

CMG GardenNotes #317

Homework: Identifying Insects

1. Complete the table for a quick comparison of the insect orders

Order	Wings	Mouthparts	Body/Legs
Adult Coleoptera (Beetles)	<ul style="list-style-type: none"> ○ 2 pair ○ Front wings thickened and shell-like (form fitting) making a straight line down the back ○ Hind wings membranous 	Chewing	Stout body with noticeable antenna
Adult Diptera Flies	<ul style="list-style-type: none"> ○ 1 pair membranous wings 	Variable forms of piercing sucking, including sponging and cutting/lapping	Typically soft bodied and often hairy. Do not use appearance for ID, rather count wings
Hemiptera True Bugs	<ul style="list-style-type: none"> ○ 2 pair on adults ○ Front pair thickened at the base and membranous at the tips, making a triangle pattern on the back ○ Hind wings membranous 	Piercing-sucking – Jointed beak is typically visible and appears to originate from top of the head in front of the eyes.	Usually broad and somewhat flattened.
Homoptera Aphids Cicadas Leafhoppers	<ul style="list-style-type: none"> ○ 2 pair on some adults ○ Membranous and folded roof-like when at rest ○ Many wingless forms 	Piercing sucking – Jointed beak originates from bottom of head so that it appears as if the beak is fastened between the front legs.	Honeydew associated with Homoptera.
Adult Hymenoptera Ants Bees Hornails Sawflies Wasps	<ul style="list-style-type: none"> ○ 2 pair membranous wings ○ Hind wing is often hidden under front wings and may be attached. 	Chewing or modified chewing/sucking	Most species (except sawflies and hornails) have distinct constriction between the thorax and abdomen (wasp wasit).
Adult Lepidoptera Butterflies Moths	<ul style="list-style-type: none"> ○ 2 pair wings – typically covered with small overlapping scales, often but not always, highly colored. 	Coiled sucking tube designed to siphon fluids like nectar.	
Orthoptera Crickets Grasshoppers Katydid	<ul style="list-style-type: none"> ○ 2 pair wings on adults ○ Front wings more or less parchment-like with distinct venation ○ Hind wings membranous and folded fan-like when at rest. 	Chewing	Hind legs enlarged for jumping.

Can you identify each Arthropod from the picture drawings?

