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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. lepidosela 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 bilobatin. The paper is completed by a key for determination of females and males of this genus.

RéSUMÉ


Suriname species of the genus Eudusbabekia Jameson, 1971, parasitizing leaf-nosed bats of the subfamily Phyllostominae have been studied in our previous paper (DUSBÄBEK & 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** (Dusbábek, 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* are also wider (7,5-8,5 µ) and setae *l3* 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 *l3* 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 II, 1969 and January 25, 1970; 3 females, 1 male, 3 deutonymphs and 1 protonymph, Meerzorg, Surinam, March 1, 1970; 1 female, Welgedacht, Surinam, August 1, 1971; 2 females and 2 males, Paramaribo, Surinam, August II, 1971; 7 females, 2 males, 5 deutonymphs, 2 larvae and some eggs, Wageningen, Surinam, September 26, 1971; 1 male and 1 praelarva, Tamana- redio, 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 Desmodes 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 Desmiodas rotundus rotundus (E. Geoffroy), 6 females, 3 males, 4 deutonymphs and 1 protonymph, Baboenhol, Surinam, July 25 and 26, 1971; 1 female, Sumatraweg, 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 vi, d4 and l3 which are setiform, and l2 which are only slightly expanded, all smooth. Setae se i subequal to se e in their form and length. Setae l1 reach the basis of l3, setae l9 shorter than d4. Setae l4 are lacking. Propodosomal pores closely associated with v e, clearly posterior to vi. Four pairs of genital setae, g1 and g5 setiform and blunt, g4 and g6 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 l5. Leg chaetotaxy normal; setae ex I r about 2-3 time shorter than ex I 2 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 x 16 (85 — 95 x 19.5 — 26); v i 12.5 (11 — 14); se e 89 (90 — 104); se i 85 (91 — 99); d1 41 (47 — 53); d2 35 (42 — 44); d3 37 (43 — 48); d4 20 (19 — 26); l1 92 (104 — 113); l2 48 (58 — 60); l4 17 (15 — 20); l5 276 (286 — 298).

MALE (Allotype) (Fig. 3, 4, 6): Setae ve and se e expanded and striated, setae l1 and l2 only slightly expanded, but also striated, l3 and d4 setiform. Setae d1-d4 setiform, closely associated with genital plate, d1 being subequal to d2 and situated laterally to the plate on uncovered integument, d3 very short and together with d4 situated on the plate. Setae l5 1½-2 times longer than l4 or d4 and situated slightly posteriorly to l1, setae l4 are lacking. Genital pore lies dorsally between trochanter I and III, posteriorly to se i. Two pairs of short spine-like genital internal (g i1 and g i2), one pair of similar genital median (g m) and two pairs of strong spine-like genital external setae (g e1 and g e2) in anterior part of plate, g e1 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 cx I r tiny, remarkably shorter than cx I 2 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.

Dorsal setae smooth.

Genital external pairs of setae in the coxal region II. Trochanter I without antero-lateral protrusion, antero-dorsal seta smooth. Genital internal spine-like genital plate; d 1 • Setae l 4 are developed, setiform. Propodosomal pores lie between a e. Genital setae normally developed, g 1 and g 2 setiform and blunt, g 4 and g 5 coniform, g 5 being twice greater than g 6. Setae g 7 are lacking. Three pairs of anal setae, a i similar to g 4 in their form and length, a e and a 4 setiform, basally slightly expanded, a 4 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 ex I i shorter than cx I i 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 allotype first): Body L. 263 (225 — 253), W. 153 (126 — 154); v e 72 × 14 (68 — 74 × 13 — 15); v i 3 (2,5 — 4); sc e 76 (76 — 80); sc i 3 (2,5 — 3); d 4 9 (10 — 11); d 4 17 (15 — 17); l 4 89 (90 — 104); l 2 32 (30 — 34); l 3 16 (16); l 5 265 (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 6 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 4 setiform. Setae v i very close to v e, setae sc i broad, wider than sc e and reaching to the basis of d 4. Setae sc e subequal to l 1, setae l 4 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 3 and g 5 setiform and blunt, g 4 and g 6 coniform, g 6 being twice greater than g 5. Setae g 7 are lacking. Three pairs of anal setae, a i similar to g 4 in their form and length, a e and a 4 setiform, basally slightly expanded, a 4 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 ex I i shorter than cx I i 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 × 19 (91-100 × 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 4 39 (40-45); d 4 28 (23-25); l 1 106 (114-127); l 2 43 (44-45); l 3 42 (39-40); l 4 19 (19-23); l 5 265 (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 4 fine and setiform, almost twice shorter than l 4 and situated between trochantera II and III, posteriorly to the genital plate; d 4 and d 3 lie on genital plate, d 3 being slightly shorter than d 4, d 3 tiny. Setae l 1, 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 sc 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 a 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.
Figs. 5-10: *Eudusbabekia carolliae* spec. nov. — 5) — vulva of female; 6) — male genital plate; *Eudusbabekia glossophaga* spec. nov. — 7) — vulva of female; 8) — male genital plate; *Eudusbabekia vampyrops* spec. nov. — 9) — vulva of female; 10) — male genital plate.

