

Palaemonid Prawn

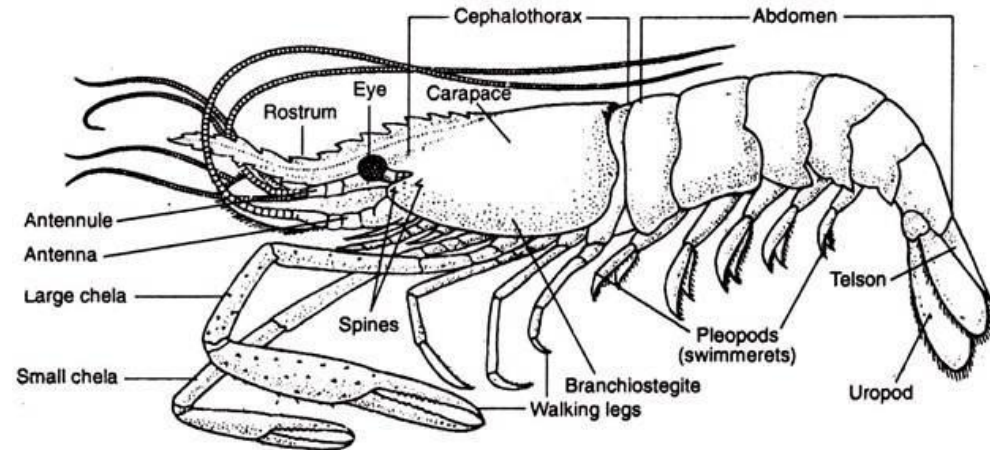


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Palaemonid Prawn

Representative Species: *Marcobrachium*

Phylum: Arthropoda
Subphylum: Mandibulata
Class: Crustacea
Subclass: Malacostraca
Order: Decapoda
Suborder: Pleocyemata
Infraorder: Caridea
Superfamily: Palaemonoidea
Family: Palaemonidae
Genus: *Marcobrachium*

