

STUDIES ON THE FAUNA OF CURAÇAO AND OTHER  
CARIBBEAN ISLANDS: No. 106.

NEW RECORDS OF TICKS  
FROM THE LESSER ANTILLES

by

GLEN M. KOHLS

(Rocky Mountain Laboratory, Hamilton, Montana)

This study is based primarily on ticks collected by Dr. P. WAGENAAR HUMMELINCK (Zoölogisch Laboratorium, Utrecht) and associates. A few additional collections were received from Dr. K. E. HYLAND (University of Rhode Island), and from Dr. R. L. WENZEL (Field Museum of Natural History, Chicago).

THOMPSON (1950), MOREL (1966, 1967) and MOREL & FAURAN (1967) recorded a total of 10 species in 6 genera for the Lesser Antilles. Thirteen species in 4 of these genera, and 2 additional genera, were found in the collections on which the present study is based. Six of the species are reported for the Lesser Antilles for the first time. Several new island records are included and ticks are recorded for the first time from Îles des Saintes, Aves (west of Dominica), Carriacou, Los Testigos, Los Frailes, Margarita, Los Hermanos, Bonaire, Curaçao and Aruba. As for Curaçao, NEUMANN's (1897) report of the occurrence there of *Rhipicephalus bursa* has not been confirmed and it may have been based on an importation.

SPECIES OF TICKS KNOWN TO OCCUR IN THE LESSER ANTILLES

New island and species records are indicated by asterisks.

*Argas* "*persicus*" (Oken, 1818)

Antigua – Martinique – Barbados.

Until recently *Argas persicus* was considered to be almost worldwide but recent studies have shown that the name has been applied to a complex

of species. Specimens, especially larvae, are needed for study to determine the species present in the Caribbean region.

\**Antricola (Antricola) silvai* Černý  
Curaçao.

\**Ornithodoros (Alectorobius) azteci* Matheson  
Barbuda.

\**Ornithodoros (Alectorobius) capensis* Neumann  
St. Martin – Aves (west of Dominica).

*Ornithodoros (Alectorobius) denmarki* Kohls et al.  
Aves (west of Dominica).

*Ornithodoros capensis* group (either *capensis* or *denmarki*)  
\*Îles des Saintes.

*Ornithodoros (Alectorobius) hasei* (Schulze)  
\*Barbuda – Guadeloupe – Martinique.

*Ornithodoros (Alectorobius) puertoricensis* Fox  
Guadeloupe – \*Aruba.

\**Ornithodoros (Subparmatius) new species*  
Curaçao.

*Anocentor nitens* (Neumann)  
Barbuda – St. Martin – St. Kitts – Antigua – Montserrat –  
Guadeloupe – Dominica – Martinique – St. Vincent.

\**Amblyomma* sp., near *albopictum* Neumann  
Dominica.

*Amblyomma dissimile* Koch  
\*Barbados – \*Carriacou – \*Los Frailes – \*Los Hermanos –  
\*Margarita. See text also.

*Amblyomma rotundatum* Koch  
Guadeloupe – Martinique – Grenada. See text also.

*Amblyomma variegatum* (Fabricius)  
Antigua – Guadeloupe – Martinique.

*\*Haemaphysalis leporispalustris* (Packard)

St. Martin – Curaçao – Aruba.

*Boophilus microplus* (Canestrini)St. Martin – Saba – St. Eustatius – St. Kitts – Nevis – Antigua  
– Montserrat – Guadeloupe – St. Vincent – Barbados.*Rhipicephalus sanguineus* (Latrielle)St. Kitts – Antigua – Montserrat – Guadeloupe – Dominica –  
Martinique – St. Vincent – Barbados.

In the following listing of collections Dr. HUMMELINCK was the collector unless otherwise stated.

***Antricola (Antricola) silvai* Černý***Antricola silvai* ČERNÝ, 1967: 141

1 ♂, 1 nymph off *Mormoops megalophylla*, CURAÇAO, April 2, 1908, Ned Dearborn, Field Museum of Natural History (whether the ticks were attached was not recorded) (RML 31412).

