

44. Field and Short-Tailed Crickets

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Hosts

Short-tailed crickets are in the genus *Anurogryllus* and field crickets are in the genus *Gryllus*. Because these two species have similar physical appearance, they are lumped together in this chapter. Short-tailed crickets have been reported feeding on newly germinated slash pine seedlings and field crickets have been observed feeding on eastern redcedar seedlings in the Southeastern United States.

Distribution

The short-tailed cricket is represented in the United States by the single species *A. arboreus*. It is found from New Jersey to Florida and west into Texas and Oklahoma.

A number of field cricket species in the genus *Gryllus* are found in the United States, some distinguished only by their chirping sounds. They have similar eastern and southern distribution as the short-tailed cricket, but their range extends farther north into Massachusetts and as far west as Kansas.

Damage

Short-tailed crickets live in underground burrows and emerge only to feed and find mates. If pine seed or newly germinated seedlings are available, the cricket eats the seed, severs the seedling at the groundline, and drags it into the burrows to consume.

Adult field crickets spend their lives above ground. When their populations reach high proportions in nursery beds and redcedar seedlings are available, the crickets feed on seedling stems. They debark the stems to a height of about 2.5 cm (1 inch), which results in seedling death.

Diagnosis

Adult field crickets' color may be black, brown, or reddish, and about 1.9 cm (0.75 in) long. Females are equipped with spike-like ovipositors at the end of their abdomens, which are almost as long as their bodies (fig. 44.1). Males can be identified by the lack of ovipositors. When high field cricket populations occur in conjunction with redcedar seedlings, look for dying seedlings and check seedlings for debarking at, or slightly above, the groundline.

Adult short-tailed crickets are very similar to field crickets except that females lack a long ovipositor (fig. 44.2). Short-tailed crickets are light brown in color. The crickets leave small soil pellets or mounds similar to crawfish activity. When observed in or near nursery beds, closely examine the beds near the soil pellets for signs of severed seedlings. The tops of the severed seedlings are normally dragged into burrows to be eaten, and the only evidence of injury is the severed seedling stem near the groundline.



Figure 44.1—Field cricket. Photo by Richard Grantham, Oklahoma State University.

Biology

Female short-tailed crickets lay eggs in their burrows in the late spring. The eggs hatch and the resulting nymphs remain in the mother's burrows for about 1 month, after which they disperse for a few yards and dig their own burrows. At first the burrows are small and near the surface, but as the cricket matures, the burrow becomes larger and deeper, eventually reaching depths of 30 to 50 cm (12 to 20 in). Only one cricket is found per burrow, except when newly hatched nymphs are present. There is only one generation per year.

Female field crickets deposit eggs in the soil using their long ovipositors. When the eggs hatch, the nymphs burrow to

the surface and emerge. The nymphs are similar to the adults, except they are smaller, wingless, and not sexually mature. Within 2 to 3 months, the nymph molts 8 to 10 times before becoming an adult. Some species overwinter as eggs and others as adults. Populations are very cyclic, low in some years and quite high in others.

All cricket species have many predators including birds and many animal species.

Control

Chemical control has been very effective in halting damage with early detection. The younger the insects, the more effective chemical control will be.

Selected References

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- Doggett, C.A.; Hawley, V.; Norris, W. 1980. Cricket damage to red cedar seedlings. *Tree Planters' Notes*. 31(3): 18.
- USDA Forest Service. 1985. Insects of eastern forests. Misc. Pub. No. 1426. Washington, DC: USDA Forest Service. 608 p.



Figure 44.2—*Short-tailed cricket*. Photo by Richard Grantham, Oklahoma State University.