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## **Every Nest Counts for Florida Grasshopper Sparrows**

With a total wild population of less than 100 birds and falling, the Florida Grasshopper Sparrow is facing the very real possibility of extinction. Habitat loss and other factors have brought this Florida endemic (found only in Florida) sub-species to this point, but biologists haven't given up. Current captive breeding programs may even begin to restock wild populations in the next few years. If these efforts are to have the best chance at working, the prairies will still need wild birds to teach the captive-bred ones and breed with them. In this situation every nest counts, and Archbold Biological Station biologists are working to better their odds of success.

"It isn't enough to count birds and maintain good habitat. Their numbers are just too low for that." says Archbold Research Assistant Greg Thompson. "Until the birds are doing better, we need to help those nests stay safe from predators and from flooding from intense summer rains."

Thompson works with the Florida Grasshopper Sparrow population at Avon Park Air Force Range, which boasts one of the last remaining large tracts of Florida dry prairie, the habitat critical to the bird's survival. Each spring and summer, Thompson and his team find and track the success of the sparrows' nesting attempts. Finding a Florida Grasshopper Sparrow nest is a real challenge; although they nest directly on the ground, they conceal their nests inside clumps of grass and other low-growing vegetation. "You can't find them by just walking around. We listen for the parents. Once we find the parents, we can find the nests," explains Thompson. Once a sparrow nest is found, the work has only just begun.

The next step for Thompson is to erect a short fence made of wire mesh to exclude potential predators, such as skunks, snakes, and other animals that may eat the eggs or nestlings. A small

surveillance camera is installed, allowing the researchers to identify any predators that approach the nest. Sometimes an electrified fence is installed as a defense again larger animals. "These fences are pretty good at keeping out most predators, but one predator that they can't keep out is fire ants," admits Thompson. Red imported fire ants are an invasive species that will kill and eat nestling sparrows. To prevent this from happening, the sparrow biologists enlist the help of Dr. Josh King, an Assistant Professor of Entomology at the University of Central Florida. Dr. King looks for fire ant mounds near the sparrow nests and then exterminates the colony by injecting boiling water into the mound.

Another major threat to the nests is flooding during summer thunderstorms. To help prevent this, the biologists have come up with a method of raising the nest higher than the expected waters. This involves using a shovel to lift the clump of vegetation that the nest is hidden in, and then placing dirt under the clump of vegetation so that the nest sits slightly higher than it did previously.

If all this works, the chicks are given uniquely colored leg bands at five days old, so that when they leave the nests, biologists know who is who. When the birds are able to fly at about 8 days, the fencing is removed.

"Even with all of these precautions, not every nestling will survive, but these measures are giving the birds an advantage until their populations can recover."



Photo 2: Archbold biologist Greg Thompson installs a predator exclusion fence around a nest of the Florida Grasshopper Sparrow. Photo by Dustin Angell



Photo 3: Archbold biologist Natalie Sweeting is using furniture stuffing to seal the bottom of the fence from snakes. Photo by Dustin Angell

