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## Two new Afrotropical genera of Scatopsidae (Diptera)

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Two new genera and three new species of Afrotropical Scatopsidae (Diptera) are described: *Octaseps* gen. nov., with type-species *O. alata* sp. nov. (South Africa), and *Psacotes* gen. nov., including *P. processa* (Cook, 1962) comb. nov. (Democratic Republic of Congo) as the type-species, *P. gigantipalpus* sp. nov. (Tanzania) and *P. caudata* sp. nov. (Botswana). The systematic position of the new genera within the family is discussed. A key for the identification of the species of *Psacotes* based on males is provided.

Keywords: Scatopsidae, Afrotropical Region, new genera, new species, systematics, identification key.

### INTRODUCTION

The family Scatopsidae is represented in tropical Africa by members of the subfamilies Psectrosciariinae and Scatopsinae, so far including altogether 17 genera and 70 species. During the preparation of the chapter of the family in the forthcoming «Manual of Afrotropical Diptera» (Haenni & Amorim in press), the first author came across some very peculiar undescribed species of scatopsines that do not properly fit in any of the known genera of the family. They are described here in two new genera. One of them clearly belongs in the Swammerdamellini, while the other more properly fits in the Scatopsini. This paper formally describes and illustrates these two genera and three species, and addresses the problem of their position in the subfamily. The description of the new species demanded the examination of the holotype of *Rhexoza processa* Cook, 1962 transferred here to the new genus described in the Swammerdamellini.

### MATERIAL AND METHODS

Part of the material examined here was originally double mounted on micropins, part was preserved in alcohol. Most specimens were cleared in potash and slide mounted for study. Photographs were prepared using the Keyence system and drawings were made using a camera lucida attached to a microscope.

The acronyms used here for the collections to which the material belongs are: CMNHP, Carnegie Museum, Pittsburgh, USA; MHNN, Muséum d'histoire naturelle, Neuchâtel, Switzerland; MRAC, Musée royal de l'Afrique Centrale, Tervuren, Belgium; ZMTAU, Zoological Museum, Tel Aviv University, Israel.

Morphology terminology follows Merz & Haenni (2000) and Amorim (2009), and the systematics of the family follows Amorim (1994) and Haenni & Amorim (in press).

*Octaseps* gen. nov.

*Type species. Octaseps alata* Haenni & Amorim, sp. nov.

*Diagnosis.* Head as high as long, supraantennal eye-bridge broad, antennal flagellum with 8 flagellomeres. Setae present on frons between antennae and eye-bridge. Anterior thoracic spiracular sclerite with an anterodorsal acute short projection. Postnotal phragma as long as notum, extending deeply into abdomen, reaching the anterior end of the fourth segment. Dorsal suture between thorax and abdomen well marked, forming a sinuous V-shaped, thickened rim laterally. Wing with  $R_{4+5}$  long, reaching costa well over mid-length of wing, a wing fold («false vein») present between  $M_2$  and  $M_4$ . Stem of halteres with a row of setae. Abdominal tergite 1 divided transversally into two parts, with anterior part devoid of pilosity. Pregenital segment 7 with an entire, narrow anterior heavily sclerotized line of sclerotization, which is also present on pleural membranes joining tergite and sternite; pleural area around spiracle of segment 7 also weakly sclerotized. Sperm pump lying free in abdominal cavity, separated from male terminalia. Genital capsule with articulated gonostyles and parameres, aedeagus elongate, complex.

*Etymology.* The name of the genus is an anagram of *Scatopse*, the type-genus of the family. The gender is feminine.

*Octaseps alata* sp. nov.

(Figs 1–10)

*Type locality.* South Africa, Kwa-Zulu Natal: Karkloof Range, Geekie's Farm, 29°16' S 30°21' E.

*Material examined.* Holotype: ♂, labelled: Süd-Afrika, Kwa Zulu Natal, Howick District, Karkloof Range, Geekie's Farm, 29°16' S 30°21' E, Malaise Trap, 11–29.X.2000, W. Barkemeyer leg. in coll. MHNN. Holotype dissected, slide mounted, in fairly good condition.

