



Jerusalem Cricket *Stenopelmatus* spp.

March 2019

Field Notes



John Roth photo. NPS/Oregon Caves National Monument and Preserve.

General Description

Creepy looking or cute? Whether luck or intention bring you into contact with this peculiar-looking insect you will surely have an opinion. The origin of the common name “Jerusalem cricket” is debatable, but one possibility is the use of “Jerusalem” as an exclamation of surprise. Upon seeing a Jerusalem cricket for the first time, it is easy to imagine being startled. These large, mostly wingless, cricket relatives (Orthoptera: Stenopelmatidae) vary in color from tan to dark brown with abdominal banding, spiny legs, and small, dark eyes set in large, round, glossy heads with big jaws. Adults may reach 7.5 cm (3 in), and weigh up to 13 g (0.5 oz), the weight of a small mouse!

Other common names include potato bug, child of the earth, stone cricket, and sand cricket. Wherever they are, people think they are poisonous. Jerusalem crickets are not harmful to humans but should be handled carefully.

Habitat and Distribution

Jerusalem crickets live throughout the western half of the U.S., in southwestern Canada, and throughout Mexico and Central America. In the U.S. Jerusalem crickets occupy habitats in oak woodlands, grasslands, shrublands, coastal and inland

sand dunes, and above tree line. Look for them under logs and rocks, in plant debris piles, or dig for them in the soil. Sometimes you can track them in the dust to burrow entrances.

Behavior

Jerusalem crickets are good diggers, and spend a great deal of time underground. As eaters, they are generalists, consuming roots, other invertebrates and detritus, and are sometimes cannibalistic.

Mammals and birds eat them. Predator avoidance tactics include playing dead, rearing, or flipping on their backs with spiny legs and strong mandibles striking protective blows. Some species have a foul-smelling anal discharge. They are primarily nocturnal and subterranean, which lowers their risk of predation above ground.

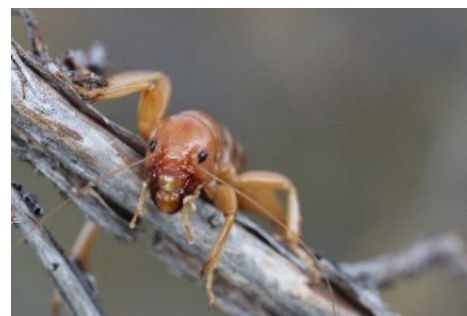
Reproduction

Females and males find each other by drumming their abdomens on the ground in a call and response fashion. Drumming patterns are unique to each species. When a male finds a suitable mate he rolls onto his side, then the female will roll onto hers. Facing away from her, the male holds one of her hind legs in his mouth, curls his abdomen around to meet hers, and eventually transfers his sperm to her. Mating is most successful when both male and female are similar in size. The female lays her eggs in chambers underground. Several stages of molting are required before maturity, which may take 2 years or more.

Conservation

The diversity of this group is impressive: at least 17 species are described in the U.S. and Canada, and the list is growing. Several species have limited geographic

distribution. That factor coupled with their flightlessness makes them vulnerable to habitat fragmentation, especially in urban environments.



Nathan Charlton photo. NPS/Lava Beds National Monument

Fun Facts

- Jerusalem crickets can regenerate lost legs during successive molts.
- In California, three of the heaviest known insects are Jerusalem crickets.
- Jerusalem crickets appear to cohabit with harvester ants—living as commensals—in their mounds.

Where to See

In the Klamath Network Jerusalem crickets are noted in all parks except Crater Lake National Park.

More Information

Weissman D. B., A. G. Vandergast, and N. Ueshima. 2008. Jerusalem Crickets (Orthoptera: Stenopelmatidae). In: Capinera J.L. (eds) Encyclopedia of Entomology. Springer, Dordrecht:

https://www.researchgate.net/publication/303662284_Jerusalem_Crickets_Orthoptera_Stenopelmatidae

Video: Jerusalem Crickets Only Date Drummers | Deep Look:

<https://www.youtube.com/watch?v=mHbwC-AlyTE&app=desktop>