CLADE METAZOA
CLADE EUMETAZOA
CLADE BILTERIA
CLADE PROTOSTOMIA
CLADE LOPHOTROCHOZOA
Phylum Platyhelminthes

Hickman Chapter 14
Getting Ahead
Figure 14.1 (page 290)
Clades within Protostomia
Phylum Platyhelminthes
Characteristics of Phylum Platyhelminthes (page 295)
- Form and Function
  - Figure 14.7 (page 294)
  - Epidermis, Muscles
    - Figure 14.9 (page 295)
  - Nutrition and Digestion
  - Excretion and Osmoregulation
    - Figure 14.10 (page 296)
  - *Nervous System*
- Class Turbellaria
  - Figure 14.13A (page 298)
- Class Trematoda
  - *Clonorchis sinesis*: Liver Fluke in Humans
    - Structure
    - Figure 14.11 (page 297)
- Class Cestoda
  - *Taenia saginata*: Beef Tapeworm
    - Structure
    - Figure 14.21 (page 304)
    - Figure 14.23 (page 306)

Distinctive characteristics - answer the questions:
Level of organization:
Symmetry:
Diplo or Triploblastic:
Protostome or Deuterostome:
Acoelomate/Psudocoelomate/Coelomate:
Schizo or Enterocoelous:
Segmented?:

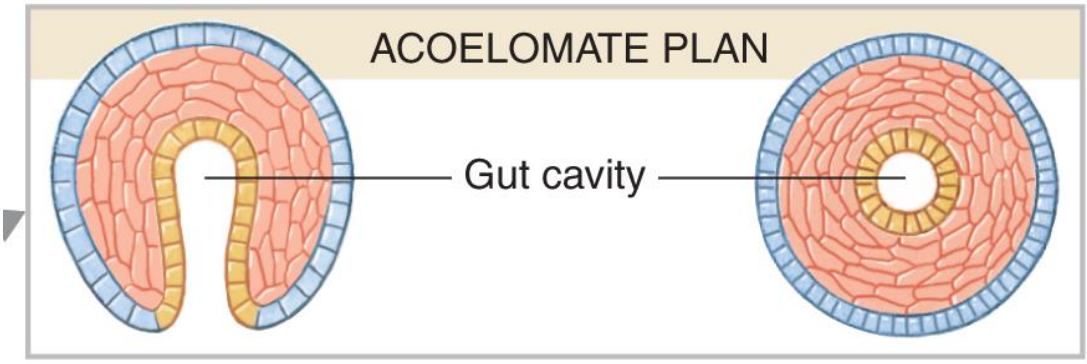


Figure 9.3 (edited). Diagram of the acoelomate body plan.

Are flatworms (circle one) (page 295 - Characteristics of Phylum Platyhelminthes)?:

Laterally flattened **Dorsoventrally flattened**

Flatworms are renowned for their ability to _____ (page 297 – Reproduction and Regeneration).

Examples include: planaria, polyclads, trematodes, flukes, cestodes, tapeworms

Class Turbellaria

<u>Habitat(s)</u> – Freshwater, Marine, and Terrestrial

<u>Distinctive characteristics – circle the answer(s) or answer the question:</u>

Epidermis (page 293): Cellular Syncytial

Epidermis (page 293): Ciliated Not ciliated

Muscles (page 295): Longitudinal Circular Diagonal (Parenchymal)

"Digestive System" (page 295 – Characteristics of Phylum Platyhelminthes):

N/A Incomplete Complete

Intestine (page 296 – Nutrition and Digestion First Paragraph)

N/A Two trunks Three trunks

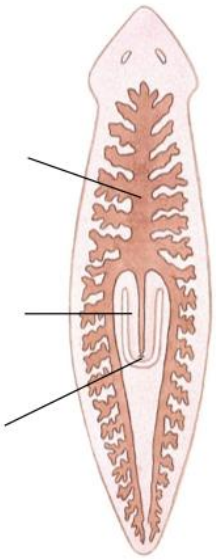
Pharynx (page 296 – Figure 14.10C) N/A Not extensible Extensible

