

Notes on Avian Ectoparasites from Costa Rica. I. Acarina and Diptera

by

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Despite interest in ectoparasites as possible vectors of human diseases, little is known about the ectoparasites of Costa Rican birds. This report is intended to add to the knowledge concerning avian ectoparasites in the neotropical country of Costa Rica. The report is based upon collections made from September 1964, through August 1965.

Part II will be concerned with Mallophaga.

ACARINA

Feather mites, ticks and chiggers were taken from a number of avian hosts. The systematics of feather mites is in a fluid state and they will not be considered here.

IXODIDAE

With one exception, all ticks in this collection are nymphs or larvae. Of these, the majority are of the genus *Amblyomma* and many are new locality and host records for Costa Rica. The immatures of many species in this genus are unknown (or not properly associated with adults) and most of the larvae and nymphs in the collection cannot be identified below the generic level. The three species identified have been reported previously from Costa Rica by TONN, KOHLS, and ARNOLD (5).

The locality and host records from this collection are:

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Amblyomma longirostre (Koch)

ALAJUELA Province: Santa Clara, Colegio San Benito - 23 October 1964, *Laterallus albigularis cinereiceps*, 3 larvae.

CARTAGO Province: Turrialba - 24 September 1964, *Xiphorhynchus guttatus costaricensis*, 1 nymph & 10 larvae; 11 March 1965, *Pipromorpha oleaginea assimilis*, 1 larva; *Thryothorus nigricapillus costaricensis* (2), 1 nymph, 3 larvae; *Baryphibengus ruficapillus costaricensis*, 1 larva; 12 March 1965, *Tangara* sp., 1 larva; 13 March 1965, *Thryothorus nigricapillus costaricensis*, 1 larva.

GUANACASTE Province: 2 mi NE Tilarán - 20 January 1965, *Lepidocolaptes souleyetii compressus*, 1 larva; 21 January 1965, *Chiroxiphia linearis fastuosa* (2), 1 larva, 2 larvae; 2.75 mi NE Tilarán - 21 January 1965, *Cyanocompsa cyanoides caerulescens*, 1 larva; 1.4 mi NE Tilarán - 3 August 1965, *Thryothorus m. modestus*, 1 larva; 4 August 1965, *Thryothorus atrogularis*, 1 larva; 3.2 mi W Tronadora - 4 August 1965, *Taraba major melanocrissus*, 1 larva.

LIMON Province: Guácimo, Río Guácimo - 18 February 1965, *Cercomacra tyrannina crepera*, 1 larva.

PUNTARENAS Province: 4.2 mi E Golfito - 13 June 1965, *Thamnophilus bridgesi*, 1 nymph.

SAN JOSE Province: Río Damitas, 8.7 mi N Quepos - 28 January 1965, *Automolus ochralaemus exsertus*, 1 larva.

Amblyomma spp.

Immatures collected represent at least two, possibly three species (Kohls, *in litt.*).

ALAJUELA Province: Santa Clara, Colegio San Benito - 22 October 1964, *Laterallus albigularis cinereiceps*, 3 nymphs; 0.75 mi N Los Chiles de Grecia - 9 July 1965, *Henicorbina leucosticta tropaea*, 2 larvae.

CARTAGO Province: Turrialba - 22 September 1964, *Thryothorus thoracicus*, 23 larvae; 23 September 1964, *Baryphibengus ruficapillus costaricensis*, 1 larva; 11 March 1965, *Thryothorus nigricapillus costaricensis*, 2 nymphs; 12 March 1965, *Myrmeciza e. exsul*, 1 larva; *Thryothorus thoracicus*, 1 nymph; *Thamnophiles punctatus atrinucha*, 1 larva; 13 March 1965, *Thryothorus nigricapillus costaricensis* (2), 1 nymph & 1 larva, 1 nymph; 17 June 1965, *Thryothorus nigricapillus costaricensis*, 1 nymph.

GUANACASTE Province: 3 mi NE Tilarán - 20 January 1965, *Nyctidromus albicollis intercedens*, 14 larvae; 2 mi NE Tilarán - 20 January 1965, *Eucometes penicillata spodocephala*, 1 nymph; *Saltator maximus magnoides*, 1 nymph; *Lepidocolaptes souleyetii compressus*, 1 larva; 1.5 mi NE Tilarán - 21 April 1965, *Thryothorus m. modestus* (2), 1 nymph & larva, 1 larva; 1.7 mi W Tilarán - 23 April 1965, *Rhinoptynx c. clamator*, 4 larvae; 1.4 mi NE Tila-

rán - 3 August 1965, *Thryothorus m. modestus*, 1 nymph; *Thryothorus atrogularis*, 1 nymph; *Thryothorus rufalbus castanonotus*, 2 larvae; *Taraba major melanocrissus*, 2 nymphs & 3 larvae.

