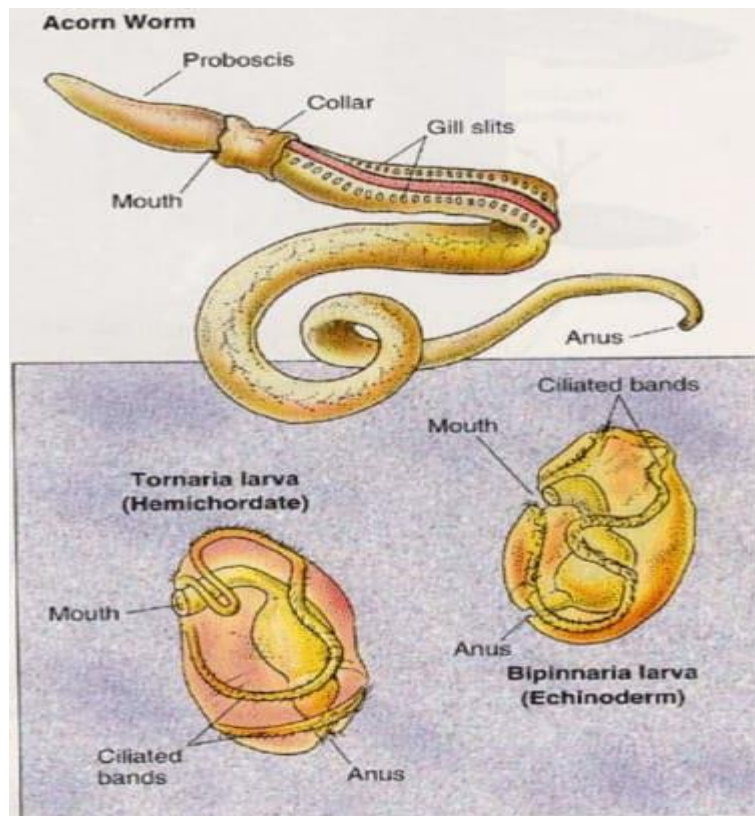


Hemichordata

INTRODUCTION and DEFINITION.

Hemichordates are usually described as, 'primitive chordates' or 'invertebrate chordates'.

This phylum of wormlike animals of shallow ocean bottom was considered closely related to the chordates. Alliance with the chordates was based on the presence of gill slits and the so called notochord. It is now generally agreed that the hemichordate 'notochord' is neither analogous nor homologous with the chordate notochord and that except the common possession of pharyngeal clefts the two groups are



dissimilar Hemichordates have thus been removed from chordates and been given the rank of a separate phylum.

Hemichordata (Gr., hemi - half; Chorde - Cord) means they are 'half' or 'part' chordates, a fact that is undisputed. They are vermiform, solitary or colonial enterocoelous coelomate animals having intra-epidermal nervous system and a pre-oral gut with or without gill-slits and without typical nephridia.

GENERAL CHARACTERS :

Exclusively marine, solitary or colonial, mostly tubicolous.

1. Body soft, fragile, vermiform, unsegmented, bilaterally symmetrical and triploblastic.
2. Body wall of a single-layered epidermis with mucous glands. No dermis.
3. Coelom enterocoelous, usually divided into protocoel, mesocoel and metacoel, corresponding to 3 body regions.
4. Digestive tube complete, straight or U-shaped.
5. Foregut gives out a hollow buccal diverticulum into proboscis, earlier considered as 'notochord'.
6. Dorso-lateral pharyngeal gill-slits, when present, one to several pairs. Ciliary filter feeders.
7. Circulatory system simple and open, including a dorsal heart and two longitudinal vessels, one dorsal and one ventral.
8. Excretion by a single proboscis gland or glomerulus connected to blood vessels.

9. Nervous system primitive consisting mainly of a subepidermal nerve plexus. Dorsal collar nerve cord hollow.
10. Reproduction mainly sexual. Sexes usually separate. Gonads one to several pairs.
11. Fertilization external in sea water. Development direct or indirect with a free-swimming tornaria larva.