

SCIENTIFIC NAME: *Ammopelmatus muwu*
COMMON NAME: Point Conception Jerusalem Cricket
CLASS, FAMILY: Insecta, Stenopelmatidae

ORIGINAL DESCRIPTION: Rentz, D.C.F. and D.B. Weissman. 1981. Faunal affinities, systematics, and bionomics of the Orthoptera of the California Channel Islands. University of California Publications in Entomology 94:116; figs. 323a,b (photos of allotype female), 325 (apex of abdomen, holotype male), 326 (ventral view of male genitalia), 327 (inner view of foreleg), 328 (outer view of hind leg), 329 (apex of abdomen, allotype female).

TYPE MATERIAL: *Holotype:* Male – CALIFORNIA: Santa Barbara County; Point Conception, Bixby Ranch, dunes near lighthouse, 18 Jul 1972, collected by D.B. Weissman. *Allotype:* Female – same data as holotype except collected 30 Jun 1971 by D.C.F. Rentz and D.B. Weissman. Both are deposited in the California Academy of Sciences; the holotype is type #12428.

RANKING/STATUS: G1S1 (Nature Serve – CNDDDB); VU/B1+2bd (IUCN).

GENERAL DESCRIPTION: Jerusalem crickets are large, striking orthopteran insects. The genus *Ammopelmatus* differs from other genera of stenopelmatine crickets in the following characters: having vestigial or absent tibial spines on the apical dorsal margins of the caudal tibiae; even, broadly spatulate ringlets of 6 apical caudal calcars; median or presubapical spur on the ventral surface of the foretibiae absent; pronotum not expanded anteriorly. *Ammopelmatus muwu* is whitish in color; the head is orange, and the abdomen has narrow black annular rings.

DIAGNOSTIC CHARACTERS: Leg characters, such as the form of spines and spurs, are important for differentiating species in this genus. Both this species and *Ammopelmatus kelsoensis* have short, spatulate apical tibial spurs and calcars; the fore tibia with only two small ventral spines; and the hind tibia with only one ventral spur and with reduced or no dorsal teeth. *Ammopelmatus muwu* can be distinguished from *A. kelsoensis* by the curved apical spur on the internal margin of the fore tibia, the hind tibia with the first tooth on the internal margin, and first major tooth on the external margin of the hind tibia short and blunt. John and Rentz (1987) studied the chromosomes of this species.

DISTRIBUTION: In spite of intensive collecting in southern California coastal dunes, this species has been collected only at the type locality at Point Conception.

HABITAT: Coastal sand dunes.

LIFE HISTORY/BEHAVIOR: All three known specimens were collected in a burrow of a *Rhachocnemis* spider colony. One specimen was feeding on a small *Rhachocnemis* nymph. There is little information on the life cycle, but adults were collected in mid-

summer. The short, robust legs, with their reduced spines and spurs, are well-adapted for an arenicolous existence.

Tinkham and Rentz (1969) observed mating behavior in the related genus *Stenopelmatus* in California. Copulation lasted approximately five minutes, and immediately after, the female partially devoured the male. They conclude that this might explain the scarcity of adult males collected. Although few specimens of *A. muwu* have been collected, most museum specimens of *A. kelsoensis* are females, suggesting that similar behavior may occur in this genus.

SELECTED REFERENCES:

John, B. & D.C. Rentz. 1987. The chromosomes of four endemic Australian fossorial orthopterans: a study in convergence and homology. Bulletin of the Sugadaira Montane Research Center 8:209 (chromosomes).

Tinkham, E.R. and D.C. Rentz. 1969. Notes on the bionomics and distribution of the genus *Stenopelmatus* in Central California with the description of a new species (Orthoptera: Gryllacrididae). Pan-Pacific Entomologist 45(1):4-14.

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