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PARASITIC MITES OF SURINAM XIX. SEVEN NEW SPECIES OF MESALGOIDES (ANALGOIDEA, ANALGIDAE)

V. ČERNÝ

Institute of Parasitology, Czechoslovak Academy of Sciences, Prague

Abstract. Seven new species and one new subgenus of the feather mite genus *Mesalgoides* are described from Passeriformes and Piciformes from Surinam.

This is a first of a series of papers devoted to the fauna of feather mites, collected during the expedition of Dutch parasitologists to Surinam in 1971 under the leadership of Dr. F. Lukoschus, Nijmegen.*

In this contribution the genus *Mesalgoides* is dealt with. The genus was erected by Gaud and Atyeo (1967) with *Dermaleichus oscinum* Koch, 1840 as type-species to include species with reduced tarsi IV, terminal body bilobation and well developed pregenital apodeme (epiandrium) in male sex, long setae l_5 and d_5, pregenital apodeme (epigynium) extending beyond genital discs in female sex, absence of apicoventral hyaline hooklet on tarsi I and II and epimerites I with a short transverse connection in both sexes. These characters clearly separate this genus from *Mesalges* Trouessart et Neumann, 1888, formerly including erroneously also the members of *Mesalgoides*. Recently 2 species belonging to *Mesalgoides* have been described from American birds: *Mesalges piprae* Berla, 1959 from *Pipra erythrocephala* (L.) (Pipridae) and *Mesalges johnstoni* Spory, 1965 from *Agelaius phoeniceus* L. (Icteridae).

The present study discovered seven species of *Mesalgoides* confined mostly to one host species. The following characters proved to be useful for distinguishing the species: shape of epimerites I, size of ventrolateral spur on tibia III and form of opisthosomal lobes in males, shape of epimerites I and hysterosomal shield, length of the pregenital apodeme in relation to setae c_2, position of setae d_1 and extraepigynial sclerotization in females. The latter is represented by a small islet situated on the external side of pregenital apodeme and its position is constant within a species.

All measurements are given in μ. The following abbreviations are used in the text: DAD — distance between the centres of adanal discs, HSB — distance between anterior margin of hysterosomal shield and bottom of interlobal cleft, LPA, WPA — length and width of pregenital apodeme, WLF — width of lobal finger basally and at the level of setae d_5 (here including the hyaline membrane when present), WOL — width of opisthosomal lobe at the level between pai and l_5, B—d_5, B—pai—

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distance between the bottom of interlobal cleft and the centers of respective setae, sce—sce, pai—pai, d_5—d_5, l_5—l_5, c_2—c_2, a—a — distance between the centres of respective setae, c_2 — a — distance of rows of respective setae, g_1, g_2 — anterior and posterior genital disc, c_1—g_1, g_1—g_2, g_2—c_2 — distance between the centres of respective setae and discs.

All specimens were collected by Dr F. Lukoschus and N. J. Kok.

***Mesalgoides turdinus* sp. n.** Figs. 1A, 2A, 3A

Material examined: male (holotype) from *Turdus leucomelas* Vieillot (Turdidae), Welgedacht, 19. 9. 1971. Paratypes: 1♂ 35♀ 10 N, the same data.

Male (holotype). — Total length 366, idiosomal length 339, width 211 at level of cranial part of trochanter III. Gnathosoma 49×49. Palpi with weakly developed dorsal membrane. Propodosomal shield 86×93, sce—sce 84. Supranal concavity ovoid, 25×16. HSB 182. Median finger of opisthosomal lobe with internal hyaline lamella forming a triangular acute terminal projection. WOL 36, WLF 14, 13, B—pai 20, B—d_5 57, pai—pai 22, d_5—d_5 65, l_5—l_5 78.

Epimerites I V-shaped, with thickened base. Pregenital apodeme inverted U-shaped. Preanal apodeme divided. DAD 20, c_2—a 71, c_2—c_2 18, a—a 20. Legs III 308, ventrolateral spur on tibia III 45 (external margin measured), extending beyond middle of tarsus III (69). Legs IV reaching the articulation between genu and tibia III.

