

Scientific Note

New records of feather mites (Acariformes: Analgoidea, Pterolichoidea) in Piracicaba, SP, Brazil

Fabio A. Hernandes¹ , Carlos H.W. Flechtmann² 

¹Departamento de Ecologia e Zoologia, CCB/ECZ, Trindade, Universidade Federal de Santa Catarina, 88040-970, Florianópolis, Santa Catarina, Brazil, CNPq-Brazil Researcher (304479/2019-5). ²Departamento de Entomologia e Acarologia, Escola Superior de Agricultura "Luiz de Queiroz", Universidade de São Paulo, 13418-900, Piracicaba, São Paulo, Brazil.

 Corresponding author: abakashi@gmail.com

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Abstract. Seven species and four undetermined feather mites are reported from various birds in Piracicaba, Brazil: *Dermoglyphus elongatus* Mégnin, 1877 (Dermoglyphidae) ex *Gallus gallus domesticus* (Linnaeus, 1758) "chicken" (Phasianidae), *Mesosathes tetrasetosus* (Novaes, 1953) (Crypturoptidae) and *Neumannella astacus* Dabert & Skoracki, 2004 (Dermoglyphidae) ex *Crypturellus tataupa* (Temminck, 1815) "tataupa tinamou" (Tinamidae), *Piciformobia ani* (Černý, 1915) (Gabuciniidae) ex *Crotophaga ani* Linnaeus, 1758 "smooth-billed ani" (Cuculidae), *Piciformobia guirae* Alzuet, Cicchino & Abrahamovich, 1988 (Gabuciniidae) ex *Guira guira* (Gmelin, 1788) "guira cuckoo" (Cuculidae), *Proctophyllodes thraupis* Atyeo & Braasch, 1966 (Proctophyllodidae) ex *Thraupis sayaca* (Linnaeus, 1766) "sayaca tanager" (Thraupidae), *Proctophyllodes troncatus* Robin, 1877 ex *Passer domesticus* (Linnaeus, 1758) "house sparrow" (Passeridae); and undetermined species of the genera: *Amerodectes* sp. (Proctophyllodidae), *Mesalgoides* sp. (Psoroptoididae), and *Trouessartia* sp. (Trouessartiidae) ex *Arundinicola leucocephala* (Linnaeus, 1764) "white-headed marsh tyrant" (Tyrannidae), and *Analges* sp. (Analgidae) ex *Euphonia chlorotica* (Linnaeus, 1766) "purple-throated euphonie" (Fringillidae). Four of them are recorded for the first time in Brazil: *D. elongatus*, *Pi. ani*, *Pr. thraupis*, and *Pr. troncatus*.

Keywords: Acari, Astigmata, feather mites, new records, plumicolous mites.

Despite recent advancements in the knowledge about feather mites of Brazil (e.g. Valim et al. 2011; Pedroso & Hernandes 2016; Hernandes 2019), the country still has several unknown feather mite associations. The aim of this work is to report feather mites from birds found in Piracicaba, São Paulo State, Brazil.

The examined feathers were obtained from dead birds either after collision with glass windows or found dead in rural areas. Feather mites were collected in the laboratory by CHWF under a dissecting microscope, from the following body regions: remiges (large wing feathers), rectrices (large tail feathers), contour (small outline wing feathers), calamus or quill (basal portion of feather shaft inserted into the follicle in the skin). Mites were mounted in glass slides using Hoyer's medium. Voucher specimens are deposited at the mite collection of the Department of Ecology and Zoology of the Universidade Federal de Santa Catarina (ECZ – UFSC).

Seven feather mite species and four undetermined species (Figs. 1A–T) were recorded from various birds. Four species are recorded for the first time in Brazil.

***Dermoglyphus elongatus* Mégnin, 1877** (Analgoidea: Dermoglyphidae) (Fig. 1A), 1 female ex *Gallus gallus domesticus* (Linnaeus, 1758) "chicken" (Galliformes: Phasianidae), 07 November 1979, Piracicaba, São Paulo, Brazil, quills.

