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PARASITIC MITES OF SURINAM XXXIV

MITES OF THE GENUS EUDUSBABEKIA (MYOBIIDAE : TROMBIDIFORMES) OF PHYLLOSTOMID AND DESMODONTID BATS, WITH A KEY TO KNOWN SPECIES

BY

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SUMMARY

New records of Eudusbabekia vigiterasi (Dusb., 1967) ex Artibeus lituratus fallax, A. cinereus cinereus and A. concolor, of E. lepidoseta Jameson, 1971 ex Sturnira lilium lilium, and of E. arganoi (Vomero, 1972) comb. n. ex Desmodus rotundus rotundus from the territory of Surinam and French Guiana are listed in this paper. Three new species of the genus Eudusbabekia from the same territory are described. They are: E. carolliae sp. n. ex Carollia perspicillata perspicillata, E. glossophaga sp. n. ex Glossophaga soricina soricina, and E. vampyrops sp. n. ex Vampyrops helleri and Uroderma bilobatum. The paper is completed by a key for determination of females and males of this genus.

SUMMARY


Suriname species of the genus Eudusbabekia Jameson, 1971, parasitizing leaf-nosed bats of the subfamily Phyllostominae have been studied in our previous paper (DUSBÁBEK & LUKOSCHUS, 1974), in which six new species and one new subspecies are described. In the present paper results are given of a study of Eudusbabekia material, collected by F. S. Lukoschus and N. N. J. Kok from the remaining phyllostomid subfamilies and Desmodus rotundus during an expedition of the Catholic University from Nijmegen to Surinam and French Guiana. This material includes three additional new species of the genus described in present communication.

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Holotypes, allotypes and paratypes of new species are deposited in the Rijksmuseum van Natuurlijke Historie at Leiden, other paratypes were distributed among following institutions: Institut Pasteur de la Guyane Française, Cayenne; Institute of Parasitology, Czechoslovak Academy of Sciences, Prague; Zoological Department of the Catholic University, Nijmegen and several other institutions.

Host specimens are deposited in the collection of the Rijksmuseum van Natuurlijke Historie at Leiden. We thank very much Dr. A. M. Husson from this museum for confirming their identification.

Eudusbabekia viguerasi (Dusbabek, 1967).

Species morphologically closely related to E. vampyrops sp. n. It has been described from Artibeus jamaicensis parvipes Rehn and is known only from the territory of Cuba. The specimens in our material, collected in Surinam on Artibeus lituratus fallax Peters, fully agree with the specimens from type host in all morphological characteristics and dimensions. A small deviation is revealed only in females collected on A. concolor Peters and concerns the width of v e setae (22-23 µ as compared with 18-20 µ in specimens from other hosts). In males from A. cinereus cinereus (Gervais) the setae sc e are also wider (7.5-8.5 µ) and setae l 3 are shorter (21-25 µ) than in males from type host, in which the width of sc e is only 6 µ and the length of l 3 is 33-39 µ. At present we classify these small differences as intraspecific variability only and do not incline to designate specimens from A. concolor or A. cinereus as distinct taxa.

Material examined: Ex Artibeus lituratus fallax Peters in following localities: 3 females, 2 deutonymphs, 2 protonymphs, 4 larvae, 1 praelarva and some eggs, Lelydorp, Surinam, December 11, 1969 and January 25, 1970; 3 females, 1 male, 3 deutonymphs and 1 protonymph, Meerveld, Surinam, March 1, 1970; 1 female, Welgedacht, Surinam, August 1, 1971; 2 females and 2 males, Paramaribo, Surinam, August 11, 1971; 7 females, 2 males, 5 deutonymphs, 2 larvae and some eggs, Wageningen, Surinam, September 26, 1971; 1 male and 1 praelarva, Tamarendio, Surinam, September 30, 1971; 7 females, 1 male, 1 tritonymph, 4 deutonymphs, 8 protonymphs, 1 larva, 1 praelarva and some eggs, Santo Boma, Surinam, August 6, 1971 — all lgt. F. S. Lukoschus and N. N. J. Kok.

Ex Artibeus cinereus cinereus (Gervais); 1 female and 3 males, Brownsberg, Surinam, October 20 and 21, 1971 — lgt. F. S. Lukoschus and N. N. J. Kok.

