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OF QUILL WALL MITES  
(ACARI, LAMINOSIPTIDAE, FAINOCOPTINAE)  
FROM *ARATINGA HOLOCHLORA*  
(AVES, PSITTACIDAE) IN MEXICO

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DIRECTION

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A NEW GENUS AND SPECIES OF QUILL WALL MITES  
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FROM *ARATINGA HOLOCHLORA* (AVES, PSITTACIDAE)  
IN MEXICO<sup>1</sup>.

BY A. FAIN<sup>2</sup> and T. M. PÉREZ<sup>3</sup>

QUILL MITE  
MEXICO

SUMMARY : A new genus and species of mites, *Aratingocoptes atyeoi* (Acari, Laminosioptidae, Fainocoptinae) are described from the wall of the feather quill of a psittacid bird, *Aratinga holochlora*, from Mexico.

ACARIEN DU  
TUYAU DE LA  
PLUME  
MEXIQUE

RESUMÉ : Un nouveau genre et une nouvelle espèce d'Acarien, *Aratingocoptes atyeoi* (Acari, Laminosioptidae, Fainocoptinae) sont décrits de la base et du tuyau des grandes plumes d'un perroquet, *Aratinga holochlora*, de Mexico.

INTRODUCTION

Including the new genus and species described herein, the subfamily Fainocoptinae Lukoschus and Lombert, 1979 (Laminosioptidae), now includes 7 genera and 21 species. All these species live in the feather quill during the development of the feather and they feed on the outer layers of the non-keratinized base of the quill, representing the germ of the feather (LUKOSCHUS and LOMBERT, 1979). The mites are generally found in the quills of the primaries, more rarely in those of the tail or of the body. These mites have been described from the following orders of birds :

Genus *Fainocoptes* Lukoschus and Lombert, 1979 :  
7 species, all from Columbiformes.

Genus *Calamicoptes* Lukoschus and Lombert, 1979 :  
9 species, among which 6 are from Passeriformes,  
2 from Charadriiformes and 1 from Galliformes.

Genus *Podicipedicoptes* Lombert, Kethley and  
Lukoschus, 1979 : one species, from Podicipedi-  
formes, in the U.S.A.

Genus *Colicoptes* Lombert and Lukoschus, 1981 :  
one species, from Coliiformes, in South Africa.

Genus *Rallicoptes* Lukoschus and Lombert, 1980 :  
one species, from Gruiformes, in Europe.

Genus *Streetacarus* Lukoschus and Lombert, 1979 :  
one species, from an Australian psittacid.

Genus *Aratingocoptes* n. g. : one species, from a  
Mexican psittacid.

We give herein a table with the main characters  
of these genera (table 1). All the measurements are  
in microns ( $\mu\text{m}$ ).

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TABLE 1 : Evolution of some characters in the genera of Fainocoptinae (females)

	<i>Aratingocoptes</i>	<i>Fainocoptes</i>	<i>Calamicoptes</i>	<i>Podicipedicoptes</i>	<i>Streetacarus</i>	<i>Rallicoptes</i>	<i>Colicoptes</i>
"Wings" :							
on gnathosoma	+	0	+	+	0	+	0
on propodosoma	+	+	+	+	0	+	+
<i>Sejugal sclerite</i>	+	+	+	+	+	+	0
<i>Solenidion genu III</i>	+	+	0	0	+	0	0
<i>Legs III and IV</i>							
thin	+	+	+	-	+	+	+
thick	-	-	-	+	-	-	-
<i>Setae</i> :							
<i>15</i>							
very long	+	+	+	+	+	-	-
very short	-	-	-	-	-	+	+
<i>12</i>							
long	+	+	+	+	+	-	-
lacking	-	-	-	-	-	+	+
trochanteral III	+	+	+	+	+	+	0
trochanteral IV	+	+	+	+	+	0	0
coxal I	+	+	+	+	+	+	0
<i>Humeral pores</i>	+	0	+	+	0	0	0

The subfamily Laminosioptinae Vitzthum, 1931 contains a single genus, *Laminosioptes* Megnin, 1880, that has been divided by FAIN (1981) into 4 subgenera :

*Laminosioptes* s. str. : with one species, *L. cysticola* Vizioli, 1870.

