

② Segmented Worms

What You'll Learn:

Identify the characteristics of segmented worms.

Describe the structures of earthworms and how it takes in and digests food.

Explain the importance of segmented worms.

Segmented Worm Characteristics (Annelids)

*Tube-shaped bodies divided into segments that have setae.

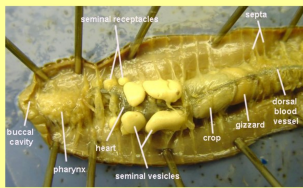
*Bilateral symmetry with a body cavity for organs and two body openings



Earthworm Body Systems

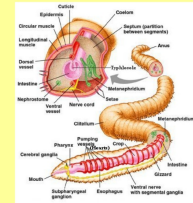
Digestive

*take soil into the mouth where it is stored in the crop, then moves to the gizzard which grinds the organic matter, it then passes to intestine which absorbs the nutrients, finally waste leaves the body through the anus.



Circulatory

*Closed circulatory system



Respiratory

*Oxygen and carbon dioxide are exchanged through the skin

Nervous

*Small brain, nerves, and a nerve cord that connects the body to the brain

*they respond to light, temperature, and moisture

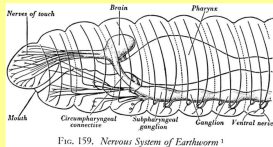


FIG. 159. Nervous System of Earthworm 1

Reproductive

*Hermaphrodites that need to exchange sperm.

Marine Worms (Polychaetes)



*Sessile polychaetes have tentacles to exchange gas and gather food, some build tubes

*Free-swimming polychaetes have a head with eyes, tail, and parapodia (fleshy outgrowth which aid in feeding and locomotion)



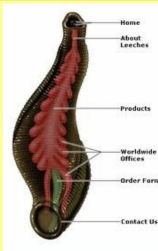
Leeches

*Feed on the blood of other animals

*sucker at each end of the body attach to the animals body

*they produce a chemical that numbs the body and prevents the blood from clotting.

*After the leech has attached itself, it cuts into the animal and sucks out two to ten times its own weight in blood.



Leeches are segmented worms, but their bodies are not as round or as long as earthworms are, and they don't have setae

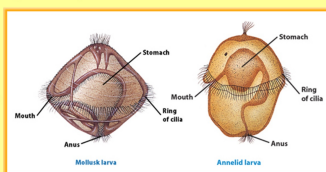
Value of Segmented Worms

*aerate the soil, recycle nutrients, develop drugs based on leech saliva, and the larvae are food for many animals.



Origin of Segmented Worms

Mollusks and segmented worms are thought to have had a common ancestor because of similar larvae.



*Some scientists hypothesize that segmented worms evolved in the sea.

*The fossil record for segmented worms is limited because of their soft bodies.

*The tubes of marine worms are the most common fossils of the segmented worms.