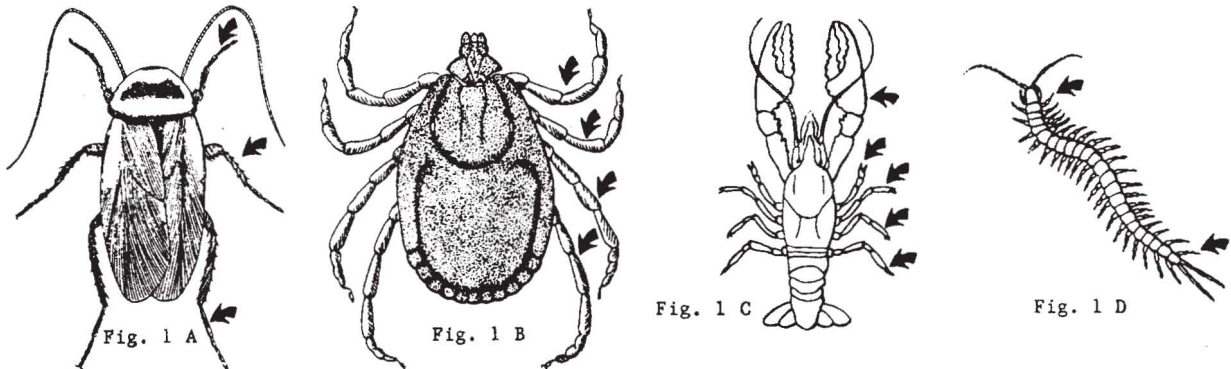


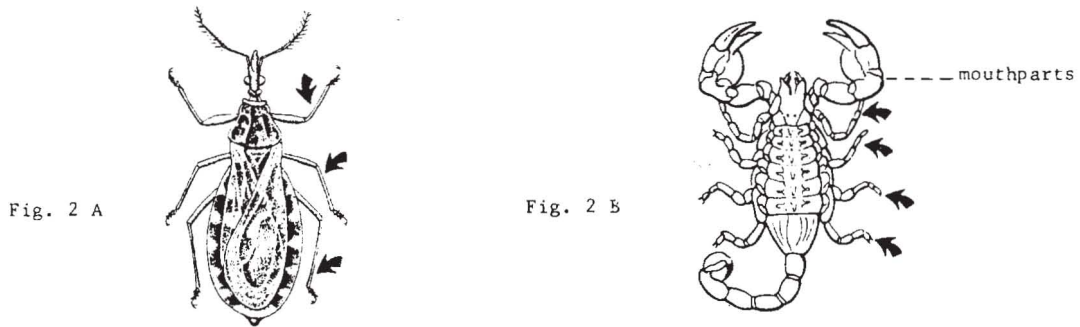
**ARTHROPODS OF PUBLIC HEALTH IMPORTANCE: KEY TO COMMON CLASSES AND ORDERS**

Harold George Scott and Chester J. Stojanovich

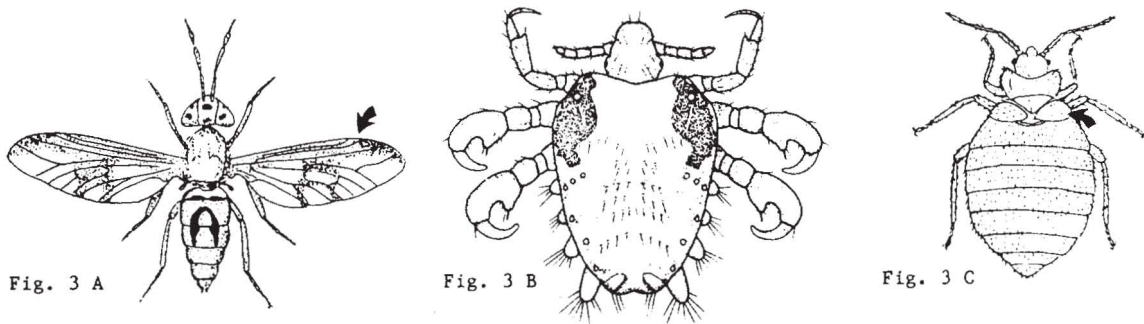
- 1. Three or 4 pairs of walking legs (Fig. 1 A & B).....2
- Five or more pairs of walking legs (Fig. 1 C & D).....33



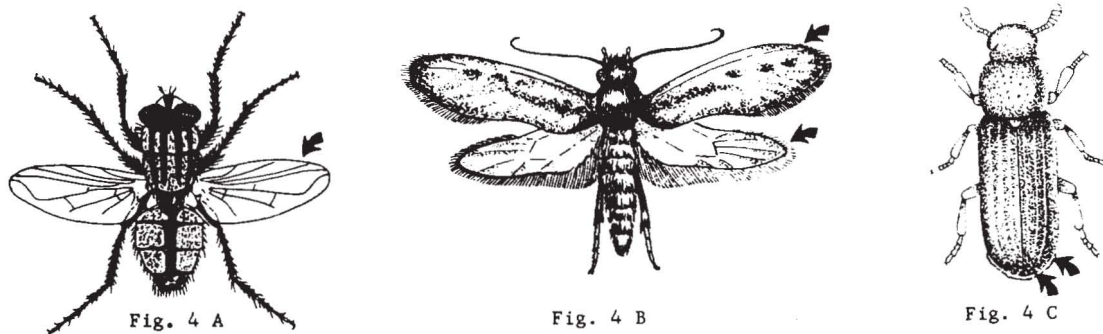
- 2. Three pairs of walking legs (Fig. 2 A).....3
- Four pairs of walking legs (Fig. 2 B).....25



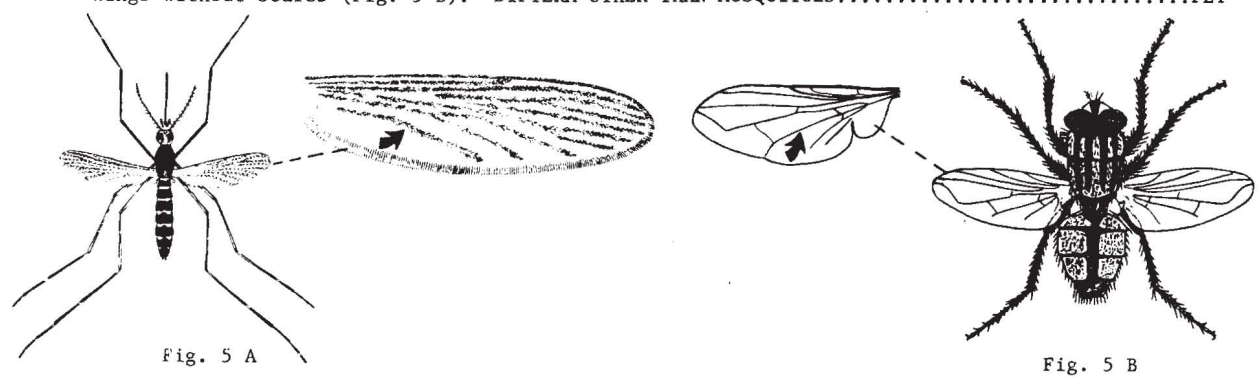
- 3. Wings present, well developed (Fig. 3 A).....4
- Wings absent or rudimentary (Fig. 3 B & C).....13



