Ascidian

classification

Kingdom: Animalia

Phylum: Chordata

Subphylum: Tunicata

Class: Ascidiacea

ForFurther details link

Habit and habitat

Sessile Adults: Adult ascidians are attached to a substratum, meaning they are stationary and immobile after their larval stage.

Filter-feeding: They are filter feeders, drawing water into their bodies to filter out microorganisms for food.

Marine Environment: Ascidians are exclusively marine, found in all the world's oceans.

All Depths: They inhabit a broad range of depths, from shallow intertidal zones to the hadal (deep-sea) regions.

Diverse Substrates: Ascidians colonize various substrates, including:

Natural: Rocks, coral reefs, seagrass beds, sandy and muddy bottoms.

Artificial: Jetties, ship hulls, floating docks, and other man-made structures.

Characteristics

- Ascidia is exclusively marine and occurs at all depths of the sea. It is sessile in adult stage, but the larva is a free-swimming form.
- Ascidia, in adult stage, is a solitary animal having a bag-like body (Fig. 1.8). The body is covered by a tough and translucent tunic or test. Because of the presence of tunic, the urochordates are also known as tunicates.
- The free end of the body bears two apertures one at the top called the oral funnel or oral siphon, containing the mouth, and the other is laterally placed and is called the atrial funnel or atrial siphon.
- A number of branching tubes, each terminating in a tiny bulb-like dilatation, are present. Blood circulates through these tubes.
- The epidermis is composed of cuboidal or squamous cells.
- Ascidia, in adult stage, is a fixed form. So locomotion in true sense is absent.
- The movement is restricted to the contraction of the body by muscle fibres and the closure of the funnels.
- Sense organs, in the strict sense, are absent. The pigment spots or ocelli that are present in the adults around the funnels are regarded to be photo-receptors, in a slowly developed condition.
- The sex cells are discharged into the atrium and from here are expelled to the exterior. Fertilisation is external. The sperms and eggs attain maturity at different times.