Practical no. 13, 14

13. Study of Principle Representative Classes of Phylum Mollusca

14. Study of Principle Representative Classes of Phylum Annelida

Kingdom Animalia
Phylum Mollusca

- “Mollusc" means "soft-bodied
- Second largest animal phylum
- Triploblastic, bilaterally symmetrical, coelomate
- Are deuterostomes or protostomes
- Includes chitons, snails, slugs, clams, oysters, squid, octopus
- Have outer shell for protection



Slug



Cuttlefish



Oyster



Squid



Limpet



Snail



Scallop



Mussel



Octopus



Nautilus



Clam



Winkle

Kingdom Animalia
Phylum Mollusca

8 classes

1. Caudofoveata: e.g. *Chaetoderma* (glisten worm)
2. Aplacophora: e.g. *Neomenia*
3. Polyplacophora: e.g. *Chiton*
4. Monoplacophora e.g. *Neopilina*
5. Scaphopoda e.g. *Dentalium*
6. Bivalvia e.g. *Anodonta, Mytilus*
7. Gastropoda e.g. *Nerita, Helix*
8. Cephalopoda e.g. *Octopus, Loligo*















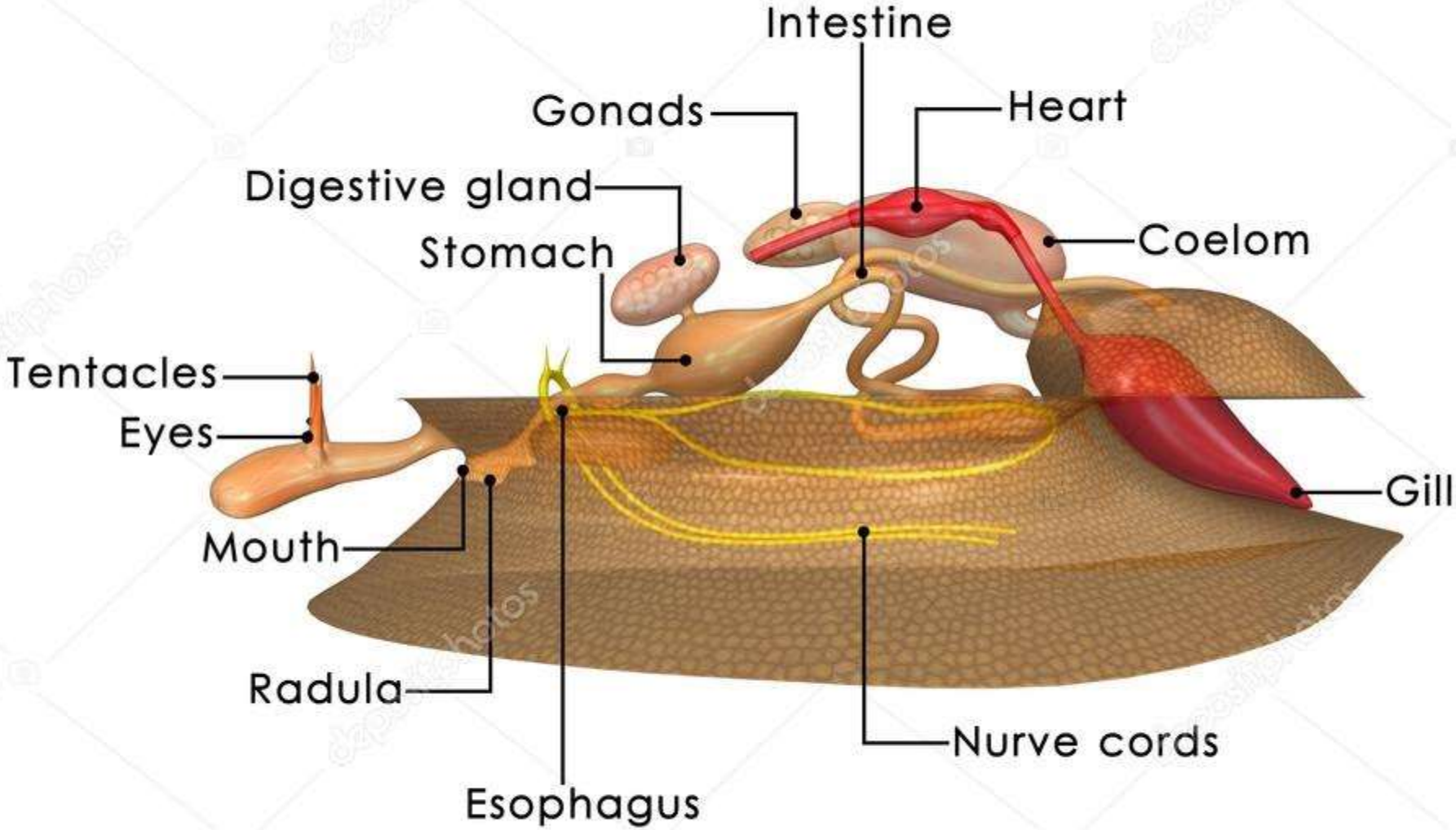






Characteristics

- Soft-bodied
- Covered with protective mantle
- Mantle cavity is present
- Visceral organs lies below mantle
- A muscular foot for movement which is modified into tentacles for squid and octopus
- Complete, one-way digestive tract with a mouth and anus
- Mouth-like structure called the radula


Intestine
Gonads
Heart
Digestive gland
Coelom
Stomach
Tentacles
Eyes
Gill
Mouth
Radula
Nurve cords
Esophagus

Conti…

- Cephalization - a distinct head with sense organs and brain
- Have circulatory, respiratory, digestive, excretory, nervous, and reproductive systems
- Gills are used for gas exchange
- Sexes are separate
- Free-swimming larval stage called trochophore

Practical no. 14

14. Study of Principle Representative Classes of Phylum Annelida

Kingdom Animalia

Phylum Annelida

- “Annelida” means “little rings”
- Mostly aquatic and burrowing or living in tubes
- Protostome, triploblastic and coelomate
- Segmented worms
- bilaterally symmetrical
- metameric
- Wormlike
- Nereis, Earthworm and Leeches etc.