Ex Artibeus concolor Peters: 3 females, 5 males and 1 larva, Moeroekreek, Surinam, September 15, 1971; 1 male, Brownsberg, Surinam, October 22, 1971 — all lgt. F. S. Lukoschus and N. N. J. Kok.


Species described from Sturnira lilium parvidens Goldman, captured in Nicaragua. No morphological differences have been found between specimens from our material, originated from S. lilium lilium (E. Geoffroy) and specimens from type subspecies of host.

Material examined: Ex Sturnira lilium lilium (E. Geoffroy) in following localities: 6 females, 1 male, 3 deutonymphs, 2 protonymphs and 4 larvae, Brownsberg, Surinam, October 18-22,
1971; 1 larva from the same host, Cayenne, French Guiana, October 1971 — all lgt. F. S. Lukoschus and N. N. J. Kok.

**Eudusbabekia argasoi** (Vomero, 1972) — comb. nov.

Species known only from *Desmodus rotundus murinus* Wagner in Mexico. No differences have been found between Surinam specimens from nominate host subspecies and specimens from type host subspecies.

**Material examined**: Ex *Desmodus rotundus rotundus* (E. Geoffroy), 6 females, 3 males, 4 deutonymphs and 1 protonymph, Baboehol, Surinam, July 25 and 26, 1971; 1 female, Sumatraverg, Surinam, July 30, 1971; 36 females, 26 males, 34 tritonymphs, 17 deutonymphs, 10 protonymphs, 7 larvae and some eggs, Helena-Christina, Surinam, August 28 and 30, 1971; 13 females, 5 males, 2 tritonymphs, 7 deutonymphs and 2 protonymphs, Cayenne, French Guiana, October 5 and 9, 1971 — all lgt. F. S. Lukoschus and N. N. J. Kok.

**Eudusbabekia carolliae** spec. nov.

**FEMALE** (Holotype) (Fig. 1, 2, 5): Body very broad, thickset. Dorsal setae broadly expanded and striated, with exception of $v_i$, $d_4$ and $l_3$ which are setiform, and $l_2$ which are only slightly expanded, all smooth. Setae $se$ $i$ subequal to $se$ $e$ in their form and length. Setae $l_1$ reach the basis of $l_3$, setae $l_3$ shorter than $d_4$. Setae $l_4$ are lacking. Propodosomal pores closely associated with $v_e$, clearly posterior to $v_i$. Four pairs of genital setae, $g_1$ and $g_2$ setiform and blunt, $g_4$ and $g_5$ spine-like and blunt, slightly curved. Two pairs of setiform and blunt paragenital setae situated ventrally, forming a transverse row in front of genital cone, posteriorly to the basis of $l_5$. Leg chaetotaxy normal; setae $ex I$ $r$ about 2-3 time shorter than $ex I$ $e$ or $3$. Ventral tarsal setae $II$-$IV$ expanded and curved, with a slight basal bump. Trochanter I with antero-lateral protrusion, antero-dorsal trochanteral seta smooth.

**Measurements** (five specimens, the holotype first; all dimensions in microns): Body L. 327 (380 – 386), W. 210 (207 – 229); $v$ $e$ 87 × 16 (85 – 95 × 19,5 – 26); $v$ $i$ 12,5 (11 – 14); $se$ $e$ 89 (90 – 94); $se$ $i$ 85 (81 – 99); $d_1$ 41 (47 – 53); $d_2$ 35 (42 – 44); $d_3$ 37 (43 – 48); $d_4$ 20 (19 – 26); $l_1$ 92 (104 – 113); $l_2$ 48 (56 – 60); $l_3$ 17 (18 – 20); $l_4$ 276 (286 – 298).