**Measurements** (five specimens, the allotype first): Body L. 266 (267-291), W. 140 (139-159); v e 80 (79-83); v i 3 (2-3); sc e 86 (92-99); sc i 2 (3); d 4 29 (28-30); l 1 105 (114-116); l 2 27 (23-25); l 3 29 (25-32); l 4 250 (258-273); Penis L. 126 (129-132).

**Protonymph**: Body length 215-217 µ, width 144-167 µ. Setae v e (11 µ), sc e (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 l 5 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, \( l_4 \) setiform, \( l_4 \) and \( d_3 \) tiny, \( l_5 \) filiform. Setae \( v \), \( e \) and scapular setae 15-17 µ long, \( l_1 \), \( d_1 \) and \( d_2 \) 20-21 µ long, \( d_3 \) 15 µ, \( d_4 \) 8 µ and \( l_6 \) only 4 µ long. Setae \( l_5 \) 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, \( d_4 \) setiform, \( l_4 \) and \( d_3 \) tiny. Setae vertical, scapular, \( l_1 \) and \( d_1-d_3 \) measure 27-31 µ, \( v \), \( e \) and \( d_1 \) being the longest. Setae \( l_4 \) 18 µ long, \( l_3 \) 12 µ, \( d_4 \) 5 µ and \( l_5 \) 86 µ long. Setae \( c x \ I 2 \) and 3 broadly shell-like expanded, \( c x \ I 2 \) 32 µ long, \( c x \ I 3 \) 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 protonymph, 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 \( v \), \( i \) and \( d_4 \) setiform, and \( l_4 \) and \( l_5 \) slightly expanded. Setae \( sc \ i \) equally long as \( sc \ e \), extending beyond the basis of \( d_4 \), setae \( l_5 \) shorter than \( l_4 \). Setae \( l_4 \) are lacking. Propodosomal pores situated in close vicinity of \( v \) at the same level with \( v \). Genital setae \( g_1 \) and \( g_2 \) setiform and blunt, \( g_3 \) and \( g_5 \) in a form of short expanded spines of peculiar shape, \( g_4 \) reaching only 3/4 of the length of \( g_5 \). Anal external setae \( (a e) \) filiform, \( a \) relatively short, clearly lanceolate, \( a \) club-like thickened. Two pairs of setiform and blunt paragenital setae posteriorly to \( l_5 \). Leg chaetotaxy normal. Only 3 pairs of coxal setae II, setae \( c x \ I 2 \) about twice shorter than \( c x \ I 2 \) 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); \( v \) 109 \times 23 (97-101 \times 23-25); \( v \) 27 (27-30); \( sc \) 180 \times 18 (92-101 \times 17-18); \( sc \) 110 (95-104); \( d_4 \) 56 (53-60); \( d_2 \) 52 (50-55); \( d_3 \) 51 (51-56); \( d_4 \) 37 (37-41); \( l_5 \) 91 (86-92); \( l_5 \) 59 (58-60); \( l_4 \) 42 (42-50); \( l_6 \) 59 (59-66).

MALE (Allotype) (Fig. 10, 17, 18): Setae \( v \), \( e \) and \( sc \) expanded and striated, \( l_1 \) slightly expanded but also striated, the remaining dorsal setae setiform, \( v \), \( i \) and \( sc \) tiny. Setae \( d_1 \) laterally, but closely attached to the genital plate, only slightly shorter than \( l_4 \). Setae \( d_2 \) and \( d_3 \) on the genital plate, minute, \( d_4 \) reaching more than a half of length of \( d_2 \). Setae \( l_3 \) relatively short, clearly shorter than \( l_5 \). 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 \( (g \ e_1 \) and \( g \ e_2) \) in the anterior part of genital plate, longer than \( g \ i \) or \( g \ m \), also thick and spine-like, \( g \ e_1 \) being crescent-like curved with an indication of a lateral bump. Penis straight, short. Leg chaetotaxy as in female, but the \( p \) \( d \) 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: Eudusbahkia 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 (131-138); \( v e \times 2 5 \) (67-69 \( x \) 12-13); \( \ell 5 (5) \), \( sd e \times 93 \times 8 (84-87 \times 8-8.5) \), \( sc i 2 (2) \), \( da 12 (12-14) \), \( da 4 \ell 5 (12-18) \), \( \ell 1 94 (78-90) \), \( \ell 16 (13-17) \), \( \ell 2 3 (22-28) \), \( \ell 2 38 (245-268) \). Peni L. 61 (61-68).