*Psittaciella* Fain, 1981 : with one species, *P. myiopsittae* Fain, 1981.

*Columbietta* Fain, 1981 : with one species, *C. collaris* Fain, 1981.

*Passeriella* Fain, 1981 : with one species, *P. reticulata* Fain, 1981.

All these species live in the subcutaneous tissues of birds, either on the body or on the legs. They are not in contact with the quills of the feathers.

#### ***Aratingocoptes* nov. gen.**

*Definition* : With the characters of the subfamily. It is the most close to the genus *Calamicoptes* and differs from this genus mainly by the presence of the solenidion on the genu III (see table I).

*Type-species* : *Aratingocoptes atyeoi* n. sp.

#### ***Aratingocoptes atyeoi* nov. spec.**

*Female* (holotype) (figs. 1-3) : Total length of body (including the gnathosoma) 550, maximum width (at level of setae *h*) 165. Length and width of the 4 paratypes : 516 × 170 ; 540 × 160 ; 546 × 186 ; 549 × 180. *Venter* : Striation of opisthosoma mostly transverse, without longitudinal striations in midline. Epimera I-III and sejugal sclerites normally developed. Epimera IV rather thick. Posterior margin of body regularly excavated. Setae *d5* distinctly thicker and longer (510) than *15* (345). Anus subterminal. Vulva at the level of epimera IV. Lengths of setae : *cx I* 45 ; *cx III* 44 ; *ga* 20 ; *gm* 12 ; *gp* 57 ; *a6* ; *l4* 78 ; *sh* 42. *Dorsum* : Propodonal shield oval with thick sclerotized margins. Cuticle of hysteronotum with transverse striations except in a transverse area at level of *d2* and *l2* and in the greatest part of opisthonotum which is devoid of striations and is finely sclerotized and punctate. Copulatory papilla small, round and in subterminal situation. A pair of small pores is present just behind setae *h*. Length of setae : *sc i* 18 ; *sc e* 260 ; *l1* 70 ; *l2* 148 ; *l3* 7 ; *d12* ; *d2* to *d4* and *l3* very short (2,5 to 5) ; *h* 150. Gnathosoma trapezoidal with lateral margins almost straight ; gnathosomal wings rather small. Maximum width of gnathosoma 57,

