

## 2-Mouth parts of insects

Mouthpart of an insect consists of the following parts.

1- Labrum (upper lip) 2- A pair of mandibles 3- A pair of maxillae 4-Labium (lower lip) 5- Hypopharynx (tongue)

### TYPES INSECT MOUTH PARTS.

#### 1- Chewing & Biting Type:

##### A-Labrum:-

It is small sclerite that forms the upper lip of the mouth cavity.

##### B- mandibles :-

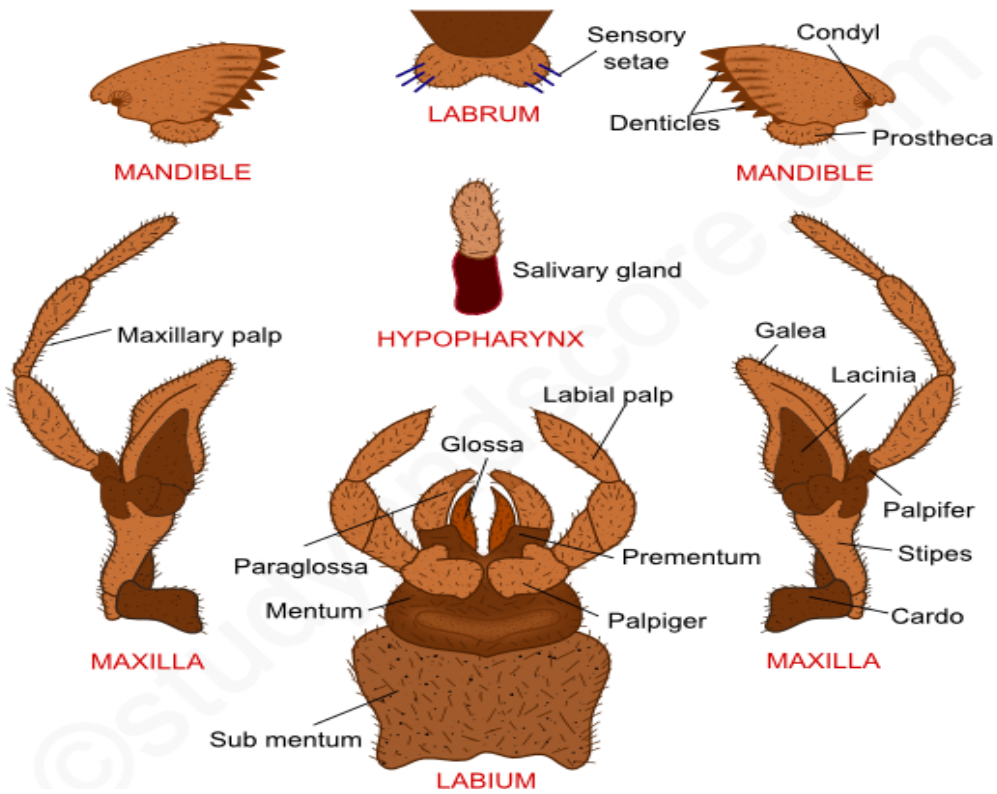
one pair it have different shape and size

##### C-maxillae:- composed of 5 parts

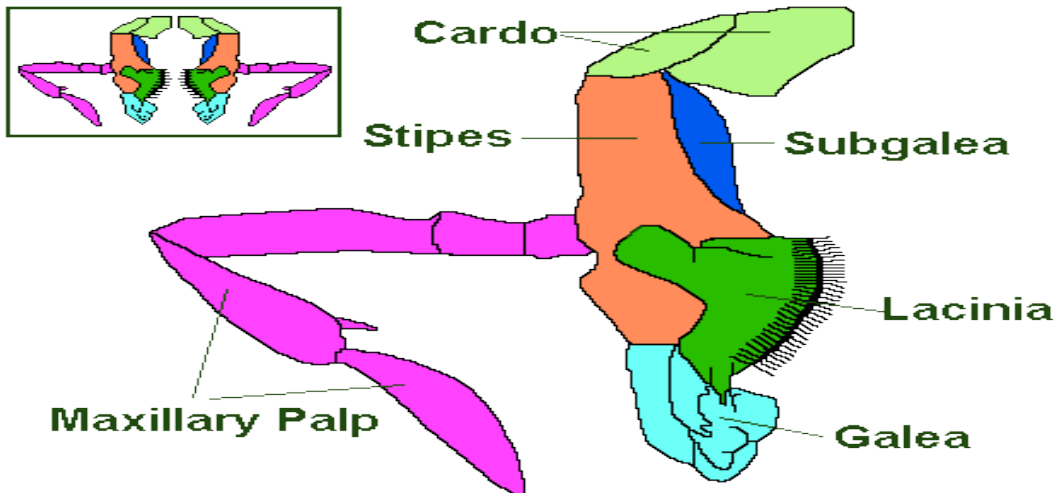
1-Cardo 2-stipes 3-galea 4- lacinia 5- maxillary palp