Female (allotype). — Total length 343, idiosomal length 308, width 199 at level of cranial part of trochanter III. Gnathosoma 57×52. Palpal membrane present. Propodosomal shield 103×112, sce—sce 93. Hysterosomal shield suboblong, 142×108. Setae d_1 on soft cuticle.

Epimerites I slightly converging, with only very weak filiform connection. Pregenital apodeme inverted U-shaped, extending beyond setae c_2. LPA 77, WPA 73, c_1—g_1 24, g_1—g_2 10, g_2—c_2 17. Extraepigynial sclerotization between g_1 and g_2, closer to g_2. Legs III reaching the proximal half of tarsus IV.

Mesalgoides turdinus sp. n. is similar to *M. oscinum* (Koch, 1840) from which it differs in epimerites I without posterolateral extensions, divided preanal apodeme and narrow acute postlobal lamellae in male, in epimerites I without lateral sclerotization terminating in triangular extensions and in suboblong hysterosomal shield with setae l_3 distant from its posterior margin in female.

***Mesalgoides lukoschusi* sp. n.** Figs. 1B, 2B, 3B

Material examined: male (holotype) from *Thraupis episcopus* L. (Thraupidae), Tawajariweg, 7. 9. 1971. Paratypes: 2♀, the same data.

Male (holotype). — Total length 405, idiosomal length 369, width 224. Gnathosoma 57×53. Palpi dorsally with large rounded hyaline membrane. Propodosomal shield 93×89, sce—sce 83. Supranal concavity elongate, indistinct. HSB 183. Median finger of opisthosomal lobe with internal lamella forming a small rounded terminal projection and with very narrow external lamella on its distal half. WOL 34, WLF 17, 15, B—pai 19, B—d_5 73, pai—pai 19, d_5—d_5 47, l_5—l_5 77.

Epimerites I Y-shaped, with short common branch, with thickened basal part connected by a transverse bridge. Pregenital apodeme inverted U-shaped. Preanal apodeme divided. DAD 25, c_2—a 69, c_2—c_2 16, a—a 22. Legs III 333, ventrolateral spur on tibia III 29, reaching about 1/4 of tarsus III (73). Legs IV extending slightly beyond the articulation of genu and tibia III.

Female (allotype). — Total length 357, idiosomal length 317, width 223. Gnathosoma 64×57. Palpi dorsally with large rounded hyaline membrane. Propodosomal shield 106×110, sce—sce 97. Hysterosomal shield suboblong, 150×110. Bases of setae d_1 protruding from its anterior margin.