Larva: Body length 169-189 \( \mu \), width 114-116 \( \mu \). Dorsal setae slightly expanded and striated, relatively long. Setae \( ve \) measure 33 \( \mu \), \( sc e 52 \mu \), \( sc i 20 \mu \), \( da 11 \mu \), \( da 11 \mu \), \( da 7 \mu \), \( la 33 \mu \), \( la 12 \mu \), and \( la 189 \mu \). Tibia II with 5 setae, ventral tarsal setae II and III spine-like, curved, with a basal bump.

Protonymph: Body length 220 \( \mu \), width 124 \( \mu \). Dorsal setae slightly expanded and striated, blunt. Setae \( ve \) measure 20 \( \mu \), \( sc e 24 \mu \), \( sc i 13 \mu \), \( da 11 \mu \), \( da 9 \mu \), \( da 9 \mu \), \( da 8 \mu \), \( la 19 \mu \), \( la 6 \mu \), \( l 1 103 \mu \). Leg chaetotaxy normal, but tarsus II with 6 setae. Ventral tarsal setae spine-like, curved, with a lateral bump.

Deutonymph: Body length 223-265 \( \mu \), width 126-149 \( \mu \). Dorsal setae slightly expanded and striated, opisthosomal setae setiform and blunt. Setae \( ve \) measure 27 \( \mu \), \( sc e 30 \mu \), \( sc i 19 \mu \), \( da 18 \mu \), \( da 14 \mu \), \( da 12 \mu \), \( da 9 \mu \), \( da 9 \mu \), \( la 16 \mu \), \( la 3 \mu \), and \( la 8 \mu \), \( la 169 \mu \). 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, Paratypes, Wageningen, Surinam, September 22 and 25, 1971; 2 females and 1 male, paratypes, Cayenne, French Guiana, October 14, 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 II, 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 (Dusbábk, 1968)

3. Setae \( l 4 \) are present. .................................................................................................................. 4
   — Setae \( l 4 \) 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 \( ve i \). Setae \( d 4-d 4 \) and \( l 4 \) with lateral bulbous swelling. On Brachyphylla nana. .......... E. cernyi (Dusbábk, 1968)
   — Setae \( sc i \) expanded and striated, dissimilar to \( ve i \). Setae \( d 4-d 4 \) and \( l 4 \) without lateral bulbous swelling, expanded and striated. ................................................................................................................................. 6
6. Paragenital setae on small tubercles forming a transverse row at the level of \( t_5 \). 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 Microcyncteris brachydontis. E. brachydontis Dusbábek et Lukoschus, 1974  
Paragenital setae on smooth integument, posteriorly to \( l_3 \). Small species with body length 320-390 µ. Setae \( s_e \) and \( l_1 \) only slightly expanded, clearly narrower than \( s_i \).  

7. Trochanter I with an antero-lateral protrusion. Setae \( s_i \) broadly expanded, wider than \( s_e \) and reaching the basis of \( d_4 \). 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 \( d_4 \). On Macrotrus waterhoussii. E. samuissnuki (Dusbábek, 1967)  

8. Setae \( d_4 \) with lateral bulbous swelling.  
Setae \( d_5 \) without lateral bulbous swelling, expanded and striated.  

9. Setae \( v \) and \( l_1 \) spinelike and striated, rather long, reaching \( 1/3 \) length of \( v \). Trochanter I with pointed postero-lateral projection, postero-lateral trochanteral seta strong and spine-like. On Chilonycteris maclearii and C. fuliginosa. E. sanguiflora (Dusbábek, 1967)  
Setae \( v \) setiform and short, less than \( 1/4 \) length of \( v \). Trochanter I without postero-lateral projection; postero-lateral trochanteral seta setiform or only slightly spine-like. On Chilonycteris parnelli E. jimenesi (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. argarvai (Vomero, 1972)  
Setae \( s_i \) wider than \( s_e \). Setae \( l_1 \) relatively long, reaching the basis of \( d_5 \).  

11. Setae \( d_1 \) and \( l_1 \) subequal, expanded and striated. Setae \( v \) closely associated with \( v \). Trochanter I with antero-lateral protrusion. On Monophyllus cubanus. E. resickyi (Dusbábek, 1967)  
Setae \( d_1 \) and \( l_2 \) expanded and striated, \( l_2 \) and \( l_3 \) setiform. A gap between \( v \) and \( v \). Trochanter I without antero-lateral protrusion.  

