Katy Did, Katy Didn't.

Who's making that summer racket?

By Edna Greig

From midsummer through autumn, the woods and fields resonate with the sounds of crickets, katydids, grasshoppers, and cicadas, collectively referred to as the singing insects. One of the better known of these insects in our area is the common true katydid (*Pterophylla camellifolia*) whose loud, raspy songs fill the nights from late July until the first killing frost.

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Juvenile Pterophylla camellifolia

Katydids impressed early Europeans arriving on our shores. The earliest settlers feared them as they had never before heard such raucous nighttime sounds. And J.F.D. Smyth, in his 1784 book, *A Tour in the United States of America*, wrote of the katydids on Long Island "... their noise is loud and incessant, one perpetually and regularly answering the other in notes exactly similar to the words Katy did, or Katy Katy did, repeated by one, and another immediately bawls out Katy did'n't, or Katy Katy did'n't. In this loud clamour they continue without ceasing until the fall of the leaf, when they totally disappear."

Katydids have prompted some interesting folklore. One tale attributes the "katy did" and "katy didn't" songs to an insect debate over the guilt of a young woman named Katy who allegedly poisoned the man she loved after he jilted her. Another tale says that the first night of katydid singing predicts the first autumn frost, which would arrive six weeks later in the northern part of its range to three months later in the south. For this reason, katydids are also occasionally called frost bugs.

There are about 30 species of katydids in our area, including meadow katydids, conehead katydids, false katydids, and shieldback katydids—but common true katydids are by far the most frequently heard. They're stout bright green insects, about one to two inches long, with long slender antennae. Although often heard, they are seldom seen. This is because they spend their lives high in the treetops, where their coloration and distance from the ground make them nearly impossible to see. They have large, leaf-like wings but they cannot fly. *Instead, they walk about the tree canopy or sometimes use their large wings as parachutes to glide to an adjacent tree. Occasionally, they may flutter to the ground, which offers us the greatest chance of actually seeing one.*

The flightless wings of the katydid serve another important purpose. At the base of the male's forewings are brown structures called a file and scraper which he rubs together in a process called stridulation to produce his raspy song. Males begin to sing at dusk and continue for several hours into the night hoping to attract a desirable female. Katydids are able to locate each other amid the chorus due to their excellent hearing. Their hearing organs, called tympana, are located just below the "knees" of their front legs. By shifting the position of their legs, they can better pinpoint the location of potential mates as well as predators.

If the male katydid successfully lures a female, he will approach her and clasp her abdomen. He will transfer to her a sperm packet as well as a nutritious gelatinous morsel that he created called a "nuptial gift." The nuptial gift is an important food source for the female and her eggs.

Immediately after mating, the female deposits her eggs in plant tissue, where they will overwinter. The eggs hatch the following spring, and the young nymphs feed on tree leaves. They reach adulthood around late July, and the katydid chorus begins anew.

To learn more about katydids and the other singing insects and to hear recordings of their songs, visit www.musicofnature.org/songsofinsects.

Member Edna Greig is a regular contributor to Trail Walker *on natural history topics.*