ENTOPROCTA

GENERAL ACCOUNTS & AFFINITIES

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CLASSIFICATION

Kingdom :- Animalia
Superphylum :- Lophotrochozoa
Phylum :- ENTOPROCTA
Families :- 1) Barentsiidae (Urnatellidae)
2) Loxokalypodidae
3) Loxosomutidae

Genus :- Loxosoma & Pedicellium

INTRODUCTION OF ENTOPROCTA

The ENTOPROCTA are solitary or colonial, stalked, sessile psuedocoelomates with a distal circlet of ciliated tentacles, with flame bulb protonephridia, and with a looped digestive tract of which both mouth and anus open inside the tentacular circlet.

- **Distinguishing features**

	ENTOPROCTA	ECTOPROCTA (BRYOZOA)
TENTACLES	Solid	Hollow
FEEDING CURRENT	From bases of tips of tentacles.	From tips to bases of tentacles.
POSITION OF ANUS	Inside – " crown" of tentacles.	Outside – " crown" of tentacles.
COELOM	None	Three parts
SHAPE OF FOUNDER ZOOID IN A COLONY	Same as other zooids.	Round, unlike normal zooids.
METAMORPHOSIS TO ADULT	Retains most larval	Destroys most larval
EXCRETOLRY ORGANS	Protonephridia	None

General characters

- Phylum Ectoprocta are minute, sedenteric and most of the marine animals.
- Solitary or colonial forms.
- Bilaterally symmetrical, acoelomate and un-segmented animals.
- Body of phylum Entoprocta is divided into calyx, stalk & stolon.
- Both mouth & anus open inside the circlet of tentacles, hence called Entoprocta or Endoprocta.
- U – shaped alimentary canal.
- Circulatory and respiratory organs are abesnt.

- Protonephridial excretory organs.
- Entoprolcta are hermaphrodites.
- Spiral, determinete cleavage.
- Development leads to a ciliated planktotrophic trochophore. Ex. Loxosoma, Pedicellina, Myosoma, Urnatella
- Entoprocta are sessile & their body is divided into a rounded or oval mass know as calyx. Contain all the viscera. Cup like body.
- The space between the body wall and the alimentary canal is filled up with parenchyma (acoelomate).

STRUCTURE

- The Entoprocta, are small, almost microscopic animals below 5mm in ength.
- Grown singly or in colonies & attached to object or to other animals.
- Entoprocta are the crown of tentacles, calyx & stalk & the basal attachments of the stalk.
- Calyx is some what flattened laterally, the tentacular crown is oval or ellilptical in outline. Number of tentacles ranges from 8 to 30 in different species. The tentacles are usually of the same length throughout the crown but in some loxosomatids, there are four longer tentacles at the oral end of the crown.

