

PHYLUM HEMICHORDATA

Greek, Hemi → half
chorda → string cord.

INTRODUCTION

Hemichordates are worm like animals found in shallow ocean bottom. They are closely related to chordates, therefore, also called prochordates; but show many similarities with echinoderms. They are included in the group of animals called deuterosomes along with echinoderms and chordates.

SYMMETRY

Symmetry is bilateral and hemichordates are triploblastic.

BODY CAVITY

Body cavity is true coelom.

BODY PLAN

Hemichordates are distinguished by a tripartite (three fold) division of the body. There is an anterior ^{protosome (known as proboscis)} ~~protosome~~, middle mesosome known as collar; and posterior metasome or ~~metasome~~, known as trunk. Every region is with a coelomic compartment.

STOMOCHORD

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It is a flexible, hollow tube

Stomochord is the structure in the collar region, which is similar to a notochord. Stomochord has endodermal origin from digestive tract and moves throughout the length. Stomochord serve to communicate with the oral cavity.

PROBOSCIS

The proboscis is muscular and ciliated organ used in locomotion and in the collection and transport of food particles.

MOUTH

The mouth is located between the proboscis and the collar.

TRUNK

The trunk is the longest part of the animal. It contains the pharynx which is perforated with gill slits (which are branchial openings that open into the pharynx), the esophagus; a long intestine, and a terminal anus. It also contains the gonads.

BODY WALL

Body wall is made of unicellular epidermis with mucus secreting cells.

HABITAT

All hemichordates are marine.

BODY FORM

Body is soft and unsegmented and has a worm like form.

DIGESTIVE TRACT

Digestive tract is complete and consists of a long straight tube.

CIRCULATORY SYSTEM

Circulatory system includes a dorsal heart and two longitudinal vessels, a dorsal and a ventral, interconnected by small lateral vessels. Blood is colourless and without corpuscles.

RESPIRATION

Gill slits are present behind the collar which performs the function of respiration.

EXCRETORY SYSTEM

Excretory system comprises of a glomerulus situated in the proboscis and connected with blood vessels. There are no nephridia.

NERVOUS SYSTEM

Brain occurs in the mesosome and the main nerve tracts are present in mid dorsal

and mid ventral line.

CLEAVAGE

complete cleavage

Cleavage is holoblastic and radial.

TORNARIA LARVA

Tornaria Larva is formed during the life cycle which resembles bipinnaria larva of echinoderms.

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COLONIES

Many hemichordates make colonies.

EXAMPLES

Examples are Saccoglossus kowalevskii (acron worm), Balanoglossus sp. etc.

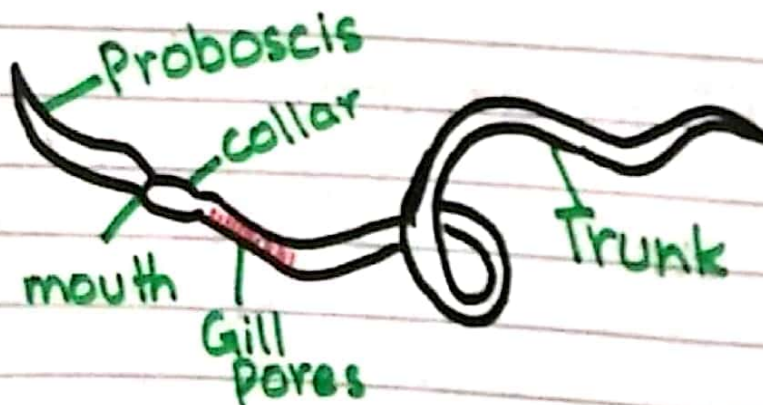


Fig: Saccoglossus

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