**MALE** (Allotype) (Fig. 3, 4, 6): Setae $v$ $e$ and $se$ $e$ expanded and striated, setae $l_3$ and $l_2$ only slightly expanded, but also striated, $l_3$ and $l_4$ setiform. Setae $d_1$-$d_4$ setiform, closely associated with genital plate, $d_1$ being subequal to $d_2$ and situated laterally to the plate on uncovered integument, $d_4$ very short and together with $d_3$ situated on the plate. Setae $l_3$ 1½-2 times longer than $l_3$ or $d_4$ and situated slightly posteriorly to $l_3$, setae $l_4$ are lacking. Genital pore lies dorsally between trochanter II and III, posteriorly to $se$ $i$. Two pairs of short spine-like genital internal ($g$ $i_1$ and $g$ $i_2$), one pair of similar genital median ($g$ $m$) and two pairs of strong spine-like genital external setae ($g$ $e_1$ and $g$ $e_2$) in anterior part of plate, $g$ $e_1$ being crescent-like curved, with an indication of a basal bump. Penis straight and short. Leg chaetotaxy as in female with the exception of thickened $p$ $d$ seta on tarsus I and II. Setae $ex I$ $r$ tiny, remarkably shorter than $ex I$ $e$ or $3$. Ventral tarsal setae $II$-$IV$ only slightly thickened. Trochanter I without antero-lateral protrusion, antero-dorsal seta smooth.
Figs. 1-4: *Eudusbabekia carolliae* spec. nov. 1) — female, dorsal view; 2) — female, ventral view; 3) — male, dorsal view; 4) — male, ventral view.

Measurements (five specimens, the allotype first): Body L. 263 (225 — 253), W. 153 (126 — 154); v e 72 x 14 (68 — 74 x 13 — 15); v i 3 (3,5 — 4); se e 76 (76 — 80); se i 3 (2,5 — 3); d 4 9 (10 — 11); d 4 17 (15 — 17); l 1 89 (90 — 104); l 2 32 (30 — 34); l 3 16 (16); l 4 265 (235 — 263); Penis L. 71 (60 — 71).

Protonymph: Body length 264 µ, width 192 µ. Dorsal setae tiny, measure 4 — 5 µ, only, with the exception of v e, which are expanded and striated, 21 µ long, and long l 1 which measure 132 µ. Coxal setae I 2 broadly expanded and striated, 30 µ long. Tarsus I with 6 setae.


Eudusbabekia glossophaga spec. nov.

Female (Holotype) (Fig. 7, 11, 12): Body relatively slender. Only v e and sc i broadly expanded and striated, sc e and setae in d and l series only slightly expanded, but also striated; only v i and l 1 setiform. Setae v i very close to v e, setae sc i broad, wider than sc e and reaching to the basis of d 1. Setae sc e subequal to l 1, setae l 2 subequal to l 2 and setae d 1-d 3 uniform. Setae l 4 are developed, setiform. Propodosomal pores lie between v e and v i at the level of the basis of v i. Genital setae normally developed, g 1 and g 2 setiform and blunt, g 3 and g 5 coniform, g 5 being twice greater than g 3. Setae g 4 are lacking. Three pairs of anal setae, a i similar to g 3 in their form and length, a e and a 3 setiform, basally slightly expanded, a 3 slightly shorter than a e. Two pairs of setiform and blunt paragenital setae situated in front of genital cone, posteriorly to l 5. Leg chaetotaxy normal, but in the coxal region II four pairs of setae. Setae cx I 2 or 3. Ventral tarsal setae II-IV only slightly spine-like and moderately curved. Trochanter I with antero-lateral protrusion, antero-dorsal seta smooth.

Measurements (five specimens, the holotype first): Body L. 321 (330-384); W. 178 (175-207); v e 87 x 19 (91-100 x 19-23); v i 10 (11-12); sc e 104 (112-120); sc i 75 (83-85); d 4 41 (45-46); d 2 39 (39-43); d 3 39 (40-45); d 4 28 (23-25); l 1 106 (114-127); l 2 43 (44-45); l 3 43 (39-49); l 4 19 (19-23); l 4 265 (277-289).