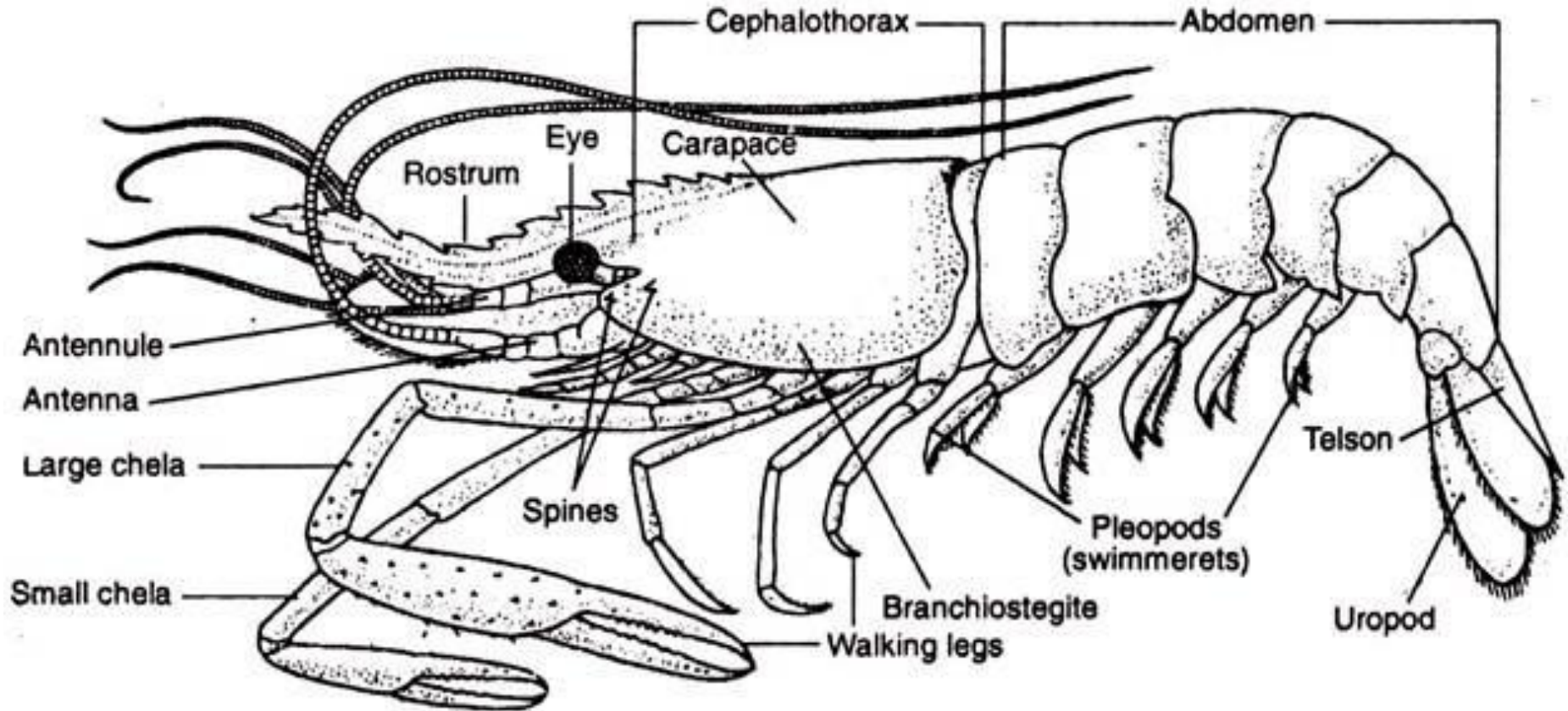


Habit & Habitat



- *Macrobrachium* inhabits freshwater streams, rivers, lakes and ponds.
- **Nocturnal**
- **Omnivorous**
- **Walks slowly at the bottom with the help of walking legs**
- **Swim actively on surface with the help of swimmerets**

External Morphology of Palaemonid Prawn



External Morphology of *Macrobrachium*

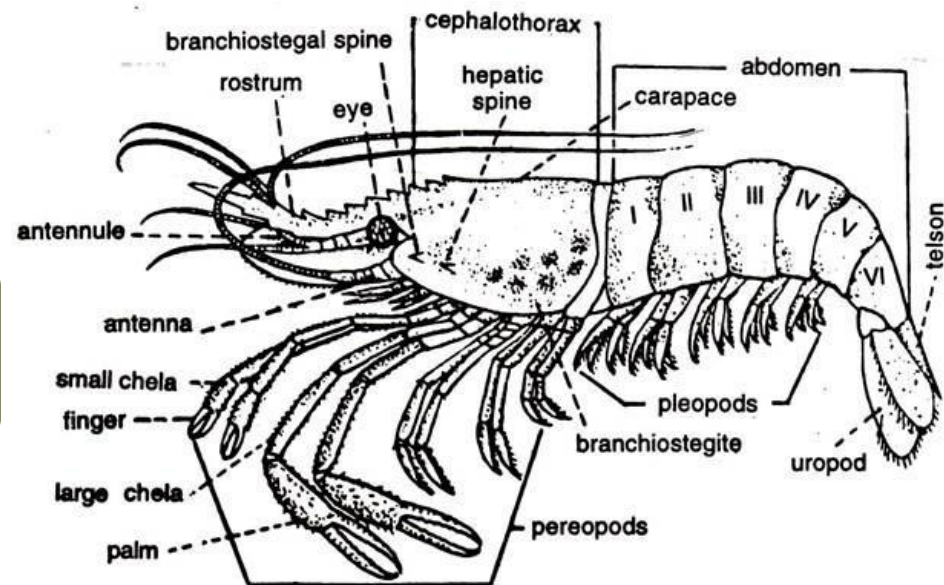
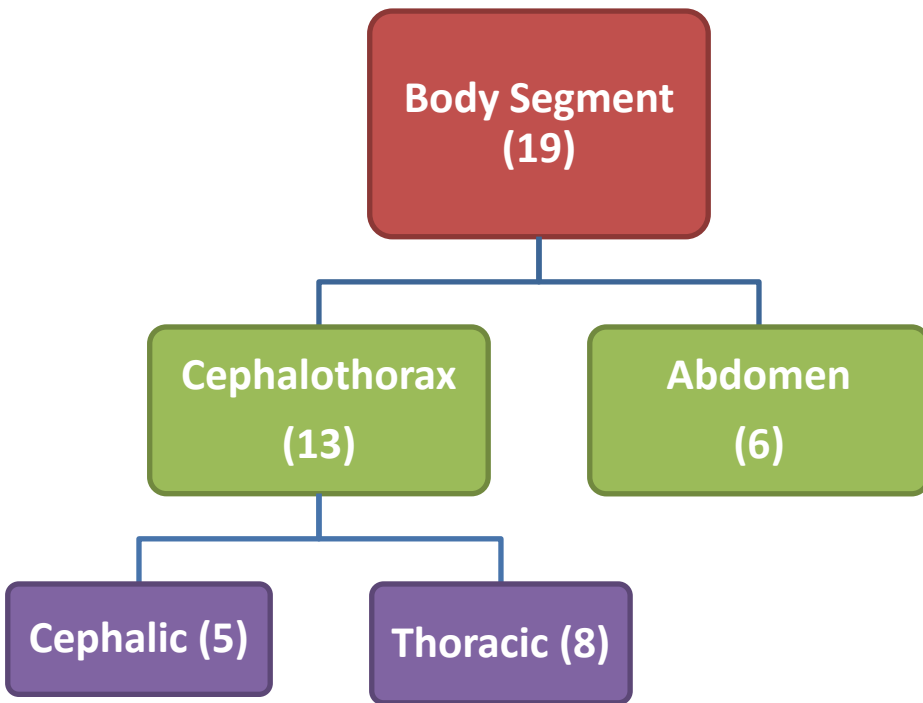
Shape & Size: Body elongated, more or less spindle shapes and bilaterally symmetrical. Size vary from species to species (**90 cm to 2.5 cm**)

Colouration: Young specimens are transparent, pale yellow or perfectly white in appearance but older specimens are differently tinted according to the species. The colour is generally pale blue or greenish with brown or orange red patches and bands of different patterns.



