

2012 Status Brief on the Endangered Florida Grasshopper Sparrow

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Introduction: A Bird in Decline

The Florida Grasshopper Sparrow is a federally endangered bird found nowhere else in the world. Despite public land managers' efforts to recover the bird, its population continues to decline steeply on the very lands where it should be thriving. Without immediate intervention, the outlook is dire for this diminutive Florida prairie specialist.

Natural History

The Florida Grasshopper Sparrow is restricted to the dry prairie ecosystem of central and south Florida. One of four subspecies of Grasshopper Sparrows in North America, the Florida Grasshopper Sparrow does not migrate, living here year-round (Fig. 1). Perhaps the *most endangered bird* in the continental US, few people have seen or even heard of it.

Florida Grasshopper Sparrows are named for one of their calls, a quiet buzz that sounds much like a grasshopper. Male sparrows sing only a few months of the year during the nesting season, for a few hours each day. Intricately patterned in brown, white, and black, the birds are well camouflaged with the remote grasslands in Florida's interior where they live, making them difficult to locate. Their quiet, cryptic, and remote nature have contributed to their anonymous personality.

“The Florida Grasshopper Sparrow is perhaps the most endangered bird in the continental United States.”

- Dr. Paul Gray, Audubon Florida Lake Okeechobee Science Coordinator



Figure 1. Historical distribution of Florida Grasshopper Sparrows. Known remaining populations are found only at northern five breeding sites. Delaney, M. F. 1996. Florida Grasshopper Sparrow. In Rare and Endangered biota of Florida. Volume V. Birds. J. A. Rodgers, Jr., H. W. Kale II, and H. T. Smith, eds.

The Florida Grasshopper Sparrow nests in spring (April–July) on the ground, under palmettos or in grass clumps. The female lays 3–5 eggs, and young fledge within 9 to 10 days. The male sings from a low perch to defend territory—*about the only time they are readily visible*--and helps raise the young. Diet includes seeds and invertebrates. It is thought that most individuals live their entire lives within a few miles of their birth place.

Recent Population Declines

The sparrow is so highly endangered due in large part to its exclusive dependence upon Florida dry prairie habitat, more than 85% of which has been destroyed.



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Most prairie loss has resulted from conversion to domestic pasture grasses, which support more cattle per acre and can support some species of prairie wildlife, but not Florida Grasshopper Sparrows.

This “improved pasture” lacks the structure that these birds need. Research indicates the sparrows need native prairie in prime condition—it should burn every two years and as a result have virtually no brush or trees. Burns at the end of the dry season (April-June) are better than other times of the year.

Despite this understanding of their habitat requirements, sparrow populations have declined on all three conservation lands where they remain, with 2011 recording the lowest counts in history on all areas (Figure 2). Suspected reasons for the decline include suboptimal habitat management, fire ants killing flightless chicks, diseases, and genetic problems. The Avon Park Bombing Range subpopulation dropped from about 130 singing males in 1999 to only 10 in 2004. In 2012 only one singing male was detected; it is unknown if a female was there to hear him. The counts of singing males at Kissimmee Prairie declined from 150 a decade ago to only 21 in 2011, to only 14 in 2012.¹ And at Three Lakes Wildlife Management Area, last year’s record low of 67 singing males was surpassed this year, with 60 singing males.

The populations at Three Lakes Wildlife Management Area and Kissimmee Prairie Preserve State Park now have fewer birds than were recorded at Avon Park prior

1. Because of the size of Kissimmee Prairie, surveys are only conducted on a sampling of the acreage. Accordingly, declines may not be as steep as surveys suggest if sparrows persist on areas left unsurveyed for lack of staff capacity.

