

SCIENTIFIC NAME: *Lepidostoma ermanae*
COMMON NAME: Cold Spring caddisfly
CLASS, FAMILY: Insecta, Lepidostomatidae

ORIGINAL DESCRIPTION: Weaver, J.S. III. 1981. A synopsis of the North American Lepidostomatidae (Trichoptera). Contributions of the American Entomological Institute 24(2):55; fig. 92A-D (genitalia of male holotype), 118A-B (female genitalia).

TYPE MATERIAL: *Holotype:* Adult male - California: Nevada Co.; spring, northern slope of Sagehen Creek basin, 2000', emergence trap, 24 Jul 1984, N.A. Erman; deposited in U.S. National Museum of Natural History. *Paratypes:* 6 males, 8 females - collection of N.A. Erman; 3 males and 3 females - collection of USNM; 3 males and 4 females - collection of J.S. Weaver.

RANKING/STATUS: G1G2S1S2 (NatureServe-CNDDDB).

GENERAL DESCRIPTION: Weaver describes the larva: "...head and pronotum brown; pronotum in dorsal view with lateral margins curved and slightly broader than head; abdomen without gills." Adult females can be identified by the genitalic characters given in the original description. Adult males are brown and best identified by the wing venation and genitalic characters provided in the original description.

DIAGNOSTIC CHARACTERS: Larvae of *L. ermanae* are the only lepidostomatid larvae in California that lack gills. Characters of the genitalia (and wing venation, in males) serve to distinguish the adults.

OTHER ILLUSTRATIONS: Merritt and Cummins (1996, fig. 18.103) illustrate the ventral apotome, a diagnostic generic character of the larval head.

DISTRIBUTION: Locally distributed in the northern Sierra Nevada.

HABITAT: The type locality habitat is a cold spring (3-4°C) at 6700' elevation, and is permanently shaded. Other collections have also been from very cold springs.

LIFE HISTORY/BEHAVIOR: Little is known of the biology of this species. Adults emerge from mid-July to mid-August; third- and fourth- instar larvae have been collected in early October. Larvae are restricted to spring sources. The cylindrical larval case is made from stones, unlike those of most other lepidostomatid larvae, whose last-instar cases are four-sided and constructed from quadrate pieces of leaves.

SELECTED REFERENCES:

Erman, N. A. and D. C. Erman. 1990. Biogeography of caddisfly (Trichoptera) assemblages in cold springs of the Sierra Nevada (California, USA). California Water Resources Center, Contribution 200, 28 pp. + Appendix A.

Merritt, R.W. and K.W. Cummins. 1996. An Introduction to the Aquatic Insects of North America. Kendall/Hunt Publishing Co., Dubuque. 862 pp.

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