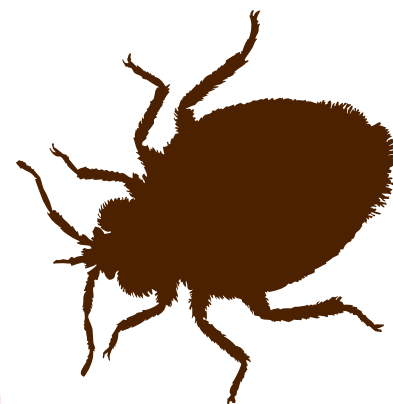


Invasion of the Bloodsuckers

Bedbugs and Beyond!

Mr. Insect Head Mouthparts Mask



Mr. Insect Head is a grasshopper head, used to demonstrate the primitive or prototype insect from which other bloodsucking arthropods evolved. Entomologists are not sure what this ancestor looked like, but most agree that it was probably similar to the modern-day grasshopper.

Watch the *Evolution of Blood-feeding Mouthparts* animation to see how primitive chewing mouthparts developed over millions of years into blood-feeding tools for the bedbug, flea and mosquito.

Instructions: Cut out the individual mouthparts and label them using the list below. Add description and definition on the back. Tape them onto the grasshopper head to make your own Mr. Insect Head Mouthparts Mask.

Insect Mouthparts

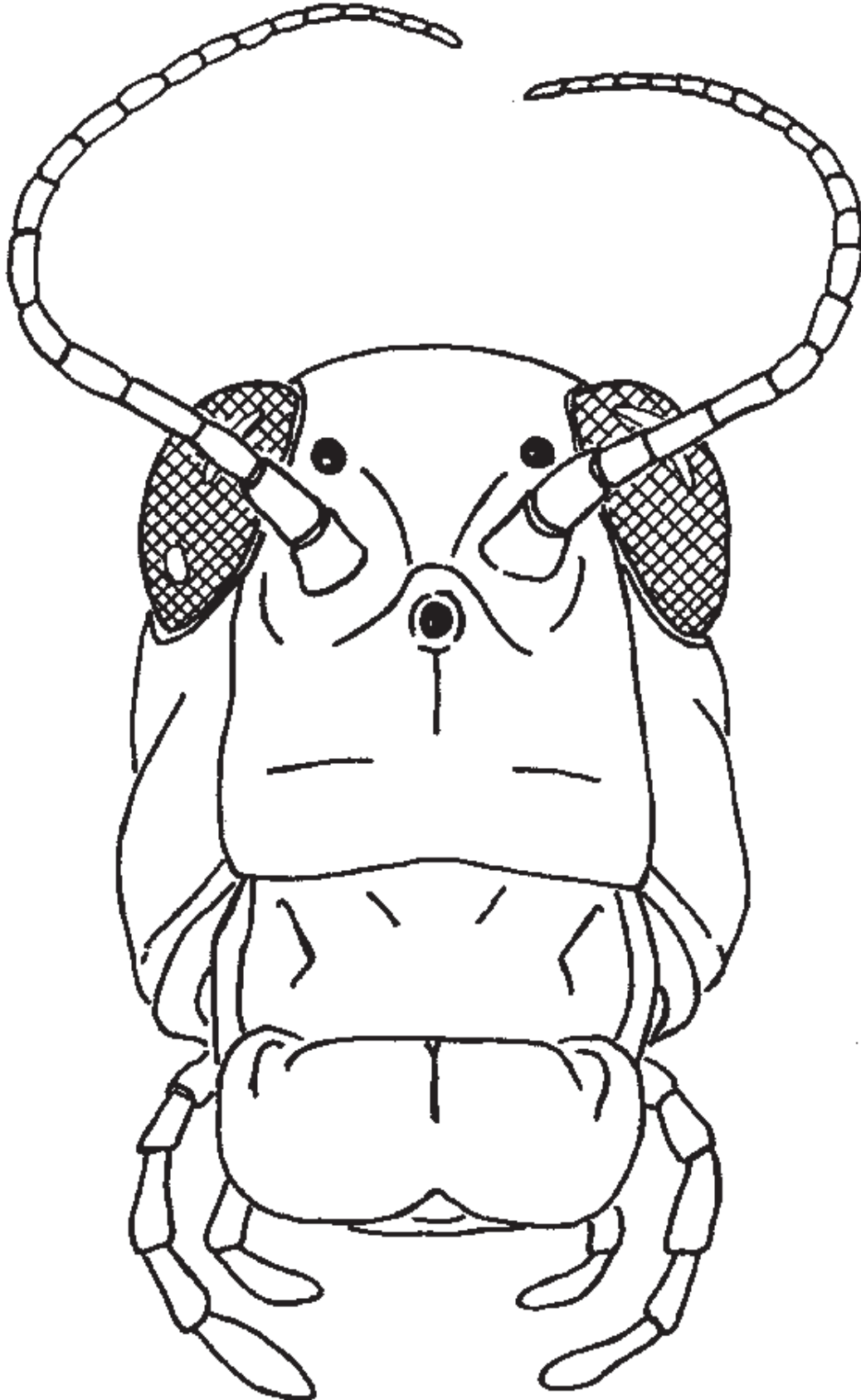
	Location	Mechanism	Function
Clypeus	Shield-shaped plate of face; connects above labium	Immovable	Protection
Labrum (upper lip)	Flap over mouth together with labium	Flexible – works while insect is eating	Holds food in place
Mandibles (lower jaws)	Paired on sides of head near mouth	Moves sideways to cut, tear or bite food	Mastication (chewing, biting, grinding food)
Maxillae with Maxillary Palps (upper jaws)	Paired on sides of head below mandible	Teeth on inner margin push food down throat	Detection of food by palps; swallowing
Hypopharynx (tongue)	Rises from base of labium	Saliva from salivary glands flows through	Digestion and swallowing
Labium (lower lip)	Floor of mouth together with labrum	Flexible – works during mastication	Manipulation of food