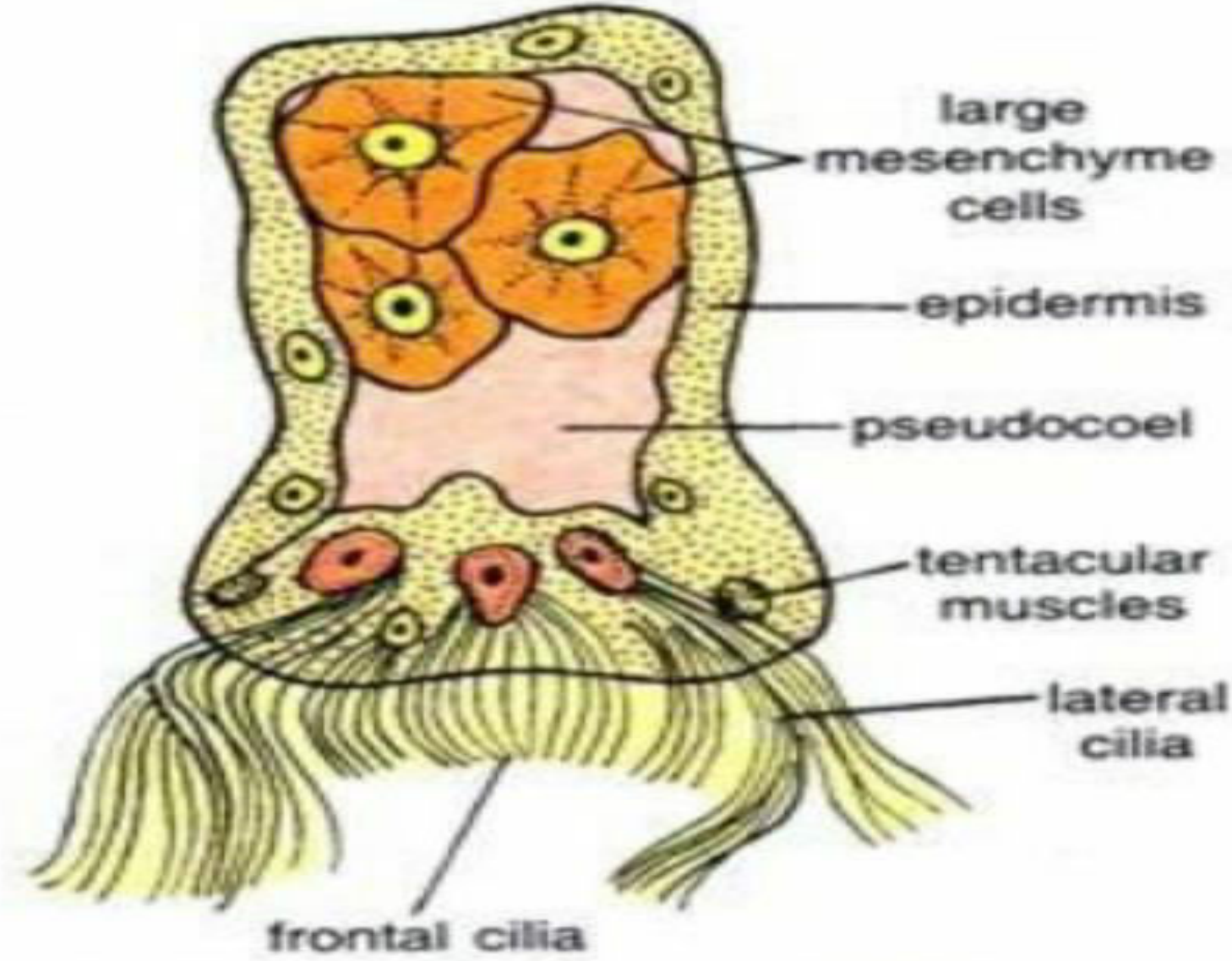

Fig. 52.1. *Pedicellina*. T.S. through tentacle.

- The tentacles are evenly spaced except that there is a wider gap at the oral and anus ends & this confers a bilateral symmetry upon the tentacular crown.
- The concavity between the mouth & anus is called vestibule.
- The outer or dorsal surface of the calyx is usually smooth.
- The stalk is an outgrowth or elongation of the calyx.
- The stalk may be smooth or spiny.

