

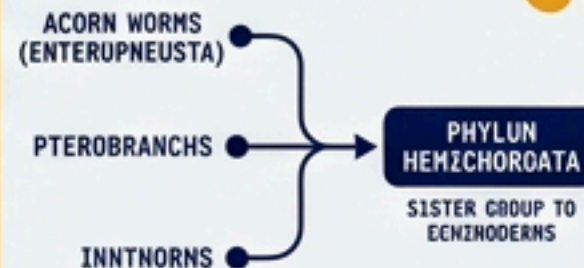


Proboscis, Collar and Trunk

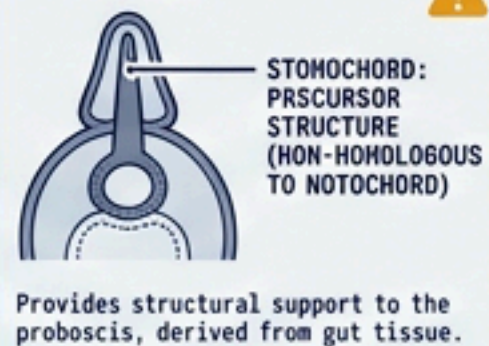
An Anatomical Profile of Phylum Hemichordata

EVOLUTIONARY NOTES

HEMICHORDATE PHYLOGENY



STOMOCHORD



SYNTHESIS PANEL

RECAPLE WORDS



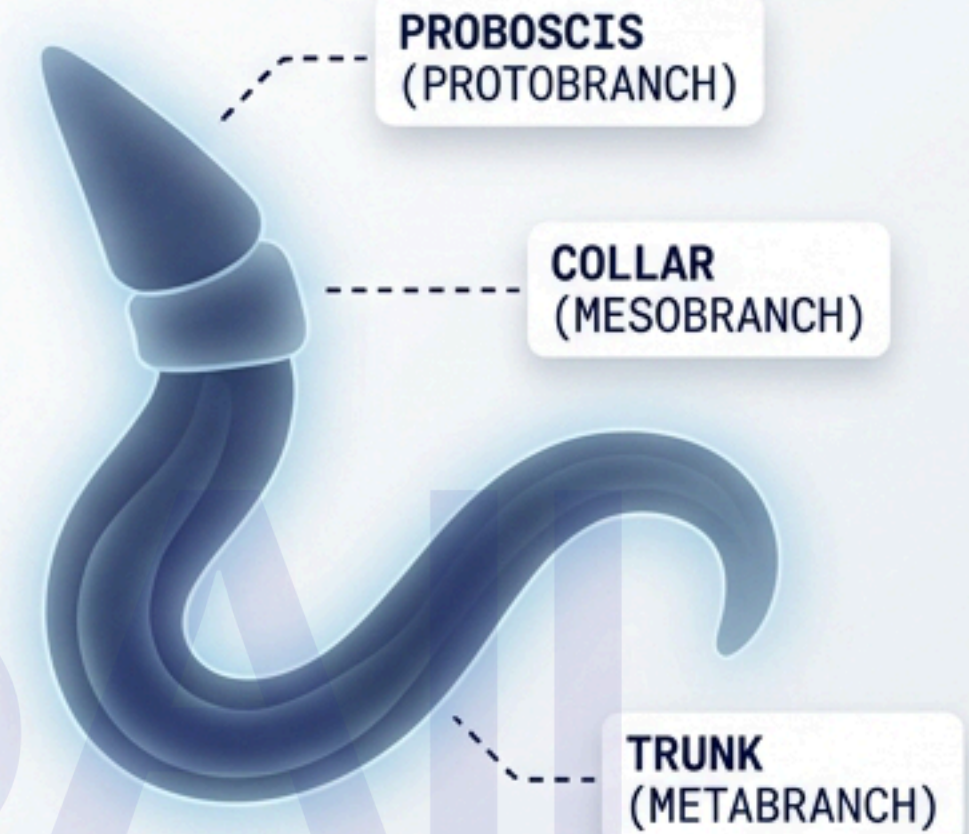
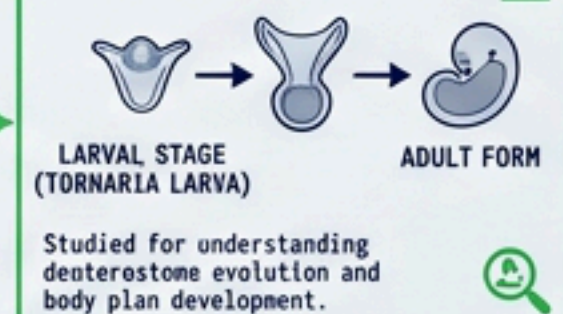
Studial for memcluyus deonnective ecosystem.