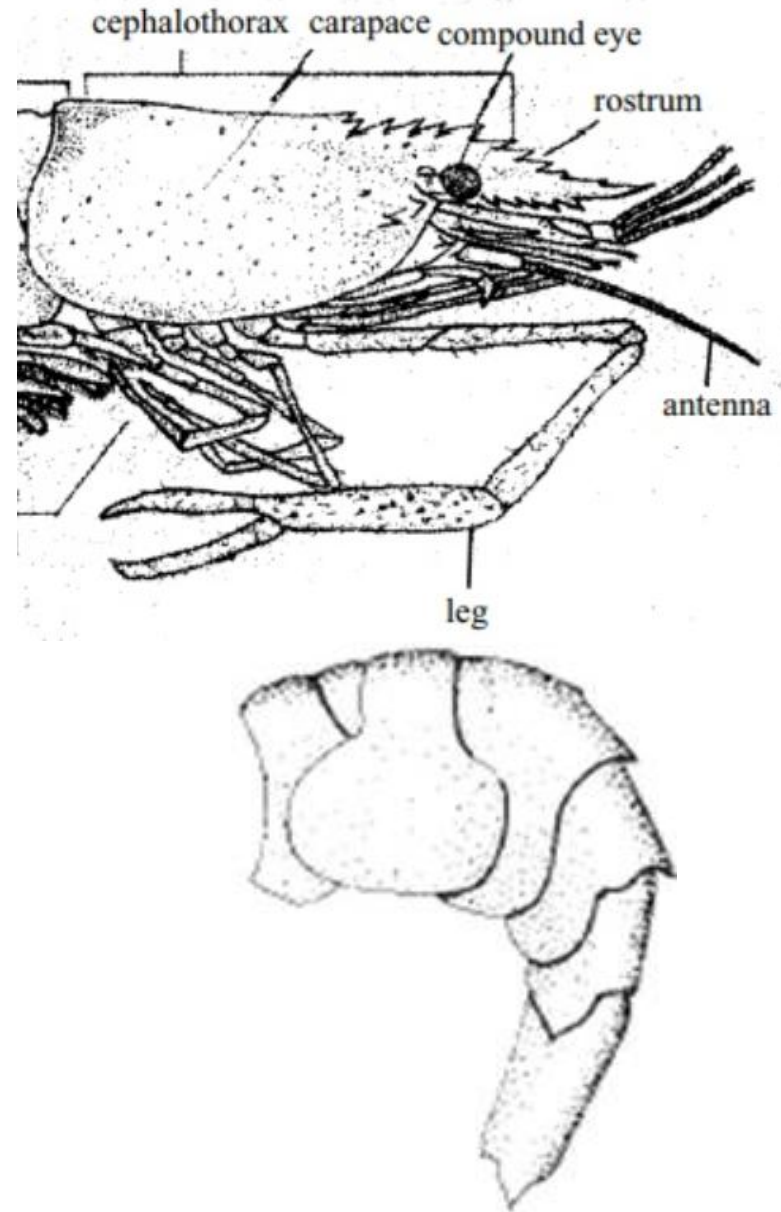
Division of Body

- Body of adult *Macrobrachium* is consist of **19 segments** having two distinct regions.



Division of Body

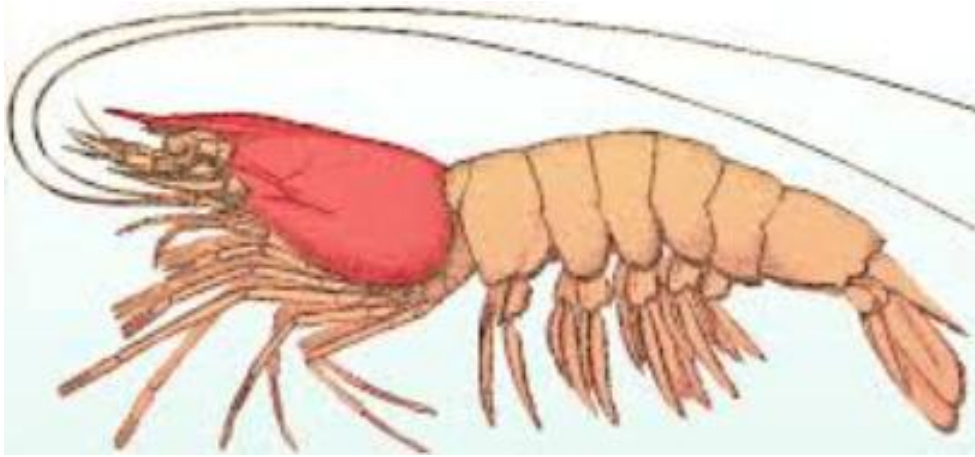
- **Cephalothorax:** Cylindrical in shape and unjointed (no external segmentation is marked). It is formed by union of head (5 segments) and thorax (8 segment).
- **Abdomen:** rounded dorsally but compressed laterally and jointed. External segmentation is clearly marked and composed of 6 segment having a terminal conical piece, telson.



