Key to Orders of Insects in British Columbia

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1. Body with 1 or 2 pairs of wings at least half as long as body (may be modified as rigid wing covers)2
- Body without wings, or with rudimentary or vestigial wings less than half body length..... 26

2. Forewings thick, strongly sclerotized or parchment-like at least at base, or vestigial..... 3
- Forewings membranous, sometimes covered with scales, but never vestigial 10

3. Forewings vestigial, scale-like or club-shaped; hindwings large and fan-shaped 4
- Forewings covering about half or more of abdomen, never scale-like or club-shaped 5

4. Hindlegs with femora enlarged for jumping; prothorax projecting posteriorly over wings and abdomen ..... ORTHOPTERA
- Hindlegs not modified for jumping; prothorax small, not projecting over abdomen STREPSIPTERA

5. Abdomen ending in large, strongly sclerotized forceps; forewings short, leaving at least 3 abdominal segments exposed..... DERMAPTERA
- Abdomen not ending in strongly, sclerotized forceps; forewings usually covering entire abdomen 6

6. Mouthparts in the form of a tube-shaped rostrum, attached to base of head and projecting backwards.....HEMIPTERA
- Mouthparts not in form of a rostrum, but mandibulate, and note attached to base of head and projecting backward 7

7. Forewings with extensive, reticulate venation; antennae usually with more than 12-segments, filiform and never clubbed..... 8
- Forewings without venation, usually strongly sclerotized and meeting in mid-line over abdomen when at rest; antennae rarely with more than 11 segments, frequently clubbed ..... COLEOPTERA

8. Hindlegs with femora enlarged for jumping ..... ORTHOPTERA
- Hindlegs with femora not enlarged for jumping..... 9

9. Forelegs raptorial .....MANTODEA
- Forelegs not raptorial .....BLATTODEA

10. With one pair of wings.....11
- With two pairs of wings 13

11. Abdomen with 1 to 3 long filaments on terminal segment; mouthparts vestigial 12
- Abdomen without long filaments on terminal segment; mouthparts rarely vestigial DIPTERA

12. Antennae long and filiform; wing with a single vein and without cells .....HEMIPTERA
- Antennae short and bristle-like; wing with closed cells and usually with numerous veins EPHEMEROPTERA

13. Abdomen with 2 or 3 terminal filaments 14
- Abdomen without 2 or 3 terminal filaments, at most with very short processes 15

14. Antennae long and filiform; hindwing larger than forewing; mouthparts mandibulate PLECOPTERA
- Antennae bristle-like; forewings larger than hindwings; mouthparts vestigial EPHEMEROPTERA

15. Tarsi with 1 to 4 segments..... 16
- Tarsi with 5 segments..... 20

16. Mouthparts in form of tube-shaped rostrum, attached to base of head and projecting backwards.....HEMIPTERA
- Mouthparts mandibulate 17

17. Antennae bristle-like, shorter than head ..... ODONATA
- Antennae filiform, longer than head 18

18. Tarsi with 4 segments..... ISOPTERA
- Tarsi with 2 or 3 segments 19

19. Wings linear, narrow, with no more than 2 veins; head cone-shaped .....THYSANOPTERA
Wings oval, with at least 4 longitudinal veins; head not cone-shaped.....PSOCOPTERA

20. Forewings densely covered with scales or setae..... 21
- Forewings bare, at most with marginal setae..... 22

21. Forewings covered with scales; mouthparts usually a coiled proboscis .....LEPIDOPTERA
- Forewings covered with setae; mouthparts mandibulate .....TRICHOPTERA

22. Forewings about 1.5 times longer than hindwings; forewings and hindwings usually markedly different in shape and venation; abdomen usually strongly constricted at base HYMENOPTERA
- Forewings and hindwings similar in size, shape and venation; abdomen not constricted at base 23

23. Head prolonged ventrally and beak-like; wings with 1 to 3 cross veins in costal margin MECOPTERA
- Head not prolonged ventrally and beak-like; wings usually with numerous, cross veins in costal margin..... 24