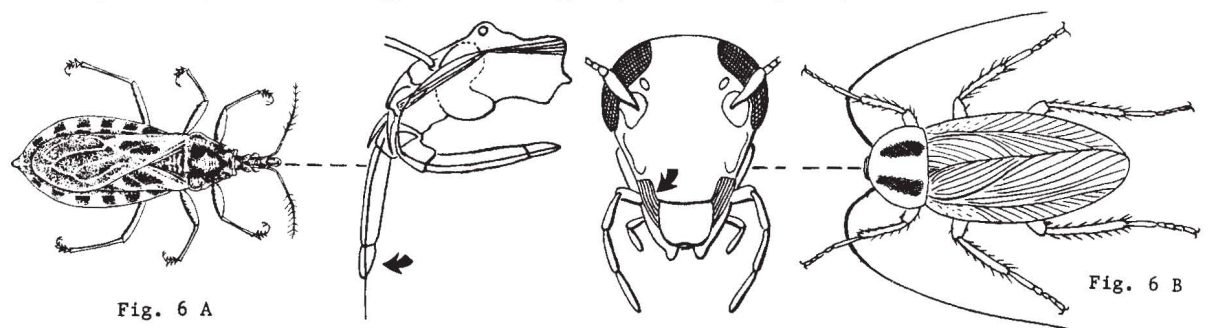
- 4. With one pair of membranous wings (Fig. 4 A). ORDER DIPTERA.....5
- With two pairs of wings (Fig. 4 B & C).....6



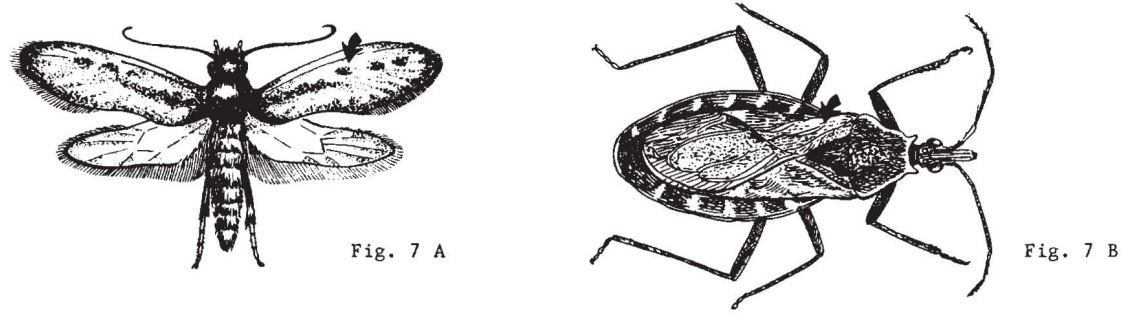
- 5. Wings with scales (Fig. 5 A). FAMILY CULICIDAE.....MOSQUITO
- Wings without scales (Fig. 5 B). DIPTERA OTHER THAN MOSQUITOES.....FLY



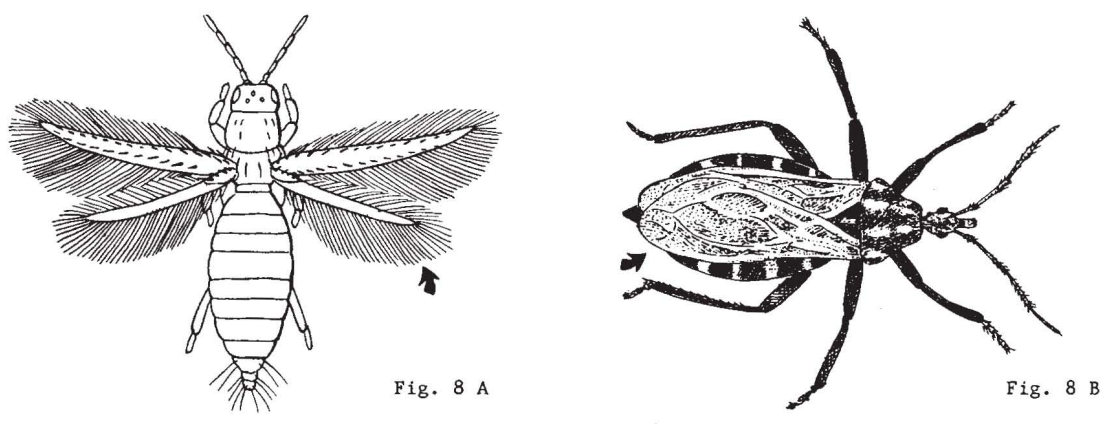
- 6. Mouthparts adapted for sucking, with elongate proboscis (Fig. 6 A).....7
- Mouthparts adapted for chewing, without elongate proboscis (Fig. 6 B).....9



- 7. Wings densely covered with scales; proboscis coiled (Fig. 7 A). ORDER LEPIDOPTERA.....MOTH OR BUTTERFLY
- Wings not covered with scales; proboscis not coiled (Fig. 7 B).....8



- 8. Wing with fringe of long hair (Fig. 8 A). ORDER THYSANOPTERA.....THRIPS
- Wing without long hair (Fig. 8 B). ORDER HEMIPTERA.....KISSING BUG



9. Both pair of wings membranous and similar in structure (Fig. 9 A).....10  
 Front pair of wings shell-like or leathery, serving as covers for the second pair (Fig. 9 B).....11

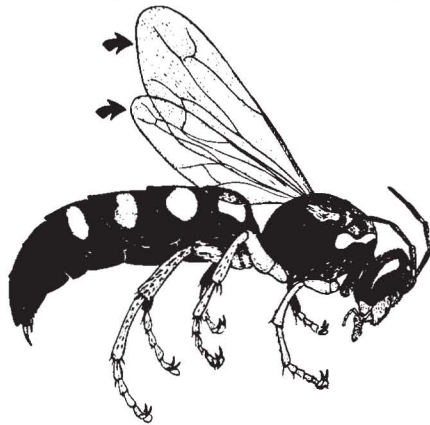


Fig. 9 A

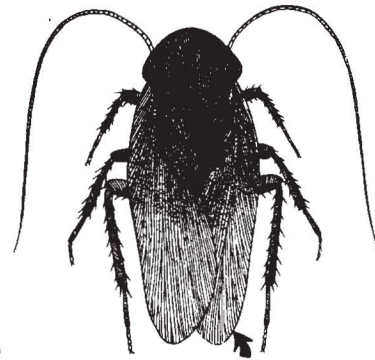


Fig. 9 B

10. Both pairs of wings similar in size (Fig. 10 A). ORDER ISOPTERA.....TERMITE  
 Hind wing much smaller than front wing (Fig. 10 B). ORDER HYMENOPTERA.....  
 .....BEE, HORNET, WASP, YELLOW JACKET, OR ANT

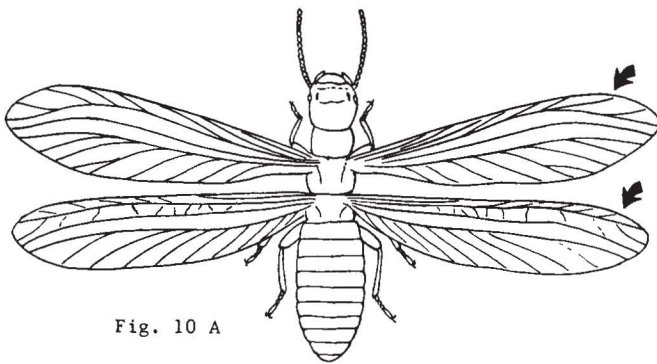


Fig. 10 A



Fig. 10 B

11. Front wings horny or leathery, without distinct veins (Fig. 11 A).....12  
 Front wings leathery or paper-like, with distinct veins (Fig. 11 B). ORDER ORTHOPTERA.....COCKROACH

