

SCIENTIFIC NAME: *Farula praelonga*
COMMON NAME: Long-tailed caddisfly
CLASS, FAMILY: Insecta, Uenoidae

ORIGINAL DESCRIPTION: Wiggins, G.B. and N.A. Erman. 1987. Additions to the systematics and biology of the caddisfly family Uenoidae (Trichoptera). Canadian Entomologist 119:867-869, figs. 1A-D (lateral, ventral, and dorsal views of male genitalia, dorsal view of phallus), 2A-C (lateral, ventral, and caudal views of female genitalia).

TYPE MATERIAL: *Holotype:* Adult male - California: Sierra Co.; New York Tributary of North Fork of Yuba River, adult reared from pupa collected 16 Mar 1985, emerged in laboratory Mar 1985, N.A. Erman. *Allotype:* adult female - same data as holotype. Holotype, allotype, and 11 male and 6 female paratypes deposited in the Royal Ontario Museum, Toronto; 8 male and 3 female paratypes deposited in the California Academy of Sciences. Some paratypes were collected from an emergence trap set 16 Mar 1985 and emptied 20 Apr 1985.

RANKING/STATUS: G1G2S1S2 (NatureServe-CNDDDB).

GENERAL DESCRIPTION: Wiggins and Erman describe the adults (in part): "Wings uniform dark brown in color, covered with dark brown hairs, fringe of long light brown hairs on apex of wings and along posterior edge of hind wing, venation as described for the genus...Male with blackish-brown scale hairs along major veins of forewing...Tibial spurs 1,2,4." Detailed descriptions of the male and female genitalia are also given in the original description.

DIAGNOSTIC CHARACTERS: The species name, *praelonga*, refers to the very long internal branch of segment 10 in the male, which is a diagnostic character for this species. The extremely slender larvae measure up to 6.5 mm, and bear a tuft of bifid filaments on the anterolateral margin of the first abdominal segment, illustrated in Wiggins (1996) for the related *F. jewetti*. The anterior margin of the pronotum is convex, but the mesonotal sclerites are not as rounded anteriorly as those of *F. jewetti*.

Farula larvae are difficult to separate from those of the genus *Neothremma*. *Neothremma genella*, another caddisfly species on the Department of Fish and Game's Special Animals List, occurs in some areas with *F. praelonga*. Where they have been studied, the time of year of larval maturity assists in identification. Both species have one generation per year, but those of *F. praelonga* mature in the winter, with adults emerging in the spring, while those of *N. genella* mature during the summer, with adults emerging in the fall. In addition, fifth-instar larvae of *Farula* species have a darkened posterolateral margin on the two mesonotal sclerites, which distinguishes them from *Neothremma* larvae. The larval case of *F. praelonga* differs from that of *N. genella* in having intermittent areas of silk only, with no sand incorporated, and being dark brown rather than golden in color.

OTHER ILLUSTRATIONS:

Wiggins, 1996. Fig. 26.1A-E (illustration of larva and case of *Farula jewetii*, showing characters unique to the genus).

Wiggins, 2004. Fig. 10.12L (adult wings of *Farula* sp.).

DISTRIBUTION: California; in small Sierran streams.

HABITAT: Rapidly-flowing stretches of spring streams and second-order streams; the type locality stream originates from a constant 9°C spring.

LIFE HISTORY/BEHAVIOR: Larval cases of *Farula* are extremely slender – Wiggins (1996) states that they could be mistaken for conifer needles – and constructed of fine, closely-fitted sand grains. The cases are similar in appearance to those of the genus *Neothremma*, but are more slender. The interior and exterior of the case are both covered with a fine layer of silk, and often much of the case is made only of silk. Larvae graze on the upper surfaces of rocks, where they spin silken networks, and pupate in aggregations on the undersides of rocks. The larval diet consists of diatoms. Erman (1996) states that *Farula praelonga* larvae are more common near spring sources, in shaded areas with constant temperatures, while the similar *Neothremma genella* larvae are more abundant further downstream in more open areas. Both species can be very locally abundant (Wiggins and Erman report combined counts of up to 4237/m²), yet quite restricted to particular streams and stream conditions.

SELECTED REFERENCES:

Erman, N.A. 1996. Status of aquatic invertebrates. Sierra Nevada Ecosystem Project: Final report to Congress., Vol. 2. Assessments and scientific basis for management options. 987-1008.

Wiggins, G.B. 1996. Larvae of the North American caddisfly genera. 2nd Edition. University of Toronto Press, Toronto. 457 pp.

Wiggins, G.B. 2004. Caddisflies: The Underwater Architects. University of Toronto Press, Toronto, Buffalo, London. 292 pp.

Wiggins, G.B., Weaver, J.S. III, and J.D. Unzicker. 1985. Revision of the caddisfly family Uenoidae (Trichoptera). Canadian Entomologist 117(6)763-800.

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