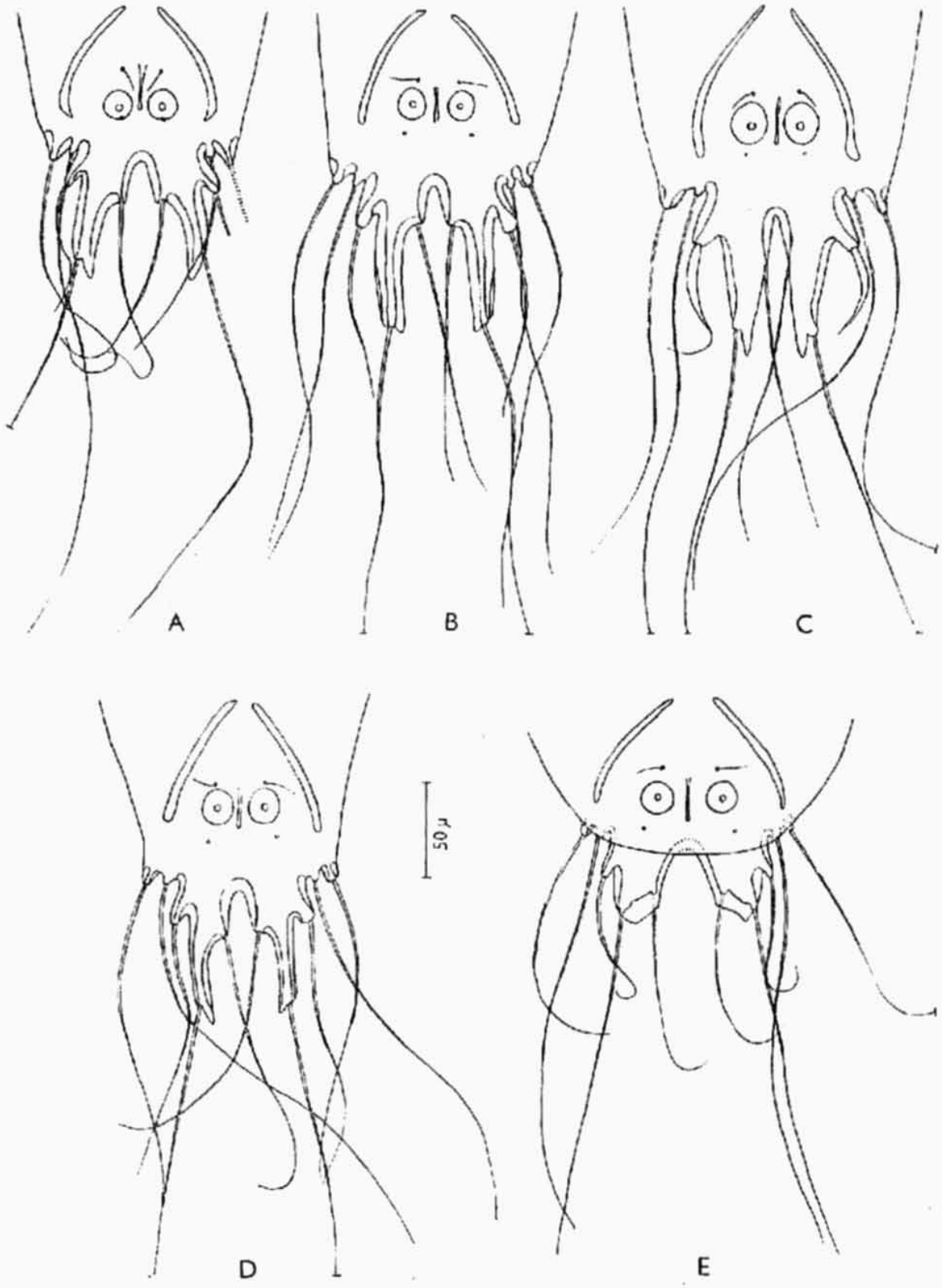


Fig. 1. Male, body terminus, ventral view. A — *Mesalgoides turdinus* sp. n., B — *M. lukoschusi* sp. n., C — *M. koki* sp. n., D — *M. surinamensis* sp. n., E — *M. capitonis* sp. n.

Epimerites I slightly convergent, weakly connected caudally. Pregenital apodeme inverted U-shaped, extending beyond setae c_2. LPA 73, WPA 71, c_1—g_1 30, g_1—g_2 10, g_2—c_2 12. Extraepigynial sclerotization close to g_1. Legs III reaching the proximal half of tarsus IV.

The male of *Mesalgoides lukoschusi* sp. n. differs from other species of the genus in the Y-shaped transversely connected epimerites I with short common branch, and weakly developed ventrolateral spur on tibia III, the female in the combination of following characters: pregenital apodeme extending beyond setae c_2, extraepigynial sclerotization close to g_1, bases of setae d_1 protruding from the anterior margin of the suboblong hysterosomal shield.

The new species is dedicated to Dr. F. Lukoschus, Zoological Institute, Catholic University of Nijmegen, a prominent parasitologist whose materials and works contributed considerably to the knowledge of parasitic mites of Surinam.

