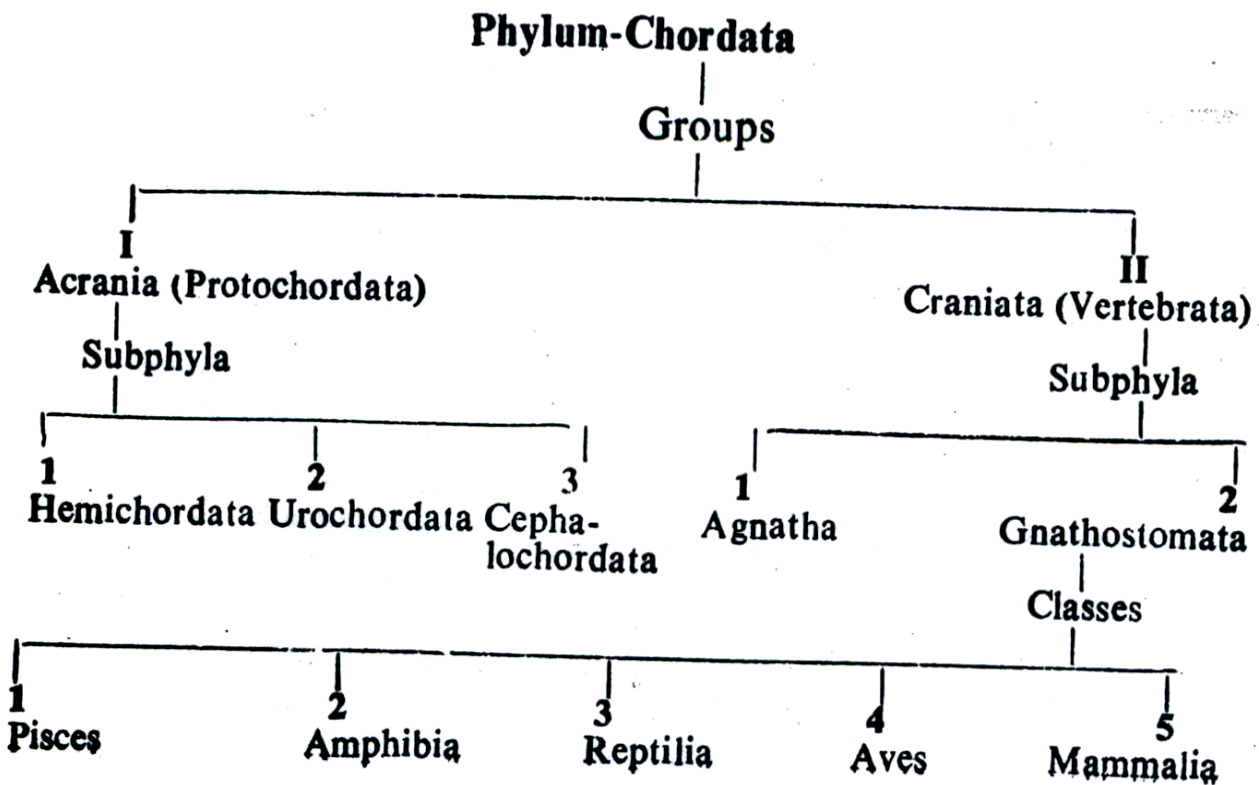


Phylum Chordata

General Characters

- 1- Bilaterally and Triploblastic semmetrical
- 2- Nerve cord and notochord, gill slits, hepatic portal system, and post anal tail are present
- 3- Coelomates



Group Protochordata

General Characters

- 1- Small forms, between the invertebrates and vertebrates
- 2- Cranium or small box, jaws, vertebral column are absent
- 3- notochord nerve cord and gill slits are present

It includes three phylum:-

- Hemichordata,
- Urochordata,
- Cephalochordata

Subphylum: Hemichordata

General Characters

- 1- Notochord occurs only in the anterior end
- 2- Paired gill slits are coelom is usually divided into three position
- 3- Body divided into Proboscis, collar, and trunk

Class I: Enteropneusta

- 1- Elementary canal is straight & numerous gill slits
- 2- Epidermis is ciliated and glandular
- 3- Body consists of proboscis, collar and trunk

EX: Balanoglossus

Class II: Pterobranchia

Order: Cephalodiscida

- 1- One pair of gill slits or non & Reproduction by budding
- 2- 4-6 tentaculated arms

ex: Cephalodiscus

Subphylum Urochordata

General Characters

- 1- Called Sea Squirts
- 2- Nerve cord in larva stage and small ganglion in adults
- 3- heart is simple and ventral & Hermaphrodite (Sex are united)

Class I: Ascidiacea

Order: Ascidiacea compositae

- 1- No Locomoary appendage
- 2- Test is Permentent and well developed

3- A sexual and sexual

. *Ascidia* sp. Ex