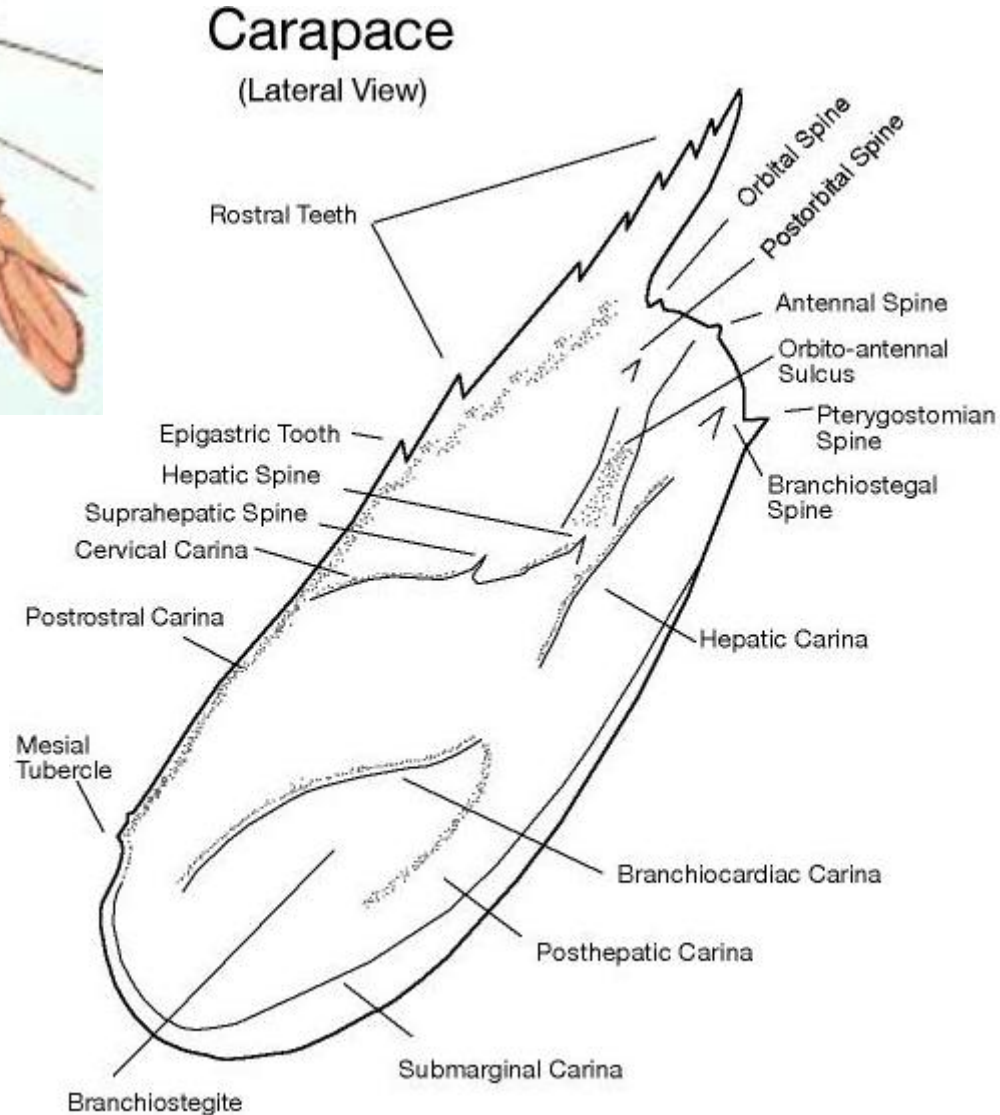
Exoskeleton

- The entire body and the appendages are covered by a **hard and chitinous cuticle** which forms exoskeleton.
- The exoskeleton is hardened by **deposits of salts of lime**
- The hard pieces of exoskeleton are called **sclerites** which are jointed by softer cuticle forming **arthrodial membrane**.