Male (Allotype) (Fig. 8, 13, 14): Only v e broadly expanded and striated, setae sc e, l 1 and l 2 slightly expanded, but also striated; remaining dorsal setae setiform to spine-like. Setae v i and sc i tiny, sc i being situated antero-laterally to the genital pore. Setae d 1 fine and setiform, almost twice shorter than l 1 and situated between trochantera II and III, posteriorly to the genital plate; d 2 and d 3 lie on genital plate, d 4 being slightly shorter than d 1, d 3 tiny. Setae l 5, l 4 and d 4 setiform to spinelike, subequal, slightly longer than l 2. Genital pore lies at the level of posterior margin of trochanter II, slightly anteriorly to the basis of se e. One pair of short and spine-like genital internal (g i) and genital median (g m) setae, two pairs of longer setiform genital external (g e 1 and g e 2) setae, situated near the anterior margin of the plate. Penis straight, very long. Leg chaetotaxy as in female, excepting modified p d seta on tarsi I and II. Four pairs of setae in the coxal region II. Trochanter I without antero-lateral protrusion, antero-dorsal seta smooth.
**Measurements** (five specimens, the allotype first): Body L. 266 (267-291), W. 140 (139-159); v & 80 (79-83); v i 3 (2-3); sc & 86 (92-99); sc i 2 (3); d4 & 13 (11-14); d4 29 (28-30); l1 105 (114-116); l2 25 (21-26); l2 27 (23-25); l4 29 (25-32); l2 250 (258-273); Penis L. 126 (129-132).

**Protonymph**: Body length 215-217 μ, width 144-167 μ. Setae v & (11 μ), sc & (7 μ) and sc i (8 μ) spine-like and blunt, striated, setae in d and l series setiform, blunt, only 5-7 μ long. Setae l5 rudimentary. Femoro-genu II with 3 setae, femoro-genu III with 2 setae, tarsus II with 5 setae.
DEUTONYMPH: Body length 207-215 µ, width 131-136 µ. Dorsal setae slightly expanded, striated and blunt, l₁ setiform, l₂ and d₂ tiny, l₅ filiform. Setae v e and scapular setae 15-17 µ long, l₁, d₁ and d₂ 20-21 µ long, d₃ 15 µ, d₄ 8 µ and l₅ only 4 µ long. Setae l₅ measure 15 µ. Femoro-genu II with 3 setae, femoro-genu III with one seta only. Tibia II with 5 setae, tibia III with 4 setae, tarsus II with 5 setae.

TRITONYMPH: Body length 195-355 µ, width 126-211 µ. Dorsal setae expanded and striated, blunt, d₁ setiform, l₁ and d₁-ta tiny. Setae vertical, scapular, l₁ and d₁-d₄ measure 27-31 µ. v e and d₁ being the longest. Setae l₄ 18 µ long, l₅ 12 µ, d₄ 5 µ and l₅ 86 µ long. Setae cx I 2 and 3 broadly shell-like expanded, cx I 2 32 µ long, cx I 3 only 10 µ long. Remaining coxal setae very fine. Femoro-genu II and III with 3 and 1 seta respectively. Tibial chaetotaxy II-IV as follows: 5-4-4. Tarsus II with 5 setae.

Type series: Ex Glossophaga soricina soricina (Pallas) only, in the following localities: Female holotype, male allotype and 1 female, 3 tritonymphs and 1 praelarva, paratypes, Brownsweg, Surinam, February 9, 1970; 10 females, 2 males, 4 tritonymphs and 1 protonymph, paratypes, Lelydorp, Surinam, December II, 12 and 16, 1969; 1 male, 1 tritonymph, 2 deutonymphs and 1 protonymph, paratypes, Leonsberg, Surinam, December 27, 1969 and February 2, 1970; 1 protonymph, paratype, Cayenne, French Guiana, October 5, 1971 — all lgt. F. S. Lukoschus and N. N. J. Kok.

Eudusbabekia vampyrops spec. nov.

FEMALE (Holotype) (Fig. 9, 15, 16): Body relatively slender. Dorsal setae broadly foliate, only v e and d₄ setiform, and l₁ and l₂ slightly expanded. Setae sc i equally long as sc e, extending beyond the basis of d₁, setae l₂ shorter than l₁. Setae l₅ are lacking. Propodosomal pores situated in close vicinity of v e at the same level with v i. Genital setae g₁ and g₂ setiform and blunt, g₄ and g₅ in a form of short expanded spines of peculiar shape, g₄ reaching only 3/4 of the length of g₅. Anal external setae (a e) filiform, a i broadly lanceolate, a₅ club-like thickened. Two pairs of setiform and blunt paragenital setae posteriorly to l₅. Leg chaetotaxy normal. Only 3 pairs of coxal setae II, setae cx I 2 about twice shorter than cx I 2 or 3. Ventral tarsal setae II-IV spine-like, strongly curved, with a clear basal bump. Trochanter I with antero-lateral protrusion, antero-dorsal seta with a lateral barb.

