

PETROMYZON

STRUCTURE & AFFINITIES

Petromyzon commonly known as lamprey, are found all over the world. It is marine as well as fresh water forms. It is ectoparasite of fishes.

External features:

- (i) Body is elongated, cylindrical and eel like. P. marinus is about 1 meter long.
- (ii) The body is dark dorsally while on the lateral and ventral side it is silvery and whitish.
- (iii) The skin is slimy and scaleless.
- (iv) The body is divided into three parts - Head, ^{trunk & tail} ~~tail~~ trunk.
- (v) The head is cylindrical and has a buccal funnel, a mouth, a single nares, a pair of eyes and seven pairs of gill slits.
- (vi) Mouth is antero-ventral and surrounded by cup-like funnel.
- (vii) The buccal funnel is cuplike structure situated at the anterior end of the head. It is directed downward. It is functional as a sucker and is provided with oral papillae or oral lamellae.
- (viii) The inner surface of buccal funnel is provided with radiating rows of conical, horny teeth. The centre of the buccal funnel has a circular mouth.
- (ix) A tongue produce through the mouth. It also provided with teeth acting as a rasping organ.
- (x) The nares is present on the dorsal surface of the head. It leads into olfactory sac. The olfactory sac is organ of smell. Behind eye, laterally are 7 pair of gill apertures.

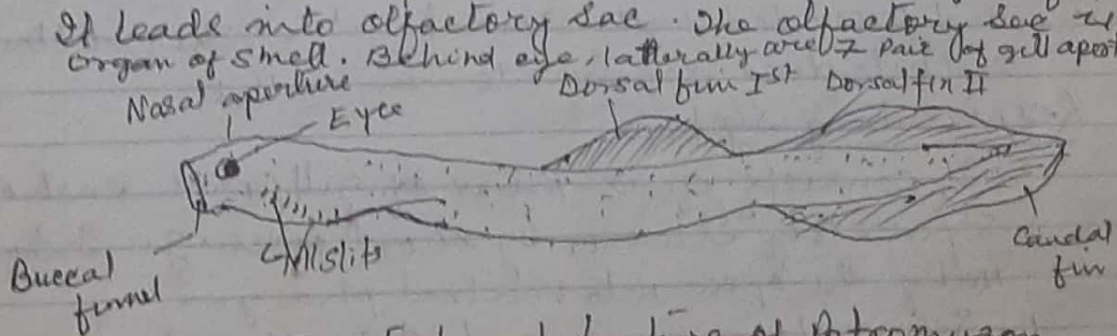


Fig. External feature of Petromyzon.

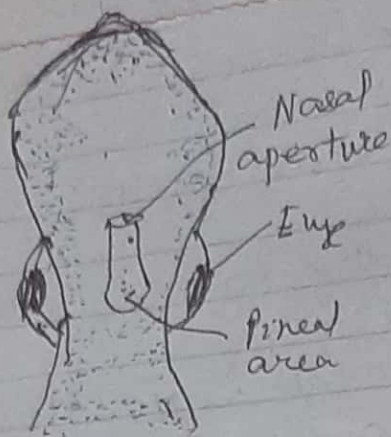


Fig. Dorsal view of Head of Petromyzon

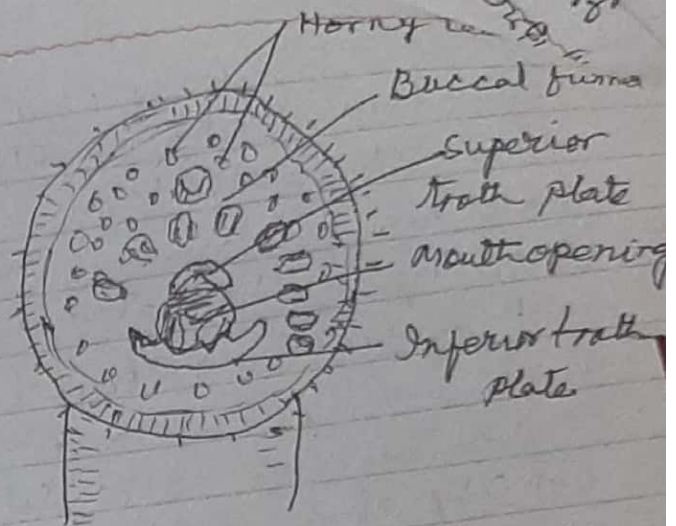


Fig. Buccal funnel (ventral view) of Petromyzon

The trunk:

- (i) The trunk is cylindrical, it has two median dorsal fin
- (ii) The fins are supported by cartilaginous rods called fin rays.
- (iii) At the junction of trunk and tail, the anus and urogenital aperture are present on ^{the} ventral side.

The tail:

- (i) The tail is laterally compressed. It has a caudal or tail fin. The tail fin is also supported by fin rays.

Digestive system:

- (i) The mouth is absent. The tongue in the buccal funnel and leads and buccal cavity. The buccal cavity passes behind into two tubes, the dorsal oesophagus and ventral pharynx or respiratory tubes. Guarded by velum.
- (ii) Stomach is absent. The intestine is straight and provided with spiral valve. The gall bladder and bile duct degenerate in adult.