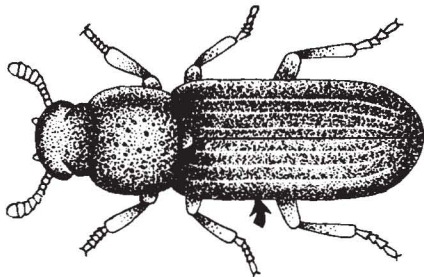


Fig. 11 A

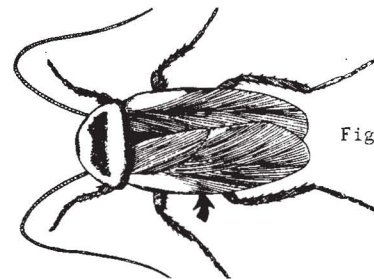


Fig. 11 B

12. Abdomen with prominent cerci; wings shorter than abdomen (Fig. 12 A). ORDER DERMAPTERA.....EARWIG  
 Abdomen without prominent cerci; wings covering abdomen (Fig. 12 B). ORDER COLEOPTERA.....BEETLE

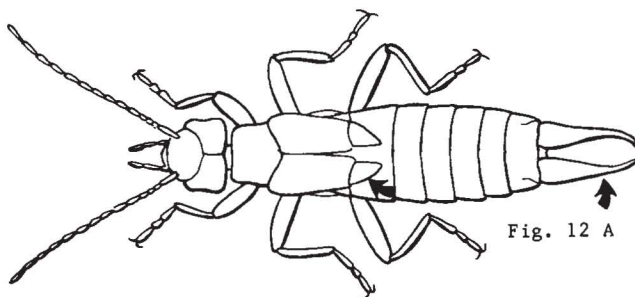


Fig. 12 A

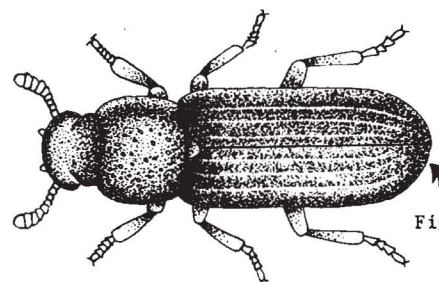


Fig. 12 B



- 13. Mouthparts with jaws for chewing (Fig. 13 A).....14
- Mouthparts with a long beak or stylets for sucking up food (Fig. 13 B).....21

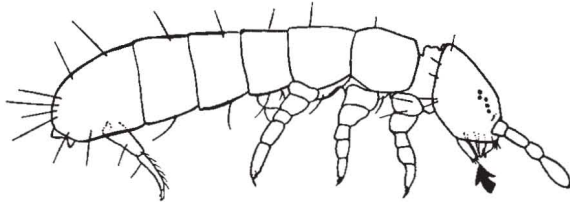


Fig. 13 A

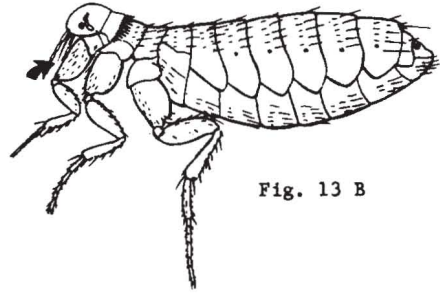


Fig. 13 B

- 14. With three long terminal tails (Fig. 14 A). ORDER THYSANURA.....SILVERFISH AND FIREBRAT
- Without three long terminal tails (Fig. 14 B).....15

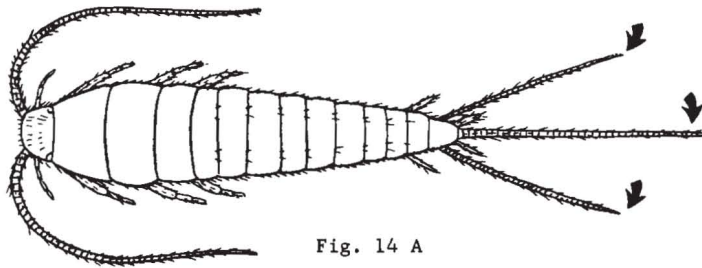


Fig. 14 A

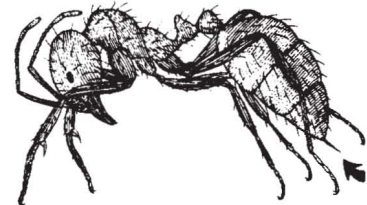


Fig. 14 B

- 15. Abdomen with prominent pair of cerci (Fig. 15 A). ORDER DERMAPTERA.....EARWIG
- Abdomen without prominent pair of cerci (Fig. 15 B).....16

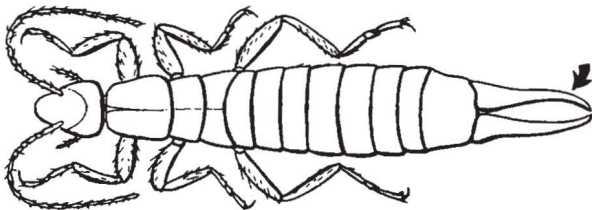


Fig. 15 A



Fig. 15 B

- 16. With narrow waist (Fig. 16 A). ORDER HYMENOPTERA.....ANT
- Without narrow waist (Fig. 16 B).....17



Fig. 16 A

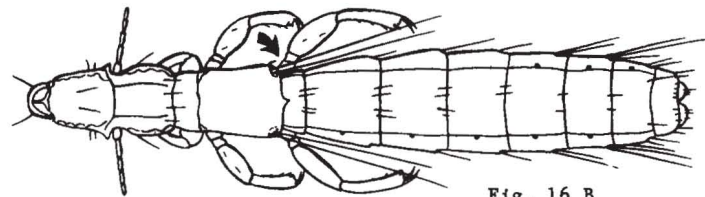


Fig. 16 B

17. Antenna with fewer than 8 segments (Fig. 17 A).....18  
 Antenna with more than 8 segments (Fig. 17 B).....19



Fig. 17 A



Fig. 17 B

18. Abdomen with 6 or fewer segments (Fig. 18 A). ORDER COLLEMBOLA.....SPRINGTAIL  
 Abdomen with more than 6 segments (Fig. 18 B). ORDER MALLOPHAGA.....CHEWING LOUSE

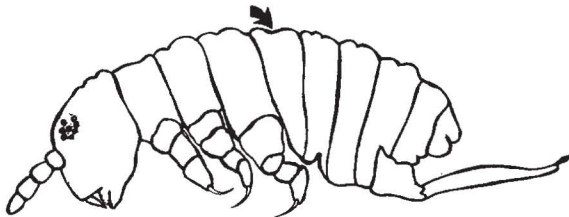


Fig. 18 A

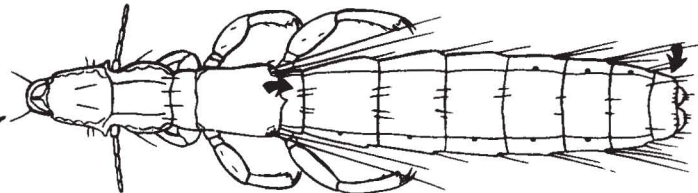


Fig. 18 B

19. Tarsus with 4-5 segments (Fig. 19 A).....20  
 Tarsus with 1-3 segments (fig. 19 B). ORDER PSOCOPTERA.....BOOK LOUSE OR PSOCID