"Excretory System" (page 296): Protonephridia Metanephridia

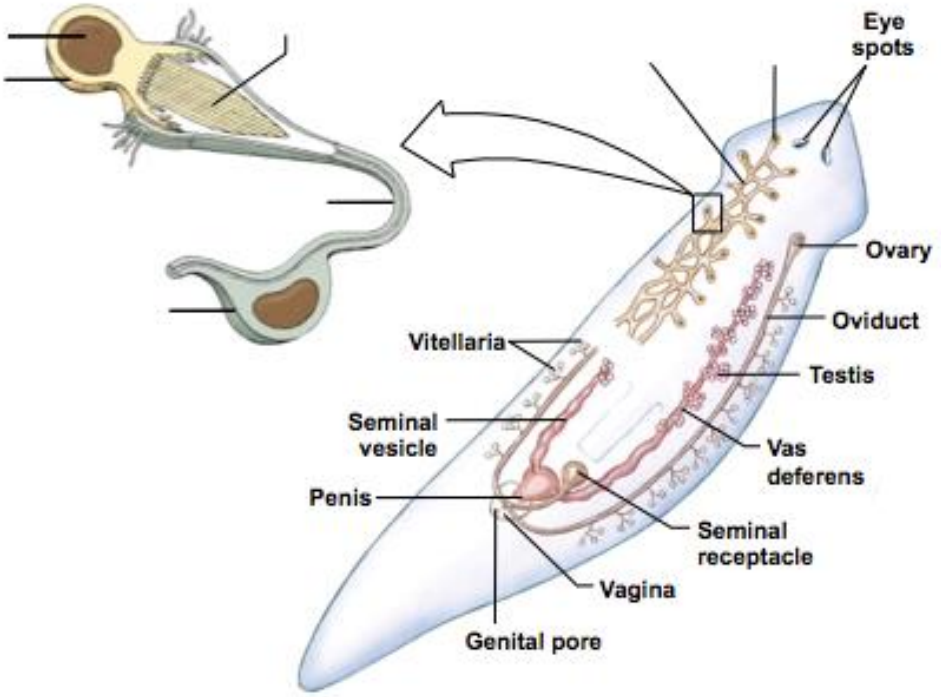
Rod shaped structures that are discharged in mucus secretions (page 293): _____

Examples include: *Dugesia* sp., planaria, polyclads

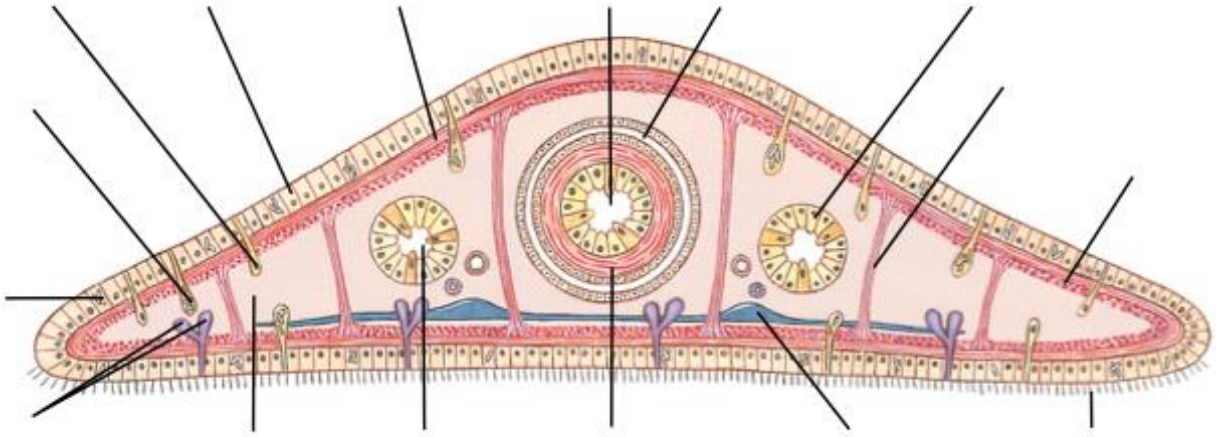
Label the diagram below, using the following list of terms: intestine, mouth, and pharynx (page 298 – Figure 14.13A).