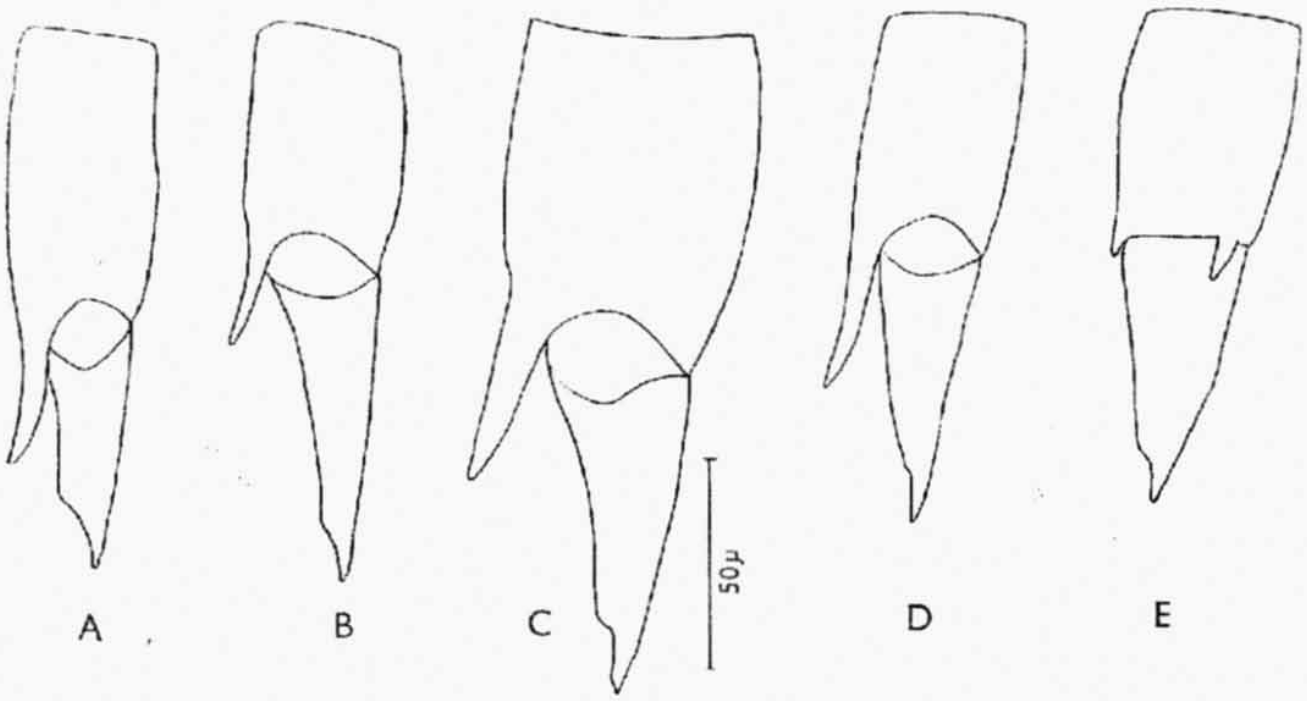


Fig. 2. Male, tibia and tarsus III. A — *Mesalgoides turdinus* sp. n., B — *M. lukoschusi* sp. n., C — *M. koki* sp. n., D — *M. surinamensis* sp. n., all ventrally, E — *M. capitonis* sp. n., dorsally.

***Mesalgoides koki* sp. n.** Figs. 1C, 2C, 3C

Material examined: male (holotype) from *Agelaius icterocephalus* (L.) (Icteridae), Welgedacht, 22. 8. 1971. Paratypes: 17♂ 18♀ 15 N 3L, the same data.

Male (holotype). — Total length 433, idiosomal length 398, width 268 at level of cranial part of trochanter III. Gnathosoma 57×57. Subtriangular rounded palpal membrane developed. Propodosomal shield 101×105, sce see 94. Supranal concavity elongate, narrow, 44×12. HSB 219. Median finger of opisthosomal lobe with internal lamella forming a triangular rounded terminal projection. WOL 43, WLF 20, 17, B—pai 20, B—d_5 61, pai—pai 16, d_5—d_5 41, l_5—l_5 85. Setae l_5 lanceolate, curved.

Epimerites I V-shaped, with thickened basal part, connected by a transverse bridge. Pregenital apodeme inverted U-shaped, with laterally directed caudal parts. Preanal apodeme divided. DAD 26, c_2—a 73, c_2—c_2 15, a—a 24. Legs III 383,

ventrolateral spur on tibia III 56, reaching about middle of tarsus III. Legs IV reaching nearly the articulation between genu and tibia III.

Female (allotype). — Total length 353, idiosomal length 315, width 210 at level of cranial part of trochanter III. Gnathosoma 59×55. Palpal membrane as in male. Propodosomal shield 100×112, sce—sce 95. Hysterosomal shield concave laterally, a little wider in its posterior part, 152×110. Setae d_1 on its anterior margin.

Epimerites I free. Pregenital apodeme broadly inverted U-shaped, extending beyond setae c_2. LPA 67, WPA 86, c_1—g_1 24, g_1—g_2 8, g_2—c_2 15. Extraepigynial sclerotization close to g_2. Legs III reaching the proximal part of tarsus IV.