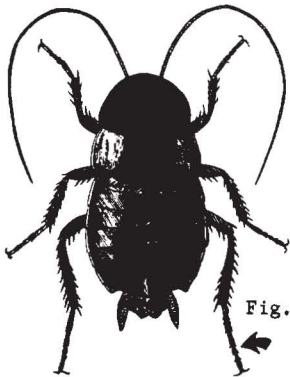


Fig. 19 A

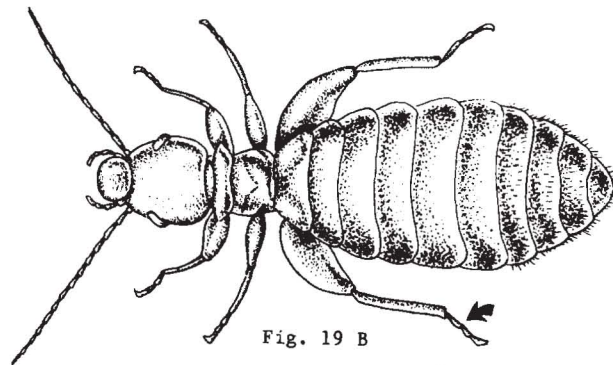


Fig. 19 B

20. Pronotum narrower than head, never covering head (Fig. 20 A). ORDER ISOPTERA.....TERMITE  
 Pronotum broader than head, often covering head (Fig. 20 B). ORDER ORTHOPTERA.....COCKROACH

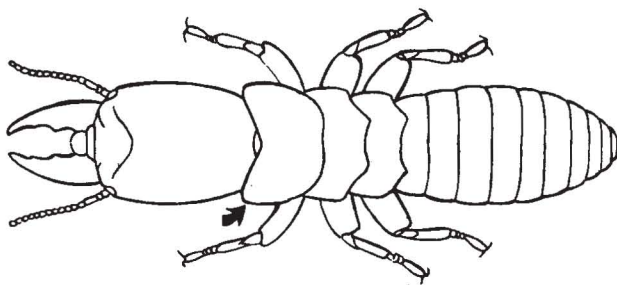


Fig. 20 A

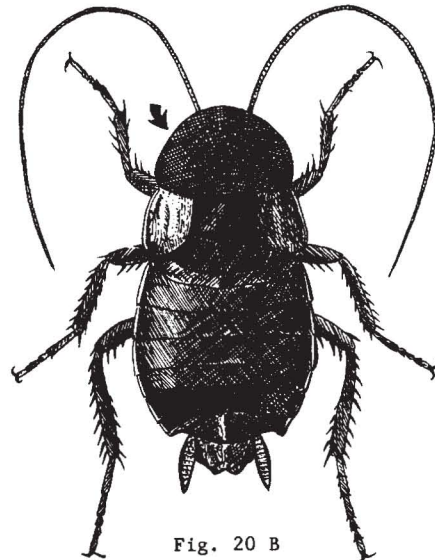


Fig. 20 B

21. Flattened laterally (Fig. 21 A). ORDER SIPHONATERA.....FLEA  
 Flattened dorso-ventrally (Fig. 21 B).....22

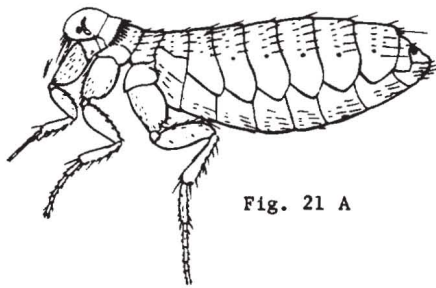


Fig. 21 A

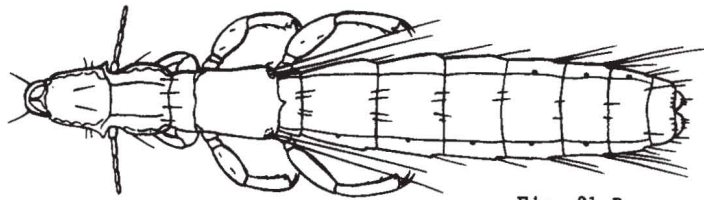


Fig. 21 B

22. Foot terminating in protrusible bladder (Fig. 22 A). ORDER THYSANOPTERA.....THRIPS  
 Foot not terminating in protrusible bladder (Fig. 22 B).....23

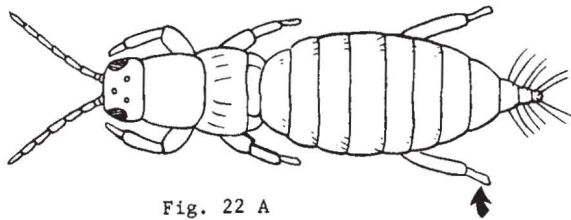


Fig. 22 A



Fig. 22 B

23. Beak jointed (Fig. 23 A). ORDER HEMIPTERA.....BEDBUG  
 Beak not jointed (Fig. 23 B).....24

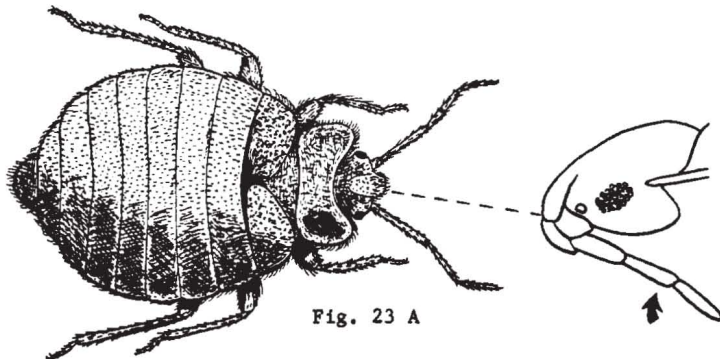


Fig. 23 A

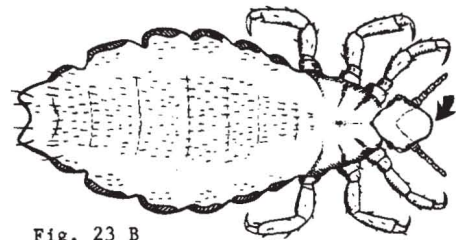


Fig. 23 B

24. Mouthparts retracted into head (Fig. 24 A). ORDER ANOPLURA.....SUCKING LOUSE  
 Mouthparts not retracted into head (Fig. 24 B). ORDER DIPTERA.....KED OR LOUSE FLY

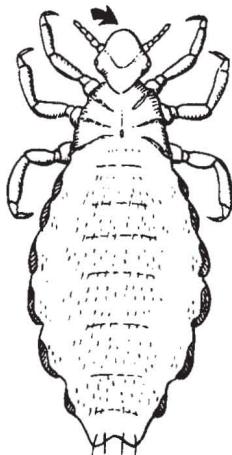


Fig. 24 A

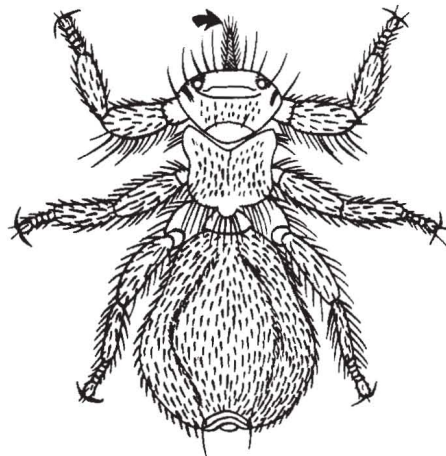


Fig. 24 B



25. Abdomen well-developed (Fig. 25 A). CLASS ARACHNIDA.....26  
 Abdomen peg-like (Fig. 25 B). CLASS PYCNOGONIDA.....SEA SPIDER

