

A KEY TO THE LARVAE OF THE MORE COMMONLY FOUND STREAM INSECTS

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This key has been constructed using characters which may be used in the field, and so ready identifications of the insects may be made without the aid of a microscope.

The principal orders of insects found in running water are the :-

Ephemeroptera	Mayflies
Plecoptera	Stoneflies
Trichoptera	Caddis flies
Neuroptera	Alderwings
Diptera	Two-winged flies
Coleoptera	Beetles

The important families and genera of these orders are keyed out below :-

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|----|---|----|
| 1. | (a) Wing pads develop externally | 2. |
| | (b) No wing pads develop externally | 9. |
| 2. | (a) Abdomen with three posterior processes and tracheal gills - order Ephemeroptera | 3. |
| | (b) Abdomen with two posterior processes - order Plecoptera | 7. |
| 3. | (a) Feathery gills and tusk-like mandibles - family Ichthyotidae | 4. |
| | (b) Streamlined torpedo-like form or hunch backed with stiff erect gills - family Siphonuridae | 5. |
| | (c) Flattened forms - family Leptophlebiidae | 6. |
| 4. | genus <u>Ichthyotus</u> (Fig. 1). | |
| 5. | (a) Body fish-like, head small, active - genus <u>Nesomaletus</u> . (Fig. 2). | |
| | (b) Body dorso-ventrally flattened, gills held across back - genus <u>Omicigaster</u> . (Fig. 3). | |
| | (c) Head very large, yellow colouration - genus <u>Amelotopsis</u> (Fig. 4). | |
| | (d) Middle caudal filament short, gills forked, spiny and erect - genus <u>Coloburiscus</u> . (Fig. 5). | |
| 6. | (a) Gills double - genus <u>Zephlebia</u> , and sub-genus <u>Atalophlebioides</u> (Fig. 6). | |
| | (b) Gills single - genus <u>Dalassidium</u> (Fig. 7). | |
| 7. | (a) Large green larva, abdominal gills present - family Euthenellidae genus <u>Stenoperla</u> . (Fig. 8). | |
| | (b) Large black larvae with very short cerci - family Austroperlidae genus <u>Austroperla</u> (Fig. 9). | |
| | (c) Smaller larvae with anal gills - family Gripopterygidae | 8. |
| 8. | (a) Flattened, with antennae and cerci longer than the body - genus <u>Zelandoperla</u> . (Fig. 10). | |
| | (b) Active, cigar shaped larvae with cerci shorter than the body - genus <u>Nesoperla</u> . (Fig. 11). | |



Fig. 1

Fig. 5

Fig. 1

Fig. 10

Fig. 6

Fig. 2

Fig. 11

Fig. 7

Fig. 3

Fig. 12

Fig. 8

Fig. 4

9. (a) Large, dark larvae with biting mouthparts and spike-like abdominal gills - order Neuroptera, family Megaloptera, genus Archichauliodes (fig. 12).
 (b) Abdomen with a pair of prolegs posteriorly. Usually with a case attached - order Trichoptera. 10.
 (c) Larva with no legs and head reduced - order Diptera 11.
 (d) Abdomen with no appendages. Anal gills contractile - order Coleoptera 14.
10. (a) Free swimming larva with abdominal gills - family Hydropsychidae, genus Hydropsyche (fig. 13).
 (b) Free swimming larva without abdominal gills. First pair of walking legs chelate - family Rhyacophilidae (fig. 14).
 (c) Free swimming larva without abdominal gills. First pair of walking legs not chelate - family Polycentropidae (fig. 15).
 (d) Small larva in transparent, purse-like case - family Hydroptilidae (fig. 16).
 (e) Case constructed of small pebbles or sand grains - family Sericoatomatidae 11.
 (f) Case constructed of organic matter particularly sticks - family Leptoceridae 13.
11. (a) Case in the form of a helix - snail-like - genus Helicopsyche (fig. 17).
 (b) Case smooth and horn like - genus Clinga, (fig. 18).
12. Case an inch or more in length, generally made from a twig - genus Triplectides (fig. 19).
13. (a) Posterior end with lobes and gills - family Tipulidae (fig. 20).
 (b) Larva U-shaped when at rest - family Dixidae. (fig. 21).
 (c) Larva with a pair of prolegs at each end of the body - family Chironomidae (Tendipedidae). (fig. 22).
 (d) Broad posterior end of abdomen. Single anterior proleg - family Simuliidae (fig. 23).
14. (a) Antennae longer than the body - family Helicidae (fig. 24).
 (b) Cigar shaped larva - family Elmidae (fig. 25).

