

Key to Larvae of British Stoneflies (Plecoptera)

J. M. Elliott

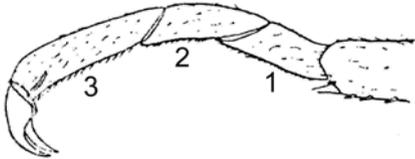


Family level identification

Examine tarsus (3 segments next to claws of leg) of hind leg. This is best achieved by removing the hind leg and mounting it flat on a slide with covering slip

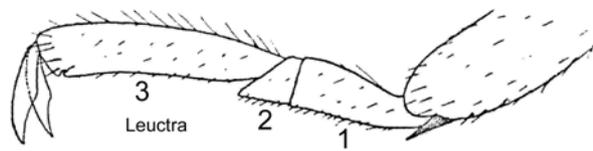
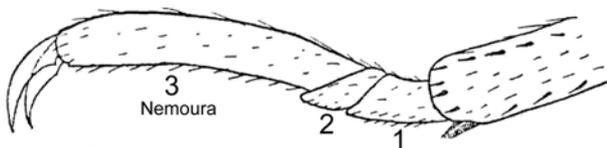
- Each segment longer than preceding:

See family: **TAENIOPTERYGIDAE**



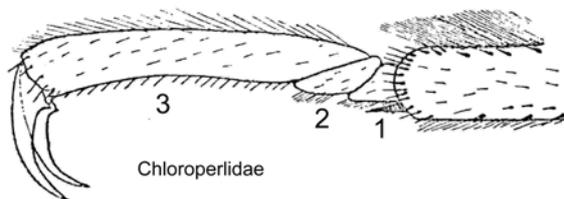
- Second segment shorter than first and third:

See herbivorous families: **NEMOURIDAE, LEUCTRIDAE, CAPNIIDAE**



- Third segment much longer than first and second:

See carnivorous families: **PERLIDAE, CHLOROPERLIDAE, PERLODIDAE**



Genus/species level identification

TAENIOPTERYGIDAE

- 3 segmented filamentous gills at base of each leg
- No gills

Taeniopteryx nebulosa

Rhabdiopteryx acuminata or
Brachyptera (2 spp.)

Herbivorous families: NEMOURIDAE, LEUCTRIDAE, CAPNIIDAE

NEMOURIDAE (4 genera): When hind leg stretched back alongside abdomen, leg over-reaches tip of abdomen. Stout nymphs with wing pads set obliquely to the body.

- Two bunches of gills present at throat (1 each side) in 2 genera;

- 3 sausage-shaped gills in each bunch
- 5-8 filamentous gills in each bunch

Protonemura (3 spp.)

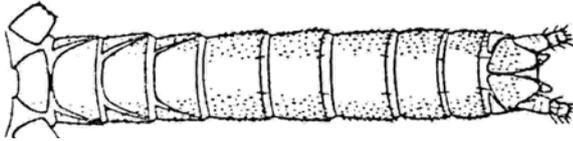
Amphinemura (2 spp.)

- No gills

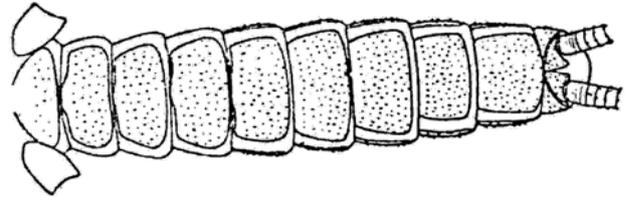
Nemoura (5 spp.) and *Nemurella picteti*

LEUCTRIDAE, CAPNIIDAE: Cylindrical elongate nymphs with wing pads set parallel to body. Hind leg does not reach tip of abdomen.

LEUCTRIDAE (all genus *Leuctra*, 6 spp.): abdominal segments 1- 4 only are divided into separate dorsal and ventral plates, other segments with continuous plate around body. Paraprocts longer than wide.



CAPNIIDAE (all genus *Capnia*, 3 spp.): abdominal segments 1-9 divided into separate dorsal and ventral plates (tergum and sternum). Paraprocts wider than long

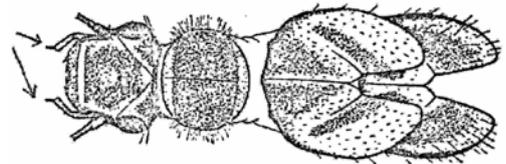


Carnivorous families: PERLIDAE, CHLOROPERLIDAE, PERLODIDAE

PERLIDAE (2 genera): tufts of gills on thorax near base of legs. **Examine dorsal plate on thorax over 1st pair of legs (pronotum):**

- width more than twice length, (last dorsal plate on abdomen dark) ***Dinocras cephalotes***
- width less than twice length, (last abdominal plate yellow) ***Perla bipunctata***

CHLOROPERLIDAE (all genus *Chloroperla*, (2 spp.): long and thin (often green or yellow). Last segment of palp reduced Crescent-shaped wing pads



PERLODIDAE (4 genera, *Perlodes* (1 sp), *Isoperla* (2 spp), *Diura* (1 sp), *Isogenus* (1 sp)): none of characters given above for PERLIDAE and CHLOROPERLIDAE. Move hind leg to side and examine side of abdomen:

- Abdominal segments 1-4 divided into separate dorsal and ventral plates



Perlodes is found in stony rivers and streams

Perlodes microcephala

- Only abdominal segments 1 and 2 divided into separate plates, and plates on other segments form complete rings around abdomen; *Isoperla*, *Diura* and *Isogenus*



- the body is thickly covered with black hairs

Isoperla

Isoperla is very common in stony rivers and streams. (*I. grammatica* is common whereas *I. obscura* possibly extinct)

- body is sparsely covered with hairs in *Diura* and *Isogenus*
Diura bicaudata* and *Isogenus nubecula

Isogenus is rare and the only recent record is from the Welsh Dee. *Diura* is found in stony streams above 1,000ft and on stony lake shores