
Dragonfly and Damselfly Nymphs (*Odonata*)

Some families of Odonata have common names. These names are given in the key immediately before the Latin name.

- a. Abdomen terminates in 3 leaf-like gills; body form is usually elongate, 4-5 times longer than wide
 . . . *Damselflies*, suborder **Zygoptera**...2

At rest, the adults of these insects hold their wings folded against each other behind and above the back. All are predators.

- 1** b. Abdomen terminates in sharp, stiff, pointed spine-like processes; body form is usually rounded or curved on the sides, 1 1/2-3 times longer than wide
 . . . *Dragonflies*, suborder **Anisoptera**...4

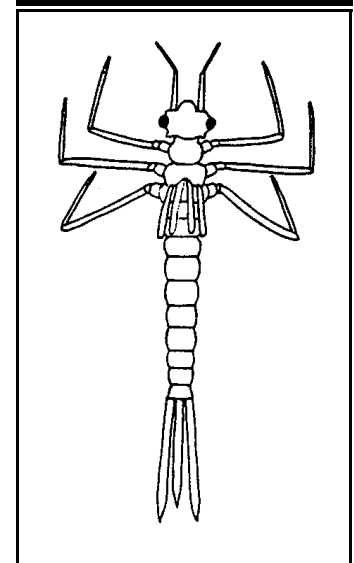
At rest, the adults of these insects hold their wings straight out to the sides of the body. All are predators.

- a. Basal segment (closest to the head) of antennae as long or longer than all other segments combined; prementum (lower part of hinged jaw) divided by deep gap at furthest end; gills triangular in cross section
 **Calopterygidae**

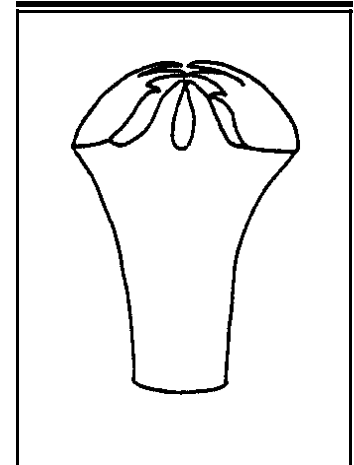
- 2** *The Calopterygidae are found in streams of all sizes, usually among vegetation and debris.*
 [M/1/2/C]

- b. Basal antennal segment shorter than other segments combined; prementum barely divided, if at all; gills flat or somewhat plump but not triangular
 3
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Calopterygidae (2a)



Premenum of damselfly nymph (Calopterygidae): view from underside of head (2a)



- a. Prementum narrows abruptly to an elongate basal half; when closed, hinge of prementum is at or behind mesocoxae (base of middle legs)
 **Lestidae**

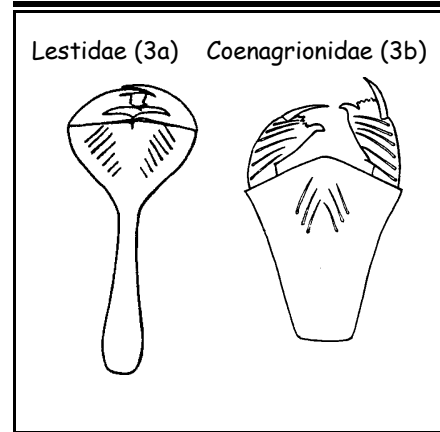
Lestidae mostly live among vegetation of lakes and marshes, though they are sometimes found in the slow waters of large streams and rivers.
 [M/X/2/C]

3

- b. Prementum narrows gradually from front to back; hinge of prementum reaches to procoxae (base of front legs) at most
 **Coenagrionidae**

Coenagrionidae are usually found among vegetation in lakes, ponds, and marshes, though some species are found in streams. They stalk and ambush small invertebrate prey.
 [H/4/8/C]

Damselfly prementum (3a/3b)



- a. Prementum nearly flat with no setae (hairs) on inside surface; palpal lobes (pincers) also flat and usually without setae
 5

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- b. Prementum rounded in front of face and usually with setae on inside surface; palpal lobes also rounded and always with stout setae
 7

- a. Antennae with 4 segments (the 4th can be very small); pro- and mesotarsi (front and middle feet) with 2 segments
 **Gomphidae**

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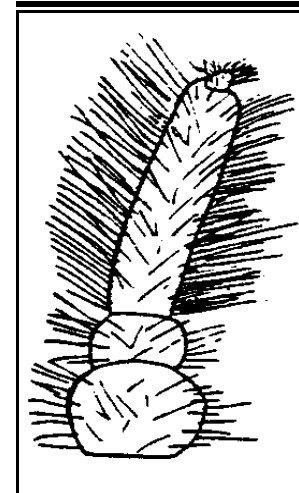
Gomphidae are relatively shorter and broader in the abdomen than Aeshnidae or Petaluridae. They can be found in streams or lakes, where they burrow into sediments to ambush prey.
 [M/8/9/C]

- b. Antennae with 6 or 7 segments; pro- and mesotarsi with 3 segments
 6

Lestidae (3a)



Gomphidae antenna with 4 segments (5a)



Gomphidae (5a)



- a. Antennae slender and with few if any hairs
..... **Darners, Aeshnidae**

The Aeshnidae are large and elongate compared to other dragonflies. They commonly live among vegetation in lakes, ponds and marshes, though are also found in streams. [M/2/7/C]

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- b. Antennae stout and hairy
..... **Petaluridae**

Petaluridae are relatively rare, but can be found in bogs, seeps, and among the mossy margins of cold streams.