Kingdom Animalia Phylum Annelida

3 classes

1. Polychaeta: Largest annelid class e.g. *Neries, sabella*
2. Oligochaeta: e.g. *Lumbricus, tubifex*
3. Hirudinea: e.g. *Hirudo*



Nereis



Earthworm



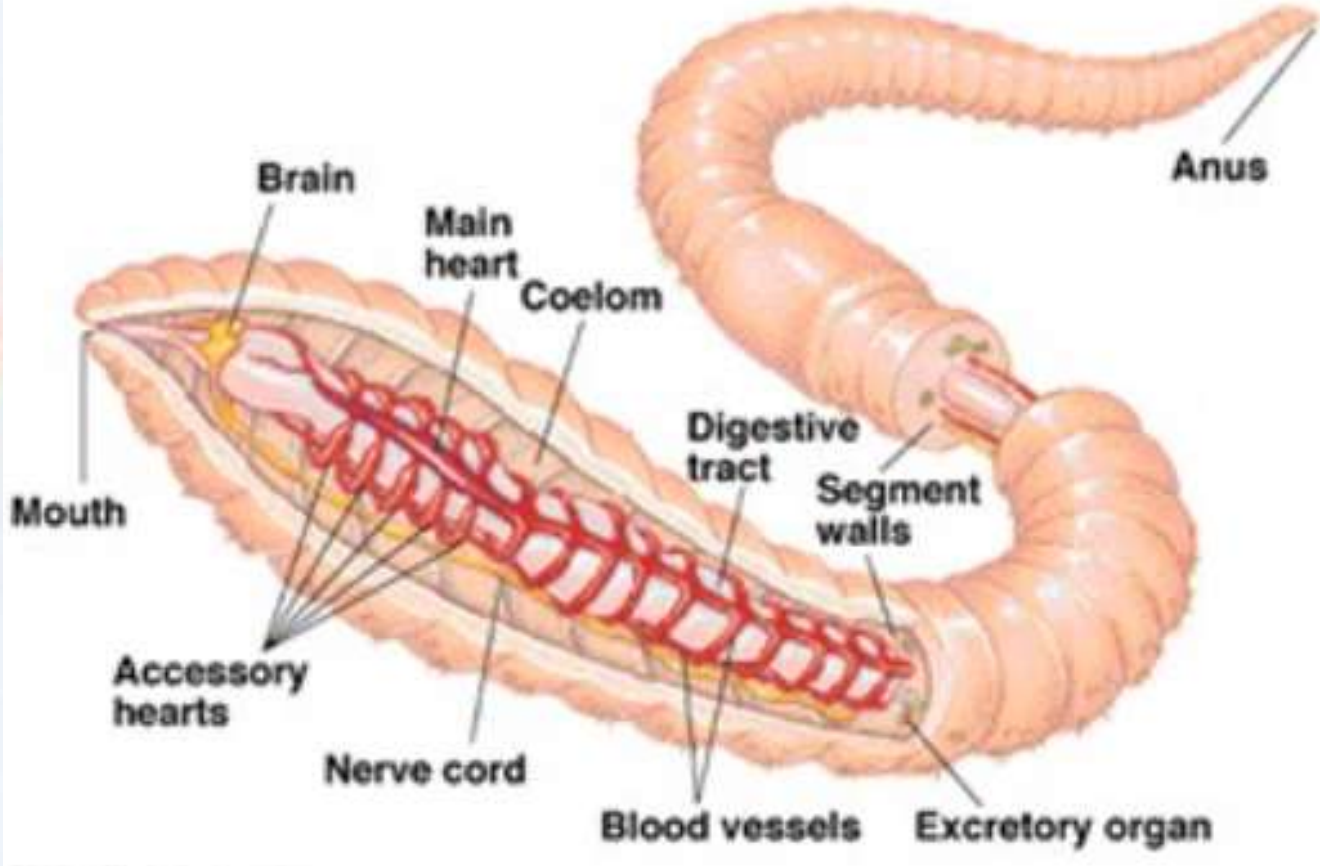
Leech

Annelida

Characteristics

- Outer body covering is cuticle secreted by the underlying epidermis.
- Appendages, when present are unjointed.
- Locomotory organs are segmentally arranged, paired setae or chaetae.
- Body wall is contractile, consists of an outer epidermis, circular and longitudinal muscles.
- Longitudinal blood vessels and the nerve cord extend throughout the body length
- Series of coelomic compartments are present in their body between the gut and the body wall.


anus
intestine
gizzard
crop
esophagus
pharynx
mouth


Brain
Main heart
Coelom
Anus
Digestive tract
Segment walls
Mouth
Accessory hearts
Nerve cord
Blood vessels
Excretory organ

Characteristics

- Alimentary canal is tube like extending straight from mouth to anus.
- Respiration through body surface, by gills in some forms.
- Blood vascular system is closed type. Blood is red due to haemoglobin.
- Excretory organs are Nephridia usually one pair in each segment.
- Nervous system consists of dorsal brain and longitudinal ventral nerve cord.
- Sexes may be united or separate, often hermaphroditic
- Reproduce sexually by cross-fertilization
- asexually by budding