Measurements (six specimens, the holotype first): Body L. 459 (440-522), W. 238 (220-240); v e 100 × 23 (97-101 × 23-25); v i 27 (27-30); sc e 100 × 18 (92-101 × 17-18); sc i 110 (95-104); d₁ 56 (53-60); d₄ 52 (50-55); d₅ 51 (51-56); d₆ 37 (37-41); l₁ 91 (86-92); l₂ 59 (58-60); l₃ 42 (42-50); l₅ 359 (321-340).

MALE (Allotype) (Fig. 10, 17, 18): Setae v e and sc e expanded and striated, l₁ slightly expanded but also striated, the remaining dorsal setae setiform, v i and sc i tiny. Setae d₁ laterally, but closely attached to the genital plate, only slightly shorter than l₂. Setae d₂ and d₃ on the genital plate, minute, d₅ reaching more than a half of length of d₂. Setae l₅ relatively short, clearly shorter than l₅. Only one pair of genital internal and genital median setae (g i and g m), both in the shape of short thick spines. Two pairs of genital external setae (g e₁ and g e₂) in the anterior part of genital plate, longer than g i or g m, also thick and spine-like, g e₁ being crescent-like curved with an indication of a lateral bump. Penis straight, short. Leg chaetotaxy as in female, but the d seta on tarsus I and II thickened and blunt. Ventral tarsal spine-like and curved. Trochanter I without antero-lateral protrusion, antero-dorsal seta smooth.
**Figs. 11-14**: *Eudusbabekia glossophaga* spec. nov. — 11) — female, dorsal view; 12) — female, ventral view; 13) — male, dorsal view; 14) — male, ventral view.
Figs. 15-18: *Eudusbabekia vampyrops* spec. nov. — 15) — female, dorsal view; 16) — female, ventral view; 17) — male, dorsal view; 18) — male, ventral view.
Measurements (five specimens, the allotype first): Body L. 253 (232-255), W. 129 (121-138); v e 79 × 12.5 (67-69 × 12-13); v i 5 (5); sc e 93 × 8 (84-87 × 8-8.5); sc i 2 (2); d1 12 (12-14); d4 15 (12-18); l1 94 (78-90); l2 16 (13-17); l3 23 (22-28); l5 238 (245-268); Penis L. 61 (61-68).

Larva: Body length 169-189 µ, width 114-116 µ. Dorsal setae slightly expanded and striated, relatively long. Setae v e measure 33 µ, sc e 52 µ, sc i 20 µ, d1 21 µ, d2 16 µ, d3 11 µ, d4 7 µ, d5 33 µ, l1 12 µ and l2-189 µ. Tibia II with 5 setae, ventral tarsal setae II and III spine-like, curved, with a basal bump.

Protonymph: Body length 220 µ, width 124 µ. Dorsal setae slightly expanded and striated, blunt. Setae v e measure 20 µ, sc e 24 µ, sc i 13 µ, d1 13 µ, d2 9 µ, d3 9 µ, d4 8 µ, l1 19 µ, l2 6 µ, l3 103 µ. Leg chaetotaxy normal, but tarsus II with 6 setae. Ventral tarsal setae spine-like, curved, with a lateral bump.

Deutonymph: Body length 223-265 µ, width 126-149 µ. Dorsal setae slightly expanded and striated, opisthosomal setae setiform and blunt. Setae v e measure 27 µ, sc e 30 µ, sc i 19 µ, d1 18 µ, d2 14 µ, d3 12 µ, d4 9 µ, d5 6 µ, l1 26 µ, l2 19 µ and l5 169 µ. Tibia II with 5 setae, tibia III with 4 setae, tarsus II with 6 setae.

