

Research Note

THE TROPICAL HORSE TICK AND THE SOUTHERN CATTLE TICK IN PUERTO RICO^{1,2}

This note reports a new host of the tropical horse tick, discusses the southern cattle tick, and indicates some characteristics for identifying these ticks.

Anocentor nitens (Neumann), the tropical horse tick, was collected from a female domestic cat, *Felis catus* L., by de León in Trujillo Alto, Puerto Rico December 9, 1980. The lot consisted of two males and two females, two specimens were found in each ear. The tropical horse tick parasitizes many different species of hosts in the southern United States, the West Indies, and Central and South America, but has not heretofore been reported found on the domestic cat³. This is the second species of tick to be found on the domestic cat in Puerto Rico⁴. The spiracular plate of the tropical horse tick is circular and divided into conspicuous compartments, as shown in figure 3, a characteristic which readily separates this tick from other species in Puerto Rico.

Boophilus microplus (Canestrini), the southern cattle tick, was collected from a cow, *Bos taurus* L., at Corozal, Puerto Rico, by de León also December 9, 1980. The lot consisted of four males and eight females, which were taken from the ears, flanks, and around the anus. Although the cow had been treated with insecticides, these ticks were alive. This finding indicates that the susceptibility to insecticides of the Puerto Rican strain of the southern cattle tick should be investigated, as the susceptibility of other strains has been investigated elsewhere⁵.

Various names have been used for this species of tick⁶. The southern

¹ Manuscript submitted to Editorial Board July 9, 1981.

² Thanks are expressed to Dr. Gary P. Combs, In Charge, Veterinary Services, USDA-APHIS, San Juan, Puerto Rico 00936, for information and literature on tick control programs; to Dr. J. E. Keirans, Cooperating Scientist, Systematic Entomology Laboratory, USDA, Beltsville, Maryland 20705, for confirming the identifications of the ticks; and to Dr. Joaquín Segarra, School of Medicine, University of Puerto Rico, San Juan, P. R. 00936, for taking the photographs.

³ Doss, M. A., Farr, M. M., Farr, K. F., and Anastos, G., 1974. Index-Catalogue of medical and veterinary zoology. Ticks and tick-borne diseases. I. Genera and species of ticks. Part I. Genera A-G, USDA Sp. Publ. No. 3: 1-429.

⁴ Fox, I., 1977. The domestic cat, *Felis catus* L., a new host record for the tick, *Ornithodoros puertoricensis* Fox, J. Agri. Univ. P. R. 61 (4):509.

⁵ Rawlins, S. C. and Mansingh, A., 1978. Patterns of resistance to various acaricides in some Jamaican populations of *Boophilus microplus*, J. Econ. Entomol. 71 (6):956-60.

⁶ Maldonado-Capriles, J. and Medina-Gaud, S., 1977. The ticks in Puerto Rico (Arachnida:Acarina), J. Agric. Univ. P. R. 61 (3):402-4.

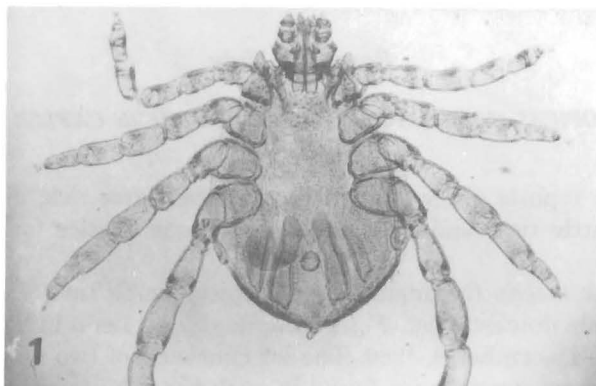


FIG. 1.—The southern cattle tick, *Boophilus microplus* (Canestrini), male, ventral view.

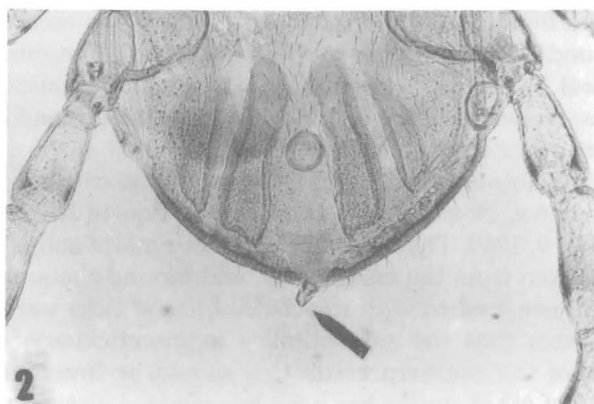


FIG. 2.—The same, posterior portion, enlarged with an arrow indicating the caudal appendage.

cattle tick, *Boophilus microplus* (Canestrini) is a separate species from the cattle tick, *B. annulatus* (Say)⁷, and distinguished from the latter by the presence of a caudal appendage in the male. Since males of the collection treated here have the caudal appendage (figures 1 and 2), the name *B. microplus* is proper. A male specimen in the School of Medicine, U. P. R., labeled, "*Boophilus annulatus*, March 1927, Aibonito, P. R.", also has the caudal appendage, indicating that the species common in Puerto Rico more than fifty years ago, very likely was *B. microplus* and not *B. annulatus*.

At the present time the southern cattle tick is a serious pest, although

⁷ Entomological Society of America, 1978. Common names of insects and related organisms (1978 Revision), Ent. Soc. Am. Sp. Publ. No. 78-1: 49.

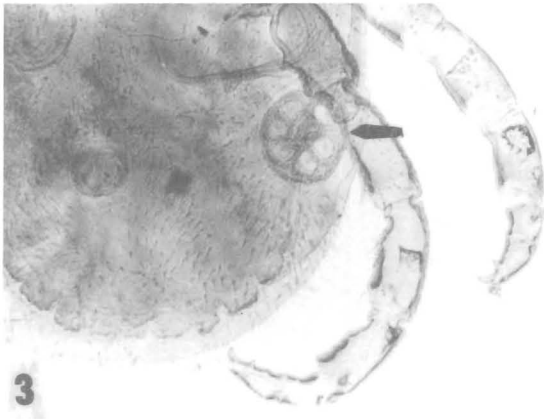


FIG. 3.—The tropical horse tick, *Anocentor nitens* (Neumann), male, posterior portion, with an arrow indicating the spiracular plate.

formerly it had been eradicated from Puerto Rico^{8,9}. In a letter dated March 18, 1981, Dr. Bary P. Combs, Area Veterinarian in Charge, Puerto Rico and the U. S. Virgin Islands, wrote, "We are estimating at this time that 70% of the herds in Puerto Rico are now infested with this tick. In a few additional years, in the noneradication zones, this incidence will increase to 98% or more. We are presently conducting eradication procedures in two small areas in Puerto Rico, which represent about 5% of the cattle population. The station offices are located in Arecibo and Caguas."

Irving Fox
Department of Microbiology
and Medical Zoology
School of Medicine
University of Puerto Rico
Delfín de León
Department of Animal Industry
Agricultural Experiment Station

⁸ Departamento de Agricultura de Puerto Rico, División de Veterinaria y Departamento de Agricultura Federal, Servicio de Inspección de Sanidad Animal y Vegetal, 1980. La guerra contra las garrapatas de fiebre de ganado en Puerto Rico.

⁹ Departamento de Agricultura de Puerto Rico y Departamento de Agricultura Federal, 1980. Erradicación de garrapatas en Puerto Rico.