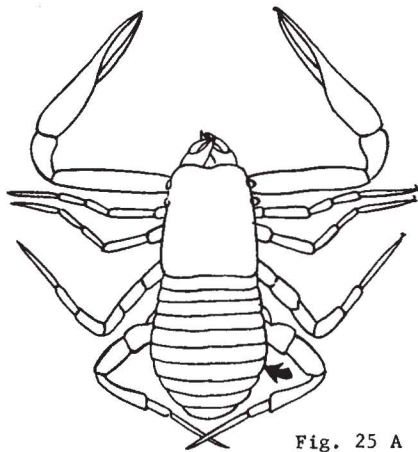


Fig. 25 A

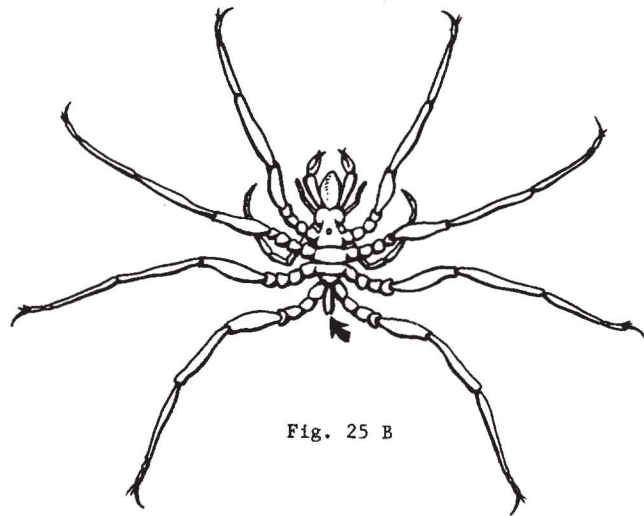


Fig. 25 B

26. Abdomen distinctly segmented (Fig. 26 A).....27  
 Abdomen not distinctly segmented (Fig. 26 B).....31

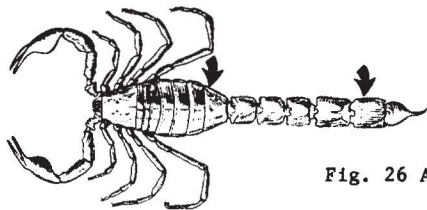


Fig. 26 A

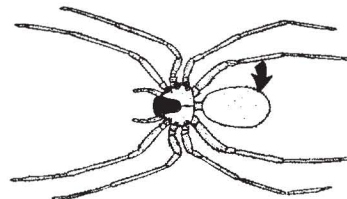


Fig. 26 B

27. Abdomen lengthened to form a long tail (Fig. 27 A).....28  
 Abdomen not lengthened to form a long tail (Fig. 27 B).....29

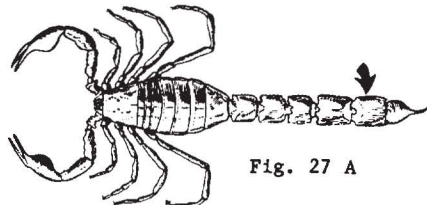


Fig. 27 A

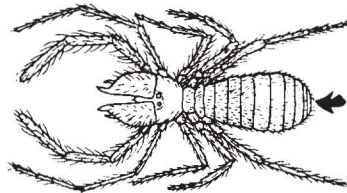


Fig. 27 B

28. Tail with stinger (Fig. 28 A). ORDER SCORPIONIDA.....SCORPION  
 Tail without stinger (Fig. 28 B). ORDER PEDIPALPIDA.....WHIP SCORPION

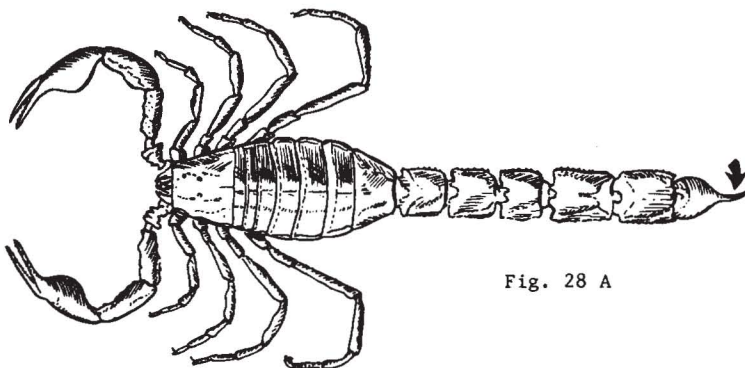


Fig. 28 A

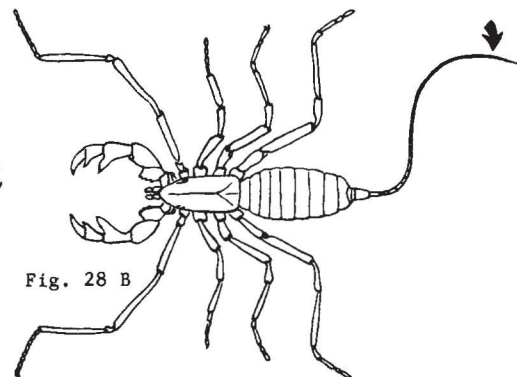


Fig. 28 B

29. With large pincer-like claws (Fig. 29 A). ORDER PSEUDOSCORPIONIDA.....PSEUDOSCORPION  
 Without large pincer-like claws (Fig. 29 B).....30

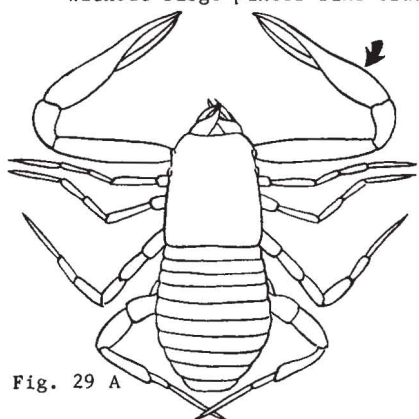


Fig. 29 A

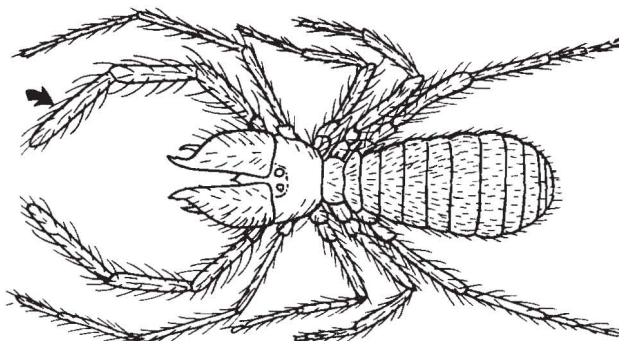


Fig. 29 B

30. Legs not longer than body (Fig. 30 A). ORDER SOLPUGIDA.....SUN SPIDER  
 Legs much longer than body (Fig. 30 B). ORDER PHALANGIDA.....DADDY LONG-LEG SPIDER

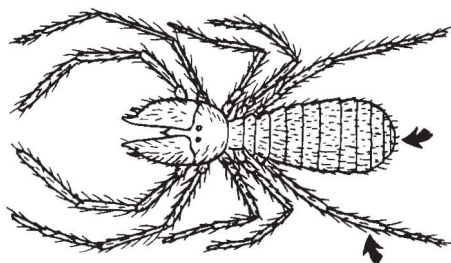


Fig. 30 A

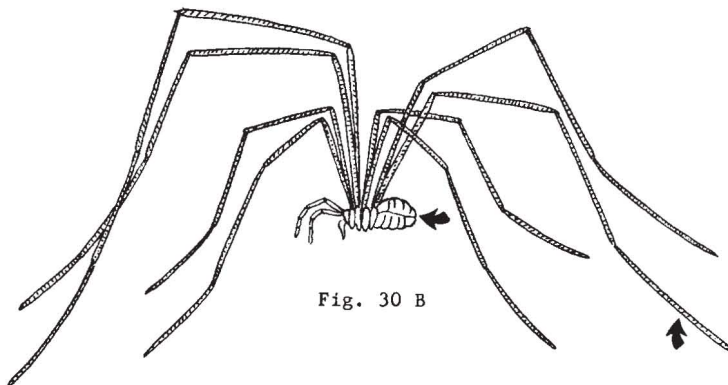


Fig. 30 B

31. Abdomen constricted to form a narrow waist (Fig. 31 A). ORDER ARANEIDA.....SPIDER  
 Abdomen not constricted (Fig. 31 B).....32