Type series: Ex Vampyrops helleri Peters in the following localities: Female holotype, male allotype, and 2 females, 1 male, 1 deutonymph, 1 larva and 1 praelarva, Wageningen, Surinam, September 22 and 25, 1971; 2 females and 1 male, paratypes, Cayenne, French Guiana, October 5, 1971 — all lgt. F. S. Lukoschus and N. N. J. Kok. Ex Uroderma bilobatum bilobatum Peters in the following localities: 1 deutonymph, paratype, Welgedacht, Surinam, July 31, 1971; 2 females, 1 male, 3 deutonymphs, 1 protonymph and 1 larva, Tawajariweg, Surinam, September 5, 1971; 1 male, paratype, Weg. n. Zee, Surinam, September 11, 1971 — all lgt. F. S. Lukoschus and N. N. J. Kok.

Key to the species of the genus Eudusbabekia Jameson, 1971.

Females

1. Only coxal and paragenital setae developed on the ventral side of body, without a patch of short and broad additional setae. ................................................................. 2
   — Apart from coxal and paragenital setae a patch of short and broad additional setae is developed on the ventral side of body. On Sturnira lilium. ..........  E. lepidoseta Jameson, 1971
2. Coxal setae normally developed, the first pair of coxals II-IV long. ............................................ 3
   — Coxal setae rudimentary, the first pair of coxals II-IV very short and fine. On Phyllonycteris poeyi.  E. danieli (Dusbábek, 1968)

3. Setae l4 are present. ................................................................. 4
   — Setae l4 are absent. .................................................................... 13
4. Two pairs of paragenital setae. ............................................................. 5
   — Only one pair of paragenital setae. ................................................. 8
5. Setae sc i setiform, very short, subequal to v i. Setae d4-d5 and l4 with lateral bulbous swelling.  On Brachyphylla nana. ..................................................  E. cernyi (Dusbábek, 1968)
   — Setae sc i expanded and striated, dissimilar to v i. Setae d4-d5 and l4 without lateral bulbous swelling, expanded and striated. .............................................................. 6
6. Paragenital setae on small tubercles forming a transverse row at the level of $l_4$. Big species, with body length 450-530 µ. Dorsal setae broadly expanded, $s_e$, $s_i$ and $l_1$ of nearly the same width. On Micronycteris brachyotis................. E. brachyotis Dusbábek et Lukoschus, 1974

Paragenital setae on smooth integument, posteriorly to $l_4$. Small species with body length 320-390 µ. Setae $s_e$ and $l_1$ only slightly expanded, clearly narrower than $s_i$............. 7

7. Trochanter I with an antero-lateral protrusion. Setae $s_i$ broadly expanded, wider than $s_e$ and reaching the basis of $d_1$. On Glossophaga soricina......................... E. glossophaga sp. n.

Trochanter I without antero-lateral protrusion, the antero-lateral margin of this segment forms almost the right angle. Setae $s_i$ only slightly expanded, narrower than $s_e$, subequal to $d_1$ and do not reach the basis of $d_1$. On Macrotes waterhousei............. E. samuensii (Dusbábek, 1967)

8. Setae $d_1$-$d_9$ with lateral bulbous swelling................................................. 9

Setae $d_1$-$d_9$ without lateral bulbous swelling, expanded and striated.................................................. 10


Setae $v_l$ setiform and short, less than 1/4 length of $v_e$. Trochanter I without postero-lateral projection; postero-lateral trochanteral seta setiform or only slightly spine-like. On Chilonycteris parnellii E. jimenezii (Dusbábek, 1967)

10. Seta $s_e$ narrower than $s_e$. Setae $l_1$ relatively short, extending beyond only the basis of $d_2$, but do not reach the basis of $d_3$. On Desmodus rotundus................. E. arganoi (Vomero, 1972)

Setae $s_e$ wider than $s_e$. Setae $l_1$ relatively long, reaching the basis of $d_3$............... 11

11. Setae $d_1$-$d_2$ and $l_2$ and $l_4$ subequal, expanded and striated. Setae $v_l$ closely associated with $v_e$. Trochanter I with antero-lateral protrusion. On Monophyllus cubanus............. E. rosickyi (Dusbábek, 1967)