##### D-Labium:-composed of 5 parts

1-mentum 2-submentum 3-glossa 4- para glossa 5-labial palp



## The Insect Maxillae (one side only)



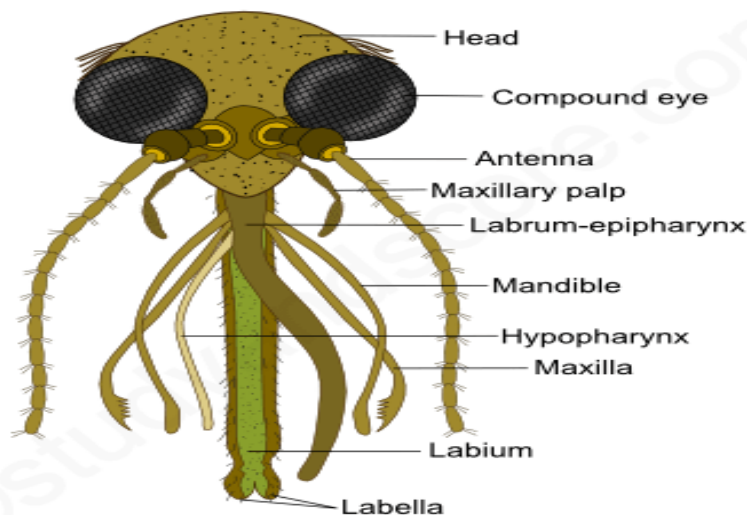
## 2-piercing-sucking:-

The labium is elongated and acts as a sheath. This encloses the mandibles and maxillae which are modified in to sharp needle like stylets for piercing. The maxillae have two tubes running along their length on the inside surface. 'Saliva' may be pumped down one of the tubes. This saliva makes the food into a liquid. The liquified food is sucked up the other tube.

The mandibular stylets form the outer pair and possess serrated margins at their tip.

The maxillary stylelets forms the inner pair having smooth curved tips and combine together enclosing a **food channel**.

ex:- hemiptera



MOUTHPARTS OF MOSQUITO - PIERCING & CHEWING TYPE



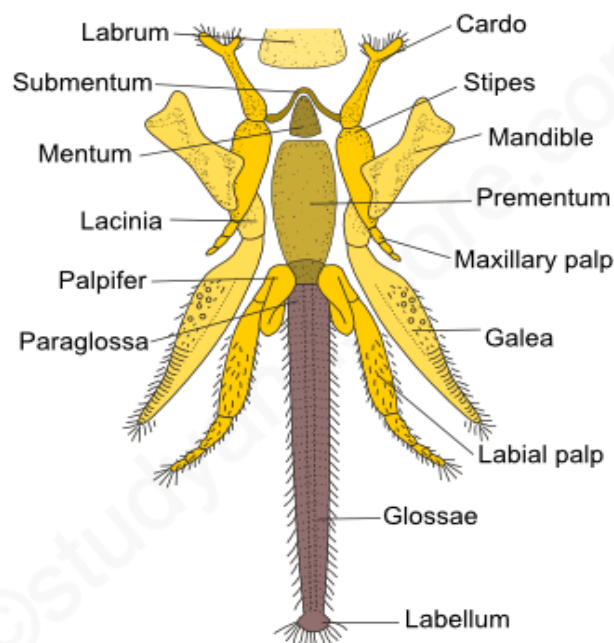
### 3-Chewing and lapping type:

Ex:- honey bee this insect feeding on different types of food solid (pollen) and liquid (flower juice) so this type of mouth parts have 2 processes chewing the pollen (solid material) and lapping the liquid (flower juice)

Mandibles used for chewing and mixing the food with salivary gland secretions

Labrum used for pushing the pollen to the mouth part

Maxilla used for lapping the flower juice labium used for sucking the liquid which is ended with flabellum is spongy part used for sucking the liquid



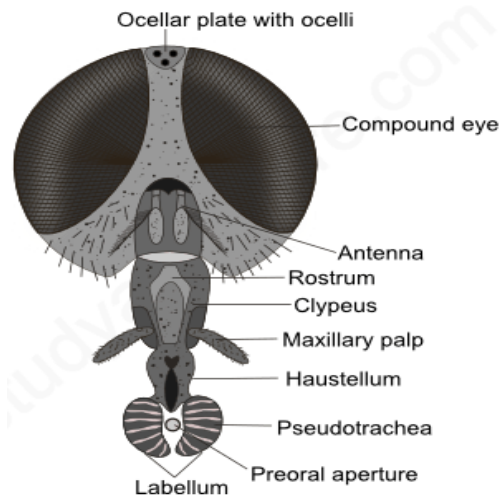
MOUTHPARTS OF HONEY BEE - CHEWING & LAPPING TYPE  
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## 1-Sponging type:

The sponging mouthparts are found in the housefly and some other flies to suck up the liquefied food. These flies lack the cutting weapons of the insects that chew the food. The mandibles are absent, while the maxillae are represented only by two maxillary palps, each made of a single piece. These mouthparts are represented by **proboscis** formed from the **labium**.

The proboscis is divided into a basal **rostrum**, middle **haustellum** and a distal **labellum**.

The labellum is a sponge like structure. It is traversed by a number of narrow transverse channels called **pseudotrachea**



## 5-Siphoning type:

Butterflies and moths are adapted for feeding on nectar like the bees, but in their mouthparts the maxillae form the main proboscis and not the labium. The mandibles and labium are much reduced. The labium forms a triangular plate forming a labial palps. The galeae are much elongated and coiled. When not in use the proboscis is coiled into position beneath the head and when the insect wants to feed, it becomes uncoiled to reach the nectary.