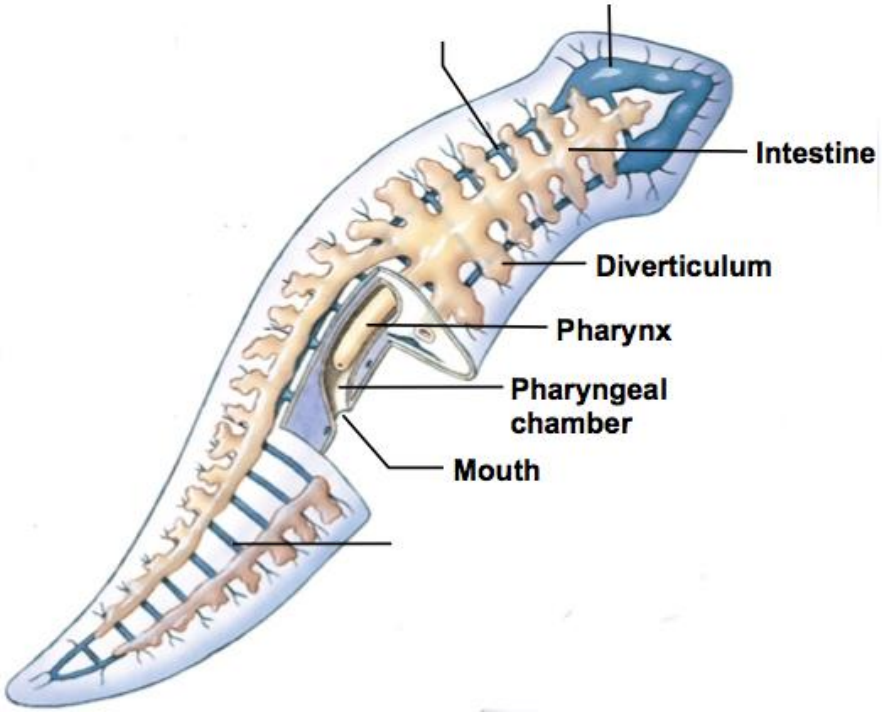
Label the diagrams below, using the following list of terms: flagella forming "flame," flame cell (x2), nucleus, osmoregulatory tubule, tube cell, and tubule (page 296 – Figure 14.10A).



Label the diagram below, using the following list of terms: cilia, circular muscles, columnar epithelium, dual-gland adhesive organ, epidermis, gland cell, intestine, longitudinal muscles, nerve cord, parenchyma, parenchymal muscles, pharyngeal cavity, pharyngeal muscles, pharynx, rhabdite cell, and rhabdites (page 294 – Figure 14.7B).



Label the diagram below, using the following list of terms: cerebral ganglion (brain), lateral nerve cord, and transverse nerve (page 296 – Figure 14.10B).



Class Trematoda

<u>Habitat(s)</u> - Parasitic

<u>Distinctive characteristics – circle the answer(s) or answer the question:</u>

Epidermis (page 293)	Cellular		Syncytial
Epidermis (page 293)	Ciliated		Not ciliated
Muscles (page 295):	Longitudinal	Circular	Diagonal (Parenchymal)

"Digestive System" (page 295 – Characteristics of Phylum Platyhelminthes):

N/A	Incomplete	Complete

Intestine (page 296 – Nutrition and Digestion Third Paragraph):