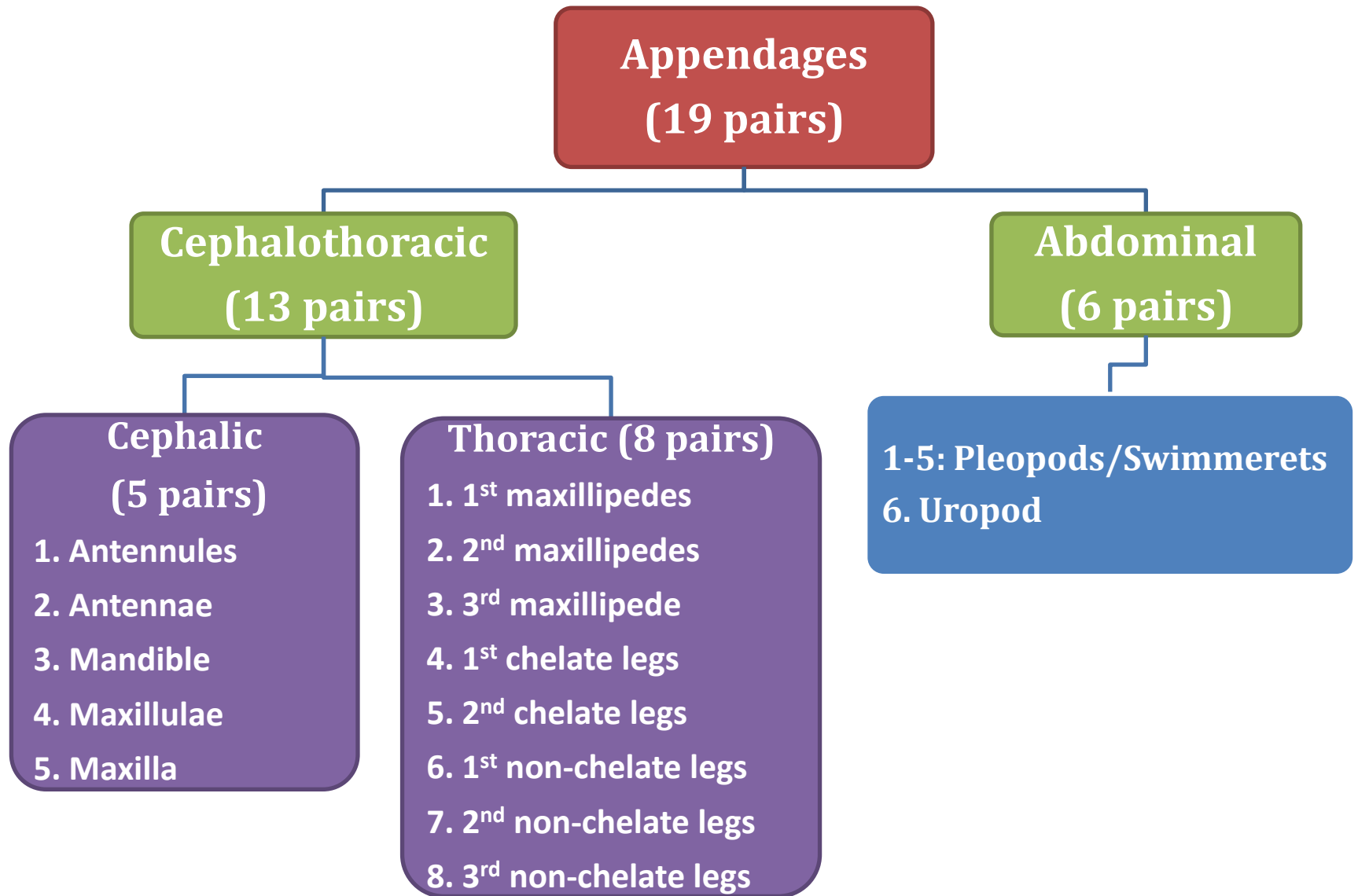
Exoskeleton



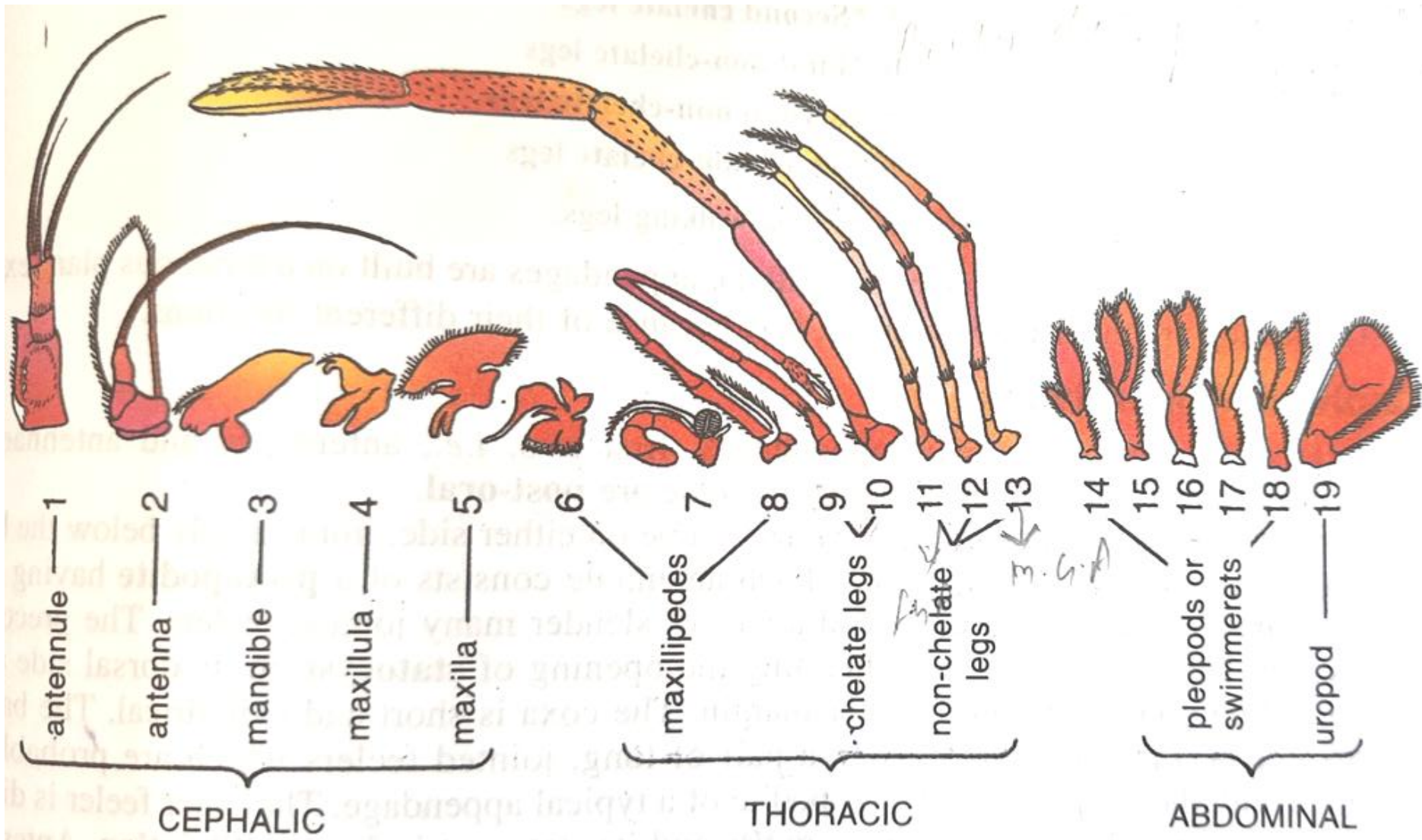
- **Dorsal shield (Dorsal plate + carapace)**
- **Rostrum (laterally compressed and serrated)**
- **Branchiostegite**



