

## Research Note

### THE TICKS IN PUERTO RICO (ARACHNIDA: ACARINA)<sup>1</sup>

The following notes give some information on the species of ticks known from Puerto Rico. Several so far unpublished records were supplied by Dr. J. E. Keirans from specimens under his care and deposited in the collection of the Rocky Mountain Laboratory (RML), Department of Health, Education, and Welfare, in Hamilton, Montana. These records are identified below by their number.

The doubtful record of *Antricola marginatus* Banks (Argasidae), as pointed out by Wolcott<sup>2</sup>, is not considered in this note. Also the record of *Spelaeorhynchus latus* Banks, collected by Fox and reported by him<sup>3</sup> as a tick from the fruit eating bat, *Artibeus jamaicensis jamaicensis*, in a cave near Bayamón in February and March 1942, is a record of a mite, not of a tick.

The species are listed in alphabetical order under their respective families.

#### ACARINA: ARGASIDAE

1. *Argas miniatus* Kock. During March 1974 a heavy infestation of this tick occurred in Peñuelas, Bo. Quebrada Ceiba. The infestation caused tick paralysis and death to hundreds of hens. Some of the specimens are recorded as RML 64134 and RML 64137 in the Laboratory in Montana.

2. *Argas persicus* Oken. The fowl tick. The senior author collected this species years ago in the San Juan market place. Wolcott<sup>2</sup> suggested that this species could have been introduced to Ponce and Guánica when chickens were commonly imported from the Dominican Republic and Haiti through these seaports.

3. *Ornithodoros puertoricensis* Fox. This species was described by Fox<sup>4</sup> from specimens collected from rats in the metropolitan area of San Juan. Later it was recorded from Argentina, Bolivia, Brazil, Panama, Paraguay, St. Croix, and Trinidad.

4. *Ornithodoros talaje* group. Larval specimens were collected from *Eleutherodactylus cooki*, a tree frog that is found only in the mountain

<sup>1</sup> Manuscript submitted to Editorial Board December 9, 1976.

<sup>2</sup> Wolcott, George N., The Insects of Puerto Rico, J. Agric. Univ. P. R., 32(1-4): 1-975, 1948.

<sup>3</sup> Fox, I., The occurrence of a rare genus of ticks on bats in Puerto Rico (Acarina: Spelaeorhynchidae), J. Agric. Univ. P.R. 26(4): 95-7, 1943.

<sup>4</sup> Fox, I., A new tick from rats in Puerto Rico, Parasitol. 33(3): 253-9, 1947.

caves near Yabucoa, by Juan A. Rivero and Horacio Mayorga. About the larvae, Keirans wrote "We are reluctant to definitely call them *O. talaje* because of the flaring nature of the hypostomal denticles and a few other minor characters, although chaetotaxy fits well for *O. talaje*." The specimens are deposited in the collection of the Rocky Mountain Laboratory as RML 65693.

5. *Ornithodoros viguerasi* Cooley and Kohls. From the bat *Erophylla bombifrons* in caves in Corozal (RML 47801) and Aguas Buenas (RML 50482).

#### ACARINA: IXODIDAE

6. *Amblyomma cruciferum* Neumann. Repeatedly collected from the large lizard from Mona Island, *Cyclura stejnegeri* B. and N. (known as the Mona Island iguana). This species was first recorded by Douglass<sup>5</sup>.

7. *Amblyomma dissimile* Koch. This species is found on *Bufo marinus* in other countries. Wolcott<sup>2</sup> mentioned that specimens were removed from the toads released on the island for the first time. Apparently this cleaning operation was effective as this species has not been collected since.

8. *Amblyomma torrei* Vigueras. From the lizard in Mona Island (known as the Mona Island iguana) (RML 57490) and from dogs in Mayagüez (RML 60046).

9. *Amblyomma variegatum* Arushcha. Collected for the first time in Puerto Rico from cows at Cidra, Bo. Río Abajo, Rd. 172, Km 79, at Mr. Mario Soler's farm, June 11, 1974. The female of this species grows to about 2 cm across the abdomen and the male about half as large, so they ingest a relatively large blood meal. This African species is particularly dangerous for the large number of hosts, both domestic and wild, that it parasitizes and the long list of diseases it can transmit. In the Americas it has been reported from Antigua, French Guiana, Guadeloupe, St. Kitts, Suriname, and Venezuela. Bibliographical data, up to 1974, on its distribution and veterinary importance are listed by Doss et al<sup>6</sup>. The species was identified for us by Dr. Keirans.

10. *Anocentor nitens* Neumann. The tropical horse tick. Van Volkenberg<sup>7</sup> and others reported this species as *Dermacentor nitens*. This

<sup>5</sup> Douglass-Tate, H., Biology of the tropical cattle tick and other species of ticks in Puerto Rico, with notes on the effects on ticks of arsenical dips, J. Agric. Univ. P.R. 25(1): 1-24, 1941.

<sup>6</sup> Doss, Mildred A., Farr, Marion M., Farr, Katherine F., and Anastos, G., 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, 1974.

<sup>7</sup> Van Volkenberg, H. L., Parasites and parasitic diseases of horses in Puerto Rico, P.R. Agric. Exp. Sta. at Mayagüez, Bull. 37: 1-19, 1935.

species can be relatively abundant on cows and horses when control measures are not taken.

11. *Boophilus annulatus* Say. The cattle tick. Van Volkenberg<sup>8</sup> listed *Boophilus annulatus australis* as the local subspecies while Wolcott<sup>2</sup> listed *Boophilus annulatus microplus*. The authors' listed name should be used. This species was eradicated from the Island in the mid-forties through a vigorous and well planned dipping campaign with arsenicals.

12. *Rhipicephalus sanguineus* Latreille. The brown dog tick. Found on dogs over the Island. It has been collected on rats in Puerto Rico by Fox<sup>9</sup>.

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<sup>8</sup> Van Volkenberg, H. L., Parasites and parasitic diseases of cattle in Puerto Rico, P.R. Agric. Exp. Sta. at Mayagüez, Bull. 36: 1-26, 1934.

<sup>9</sup> Fox, I., The brown dog tick on rats in Puerto Rico, J. Econ. Entomol. 43(5): 722, 1951.