SYNTHESIS PANEL

BIOLOGICAL SIGNIFICANCE



DEVELOPMENTAL BIOLOGY MODEL



A Small Group of Marine Worms



Habitat: Exclusively marine environments.



Morphology: Cylindrical, worm-like body structure.



Level of Organisation:
Complex organ-system level.



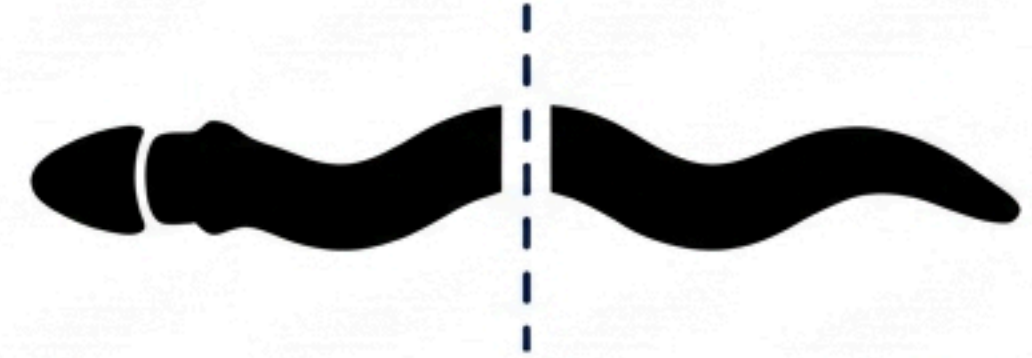
The Chordata Misclassification

Hemichordata was previously classified as a sub-phylum of Chordata. It is now definitively recognized as an independent, non-chordate phylum.

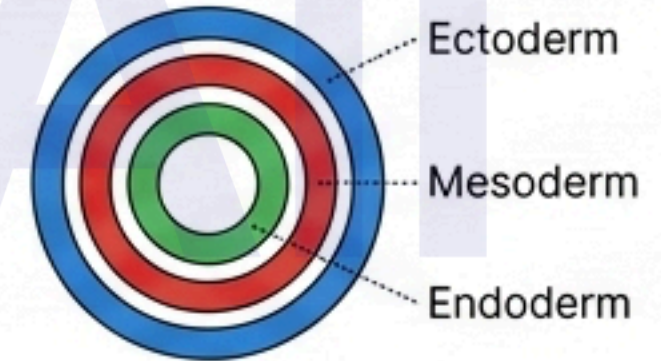
The distinguishing feature:
Hemichordates possess a rudimentary **Stomochord** in the collar region, rather than a true mesodermally derived **Notochord**.

The Foundational Blueprint

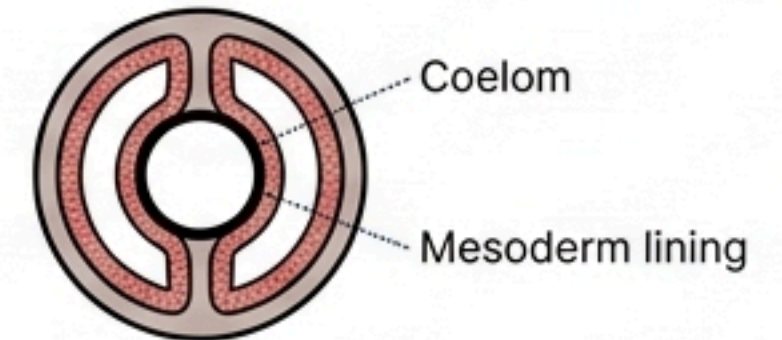
Bilateral



Triploblastic



Coelomate





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The Tripartite Body Plan



Anterior Proboscis

The conical, anterior-most segment utilized primarily for burrowing into the marine substrate and gathering food.



Collar

The short middle segment that houses the mouth opening and the defining Stomochord structure.



Long Trunk

The extended posterior region containing the organism's major physiological and reproductive systems.

