



## Crickets

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### What You Should Know

- Crickets will eat almost anything, including fabrics, other insects (dead or alive), food products, and furs.
- Occasionally crickets may enter the home or chirp near the home, and become a nuisance.
- Regular sanitation around the exterior of the home will discourage cricket infestations.

Crickets are closely related to grasshoppers and katydids, all belonging in the order Orthoptera. The family of "true crickets" is called Gryllidae, which includes more than 900 different species worldwide. In Utah, we have several species of field crickets and snowy tree crickets located throughout the state. True crickets are often confused with grasshoppers and katydids because they have similar body shapes and large hind legs for jumping. Grasshoppers have short antennae and more rounded bodies (Fig. 1); katydids have long antennae and can have long, delicate wings that are held roof-like over the back (Fig. 2). In general, crickets have long antennae like katydids, but also have flattened bodies and shortened wings (Fig. 3).



Fig. 3. Field cricket.<sup>2</sup>



Fig. 1. Grasshopper.<sup>1</sup>



Fig. 2. Katydid.<sup>1</sup>

### Life History Information

**Life Cycle:** Crickets go through simple metamorphosis (egg, nymph, adult) and typically have one generation per year. Adults mate in late summer and females deposit 200 to 2,000 eggs in soil or wood during the fall. The eggs hatch into nymphs the following spring. Nymphs look like the adults except are wingless and smaller in size; they will develop through 8 to 10 instars before becoming adults.

**Feeding Habits:** Crickets have chewing mouthparts, and are scavengers that typically feed on living or decaying plants, fungi, or other organic materials. Crickets are often found in fields, pastures, lawns, roadsides, and wooded areas. They can also feed on a variety of fabrics, foods and paper products. Cotton, linen, wool, rayon, nylon, silk and furs are also at risk, along with soiled materials, wallpaper, bookbinding glue, fruit, vegetables, and meat. They have been known to cannibalize when there is no other food source available.

## Chirping

Crickets are known for their chirping noise, which can sometimes become a nuisance to homeowners. Only the males can chirp, and use sound to attract females or repel males. Males stridulate, or rub their forewings together like a "comb and file" instrument, to create a high-pitched sound. Both males and females have "ears" or auditory organs, on the front pair of legs. Crickets chirp at different rates depending on the species and the surrounding temperature. For most species, warmer weather will cause an increase in chirping rates compared to chirps in cooler weather. The relationship between temperature and chirping rates is known as Dolbear's Law. According to this law, you can calculate the temperature in Fahrenheit by adding 38 to the number of chirps produced in 12.5 seconds by the snowy tree cricket.

There are four types of cricket songs. The calling song is fairly loud. The courting song is quiet and used when a female cricket is near. An aggressive song is triggered when other males are nearby. A copulatory song is produced after successful mating with the female.



Fig. 4. Snowy tree crickets are reliable living thermometers.<sup>3</sup>

## Common Crickets

### **Snowy tree cricket:** *Oecanthus fultoni*

This cricket is also called the "thermometer cricket" because the chirps are easily countable and a reliable temperature indicator. Males have more than 35 teeth along the forewing to stridulate. Adults are 15-18 mm in length, and pale yellow or green in color (Figs. 4-5). Snowy tree crickets are more slender and elongated compared to field crickets. Males have broad, paddle-like wings that fold flat over the back, while females have more narrow wings that are held close to the body. Snowy tree crickets are active from July to October. Nymphs and adults will feed and seek shelter near shrubbery, other vegetation at edges of clearings, and along neglected fence rows. Females will lay eggs in the bark or stems of fruit and ornamental trees, with apple, peach, and cherry especially preferred.



Fig. 5. Snowy tree cricket.<sup>4</sup>

### **Field crickets:** *Gryllus* spp.

Depending on the species, field cricket adults range from 12-30 mm in length, and have stout bodies compared to other crickets. These crickets can be dark brown or black in color. Some field crickets have shortened wings that expose the abdomen (Figs. 3, 6). Adults will have a pair of large cerci at the end of the abdomen), and females will also have a long ovipositor (Fig. 6). Field crickets are active from June to September. Nymphs and adults are attracted to lights and can become aggregated in the late summer. After mating, females prefer to lay eggs in moist soil. Unlike other crickets, field crickets cannot live or reproduce indoors; and any accidental invaders will die during the winter.



