

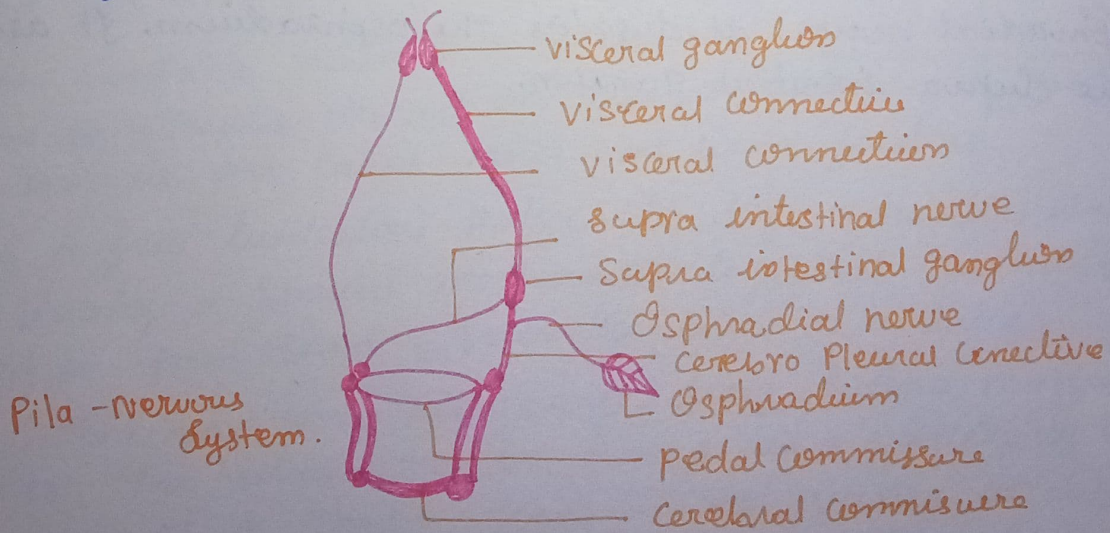
NERVOUS SYSTEM OF MOLLUSCA

Nervous system: The nervous system of Pila is well developed. It has two special features. They are follows.

1. Most of the ganglia are placed in the form of a ring around the buccal mass.
2. The nervous system is twisted in the form of the figures 8.

Conglia: The nervous system of Pila has the following ganglia:

1. Cerebral ganglia: These are pair of ganglia located beneath the buccal mass near its anterior end.
2. Pleural ganglia: There are pair of ganglia situated beneath the buccal mass at its posterior end.
3. Pedal ganglia: Pila has pair of pedal ganglia. They are situated on the inner side of the pleural ganglia. They are partly fused with the pleural ganglia.
4. Supra intestinal ganglion: The single ganglion located behind the left pleural ganglion.
5. Visceral ganglia: These are a pair of ganglia located in the visceral mass. They are fused together.
6. Buccal ganglia: These are paired ganglia located beneath the junction of the buccal mass and the oesophagus.



Commissure: The nerves connecting similar ganglia are called commissure. Pila has the following.

1. Cerebral commissure: It is a nerve connection the two cerebral ganglia.
2. Pedal commissure: It is a nerve connection the two pedal ganglia.
3. Buccal commissure: The buccal commissure ganglia are connected together by a buccal commissure.

Connectives: These nerves connecting two dissimilar ganglia are called connectives. Pila has the follow.

1. Cerebro-pleural connectives: The nerve connecting cerebral ganglia with the pleural ganglia are called Cerebro pleural connectives.
2. Cerebro-pedal connectives: They connect cerebral ganglia with the pedal ganglia.
3. Cerebro-buccal connectives: They connect the cerebral ganglia with buccal ganglia.
4. Left visceral connective: It connects the supra intestinal ganglion with the visceral ganglion.
5. Right visceral connective: It connects the visceral ganglia with the right pleural ganglia.

Nerves:

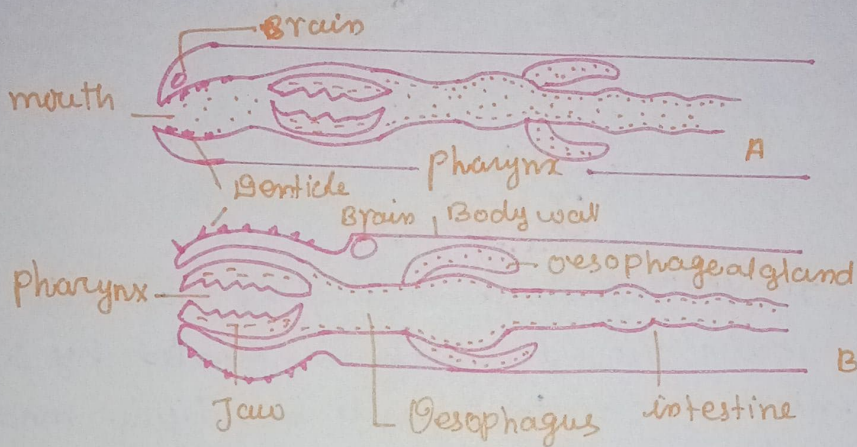
1. Infra-intestinal nerve: It connect the two pleural ganglia. It runs below the oesophagus.
2. Supra-intestinal nerve: It connects the supra-intestinal ganglion and the right pleural ganglion. It runs above the oesophagus.
3. Oosphradial nerve: It supplies the oosphradium. It arises from the supra-intestinal ganglion.

