

Crickets and Their Management

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The six species of crickets found in Nebraska are nuisance pests but can damage fabrics, gardens and crops. This publication provides information to identify these crickets, their biology, damage and control.

Description and Life Cycle

Crickets belong to the order Orthoptera, as do grasshoppers. Generally, insects in this group have enlarged hind legs (except mole crickets) adapted for jumping. They also have opaque leather-like forewings that cover a pair of clear, membranous hind wings. Most crickets are nocturnal while their grasshopper relatives are active only during the day. Crickets have adapted to a wide range of habitats and thus are diverse in forms and colors. They are omnivorous, feeding on plants, fruits, decaying organic matter, and even live and dead insects. Crickets usually have very long antennae and a “boxlike” appearance, because their wings are folded sharply over the side of the body. Female crickets have long, spear-shaped ovipositors, used for egg-laying.

Crickets sometimes are confused with cockroaches, especially Oriental cockroaches or “water bugs.” However, crickets are distinguished from cockroaches by their enlarged hind legs, and their bodies are not flattened from top to bottom like those of cockroaches.

Male crickets sing to attract mates through rhythmic chirps or trills by either rubbing one wing against another or a leg against a wing. This process is called “stridulation.” Each species has a characteristic chirp that is recognized and responded to only by females of the same species. The sound receptor or “ear” of the cricket is located on the front side of the fore leg, and consists of a small pit with a thin, drum-like membrane stretched across the top. The membrane picks up the vibrations of the chirp and transmits them to a sensory nerve, which relays the message to the brain.

Once the female cricket is mated, she seeks loose, pliable soil in which to deposit her eggs. The ovipositor is then thrust into the ground and 150-400 eggs are deposited. Unlike grasshoppers, the eggs are laid singly, and are not cemented together in “pods.” The over-wintered eggs hatch in May and June and the young crickets (nymphs) climb to the soil surface. They closely resemble adults, but they are smaller and do

not have fully developed wings or functional sexual organs. Since wings are not completely developed and functional until sexual maturity, immature crickets cannot stridulate or “sing.” Between feeding periods, the young crickets molt eight to 10 times, growing in size between molting intervals. Most crickets mature in August and September, and there is normally one generation each year.

Damage

Crickets have been known to damage plant seedlings, seeds of grain crops, alfalfa, strawberries, tomatoes and other vegetable crops. They also can damage stored tubers or fruits. In hay meadows, crickets can chew through bale twine. On a positive side, crickets often eat a large number of other insects, some of which are crop pests.

In homes and commercial buildings, crickets sometimes chew on clothing, draperies or furniture upholstery. They particularly like fabrics containing organic materials such as cotton, silk and wool, but occasionally may damage synthetic fibers such as nylon, rayon, etc. This is more likely to occur when preferred food is limited or unavailable.

Common Nebraska Crickets

Six species of crickets commonly found in Nebraska are: 1) field crickets, 2) ground crickets, 3) house crickets, 4) mole crickets, 5) camel/cave crickets and 6) tree crickets.



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Figure 1. Field Cricket (Adult Female).

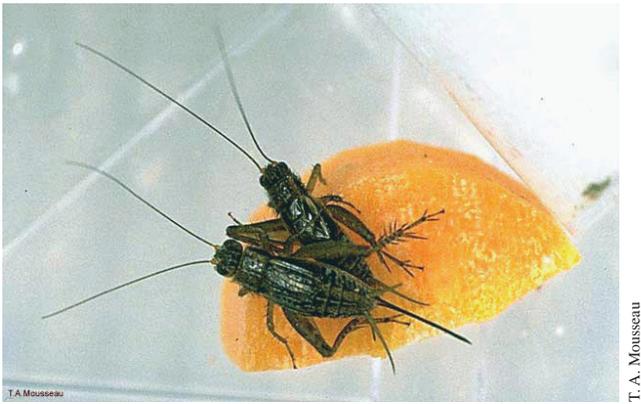


Figure 2. Striped Ground Crickets.

Field Crickets

The common field cricket, *Gryllus assimilis* Fab. (Figure 1), commonly invades structures. It is a large 1 inch or 2.5 cm long, black-bodied cricket especially noticeable in August and September. It is commonly found under boards, boxes, stones, or piles of plant debris. The female has a sharp ovipositor nearly three-fourths inch or 19 mm in length.

Ground Crickets

The striped ground cricket, *Nemobius fasciatus* is smaller (about one-half inch or 13 mm) than the field cricket and is gray to brown in color with tapering wings (Figure 2). It is a strong flier and is highly attracted to lights. Ground crickets commonly are found in wooded areas, meadows and pasture. They resemble house crickets but are much smaller. Their songs are soft, high-pitched, pulsating trills or buzzes. Ground crickets invade homes in the fall especially after harvest or hay cutting in rural areas.

House Crickets

These crickets (Figure 3) normally live outdoors in southern states, but in Nebraska, they are sold as a popular pet food. Escaped crickets breed indoors and can become a nuisance. An adult is about three-fourths inch (19 mm) long with three dark bands on the head with long thin antennae.