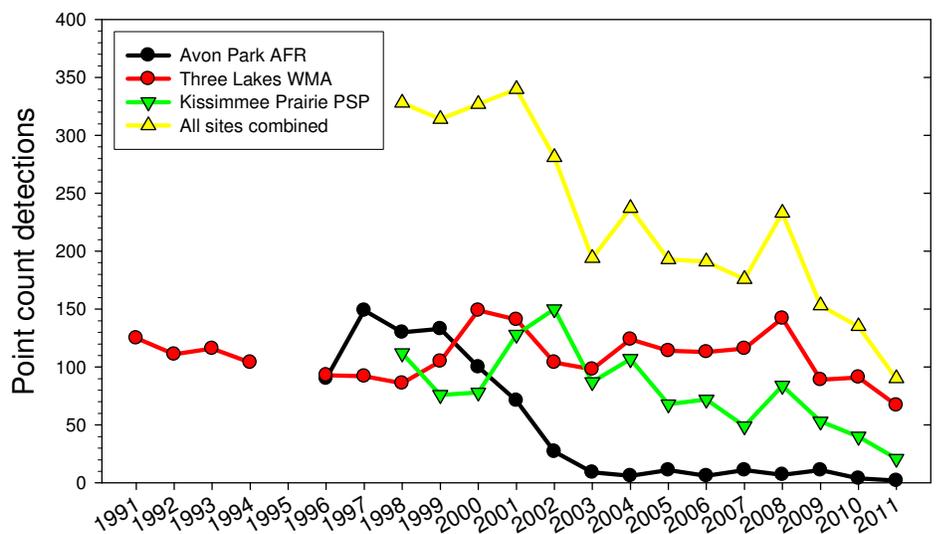


Figure 2. Florida Grasshopper Sparrow numbers on the three public lands with populations. Image courtesy of Archbold Biological Station.

to its rapid population crash. At these population levels, genetic problems become a major concern.

The Future

The Florida Grasshopper Sparrow Working Group is composed of managers of properties the sparrows occupy, researchers, federal and state wildlife agencies, and Audubon. The group’s short-term emphasis: manage the sparrows’ habitat to the best standard possible. The longer-term need is to mount an intensive research effort examining threats like disease, genetics and fire ants. Agencies also must prepare for captive breeding efforts.

Hope on Private Lands

Encouraging reports of at least two other subpopulations of Florida Grasshopper Sparrows on private lands give additional hope for the future of this rare Florida endemic. Numbers of birds or population trends on these sites are unknown, but the new Everglades Headwaters National Wildlife Refuge and Conservation Area may have the opportunity to secure these properties through full-fee acquisition or conservation easements.



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Audubon's Priorities

- **Increase land managers' capacity to monitor sparrow populations and conduct controlled burns for habitat health.**

Audubon will provide funding in 2013 for two staff at Kissimmee Prairie Preserve State Park during the sparrow breeding season. We are calling on the Florida Park Service and FWC to match our financial commitment by funding two other additional temporary staff on their lands, respectively, to assist with prairie-wide habitat management, sparrow, and fire ant surveys. Special protocols to facilitate endangered species burns must be developed.

- **Advance critical research needed to understand the cause of the sparrow's decline.** Audubon is urging funders to support proposals from our academic and research partners to get to the bottom of this prairie mystery. This will include developing a captive breeding program. Audubon will work with Kissimmee Prairie managers to provide citizen science volunteers to conduct fire ant surveys.
- **Prioritize sparrow habitat on private lands for protection.** Audubon encourages addition of private properties reported to host sparrow populations to the Everglades Headwaters NWR via full-fee acquisition or conservation easements.

Additional Resources

- Audubon Florida: fl.audubon.org
- Audubon Florida News Blog: audubonoffloridanews.org
- Kissimmee Prairie State Park: bit.ly/NIBJo9
- Friends of the Kissimmee Prairie: kissimmeeprairiefriends.org
- Archbold Biological Station: archbold-station.org
- Dry Prairie Conference Proceedings: bit.ly/N1Zk6n
- Kissimmee Prairie Important Bird Area Profile: bit.ly/NHWA1g

FGSP 1999-2012

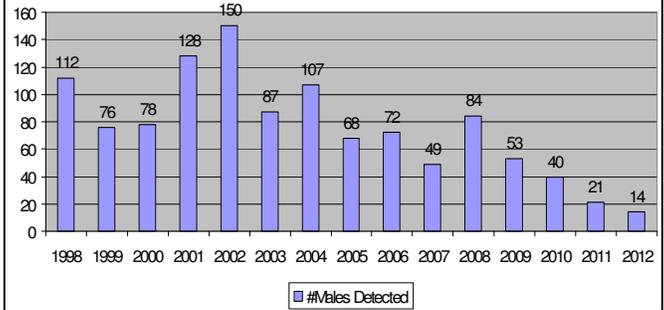


Figure 3. Florida Grasshopper Sparrow's Decline 1998-2012 on Kissimmee Prairie Preserve State Park (by Paul Miller, Biological Scientist II, Florida Park Service, Okeechobee, FL).



Figure 4. Kissimmee Prairie wildflowers three months after fire.

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