24. Hindwings broader at base than forewings; veins not bifurcating near wing margin..... 25
- Hindwings at base narrower, less than or equal to forewing breadth; at least radial vein bifurcating just before wing margin.....NEUROPTERA

25. Wings with pterostigma; pronotum at least 3 times longer than broad RAPHIDIOPTERA
- Wings without pterostigma; pronotum quadrate, not 3 times longer than broad MEGALOPTERA

26. Legs absent or reduced to unsegmented papillae; and shorter than one-fifth body width 27
- Legs with 4 to 5 distinct segments, almost always ending in 1 or 2 claws..... 28

27. Mouthparts in form of tubular rostrum (Fig.); antennae and eyes usually absent; body segmentation indistinct (Fig.); sessile plant feeders, frequently covered by a waxy or cottony shell.....HEMIPTERA
- Mouthparts mandibulate or internal, never in the form of a tubular-rostrum; eyes and antennae present or absent; body segmentation distinct, but seldom with distinct sclerotizated protectionLegless END

28. Legs clawless or with a single claw..... 29
- At least middle legs terminating in 2 claws..... 41

29. Head with large compound eyes almost always present laterally; ocelli frequently present on vertex 30
- Head with compound eyes absent or vestigial, lateral ocelli often present; ocelli absent from vertex..... 33

30. Mouthparts enclosed in tubular rostrum; cerci absent .....HEMIPTERA
- Mouthparts mandibulate, never enclosed in a tubular rostrum; cerci present or absent..... 31

31. Terminal abdominal segment with 2 or 3 long filaments; usually with leaf-life abdominal gills; antennae multi-articulate and slender; long-legged and aquatic (Fig.)..... EPHEMEROPTERA naiads
- Terminal abdominal segment without filaments; abdominal gills absent; terrestrial 32

32. Body caterpillar-shaped or grub-like with short, thick legs (Fig.); tarsi with 1 segment ..... MECOPTERA larvae
- Body slender, elongate, with long, slender legs (Fig.); tarsi 4 or 5 segmented ..... MECOPTERA adults

33. Mouthparts in form of a tubular rostrum; body segmentation indistinct; antennae and eyes usually absent; plant feeders frequently covered by a waxy or cottony shell..... HEMIPTERA
- Mouthparts mandibulate or concealed in head capsule; body segmentation usually distinct..... 34

34. Antennae with 2 or more segments..... 36
- Antennae absent..... 35

35. Tarsus terminating in single claw: lateral ocelli absent; body elongate and cylindrical (Fig.); pale and soil dwelling .....PROTURA
- Tarsus without claw; lateral ocelli (stemmata) large, usually set in pigmented patches; body fusiform (Fig.); minute insects found in flowers or foliage..... STREPSIPTERA

36. Abdomen with only 6 segments (Fig.); segments I, III and IV usually with median unpaired appendages..... COLLEMBOLA
- Abdomen with 8 to 11 segments (Fig.)..... 37

37. Tarsus and claws chelate (Fig.); abdomen without appendages; ectoparasites on birds and mammals..... PHTHIRAPTERA
- Tarsus and claws usually fused, very rarely chelate; abdomen with or without appendages; body shape variable..... 38

38. Abdomen with unsegmented, paired walking appendages on some preterminal segments (Fig.); body caterpillar-shaped (Fig.)..... 39
- Abdomen without walking appendages on preterminal segments (Fig.); not usually caterpillar-like 40

39. Abdominal appendages bearing rows, circles or patches of short, curved spines (crochets) (Fig.) LEPIDOPTERA larvae
- Abdominal appendages without crochets (Fig.) .....HYMENOPTERA larvae

40. Abdomen with ventrally directed hooks on last segment (Fig.); thoracic legs with trochanters 2-segmented; aquatic larvae usually dwelling in tubular cases..... TRICHOPTERA larva
- Abdomen without appendages or with dorsal or lateral appendages without terminal hooks; without ventrally directed hooks on last abdominal segment.....COLEOPTERA larvae

41. Hindlegs modified for jumping, with femur greatly enlarged (Fig.) ..... ORTHOPTERA
- Hindlegs similar to middle legs 42

