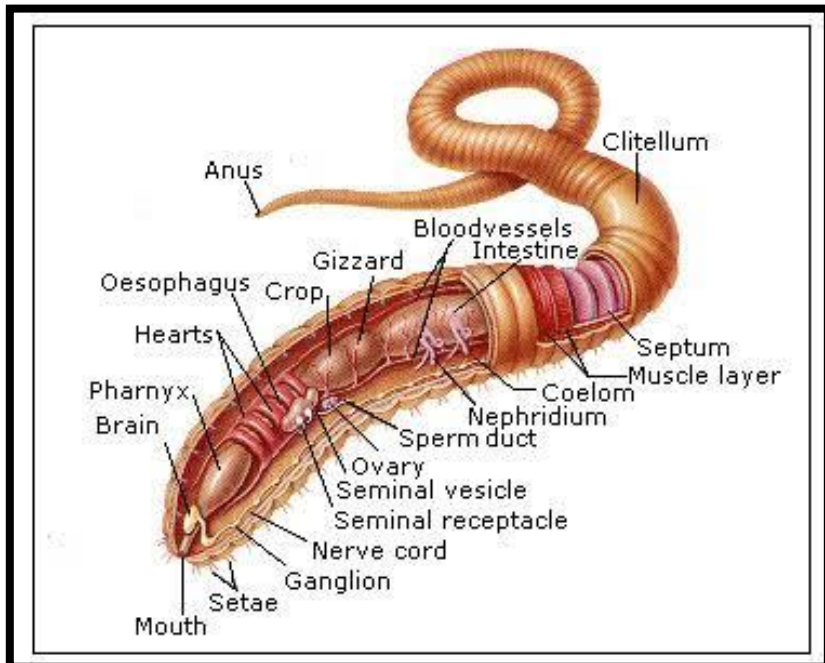


EARTHWORM SECTIONS (MUSEUM COLLECTION)



- T.S. through Pharynx
- T.S. through Gizzard
- T.S. through Typhlosolar intestine

Permanent slides

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Picture credit:

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B.Sc. (Hons.) Zoology Sem V (Batch 2018-2022)

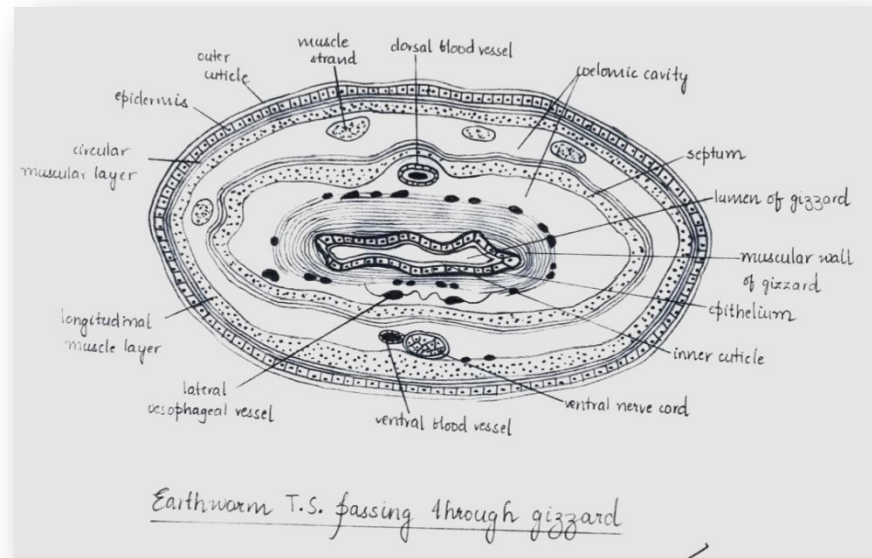
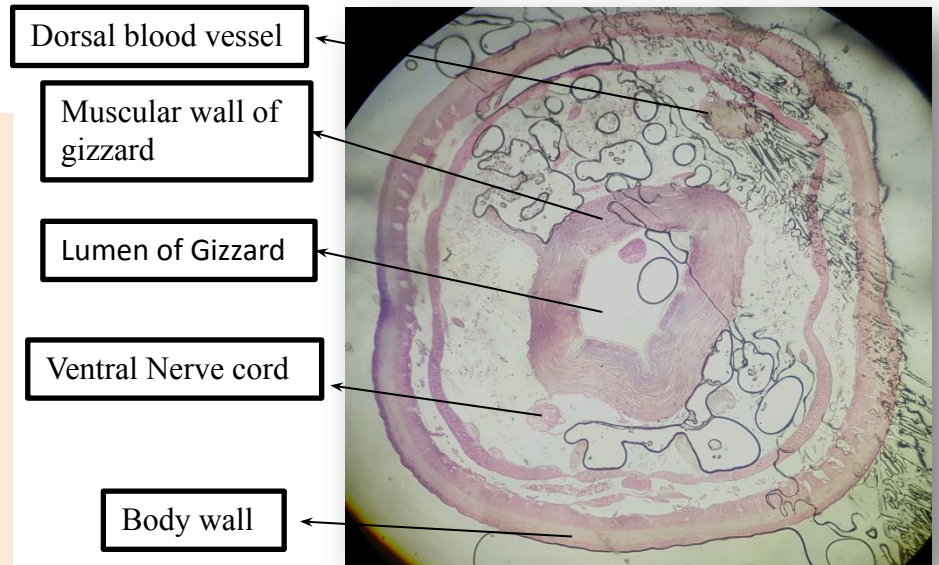
Palak Chugh

