

Whole Lot of Buzzing Going On



Word of rare bee species discovered in the Carolinas lured wildlife biologist Sam Droege to the region, where in just two days last spring he found 56 bee species at [Carolina Sandhills National Wildlife Refuge](#). Twenty of them had never before been recorded in South Carolina.

Droege, based at the [U.S. Geological Survey in Patuxent](#), Maryland, isn't stopping there. He plans to return this spring to the 45,000-acre refuge – located in McBee, of all places – to launch a year-long survey of native bees. He expects to find at least 130 native bee species thriving among the long-leaf pine forests and native wiregrass – protected and enhanced by controlled burns and other management practices aimed at preserving the endangered red-cockaded woodpecker.

The Carolina bee effort is in part a precursor to a greater effort in which Droege intends to launch a nationwide bee survey.

Over time, the survey should help scientists determine whether bee populations are on the increase, decrease or holding steady. “We know of a few cases where bumblebee species have declined or disappeared,” Droege said. “But in most cases, we not only don't know how many bees there are, we don't even know what bees are where.”

Since bees are the world's greatest pollinators, fewer bees could mean fewer wildflowers, nut and fruit crops, and seeds for other agricultural plants. In short, without pollination, 60 percent of all plant species in the United States would disappear, he said. With mites and other introduced diseases and pests besieging honeybee hives across the country, understanding and encouraging the survival of other native bees takes on a greater urgency.

All We Know about Bees

As a first step, Droege and his partners

at the U.S. Geological Survey, U.S. Department of Agriculture and University of Georgia have been creating a bee-identification guide on the Polistes Foundation's Web site, [www.discoverlife.org](#). The core of the site is a matrix that helps people identify species by answering a set of questions. Photographs of bees are being added, and information is listed on each known bee – about 800 on the East Coast and 4,000 nationwide.

Unlike the honeybee and bumblebee, which have a hive to protect, most native bees nest alone and therefore have little reason to attack; even if trapped, their stingers often are too small to penetrate the skin. “People notice them but don't think they're bees,” Droege said, explaining that the bees are about the size of a fly or smaller and range in color from brown to metallic green.

In attempting to survey bees, Droege has run into a few start-up challenges, notably the dearth of people trained in identifying bees. Droege is advertising training sessions and hopes eventually to have at least five people on the East Coast.

At the same time, he is preparing for an April or May return to Carolina Sandhills Refuge. He plans to recruit volunteers from the refuge's Friends group to help him create a bee-trapping program that could be replicated on other public lands. The volunteers will set out bowls in bee-attractive colors at various spots throughout the refuge. When the bees enter the bowls, they will land on soapy water and sink. The volunteers then will collect the bees in plastic bags for later identification.

Another bee team, the [U.S. Department of Agriculture's Bee Biology and Systematics Laboratory](#) is identifying and surveying bees at national parks in the west. The two groups of researchers share their findings. ♦



USGS wildlife biologist Sam Droege has identified 56 bee species at Carolina Sandhills National Wildlife Refuge in South Carolina, 20 of them never before recorded in the state. He plans to return this spring to complete a more thorough survey at the refuge before launching a nationwide bee survey. (USFWS)