Protochordata : Petromyzon.

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Question:

What is petromyzon ? Write the characters of petromyzon.

marks: 2+5

Answer. Petromyzon is commonly known as sea lamprey. Petromyzon or Lamprey lives as ecto parasite on aquatic vertebrates and is anadromous in habit i.e. it ascends from fresh water rivers and streams for spawning.

Characters:

1. Body is cylindrical, elongated, eel like, stout with unpaired fins.
2. Unpaired or median fins in the form of two membranous median dorsal fin present near the posterior end.
3. A caudal fin supported by fin ray is also present. in anal fin is present in female behind anus.
4. Body is divided into head, trunk and a laterally compressed tail.
5. Exoskeleton is absent and the skin is is naked and slimy and heavily pigmented.
6. Mouth is in the form of suctorial funnel .
7. A long rasping, protrusible and piston like tongue is present but jaws are absent.
8. Head bears one pairs of large lateral eye, covered by a transparent area of skin.
9. Pharynx is perforated with 7 pairs of round gill slits and brachial basket is well formed.
10. cloacae is present on ventral side, at the junction of trunk and tail.
11. Fertilization is external. Development is indirect with a larval form known as ammocoete.

Question: what is ammocoete larva ? Write the feature of ammocoete larva . marks : 2+ 4

Answer.

It is a free swimming larva of Petromyzon. Ammocoete is a fresh water larva. it exhibits a prolonged larval period of 5 to 8 days.

Features:

1. Ammocoete larva hatches out of egg of petromyzon.
2. Ammocoete larva has a long, slender body with an oral head surrounding the mouth.
3. Ammocoete larva is without exoskeleton but is covered by thick mucus.
4. Paired fins are absent but median fin without fin ray is present.
5. There are two dorsal fin and a caudal fin around the tail.
6. Mouth is not funnel like and the buccal cavity is without teeth, hooks and papillae.
7. Jaws are absent but mouth is guarded by dorsal and ventral ribs.
8. Dorsal rib is circular and hooks like.
9. At the end of posterior end of the buccal cavity is present the velum, which is followed by pharynx.
10. 7 pairs of gills are present in the pharynx.
11. Anal aperture is present on ventral side at the junction of trunk and tail.

Ammocoete larva is of greater phylogenetic significance because it exhibits characters of a generalized chordate and resemble adult amphioxus in many respect, it is a connecting link between cyclostomes and cephalochordate.