



Vertebrate Biology Laboratory

PROCHORDATA

SUBPHYLUM: UROCHORDATA (TUNICATA)

SUBPHYLUM: CEPHALOCHORDATA

CLASSIFICATION

SUBPHYLUM: UROCHORDATA-TUNICATA

CLASS: ASCIDIACEA (SEA SQUIRTS)

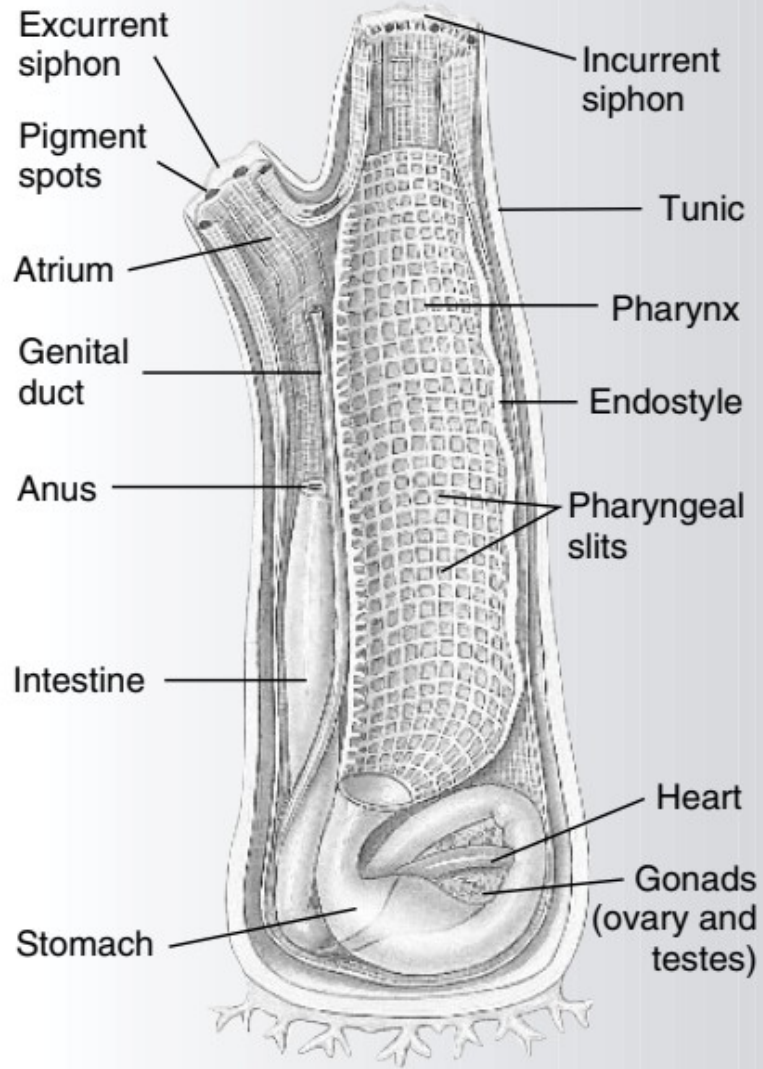
- Marine and benthic forms which vary greatly in size and form.
- The individuals are solitary or colonial.
- Adults become usually sessile after metamorphosis of the larval stage
- Colonial ascidians are produced by asexual budding.

CLASS: APPENDICULARIA (LARVACEA)

- The members of the class are minute free-swimming pelagic forms with a highly developed tail.
- The tail is supported by notochord and large striped muscle cells.
- The tunic is not persistent
- The nerve cord is persistent.
- The atrium is lacking.

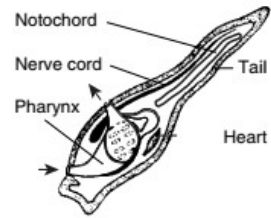
CLASS: THALIACEA

- The members of this class vary greatly in size. The adult form is devoid of notochord and tail.
- Distinct alternation of generations is present in the life-cycle.
- The tunic is thin and transparent.
- The pharynx is provided with two large or many small stigmata.

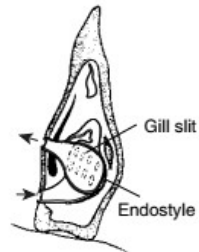


Structure of a tunicate, *Ciona* sp.

