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Additional U.S. collections of the Gulf Coast tick, *Amblyomma maculatum* (Acari: Ixodidae), from the State of Delaware, the first reported field collections of adult specimens from the State of Maryland, and data regarding this tick from surveillance of migratory songbirds in Maryland

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Abstract

This report describes collections of the Gulf Coast tick, Amblyomma maculatum Koch (Ixodida: Ixodidae), made during 2013 at the Bombay Hook National Wildlife Refuge (NWR), Delaware, and at two sites in Maryland: the Blackwater NWR and the Chester River Field Research Station (CRFRS). Ticks were collected via field drags, dry ice-baited traps, and/or from the human field researchers (collections of ticks crawling on clothing/boots) at Bombay Hook NWR and Blackwater NWR. A total of 21 A. maculatum were successfully collected at Bombay Hook NWR during May 28-30, 2013. Using a genus-specific quantitative real-time polymerase chain reaction (qPCR) assay and species-specific qPCR assays, a single male was found to be positive for the presence of Rickettsia parkeri DNA (a spotted fever group rickettsia). The repeated collection of this species in the adult stage at Bombay Hook NWR, the relatively large number collected (n=21), along with its continuity of presence pre- and post-winter, indicate that an established population may now exist at Bombay Hook NWR. A single adult female was collected from a field drag at Blackwater NWR on June 18, 2013; this specimen was negative for the presence of *Rickettsia* spp. DNA (including *R. parkeri* DNA). An adult male was collected on a researcher at CRFRS on August 8, 2013; this specimen was found to be positive for R. parkeri DNA. This report also summarizes data from 2008 to 2010 for A. maculatum collected during mist netting surveillance of migratory songbirds by the Foreman's Branch Bird Observatory, located at CRFRS: a total of 104 immature A. maculatum were collected. The adult specimens of A. maculatum collected at Blackwater NWR and at CRFRS are regarded as representing the first documentation of adult field-collected A. maculatum within the state. Future sampling is needed at each location to determine if A. maculatum is firmly established, the prevalence of R. parkeri infection, and the epidemiological risk to humans.

Key words: Amblyomma maculatum, Rickettsia parkeri, Delaware, Maryland, U.S.A.

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