42. Last abdominal segment bearing cerci, either single-segmented or multi-articulate..... 43
- Last abdominal segment without cerci..... 54

43. Last abdominal segment with median, multi-articulate filament (Fig.); 1-segmented styli present on al least abdominal segments 7 to 9..... 44
- Last abdominal segment without median filament; abdominal segments 7 to 9 without styli 45

44. Head with large, compound eyes contiguous dorsally; maxillary palp with 7 segments; body cylindrical (Fig.).....ARCHEOGNATHA
- Head with widely separated lateral ocelli or without eyes; maxillary palp with 5 segments; body usually dorso-ventrally flattened (Fig.).....THYSANURA

45. Mouthparts modified as a rostrum or haustellum, or projecting beak-like below the head (Fig.); labial palp with 2 segments..... 46
- Mouthparts short and mandibulate, never forming a beak or haustellum; labial palp with 3 segments..... 47

46. Mouthparts modified as a rostrum or haustellum; metathorax frequently with halteres; antennae frequently with 5 or fewer segments ..... DIPTERA
- Mouthparts with elongate mandibles and maxillae projecting beak-like; halteres absent; antennae with at least 12 segments ..... MECOPTERA

47. Tarsi with 5 segments 48
- Tarsi with 1 to 4 segments 50

48. Forelegs raptorial (Fig.) ..... MANTODEA
- Forelegs not raptorial 49

49. Head prognathous (Fig.) ..... GRYLLOBLATTODEA
- Head hypognathous (Fig.) ..... BLATTODEA

50. Tarsi with 1 or 2 segments ..... DIPLURA
- Tarsi with 3 or 4 segments 51

51. Cerci forceps-shaped, strongly sclerotized (Fig.) ..... DERMAPTERA
- Cerci not forceps-shaped 52

52. Tarsi 3 segmented; aquatic 53
- Tarsi 4 segmented; terrestrial ..... ISOPTERA

53. Antennae more than half as long as body (Fig.); labium small, without movable, apical teeth PLECOPTERA
- Antennae much less than half as long as body (Fig.); labium jointed, with large, movable apical teeth ODONATA

54. Tarsi with 1 to 3 segments 55
- Tarsi with 5 segments 58

55. Mouthparts enclosed in a long, slender rostrum projecting beneath the head (Fig.); maxillary and labial palps absent ..... HEMIPTERA
- Mouthparts not in the form of a rostrum; maxillary and labial palps usually present 56

56. Antennae longer than head, with at least 5 segments, usually with more than 20 segments 57
- Antennae shorter than head, with 3 to 7 segments 62

57. Head cone-shaped, directed ventrally or posteriorly; antennae with 4 to 9 segments; body elongate, slender (Fig.) ..... THYSANOPTERA
- Head not cone-shaped; antennae almost always with more than 12 segments; body stout (Fig.) PSCOPTERA

58. Abdomen strongly constricted at base; antennae frequently elbowed ..... HYMENOPTERA
- Abdomen not constricted at base; antennae not elbowed 59

59. Body densely covered with scales or long setae; mouthparts usually in the form of a coiled proboscis (sometimes vestigial) (Fig.) ..... LEPIDOPTERA

- Body bare or sparsely covered with setae, rarely with scales; mouthparts not a coiled proboscis 60

60. Mouthparts a slender tube-like rostrum or a haustellum; antennae usually with 3 or 4 segments 61
- Mouthparts mandibulate, never forming a rostrum or haustellum; antennae almost always with 9 to 11 segments ..... COLEOPTERA

61. Body strongly flattened laterally; head and thorax usually bearing large flattened, backward directed spines (Fig.) ..... SIPHONAPTERA
- Body cylindrical or flattened dorso-ventrally; head and thorax not bearing special spines (Fig.) DIPTERA

62. Antennae usually concealed in grooves; body flattened, with reduced eyes and pigmentation; ectoparasitic on birds and mammals ..... PHTHIRAPTERA
- Antennae free; body with long legs, large compound eyes and darkly pigmented; free-living and aquatic ODONATA