LIMON Province: Guácimo, Río Guácimo - 18 February 1965, *Thryothorus thoracicus* (2), 1 nymph, 2 nymphs; *Cercomacra tyrannina crepera*, 3 nymphs; 19 February 1965. *Automolus ochralaemus hypophaeus*, 1 nymph & 2 larvae; 19 February 1965, *Myrmeciza e. exsul*, 1 larva; 20 February 1965, *Myrmeciza e. exsul*, 1 larva; *Arremon aurantirostris rufidorsalis*, 75 larvae; 21 February 1965, *Thryothorus nigricapillus costaricensis*, 1 nymph; Finca La Lola - 27 May 1965, *Taraba major melanocrissus*, 1 nymph; *Pachyramphus cinnamomeus fulvidior*, 1 nymph.

PUNTARENAS Province: Finca Don Nicolás, 0.6 mi N Tambor - 11 November 1964, *Thryothorus pleurostictus ravus*, 2 nymphs & 6 larvae; 4.2 mi E Golfito - 13 June 1965, *Habia atrimaxillaris*, 1 larva; 0.5 mi NW Buenos Aires - 27 July 1965, *Rhodinocichla rosea eximia*, 1 nymph; 1 mi N Paso Real - 29 July 1965, *Manacus aurantiacus*, 2 nymphs.

Haemaphysalis leporispalustris (Pack.)

HEREDIA Province: Puerto Viejo de Sarapiquí - 3 December 1964, *Thryothorus nigricapillus costaricensis*, 1 larva.

LIMON Province: Guácimo, Río Guácimo - 20 February 1965, *Myrmeciza e. exsul*, 1 nymph & 1 larva.

Ixodes auritulus Neumann

ALAJUELA Province: Volcán Póas, 8200 feet - 29 December 1964, *Seiurus aurocapillus*, 1 larva; *Catharus g. gracilirostris*, 1 larva.

Ixodes sp.

SAN JOSE Province: 1 mi N La Georgina, 10,000 feet - 17 September 1964, *Turdus nigrescens*, 1 female.

The only adult tick collected from a bird. This specimen is badly mutilated with most of the capitulum missing. The high altitude of the locality makes it probable that the tick is *I. auritulus*.

TROMBICULIDAE

I have been unable to locate any published records of chiggers for Costa Rica. Indeed, the only Central American republic for which information has been summarized is Guatemala. BRENNAN and DALMAT (1) recorded 19 species for this country. More recently, BRENNAN and YUNKER (2) listed 76 species of chiggers for Panamá.

All the following records, then, are new for Costa Rica.

Blankaartia sinnamaryi (Floch & Fauran)

PUNTARENAS Province: 0.6 mi WNW Buenos Aires - 14 May 1965, *Lepidocolaptes souleyetii compressus*, 4 larvae; 15 May 1965, *Thryothorus rutilus hyperythrus*, 24 larvae, *Tolmomyias sulphurescens cinereiceps*, 18 larvae; 16 May 1965, *Thamnophilus bridgesi*, 49 larvae; 18 May 1965, *Thryothorus rutilus hyperythrus*, (2), 10 larvae; 19 May 1965, *Thryothorus m. modestus*, 1 larva; 27 July 1965, *Thryothorus m. modestus* (2), 6 larvae; 4 mi N, 2 mi W Buenos Aires - 28 July 1965, *Thryothorus m. modestus*, 3 larvae; 7 mi E Golfito - 13 June 1965, *Thryothorus fasciatoventris melanogaster*, 5 larvae; Finca La Ligia, Julieta - 5 March 1965, *Thryothorus fasciatoventris melanogaster*, 2 larvae; 3 March 1965, *Thamnophilus doliatus pacificus*, 3 larvae.

GUANACASTE Province: 3 mi N La Guardia - 30 October 1964, *Thryothorus pleurostictus ravus*, 1 larva.

Eutrombicula alfreddugesi (Oudemans)

PUNTARENAS Province: Finca Don Nicolás, 0.6 mi N Tambor - November 1964, *Thryothorus m. modestus*, 1 larva; *Thryothorus pleurostictus ravus*, 11 larvae; 0.6 mi WNW Buenos Aires - 16 May 1965, *Thamnophilus bridgesi*, 3 larvae; 18 May 1965, *Thryothorus rutilus hyperythrus*, 2 larvae.