Remarks: this quill mite was described from *G. gallus* (type host) and small passerines such as *Serinus canaria* (Linnaeus, 1758) (Passeriformes: Fringillidae) and *Amandava* spp. (Passeriformes: Estrildidae). Gaud (1974) demonstrated that the mite from passerines constitutes a distinct species, *D. passerinus* Gaud, 1974. To our knowledge, this is the first record of the species in Brazil.

***Mesosathes tetrasetosus* (Novaes, 1953)** (Pterolichoidea: Crypturoptidae) (Figs. 1B–E), 1 male, 5 females, ex *Crypturellus tataupa* (Temminck, 1815) "tataupa tinamou" (Tinamiformes: Tinamidae), 10 August 1975, Piracicaba, São Paulo, Brazil, remiges.

Remarks: this species was described from *C. tataupa* in Espírito Santo, Brazil (Novaes 1953) and was later reported from the same host species in Argentina, Brazil, and Paraguay, and also on *C. parvirostris* (Wagler, 1827) in Argentina and Brazil (Gaud et al. 1972). The type series, originally housed at the Museu Nacional, Rio de Janeiro, were probably destroyed in the fire of 2018.

***Neumannella astacus* Dabert & Skoracki, 2004** (Analgoidea: Dermoglyphidae) (Fig. 1F), 2 females, 1 larva, ex *Crypturellus tataupa* (Temminck, 1815) "tataupa tinamou" (Tinamiformes: Tinamidae), 10 August 1975, Piracicaba, São Paulo, Brazil, calamus.

Remarks: species recorded from the type host, described from Brazil (Dabert & Skoracki 2004); the genus includes currently seven species (Hernandes et al. 2017), all of them are syringicoles (live inside quills) associated with the Neotropical tinamous (Tinamiformes).

***Piciformobia ani* (Černý, 1975)** (Pterolichoidea: Gabuciniidae) (Figs. 1G–H), 12 males, 14 females, 1 nymph, ex *Crotophaga ani* Linnaeus, 1758 "smooth-billed ani" (Cuculiformes: Cuculidae), 23 August 1975, Piracicaba, São Paulo, Brazil, remiges.

Remarks: originally described from *C. ani* in Suriname, this species was later reported in Argentina on the type host, and also on *Crotophaga sulcirostris* Swainson, 1827 and *C. major* Gmelin, 1788 (Alzuet et al. 1988). This species is recorded for the first time in Brazil. Although superficially quite similar to *Piciformobia guirae* Alzuet, Cicchino & Abrahamovich, 1988, this species has setae cG on genu I

about twice longer, approximately the length of genu + tibia combined, while in *P. guirae* this seta is as long as – or only slightly longer than – genu I.

***Piciformobia guirae* Alzuet, Cicchino & Abrahamovich, 1988**
(Pterolichoidea: Gabuciniidae) (Figs. 1I–J), 14 males, 14 females, 3 nymphs, ex *Guira guira* (Gmelin, 1788) “guira cuckoo” (Cuculiformes: Cuculidae), 16 August 1975, Piracicaba, São Paulo, Brazil, remiges.

Remarks: This species was described from *G. guira* in Argentina, and also recorded in Piracicaba, Brazil (Alzuet et al. 1988). Recently, a second species of *Piciformobia* was described from the same host in Brazil (Hernandes 2020).

***Proctophyllodes thraupis* Atyeo & Braasch, 1966** (Analgoidea: Proctophyllodidae) (Figs. 1K–L), 11 males, 14 females, 2 nymphs, ex *Thraupis sayaca* (Linnaeus, 1766) “sayaca tanager” (Passeriformes: Thraupidae), 16 August 1975, Piracicaba, São Paulo, Brazil, remiges.