N/A	Two trunks	Three trunks

Pharynx (page 296):	N/A	Not extensible	Extensible

"Excretory System" (page 296): Protonephridia Metanephridia

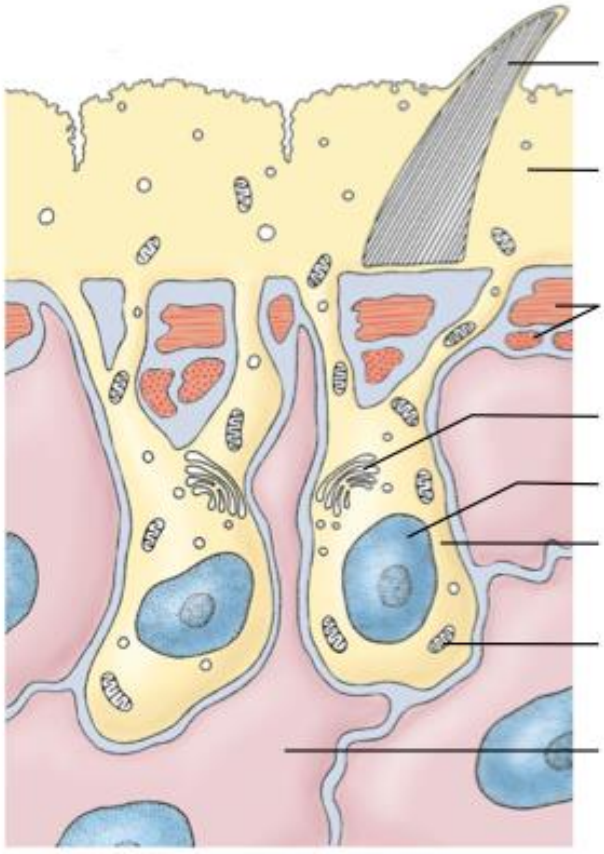
Suckers (page 299): Present Absent

Hooks (page 307 – Taxonomy of Phylum Platyhelminthes): Present Absent

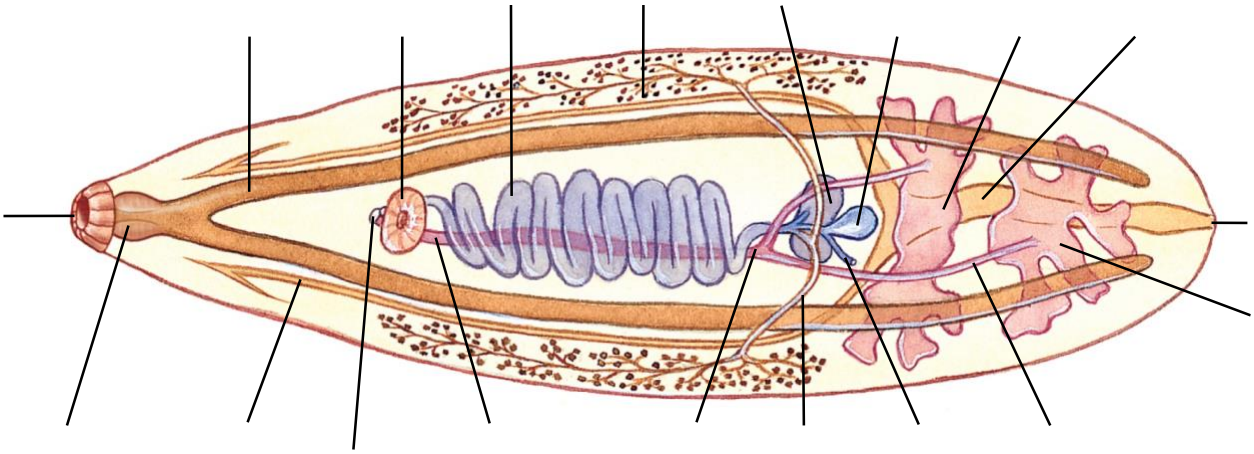
How would you describe the shape of flukes? (page 299): _____

Examples include: *Conspicuum* sp., *Clonorchis* sp., liver flukes, blood flukes, gall bladder flukes, lung flukes

Label the diagram below, using the following list of terms: distal cytoplasm, golgi, mitochondrion, muscle layer, nucleus, parenchymal cell, spine, and tegumentary cell body (page 295 – Figure 14.9).



Label the diagram below, using the following list of terms: anterior testis, bladder, excretory pore, excretory tube, gonopore, intestine, Laurer's canal, oral sucker, ovary, pharyngeal muscle, posterior testis, seminal receptacle, seminal vesicle, sperm duct, uterus, vas deferens, ventral sucker, vitellaria, and vitelline duct (page 297 – Figure 14.11)



Class Cestoda

<u>Habitat(s)</u> - Parasitic

<u>Distinctive characteristics – circle the answer(s) or answer the questions:</u>

Epidermis (page 293):	Cellular		Syncytial
Epidermis (page 293):	Ciliated		Not ciliated
Muscles (page 295):	Longitudinal	Circular	Diagonal (Parenchymal)

"Digestive System" (page 296 – Nutrition and Digestion Fourth Paragraph):

	N/A	Incomplete	Complete
Intestine (page 296):	N/A	Two trunks	Three trunks
Pharynx (page 296):	N/A	Not extensible	Extensible

"Excretory System" (page 296):	Protonephridia	Metanephridia
Suckers (page 303):	Present	Absent
Hooks (page 303):	Present	Absent

