

SCIENTIFIC NAME: *Cryptochia excella*
COMMON NAME: Kings Canyon cryptochian caddisfly
CLASS, FAMILY: Insecta, Limnephilidae

ORIGINAL DESCRIPTION: Denning, D.G. 1964. Descriptions of five new Trichoptera. Pan-Pacific Entomologist 40:244-245, fig 5A-B (dorsal view of ninth and tenth tergite, ventral view of aedeagus and aedeagus blades).

TYPE MATERIAL: *Holotype:* Adult male - California: Fresno Co.; Kings Canyon National Park, 6400', 4 Jun 1963, C. P. Alexander. Deposited in California Academy of Sciences, type #16162.

RANKING/STATUS: G1G2S1S2 (NatureServe-CNDDDB).

GENERAL DESCRIPTION: From Denning (1964): "Male. – Length 8 mm. Wings blackish, pubescence sparse. Head and thorax varying shades of yellow to dark brown, setation golden, antennae dark brown, legs yellowish."

Larvae and females are undescribed.

DIAGNOSTIC CHARACTERS: The larvae of *Cryptochia* are unusual in possessing a dense fringe of long setae behind the head, on the anterior edge of the thorax. The top of the head is flattened, with a circular, peripheral ridge bearing a thick row of setae. The original description gives a complete description of the male genitalia.

OTHER ILLUSTRATIONS: The larva of a related species, *C. pilosa*, is illustrated in Wiggins (1996), Fig. 20.10A-F (lateral view of larva, anterolateral view of head and thorax, case, lateral view of middle leg, ventral view of head, ventral view of mouthparts); the illustrations show the generic characters of the larvae. Merritt and Cummins (1996) illustrate the head (p. 369, fig. 18.144) and case (p. 370, fig. 18.159) of an unidentified species of *Cryptochia*.

DISTRIBUTION: Known from the type locality and from Sagehen Creek basin (upper reaches of Lower Kiln tributary), Nevada Co., California.

HABITAT: Restricted to cold spring streams and their sources.

LIFE HISTORY/BEHAVIOR: Adults emerge in June and July. There is no other information on life history or behavior of this species. Larvae of other *Cryptochia* construct a flattened, tapered case from woody debris. The larvae are suspected of using their mandibles to smooth the rough edges of the posterior portion of their cases. *Cryptochia pilosa* cases are buoyant and float in the water; when lodged along the edge of the stream, the semi-aquatic larvae then crawl onto shore where they probably feed on fungi in the damp, decaying leaves and decaying wood on which they are frequently found (Wisseman and Anderson, 1987). Pupae of other

Cryptochia have been found in wet logs above the water surface. In Oregon, *Cryptochia pilosa* appears to complete its life cycle in two years.

SELECTED REFERENCES:

- Erman, N.A. and C.D. Nagano. 1992. A review of the California caddisflies (Trichoptera) listed as candidate species on the 1989 federal "Endangered and threatened wildlife and plants; Animal notice of review." California Fish and Game 78(2):45-56.
- Merritt, R.W. and K.W. Cummins. 1996. An Introduction to the Aquatic Insects of North America. Kendall/Hunt Publishing Co., Dubuque. 862 pp.
- Wiggins, G.B. 1996. Larvae of the North American caddisfly genera. 2nd Edition. University of Toronto Press, Toronto. 457 pp.
- Wiseman, R.W. and N.H. Anderson. 1987. The life history of *Cryptochia pilosa* (Trichoptera: limnephilidae) in an Oregon coast range watershed. In Bournaud, M., and H. Tachet (eds.), Proceedings of the 5th International Symposium on Trichoptera, Dr. W. Junk Publishers, Dordrecht, The Netherlands.

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