

Discover the Microbes Within: The *Wolbachia* Project

Insect Identification Guide



Coleoptera

beetles; 370,000 species

Fore wing a hard protective cover, hind wing membranous



Collembola

spring tails; 6,000 species

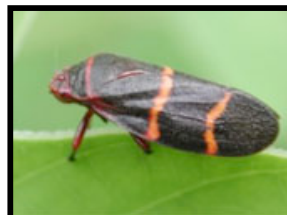
Tiny wingless creatures with a "spring" on the end of the abdomen



Diptera

flies; 120,000 species

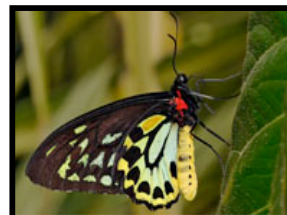
Single pair of membranous wings



Hemiptera

aphids; 67,500 species

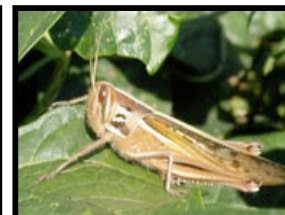
Many have the basal half of the forewings thicker than the distal half; sucking/piercing mouthparts



Lepidoptera

butterflies, moths, skippers; 140,000 species

2 pair of wings covered with small scales



Orthoptera

grasshoppers, crickets, katydids; 17,000 species

Two pairs of wings, hindleg often enlarged



Dermaptera

earwigs; 1,200 species

First pair of wings very short, abdomen exposed, "forcep-like" appendages at tip of abdomen



Dictyoptera

cockroaches and mantids; 6,000 species

Two pair of wings, forewings thickened and hindwings membranous



Ephemeroptera

mayflies; 2,000 species

Two pair of membranous wings which they can fold over their back



Hymenoptera

bees, wasps, ants; 108,000 species

Both pair of wings membranous and hooked together



Isoptera

termites; 1,900 species

When winged, both pair membranous and similar in size



Odonata

dragonflies, damselflies; 5,000 species

2 pair of wings with many veins, aquatic larvae

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Nueroptera

dobsonflies,
lacewings,
antlion, owlflies;
4,700 species



Siphonaptera

fleas 2,300
species

Permanently
wingless
ectoparasites of
vertebrates



Thysanura

silverfish,
firebrats; 350
species

Wingless with
three long "tails"
at the end of the
abdomen



Trichoptera

caddisflies,
7,000 species

2 pair of hairy
wings