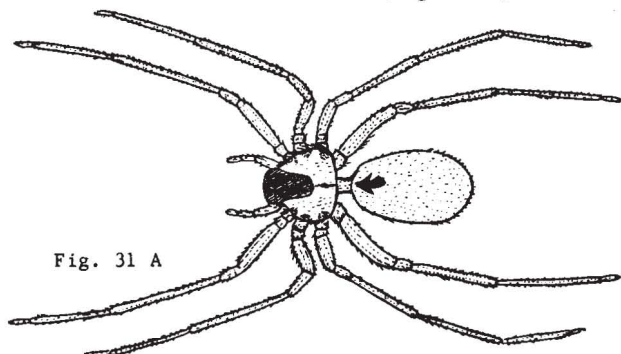


Fig. 31 A

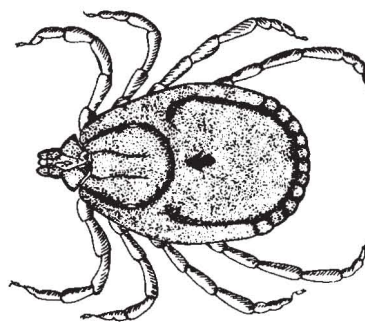


Fig. 31 B

32. Body with long hair; Haller's organ absent (Fig. 32 A). ORDER ACARINA.....MITE  
 Body without hair or short hair; Haller's organ present (Fig. 32 B). ORDER ACARINA.....TICK

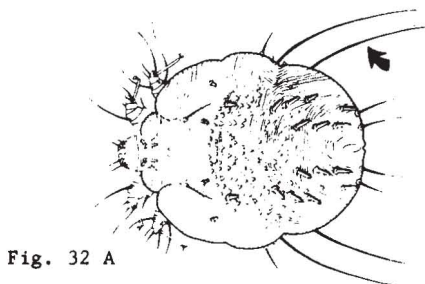


Fig. 32 A

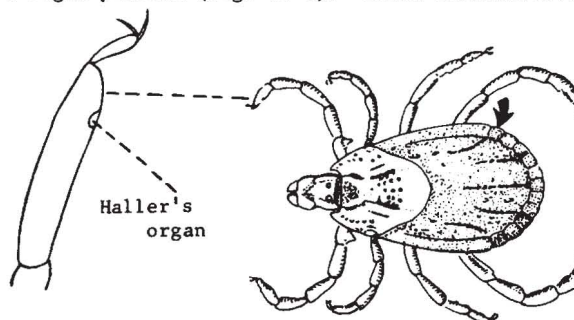


Fig. 32 B



33. Five to 7 pairs of walking legs (Fig. 33 A). CLASS CRUSTACEA.....34  
 More than 14 pairs of walking legs (Fig. 33 B).....36

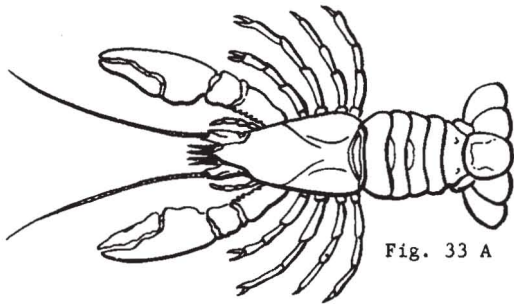


Fig. 33 A

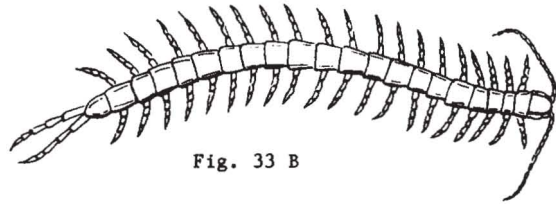


Fig. 33 B

34. Abdomen without appendages (Fig. 34 A). ORDER COPEPODA.....COPEPOD  
 Abdomen with appendages (Fig. 34 B).....35

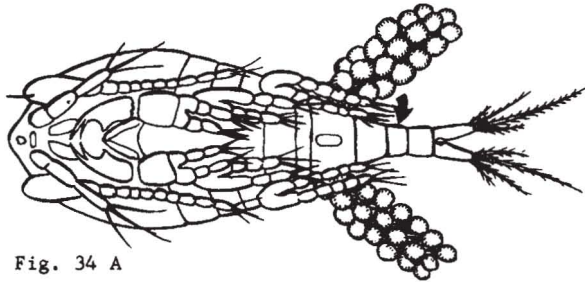


Fig. 34 A

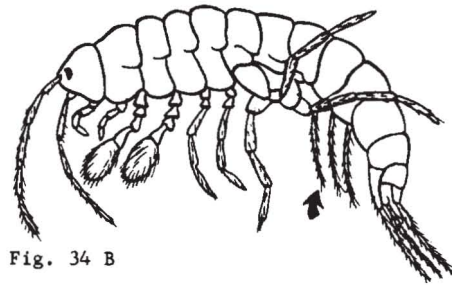


Fig. 34 B

35. Thorax covered with a fused plate; eyes, when present, on movable stalks (Fig. 35 A & B).....  
 ORDER DECAPODA.....LOBSTER, CRAB, CRAYFISH, SHRIMP, ETC.  
 Thorax not covered with a fused plate; eyes, when present, not on movable stalks (Fig. 35 C & D)...  
 ORDER ISOPODA.....SOWBUG, PILLBUG

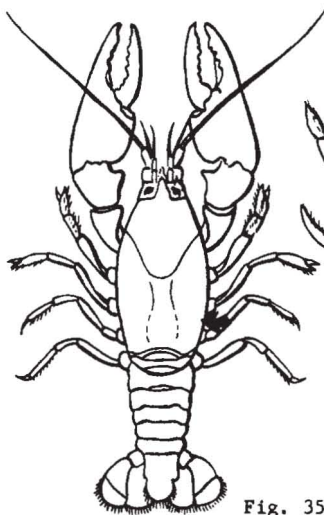


Fig. 35 A

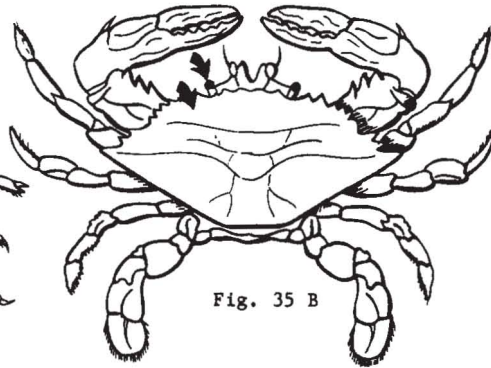


Fig. 35 B

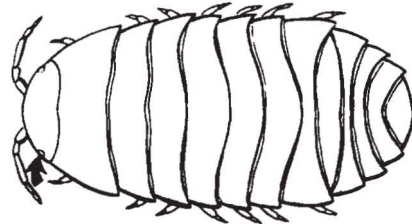


Fig. 35 C

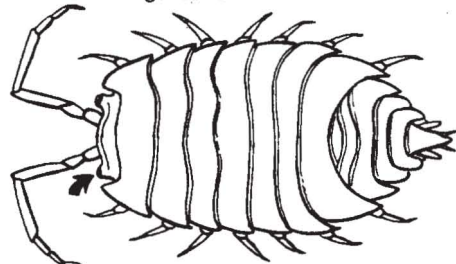


Fig. 35 D

36. One pair of legs per body segment (Fig. 36 A). CLASS CHILOPODA.....CENTIPEDE  
 Two pairs of legs per body segment (Fig. 36 B). CLASS DIPLOPODA.....MILLIPEDE

