

KEY TO THE ORDERS OF COMMON ADULT INSECTS

(Adapted from *Fundamentals of Entomology* Fifth Edition by Richard J. Elzinga; 2000)

1. Wings present.....24
Wings absent or reduced to small pads.....2
2. Antennae absent; body slender and whitish color.....PROTURA
Antennae present.....3
3. Usually possess abdominal forked spring (furcula); minute size.....COLLEMBOLA
Furcula absent.....4
4. With long multi-segmented cerci (if cerci short, then abdominal ventral styliform
appendages present).....5
Cerci short *or* lacking *or* forceps-like in shape; styliform appendages absent.....7
5. Three terminal "tails" present.....6
Two terminal "tails" present, filiform or forceps-like.....DIPLURA
6. Compound eyes large and touching dorsally.....ARCHAEOGNATHA
Compound eyes reduced, not touching.....THYSANURA
7. Large insects, usually 1 in (2.54 cm) or more in length.....8
Small insects, usually 1/2 in (1.27 cm) or less in length.....10
8. Hind legs enlarged, modified for jumping.....ORTHOPTERA
Hind legs similar in size to other legs.....9
9. Body shortened and flattened dorsoventrally; coxae nearly touching.....BLATTARIA
(or DICTYOPTERA)
Body elongate and tubular; coxae usually well separated.....PHASMIDA
10. Large unsegmented forceps-like cerci.....DERMAPTERA
Cerci (when present) not forceps-like or unsegmented.....11
11. Cornicles present or body covered with waxy filaments or scales.....HOMOPTERA
Cornicles absent; no scale or waxy filaments covering body.....12
12. Abdomen constricted into narrow waist at juncture with thorax.....HYMENOPTERA
Abdomen not constricted into narrow waist.....13
13. Enlarged basitarsi on forelegs.....EMBIOPTERA
Basitarsi on forelegs not enlarged.....14
14. Piercing-sucking mouthparts present in short cone-like beak; tarsi with eversible
apical bladders; abdomen often terminally pointed.....THYSANOPTERA

Mouthparts not as above; tarsal bladders lacking.....	15
15. Legs modified for jumping; body flattened laterally.....	SIPHONAPTERA
Legs not modified for jumping.....	16
16. Mouthparts elongated into long piercing-sucking beak.....	17
Mouthparts not as above although head may be prolonged.....	18
17. Antennae hidden in grooves in head.....	DIPTERA
Antennae long and easily seen.....	HEMIPTERA
18. Body with dense hair and scales.....	LEPIDOPTERA
Body lacking dense hair and scales.....	19
19. Antennae moniliform; short cerci present.....	ISOPTERA
Antennae not moniliform; cerci absent.....	20
20. Antennae long and slender.....	21
Antennae short.....	22
21. Head prolonged and beak-like.....	MECOPTERA
Head not prolonged.....	PSOCOPTERA
22. Each tarsus four- to five-segmented.....	DIPTERA
Each tarsus one- to three-segmented.....	23
23. Head usually broader than long; if same size or longer than broad, then with chewing mouthparts.....	MALLOPHAGA
Head usually longer than broad; piercing-sucking mouthparts retracted into head; legs greatly enlarged for grasping.....	ANOPLURA
24. With an anterior notch or node on each wing.....	ODONATA
Wings lacking such notch.....	25
25. Multi-segmented cerci often long as body and with setaceous antennae.....	EPHEMEROPTERA
Not with above combination of traits.....	26
26. Hind legs enlarged for jumping or front legs adapted for digging; antennae filiform.....	ORTHOPTERA
Hind legs similar in size to middle pair of legs; antennae various.....	27
27. With large unsegmented forceps-like cerci.....	DERMAPTERA
Cerci filamentous or absent.....	28

28. One pair of wings present.....	29
Two pairs of wings present.....	30
29. Halteres present behind wings.....	DIPTERA
Halteres if present anterior to wings.....	HOMOPTERA
30. Piercing-sucking mouthparts, usually in elongate beak; palpi absent.....	31
Mouthparts other than above; palpi present.....	33
31. Hind legs without tarsal claws, adapted for swimming.....	HEMIPTERA
Hind leg with tarsal claws.....	32
32. Beak arises at anterior part of head; hemelytra usually present.....	HEMIPTERA
Beak appears to arise between front pair of legs; forewings with uniform texture.....	HOMOPTERA
33. Piercing-sucking mouthparts in short cone-like beak; wings fringed with long hair.....	THYSANOPTERA
Not as above.....	34
34. Front pair of wings horny or of different textures from hind wings.....	35
All wings membranous.....	38
35. Front pair of wings thickened and usually hard, meeting at meson; normally without cross veins; cerci absent.....	COLEOPTERA
Front pair of wings with obvious cross veins, overlapping one another at least partially; cerci present.....	36
36. Front legs modified for grasping.....	MANTODEA
Front legs similar to other legs.....	37
37. Body flattened dorsoventrally; wings usually covering entire body.....	BLATTARIA
(or DICTYOPTERA)	
Body stick-like; wings short stubs.....	PHASMIDA
38. Cerci at least length of last 3 abdominal segments.....	PLECOPTERA
Cerci short or absent.....	39
39. Siphoning moutparts coiled under head; wings and body usually covered with scales.....	LEPIDOPTERA
Mouthparts not coiled under head; scales absent or few in number, primarily on wing veins.....	40
40. Fore basitarsi enlarged.....	EMBIOPTERA
Fore basitarsi not enlarged.....	41

41. Tarsi four-segmented; wings of equal length and venation.....	ISOPTERA
Tarsi not four-segmented; fore and hind wings usually different.....	42
42. Head prolonged and beak-like.....	MECOPTERA
Head not prolonged and beak-like.....	43
43. Many cross veins in wings, particularly at anterior edge; if few cross veins present, then wings and body with waxy coating.....	46
Few cross veins in wings; body and wings lacking waxy coating.....	44
44. Mouthparts reduced, only palpi obvious; hair often present on wings.	TRICHOPTERA
Not as above.....	45
45. Tarsi five-segmented; wings usually folded flat over body.....	HYMENOPTERA
Tarsi two- or three-segmented; wings folded roof-like over body.....	PSOCOPTERA
46. Hind wing with broader base than front wing and with wing area that folds fanwise when at rest; few or no marginal branching of longitudinal veins.....	MEGALOPTERA
Hind and front wings similar in size and shape and lacking folded anal area on hind wing; longitudinal veins with many branchings near margin.....	NEUROPTERA