

Key to Common Soil Invertebrates

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. Only the most common soil insects are included, so you should also refer to the insect order key (especially if winged).

1. A. Legs absent or only short, unsegmented prolegs.....2
B. Segmented legs present.....7
2. A. Body unsegmented.....3
B. Body segmented.....4
3. A. Body tapers to point at each end; never with shell or antennae.....**Phylum Nematoda**
B. Body with flat ventral foot; antennae present; may have coiled shell.....**Class Gastropoda**
4. A. Body slender with >15 segments; no obvious head or appendages.....**Phylum Annelida**
B. Body thicker, with <15 segments: often with recognizable head (insect larvae).....5
5. A. Several pairs of prolegs on abdomen.....**Orders Lepidoptera, Hymenoptera (larva)***
B. Abdomen lacks prolegs.....6
6. A. Distinct head or jaws visible and sclerotized (hardened).....**Order Coleoptera (larva)***
B. Head usually indistinct, pointed; abdomen rounded.....**Order Diptera (larva)***
7. A. 3 pairs of legs; distinct head, thorax and abdomen; antennae present (Insecta).....12
B. 4 pairs of legs; head and thorax fused; antennae absent (Arachnida).....10
C. More than 4 pairs of legs; antennae present.....8
8. A. 7-8 pairs of legs; head not distinct; trunk relatively short.....**Order Isopoda**
B. 9 or more pairs of legs; head distinct from long trunk (Myriopoda).....9
9. A. One pair of legs per body segment.....**Order Chilopoda**
B. Two pairs of legs per body segment.....**Order Diplopoda**
10. A. Anterior appendage with chelae (claws); abdomen segmented.....**Order Pseudoscorpionida**
B. No chelae present; cephalothorax and abdomen joined by narrow connection.....**Order Araneae (spiders)**
C. No chelae present; cephalothorax and unsegmented abdomen broadly joined.....11
11. A. Legs usually shorter than body; size tiny.....**Order Acari**
B. Legs more than twice as long as body; larger size.....**Order Opiliones**
12. A. No wings or wing pads present on thorax.....13
B. Wings reduced: small pads or wing covers (do not cover abdomen).....18
C. Well-developed membranous wings present.....*See Key to Adult Insects*
13. A. Antennae short and indistinct; generally soft-bodied.....14
B. Antennae long and distinct.....15
14. A. Short, fleshy prolegs on abdomen; caterpillar-like.....**Orders Lepidoptera, Hymenoptera (larva)***
B. No abdominal prolegs absent.....**Orders Coleoptera, Neuroptera (larva)***
15. A. Waist between thorax and abdomen narrow.....**Order Hymenoptera (ants)**
B. Thorax and abdomen broadly joined.....16

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16. A. 2-3 tail appendages present; antennae long 17
 B. Forked tail appendage held ventrally, used for jumping **Order Collembola**
 C. No tail appendage present; body usually whitish **Order Isoptera**
17. A. 2 tail appendages short; front tarsi with enlarged muscle-like bulge **Order Embioptera**
 B. 2-3 tail appendages long & slender; tarsi not bulging **Order Thysanura**
18. A. Paired abdominal cerci present 19
 B. No abdominal structures present 20
19. A. Body dorso-ventrally flattened; cerci relatively small **Order Blattodea**
 B. Cerci enlarged to form posterior pincer **Order Dermaptera**
20. A. Mouth parts form straight sucking tube **Order Hemiptera**
 B. Biting or chewing mouthparts 21
21. A. Legs all of similar length; fore-wings modified into hardened covers **Order Coleoptera**
 B. Grasshopper-like body with proportionately long hind legs **Order Orthoptera**

*Identification of insect larvae should be considered tentative; specialist keys are usually required.

