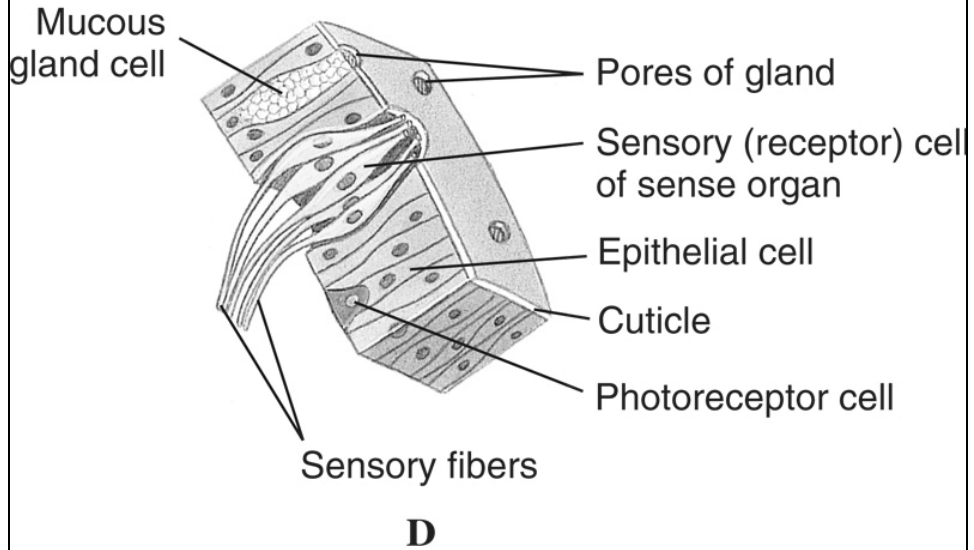


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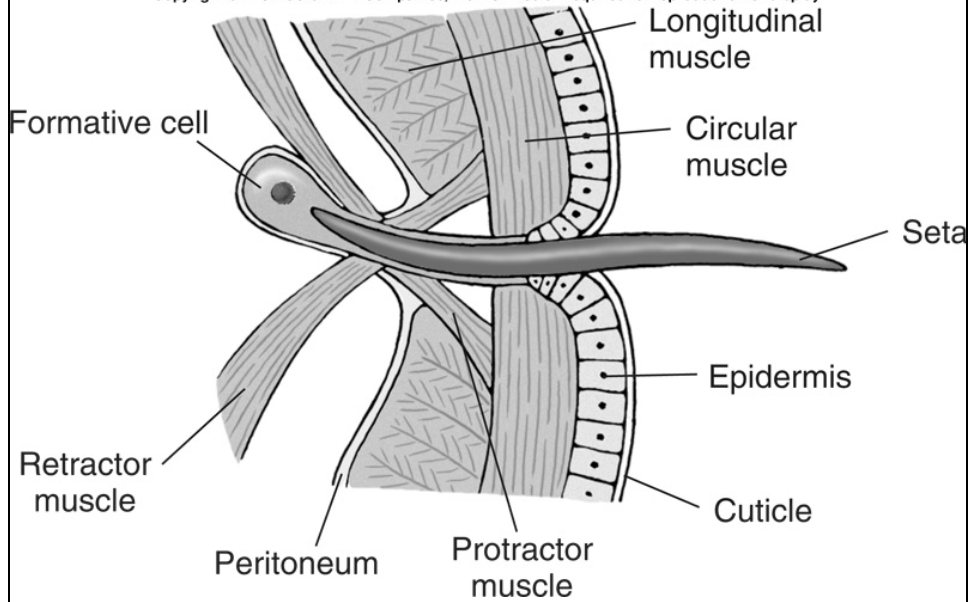