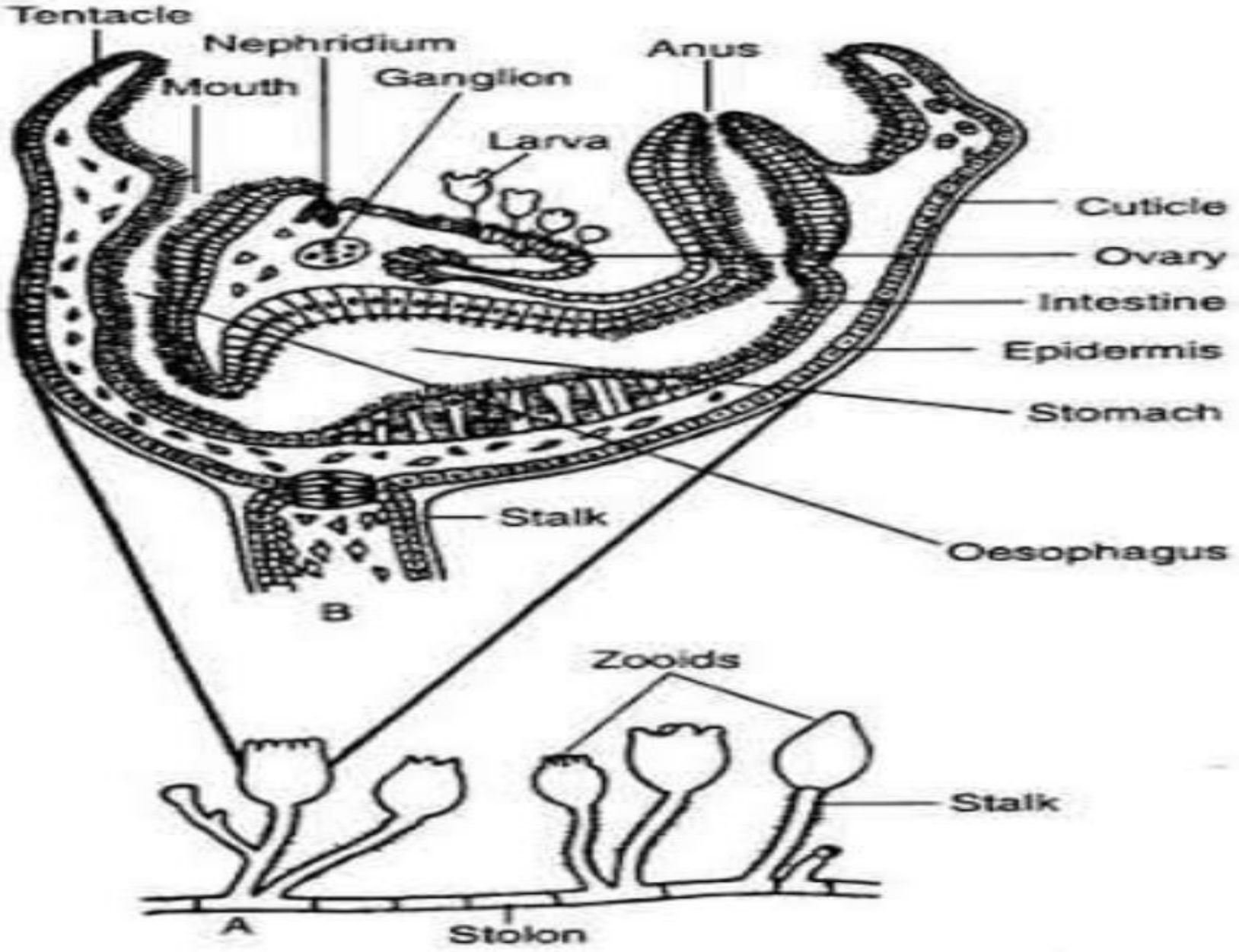

Fig. 14.34: Structures of *Pedicellina*. A. Part of a colony. B. Enlarged sectional view (saggital section) of a calyx.

