

Comparison of Insects Found in Home Gardens

Order		Metamor- phosis	Adults		Larvae			Honeydew
			Mouth	Identifiers	Mouth	Wingbuds	Forms & Identifiers	
Blattodea	Cockroaches	incomplete	chewing	wings overlap / antennae swept back / hard eggcases	chewing	✓	adult-like	
	Termites	incomplete	chewing	fat waist / wings equal size / beaded antennae	chewing	✓	adult-like	
Coleoptera	Beetles, weevils	complete	chewing	hard-shelled forewings meet in straight line down center of back	chewing		3 pairs jointed legs / campodeiform , elateriform or scarabaeiform	
Dermaptera	Earwigs	incomplete	chewing	forceps-like cerci	chewing		adult-like	
Diptera	Flies, gnats, midges, mosquitoes	complete	sucking, sponging, piercing	1 pair of wings / 1 pair of halteres (wing stubs) / multi-faceted eyes	chewing		vermiform (maggots) no legs, no wings, no antennae	
Ephemeroptera	Mayflies	incomplete	do not eat	2 or 3 long, thin tails / antennae inconspicuous	chewing	✓	aquatic / adult-like	
Hemiptera	True bugs	incomplete	piercing-sucking	antennae visible / wings: front half hard, cross & form v-shape where tips become membranous / triangular scutellum	piercing-sucking	✓	antennae visible / triangular scutellum often apparent	
	Hoppers, spittlebugs	incomplete	piercing-sucking	antennae invisible / wings tent-like / can jump / often move crabwise	piercing-sucking	✓	antennae invisible / may hide in cottony filaments or spittle / can jump / often move crabwise	✓
	Cicadas	incomplete	piercing-sucking	wings transparent / enlarged front legs	piercing-sucking	✓	enlarged front legs for digging	
	Adelgids, phylloxera	incomplete	piercing-sucking	antennae long / resemble aphids without cornicles	piercing-sucking		antennae long / resemble aphids without cornicles	✓
	Aphids	incomplete	piercing-sucking	cornicles / antennae long	piercing-sucking		cornicles / antennae long	✓
	Psyllids (jumping plant lice)	incomplete	piercing-sucking	antennae visible / wings tent-like / can jump	piercing-sucking	✓	antennae visible / produce cottony filaments / can jump	✓
	Scales, mealybugs	incomplete	piercing-sucking	males 1 pair of wings / females wingless with waxy coating or shell	piercing-sucking		1 st instar crawlers then legless / waxy coating or shell	✓
	Whitefly	complete	piercing-sucking	cloud of tiny white flying insects when disturbed	piercing-sucking		oval with hair-like filaments along edge	

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Hymenoptera	Ants	complete	biting	cinched waist / antennae elbowed / top view=oblong head / some sting	chewing		vermiform (no legs, wings or antennae)	
	Bees	complete	chewing / lapping	cinched waist / top view = oblong head /usually hairy body / can sting	chewing		vermiform no legs, no wings, no antennae	
	Wasps	complete	chewing	cinched waist / top view = oblong head / some sting	chewing		vermiform (no legs, wings or antennae)	
	Parasitic & gall wasps	complete	chewing	cinched waist / top view = oblong head / long ovipositor	chewing		vermiform (no legs, wings or antennae)	
	Sawflies	complete	chewing	fat or no waist / top view = oblong head / saw-shaped ovipositor	chewing		eruciform: ≥6 pairs of prolegs / distinct head, distinct eye	
Lepidoptera	Butterflies, moths	complete	siphoning	forewing larger than hindwing / wings covered with scales	chewing		eruciform: ≤5 pairs of prolegs / no visible eye in head / some with fake eyespots not in head	
Mantodea	Mantises	incomplete	chewing	enlarged forelegs / head swivels / foamy eggcases	chewing	✓	adult-like	
Mecroptera	Scorpionflies	complete	chewing / snout-like	wings equal size & veined/ some male genitalia arched like a scorpion	chewing		eruciform: 8 pairs of short prolegs	
Neuroptera	Lacewings, antlions	complete	chewing	clear wings, highly veined / some lay single egg on hairlike stalk	pincering- sucking		campodeiform with large hollow mandibles	
Odonata	Dragonflies& damselflies	incomplete	chewing	often iridescent / forewing & hindwing equal sized & highly veined / toothed jaw	chewing	✓	aquatic / toothed jaw	
Orthoptera	Crickets, katydids, grasshoppers	incomplete	chewing	enlarged & flattened hind femurs	chewing	✓	adult-like	
Phasmida	Walkingsticks	incomplete	chewing	resemble sticks or twigs	chewing	✓	adult-like	
Microcoryphia	Bristletails	incomplete	chewing	wingless / 2-3 tail-like appendages / antennae long	chewing	✓	adult-like	
Thysanoptera	Thrips	inter- mediate	rasping / sucking	minute / slender / wings long, narrow & fringed	rasping / sucking	✓	minute / slender / pale-colored	
Trichoptera	Caddisflies	complete	chewing	antennae long & thread- like / hairy wings	chewing		eruciform / hooked anal prolegs / aquatic / often in debris	

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and the following Arachnids:

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Acari (subclass)	Broad mites, cyclamen mites	incomplete	piercing-sucking	microscopic / wingless / 4 pairs of legs / no jointed waist	piercing-sucking		adult-like / 3 pairs of legs	
	Eriophyid mites	incomplete	piercing-sucking	microscopic / wingless / 2 pairs of legs up front / no jointed waist / distinct carrot shape	piercing-sucking		adult-like	
	Spider mites	incomplete	piercing-sucking	tiny but most are visible / wingless / 4 pairs of legs / no jointed waist / fine, barely visible webbing	piercing-sucking		adult-like / 1 st stage = 3 pairs of legs, later stages = 4 pairs	
	Ticks	incomplete	piercing-sucking	wingless / 4 pairs of legs / no jointed waist	piercing-sucking		adult-like / 3 pairs of legs developing into 4 pairs	
Araneae (subclass)	Spiders	incomplete	piercing-sucking	wingless / no antennae / 4 pairs of legs / 2 venomous fangs with a feeler (pedipalp) on each side / jointed waist between cephalothorax & abdomen / some make large webs / all can produce silk	piercing-sucking		adult-like	
Opiliones (subclass)	Harvestmen	incomplete	piercing-sucking & chewing	wingless / no antennae / 4 pairs of legs / non-venomous / 2 feelers (pedipalps) / no jointed waist / very long legs	piercing-sucking & chewing		adult-like	

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Common Larval Insect Forms

Campodeiform (3 pairs jointed legs, larvae often with spines)



Elateriform, a.k.a., wireworms (3 pairs jointed legs, often found in soil)



3 pairs of jointed legs

Eruciform, a.k.a, caterpillars (usually with 3 pairs of true legs and 2 or more pairs of prolegs)



Scarabaeiform, a.k.a., grubs (3 pairs of jointed legs, usually found in soil or inside plant material)



Vermiform, a.k.a, worm-like (larvae without appendages, usually found inside prey or plant material, or in water)