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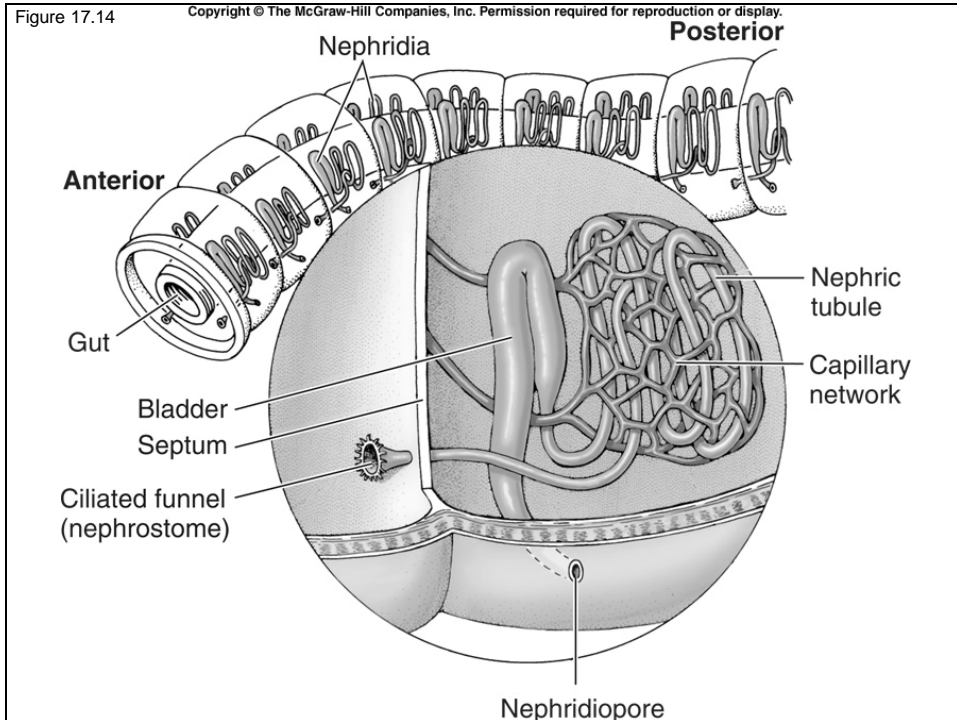


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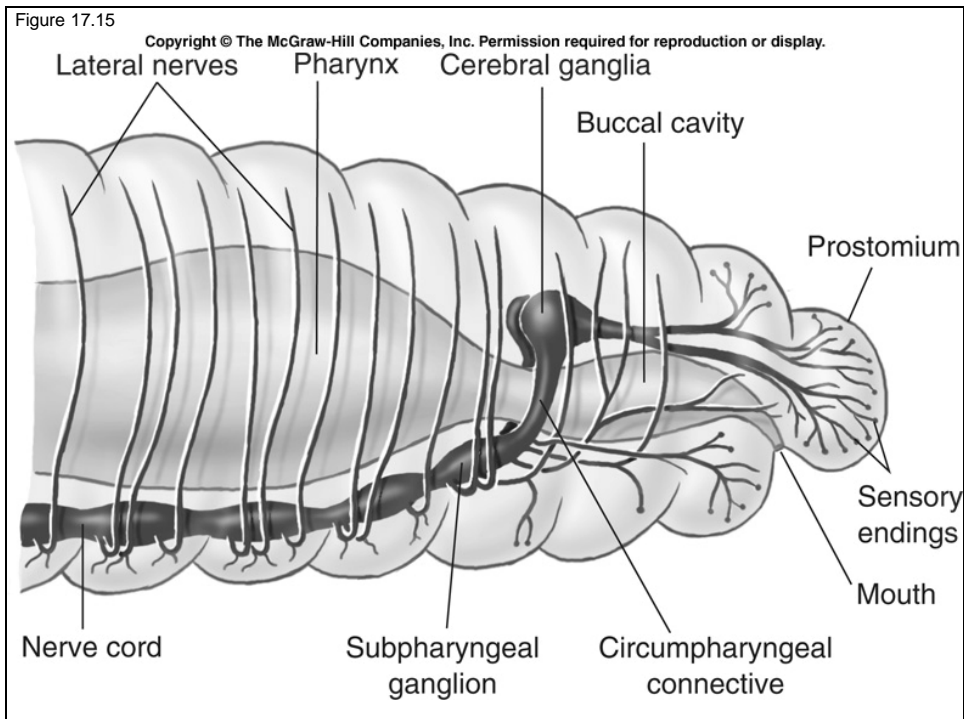