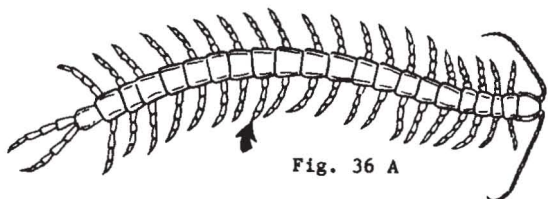


Fig. 36 A

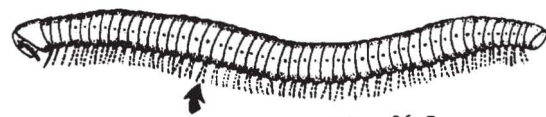
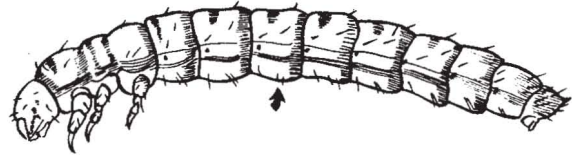
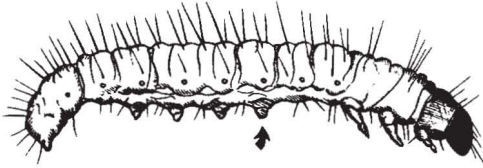