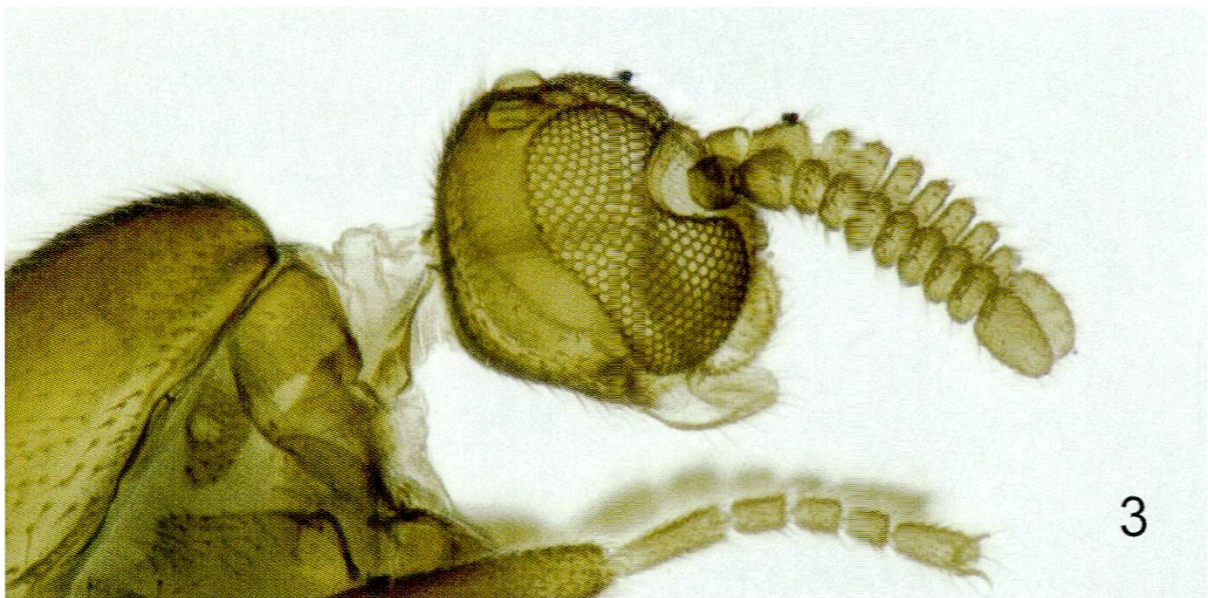
*Diagnosis.* Dorsal suture between thorax and abdomen forming a sinuous V-shaped thickened rim laterally (Fig. 4). Male terminalia (Figs 9–10) with gonocoxites well-developed, parameres with teeth, aedeagus elongate, with an apically enlarged, flattened lobe.

*Description.* Male. 2.8 mm long (in alcohol). Head, body and legs black, hardly shining, densely pilose, especially on notum and on last abdominal segment. Labellum and palpi brownish, halteres yellowish brown. Apical half of posterior tibia and all tarsi slightly lighter than remaining legs. Head (Fig. 3) as high as long. Supraantennal eye-bridge well developed; antennae longer than head, flagellum with 8 flagellomeres, wider than long, each bearing a single whorl of setae, last flagellomere longer than two preceding ones; frons setose between antennae and eye-bridge; palpus adpressed, elongate, obtusely pointed apically, as long as labella. Thorax with notum longer than wide; spiracular sclerite somewhat elongate, nearly twice as long as high, acute anterodorsally (Fig. 5); an elongate row of about 20 supralar setae; scutellum rounded, with a row of lateral setae but devoid of pilosity on posterior third. Postnotal phragma elongate, as long as notum. Wing 2.4 mm