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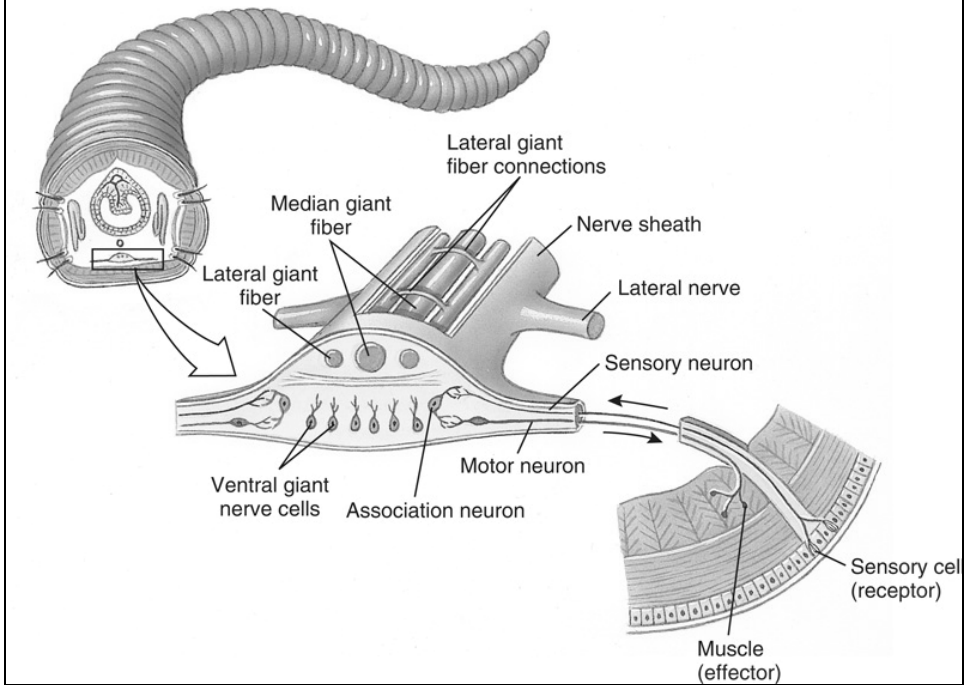


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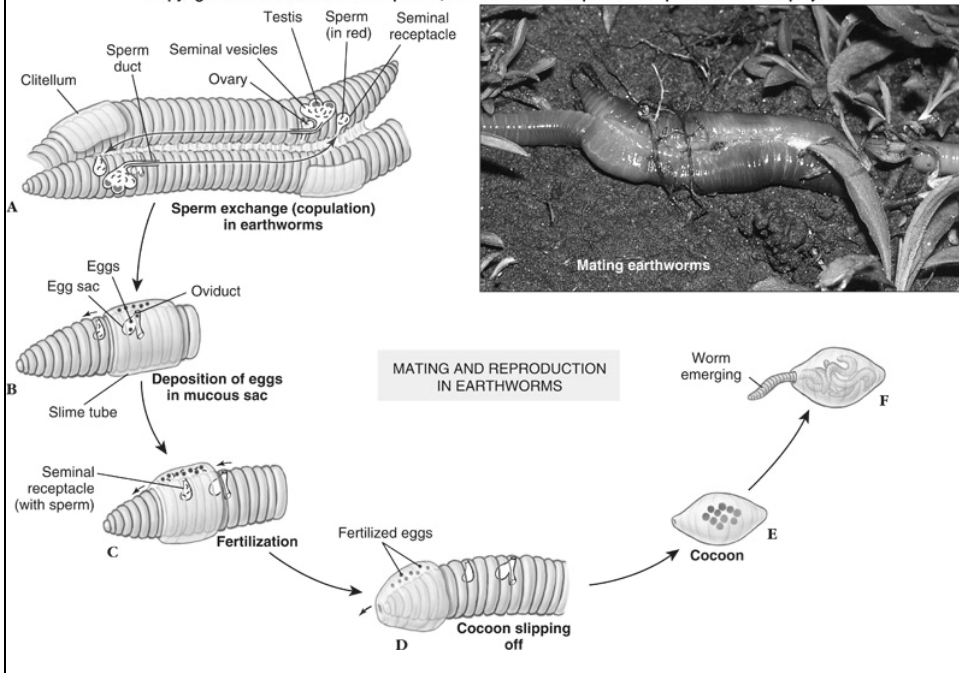