Setae $d_1$-$d_2$ expanded and striated, $l_2$ and $l_4$ setiform. A gap between $v_l$ and $v_e$. Trochanter I without antero-lateral protrusion.................................................. 12


Setae $l_2$, $l_3$, $d_3$ and antero-lateral seta on trochanter I smooth. Paragenital setae at the level of $l_4$. On Mormoops megalophylla............. E. ecuadoricensis Fain, 1973

13. Paragenital setae situated posteriorly to $l_2$, forming a transverse row in front of genital conus 15

Paragenital setae are situated at the level of $l_4$ and do not form a transverse row. First pair of paragenital setae anteriorly or at the level of $l_4$, the second, outer pair slightly posteriorly to $l_4$........ 14

14. Setae $s_e$ clearly longer than $s_e$, setae $l_1$ relatively short, reaching only the basis of $d_2$. Ventral tarsal setae on legs II-IV strongly spine-like. On Uroderma magnirostrum............. E. wedermae Fain, 1972

Setae $s_e$ clearly shorter than $s_e$, setae $l_1$ longer, reaching the basis of $d_2$. Ventral setae on tarsi II-IV only slightly spine-like or setiform. On Mimon (Anthrornia) crassatum............. E. anthorhininae Dusbábek et Lukoschus, 1974

15. At least $d_2$ or several more setae in $d$ and $l$ series with clear lateral bulbous dilatation. If only an indication of such dilatation is developed, then a second minute claw on tarsus II-IV is present. 16

Setae in $d$ and $l$ series setiform or expanded, without lateral bulbous dilatation. If an indication of such dilatation appears to be on $d_2$, $d_3$, and $l_2$, the second minute claw on tarsus II-IV is absent. 20

16. Only setae $d_4$ with a clear bulbous dilatation, $l_4$ with only an indication of it, $d_3$ and $d_4$ expanded and striated, without bulbous dilatation........ 17

At least $d_2$ and $d_4$ with clear lateral bulbous dilatation.................................................. 18

17. Tarsus III and IV with one straight claw only. On Phyllostomus discolor............. E. phyllostomi Jameson, 1971

Apart from a straight claw a second minute claw is developed on tarsi III and IV, on tarsus III being slightly shorter than on tarsus IV. On Phyllostomus elongatus............. E. phyllostomi unguiculata Dusbábek et Lukoschus, 1974

18. Setae $l_1$ relatively short, subequal to $d_1$. Propodosomal pores lie almost in the middle distance between $v_l$ and $v_i$. Second minute claw on tarsus II-IV developed. On Phyloderma stenops E. phylodermae Fain, 1973
19. Setae $d_1$ long, $1\frac{1}{2}-2$ time longer than $d_2$. Propodosomal pores closely associated with $v\ e$. Second minute claw on tarsus II-IV developed or absent. 

20. Setae $d_1$ without lateral bulbous dilatation or only with a weak indication of it. Setae $se$ do not reach the basis of $d_1$. With a gap between $v\ e$ and $v\ i$. Second minute claw on tarsus III and IV developed. Big species, with body length 420-460 $\mu$. On *Phyllostomus hastatus* 

E. hastata Dusbábek et Lukoschus, 1974

21. Antero-lateral protrusion of trochanter I large, the antero-lateral margin forms almost the right angle. Setae $d_2$, $d_3$ and $l_2$ sometimes with an indication of lateral bulbous dilatation. Setae $v\ e$ 12 $\mu$ wide, $v\ i$ 8 $\mu$ only. Setae $d_2$ 41 $\mu$ long, $l_1$ 105 $\mu$, $d_2$ 17 $\mu$ only. On *Mimon cuzzolae*. E. mimon Fain, 1973

22. Setae $se$ of the same length as $se$. Smaller species with body length 320-390 $\mu$. Setae $l_2$ relatively short [15-35 $\mu$]. Setae $se$ slightly longer or clearly shorter than $se$, mostly not of the same length. Big species, with body length about 440-520 $\mu$. Setae $l_2$ relatively long (40-60 $\mu$).