Appendages

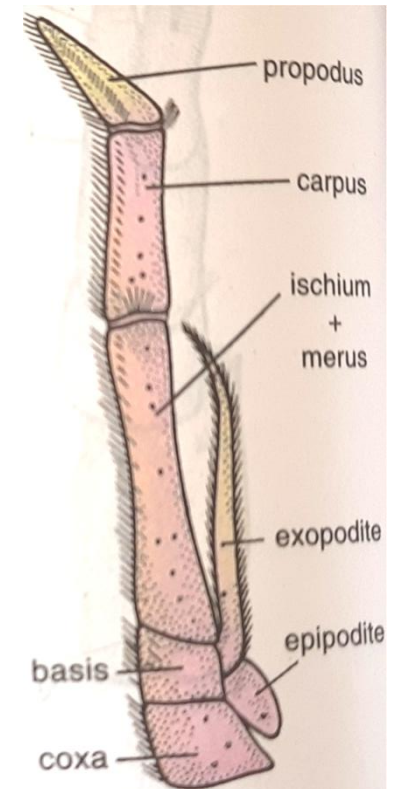
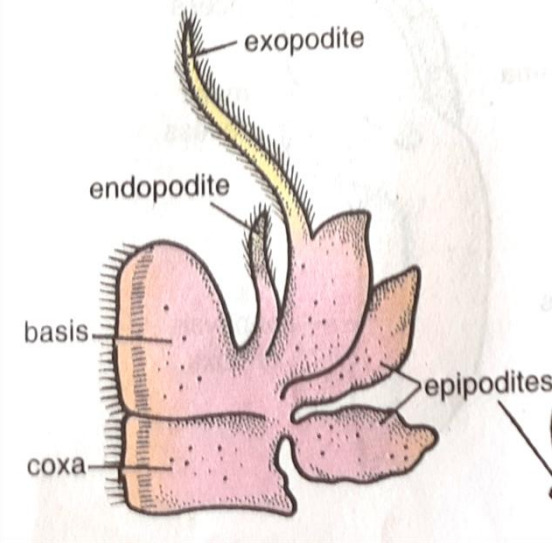


Appendages (19 Pairs)



Appendages

- From the ventrolateral margin of each segment arises a pair of appendages.
- All the appendages are biramous (bi=two, ramus=branch), except the first pair which are uniramous.
- Each appendage has a basal stalk or (protopodite) made up of two joints (podomers) namely coxa (lower) and basis (upper).
- From protopodite arise two rami, an inner endopodite and an outer exopodite each of which may be composed of one to several podomers



Cephalic Appendages (5 pairs)

- **Pre-oral:** Antennule & antennae
- **Post-oral:** Mandible, Maxillulae & Maxillae