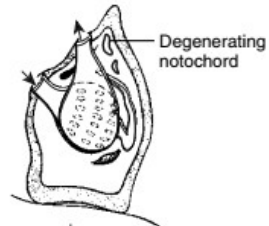
Free-swimming larva



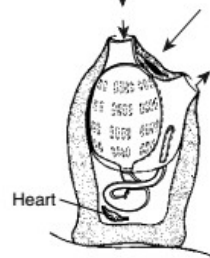
Attached, early metamorphosis



Late metamorphosis



Adult



Metamorphosis of a free-swimming tunicate (class Ascidiacea) tadpole-like larva into a solitary, sessile adult. Note the dorsal nerve cord, notochord, and pharyngeal gills slits.

CLASSIFICATION

SUBPHYLUM: CEPHALOCHORDATA

CLASS: LEPTOCARDIA



Genus: *Amphioxus-Branchiostoma*

Gonads lie on each side of the body. They inhabit the tropical and sub-tropical seas.



Genus: *Asymmetron*

Gonads lie only on the right side. They inhabit the tropical seas.

FOSSILS: The oldest known Cephalochordates is **Pikaia**, recorded from the **Burges Shales of Canada, about the middle Cambrian period.**

The anatomical characteristic features are more or less same as Branchiostoma except a pair of sensory tentacles that are found at the end of the body.

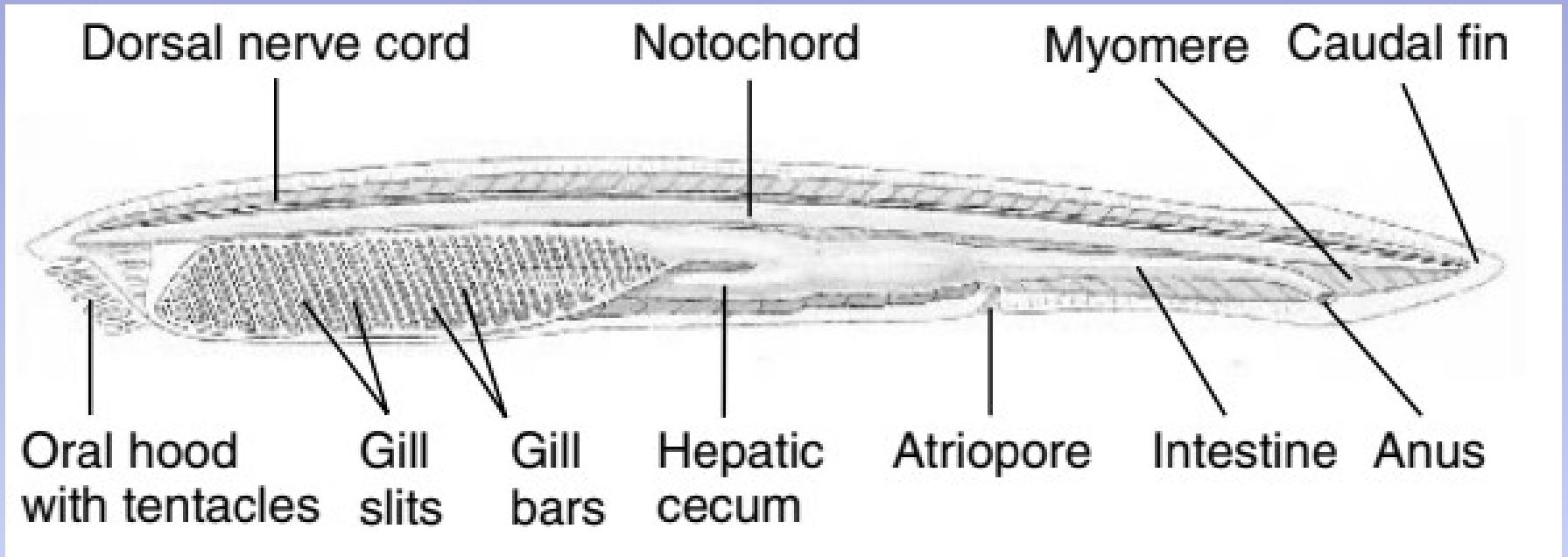
Phylum: Chordata

Group : Acraniata

Subphylum: Cephalachordata

Classis: Leptocardia

Genus: *Branchistoma* (*Amphioxus*)



3. SUBPHYLUM (ALT ŞUBE): CEPHALOCHORDATA

CLASS (SINIF): LEPTOCARDIA



Gonads

Amphioxus