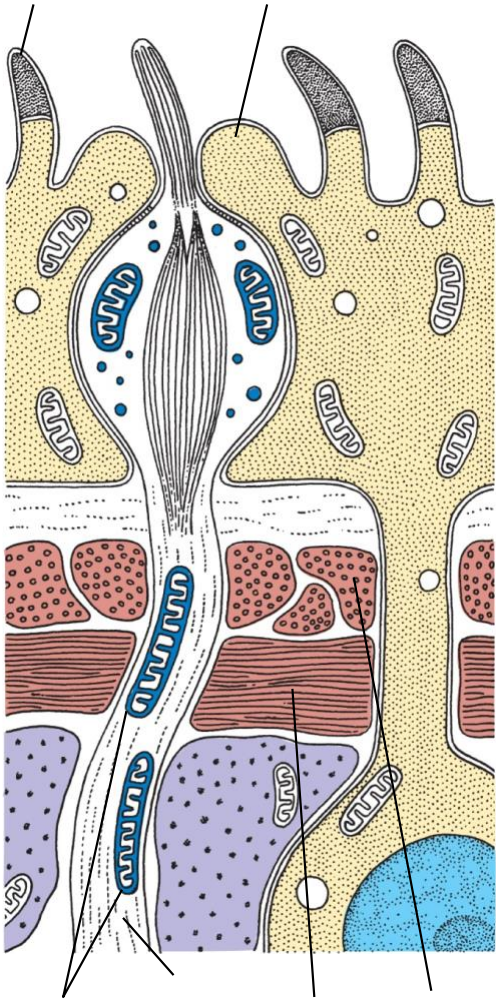
Term for the projections from the tegument of tapeworms (page 303): _____

What is the anterior end of tapeworms called? (page 303): _____

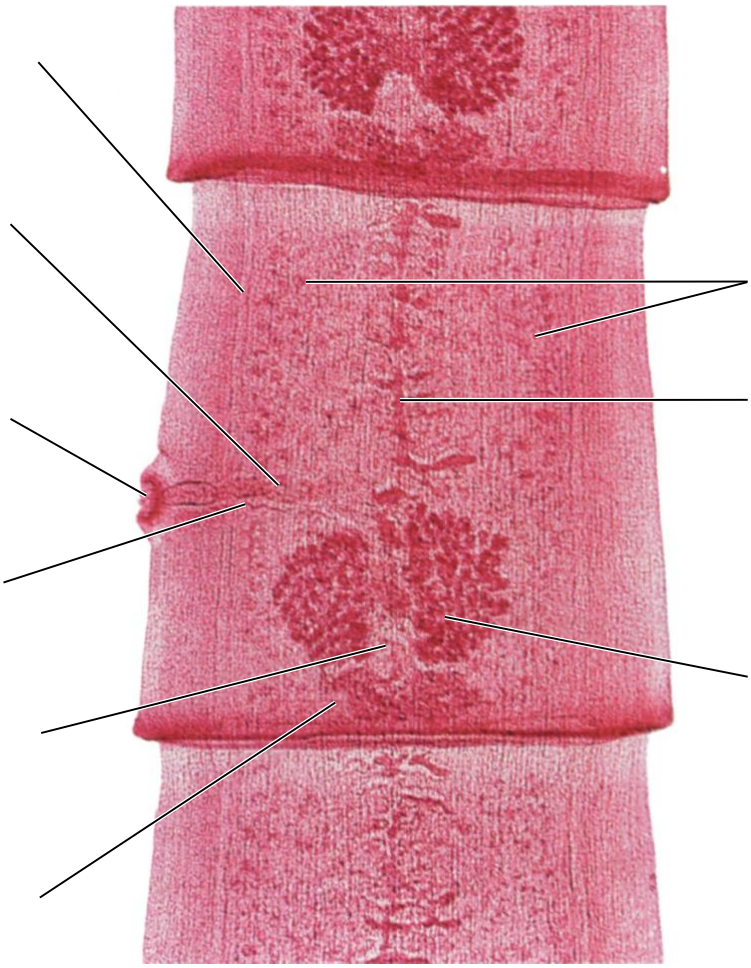
List the term applied to the linear series of reproductive units that follow the head (page 303): _____

Examples include: *Taenia* sp., beef tapeworm, dog tapeworm, pork tapeworm, fish tapeworm

Label the diagram below, using the following list of terms: circular muscle, distal cytoplasm of tegument, longitudinal muscle, microthrix, mitochondria, and nerve process (page 304 – Figure 14.21)



Label the diagram below, using the following list of terms: excretory canal, genital pore, Mehlis's gland, ovary, sperm duct, testes, uterus, vagina, and vitelline gland (page 306 – Figure 14.23A – similar).



Label the diagram below, using the following list of terms: hook, immature proglottid, mature proglottid, neck, rostellum, scolex, and sucker (Lecture).