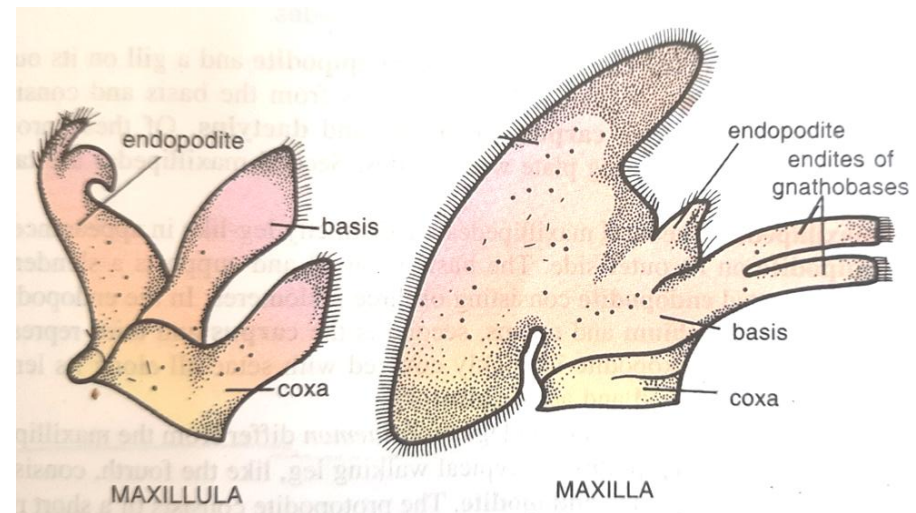
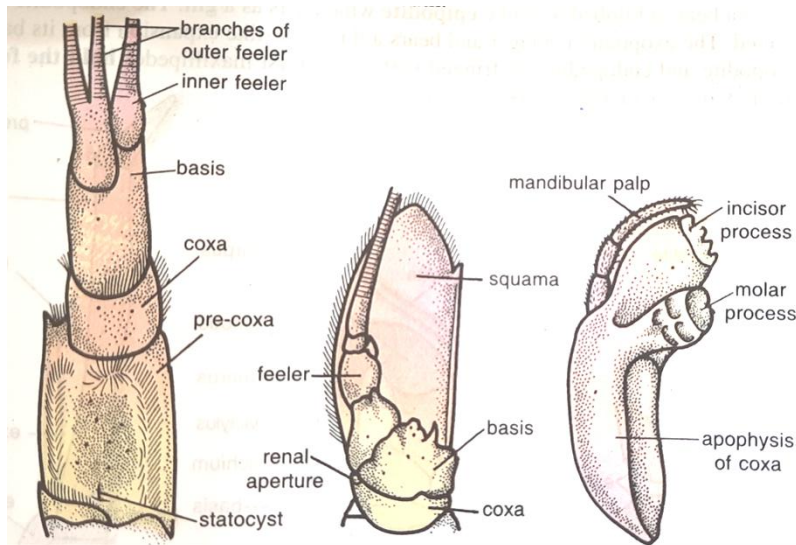
1. Antennules

2. Antennae

3. Mandible

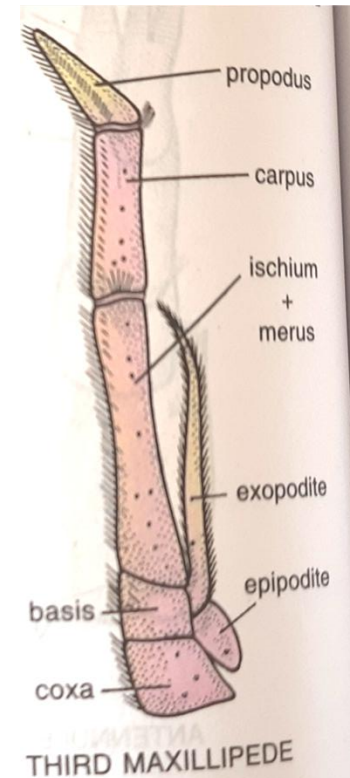
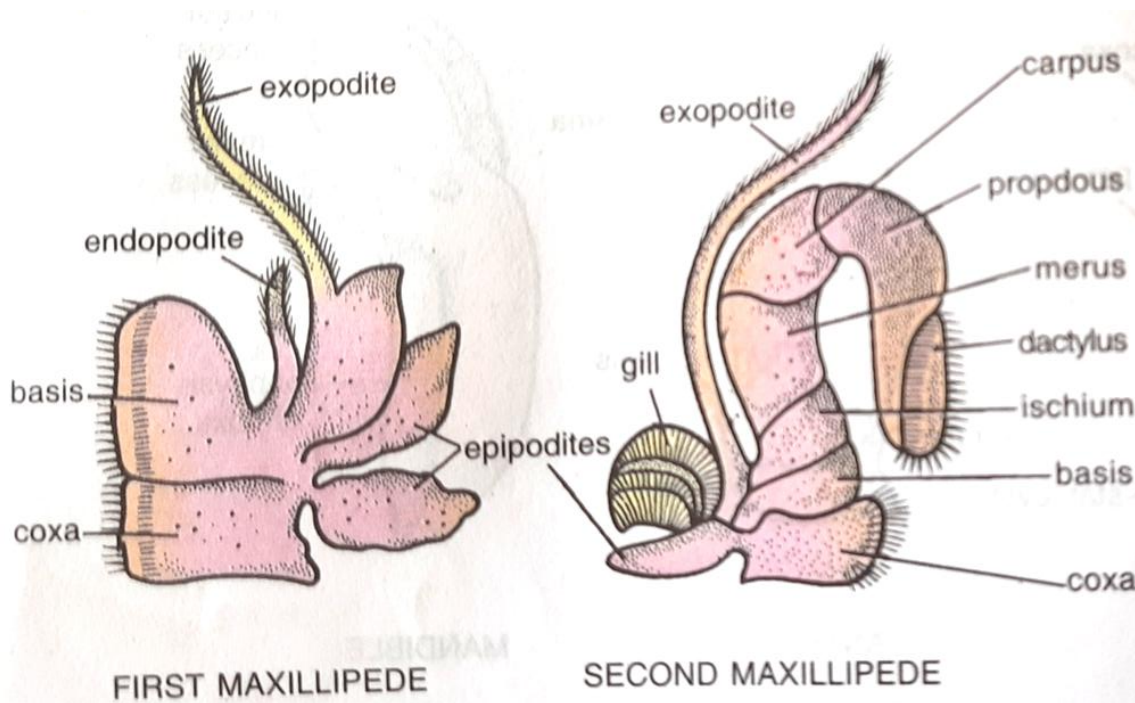
4. Maxillulae