The body is light yellowish brown. House crickets remain hidden during the day and become active at night. They feed on almost any food found around the home. They sometimes chew on cotton, silk and/or woolen fabrics. They also damage green peppers, fruits and vegetables.

Mole Crickets

Mole crickets (Figure 4) are not common pests in Nebraska, but can be occasionally found around homes. They live underground, particularly in areas near standing water. These unusual insects feed on plant roots, smaller insects and earthworms in the soil. Mole crickets are cylindrical and about 1 1/4 inch or 3.2 cm long. The body is brown and covered with fine velvety hairs. The most unusual feature of this insect is large mole-like, paddle-shaped forelegs adapted to increase their effectiveness for burrowing. The forelegs are further modified to form a scissor-

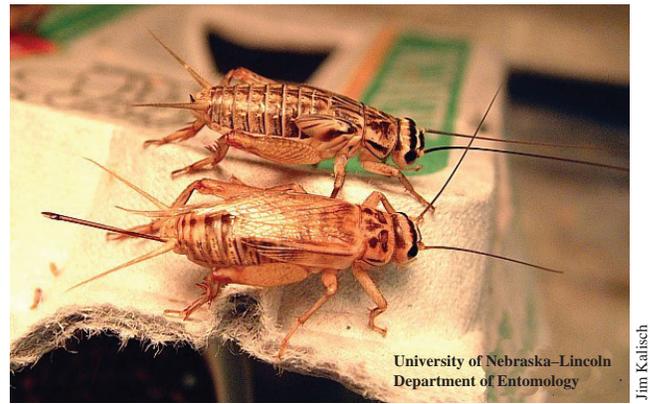


Figure 3. House Crickets.



Figure 4. Mole Cricket.

like apparatus used for cutting roots. In the South, mole crickets sometimes become nuisance pests on golf courses, where they damage roots of grasses on greens or fairways.

Camel/Cave Crickets

Camel crickets (Figure 5) have a humpbacked appearance. They also are known as cave crickets because of their occurrence in caves, and stone crickets because often they are found under stones. Adults are wingless, light tan to dark brown with thin and very long antennae. Camel crickets are one-half to 1 1/4 inch (12-33 mm) in body length. The female's ovipositor exceeds half of its body length. These insects have very enlarged hind legs adapted for jumping. Due to their large size and quick jumping ability, camel crickets can be quite disturbing to some people. They overwinter as nymphs or adults. Females lay eggs in spring, which hatch in April. Camel crickets invade homes when it is hot and dry outdoors, they are active at night and hide during the day. Indoors, they commonly seek damp basements, storage utility rooms, crawl spaces and garages. Outdoors, they seek out cool, moist places such as under mulch, stones, railroad ties, woodpiles, leaf litter, window wells and cellars. They are known to feed on clothing and curtains.

Tree Crickets

The snowy and black horned tree crickets (Figure 6) are common in Nebraska, but they are not nuisance pests in



Figure 5. Camel Cricket.



Figure 6. Tree Cricket.

homes. Tree crickets are slender, greenish insects that live among tall weeds, trees or shrubs, upon which they feed. Females sometimes damage twigs of young trees by inserting their saw-like ovipositors to deposit eggs.

Control Strategies

Non-chemical

When temperatures begin to fall in late summer, crickets often enter structures and annoy humans by making unpleasant chirping noises. A single cricket or few crickets can be killed with a fly swatter or broom. Reduce hiding places around the perimeter of homes and buildings to discourage build up of cricket populations. Removal of dense vegetation, loose bricks, boards, wood piles and other debris minimizes hiding places. Deny entry to crickets in homes by sealing cracks and gaps around the foundation, loose-fitting doorways and hose/wire entrance points (e.g., electrical, air conditioner, cable etc.). Seal entry points either by caulking cracks and crevices, or by using weather stripping for tighter-fitting garage and other entry doors.

Chemical

Insecticides registered for cricket control are available in various formulations such as aerosols, baits, dusts, granules, emulsifiable concentrates (EC), soluble concentrates (SC) and wettable powders (WP). Insecticide products available locally may contain active ingredients as follows: bifenthrin, cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, permethrin and pyrethrins.

Insecticide aerosols are very useful to kill one or a few crickets, but they may not be as effective as more general, residual insecticides. The short burst of an aerosol spray containing pyrethrins should be sufficient but will not provide long term control. Insecticide baits and dusts may be helpful to

minimize small cricket populations. If crickets are numerous, thorough application of insecticides may be best.

An insecticide “barrier” may be created by spraying the exterior of structures along the foundation with a wide band about 4-5 feet (1.25-1.5 m). It may be advisable to spray ornamental beds and lawns adjacent to the foundation.

Insecticides in EC and SC formulations often are better for indoor use. Always read, understand, and follow all the label directions and precautions specified on the insecticide container or package. Keep insecticides in original containers with the label intact. Do not contaminate food, water or dishes. Keep insecticides out of reach of children and irresponsible adults. Do not allow children, other persons or pets near treated surfaces until they are dry.

If the cricket problem persists, you may be advised to call a **commercial pest control company professional**. A company representative will provide price quote and guarantee.

Acknowledgment

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