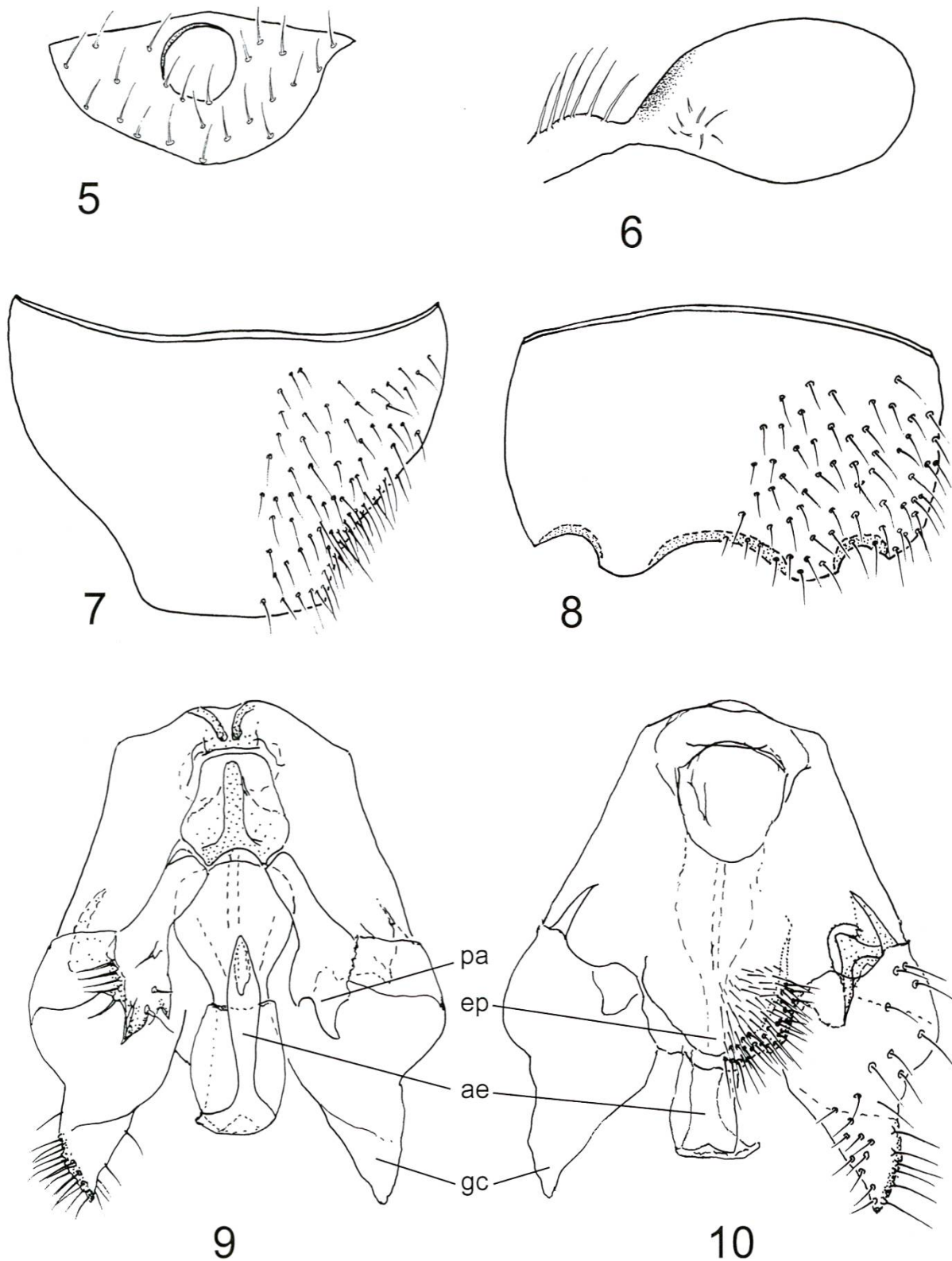
Figs 1-2. *Octaseps aketa* sp. nov. ♂: — 1. Wing; — 2. Habitus (wings removed) (photographs Jessica Litman).

long. Membrane very lightly brownish-tinged; anterior veins yellowish brown, posterior veins hyaline,  $R_{4+5}$  elongate, reaching C at about  $\frac{2}{3}$  of wing length; base of  $A_2/CuP$  somewhat inflated and strongly sclerotized, bearing a short spinose microcheta. Stem of halteres with a row of setae and knob bearing a subbasal posterior patch of short setae near base (Fig. 6). Abdomen constricted at level of first segment after base, dorsal suture between thorax and abdomen V-shaped, forming



Figs 3–4. *Octaseps alata* sp. nov. — 3. Head and thorax, side view; — 4. Thorax and base of abdomen, subdorsal view showing the thickened rim between thorax and abdomen (marked) (photographs Jessica Litman).