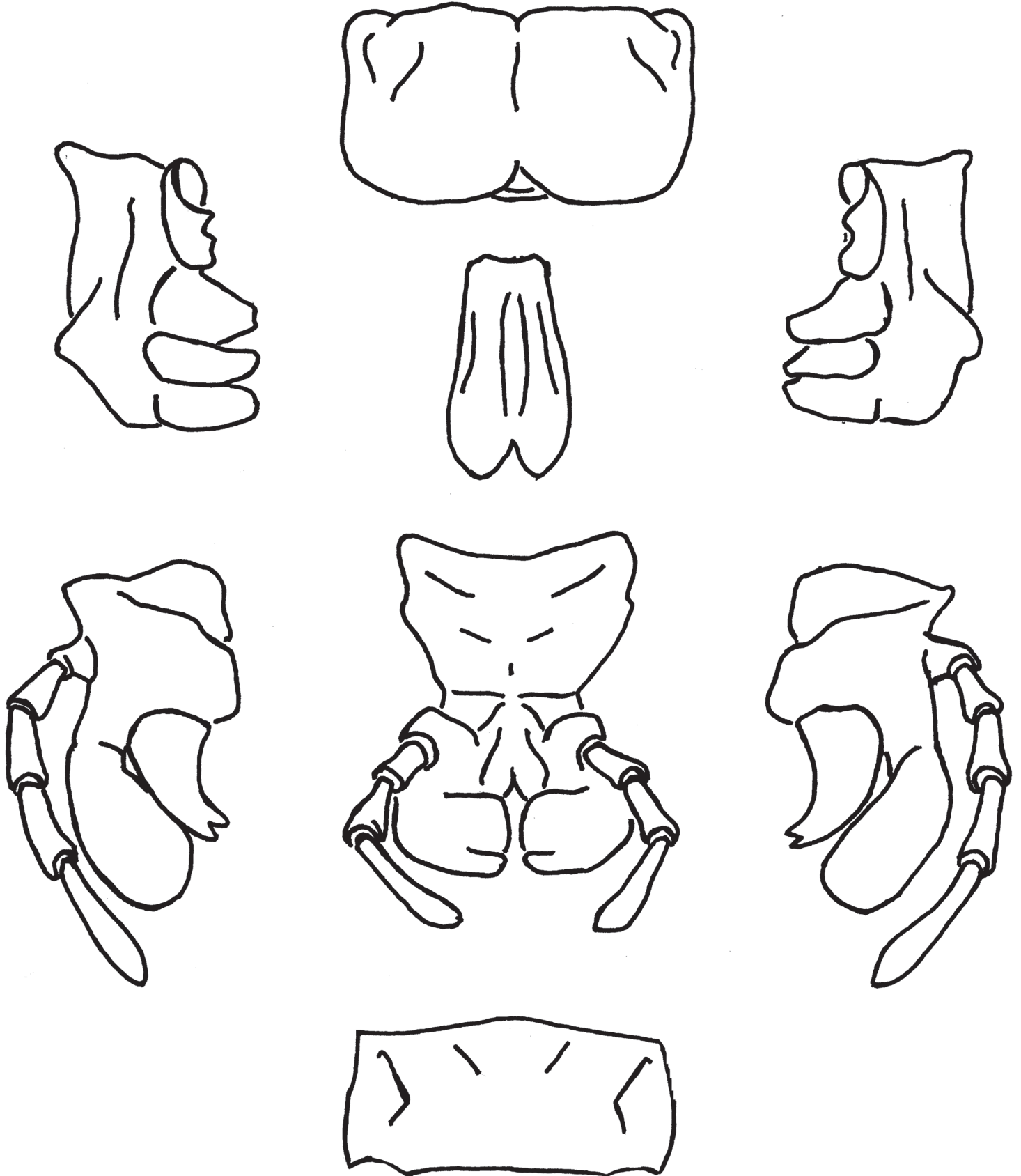
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Bloodsuckers**

