

Major Insect Orders Master Gardeners Should Know

Orders (Insects)	Examples	Mouth parts	Metamorphosis	Features
Thysanura	Firebrats Bristletails	chewing	*amatabolous	“tail” filaments
Collembola	Springtails	chewing	ametabolous	Furcula (for jumping)
Orthoptera	Crickets Grasshoppers	chewing	simple metamorphosis	Leathery wings Jumping hind legs
Isoptera	Termites	chewing	simple metamorphosis	Soldier casts wood eaters
Dermaptera	Earwigs	chewing	simple metamorphosis	“tail” pinchers
Psocoptera	Book lice Bark lice	chewing	simple metamorphosis	Some species can be food pests
Hemiptera	True bugs	sucking	simple metamorphosis	Some can “bite”. Membranous tips on leathery forewings
Homoptera	Aphids, Scales, Whiteflies	sucking	simple metamorphosis	-Plant feeders. -Some transmit plant viruses
Coleoptera	Weevils Beetles	chewing	complete metamorphosis	Elytra or wing covers
Lepidoptera	Moths Butterflies	sucking	complete metamorphosis	Scales on wings
Diptera	Flies Midges, Mosquitoes	Piercing/sponging	complete metamorphosis	Halteres=hindwings
Siphonaptera	Fleas	sucking	complete metamorphosis	Laterally flattened. Hind legs made for jumping
Hymenoptera	Ants, Bees, Wasps, Parasitoids, Sawflies	chewing lapping	complete metamorphosis	Many have stingers. Some species are social and build nests.

*No dramatic change; just size increase with each molt