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SWAMP SPARROW WINTER SITE FIDELITY RECORDS IN FLORIDA

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The status of grassland birds during the winter in the southeastern United States is a subject of increasing concern to biologists because of the degradation and loss of many of their habitats. The Swamp Sparrow (*Melospiza georgiana*) is a common species during the winter in the Southeast and a frequent co-dominant among grassland bird assemblages. Swamp Sparrows are a common winter resident in Florida, inhabiting emergent wetlands, savannas, and old fields (Stevenson and Anderson 1994). While their status appears to be stable, they may occur in the same habitat with grassland birds of management concern like Henslow's Sparrow (*Ammodramus henslowii*). Despite the abundance of Swamp Sparrows, winter site fidelity has not been documented in Florida. Researchers have documented winter site fidelity for a number of Neotropical migrants and have used site fidelity to emphasize the importance of resources on wintering habitats (Nickell 1968, Ely 1973, Woods 1975, Holmes and Sherry 1992). We document new information on winter site fidelity of Swamp Sparrows in Florida and other states of the Southeast. In Florida, we focus on the relationship of winter site fidelity and prescribed fire in two habitats, coastal cordgrass marsh and inland savannas.

While studying Black Rails (*Laterallus jamaicensis*) on the St. Johns National Wildlife Refuge (St. Johns), we (MLL, WCC, SAL) captured and banded five Swamp Sparrows in March of 1994. One Swamp Sparrow banded on 20 March 1994, was recovered on 5 January 1995, following a prescribed fire on the refuge. The banded bird was found dead in a burned cordgrass (*Spartina bakeri*) clump with standing water at the base. The bird had most of its feathers burned, but the aluminum leg band was intact. The recovery site was within 50 m of the original banding location. During banding operations on the Apalachicola National Forest (Apalachicola Ranger District), DBM captured and banded one Swamp Sparrow on 5 November 1995 and recaptured the same individual within 500 m on 19 November 1996; a second individual was captured and banded on 5 March 1996 and recaptured within 500 m on 3 November 1996, and a third individual was captured on 15 March 1996 and recaptured within 50 m on 30 November 1996. All six captures were in savannas burned within the previous four months to two years. These are the first Swamp Sparrow site fidelity records published from Florida.

We searched the USGS Bird Banding Laboratory (BBL) banding records from 1920 to 1999, and found records of seven birds banded in Florida during the winter, and recaptured in the same location one to two years later. Looking at the records for the entire Southeast, we located 20 additional cases of winter site fidelity, in two cases the banded birds were captured in the same location during three successive years. All the

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BBL winter site fidelity records for Swamp Sparrows were recorded between 1931 and 1956. Five additional instances of winter site fidelity were recorded from 1966 to 1997; however, those records were within the same winter, not year-to-year fidelity. More recently, winter site fidelity is known in Swamp Sparrows from Mississippi, where 25.9% ($n = 27$) of birds banded in January 1995 were recaptured in 1996 (R. Holberston pers. comm. in Mowbray 1997). Breeding site fidelity in Swamp Sparrow has been reported from Rhode Island, where 51.5% ($n = 64$) of banded birds returned from one breeding season to the next (Ellis 1980).

In Alabama, Henslow's Sparrows showed strong within winter site fidelity, but not year-to-year site fidelity (Plentovich et al. 1998). Plentovich et al. (1998) hypothesized that because of the three to five year burn cycle, the pine (*Pinus sp.*) dominated habitat is ephemeral, and the birds don't exhibit year-to-year site fidelity because of this disturbance. However, 8% of Henslow's Sparrows banded in 1995 ($n = 90$) at Apalachicola returned to the same two savannas in 1996 (D. McNair, unpubl. data). In addition, one Henslow's Sparrow banded in 1995 was recaptured in 1999, and another banded in 1996 was recaptured in 1999 in the same habitats which had been prescribed burned between the first capture and recapture periods (D. McNair unpubl. data). The St. Johns marsh is burned on a three to five year cycle, with approximately one third of the total marsh area burned each year to maintain the open cordgrass marsh. Site fidelity may indicate the uniqueness and relative importance of a habitat type on a regional or larger scale. Research is needed to investigate site fidelity at different scales to understand the importance of wetland disturbances like prescribed fire on wintering bird populations.

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LITERATURE CITED

- ELLIS, H. K., III. 1980. Ecology and breeding biology of the Swamp Sparrow in a southern Rhode Island peatland. M.S. thesis, University of Rhode Island, Kingston.
- ELY, C. A. 1973. Returns of North American birds to their wintering grounds in southern Mexico. *Bird Banding* 44:228-229.
- HOLMES, R. T., AND T. W. SHERRY. 1992. Site fidelity of migratory warblers in temperate breeding and Neotropical wintering areas: implications for population dynamics, habitat selection, and conservation. Pages 563-578 in *Ecology and conservation of Neotropical migrant landbirds*. (J. M. Hagan, III, and D. W. Johnson, Eds.). Smithsonian Institution Press, Washington, D.C.
- MOWBRAY, T. B. 1997. Swamp Sparrow (*Melospiza geogiana*). In *The birds of North America*, no. 279 (A. Poole and F. Gill, Eds.). Academy of Natural Sciences, Philadelphia, and American Ornithologists' Union, Washington, D.C.
- NICKELL, W. P. 1968. Return of northern migrants to tropical winter quarters and banded birds recovered in the United States. *Bird Banding* 39:107-116.
- PLENTOVICH, S. M., N. R. HOLLER, AND G. E. HILL. 1998. Site fidelity of wintering Henslow's Sparrows. *Journal of Field Ornithology* 69:486-490.
- STEVENSON, H. M., AND B. A. ANDERSON. 1994. *The birdlife of Florida*. University Press of Florida, Gainesville.
- WOODS, C. A. 1975. Banding and recapture of wintering warblers in Haiti. *Bird Banding* 46:344-346.