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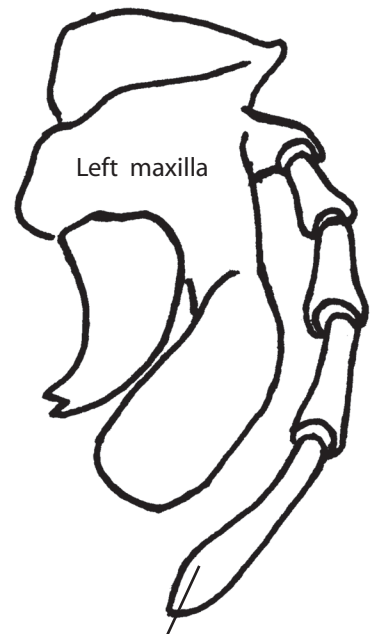
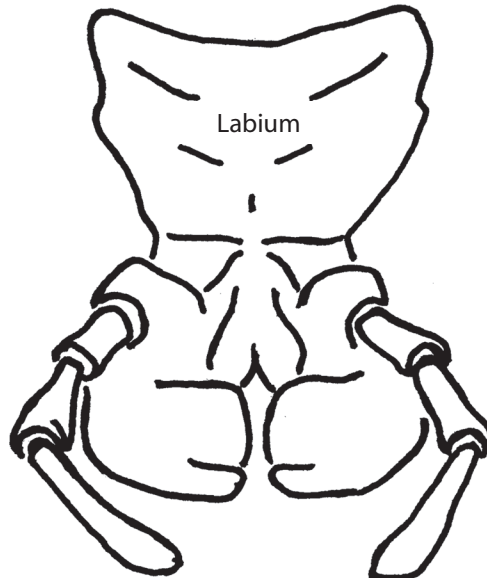
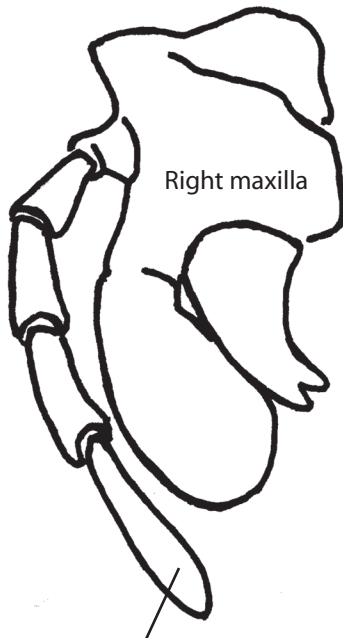
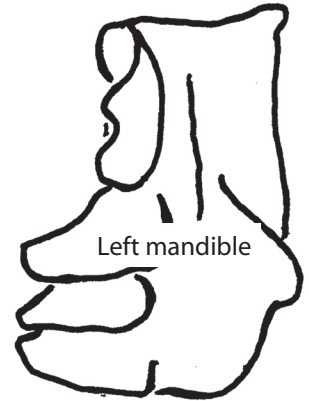
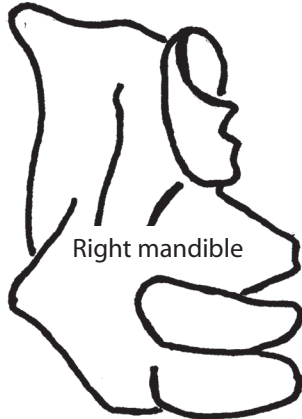
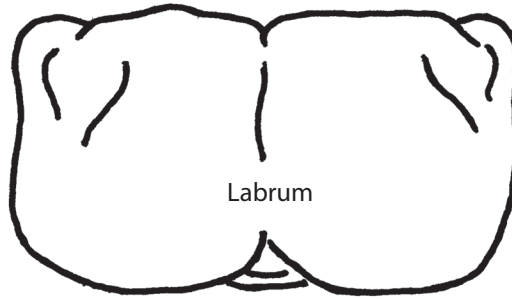
Mr. Insect Head



Mr. Insect Head



Mr. Insect Head Mouthparts — ANSWER KEY



Maxillary Palp

Maxillary Palp