Physiological Dashboard



Circulation

Open Type

Circulatory System



Respiration

Gas exchange occurs exclusively through the

Gills



Excretion

Excretion is driven by the unique

Proboscis Gland

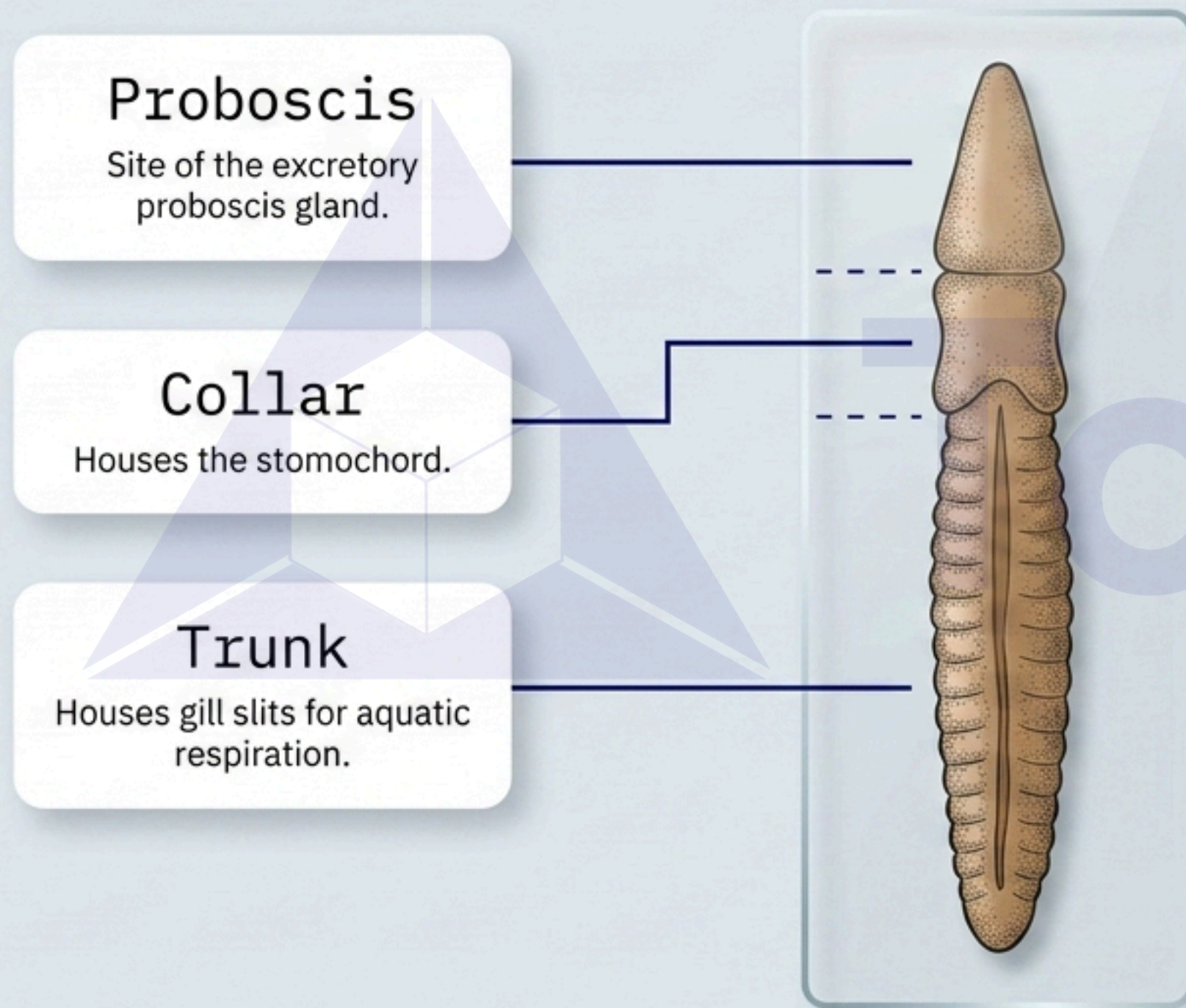
Located in the anterior segment.



Reproduction

- ✓ Separate sexes (Dioecious)
- ✓ External fertilization
- ✓ Indirect development (via free-swimming larva)

Morphological Examination: Balanoglossus



Representative Specimens

Balanoglossus •

Commonly known as the Acorn Worm. Serves as the primary archetype and most studied genus of the phylum.

Saccoglossus •

A closely related genus, easily distinguishable by its elongated proboscis and unique developmental variations.

Phylum Summary

Hemichordates are a small, evolutionarily distinct group of marine worms. Defined by their tripartite body architecture (proboscis, collar, and trunk) and the presence of a stomochord, they represent a fascinating bridge in animal classification, structurally complex yet wholly distinct from true chordates.



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