Remarks: this species was described from *Thraupis abbas* (Deppe, 1830) in Mexico, but also recorded on the following hosts: *Chlorophanes spiza* (Linnaeus, 1758) (Thraupidae) in Honduras and Mexico, *Sporophila corvina ophthalmica* (Sclater, 1860) (Thraupidae) in Mexico, *Euphonia affinis* (Lesson, 1842) (=*Tanagra affinis*) (Fringillidae) in Mexico; *Euphonia hirundinacea* Bonaparte, 1838 (=*Tanagra lauta* Bangs & Penard, 1919) in Honduras; *Euphonia musica* (Gmelin, 1789) (=*Tanagra musica*) in Mexico. It is herein reported for the first time in Brazil.

***Proctophyllodes troncatus* Robin, 1877** (Analgoidea: Proctophyllodidae) (Figs. 1M–N), 2 males, 6 females, 6 nymphs, ex *Passer domesticus* (Linnaeus, 1758) “house sparrow” (Passeriformes: Passeridae), 07 August 1975, Piracicaba, São Paulo, Brazil, remiges and rectrices.

Remarks: originally described from *P. domesticus*, this species constitutes one of the few examples of feather mites collected over a wide geographical range, following the widespread distribution of its primary host (Atyeo & Braasch 1966; Mironov 2012). This species is reported for the first time in Brazil, and to our knowledge, for the first time in the Neotropical region.

Undetermined species:

***Amerodectes* sp.** (Analgoidea: Proctophyllodidae) (Fig. 1O), 1 male ex *Arundinicola leucocephala* (Linnaeus, 1764) “white-headed marsh tyrant” (Passeriformes: Tyrannidae), 31 August 1975, Piracicaba, São Paulo, Brazil, remiges.

Remarks: this represents an undescribed species.

***Analges* sp.** (Analgoidea: Analgidae) (Figs. 1P–Q), 2 males, 3 females, 1 nymph, ex *Euphonia chlorotica* (Linnaeus, 1766) “purple-throated euphonia” (Passeriformes: Fringillidae), 12 September 1975, Piracicaba, São Paulo, Brazil, no further data.

Remarks: with approximately 64 described species mainly associated with passerines (Mironov 2019), a single species of this genus was described from Brazil (Pedroso & Hernandes 2018).

***Mesalgoides* sp.** (Analgoidea: Psoroptoididae) (Figs. 1R–S), 2 males and 1 female ex *Arundinicola leucocephala* (Linnaeus, 1764) “white-headed marsh tyrant” (Passeriformes: Tyrannidae), 31 August 1975, Piracicaba, São Paulo, Brazil, contour feathers.

Remarks: this represents an undescribed species.

***Trouessartia* sp.** (Analgoidea: Trouessartiidae) (Fig. 1T), 1 female ex *Arundinicola leucocephala* (Linnaeus, 1764) “white-headed marsh tyrant” (Passeriformes: Tyrannidae), 31 August 1975, Piracicaba, São Paulo, Brazil, remiges.

Remarks: this represents an undescribed species.

slided, and provisionally identified the mites. There is no conflict of interest between authors.

