

A New Classification of the Subfamily Ephemerellinae and the Description of a New Genus

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A single female nymph collected in central Idaho represents an undescribed genus and species.

Caurinella Allen, NEW GENUS

Nymph.—Head without tubercles, and without frontal or occipital projections; head with long setae around lateral and ventral margins of head, above mouthparts; maxillary palpi two-segmented. Thoracic nota without tubercles or protuberances. Abdominal terga without paired dorsal abdominal tubercles; postero-lateral projections on segment nine 50% longer than length of segment at midline, and postero-lateral projections upturned at apices.

Type species.—*Caurinella idahoensis* Allen, **New Species.**

Remarks.—The nymph of this new taxon is not similar morphologically, to any of the other known genera in the subfamily, but it does have some characters in common with the genus *Serratella*. The nymphs of both are without tubercles or projections on the head and thorax, they both possess well developed spines on the femora, and they both have a reduced maxillary palpus and long spines on the caudal filaments. The long postero-lateral projection on segment nine is not unique as some or all species of *Torleya*, *Acerella* and *Cincticostella* have long abdominal projections. The upturned apices of the postero-lateral projections of segment nine and the row of long setae around the head are characters which are unique to *Caurinella*.

Caurinella idahoensis Allen, NEW SPECIES

Nymph.—Length: body 4.0 mm; caudal filaments 3.0 mm. General color light brown. Head light brown; maxillary palpi 2-segmented. Thoracic nota light brown with irregular brown markings; legs light brown; femora with dorsal spines and ventral setae; dorsal spines set in elevated sockets; claws with 3-4 small denticles. Abdomen light brown, median area terga 5-7 brown; imbricated gills terga 3-7 unusually small; postero-lateral projections segments 4-9, small on 4 and increasing in length posteriorly; postero-lateral projection segment 9 more than 50% longer than segment length at midline and postero-lateral projections turned upward at apices. Caudal filaments light brown with spines and sparse setae.

Holotype.—Female nymph, Bushy Creek, trib. Lochsa River (between Lolo Pass and Powell Ranger Sta.), Idaho Co., Idaho, 26-VI-80, Bill Platt et al., in collection California Academy of Sciences, San Francisco.

Classification.—In 1980, Allen divided the subfamily Ephemerellinae into 2 tribes, 14 genera and 10 subgenera, and he placed the genus *Vietnamella* Tshernova as a subgenus of *Cincticostella* Allen. This synonymy is incorrect. *Vietnamella* is known only from the nymphal stage and the nymphs differ from those

of *Cincticostella*, and all other Ephemerellinae, in the number and placement of the dorsal abdominal gills. The nymphs of *Vietnamella* have six pairs of lamellate gills on segments 2–7, eleven other genera, including *Cincticostella*, have five pairs of lamellate gills on segments 3–7, and four genera have four pairs of lamellate gills on segments 4–7.

I apply the philosophy used in the separation of subgenera in the Ephemerellinae, and herein erect subtribes in the tribe Ephemerellini which will eliminate the necessity of referring to these nymphs as “those with gills on segments 3–7” or “those with gills on segments 4–7”. I propose the name EPHEMERELLAE for those genera with nymphal gills on abdominal segments 3–7, the name TIMPANOOGAE for those genera with nymphal gills on segments 4–7, and the name VIETNAMELLAE for the genus *Vietnamella* with nymphal gills on segments 2–7.

The subfamily Ephemerellinae is now divided into 2 tribes, 3 subtribes, 17 genera, and 9 subgenera as follows:

Tribe Ephemerellini Lameere, 1917

Subtribe EPHEMERELLAE Allen, **New Subtribe**

Type Genus. *Ephemerella* Walsh, 1862

Nymph. Abdominal terga with five pairs of lamellate gills on segments 3–7.

Genera and Subgenera

1. *Ephemerella* (= *Chitonophora* Bengtsson, 1908)
2. *Serratella* Edmunds, 1959
3. *Caurinella* Allen, **New Genus**
4. *Uracanthella* Belov, 1979
5. *Torleya* Lestage, 1917
6. *Teloganopsis* Ulmer, 1939
7. *Caudatella* Edmunds, 1959
8. *Drunella* Needham, 1909
 - a. *Drunella* s.s.
 - b. *Tribrochella* Allen, 1980
 - c. *Unirhachella* Allen, 1980
 - d. *Myllonella* Allen, 1980
 - e. *Eatonella* Needham, 1927
9. *Crinitella* Allen and Edmunds, 1963
10. *Acerella* Allen, 1971
11. *Cincticostella* Allen, 1971
 - a. *Cincticostella* s.s.
 - b. *Rhionella* Allen, 1980

Subtribe TIMPANOOGAE Allen, **New Subtribe**

Type Genus. *Timpanoga* Needham, 1927

Nymph. Abdominal terga with four pairs of lamellate gills on segments 4–7.

Genera and subgenera

1. *Attenella* Edmunds 1971 (= *Attenuatella* Edmunds, 1959 *nec* Stehli, 1954)
2. *Eurylophella* Tiensuu, 1935

3. *Dannella* Edmunds, 1959

a. *Dannella* s.s.

b. *Dentatella* Allen, 1980

4. *Timpanoga*

Subtribe VIETNAMELLAE Allen, New Subtribe

Type Genus. Vietnamella Tshernova, 1972

Nymph. Abdominal terga with six pairs of lamellate gills on segments 2-7.

Vietnamella only known genus.

Tribe Hyrtanellini Allen, 1980

Hyrtanella Allen and Edmunds, 1976, only known genus.

LITERATURE CITED

- Allen, R. K. 1980. Geographic distribution and reclassification of the subfamily Ephemerellinae (Ephemeroptera: Ephemerellidae). pp. 71-91 in J. F. Flannagan and K. E. Marshall (eds.), *Advances in Ephemeroptera Biology*, Plenum Publ. Corp., N.Y., 552 pp.