## COMMON INSECT ORDERS
### AND GENERAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Order</th>
<th>Common name</th>
<th>Metamorphosis</th>
<th>Mouthparts</th>
<th>Key characteristics</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 Blattodea</td>
<td>Cockroach</td>
<td>Paurometabolous</td>
<td>Chewing</td>
<td>Flattened body, head concealed by pronotum</td>
<td>Pest</td>
</tr>
<tr>
<td>02 Coleoptera</td>
<td>Beetles</td>
<td>Holometabolous</td>
<td>Chewing</td>
<td>Elytra are hard and shield-like, meeting in a straight midline</td>
<td>Pest, beneficial, and variable</td>
</tr>
<tr>
<td>03 Collembola</td>
<td>Springtail</td>
<td>Ametabolous</td>
<td>Chewing</td>
<td>Minute, wingless, with spring-like apparatus on abdomen</td>
<td>Variable</td>
</tr>
<tr>
<td>04 Dermaptera</td>
<td>Earwig</td>
<td>Paurometabolous</td>
<td>Chewing</td>
<td>Forceps-like cerci at the tip of the abdomen</td>
<td>Beneficial</td>
</tr>
<tr>
<td>05 Diptera</td>
<td>Fly, midge, mosquito, etc.</td>
<td>Holometabolous</td>
<td>Piercing-sucking, cutting-sponging, sponging, chewing, cutting-lapping</td>
<td>Second pair of wings reduced in size</td>
<td>Pest, beneficial, or variable</td>
</tr>
<tr>
<td>06 Ephemeroptera</td>
<td>Mayfly</td>
<td>Hemimetabolous</td>
<td>Vestigial</td>
<td>10-segmented abdomen</td>
<td>Beneficial</td>
</tr>
<tr>
<td>07 Hemiptera</td>
<td>True bugs (assassin, damsel, minute, toad, etc.)</td>
<td>Paurometabolous</td>
<td>Piercing-sucking</td>
<td>Beak attached near front of head, hemelytra front wings</td>
<td>Beneficial or Pest</td>
</tr>
</tbody>
</table>
(08) **Order: Homoptera**
Common name: Cicada, hopper, scale, aphid, etc.
Metamorphosis: Paurometabolous
Mouthparts: Piercing-sucking
Key characteristics: Beak attached near the rear of the head
Significance: Pest or variable

(09) **Order: Hymenoptera**
Common name: Ant, bee, wasp
Metamorphosis: Holometabolous
Mouthparts: Chewing, chewing-lapping
Key characteristics: Membranous wings, front pair larger than rear
Significance: Pest, beneficial, or variable

(10) **Order: Isoptera**
Common name: Termite
Metamorphosis: Paurometabolous
Mouthparts: Chewing
Key characteristics: Bead-like antennae
Significance: Pest

(11) **Order: Lepidoptera**
Common name: Butterfly and moth
Metamorphosis: Holometabolous
Mouthparts: Siphoning, chewing
Key characteristics: Wings covered with scales
Significance: Pest, beneficial, or variable

(12) **Order: Mantodea**
Common name: Praying mantis
Metamorphosis: Paurometabolous
Mouthparts: Chewing
Key characteristics: Raptorial front legs
Significance: Beneficial

(13) **Order: Mecoptera**
Common name: Scorpionfly
Metamorphosis: Holometabolous
Mouthparts: Chewing
Key characteristics: Head prolonged below the eyes as a beak
Significance: Beneficial

(14) **Order: Neuroptera**
Common name: Lacewing, antlion, dobsonfly, etc.
Metamorphosis: Holometabolous
Mouthparts: Chewing
Key characteristics: Membranous wings with numerous veins
Significance: Beneficial

(15) **Order: Odonata**
Common name: Dragonfly and damselfly
Metamorphosis: Hemimetabolous
Mouthparts: Chewing
Key characteristics: Large faceted compound eyes occupy most of the head, 4 elongate wings
Significance: Beneficial
(16) **Order: Orthoptera**
Common name: Grasshopper, cricket, katydid
Metamorphosis: Paurometabolous
Mouthparts: Chewing
Key characteristics: Front wings parchment-like, long antennae, legs modified for jumping
Significance: Variable or Pest

(17) **Order: Phasmatodea**
Common name: Walkingstick
Metamorphosis: Paurometabolous
Mouthparts: Chewing
Key characteristics: Elongate sticklike body
Significance: Variable

(18) **Order: Phthiraptera**
Common name: Sucking and biting louse
Metamorphosis: Paurometabolous
Mouthparts: Piercing-sucking and chewing
Key characteristics: Wingless, flattened, crab-like legs, modified for clinging to host
Significance: Pest

(19) **Order: Plecoptera**
Common name: Stonefly
Metamorphosis: Hemimetabolous
Mouthparts: Chewing
Key characteristics: Cerci present, may be long or short
Significance: Beneficial

(20) **Order: Siphonaptera**
Common name: Flea
Metamorphosis: Holometabolous
Mouthparts: Piercing-sucking
Key characteristics: Wingless, flattened laterally, jumping hind legs
Significance: Pest

(21) **Order: Thysanoptera**
Common name: Thrips
Metamorphosis: Paurometabolous
Mouthparts: Rasping - sucking
Key characteristics: Minute, wingless or winged with 4 bristle-like wings
Significance: Variable

(22) **Order: Thysanura**
Common name: Silverfish
Metamorphosis: Ametabolous
Mouthparts: Chewing
Key characteristics: Wingless with 3 thread-like filaments at the tip of the abdomen
Significance: Pest

(23) **Order: non-insect**