Figure 17.17a

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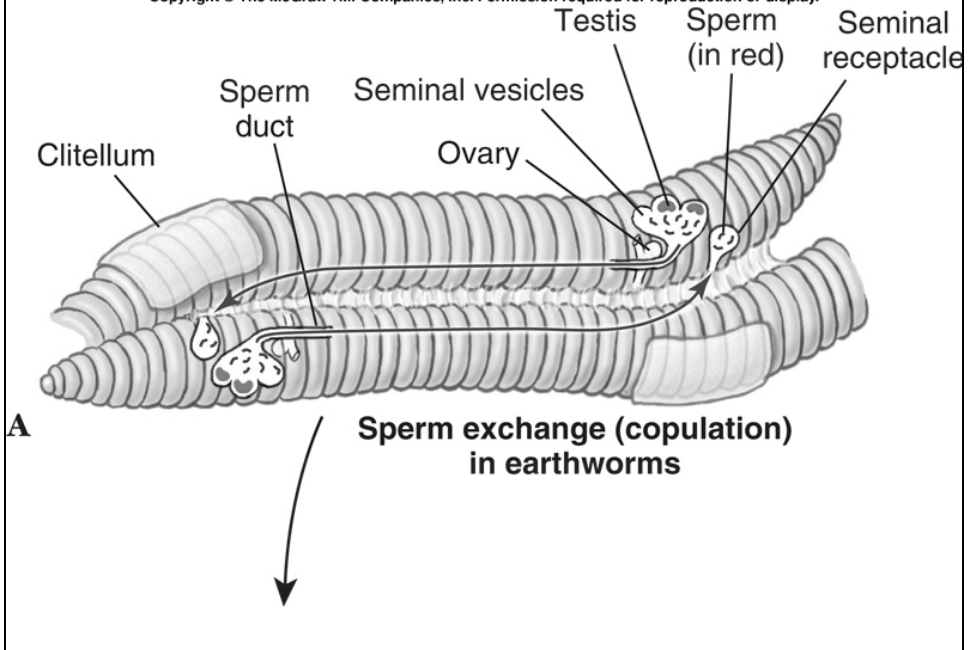


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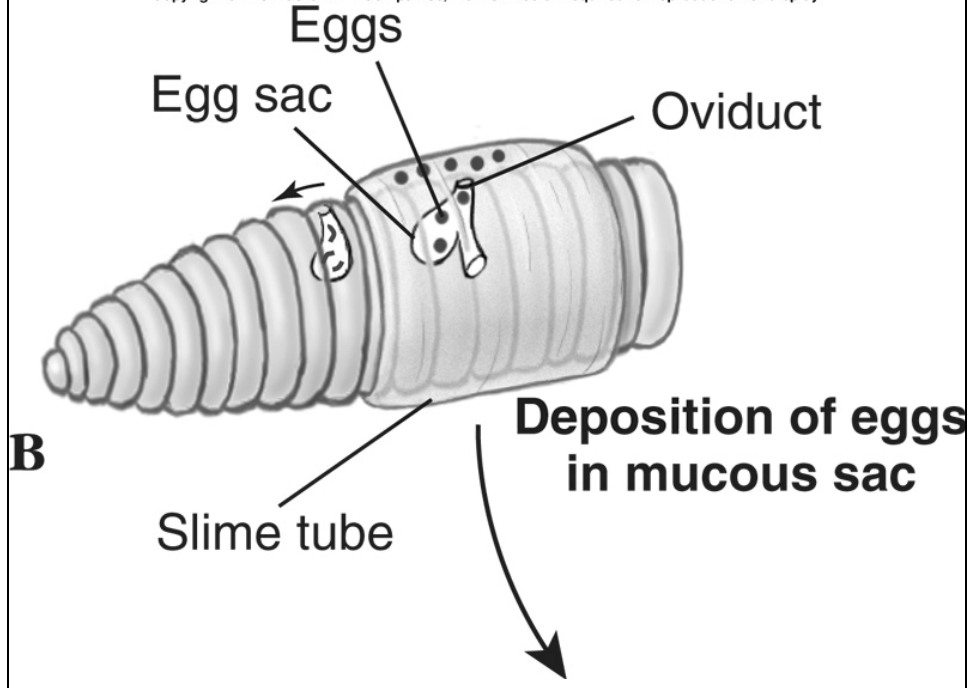