GUANACASTE Province: 5 mi N La Guardia - 30 October 1964, *Thryothorus pleurostictus ravus*, 7 larvae; 2.6 mi W Los Angeles de Tilarán - 5 August 1965, *Thryothorus pleurostictus ravus*, 4 larvae.

Recorded from Guatemala and Panamá.

Eutrombicula batatas (Linn.)

PUNTARENAS Province: Finca La Ligia, Julieta - 3 March 1965, *Tapera naevia* (2), 12 larvae.

Eutrombicula goeldii (Oudemans)

PUNTARENAS Province: 4 mi NW junction of routes 1 & 17 - 3 July 1965, *Thryothorus rufalbus castanonotus*, 4 larvae.

ALAJUELA Province: 0.75 mi N Los Chiles de Grecia - 9 July 1965, *Formicarius analis umbrosus*, 9 larvae.

Recorded from Panamá.

Euschoengastia belgicae Brennan & Yunker

PUNTARENAS Province: Finca Don Nicolás, 0.6 mi N Tambor - *Thryothorus pleurostictus ravus*, 8 larvae.

Described from Panamá.

Neoschoengastia americana (Hirst)

GUANACASTE Province: 1.5 mi NE Tilarán - 22 April 1965, *Thryothorus atrogularis*, 3 larvae.

This species is recorded from Panamá and Guatemala, northward throughout the southern United States.

Neoschoengastia dalmati Brennan

CARTAGO Province: Turrialba - 11 March 1965, *Baryphthengus ruficapillus costaricensis*, 8 larvae.

DIPTERA

Two families are represented in the collection, both of which are well-known avian ectoparasites.

MUSCIDAE

Fly larvae living in subcutaneous pockets were recovered from seven birds. Three birds were siblings still in the nest.

Philornis pici (Macquart)

GUANACASTE Province: 1.4 mi NE Tilarán - 5 August 1965, *Thryothorus rufalbus cantanonotus* (3), 58 larvae.

Adults reared from 12 larvae forced into pupation, allowed specific determination. This is the first host record for the avian family Troglodytidae, although a large range of hosts are known for this species (3).

Philornis spp.

LIMON Province: 1 km E. Siquirres - 15 October 1964, *Thryothorus modestus zeledoni*, 2 larvae.

PUNTARENAS Province: 7 mi E Golfito - 13 June 1965, *Gymnopithys leucaspis olivascens*, 7 larvae; Finca Helechales, 14 km NE Potrero Grande - 28 June 1965, *Odontophorus guttatus*, 12 larvae; Río Ceibo, 4 mi N, 2 mi W Buenos Aires - 28 July 1965, *Thryothorus m. modestus*, 12 larvae.

Although the adult birds did not appear to be harmed by the presence of these hematophagous parasites, the three nestling wrens had apparently suffered. Each nestling had 20 or more parasites on the head, in the wings and between the toes. The feather development indicated an age of six or seven days, but the young birds had not yet opened their eyes and the heads and wings were severely distorted by the fly larvae. Such heavy infestation may be an important factor in nestling mortality.

There are few published records for the genus from Costa Rica.

HIPPOBOSCIDAE

All four species in this collection have been reported before from Costa Rica by TONN and ARNOLD (4). However, all localities and hosts are new for this country.

There seems to be little host specificity and it is not uncommon to encounter two or more species of louse-fly on the same host.

Ornithoctona erythrocephala (Lynch)

PUNTARENAS Province: Finca Helechales, 14 km NE Potrero Grande - 23 June 1965, *Odontophorus gujanensis castigatus*, 1 female; 26 June 1965, *Pulsatrix perspicillata saturata*, 1 female (with 3 *Lynchia wolcotti*).

Ornithoctona fusciventris (Wiedemann)

PUNTARENAS Province: Finca Helechales, 14 km NE Potrero Grande - 22 June 1965, *Dysithamnus mentalis septemtrionalis*, 1 female.

This is the first record for this host.

Ornithoica vicina (Walker)

HEREDIA Province: Hacienda Las Horquetas, Río Sarapiquí - 19 March 1965, *Monasa morpheus*, 1 female.

This is the first record for this host.

Lynchia wolcotti (Swenk)

PUNTARENAS Province: Finca Helechales, 14 km NE Potrero Grande - 26 June 1965, *Pulsatrix perspicillata saturata*, 1 male, 2 females.

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SUMMARY

Locality and host records are given for ticks, chiggers, and flies collected from Costa Rican birds in 1964-1965. The chigger records are the first published for the country.

RESUMEN

Se presentan localidades y anotaciones de huéspedes de garrapatas, ácaros, y moscas coleccionadas en Costa Rica en 1964-1965. Las anotaciones de ácaros son las primeras publicadas de este país.

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