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TICKS FROM FLORIDA GRASSHOPPER SPARROWSMICHAEL F. DELANY¹ AND DONALD J. FORRESTER²¹*Florida Game and Fresh Water Fish Commission, 4005 S. Main St.
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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.

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