

# TYPES OF MOUTH PARTS OF INSECTS



# 1. Chewing Mouth Parts

- Represent the simplest type of mouth parts
- Occure in silverfish, grasshopper, cockroaches, beetle dragonflies, bird lice and caterpillars
- Biting off, chewing and swallowing small bits from plant and animal tissues.
- Labrum,mandibles,First maxillae, Second maxillae, Hypopharynx



# Labrum

- Broad somewhat rectangular, vertical plate
- It forms anterior wall of the preoral cavity
- Called upper lip

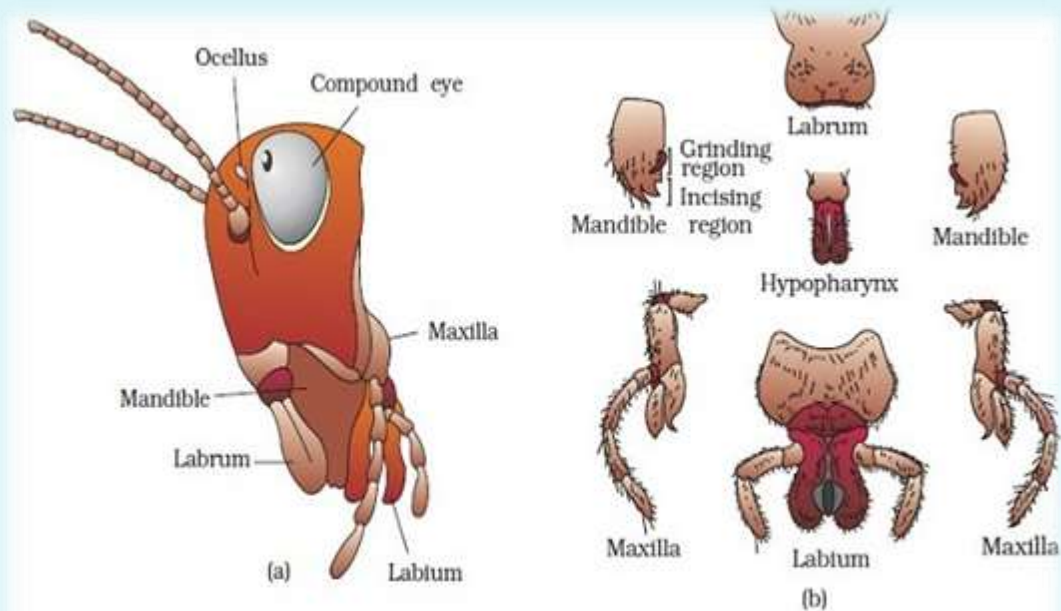


Figure 15. Head region of cockroach : (a) parts of head region (b) mouth parts

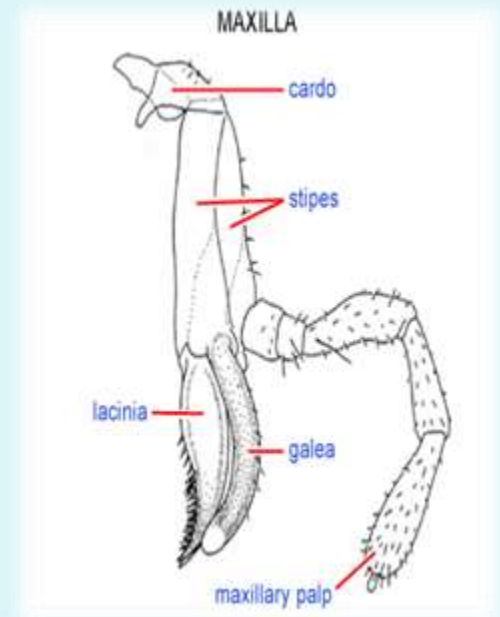
# Mandibles

- Heavily sclerotized triangular st.lying just behind the labrum on the side of preoral cavity.
- They bear strong pointed teeth
- Work horizontally to cut and chew the food