laterally a sinuous, thickened elevated rim (Fig. 4); tergites 1–7 normally developed, tergite 2 with a pair of submedian lunules along anterior margin; sternites 2–7 present, normally sclerotized, 2–4 narrower; pregenital segment 7 anteriorly with an entire, narrow, heavily sclerotized line of sclerotization; a weakly sclerotized area also present around spiracle 7, on pleural membranes joining tergite and sternite; tergite 7 (Fig. 7) elongate, roof-shaped, with rounded posterior margin; sternite 7



Figs 5–10. *Octaseps alata* sp. nov. ♂: — 5. Spiracular sclerite; — 6. Halter; — 7. Tergite 7; — 8. Sternite 7; — 9. Genital capsule, ventral view; — 10. Genital capsule, dorsal view.  
Abbreviations: ae – aedeagus; gc – gonocoxite; ep – epandrium; pa – paramere.

(Fig. 8) shorter, posterior margin with median emargination surrounded by a pair of submedian rounded lobes and sublateral shallow emarginations. Genital capsule (Figs 9–10) rotated 180°; epandrium strongly sclerotized apically, with a median shining projection; gonocoxites oblique, diverging apically, somewhat wing-shaped, heavily sclerotized, strongly pilose apically; parameres complex, heavily sclerotized, toothed both basally and distally; aedeagus elongate, geniculate (Fig. 9), widened medially and spatulate apically, with a nearly translucent dorsal process (Fig. 10). Sperm pump lying free in abdominal cavity, separated from genital capsule.

Female. Unknown.

*Distribution.* Only known from the type-locality in Kwa Zulu Natal, South Africa.

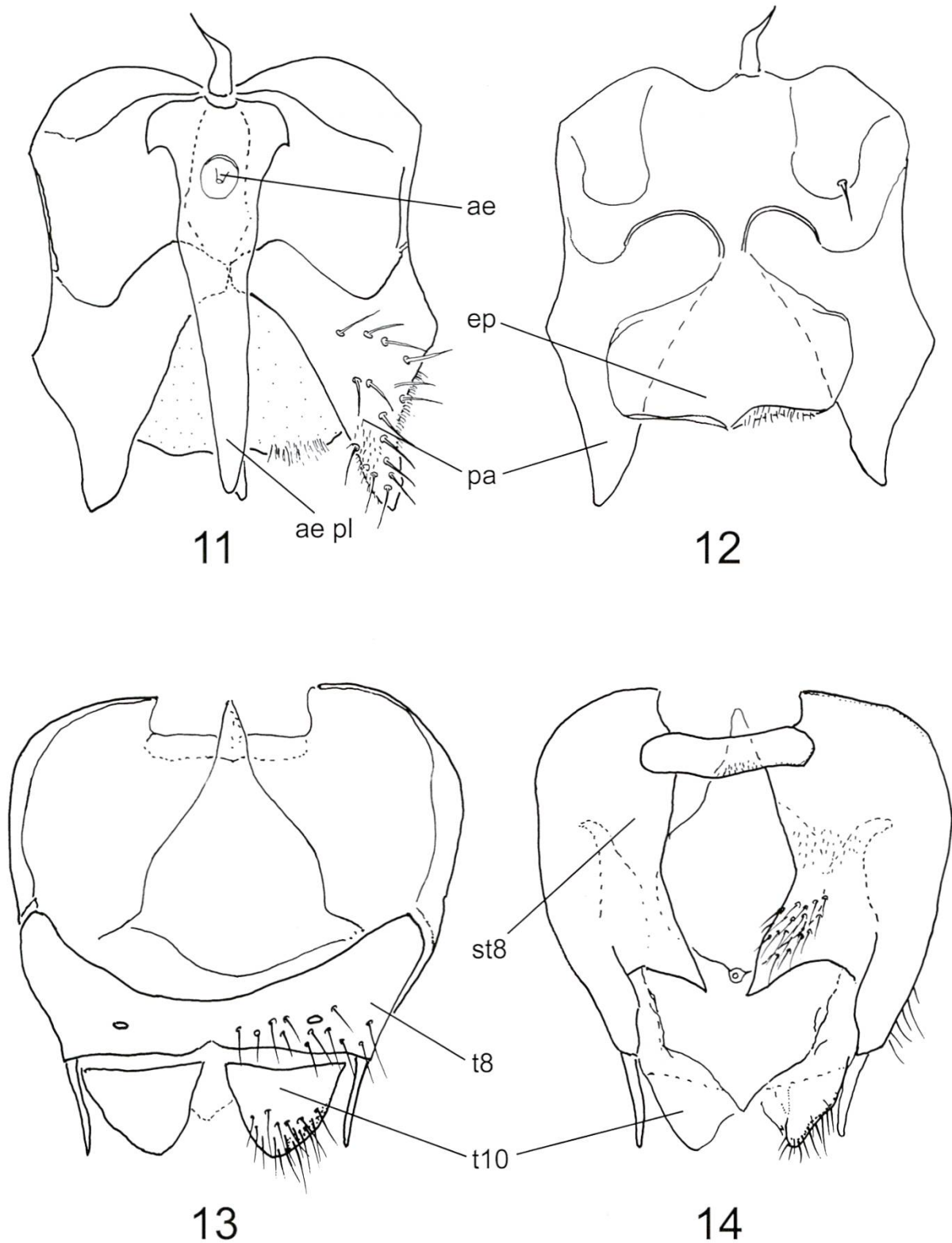
*Etymology.* The specific epithet of the name is a Latin adjective meaning «winged», as a reference to the shape of the male genital capsule.

