Fla. Field Nat. 25(2):58-59, 1997.

TICKS FROM FLORIDA GRASSHOPPER SPARROWS

MICHAEL F. DELANY¹ AND DONALD J. FORRESTER² ¹Florida Game and Fresh Water Fish Commission, 4005 S. Main St. Gainesville, Florida 32601

²Department of Pathobiology, College of Veterinary Medicine, University of Florida Gainesville, Florida 32611

The prevalence and intensity of the Gulf coast tick (*Amblyomma maculatum*) and the bird tick (*Haemaphysalis chordeilis*) in a breeding aggregation of the endangered Florida Grasshopper Sparrow (*Ammodramus savannarum floridanus*) are reported in this note. Basic biological information is needed before conservation strategies for the sparrow can be fully assessed (USFWS 1988).

The study area was a 700-ha dry prairie on Avon Park Air Force Range in Highlands and Polk counties, Florida. The grassland plant community was described by Delany et al. (1985). Prairie pastures were burned on a 3-year rotation between December and mid-March to enhance forage production for cattle and manage habitat for Grasshopper Sparrows. Annual population estimates based on systematic searches ranged from 26 to 43 pairs of Florida Grasshopper Sparrows. During March 1989 through June 1992, Florida Grasshopper Sparrows (n = 73) were captured with mist nets, marked with numbered aluminum U.S. Fish and Wildlife Service bands, and examined for ticks. Capture and banding activities were described by Delany et al. (1992).

Two nymphs of the Gulf coast tick were removed from an adult male Florida Grasshopper Sparrow on 19 April 1989, and one nymph of the bird tick was removed from an adult male on 15 March 1990. Ticks were on the head of each bird. The ticks were deposited in the U.S. National Tick Collection at Georgia Southern University, Statesboro, Georgia 30460 (RML Nos. 119585 and 121998).

Gulf coast ticks and bird ticks are common parasites of ground-dwelling birds in the southeastern United States (Strickland et al. 1976). According to the records of the U.S. National Tick Collection, five nymphs of the Gulf coast tick (RML 57680) were found on a Florida Grasshopper Sparrow collected on 31 January 1937 near Orlando, Florida. Travis (1941) reported *A. maculatum* (stages not given) from a Florida Grasshopper Sparrow from either Orange, Osceola, or Collier counties between 1933 and 1937 (specific locality and date not given). Bishopp and Trembley (1945) reported six nymphs of *A. maculatum* and one larva and two nymphs of *H. chordeilis* from Florida Grasshopper Sparrows (specific localities and dates not given). Some of the ticks referenced above may be the same as given in the U.S. National Tick Collection citation (RML 57680), but this cannot be verified.

Tick neurotoxins may cause paralysis and death in some passerines, but it is not known if this is a significant source of mortality in wild populations (Pitts and Hayes 1990). The low prevalence (2.7%) and intensity (≤ 2 ticks per bird) found during this study leads us to believe that ticks pose little threat to Florida Grasshopper Sparrows. Frequent prescribed fires on prairie grasslands inhabited by the sparrow may moderate infestations (Davidson et al. 1994).

The U.S. Air Force allowed access to the study area and we are grateful for assistance provided by Natural Resources personnel at the Avon Park Air Force Range. J. E. Keirans identified the ticks. J. R. Brady, S. A. Nesbitt, J. A. Rodgers, Jr., and D. A. Wood reviewed previous manuscript drafts. This study was funded by the Florida Nongame Wildlife Trust Fund.

Notes

LITERATURE CITED

- BISHOPP, F. C., AND H. L. TREMBLEY. 1945. Distribution and hosts of certain North American ticks. J. Parasitol. 31:1-54.
- DAVIDSON, W. R., D. A. SIEFKEN, AND L. H. CREEKMORE. 1994. Influence of annual and biennial prescribed burning during March on the abundance of *Amblyomma america*nium (Acari: Ixodidae) in central Georgia. J. Med. Entomol. 32:72-81.
- DELANY, M. F., H. M. STEVENSON, AND R. MCCRACKEN. 1985. Distribution, abundance, and habitat of the Florida Grasshopper Sparrow. J. Wildl. Manage. 49:626-631.
- DELANY, M. F., D. R. PROGULSKE, JR., AND S. D. COLTMAN. 1992. Netting and banding Florida Grasshopper Sparrows. N. Amer. Bird Bander 17:45-47.
- PITTS, T. D., AND L. E. HAYES. 1990. Eastern bluebird mortality due to tick paralysis. Sialia 12:3-4.
- STRICKLAND, R. K., R. R. GERRISH, J. L. HORRIGAN, AND G. O. SCHUBERT. 1976. Ticks of Veterinary Importance. Agr. Handbook No. 485, APHIS, USDA, Washington, D.C.
- TRAVIS, B. V. 1941. Examination of wild animals for the cattle tick Boophilus annulatus microplus (Can.) in Florida. J. Parasitol. 27:465-467.
- USFWS. 1988. Recovery plan for Florida Grasshopper Sparrow. U.S. Fish and Wildl. Serv., Atlanta.

FLORIDA ORNITHOLOGICAL SOCIETY SPECIAL PUBLICATIONS

Species Index to Florida Bird Records in Audubon Field Notes and American Birds Volumes 1-30 1947-1976, by Margaret C. Bowman. 1978. Florida Ornithological Society, Special Publication No. 1. Price \$4.00.

The Carolina Parakeet in Florida, by Daniel McKinley. 1985. Florida Ornithological Society, Special Publication No. 2. Price \$6.00.

Status and Distribution of the Florida Scrub Jay, by Jeffrey A. Cox. 1987. Florida Ornithological Society, Special Publication No. 3. Price \$8.00.

Florida Bird Records in American Birds and Audubon Field Notes 1947-1989, by Robert W. Loftin, Glen E. Woolfenden, and Janet A. Woolfenden. 1991. Florida Ornithological Society, Special Publication No. 4. Price \$8.00.

West Indian Bird Records in American Birds and Audubon Field Notes (1947-1990): Species Index by Islands, by Robert W. Loftin. 1992. Florida Ornithological Society, Special Publication No. 5. Price \$8.00.

Florida Bird Species: An Annotated List, by William B. Robertson, Jr. and Glen E. Woolfenden. 1992. Florida Ornithological Society, Special Publication No. 6. Price for FOS members \$14.95 (soft cover), \$19.95 (hard cover); nonmembers \$17.95 (soft cover), \$22.95 (hard cover).

Order prepaid from the Secretary; add \$1.00 handling and shipping for Special Publications No. 1-5; add \$2.00 handling and shipping for Special Publication No. 6. **Florida residents** add 7% sales tax to the total. Make checks payable to the Florida Ornithological Society.