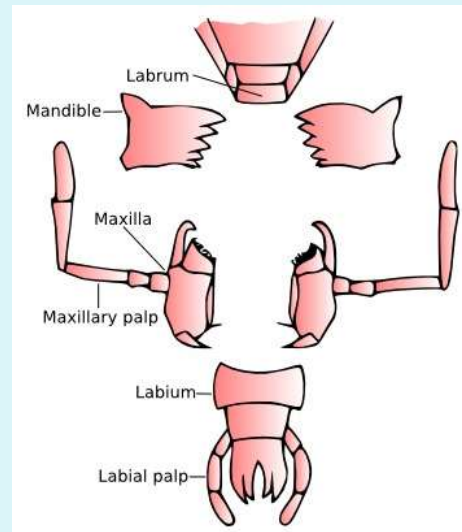
# First Maxillae

- Lie behind the mandibles also on side of the preoral cavity.
- Consist of (i) a basal protopodite of two segment
  1. cardo
  2. Stipes(ii) An inner endopodite also two segment
  - 1.lacinia(jaw like)
  - 2.Galea (hood like)



# Second Maxillae

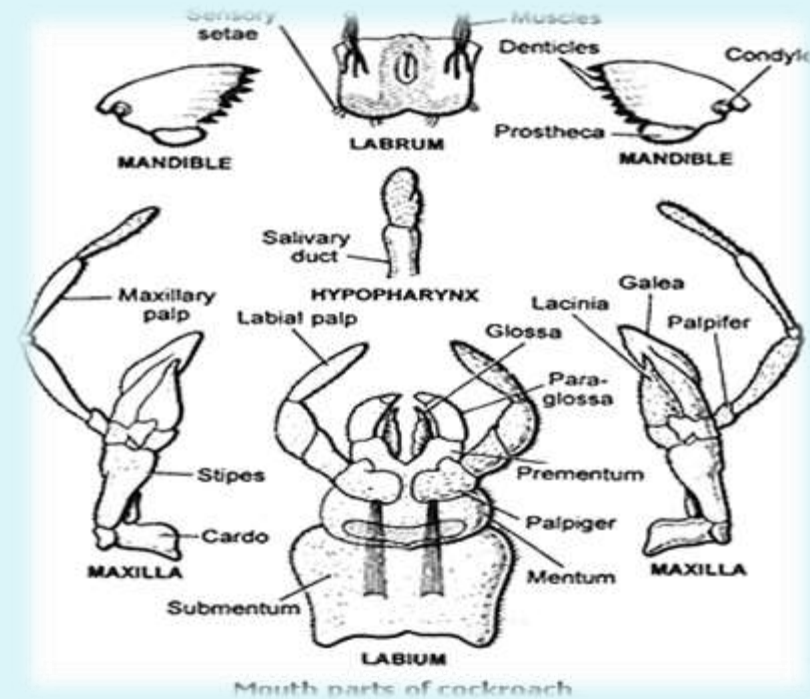
- Lie behind the 1st maxillae, form hind wall of the preoral cavity.
- Called lower lip.
- Divided into postmentum and prementum





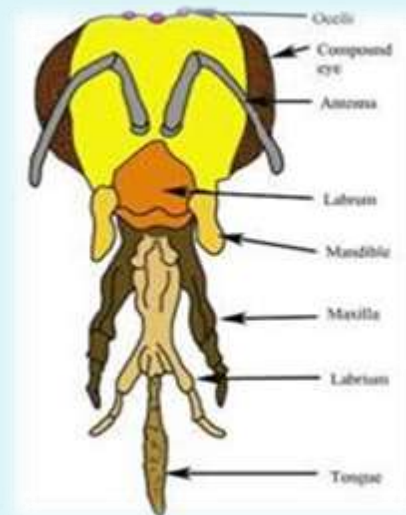
# Hypopharynx

- Short, median, tongue like chitinous st. located just in front of the labium and b/w the 1st maxillae.
- Comprises two lobes called superlinguae .
- Salivary duct opens at its base.