#### DISCUSSION

This genus lacks typical features of any of the tribes of Scatopsinae, hence placing the genus within the system is particularly challenging. There is no question that *Octaseps* belongs to the Scatopsinae. This is suggested by the sperm pump lying free in the abdomen, the fold in the wing between  $M_2$  and  $M_4$ , and the presence of setation on the frons between the antennae and the eye-bridge, among other features synapomorphic for the subfamily (Amorim 1982). The lack of setation on the wing membrane and veins also indicates that it does not belong in the Rhegmoclematini (although *Diamphidicus* also lacks this feature). The presence of pedicelar setae in *Octaseps* also shows that it does not fit into the Rhegmoclematini. Finally, the absence of the tegula of the halter is an apomorphic feature shared by all Scatopsinae except the Rhegmoclematini.

The elongate  $R_{4+5}$  joining costa beyond the middle of the wing is a plesiomorphic condition in the evolution of the family. In the Scatopsinae  $R_{4+5}$  reaching C before the mid of the wing is seen only in *Swammerdamella* Enderlein, 1912 and other higher genera of Swammerdamellini – the relatively long  $R_{4+5}$  in *Octaseps* certainly excludes the genus from the clade that has *Akorhexoza* Cook, 1978, *Rhexoza* Enderlein, 1936, *Quateiella* Cook, 1975 etc. (Amorim 2007). The shape of the anterior thoracic spiracular sclerite is also helpful in this discussion. In all genera of Swammerdamellini but in *Pararhexosa* Freeman, 1990 it is more or less elongated, the posterior end of the sclerite often being more slender than the anterior end. The anterior spiracle sclerite in *Octaseps* has a dorso-anterior extension, a condition seen in the genera of Scatopsini, as well as in *Pararhexosa*.

The male terminalia bearing two pairs of well-developed processes, and a complex elongate aedeagus are features seen in all four genera of Scatopsini. Indeed, *Octaseps* has important similarities with *Aztecatope* Haenni & Huerta, 2014 and the discussion in Haenni & Huerta (2014) applies here to a considerable extent. In fact, the similarities of *Pararhexosa* with *Octaseps* may actually suggest that the position of *Pararhexosa* in the Swammerdamellini is mistaken, and that the genus could more properly belong in the Scatopsini. The inclusion of *Octaseps* gen.nov. in the Scatopsini is clearly the best solution for the time being. The peculiar thickened suture between the thorax and the abdomen of *Octaseps* is unique among the Scatopsidae and is evidently an autapomorphy of the new genus.



Figs 11–14: *Psacotes processa* (Cook): — 11. ♂ genital capsule, ventral view; — 12: ♂ genital capsule, dorsal view; — 13: ♀ terminalia, dorsal view; — 14: ♀ terminalia, ventral view. Abbreviations: ae – aedeagus; ae pl – aedeagal plate; ep – epandrium; pa – paramere; st – sternite; t – tergite.



Within the Scatopsini, the new genus may be more closely related to *Apiloscatopse* Cook, 1974 – a genus mainly Holarctic in distribution, also known from an Afrotropical species, *A. labellata* (Cook, 1965), from South Africa – or to *Pharsoreichertella* Cook, 1974. *A. labellata* was originally described based on a female and placed in the genus *Scatopse* (Cook, 1965a). Its precise position within the scatopsines, however, should be still considered as uncertain.

