

SCIENTIFIC NAME: *Hubbardia shoshonensis*
COMMON NAME: Shoshone Cave Whip-scorpion
CLASS, FAMILY: Arachnida, Hubbardiidae

ORIGINAL DESCRIPTION: Briggs, T.S., and K. Hom. 1972. A cavernicolous whip-scorpion from the northern Mojave Desert, California (Schizomida: Schizomidae). Occasional Papers of the California Academy of Sciences 98:2, fig. 1-7 (dorsum of male holotype, ectal view of pedipalp, mesal view of tibia of pedipalp, ventral lateral, and dorsal views of flagellum, and fixed finger of chelicera).

OTHER NAMES USED: This species was originally described in the genus *Trithyreus*, and has also been reported in the literature as *Schizomus shoshonensis*, but was subsequently transferred to the genus *Hubbardia* by Reddell and Cokendolpher (1991).

TYPE MATERIAL: *Holotype:* Male – California: Inyo County; Upper Shoshone Cave, near Shoshone, 28 Dec 1971, collected by W. Rauscher, E. Fogarino, and T. Briggs. Female – same data as holotype. A paratype female and a juvenile with the same data were also collected. All specimens are deposited in the California Academy of Sciences; the holotype is type #1840.

RANKING/STATUS: G1S1 (NatureServe - CNDDDB); BLM Sensitive.

GENERAL & DIAGNOSTIC CHARACTERS: The holotype male is about 4.8 mm in length, with the carapace and metapeltidium pale brown, abdominal terga darker brown, and with reddish brown chelicerae and pedipalps. The male flagellum is heart-shaped. The male of this species can be separated from its nearest relatives, *Hubbardia belkini* and *H. joshuensis*, by its distinctively setose, bilobed flagellum and pair of broadened setae on the last abdominal segment. The allotype female is similar in color to the male and measures about 5.2 mm. Females have a 4-segmented cylindrical flagellum; no diagnostic characters are given in the original description to separate them from females of other *Hubbardia* species.

OTHER ILLUSTRATIONS: Rowland, J.M. and J.R. Reddell 1981, figs. 15, 19, 24 (distribution, dorsal and lateral views of male flagella).

DISTRIBUTION: Known only from the type locality.

HABITAT: This species is known only from Shoshone Cave, which is warmed by a small thermal spring. Most specimens were collected from under and around wood debris on the warm, moist floor, where the air temperature varied from 24.4-26.1° C and the relative humidity was near 100%. The species was not found in the cooler lower part of the cave, where the air temperature measured 22.4°C. *Hubbardia shoshonensis* has not been found in other caves in the surrounding area, including

another thermal cave, Titus Canyon Cave, indicating that the species may be dependent upon specific environmental conditions in Shoshone Cave.

LIFE HISTORY/BEHAVIOR: There is little known about the life history or behavior of this species. Although strictly troglobitic, the presence of eyespots indicates that this species is recently restricted to its cave habitat.

SELECTED REFERENCES:

- Reddell, J.R. and J.C. Cokendolpher. 1991. Redescription of *Schizomus crassicaudatus* (Pickard-Cambridge) and diagnoses of *Hubbardia* Cook, *Stenochrus* Chamberlin, and *Sotanostenochrus* new genus, with description of a new species of *Hubbardia* from California (Arachnida: Schizomida: Hubbardiidae). Pearce-Sellards Series, Texas Memorial Museum. (47):1-24.
- Rowland, J.M. and J.R. Reddell. 1981. The order Schizomida (Arachnida) in the New World. IV. *goodnightorum* and *briggsi* groups and unplaced species (Schizomidae, *Schizomus*). Journal of Arachnology 9:19-46.

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