9 ♂, 3 ♀, 74 nymphs off guano of *M. megalophylla* or *Glossophaga* sp., Cueba di Jetchi (Sta. 817), CURAÇAO, August 11, 1962, Miss L. J. van der Steen (RML 46326).

66 ♂, 11 ♀, approximately 500 nymphs, 2 larvae off guano of *M. megalophylla*, Cueba di Ratón, Hato (Sta. 340), CURAÇAO, September 26, 1948 (RML 45403).

– 1 larva off *M. megalophylla*, locality as above, October 20, 1948 (RML 45404).

– 17 ♂, 2 ♀, approximately 50 nymphs off guano of *Myotis* sp., locality as above, May 23, 1955 (RML 45411).

32 ♂, 2 ♀, approximately 100 nymphs, 4 larvae off guano of *M. megalophylla*, Cueba Bosá, Savonet (Sta. 348, 348a), CURAÇAO, March 7–17, 1949 (RML 45408).

This species was previously known from Cuba from adults and nymphs found on bat guano and larvae off several species of bats.

***Ornithodoros (Alectorobius) azteci* Matheson***Ornithodoros azteci* MATHESON, 1935: 349

17 larvae off *Noctilio leporinus*, Codrington Village, BARBUDA, July 5, 1955 (RML 45391).

This species has been recorded from bats and bat retreats in Cuba, Jamaica, Mexico, Panama, Colombia, Trinidad and Venezuela KOHLS et al. 1965).

### **Ornithodoros (Alectorobius) capensis** Neumann

*Ornithodoros talaje* var. *capensis* NEUMANN, 1901: 258

Approximately 30 larvae from pouch of *Pelecanus occidentalis*, Pelican Cay (Sta. 457), ST. MARTIN, August 3, 1949 (RML 46356). – 7 larvae off *Anous stolidus*, locality as above, May 26 and August 3, 1949 (RML 45476, 45477).  
5 larvae off *Anous stolidus* and *Sterna fuscata*, AVES (west of Dominica), May 12, 1949 (RML 45475).

For a review of the very extensive distribution of this sea bird tick see KOHLS et al. (1965) and AMERSON (1966).

### **Ornithodoros (Alectorobius) capensis** group

30 adults and nymphs associated with *Anous stolidus* and *Sterna fuscata*, AVES (west of Dominica), May 12, 1949 (RML 45475).

3 ♂, 1 nymph, under debris near shallow pond, Terre-de-haut, ÎLES DES SAINTES, February 6, 1964 (RML 46336).

The above collections of adults and nymphs are identified as *O. capensis* group because *capensis* and *denmarki* can be distinguished only on the basis of larvae.

### **Ornithodoros (Alectorobius) denmarki** Kohls, Sonenshine & Clifford

*Ornithodoros denmarki* KOHLS, SONENSHINE & CLIFFORD, 1965: 341

6 larvae off *Anous stolidus* and *Sterna fuscata*, AVES (west of Dominica), May 12 1949 (RML 45475).

This sea bird tick was recorded from Martinique by MOREL (1967) from nesting places of *Puffinus l. lherminieri*. Other records are from Dry Tortugas, Florida; Jamaica; Trinidad; Baja California, Mexico; Rabbit Island near Oahu, Hawaii (KOHLS et al. 1965); Sand Island, Johnston Atoll, Central Pacific (AMERSON, 1966).

### **Ornithodoros (Alectorobius) hasei** (Schulze)

*Argas hasei* SCHULZE, 1935: 34

3 larvae off *Noctilio leporinus*, Codrington Village, BARBUDA, July 5, 1955 (RML 45391).

MOREL (1967) recorded this species from Guadeloupe and Martinique and presented a review of its hosts and distribution. Its range extends from Mexico to Venezuela.

### **Ornithodoros (Alectorobius) puertoricensis** Fox

*Ornithodoros puertoricensis* Fox 1947: 253

3 larvae off *Sylvilagus floridanus* (= *S. nigronuchalis*), Noord, ARUBA, December 2, 1945, J. van Zijl (RML 45470).