Fig. 6. Female field cricket, note the ovipositor.<sup>5</sup>

## Management

**Outdoors:** In general, keeping areas in and around buildings moisture-free will reduce cricket and other insect problems. This includes removing dense vegetation adjacent to any structure, mowing lawns, removing weeds, and cleaning up other organic garbage. Get rid of other debris such as piles of bricks, stones, or rotting wood. Do not store firewood near the building foundation, and keep garbage containers away from the building. Consider elevating necessary containers with wood blocks to reduce harborage sites. Caulk and seal all cracks and crevices, especially around the foundation. Make sure all the windows and doors are tight-fitting with proper screening. Repairs that eliminate small openings will greatly minimize the chance of cricket invasions (plus other insects and spiders). Bright white, neon, and mercury vapor lights attract crickets from a distance, so avoid using these in entryways. Insecticides are not warranted for outdoor cricket control.

**Indoors:** Crickets are rarely serious pests, but will occasionally invade the home through open doors and windows, cracks in poorly fitted doors, siding, foundation and spaces under doors. Most crickets are nocturnal and prefer shelter in protected locations behind or under objects and in cracks and crevices. They prefer cool, damp, and dark habitats. They can be easily captured or killed, but should be removed (dead or alive) so they do not become a food source animals. Sanitation is key to the elimination of crickets. Sweep or vacuum nymphs or adults, or use sticky cards along baseboards. Dry out any damp areas with a fan or dehumidifier, and minimize excess paper, boxes, and other clutter. Insecticides should be used as a last resort for cricket control, and will typically only provide short-term control. For a more effective treatment, consider using a dust in cracks and crevices rather than a liquid formulation. The following products are registered in Utah for cricket control: carbaryl, deltamethrin, lambda-cyhalothrin, and permethrin.

**Other cricket relatives:** In addition to grasshoppers (Fig. 1), there are many other close relatives in the order Orthoptera often mistaken for true crickets. Common examples of “false” crickets in Utah include: mole crickets (family Gryllotalpidae) (Fig. 7); Jerusalem crickets (*Stenopelmatus* spp.) (Fig. 8); and katydids (Fig. 2) in the family Tettigoniidae, such as camel or cave crickets (*Ceuthophilus* spp.) and Mormon crickets (*Anabrus simplex*) (Fig. 9). These other cricket relatives can create much more economic damage to turfgrass, agriculture and pasture areas in Utah than true crickets.



Fig. 7. Mole cricket.<sup>6</sup>



Fig. 8. Jerusalem cricket.<sup>7</sup>



Fig. 9. Mormon cricket.<sup>8</sup>

<sup>1</sup> Images courtesy of Whitney Cranshaw, Colorado State University Extension ([www.ipmimages.org](http://www.ipmimages.org)).

<sup>2</sup> Image courtesy of Joseph Berger ([www.ipmimages.org](http://www.ipmimages.org)).

<sup>3</sup> Image courtesy of Clemson University - USDA Cooperative Extension Slide Series ([www.ipmimages.org](http://www.ipmimages.org)).

<sup>4</sup> Image courtesy of Edward L. Manigault, Clemson University Donated Collection ([www.ipmimages.org](http://www.ipmimages.org)).

<sup>5</sup> Image courtesy of Eugene E. Nelson ([www.ipmimages.org](http://www.ipmimages.org)).

<sup>6</sup> Image courtesy of Steve Dewey, Utah State University ([www.ipmimages.org](http://www.ipmimages.org)).

<sup>7</sup> Image courtesy of Natasha Wright, Florida Department of Agriculture and Consumer Services ([www.ipmimages.org](http://www.ipmimages.org)).

<sup>8</sup> Image courtesy of David Cappaert, Michigan State University ([www.ipmimages.org](http://www.ipmimages.org)).

**Precautionary Statement:** All pesticides have benefits and risks, however following the label will maximize the benefits and reduce risks. Pay attention to the directions for use and follow precautionary statements. Pesticide labels are considered legal documents containing instructions and limitations. Inconsistent use of the product or disregarding the label is a violation of both federal and state laws. The pesticide applicator is legally responsible for proper use.

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