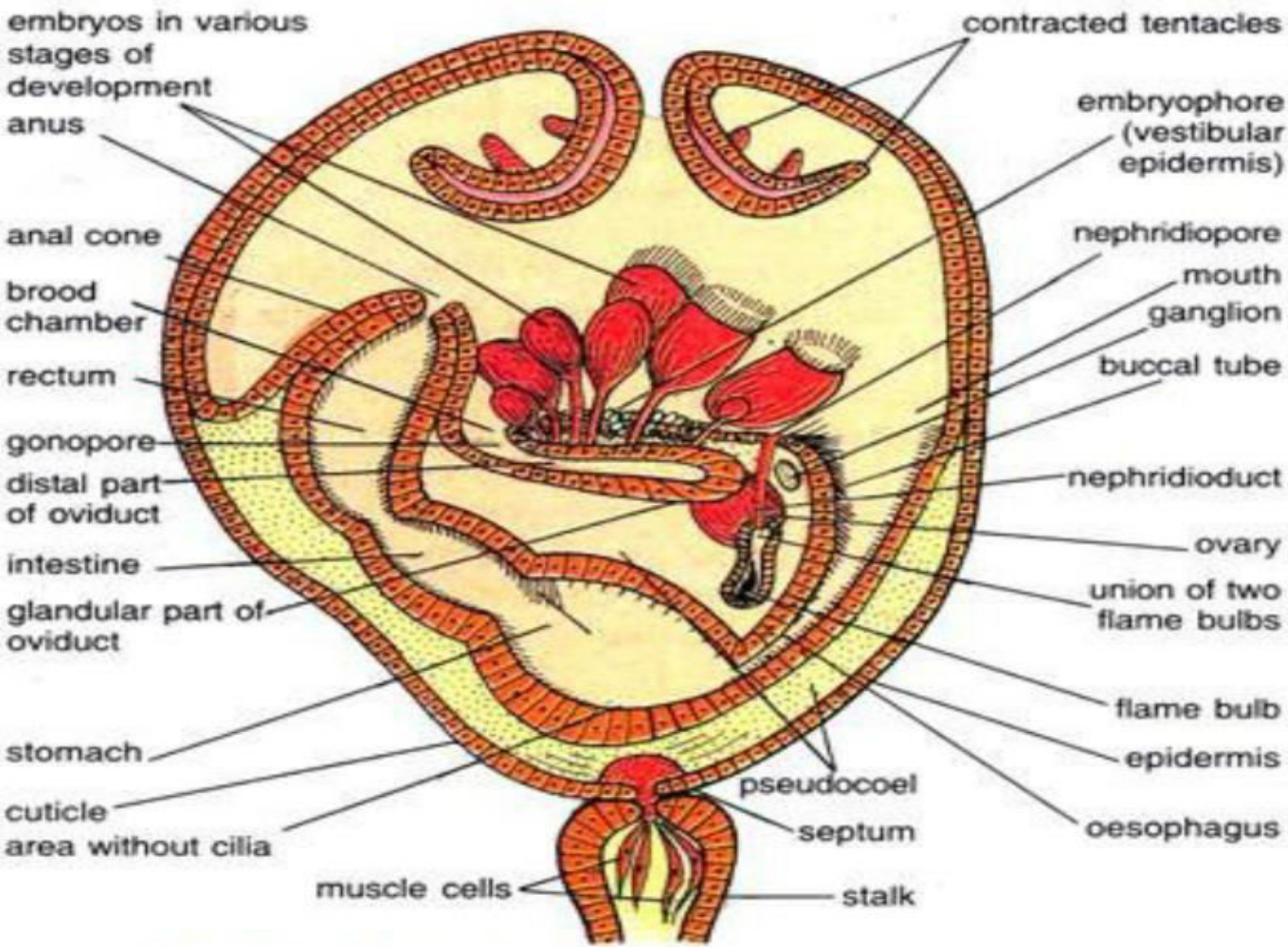

Fig. 52.2. *Pedicellina*. Median sagittal section of calyx.

AFFINITIES OF ENTOPROCTA WITH ECTOPROCTA

SIMILAR FEATURE

- ✓ Presence of a crown of ciliated tentacles.
- ✓ Presence of U- shaped alimentary canal.
- ✓ The larva of Entoprocta superficially resembles the cyphonauta larva of Ectoprocta.

DISSIMILARITES

- ✓ Entoprocta are acoelomates but Ectoprocts are coelomate animal.
- ✓ In Entoprocts the anus and mouth are situated within the circlet of tentacles but in Entoprocta anus remains at the outside of circlet of tentacles and the mouth is only located within the crown of ciliated tentacles.
- ✓ The protonepheridia the gonoducts are present in Entoprocts but both are absent in Ectoprocts
- ✓ The Entoprocta are thus of a much lower grade of structure than are the ectoprocta and cannot be united with them in the some phylum.

➢ AFFINITIES OF ENTOOPROCTA WITH ROTIFERA

- Both are a trumpet shaped body with the free surface bordered by ciliated or bristle bearing projection that are simple extensions of the body wall.
- The stalk in both is a post embryonic outgrowth provides with pedal glands at least temporarily.
- In both the mouth lies within the crown of tentaculate projections and in both the digestive tract makes a decided curve.

- A pair of eyes is present in both loxosomatid & collothecacean young ones.
- The pair of preoral organ of the entoprocta larva and the loxasomatid adults is homologus with the lateral antennae of rotifera.
- In the laxosomatid adults they are situated towards the free and of the calyx.

A Very Special

"Thank You!"