

### Feeding in Pila sp

Pila is herbivorous, feeds generally on succulent plants like Pistia, Vallisnaria etc. and some time it feeds upon detritous material too.

1. The digestive system is complete, large, coiled due to torsion which brings mouth and anus side by side. The feeding function is performed by mouth and buccal mass.
2. The whole digestive system is divided into Foregut, midgut and hindgut. The foregut includes mouth, buccal mass and oesophagus.
3. Mouth - Located below the anterior part. It is a narrow vertical slit located at the end of snout. There are no true lips but the edges serve as secondary lips. The longitudinal muscle of vestibule form sphincter of the mouth that regulates the opening of mouth & movements of jaws..
- 4.. Buccal mass - The mouth lead into a large cavity of buccal mass (pharynx) having thick walls with several sets of muscles. The anterior part of the cavity is vestibule. Behind that, there are 2 jaws with muscles and the anterior edges of jaws have teeth like projections for cutting food.

Buccal cavity - Behind the jaws there is large buccal cavity. On the floor there is a large elevation called odontophore. The front part of odontophore has a furrowed sub-radular organ helps in cutting food.

The odontophore has protractor & retractor muscles and 2 pair of cartilages-

a) A pair of triangular superior cartilage which project into the buccal cavity and

b) a pair of large 'S' - shaped lateral cartilages

## 6. Radula

a) Above and behind the odontophore a bag like radular sac is present.

b) The radula is a long strip like structure with 2 lateral flaps on 2 sides of the outer end. On the radular strip, there are horizontal rows of chitinous and recurved teeth.

c) Each row has 7 teeth - 2 marginal and 1 lateral tooth on each half and a central or rachidian tooth in the middle (2, 1, 1, 1, 2')

d) The teeth are made of chitin having sharp cutting projections which act like a file and rasp vegetation as food.

e) The teeth of the radula are worn off from the front side and new teeth are formed all the time by odontoblast from back side.

On the roof of the buccal cavity, above the radula, is a pair of grooved buccal digestive glands.

g) Each tooth can be divided into 3 sections - a base, a shaft and a cusp. The shaft and cusp are often continuous and cannot be differentiated.

h) The teeth often remain interlocked with their neighbours which prevent their removal from the radular ribbon.

i) The radular teeth generally bend in a side-ways direction.

**Feeding Mechanism:** The chain saw movement of radula on the odontophore makes it an effective organ for rasping of food particles. The radula moves forward and backward on the odontophore for rasping and this movement is called chain saw movement.

