

Auburn's EcoDogs sniffing out endangered species

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(PhysOrg.com) -- These dogs seek out animals in the woods, but they aren't your typical hunting dogs. They have been trained to find endangered species so Auburn University researchers can document the location and number of the rare animals.

The question is, how do you put [dogs](#) on the trail of unusual, elusive critters that few humans have seen? The dogs aren't looking for animals per se, but are trained to find where the animals have been, that is, by finding their excrement ... or, in other words, the poop or scat.

Todd Steury, assistant professor of wildlife ecology in the School of Forestry and Wildlife Sciences, has started a program, EcoDogs: Detection Dogs for Ecological Research, to study "greatest conservation need" species.

"Alabama is home to 117 [endangered species](#), which is third in the United States behind Hawaii and California, and numerous other species are at risk," Steury said. "But little is known about these species, including where they are located, the habitats they occupy, and how many individuals of a species exist."

Sophie, a 15-month-old black Labrador retriever, is trained to find scat from eastern spotted skunks, while Bishop, a 3-year-old black Labrador retriever, is trained to find scat from striped skunks. Both can also detect scat from black bears. The program recently added five new dogs as well.

"We are especially interested in the eastern spotted skunk," Steury said. "It is very small like a squirrel and is very susceptible to predators. Over the past two years, we have taken more than 600,000 photos with game cameras and we only got two photos of eastern spotted skunks."

The goal, he says, is to find populations large enough to study with additional techniques such as trapping and attaching [radio transmitter](#) collars.

"We want to find out what is reducing the populations," he said. "Is it disease? Is it predators? We need to know the reproduction rates. We then can address issues that cause animals to become endangered."

EcoDogs, which began one year ago, is the only program of its kind in the Southeast and is one of four such efforts in the United States. Two are located in Washington state and one in Montana. EcoDogs is a collaborative project between Auburn's School of Forestry and Wildlife Sciences and the College of Veterinary Medicine's Animal Health Performance Program, which includes the Canine Detection and Research Institute and the Sports Medicine Program.

"The dogs are housed at the veterinary college where we provide care and prepare them for this type of work," said Rob Gillette, director of the Animal Health Performance Program. "Our first priority is the dogs' care and making sure they are in proper condition. The dogs love doing this."

The college has handlers who train the dogs and accompany Steury and his graduate students to the research sites. This summer they will use the dogs to study black bears near Apalachicola, Fla., to learn more about human and bear interaction near new and proposed developments. Steury also wants to count [black bears](#) in the Mobile River Basin near Mobile.

"Each animal's scat contains DNA specific to that animal," he said. "By collecting scat samples, we can get a population count for a certain location. This will allow us to formulate an estimate for a much larger area."

The dogs, always teamed with a handler, can work up to four hours a day covering 12 miles in a zigzag pattern around the edges of a triangular area. Dogs usually detect the scat within 15 meters, sometimes up to 100 meters, and will sit down when they find the appropriate scent. A GPS collar allows trainers to keep up with the dog's location and it records the dog's path which can be viewed later on a computer.

"If we see sudden or irregular paths on the GPS, this can indicate where the dog detected the scent of the scat," Steury said.

He says the training time takes three to six weeks for the first scent and then a few days for additional scents. Samples of scat are collected from zoos and other wildlife organizations.

"We try to obtain scat from 10 to 20 individual animals of the species we want to study," he said. "The dogs are exposed to those samples and rewarded for finding them. We also expose them to scat from other animals, such as deer, but we don't reward them for finding those droppings. This teaches the dogs to ignore those scents."

Auburn researchers are also interested in finding scat from endangered long-tailed weasels in Alabama.

"We have been able to take only one photo of a long-tailed weasel in our game camera surveys, and there have been only eight reported road kills in Alabama since 1988," Steury said. "Getting samples of its scat is a problem because only one zoo in the U.S., in North Carolina, has a long-tailed weasel in captivity. We will try to use scat from several kinds of

weasel so we can create a 'weasel dog' to detect scat from any kind of weasel. Hopefully this will help lead us to a long-tailed weasel."

The dogs, he says, could also help prove or disprove stories about possible mountain lion sightings in Alabama.

"We would like to train a dog to find mountain lion scat," he said. "We hear stories that mountain lions have been seen here, but Alabama is not in their range. Most likely people have seen large bobcats or even coyotes. I would be very surprised if mountain lions are found here."

Provided by Auburn University

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