Figure 17.17c

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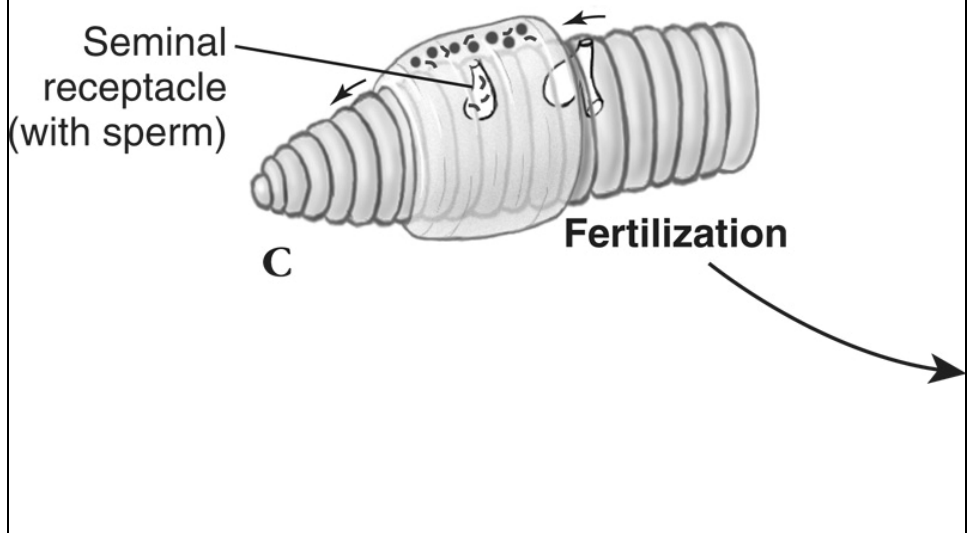


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Fertilized eggs

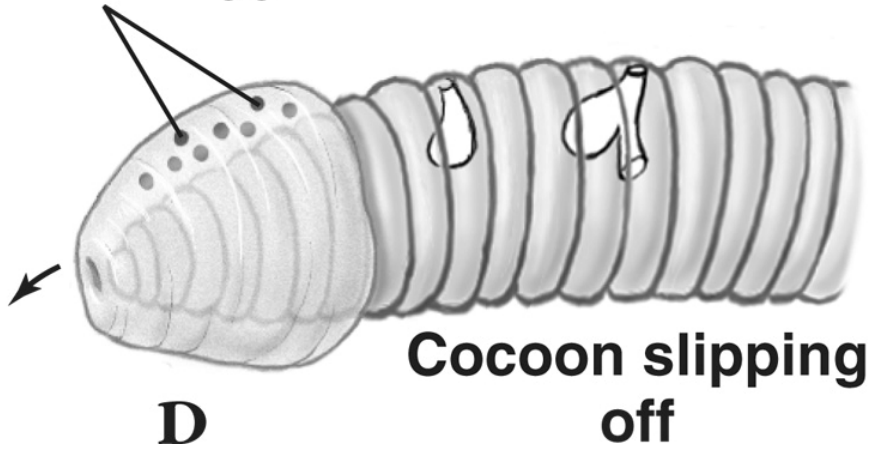


Figure 17.17e

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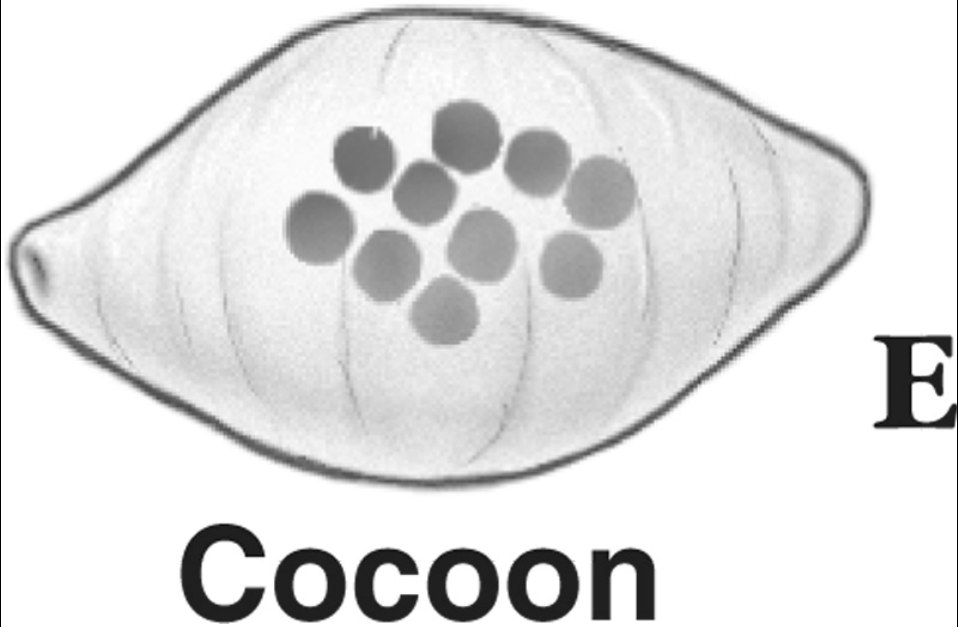