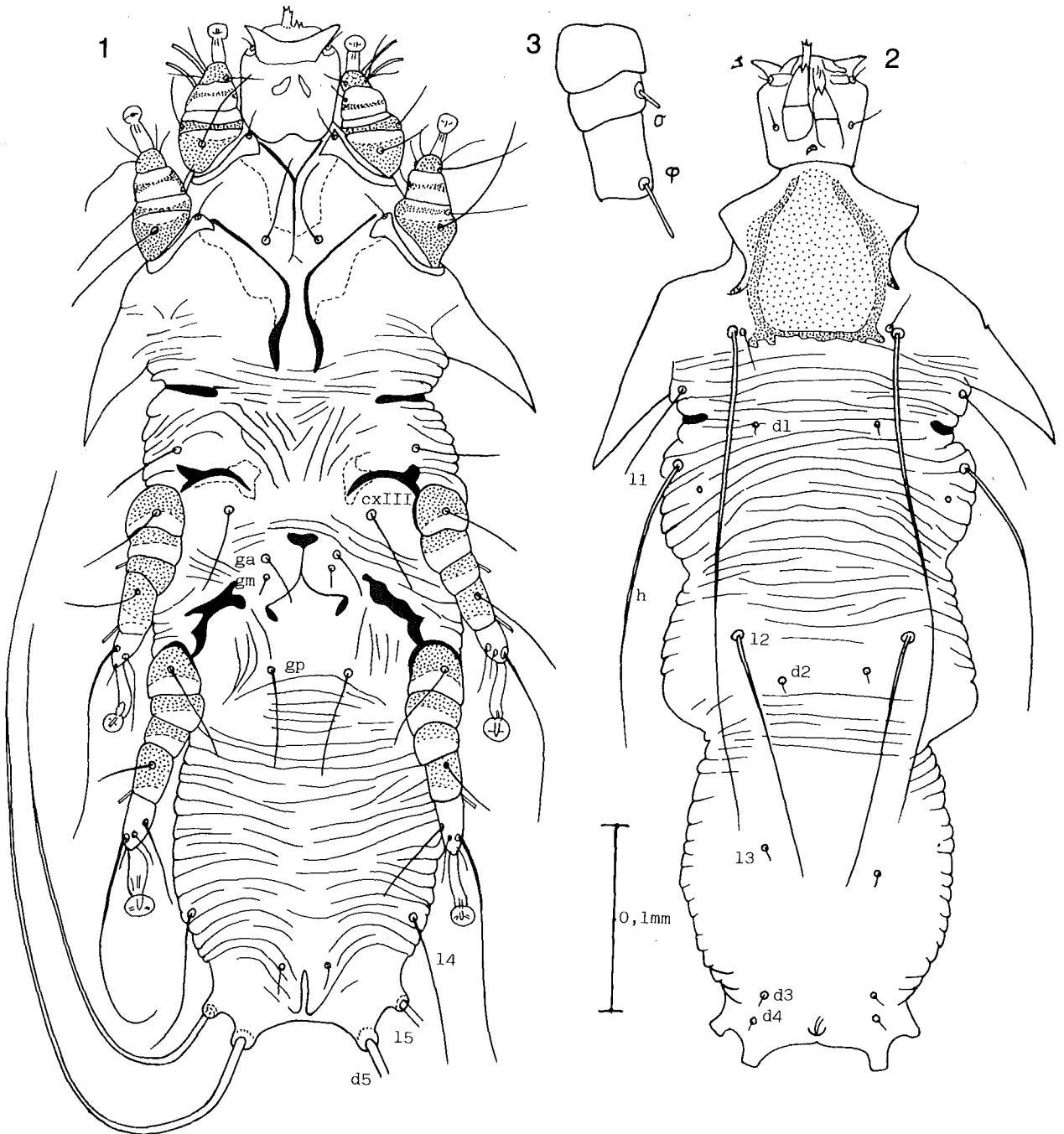


FIG. 1-3 : *Aratingocptes atyeoi* n. sp.

Holotype female in ventral view (1), in dorsal view (2); tibia, genu and femur of leg III (enlarged) (3).

minimum width 48. *Legs* : anterior legs short and thick ; posterior legs longer and narrower. Tarsi I-II with 2 dorso-apical conical processes. On legs I-II the genu is fused dorsally with femur. Chaetotaxy : Tarsi I-IV with 6-7-4-5 thin setae. Tibiae 1-1-1-1. Genua 2-2-0-0. Femora 1-1-0-0. Trochanters 1-1-1-1. Coxae 1-0-1-0. Solenidia : Tarsi 2-1-0-0. Tibiae 1-1-1-1. Genua 1-1-1-0. The solenidion of genu III is 4 long, that of tibia III is 10 long (fig. 3).

*Male and immatures* : unknown.

*Host and locality* :

Holotype and 4 paratypes, all females, from the primaries and the tail quills of *Aratinga h. holochlora*, Psittacidae, from El Limón, Tamaulipas, Mexico, 17 June 1985 (Coll. T. M. PÉREZ, E. MEJÍA). Several other specimens, not paratypes in the collection of Dr T. M. PEREZ. The mites were located in primaries (either at level of feather follicle and skin, near superior umbilicus or in channel) and in tail feather.

Holotype and one paratype deposited in US National Museum of Natural History (Washington D.C.). Paratypes in the collections of the authors.

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