12. Setae \( l_2 \), \( l_3 \) and \( d_6 \), and antero-lateral seta on trochanter I with a lateral barb. Paragenital setae posteriorly to \( l_4 \). On Microcyncteris megalotis. E. micropycteris Dusbábek et Lukoschus, 1974  
Setae \( l_2 \), \( l_3 \), \( l_4 \) and antero-lateral seta on trochanter I smooth. Paragenital setae at the level of \( l_4 \). On Mormoops megalophylla. E. ecuadorensis Fain, 1973  
Paragenital setae situated posteriorly to \( l_2 \), forming a transverse row in front of genital conus  
Paragenital setae are situated at the level of \( l_3 \) and do not form a transverse row. First pair of paragenital setae anteriorly or at the level of \( l_3 \), the second, outer pair slightly posteriorly to \( l_4 \).  
Setae \( s_e \) clearly longer than \( s_e \), setae \( l_1 \) relatively short, reaching only the basis of \( d_5 \). Ventral tarsal setae on legs II-IV strongly spine-like. On Uroderma magnivirostrum E. urodermae Fain, 1972  
Setae \( s_e \) clearly shorter than \( s_e \), setae \( l_1 \) longer, reaching the basis of \( d_5 \). Ventral setae on tarsi II-IV only slightly spine-like or setiform. On Mimon (Anthorhina) crumatum E. antherhimae Dusbábek et Lukoschus, 1974  
At least \( d_4 \) 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.  
Setae in \( d \) and \( l \) series setiform or expanded, without lateral bulbous dilatation. If an indication of such dilatation appears to be on \( d_2 \) and \( l_2 \), the second minute claw on tarsus II-IV is absent.  
Only setae \( d_4 \) with a clear bulbous dilatation, \( l_4 \) with only an indication of it, \( d_1 \) and \( d_4 \) expanded and striated, without bulbous dilatation.  
At least \( d_4 \) and \( d_5 \) with clear lateral bulbous dilatation.  
Tarsus III and IV with one straight claw only. On Phyllostomus discolor. E. phyllostomi 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  
Setae \( l_1 \) relatively short, subequal to \( d_1 \). Propodosomal pores lie almost in the middle distance between \( v \) and \( v \). Second minute claw on tarsus II-IV developed. On Phyloderma stenops E. phylodermae Fain, 1973.
317

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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 $sc$ do not reach the basis of $d_1$. With a gap between $v_e$ and $v_e$. Second minute claw on tarsus III and IV developed. Big species, with body length 420-460 $\mu$. On *Phyllostomus hastatus*, 1974

E. hastata Dusbábek et Lukoschus, 1974

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21. Antero-lateral protrusion of trochanter I large, the antero-lateral margin form a sharp angle. Setae $d_1$, $d_2$, and $l_1$ without any indication of lateral bulbous dilatation. On *Chrotopterus auritus*. E. chrotopterus Fain, 1973

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22. Setae $sc$ of the same length as $sc_e$. Smaller species with body length 320-390 $\mu$. Setae $l_1$ relatively short (15-35 $\mu$). 

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23. Dorsal propodosomal setae widely expanded, setae $v_e$ about 18-26 $\mu$ wide. Setae $l_1$ reaching the basis of $l_2$, relatively long (92-113 $\mu$). Setae $l_4$ 48-60 $\mu$, $l_3$ 17-20 $\mu$ only and shorter than $d_4$. On *Carollia perspicillata* E. mimon Fain, 1973

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24. Setae $sc$ shorter than $sc_e$, setae $l_4$ of the same length or longer than $l_2$. On *Centurio senex*. E. mimon Fain, 1973

25. Body width mostly exceeds 250 $\mu$ (290-290 $\mu$). Setae $v_e$ 110-126 $\mu$ long, 17-22 $\mu$ width. Setae $sc$ 82-97 $\mu$ long, 12-15 $\mu$ width. On the species of the genus *Artibeus*. E. vigneaudi (Dusbábek, 1967)

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**MALES**

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

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2. Setae $d_1$ 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

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4. Setae $d_4$ slightly expanded and striated, subequal to $l_2$. Genital pore situated at the level of anterior margin of trochanter II, between setae $v$ and $e$. On Micronycteris brachyotis. 

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5. Setae $d_4$ fine, setiform, $l_4$ slightly expanded and striated, almost twice longer than $d_4$. Genital pore situated at the level with posterior margin of trochanter II, slightly anteriorly to the basis of sc $e$. On Glossophaga soricina. 

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REFERENCES