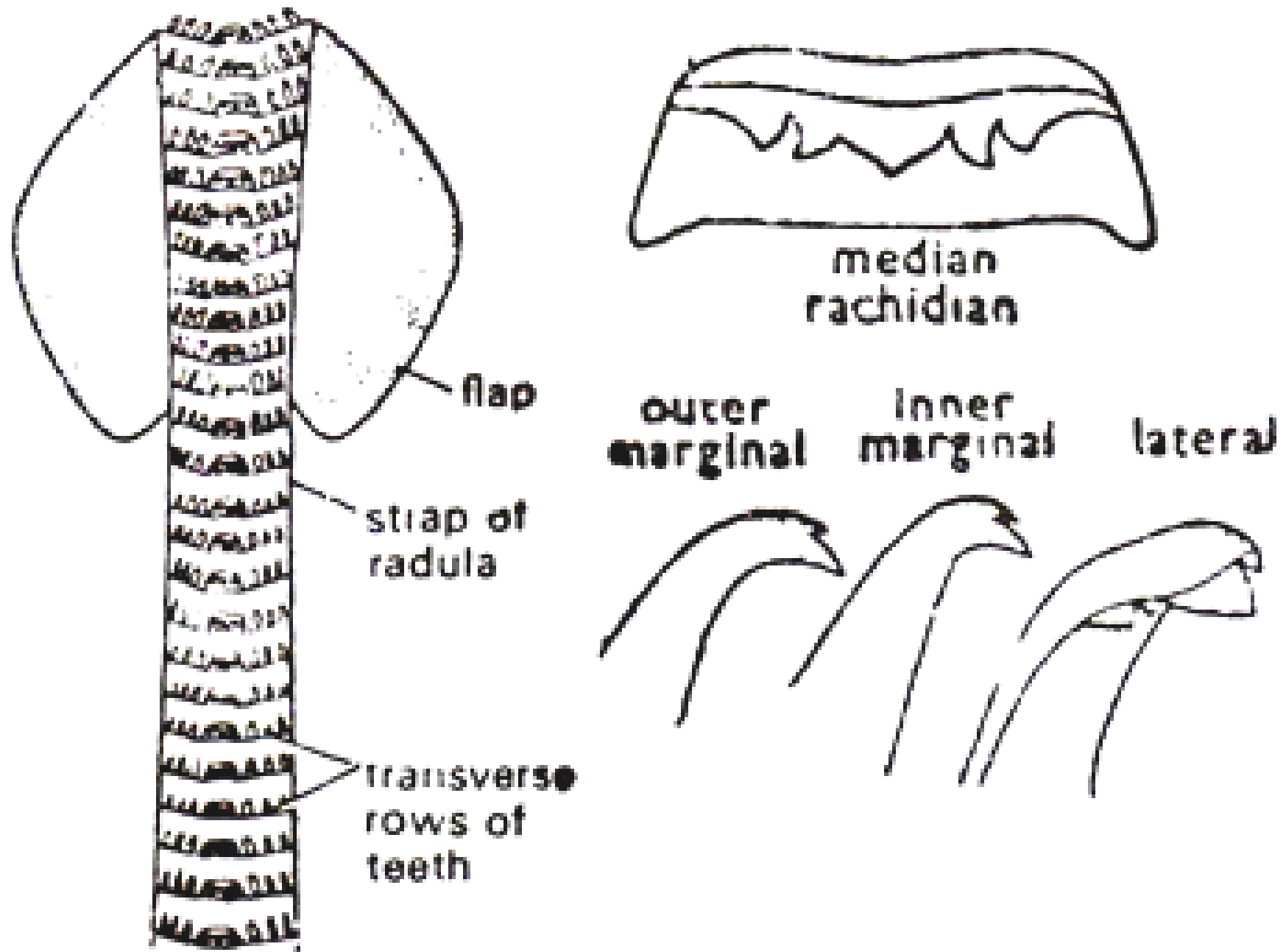
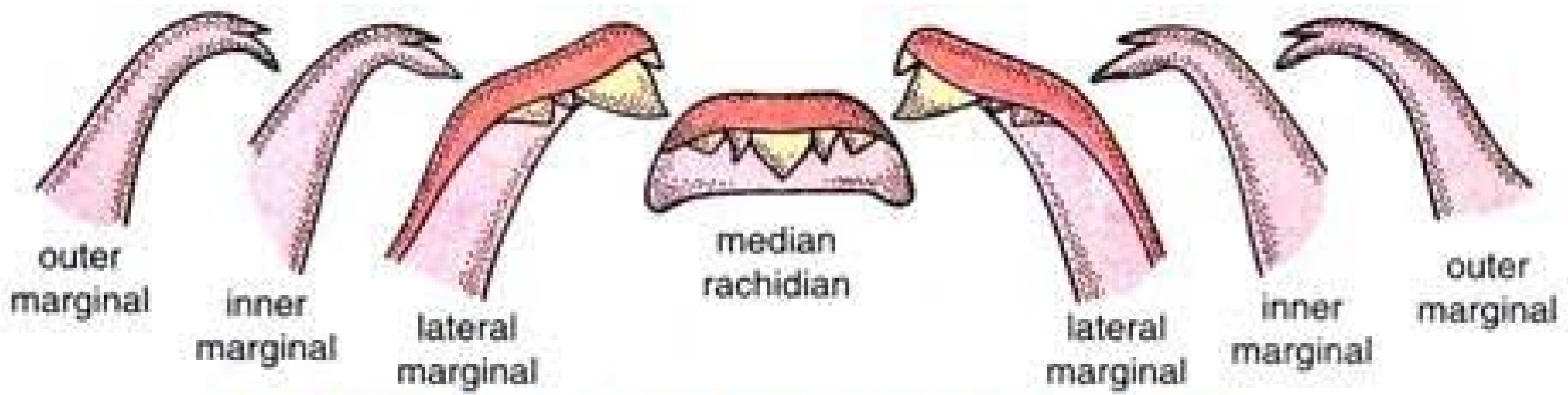


Fig. 68 RADULA PILA.



**Fig. 60.11.** *Pila globosa*. A single row of radular teeth.

