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Hope on the horizon for Florida Grasshopper Sparrows

By ARCHBOLD BIOLOGICAL STATION

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All Florida Grasshopper Sparrows are banded at the four monitored populations to study their annual survival and movements across the landscape.

CHELSEA WISNER PHOTO

Waking up at 4 a.m. is never easy, but for Avian Ecology research assistants Fabiola Baeza-Tarin and Chelsea Wisner, the reward of seeing Florida Grasshopper Sparrows makes those dark mornings worth it. With headlamps adorned, the biologists brave the clouds of mosquitoes and the soggy prairie landscape to study a rare bird endemic to Florida and one of the most endangered species in the United States.

“The sparrows are very elusive and definitely prove to be a challenge while trying to work with them!” explains Baeza-Tarin. Agreeing, Wisner adds “I am always blown away by how resilient they are. They put up with a lot of our manipulations while we try to protect them.”

The sparrows at Avon Park Air Force Range had been monitored since the early 1990s, but Archbold’s Avian Ecology Program didn’t take over until 2003. Each year, researchers estimate population size using point count surveys, during which biologists navigate through established transects to listen for and count singing birds. The population was near its peak in 1998, but over the next 4-5 years, the numbers tumbled by almost 90%. Within a few years of that decline, the populations on other protected conservation lands, such as Three Lakes Wildlife Management Area, managed by the Florida Fish and Wildlife Conservation Commission, and Kissimmee Prairie Preserve State Park, managed by the Florida Park Service, began declining.

“Once we realized how dire the situation was, it was all hands on deck to try to figure out a solution,” Dr. Reed Bowman, Director of the Avian Ecology program, recalls. “All populations were declining despite intensive management efforts that had been implemented based on past research. We needed to act fast to stabilize the population and identify a cause for the decline.”

In 2002, concerned scientists from Archbold and several agencies and universities created the Florida Grasshopper Sparrow Working Group, the primary purpose of which was to collaborate on research and outline ways to save the Florida Grasshopper Sparrow. “The Working Group approached the situation from all angles, coordinating work at different sites and focusing on factors that might be causing the decline,” says Wisner. “Although birds had been banded at some sites, they began banding males at all sites to increase our understanding of annual adult survival. Everyone began monitoring nests and, in 2015, installing nest cameras to study nest predators.”

Unfortunately, researchers found many nests were easy targets for predators, so the Florida Fish and Wildlife Conservation Commission devised a method to install fences around sparrow nests without disturbing the females. These were successful and were soon implemented at all sites. At other sites where Red Imported Fire Ants were a problem, scientists began treating nearby fire ant mounds with scalding hot water, which also increased fledgling production. “We switched our focus from simply monitoring these birds to increasing survival and reproduction in order to prevent extinction,” Dr. Bowman notes.

Currently, less than 120 Florida Grasshopper Sparrows remain across four monitored populations, two of which Archbold biologists are monitoring. Archbold continues its partnership with the Department of Defense and the U.S. Fish and Wildlife Service by monitoring the sparrow population at Avon Park Air Force Range, and the Avian Ecology program also recently, with support from the U.S. Fish and Wildlife Service, took over monitoring a population of sparrows on a private cattle ranch.

“We originally thought the sparrows wouldn’t survive or nest successfully in pasture, but with the use of fences and fire ant treatments, they do just fine!” explains Baeza-Tarin. “It takes a lot of work, but it is promising to know that the sparrows can survive and prosper on active cattle ranches. It’s a big step forward in the conservation of the species.” Additionally, there has been some encouraging news of additional populations of sparrows on other private lands, which could have big implications on future conservation efforts.

As sparrows continued to decline in the wild, the Working Group made the decision to begin captive breeding of this species. A handful of eggs, nestlings, and adults were collected from the various sites to establish a captive breeding program at White Oak Conservation, in Yulee, Florida (whiteoakwildlife.org/wildlife/florida-grasshopper-sparrow/).

The captive breeding program has been incredibly successful, and captive-bred birds are currently being released to bolster existing wild sparrow populations (myfwc.com/news/all-news/fgs-breeding/). “Once we can stabilize and grow existing populations, we could even begin to release birds at other sites that have long since lost their sparrows. It’s an exciting and promising time in the world of Florida Grasshopper Sparrow conservation,” remarks Dr. Bowman. Over the last two years, 242 Florida Grasshopper Sparrows have been released into the wild at one of the populations on public lands, where scientists monitor them and track their survival and recruitment. Many of these birds have survived and are breeding in the wild.

Today, Archbold maintains its role as an active member in the Florida Grasshopper Sparrow Working Group, which holds bi-annual meetings to evaluate annual goals and discuss future conservation efforts. “It’s truly remarkable to see all of the various partners working together to conserve this tiny brown bird,” Wisner comments. “There is a need for constant cooperation and collaboration between state and federal agencies, universities, nonprofits, and private landowners, and it gives me a lot of hope that we can and will save this species.”

For additional information on the fight to save the Florida Grasshopper Sparrow, please visit:

fl.audubon.org/birds/florida-grasshopper-sparrow or myfwc.com/research/wildlife/birds/florida-grasshopper-sparrow/