FEEDING IN POLYCHAETES

4.12.2020

Feeding is one of the stage in nutrition. It involves the collection and capture of food materials from the medium. Polychaetes live in different ways. Accordingly they develop different mechanisms for feeding.

1. Raptorial feeders. Raptorial feeders are carnivores which capture their prey by chasing. Raptorial animals includes some crawling polychaetes (*Nereis*, *Polynoe*, *Eunice*, *Syllis*, *Autolytus*, etc.) The protrusion of the proboscis is brought out by the working of a set of muscles called protractor muscle.

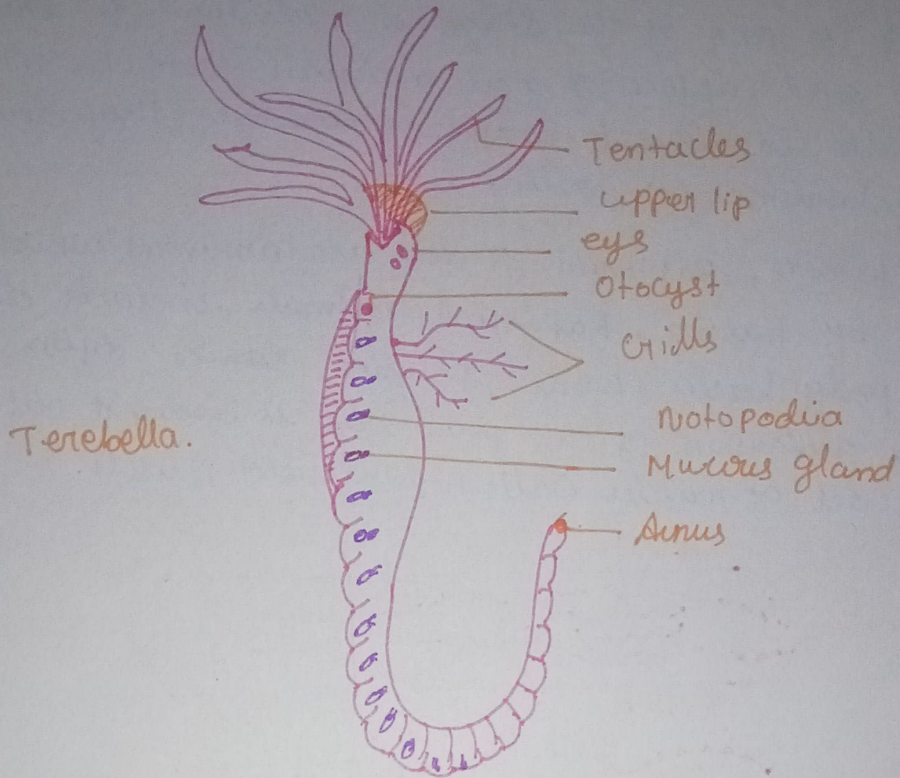


2. Browsers: Browsers are herbivorous polychaetes feeding on algae. They use their jaws for tearing the algae. (E.g) some species of *Nereis*.

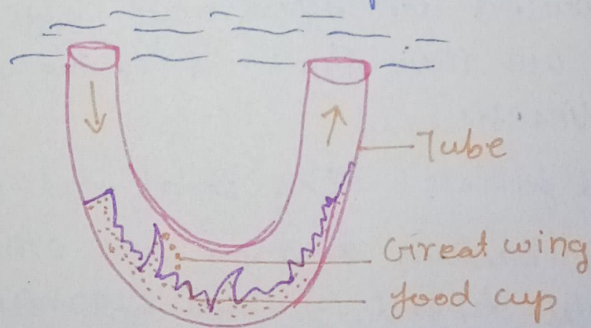
3. Sand and mud feeders: The sand and mud of sea bottom contains bacteria, diatoms, and other micro organisms. Certain polychaetes depend on these organisms for their food. Such animals are called mud and sand feeders.

A few tubicolous polychaetes like *Terebella*, *Amphitrite* etc. develop a special mechanism to collect the micro-organisms from sand. *Terebella* lives in a tube.

The head bears numerous, long, hollow muscular tentacles. The tentacle can be turned in a variety of ways. Their shape cross section, varies at different points at any particular movement according to the use to which they are being put.



4. Filter feeders: In filter feeding, the food materials are filtered from the water current which is created by ciliary or other mechanisms. Chaetopterus is beautifully modified for filter feeding. It lives in a 'U'-shaped tube.



In Arenicola marina, the food is collected by two methods, namely filter feeding and sand feeding. It lives in a 'J' shaped tube. The head lies towards the small limb of 'J'.

