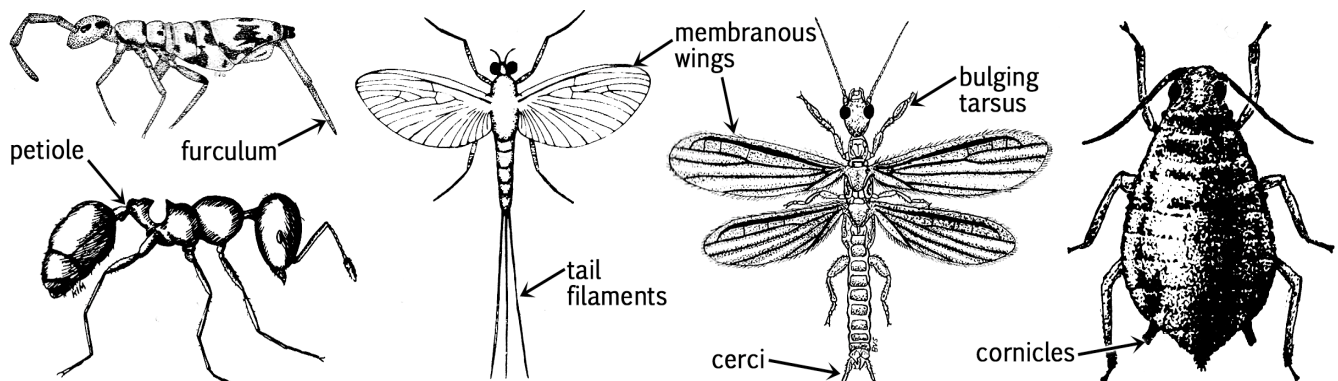


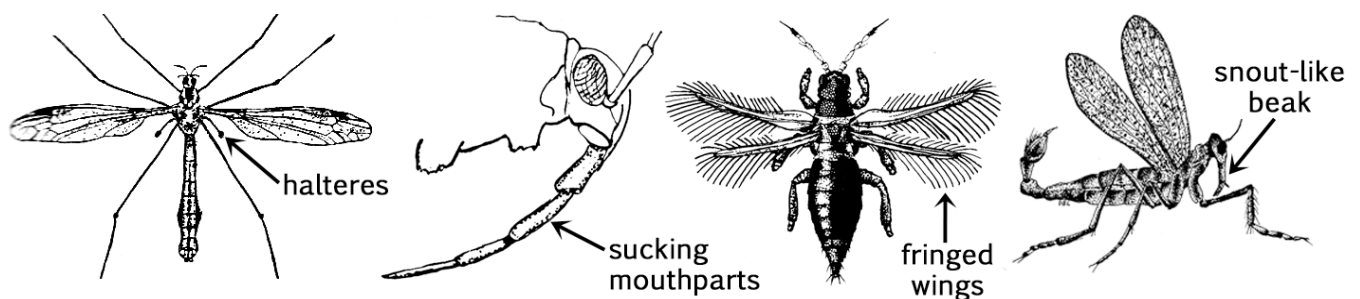
Key to Common Orders of Adult Insects

To use this key, start with the first couplet, and select the best option for your organism. The number at right then indicates the next couplet to jump to. You are finished when you get to the name of an organism (bold type) rather than another number. This key is not comprehensive, and omits some more obscure orders and unusual species. Use caution in keying any wingless forms, as you may have an immature form rather than the adult Nymphal forms can sometimes be keyed out by using the “wings present” choice of the first couplet. *Italicized* terms are illustrated in the accompanying drawings.

1. A. Wings absent or present only as small covers or pads on thorax 2
 B. One or two pairs of well-developed wings present (fore-wings may form covering over abdomen and hind wings) 13
2. A. Constriction (*petiole*) between thorax and abdomen Ants, **Order Hymenoptera**
 B. Thorax and abdomen broadly joined 3
3. A. External parasite living on or closely associated with vertebrates 4
 B. Not parasitic on vertebrates 5
4. A. Body laterally compressed; legs elongated for jumping Fleas; **Order Siphonaptera**
 B. Body dorso-ventrally compressed; don't jump Lice; **Orders Mallophaga & Anoplura**
5. A. Forked tail appendage (*furculum*) for jumping; no visible mouthparts; tiny **Order Collembola**
 B. No jumping tail appendage; mouthparts present 6
6. A. 2 or 3 long, slender *tail filaments* **Order Thysanura**
 B. 2 posterior *cerci* 7
 C. No posterior tail appendages 9
7. A. Body dorso-ventrally flattened; cerci relatively small 8
 B. Cerci enlarged to form posterior pincer **Order Dermaptera**
8. A. 5 segments per tarsus; generally oval shape **Order Blattodea**
 B. 3 segments per tarsus; front tarsi with enlarged muscle-like *bulge* **Order Embioptera ♀**



