

Classification of Hemichordata

Hemichordata includes about 80 known species which are generally grouped under two classes, Enterozooneusta and Pterobranchia. Besides, ~~one~~ two more classes are included by some, as below.

Class - 1. Enterozooneusta (Gr., enteron, gut + zooneustos, breathed).

- (i) They are solitary, free-swimming or burrowing animals, commonly called the "acorn" or "tongue worms."
- (ii) Body is elongated, vermiform, with no stalk.
- (iii) Proboscis is cylindrical and tapering.

- (IV) Collor is without ciliated arms (lophophore).
 - (V) Alimentary canal is straight. Mouth and anus are at opposite ends. They are filter feeders.
 - (VI) Several pairs of U-shaped gill-slits are present.
 - (VII) Sexes are separate. Gonads are numerous and sac-like.
 - (VIII) Development includes tomaria larva in some.
- eg. Asexual reproduction is absent.
 Eg. Balanoglossus, Saccoglossus, Protoglossus.

Class - 2. Pterobranchia

(Gr. Pteron, feather + branchia, gill).

- (i) They are solitary or colonial, sessile and tubicolous animals living inside secreted chitinous tubes.
 - (ii) Body is short and compact, with stalk for attachment.
 - (iii) Proboscis is shield-like.
 - (iv) Collor bears ciliated arms.
 - (v) Alimentary canal is U-shaped, Anus is dorsal lying near mouth. They are ciliary feeder.
 - (vi) Gill-slits one pair or absent, never U-shaped.
 - (vii) Sexes separate or united.
 - (viii) Development direct or with a larval stage.
- (ix) Asexual reproduction by budding in some.
 Ex - Rhabdopleura, Cephalodiscus.

Class - 3. Planctosphaerozoidea (Not important):

This class is represented by a few small, rounded, transparent and pelagic larvae, supposed to be specialized tomaria of some unknown hemichordate, termed ~~Planct~~ Planctosphaera pelagica. The larval body is covered by extensively branched ciliary bands and its alimentary canal is L-shaped.

Class - 4. Graptolita (Not important):

The fossil graptolites (Eg. Dendrograptus) were abundant in Ordovician and Silurian periods and often placed as an extinct class under Hemichordata. Their tubular chitinous skeleton and colonial habits show an affinity with Rhabdopleura.