

Classification of Insect Orders

(from Wheeler *et. al.*, 2001)

Order Name	Common name	Adult mouthparts	Wings (no. and type)
Protura	Proturans	Chewing	Lacking
Collembola	Springtails	Chewing	Lacking
Diplura	Diplurans	Chewing	Lacking
Microcoryphia	Jumping bristletails	Chewing	Lacking
Thysanura	Bristletails, silverfish	Chewing	Lacking
Ephemeroptera	Mayflies	Vestigial	2 pair, may be reduced, membranous
Odonata	Dragonflies, damselflies	Chewing	2 pair, membranous
Orthoptera	Grasshoppers, crickets, katydids	Chewing	2 pair, or may be reduced; 1st pair tegmina
Phasmatodea	Walkingsticks	Chewing	variable, 0-2 pair; tegmina
Grylloblattodea	Rock crawlers	Chewing	lacking
Mantophasmatodea		Chewing	lacking
Dermaptera	Earwigs	Chewing	0-2 pair; front wings elytra
Plecoptera	Stoneflies	Chewing	2 pair, membranous
Embiidina	Web spinners	Chewing	0-2 pair; membranous
Zoraptera	Zorapterans	Chewing	0-2 pair
Isoptera	Termites	Chewing	0-2 pair
Mantodea	Mantids	Chewing	0-2 pair
Blattodea	Cockroaches	Chewing	0-2 pair;
Hemiptera* - now with 3 suborders; <ul style="list-style-type: none"> • Heteroptera - bugs • Auchenorrhyncha - cicadas, leafhoppers 	"True Bugs"	Piercing, sucking	0-2 pair; front wings hemelytra

<ul style="list-style-type: none"> • Sternorrhyncha - aphids, scales 			
Thysanoptera	Thrips	Rasping, sucking	2 pair, fringed with hairs
Psocoptera	Book and bark lice	Chewing	0-2 pair
Phthiraptera* - several suborders <ul style="list-style-type: none"> • Amblycera • Ischnocera • Anoplura 	Lice	Chewing, piercing	Lacking
Coleoptera	Beetles	Chewing	2 pair; front wings elytra
Neuroptera	Lacewings, owlflies, mantispids, antlions	Chewing	2 pair, membranous
Hymenoptera	Bees, ants, wasps	Chewing	0-2 pair, membranous
Trichoptera	Caddisflies	Chewing	2 pair, hairy or with scales
Lepidoptera	Moths, butterflies	Siphoning, vestigial	0-2 pair; usually covered with scales
Siphonaptera	Fleas	Piercing-sucking	Lacking
Mecoptera	Scorpionflies	Chewing	0-2 pair
Strepsiptera	Twisted-winged parasites	???	0-2(1) pair
Diptera	Flies	Piercing, sucking, lapping	0-1 pair

Reference cited

Wheeler, W. C., M. Whiting, Q. D. Wheeler, and J. M. Carpenter. 2001. The phylogeny of the extant hexapod orders. *Cladistics* 17:113-169.