The male of *Mesalgoides koki* sp. n. differs from other members of the genus in V-shaped epimerites I connected transversely and strongly developed ventrolateral spur on tibia III, the female in the combination of following characters: pregenital apodeme extending beyond setae c_2, extraepigynial sclerotization close to g_2, setae d_1 on anterior margin of hysterosomal shield.

The new species is dedicated to Dr. N. J. J. Kok, Catholic University of Nijmegen who collected a large number of feather mites during the parasitological investigations in Surinam.

***Mesalgoides surinamensis* sp. n.** Figs. 1D, 2D

Material examined: male (holotype) from *Tachyphonus cristatus* (L). (Thraupidae), Weg n. Zee, 10. 9. 1971.

Male (holotype). — Total length 386, idiosomal length 349, width 211. Gnathosoma 53×53. Palpi with large hyaline membranes. Propodosomal shield 85×97, sce — sce 87. Supranal concavity ovoid, elongate, 34×12. HSB 182. Median finger of opisthosomal lobe very narrow, with internal lamella forming a terminal triangular projection and with very narrow external membrane on right side. WOL 33, WLF 12, 11, B — pai 20, B—d_5 63, pai—pai 17, d_5—d_5 49, l_5—l_5 71.

Epimerites I converging, free, with thickened basal part. Pregenital apodeme inverted U-shaped. Preanal apodeme divided. DAD 24, c_2—a 72, c_2—c_2 15, a—a 27. Legs III 296, ventrolateral spur on tibia III 45, reaching the middle of tarsus III (68). Legs IV reaching the articulation between genu and tibia III.

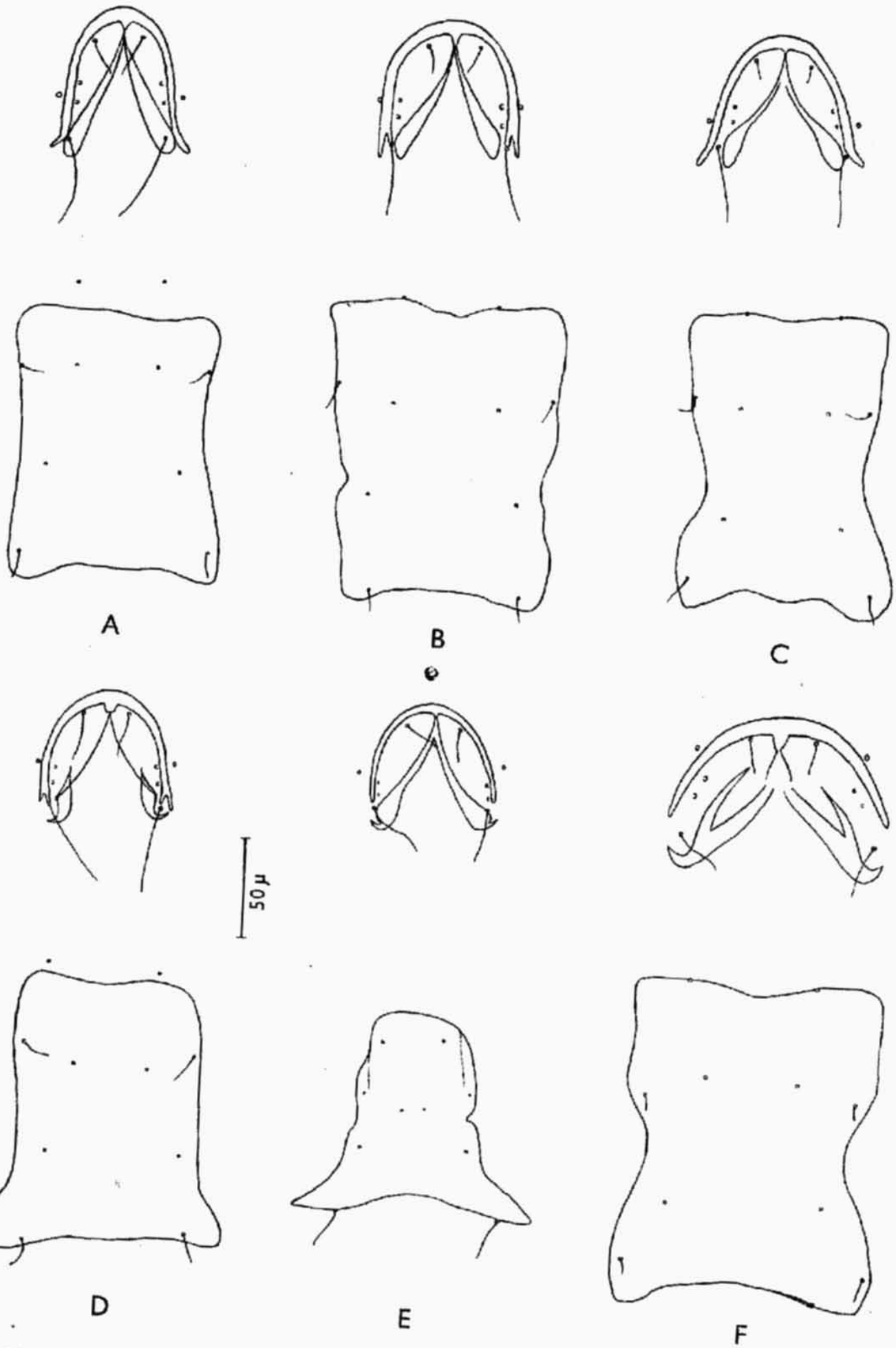
The male of *Mesalgoides surinamensis* sp. n. is similar to *M. johnstoni* (Spory, 1965) in having the epimerites I free. It differs from the latter species in the following characters: large palpal membranes, divided preanal apodeme, thickened bases of epimerites I, postlobal lamella reaching the level of distal end of tibia III.

