

# Classification of Hemichordates

## HEMICHORDATA CLASSIFICATION



BY: BARUN PRABHAT  
ASSISTANT PROFESSOR  
DEPARTMENT OF ZOOLOGY  
J N COLLEGE, MADHUBANI  
L N M U (DARBHANGA)

COURSE : DEGREE-I  
SUBJECT : ZOOLOGY (H)

B Sc Part - I

ZOOLOGY PAPER - 2

HEMICHORDATA CLASSIFICATION

BARUN PRABHAT

### GENERAL CHARACTERS

1. Exclusively marine wormlike and soft-bodied animals
2. Body is divisible into proboscis, collar and trunk
3. Notochord occurs only in the anterior end of the body.  
But, Nature is doubtful
4. Numerous paired gill-slits
5. Nervous tissues embedded in epidermis and occur both on dorsal and ventral surfaces
6. Coelom is usually divided into proboscis, collar, and trunk
7. Blood vascular system is simple
8. Sexes separate
9. Development direct or indirect

## CLASSIFICATION

Hemichordata has been divided into following 4 classes:

### Class 1. Enteropneusta

1. Solitary and burrowing worm-like
  2. Marine forms commonly known as "acorn" or "tongue worm"
  3. Body consists of the usual divisions, viz., proboscis, collar, trunk
  4. Epidermis is ciliated and glandular
  5. Numerous gill-slits and gonads are present
  6. Alimentary canal straight with a terminal anus
  7. 2 rows of hepatic caeca are present in the middle of the trunk
- Example: *Balanoglossus*, *Sacchoglossus*, and *Ptychodera*

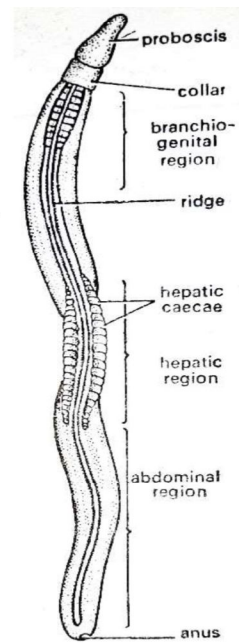


Fig. 2-2. *Balanoglossus*.

### *Class 2 Pteroranchia*

1. Sedentary, solitary, or colonial, and marine forms
2. Proboscis bears ciliated tentacles
3. Collar bears 2 or more tentaculated arms
4. 1 pair of gill slits or none
5. Collar has ciliated arms (loophore)
6. Alimentary canal U-shaped
7. Anus situated near the mouth
8. Sexes separate
8. Gonads few
9. Reproduction by budding

### Order 1. Cephalodiscida

1. Solitary or living in common gelatinous house
2. 2 gill-slits are present
3. Single pair of gonads present
4. 4-6 tentaculated arms present

Examples: *Cephalodiscus*

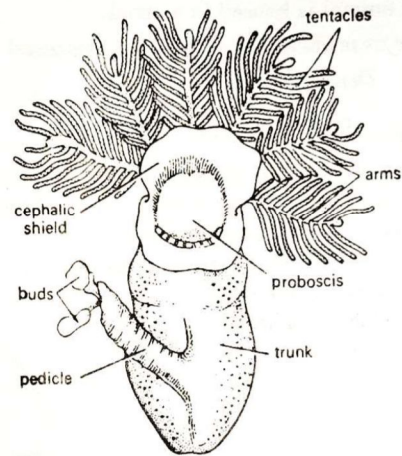


Fig. 3-2. *Cephalodiscus*.

### Order 2. Rhadopleura

1. Colonial
2. Gill-slits present
3. Single gonads
4. One pair of tentaculated arms

Example: *Rhadopleura* (only one genus)

### Class 3. Planctospheroidea

1. Round transparent, pelagic larvae
2. Related to tornaria larva
3. Alimentary canal of larva is u-shaped
4. Adult form is not known

Example: *Planctosphaera*

#### Class 4. Graptolite

1. Extinct
2. Colonial
3. Known from fossil structure of tubes
4. Each animal is housed in a zooid
5. Abundant in Ordovician and Silurian period

Example: *Dendrograptus*

