

SCIENTIFIC NAME: *Orobittacus obscurus*
COMMON NAME: Gold rush hanging scorpionfly
CLASS, FAMILY: Insecta, Bittacidae

ORIGINAL DESCRIPTION: Villegas, B. and G.C. Byers. 1981. *Orobittacus obscurus*, a new genus and species of Bittacidae (Mecoptera) from California. Pan-Pacific Entomologist, 57(3):385-396, fig. 1-10 (photo of adult suspended in resting posture from spider web, terminal segments of male, wing of male, details of abdomen of female).

TYPE MATERIAL: *Holotype:* Male – California: El Dorado Co.; American River, 11.4 miles west of Kyburz, 6 Jun 1976, 3040', G.W. Byers, B. Villegas. *Allotype:* Female – same data as holotype. *Paratypes:* 15 males, 8 females - same data as holotype. *Paratopotypes:* 211 males and 156 females - same data as holotype but various dates from 10 May to 4 July, most early June 1976-1979. *Additional paratypes:* 50 males, 33 females – California: Placer Co.; Shirttail Creek, 6.4 km northeast of Foresthill, Tahoe National Forest, 27 May and 7 Jun 1976, 3440', same collectors. Holotype, allotype, and 331 paratypes deposited in the Snow Entomological Museum, University of Kansas, Lawrence, Kansas, some distributed to 11 other museums; 142 paratypes deposited in the Bohart Museum of Entomology, University of California, Davis.

RANKING/STATUS: G1S1 (NatureServe – CNDDDB)

GENERAL DESCRIPTION: A typical hanging scorpionfly in general appearance. Length of male, 14.5-16.8 mm, of female, 14.0-15.7 mm. Head shining, black to blackish brown, mouthparts lighter, eyes plum-colored. Thorax shining black to brownish-black with sparse, fine hairs. Leg segments varying from yellowish brown to brown, with tarsi dark brown apically. Wings moderately iridescent, smoky yellowish brown with diffuse gray "clouding" along radial and medial cross vein areas. Terga brown to dark brown, 6-8 shining black in male. Segment 9 of male abruptly paler in color.

DIAGNOSTIC CHARACTERS: The monotypic genus can be recognized by the following combination of characters: antenna nearly as long as body or slightly longer, ninth abdominal tergum and sternum of male fused into a continuous ring; male cerci projecting beyond any part of ninth tergum; vein M in wing bifurcate at first fork; male ninth abdominal tergum with one median projection directed caudad; posterior margin of ninth sternum entire, lacking median projection.

OTHER ILLUSTRATIONS: None available.

DISTRIBUTION: Known only from the two localities above, on the western slopes of the central Sierra Nevada. Villegas and Byers unsuccessfully attempted to locate this species in similar habitats to the north and south of El Dorado and Placer counties.

HABITAT: During the day *Orobittacus obscurus* is frequently found in darkly shaded sheltered areas with high humidity, such as beneath tree roots in overhanging riverbanks, beneath fallen logs and rock outcrops, and along streams underneath large boulders. At the type locality, the forest is dominated by Ponderosa pine, incense cedar, and Douglas-fir. Other tree species include big-leaf maple, dogwood, hazelnut, occasional oaks, and white alder and willow along the stream banks. At the Shirttail Creek site Jeffrey pine, California black oak, and canyon live oak are also common on the steeper, slightly drier slopes.

LIFE HISTORY/BEHAVIOR: Adults of *Orobittacus obscurus* inhabit darkened, shady areas, and are frequently found hanging at rest on spider webs. Their dark color makes them difficult to see in their shady surroundings. They feed mainly on fungus gnats of the family Mycetophilidae, which are often trapped in the same spider webs where the scorpionflies rest. Occasionally the scorpionflies themselves become entangled in webs and are then preyed upon by spiders. One *O. obscurus* was seen feeding on a small crane fly (Tipulidae). Courtship and mating of this species have not been observed, either in nature or captivity, and may occur at night.

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