***Mesalgoides furnarius* sp. n.** Fig. 3D

Material examined: female (holotype) from *Philydor pyrrhodes* (Cabanis) (Furnariidae), Tawajari-weg, 9. 9. 1971.

Female (holotype). — Total length 357, idiosomal length 323, width 215. Gnathosoma 54×51. Medium sized palpal membrane developed. Propodosomal shield 97×97, sce — sce 88. Hysterosomal shield nearly parallelsided in its anteiror 4/5 and then expanding, 142×122. Setae d_1 on soft cuticle.

Epimerites I with transverse connection. Pregenital apodeme inverted U-shaped, bifurcate caudally, reaching c_2 which are situated on the tip of its internal branch. LPA 61, WPA 72, c_1—g_1 31, g_1—g_2 10, g_2—c_2 12. Extraepigynial sclerotization close to g_1. Legs III reaching the proximal half of tarsus IV.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The female of *Mesalgoides furnarius* sp. n. is similar to *M. johnstoni* (Spory, 1965) in having the pregenital apodeme reaching setae c_2. It differs from the latter species in bifurcate tips of this apodeme, characteristic form of hysterosomal shield and setae d_1 situated on soft cuticle.

***Mesalgoides elaeniae* sp. n.** Fig. 3E

Material examined: female (holotype) from *Elaenia flavogaster* (Thunberg) (Tyrannidae), Weg n. Zee, 10. 9. 1971.

Female (holotype). — Total length 369, idiosomal length 326, width 199. Gnathosoma 61×55, with large rounded palpal membranes. Propodosomal shield 97×97, sce—sce 87. Hysterosomal shield rounded anteriorly and with 2 triangular projections posteriorly, 106×118. Setae d_1 on this shield, bases of setae l_3 protruding from the posterior margin of the shield.

Epimerites 1 free, with lateral sclerotization. Pregenital apodeme inverted U-shaped, simple caudally, not reaching c_2. LPA 57, WPA 65, c_1—g_1 31, g_1—g_2 6, g_2—c_2 10. Extraepigynial sclerotization distinctly before g_1. Legs III reaching the middle of tarsus IV.

The female of *Mesalgoides elaeniae* sp. n. differs from other members of the genus in having the pregenital apodeme not reaching setae c_2, in the characteristic bell-shaped form of hysterosomal shield and seate l_2 situated on soft cuticle.

***Mesalgoides capitonis* sp. n.** Figs. 1E, 2E, 3F

Material examined: male (holotype) from *Capito niger* (Müller) (Capitonidae), Paramaribo, 15. 8. 1971. Paratypes: 13♂ 18♀ 7N IL, the same data.