## 2.Chewing –lapping Mouth Part

- Occure in worker bees.
- Used for collecting nectar and moulding wax.
- Labrum and mandibles are chewing type,maxillae and labium are modified for collecting nectar.
- Mandibles are smooth,these mould the wax to build cells of hive.





# 3. Piercing-Sucking Mouth Parts

- Occur in bug, aphids, scale insects, mosquitoes, fleas, some flies.
- Pierce into the plant or animal tissue, suck sap or blood from it.
- Sub types (i) Dipterous mouth parts  
(ii) Hemipterous mouth parts



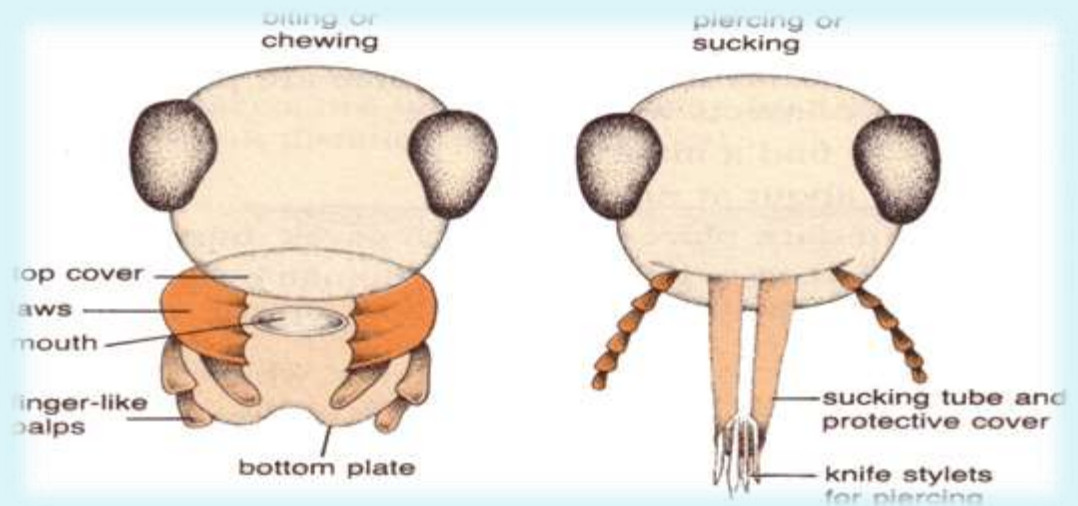
# Dipterous Mouth Parts

- Found in mosquitoes.
- Form long ,pointed stylets for piercing the host skin.
- Hypopharynx encloses the salivary duct.
- Maxillary palps are shot and 3 -jointed.



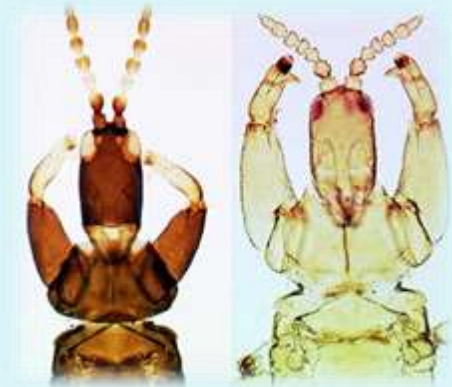
# Hemipterous Mouth Parts

- Found in bugs.
- Mandibles and maxillae form 4 long, needle like piercing stylets.
- Hypopharynx is short lobe .
- Maxillary and labial palps are absent.



# 4. Rasping-sucking Mouth Parts

- Intermediate in st. b/w chewing type and piercing-Sucking type.
- Found in thrips.
- Form stylets
- Do not form regular food channels by coming together.



# 5. Sponging/lapping Mouth parts

- Occur in housefly, blow flies, fruit flies.
- Absorbing fluid food, solid food is first liquified by salivary secretion.
- Mandibles are absent, maxillae reduced.
- 3 parts:- i) rostum  
ii) haustellum  
iii) sucker





# 6. Siphoning Mouth Parts

- Occur in butterflies and moth .
- Drawing up fluid nectar from flower.
- Labrum is reduced , represented by narrow , transverse band.







*THANKS*