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T.S. through Gizzard-

COMMENTS-

1. Oesophagus terminates into a prominent oval, hard, thick-walled, and distinct gizzard lying in the 8th and 9th segment.
2. Body wall is composed of a thin cuticle, columnar, epidermis, thin circular muscle layer.
3. Gizzard is a hard muscular organ, composed of visceral coelomic epithelial layer thick circular muscle fibers and lined internally by columnar epithelial cells and thin cuticle.
4. Gizzard is masticatory apparatus and breaks food into small particles.
5. Gizzard can at once be recognized by thick continuous circular muscle fiber and various blood vessels.
6. Section also contain dorsal-ventral vessels, ventral nerve cord, integumentary nephritis, lateral oesophageal vessel.
7. Few muscles strands are also seen in the section.



T.S. through Typhlosolar intestine

COMMENTS:

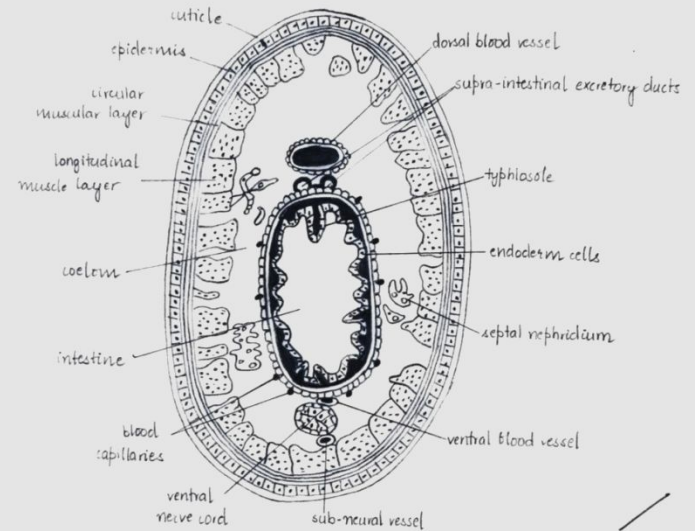
1. Intestine starts after 15th segment. It shows beaded appearance. Section is triploblastic with organ grade constructions and true coelom.
2. Intestine is divisible into 3 regions
 - (i) pre- typhlosolar (from 15 to 26 segments)
 - (ii) typhlosolar region (from 26 segment to rectum)
 - (iii) post- typhlosolar (rectum)
3. Typhlosolar region has a median dorsal internal fold.
4. Body wall is composed of thin cuticle, columnar epidermis, thin cuticle muscle layer, and thick longitudinal muscles layer parietal coelomic epithelial layer.
5. Intestine is composed of outer visceral coelomic epithelial layer, intermediate longitudinal and circular muscle layers and its lining is made up of endodermal columnal epithelial cells. In the typhlosolar region the epithelial cells are raised tk form typhlosole.
6. Typhlosole is a median internal fold of dorsal wall having chloragogen cells and a capillary blood vessel.
7. Typhlosole increases the surface area for absorption.
8. Dorsal blood vessel, supra-intestinal excretory duct, ventral blood vessels, nerve cord, sub-neural vessel, blood capillaries, and coelom are also seen in the section.

Dorsal
Blood Vessel

Typhlosole

Intestine

Ventral
Nerve cord



Earthworm T.S. passing through typhlosolar region

T.S. through Pharynx

COMMENTS-

1. Pharynx is a wide pear-shaped and thick-walled muscular. Pharyngeal cavity is dorsoventrally compressed.
2. Body wall is composed of cuticle, epidermis, musculature, and parietal epithelial layer.
3. Cuticle is thin, non-cellular, double-layered, iridescent and made up of collagen, protein, gelatin and polysaccharide.
4. Epidermis consists of single-layered distinct columnar cells with gland cells, supporting cells, basal cells and receptor cells.
5. Musculature comprises outer continuous circular muscle fibers, inner longitudinal muscle fiber cut in bundles.
6. Pharynx contains visceral epithelial layer, pharyngeal gland cells, musculo-vascular tissue, and lumen of the pharynx.
7. Lumen is divided by an incomplete horizontal shelf into upper salivary chamber and lower conducting or ventral chamber. Salivary chamber contains affiliated pharyngeal epithelial layers dorsally.
8. From the pharyngeal wall radial muscles strand run outward up to body wall. Their condition dilate pharyngeal cavity work as suction pump.

Dorsal Blood vessel

Pharyngeal chamber

Longitudinal muscle layer

Ventral Nerve cord