5. Maxilla



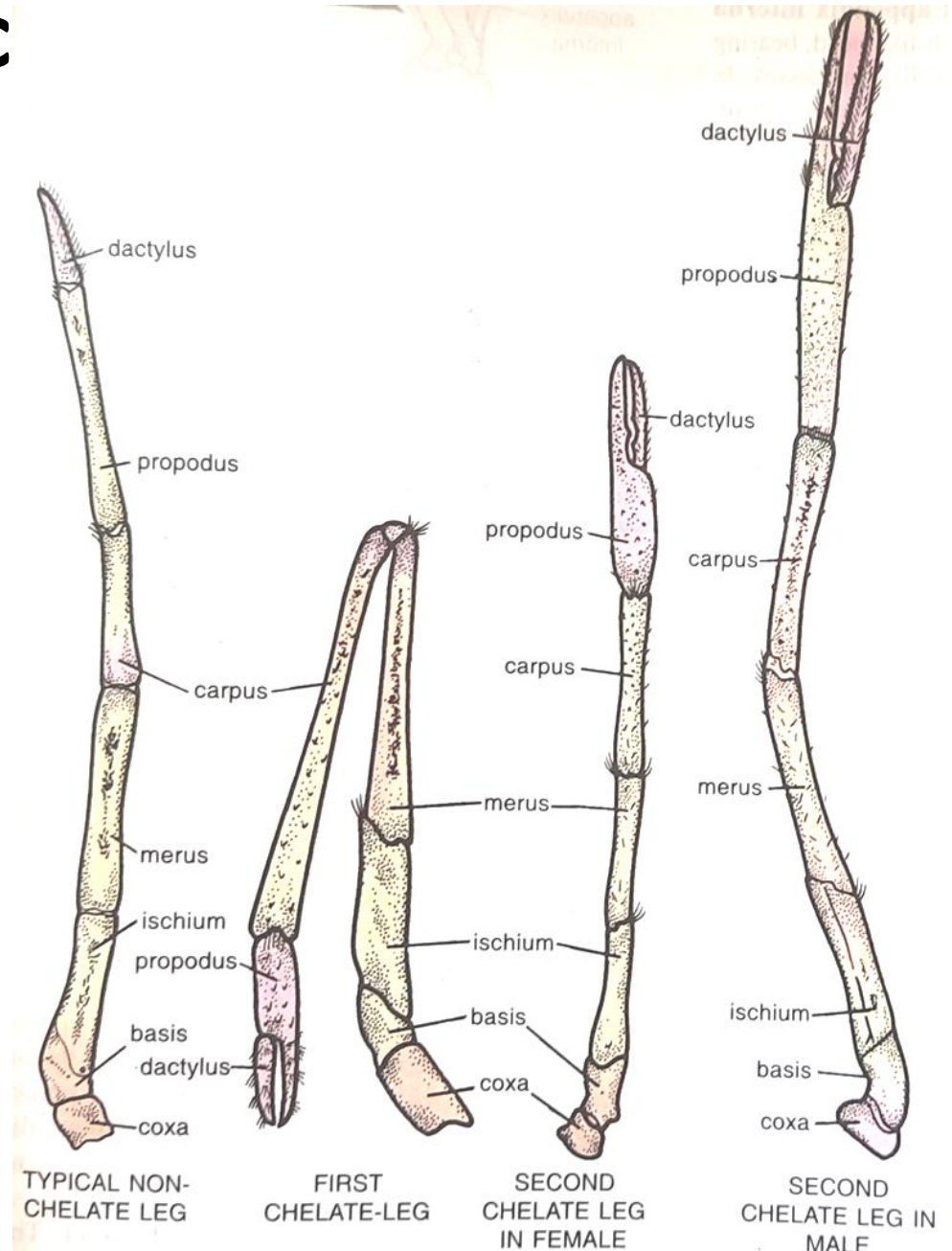
Thoracic Appendages (8 pairs)

- Anterior 3 pairs: Maxillipedes (foot jaws)
- Posterior 5 pairs: Walking Legs (Pareopods)



Posterior Thoracic Appendages

- Posterior 5 pairs: Walking Legs (Pareopods)



Abdominal Appendages (6 pairs)

- Six pair known as pleopods or swimmerets
- Simple & typical biramus type

