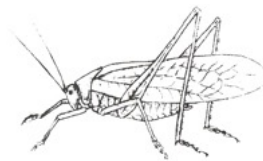




## Night-Singing Insects

### How to Become an Orthopterist



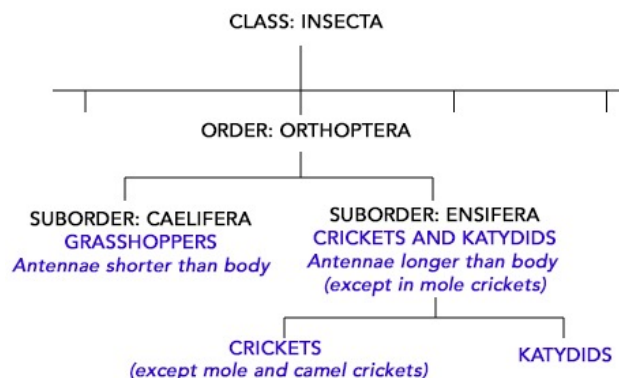
In the fullness of summer, as the bird and frog symphony fades away, we become aware of a swelling clamor of trills, ticks, and scrapes as the calls of singing insects rise to a crescendo in August and September, then die away until frosty nights silence the last humble ground cricket trilling under our windowsill in early November. This is an orchestra of soprano soloists, each species making a distinct calling song and only a few, such as the snowy tree cricket, joining in concert with others of its kind. The total effect of many species calling at once is discordant and opaque to our human ears—call it the insect din. By means of careful listening and song matching, using an audio field guide, participants will learn how to discriminate and identify by ear several species of crickets and katydids.

**Taxonomy: Order Orthoptera** The insect singers in this workshop are for the most part in the suborder Ensifera, which includes the familiar crickets and katydids. We might hear a grasshopper species (suborder Caelifera) call as well, but they are most active during daylight hours and usually become quiet after dark.

Grasshoppers are most easily distinguished from katydids and crickets by their antennae, which are shorter than their body length.



**Growth and Development** Crickets, katydids, and grasshoppers begin life as eggs, laid the previous year, skip the caterpillar stage, and hatch as nymphs, a process called incomplete metamorphosis. The nymphs are miniature adults, wingless at the outset, but molt their skins as they grow and develop wings that make them capable of flight and sound production, in the case of adult male tree crickets and katydids. The Spring field cricket is the earliest singer, usually heard in May, because it winters over as a nymph and has a head start.



**Sound Production** Males make calling songs to advertise for mates. They do this by rubbing together special structures in their forewings called file and scraper. This is called stridulation. The insect din is created by hundreds of wing pairs of several species making sound. Not all grasshoppers stridulate, but those that do pump their barbed hind legs against their wings or other body structures. Females of many species also make sounds but do not stridulate.

Crickets and katydids have “ears” on their forelegs. These are conspicuous on the larger katydids.

Before darkness falls we might hear cicadas, of which we have two common species and a third less common one. Cicadas descend from another order and are not allied with the Orthoptera. They create sound with special organs on their abdomens called tymbals.

- Paper field guide: [Guide to Night-Singing Insects of the Northeast](#), by John Himmelman. Illustrations by Michael DiGiorgio. Stackpole Books 2009.

# The Most Common Singing Insect Species Heard in Middlesex County

## Crickets >

Field Crickets, *Gryllidae* >

[Spring and Fall Field Cricket](#)

Ground Crickets, *Nemobiinae* >

[Allard's Ground Cricket](#)

[Carolina Ground Cricket](#)

[Striped Ground Cricket](#)

[Tinkling Ground Cricket](#)

Tree Crickets, *Oecanthinae* >

[Black-horned Tree Cricket](#)

[Four-spotted Tree Cricket](#)

[Narrow-winged Tree Cricket](#)

[Snowy Tree Cricket](#)

[Two-spotted Tree Cricket](#)

Trigs and Bush Crickets, *Eneopterinae* and *Trigonidiinae* >

[Jumping Bush Cricket](#)

[Handsome Trig](#)

Mole Crickets, *Gryllotalpidae* >

[Northern Mole Cricket](#)

## Katydids >

Meadow Katydids, *Tettigoniidae* >

[Short-winged Meadow Katydid](#)

[Slender Meadow Katydid](#)

[Straight-lanced Meadow Katydid](#)

[Common Meadow Katydid](#)

[Gladiator Meadow Katydid](#)

Coneheads, *Copiphorinae* >

[Round-tipped Conehead](#)

[Swordbearing Conehead](#)

True Katydids, *Pseudophyllinae* >

[Common True Katydid](#)

False Katydids, *Phaneropterinae* >

[Rattler Round-winged Katydid](#)

[Oblong-winged Katydid](#)

[Greater Angle-wing](#)

[Broad-winged Bush Katydid](#)

[Curve-tailed Bush Katydid](#)

[Fork-tailed Bush Katydid](#)

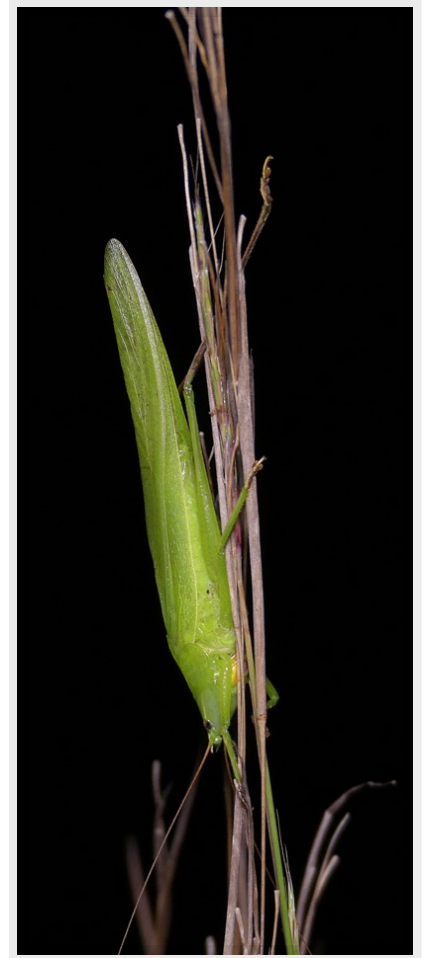
[Northern Bush Katydid](#)

[Texas Bush Katydid](#)

## Cicadas >

[Dog-day Cicada](#)

[Lyric Cicada](#)



● Here are some links to web pages with more information about singing insects.

[Songs of Insects](#), an online field guide with photos and audio by Wil Hershberger and Lang Elliott.

[A short video](#) created by Norm Levey that features several local crickets and katydids.