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Worm
emerging

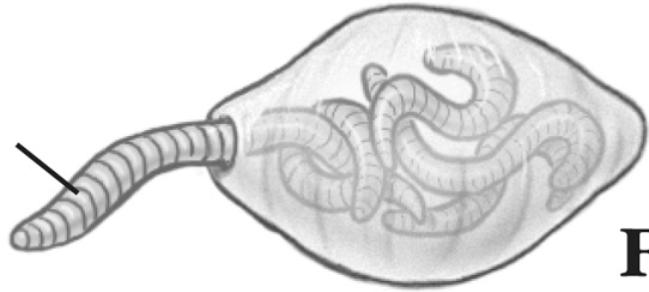
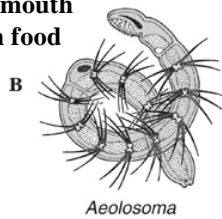


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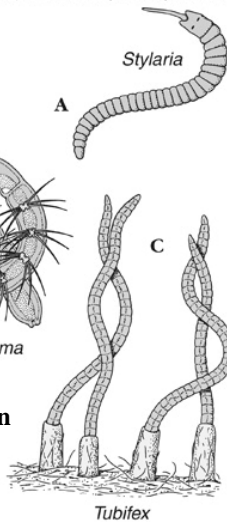
freshwater oligochaetes

cilia around mouth
to sweep in food



Aeolosoma

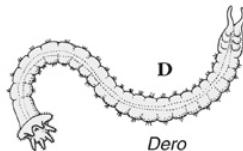
Intermediate host for the hydrozoan
Myxobolus cerebralis causing
whirling disease



Stylaria

Tubifex

Ciliated anal gills



Dero

Prostomium drawn out
into a long snout

Whirling Disease: *Myxobolus cerebralis*

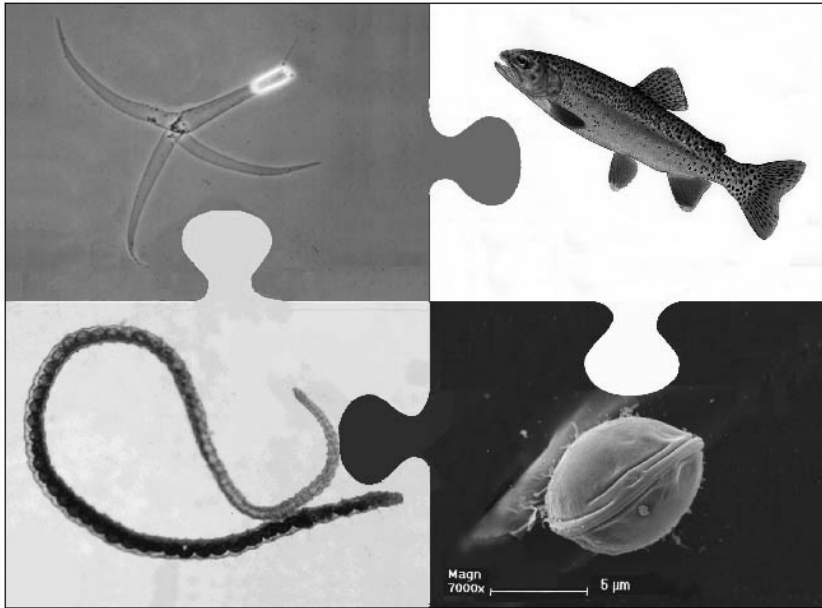


Figure 17.19

Hirudinea

freshwater, terrestrial, ectoparasite, predaceous

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