Fig. 36 B

**HOUSEHOLD AND STORED-FOOD PESTS: PICTORIAL KEY TO COMMON LARVAE**  
Chester J. Stojanovich & Harold George Scott

abdominal legs present

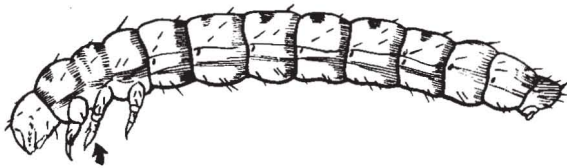
abdominal legs absent



**MOTH LARVAE**

thoracic legs present

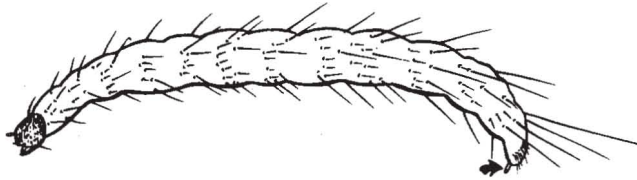
thoracic legs absent



**BEETLE, BORER & MEALWORM LARVAE**

with fleshy lobes at ends of body

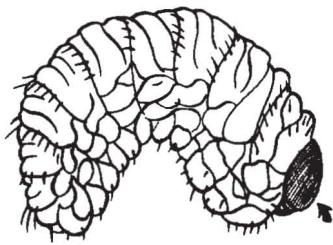
without fleshy lobes at ends of body



**FLEA LARVAE**

head capsule present

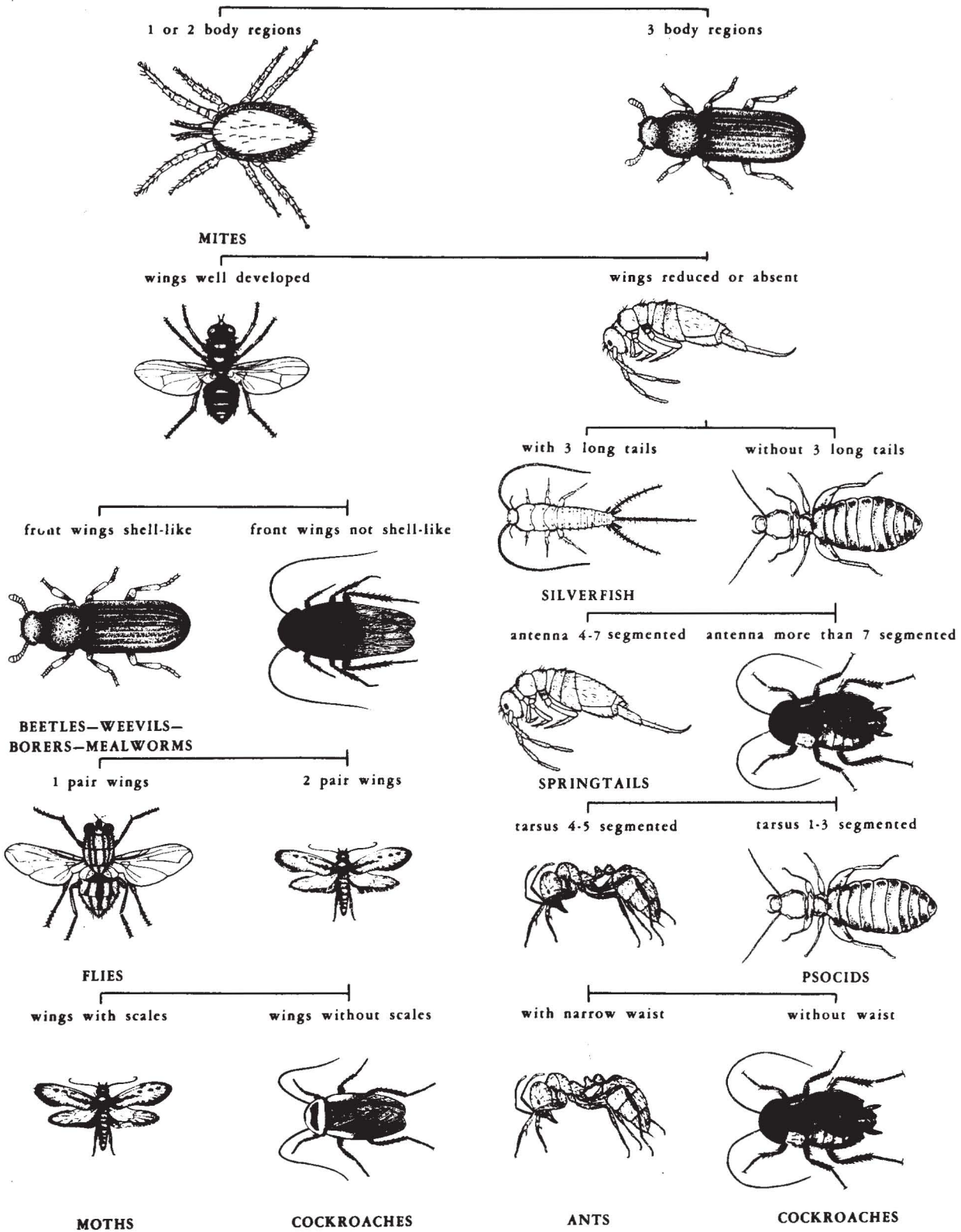
head capsule absent



**WEEVIL LARVAE**

**MUSCOID FLY LARVAE**

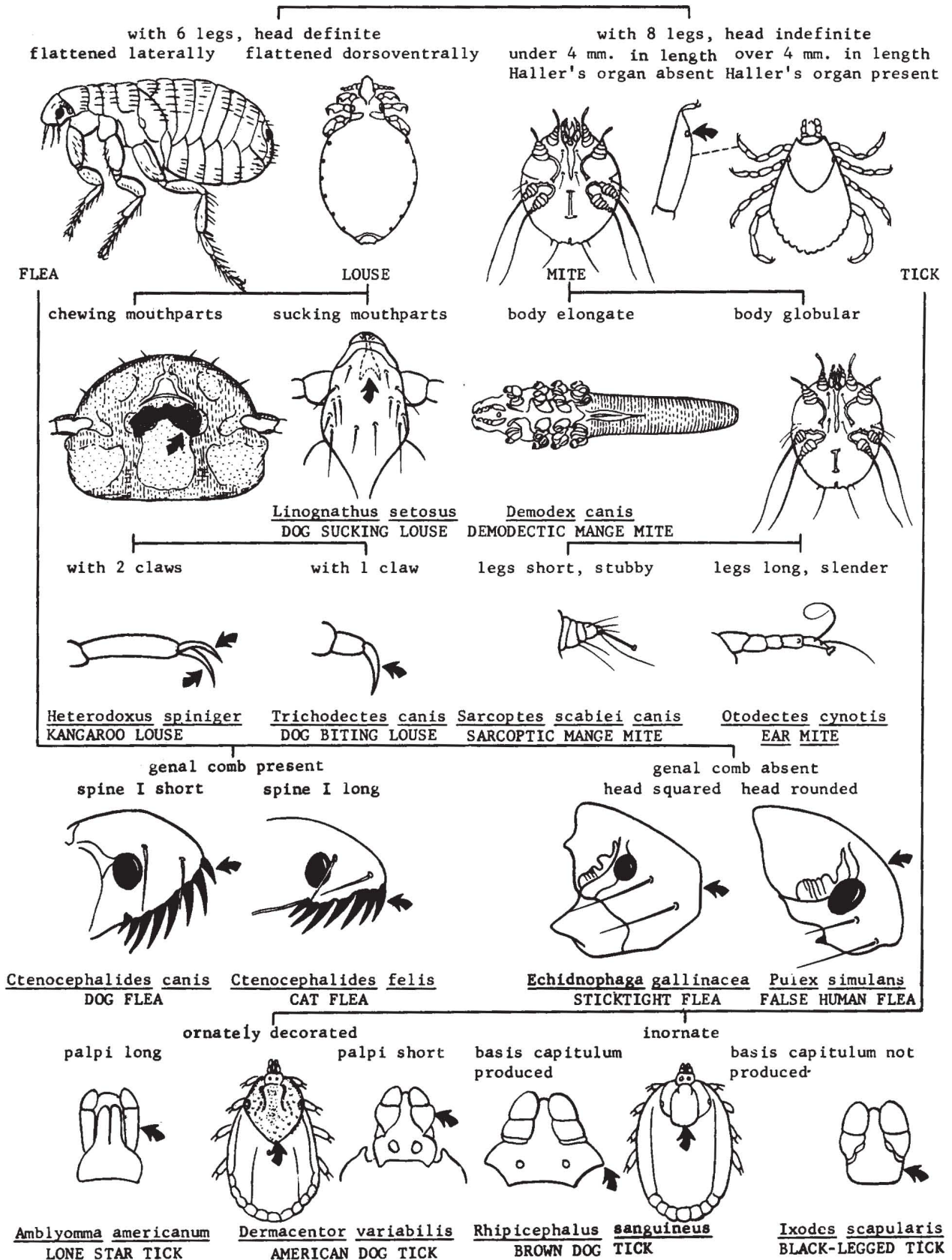
**HOUSEHOLD AND STORED-FOOD PESTS: KEY TO COMMON ADULTS**  
 Harold George Scott & Chester J. Stojanovich





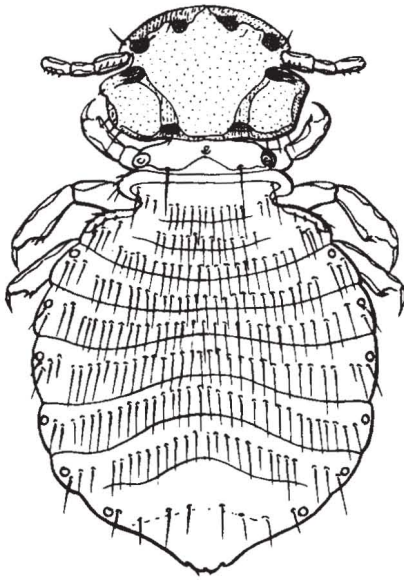
**ECTOPARASITES OF THE DOG: PICTORIAL KEY TO COMMON SPECIES**

Harold George Scott & Chester J. Stojanovich

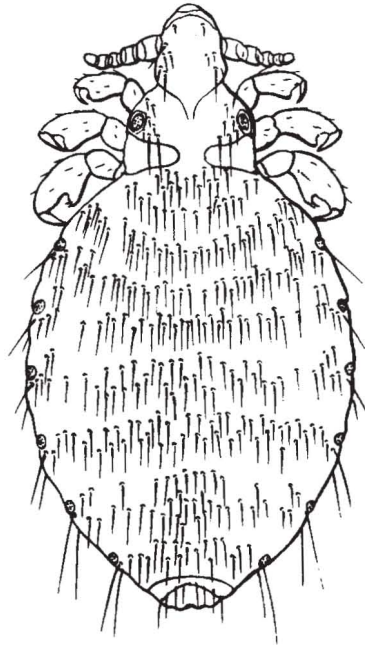


REPRESENTATIVE ECTOPARASITES OF THE DOG

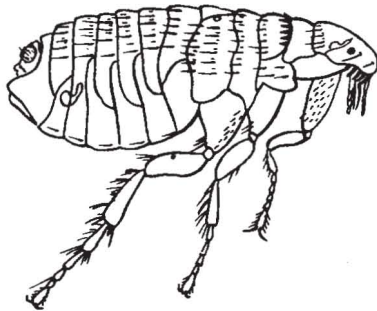
Chester J. Stojanovich



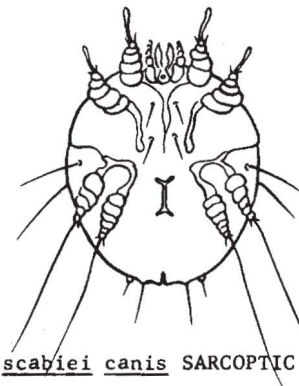
Trichodectes canis DOG BITING LOUSE



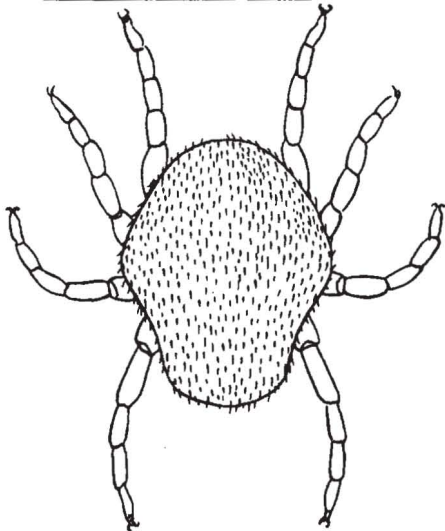
Linognathus setosus DOG SUCKING LOUSE



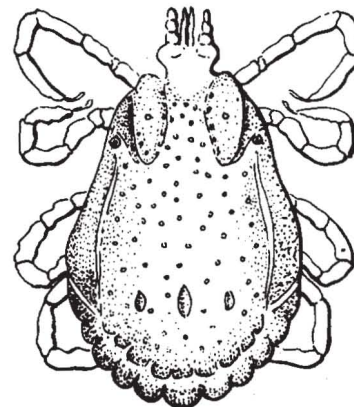
Ctenocephalides felis CAT FLEA



Sarcoptes scabiei canis SARCOPTIC MANGE MITE



Otobius megnini SPINOSE EAR TICK



Rhipicephalus sanguineus BROWN DOG TICK

**HUMAN ECTOPARASITES: KEY TO COMMON GROUPS**

Chester J. Stojanovich and Harold George Scott