23. Dorsal propodosomal setae widely expanded, setae $v\ e$ about 18-26 $\mu$ wide. Setae $l_2$ reaching the basis of $l_2$, relatively long (92-113 $\mu$). Setae $l_2$ 48-60 $\mu$, $l_2$ 17-20 $\mu$ only and shorter than $d_4$. On *Carollia perspicillata*. E. carolliae sp. n.

24. Dorsal propodosomal setae moderately expanded, setae $v\ e$ about 12 $\mu$ wide. Setae $l_2$ reach only the basis of $d_3$, measure 78 $\mu$ only. Setae $l_2$ 39 $\mu$, but $l_2$ 33 $\mu$ long, subequal to $d_4$. On *Macrophyllum macrophyllum*. E. macrophyllum Dusbábek et Lukoschus, 1974

25. Body width mostly exceeds 250 $\mu$ (260-290 $\mu$). Setae $v\ e$ 110-126 $\mu$ long, 17-22 $\mu$ width. Setae $se$ 82-91 $\mu$ long, 12-15 $\mu$ width. On the species of the genus *Artibeus*. E. vingerasi (Dusbábek, 1967)

26. Body width mostly less than 250 $\mu$ (220-240 $\mu$). Setae $v\ e$ 97-109 $\mu$ long, 23-25 $\mu$ width. Setae $se$ 92-101 $\mu$ long, 17-18 $\mu$ width. On *Vampyrops helleri* and *Uroderma bilobatum*. E. vampyrops sp. n.

**MALES**

1. Genital pore situated anteriorly or at the same level with the basis of $se$. Setae $se$ lateral to the genital plate.

2. Genital pore situated posteriorly or at the same level with the basis of $se$. Setae $se$ anterior to the genital plate.

2. Setae $d_3$ are present and frequently one unpaired additional seta on left or right side of body is also developed. On *Sturnira lilium*. E. lepidoseta Jameson, 1971

3. Setae $d_4$ are present, posterior to the genital plate, setae $d_4$ and additional setae are lacking.


4. Setae $d_4$ slightly expanded and striated, subequal to $l_4$. Genital pore situated at the level of anterior margin of trochanter II, between setae $v$ and $r$. On Micronycteris brachyotis. E. brachyotis Dusbábek et Lukoschus, 1974

5. Setae $v$ and $r$ very short, the same length or shorter than $l_4$. Setae $l_4$ are present. On Glossophaga soricina. E. glossophaga sp. n.

6. Setae $v$ and $r$ only slightly expanded, subequal to $sc$ and $l_4$. Setae $sc$ very fine, shorter than $l_4$ and $d_4$. Setae $ex$ II and $ex$ IV slightly longer than $ex$ I. Setae $ex$ III 2 and $ex$ IV 2 are present. On Brachyphylla nana. E. cernyi (Dusbábek, 1967)

7. Setae $v$ and $r$ expanded and striated, dissimilar to $sc$ or $l_4$. Setae $l_2$ subequal to $l_3$ or $d_4$. Setae $ex$ III I and $ex$ IV I and $ex$ IV I tiny, clearly shorter than $ex$ I. Setae $ex$ III 2 and $ex$ IV 2 are absent. On Phylo­­mycteris poeyi. E. danieli (Dusbábek, 1967)


10. Setae $l_2$ 1½-2 times longer than $l_2$ or $d_4$.

11. Setae $l_4$ of the same length or shorter than $l_2$.

12. Setae $sc$ and $l_2$ with lateral bulbous swelling.

13. Setae $sc$ and $l_2$ and $l_3$ without lateral bulbous swelling.


15. Setae $l_4$ with a lateral barb. All three pairs of $ex$ I setae of the same length, relatively long. On Micronycteris megalotis. E. micronycterids Dusbábek et Lukoschus, 1974

16. Width of body up to 150-175 $\mu$, width of $v$ and $r$ II only. Setae $l_4$ about 25-35 $\mu$ long. On species of the genus Artibeus. E. vigerasi (Dusbábek, 1967)

17. Width of body does not exceed 140 $\mu$ (120-140 $\mu$) only. Width of $v$ and $r$ up to 12-13 $\mu$, setae $l_4$ only 13-17 $\mu$ long. On Vampyrops helleri and Uroderma bilobatum. E. vampyrops sp. n.

REFERENCES