Male (holotype). — Total length 381, idiosomal length 353, width 276. Gnathosoma 55×55. Palpi dorsally with small membrane. Propodosomal shield 114×108, sce—sce 95. Supranal concavity elongate, 32×15. HSB 192. Opisthosomal lobe short, with terminal lamella. WOL 36, B—pai 28, B—d_5 45, pai—pai 36, d_5—d_5 71, l_5—l_5 88.

Epimerites 1 convergent, approximate and then for a very short distance divergent. Their caudal part with external sclerotization. The whole resembles the letter X with short posterior half. Pregenital apodeme inverted U-shaped. Preanal apodeme divided. DAD 33, c_2—a 77, c_2—c_2 26, a—a 28. Ventral hyaline membrane on tarsus I and II rounded, on tibia I and II acute. Legs III 288, with short dorsomedian spur and only rudimentary posterolateral spur on tibia III. Tarsus III 61. Legs IV reaching the proximal 1/3 of tibia III.

Female (allotype). — Total length 426, idiosomal length 394, width 280. Gnathosoma 61×61. Palpi dorsally with rounded membrane. Propodosomal shield 122×120, sce—sce 105. Hysterosomal shield longer than wide, with lateral and posterior margins concave, 171×132. Bases of setae d_1 on its anterior margin.

Epimerites 1 U-shaped, with lateral extensions and with external sclerotization in caudal part. Pregenital apodeme semicircular, not reaching setae c_2. LPA 53, WPA 110, c_1—g_1 28, g_1—g_2 9 (11), g_2—c_2 22 (20). Extraepigynial sclerotization distinctly before g_1. Ventral membranes on tarsi and tibiae of legs I and II as in male. Legs III reaching the distal half of tarsus IV.

Fig. 3. Female, genital region and hysterosomal shield. A — *Mesalgoides turdinus* sp. n., B — *M. lukoschusi* sp. n., C — *M. koki* sp. n., D — *M. furnarius* sp. n., E — *M. elaeniae* sp. n., F — *M. capitonis* sp. n.

In its characters *Mesalgoides capitonis* sp. n. differs distinctly from all other species in our material and resembles *M. picimajoris* (Buchh., 1869) from European Picidae. The latter species differs in the shape of postlobal lamellae, entire preanal apodeme and larger spurs on tibiae III in male and in the posteriorly diverging hysterosomal shield, pregenital apodeme reaching setae c_2 and setae d_1 situated on soft cuticle in female. Both species have some common characters which allow to erect a new subgenus for them.

***Picalgoides* sgen. n.**

The new subgenus differs from *Mesalgoides* s. str. in the following characters. Both sexes: hyaline ventral membrane processes on tarsi I and II rounded, on tibiae I and II acute. Male: tibia III with 2 short posterior spurs, one dorsomedian and one lateral. Female: epimerites I U-shaped with lateral extensions. Hosts: Piciformes.
Type species: *Dermaleichus pici-majoris* Buchholz, 1869.

The holotypes of all species are deposited with the collections of Rijksmuseum van Natuurlijke Historie, Leiden, the paratypes of *Mesalgoides turdinus*, *M. koki* and *M. capitonis* also with the following institutions: National Collection of Surinam, Paramaribo; University of Georgia, Athens; Institute of Parasitology, Prague; Prins Leopold Instituut voor Tropische Geneeskunde, Antwerpen; Zoologisches Museum, Hamburg; Katholieke Universiteit, Nijmegen; U.S. National Museum, Washington; Rocky Mountain Laboratory, Hamilton; Institut Pasteur, Cayenne.

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ПАРАЗИТИЧЕСКИЕ КЛЕЩИ СУРИНАМА XIX. СЕМЬ НОВЫХ ВИДОВ *MESALGOIDES* (ANALGOIDEA, ANALGIDAE)

В. Черны

Резюме. Дано описание 7 новых видов и одного нового подрода перьевых клещей рода *Mesalgoides* от птиц Passeriformes и Piciformes Суринама.

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V. Č., Parasitologický ústav ČSAV, Flemingovo n. 2, 166 32 Praha 6, ČSSR