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Authors' contributions

FAH identified the mites and wrote the results; CHWF collected,

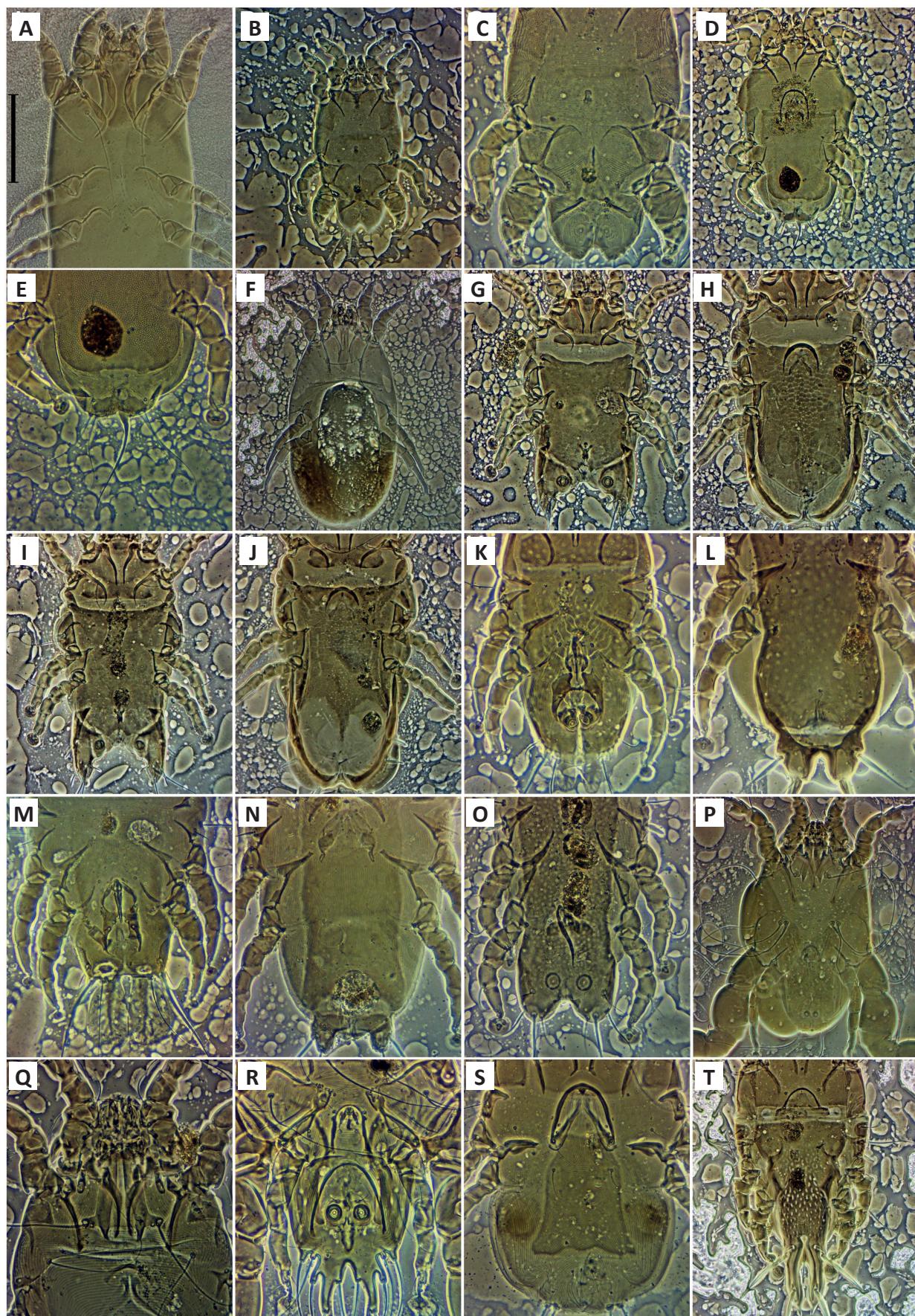


Figure 1. Feather mites from birds in Piracicaba, Brazil: *Dermoglyphus elongatus* Mégnin, 1877, female (A); *Mesosathes tetrasetosus* (Novaes, 1953), male (B, C) and female (D, E); *Neumannella astacoides* Dabert & Skoracki, 2004, female (F); *Piciformobia ani* (Černý, 1915), male (G) and female (H); *Piciformobia guirae* Alzuet, Cicchino & Abrahamovich, 1988, male (I) and female (J); *Proctophyllodes thraupis* Atyeo & Braasch, 1966, male (K) and female (L); *Proctophyllodes troncatus* Robin, 1877, male (M) and female (N); *Amerodectes* sp., male (O); *Analges* sp., male (P) and female (Q); *Mesalgoides* sp., male (R) and female (S); *Trouessartia* sp., female (T). Scalebar: = A–B, D, F–J, P, T = 200 µm; C, E, K–O, Q–S = 100 µm.