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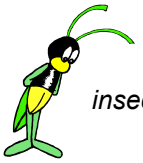

Don's Bug Corner

Sugar Land Garden Club member Don Johnson, an occasional contributor to the Greenleaf writing on garden insects, is a member of the Fort Bend County Master Gardeners' Entomology Group and gives talks on insects. He is also a member of the local Coastal Prairie Chapter of the Texas Master Naturalists.

WHO'S SINGING IN MY BACKYARD

By Don Johnson

While at the Houston Museum of Natural Science recently I bought a book titled, *The Songs of Insects*. With the book came a CD that includes the sounds of a variety of cricket, katydid and cicada species. After playing the CD, I decided that this was essentially a hearing test on which I did poorly. How do I distinguish the hissing of an insect from the hissing in my ears? In fact, the authors also admitted to having problems with high pitched insect sounds, but after several years of collecting the sounds, they have created an interesting book. You can find their website at: http://www.musicofnature.org/songsofinsects/index.html. I encourage you to listen to some of the insect sounds and you don't have to tell anyone that you didn't hear all of them.

Shortly after getting the book, an email from a fellow docent at the Cockrell Butterfly Center showed how a caterpillar made a hissing sound to ward off a predator. The experiment was done with a moth caterpillar and some birds. For the most part, the birds were startled with the hissing sound and left the caterpillar alone. Insects breathe through tiny holes in their abdomen called spiracles. The hissing came from the caterpillar forcing air out of its spiracles, something like air coming out of a balloon. http://www.livescience.com/10350-blow-sides-caterpillars-whistle.html

This is the same tactic that the hissing cockroach uses to protect his territory. When I have taken some of the museum's hissing cockroaches to school groups, the students always want the roaches to hiss.

Madagascar Hissing Cockroach. The insect breathes through holes called spiracles located in the dark brown spots on its abdomen.

As I discussed the caterpillar action with the director of the museum greenhouse she informed me that she has heard sounds coming from the chrysalis of the Julia butterfly. I tried to listen but did not pass that test either.

Professors at Clarkson University are studying sounds coming from the inside of insects hoping to find "solutions to the problems caused by insect pests." http://www.newswise.com/articles/scientists-listen-to-faint-sounds-inside-insects

Scientists have stated that the majority of the sounds made by insects are "calling songs" produced generally by the male to find a female. Some crickets have a calling song and a courtship song while others have aggressive songs to caution their competition. Insects have favorite times of the day and night to sing. Some of them stop when the temperature gets too cold. Some cicadas even form singing choruses to attract females. Some of the sounds are produced when the insect rubs one body part against another. Others, like the cicadas, have sound producing organs in their abdomens.

One scientist who must have had lots of time has determined that the snowy tree cricket can help tell the temperature. He counts how many chirps the cricket makes in 13 seconds, adds forty to that number and that is the temperature in degrees Fahrenheit.

Walk one of the paths in daylight in Brazos Bend State Park in the spring and you will hear how the alligators communicate. You won't have any trouble hearing their sounds. A summer evening there can be filled with the sounds of a variety of species of frogs. Also listen to the serenade of the insects in your own yard. You may not recognize the sounds, but there's probably some courtships going on right in your own herb garden.

Editor's note: *See http://www.tpwd.state.tx.us/learning/texas_nature_trackers/amphibian_watch/references/* for online audio of frog calls and information about the Texas amphibian watch guide to the calls of frogs and toads in Texas.