2 larvae off *Sylvilagus floridanus*, Balashi, ARUBA, December 16, 1945, J. van Zijl (RML 45471).

MOREL & FAURAN (1967) recorded larvae from Guadeloupe, off *Rattus norvegicus* and reviewed the hosts and distribution of the species. The species is known from Puerto Rico, Jamaica, St. Croix, Trinidad, Panama and Colombia. Its hosts include *Rattus norvegicus*, *R. rattus*, *Herpestes ichneumon*, *Proechimys guyanensis trinitatis*, *Sylvilagus brasiliensis*, *S. floridanus* and man.

### **Ornithodoros (Subparmatius) new species**

8 larvae off *Mormoops megalophylla*, Cueva di Ratón, Hato, CURAÇAO, October 20, 1948 (RML 45404). 1 larva, host not stated, same locality, December 1, 1948 (RML 45423).

This new species, which resembles *O. (S.) viguerasi* Cooley & Kohls, 1941, is being described by KOLHS, CLIFFORD & JONES (in preparation). *O. (S.) viguerasi* has been reported from several genera and species of bats in Cuba and Trinidad (FAIRCHILD et al., 1966; ČERNÝ & DUSBÁBEK, 1967). The specimens reported from Panama by FAIRCHILD et al. are not *viguerasi* but a closely related new species also being described by KOHLS et al. MOREL (1967) mistakenly reported Cuban records from Cueva de Somorrostro, Jamaica, Prov. Habana, as being from the island of Jamaica.

### **Ornithodoros** sp.

1 nymph off *M. megalophylla*, Cueva di Ratón, Hato, CURAÇAO, September 26, 1948 (RML 45403).

This early stage nymph appears to be a new species but more material is needed for positive identification.

### **Anocentor nitens** (Neumann)

*Dermacentor nitens* NEUMANN, 1897: 376

5 ♀ off horse, plain northwest of Codrington Village, BARBUDA, July 5, 1949 (RML 46355).

The distribution of the tropical horse tick extends from southern Texas and Florida and the West Indies southward to Brazil. Its distribution and hosts in the Caribbean were reviewed by MOREL (1966). In the Lesser Antilles the species is known from the following islands in addition to Barbuda: St. Martin, St. Kitts, Antigua, Montserrat, Guadeloupe, Dominica, Martinique, and St. Vincent. Although *nitens* parasitizes horses primarily, it is frequently taken on cattle and it is sometimes found on other domestic animals as well.

### **Amblyomma** sp., near **albopictum** Neumann, 1899

9 ♂, 2 nymphs, 1 larva off *Iguana delicatissima*, Layou Park, DOMINICA, J. D. Lazell, received December 1966 from K. E. Hyland (RML 47337).

The males strongly resemble those of *Amblyomma albopictum*. They differ primarily in having finer and more numerous scutal punctations and the foveae are large and distinct.

### **Amblyomma dissimile** Koch

*Amblyomma dissimile* KOCH, 1844: 225

1 ♂, 1 ♀ off *Bufo marinus*, Washy Pond southeast of Merricks (St. Philip), BARBADOS, July 6, 1967 (RML 50498).

1 ♀, data as above except Cole's Pasture pond at mill (RML 50499).

All of the following from *Iguana iguana*: 6 ♂, 1 ♀, 2 nymphs, CARRIACOU, date not stated, K. E. Hyland (RML 47336).

4 ♂, 2 ♀, 2 nymphs, La Pecha (Sta. 168), LOS FRAILES, April 19, 1936 (RML 46345).

5 ♂, 2 ♀, 2 nymphs, 30 larvae, off 3 iguanas, MORRO PANDO, LOS HERMANOS, July 30, 1936 (RML 46346).

11 ♂, 4 nymphs, 30 larvae, off 6 iguanas, Porlamar, MARGARITA, May 19, 26, 27, 31, 1936 (RML 46348-51).

- 8 ♂, 1 ♀, off 2 iguanas, El Valle, MARGARITA, May 26, 1936 (RML 46352).  
 1 ♂, Laguna Dulce, Macanao, MARGARITA, May 20, 1936 (RML 46353).