10. A. Body soft, usually grayish or whitish; thorax poorly defined **Order Isoptera**
 B. Well defined thorax; not especially soft; medium to large size (except nymphs) 11
9. A. *Sucking (tube-like) mouthparts*; either 2 tube-like *cornicles* projecting from dorsal abdomen; or live under various protective coverings **Order Hemiptera**
 B. Biting mouthparts (or mouthparts vestigial); never covered under scale or shield 10
11. A. Legs relatively short; body slightly flattened Rove beetles, **Order Coleoptera**
 B. Legs relatively long; body round or squarish in cross section 12
12. A. Forelegs raptorial, adapted for grasping and holding **Order Mantodea**
 B. Prothorax larger than meso and meta thorax, hind legs enlarged for jumping **Order Orthoptera**
 C. Prothorax smaller than meso and meta thorax; legs all similar-sized; twig-like **Order Phasmida**
13. A. One pair of membranous wings; 2nd pair reduced to knob-like *halteres* **Order Diptera**
 B. Two pairs of wings (fore-wings may cover hind-wings) 14
14. A. Wings lack veins, slender and *fringed* with long hairs; body size tiny **Order Thysanoptera**
 B. Wings with veins, not fringed 15
15. A. Fore-wings hard or leathery and usually pigmented; function as covers for hind-wings 16
 B. Both *wings membranous* and used for flight 21
16. A. Mouthparts form long, straight *sucking beak* (folded back between legs) **Order Hemiptera**
 B. Biting or chewing mouthparts 17
17. A. Forewings hard, veinless, meet at midline and cover hindwings & abdomen **Order Coleoptera**
 B. Forewings hard, but short, cover only part of abdomen 18
 C. Forewings partly or entirely leathery, with veins visible; right and left fore-wings overlap 19
18. A. Abdomen with large pincer-like cerci **Order Dermaptera**
 B. Abdomen without cerci Rove beetles, **Order Coleoptera**
19. A. Body dorso-ventrally flattened, cerci present **Order Blattodea**
 B. Body round or squarish in cross section 20
20. A. Forelegs raptorial, adapted for grasping and holding; head very mobile **Order Mantodea**
 B. Hind legs enlarged for jumping; head not flexible **Order Orthoptera**



21. A. Wings covered by scales; mouth parts form coiled tube **Order Lepidoptera**
 B. Wing surface obviously hairy; mouthparts very small; antennae very long **Order Trichoptera**
 C. Wings not covered with scales or extensively hairy; mouthparts & antennae variable 22
22. A. Hind-wings much smaller than forewings 23
 B. Fore-wings and hind-wings are similar in size 25
23. A. Abdomen with 2 or 3 *tail filaments*; fore-wings extensively veined with
 net-like pattern; wings held vertically at rest **Order Ephemeroptera**
 B. Fore-wings with fewer veins, pattern not net-like; lack tail filaments 24
24. A. Mouth-parts form straight tube for piercing and sucking **Order Hemiptera**
 B. Mouth-parts for biting and chewing; abdomen usually with constriction at
 base (*petiole*) **Order Hymenoptera**
25. A. Large body size (> 25 mm); wings held vertically above or away from body
 at rest; antennae short; head highly mobile **Order Odonata**
 B. Wings folded flat over body; antennae longer than head 26
26. A. Mouthparts elongated into a *snout-like beak* **Order Mecoptera**
 B. Mouthparts short 27
27. A. Numerous cross-veins in wings; 5 tarsal segments **Order Neuroptera**
 B. Few cross-veins in wings; 3 or 4 tarsal segments 28
28. A. Two long posterior *cerci*; forewings longer than hindwings; 3 tarsal segments 29
 B. No posterior appendages; wings of equal length; 4 tarsal segments **Order Isoptera**
29. A. Hind wing with broad base that is folded at rest; tarsi not bulging **Order Plecoptera**
 B. Hind wings narrow; front tarsi with enlarged muscle-like *bulge* **Order Embioptera** ♂