Respiratory system:

- (i) It consists of six pairs of gill pouch each open separately ^{to the} exterior by short passage. Internally the open into ventral pharynx.
- (ii) Respiratory movement takes place by branchial basket.

- Branchial basket
 - Basal plate
 - Styloid cartilage
 - Auditory capsule
 - Gill aperture

Branchial basket is placed superficially below the skin. It is composed of ^{none} irregular, vertical bars of cartilage. The first is immediate posterior to styloid cartilage. These are connected together by four longitudinal bars, one dorsally, one ventrally and two laterally.

Endoskeleton:

- (i) The skull is primitive and cartilaginous.
- (ii) Its floor is composed of parachordal & trabeculae. Collective constitute basal plate.
- (iii) Anterior to basal plate is a large aperture basi-cranial & fontanelle.
- (iv) A pair of auditory capsule united with the posterior end of the basal plate.
- (v) Each side of basal plate is sub-ocular arch supporting the eye.
- (vi) Additional cartilage such as dorsal plate, lateral cartilages, styloid cartilage are present in skull.

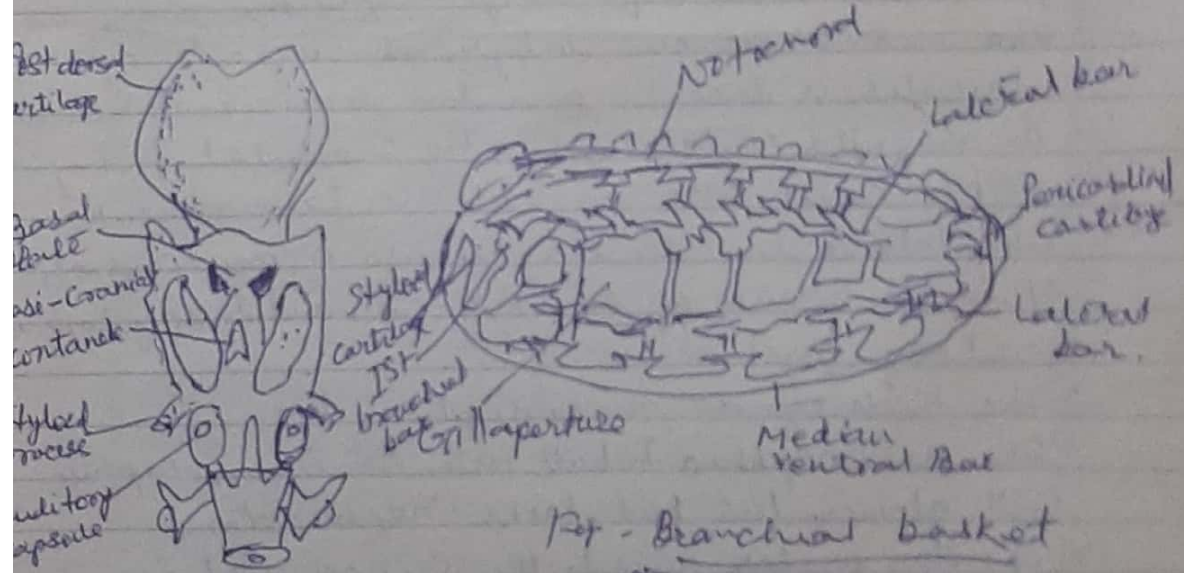


Fig - Skull of Petromyzon

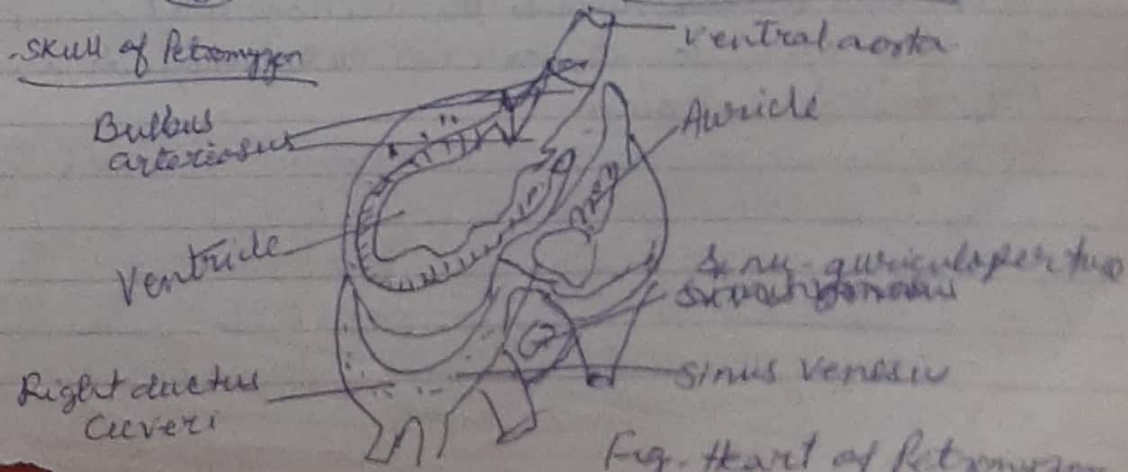


Fig. Heart of Petromyzon