The range of this common reptile tick extends from Florida, Mexico, and the West Indies, to Argentina. Because of the similarity of the females to those of *A. rotundatum* (females are parthenogenetic, males do not exist) MOREL (1967) questioned reports of the presence of *dissimile* in the Greater Antilles and in Grenada, St. Lucia, Barbados and Antigua in the Lesser Antilles and stated that only *rotundatum* appeared to be present. He stated, too, that the AUDEBAUD & COURMES (1962) record of *dissimile* from Guadeloupe applies instead to *rotundatum*. The present records, however, confirm the presence of *dissimile* in the Lesser Antilles, as far north as Barbados. Moreover, the collections of the Rocky Mountain Laboratory contain 1 ♀ off *Cyclura cornuta* in the Dominican Republic (RML 35994), and ČERNÝ (1966) examined 53 ♂, 9 ♀, 19 nymphs and 27 larvae from *Bufo peltacephalus*, Viñales, Pinar del Rio, Cuba.

### **Amblyomma rotundatum Koch**

*Amblyomma rotundatum* KOCH, 1844

- 1 ♀, host not stated, "Boys School", GRENADA, March 9, 1951 (RML 46338).

The range of this parasite of amphibians and reptiles extends from Mexico and certain of the Caribbean islands to Argentina. Previous records from Cuba, Jamaica, Puerto Rico, Barbados, St. Lucia, Antigua, and Grenada were questioned by MOREL (1967) because similarity of the females (males do not exist) to those of *dissimile* may have resulted in errors in identification. Collections which he identified as *rotundatum* were from Guadeloupe and Martinique and most of them were from *Bufo marinus*. The presence of the species in JAMAICA is confirmed by 2 collections in the Rocky Mountain Laboratory as follows: 2 ♀, 10 nymphs, 1 larva off *Bufo marinus*, Stony Hill, St. Andrew, September 29, 1946, Gordon B. Thompson (RML 23862) and 1 ♀ off *Bufo granulosis*, Amity Hill, St. Thomas, December 2, 1962, T. H. G. Aitken (RML 39453). I had previously determined the first of these collections as probably *goeldii* Neumann, 1899 and it has been reported as this by THOMPSON (1950).

### **Haemaphysalis leporispalustris (Packard)**

*Ixodes leporis-palustris* PACKARD, 1869: 67

3 engorged ♀, "on grassy field", Agricultural Experiment Station, St. Peter, St. MARTIN, March 9, 1949, A. C. J. Burgers (RML 46333).

All of the following collections were from *Sylvilagus floridanus*:

2 nymphs, Ronde Klip, CURAÇAO, April 2, 1946 (RML 45474). – 1 ♀, data as above but April 9, 1946 (RML 46367).

1 nymph, Zapateer, CURAÇAO, April 7, 1946 (RML 45472).

1 ♂, 2 ♀, 16 larvae, CURAÇAO, 1963 (RML 46341).

1 ♀, 1 nymph, Noord, ARUBA, December 2, 1945, J. van Zijl (RML 45470).

1 ♀, 1 nymph, Balashi, ARUBA, December 16, 1947, J. van Zijl (RML 45471).

Although the rabbit tick is widely distributed from Alaska and Canada to Argentina (Kohls, 1960) it does not appear to have been recorded previously from the Caribbean.

### **Rhipicephalus sanguineus (Latreille)**

*Ixodes sanguineus* LATREILLE, 1806: 157

7 ♂, 40 ♀ off dog, Philipsburg, St. MARTIN, May 21, 1949 (RML 46330). – Over 300 adults, host and locality as above, May 25, 1949 (RML 46331).

1 ♂ off pig, Philipsburg, St. MARTIN, May 21, 1949 (RML 46332).

1 ♂, 1 ♀ off dog, Kralendijk, BONAIRE, September 22, 1948 (RML 46337).

This very widely distributed species has been recorded previously from several islands of the Lesser Antilles and from other islands of the Caribbean.

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