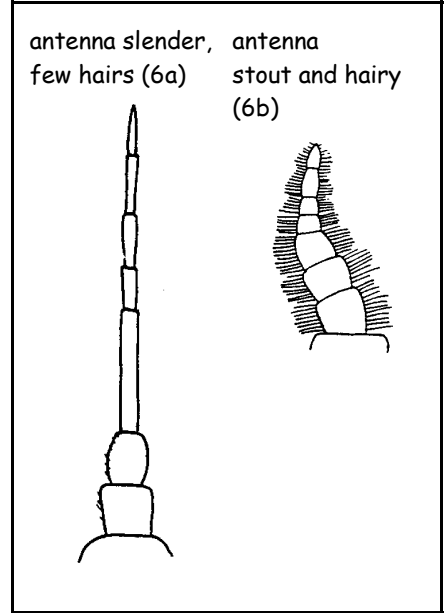
- a. Palpal lobes with large and irregular teeth, without setae; ligula (front and center of prementum) projecting forward and with cleft
..... **Biddies, Flying Adders, Cordulegastridae**

7

The Cordulegastridae live in small streams where they ambush prey from concealed positions in silt at the upstream edges of pools. [L/1/3/C]

- b. Palpal lobes with small, regularly spaced teeth with setae or nearly flat; ligula not as above
..... **8**

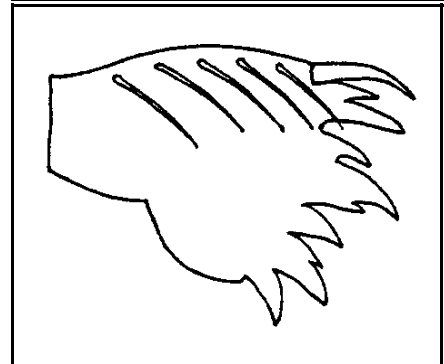
Antennae of Aeshnidae and Petaluridae (6a/6b)



Aeshnidae (6a)



Cordulegastridae palpal lobes with irregular teeth (7a)



- a. Teeth of palpal lobes approximately $\frac{1}{4}$ to $\frac{1}{2}$ as high as they are wide; lateral spines on abdominal segment 8 shorter than overall length of segment 9

..... **Corduliidae***

[L/2/8/C]

- b. Teeth of palpal lobes approximately $\frac{1}{10}$ to $\frac{1}{6}$ as high as they are wide; lateral spines on abdominal segment 8 longer than overall length of segment 9

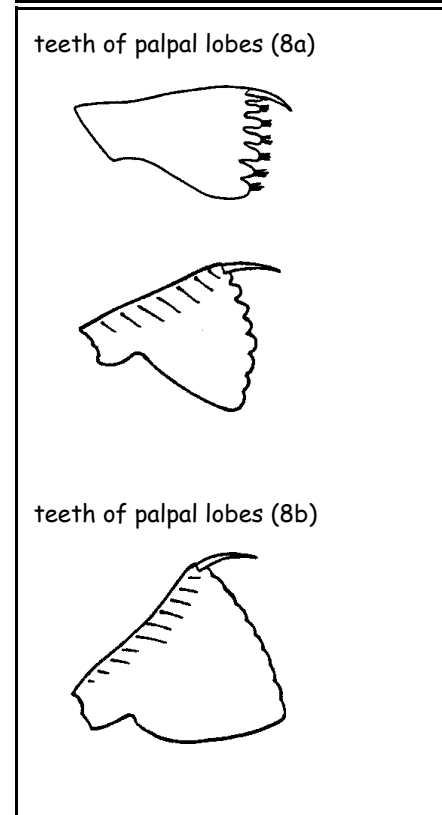
8

..... **Libellulidae***

[H/2/13/C]

** Couplet 8 is an uncertain descriptor. Some taxonomists use a single family Libellulidae, with subfamilies Corduliinae and Macromiinae. Macromiinae were once considered a separate family distinguishable by long legs and a horn between the eyes. To be confident, list any animal reaching couplet 8 as "Libellulidae and Corduliidae" or identify to genus using a key such as Merritt and Cummins (1996). Within this group, the diversity of habitats and habits is extensive.*

**Corduliidae and Libellulidae
teeth of palpal lobes (8a/8b)**



Libellulidae

(8b)