*Psacotes* gen. nov.

*Type species.* *Rhexoza processa* Cook, 1962, by present designation.

*Diagnosis.* Supraantennal eye bridge broad. Antennal flagellum with 8 flagellomeres, each with a single irregular whorl of setae. Setae present on frons between antennae and eye-bridge. Palpus strongly developed, elongate, rounded apically. Antepnotum with a ventral cleft extending dorsally to middle of sclerite. Spiracular sclerite elongate, rounded anterodorsally, more or less triangular posteriorly. Fold between  $M_2$  and  $M_4$  present on wing. Sperm pump lying free in abdomen, separated from male terminalia. Pilosity well developed, present on all sclerites except on lower pleura. Sternites 1–2 unsclerotized, sternite 3 unsclerotized or very narrow in males, sternites 1–4 unsclerotized in female. Male genital capsule with well developed, elongate aedeagal plate, aedeagus short; female terminalia with tergite 10 divided into a pair of lobes, sternite 8 bearing a pair of apically acute lateral lobes.

*Etymology.* The name of the genus is an anagram of *Scatopse*, the type-genus of the family. The gender is feminine.

*Species included:* *P. processa* (Cook, 1962) (Democratic Republic of Congo), *P. gigantipalpus* sp. nov. (Tanzania), *P. caudata* sp. nov. (Botswana).

*Psacotes processa* (Cook, 1962) comb. nov.

(Figs 11–14)

*Rhexoza processa* Cook, 1962: 54, Figs 3–6 (♂ ♀). Type-locality: Democratic Republic of Congo, Rutshuru.

*Material examined.* Democratic Republic of Congo: male holotype, slide-mounted, labelled: «MUS. CONGO / Rutshuru / VI-1938 / J. Ghesquière, 6935», «*Rhexoza processa* / ♂ Holotype / E F Cook 1961» [red label], «*Rhexoza processa* / HOLOTYPE» [red label]; «*Psacotes processa* (Cook, 1961) comb. nov. Haenni & Amorim 2015»; female allotype: as holotype but V-1937, 4500; male paratype: Parc Albert [= Virunga N.P]: Chumbi, XI-1933, Dr De Wulf. All material slide-mounted by Prof. E.F. Cook, deposited in MRAC.

*Diagnosis.* In males, aedeagal plate with elongate, conical, apically bifurcate process (Fig. 11). In females, elongate paired acute lateral projections of tergite 8 (Fig. 14).

*Description.* The species was adequately described in both sexes by Cook (1962: 54). Some additional characters omitted in the original description are given here.

Male. Abdominal sternites 1–3 unsclerotized, sternites 4–6 narrow, less than half width of sternite 7; a shallow median emargination surrounded by a pair of short submedian rounded projections at posterior margin of sternite 7 (pregenital); tergite 7 with a complex posterior emargination, one pair of lateral rounded, medially directed processes surrounding a median rounded pilose process and an inner wider bare process with nearly straight margin; an inner small triangular sclerite present within segment 7. Genital capsule as in Figs 11–12.

Female. Abdominal sternites 1–4 unsclerotized, sternites 5–7 progressively wider; tergite 8 (Fig. 13) transverse, much wider than long, with paired submedian spiracles, slightly emarginate medially at posterior margin, bearing a pair of distinctive, elongate, acute finger-like lateral processes reaching in length the medially divided tergite 10; sternite 8 with acute triangular hairy lateral lobes (Fig. 14); genital furca with an apical rounded nipple.

*Distribution.* Presently known only from two localities of Kivu region in the Eastern part of the Democratic Republic of Congo.

*Discussion.* As commented above, this species was originally described in the genus *Rhexoza* by Cook (1962) and has remained ever since as the only known species of the genus from the Afrotropical region (Cook 1980). The discovery of additional Afrotropical Swammerdamellini species belonging to the same clade and deserving generic rank urged us to re-examine *R. processa*. The structure of the male genitalia, especially the development of the aedeagal plate, clearly indicates that *R. processa* is congeneric with the two new species described here in *Psacotes* gen.n. Both sexes of *P. processa* are known and it is designated as type-species of the genus.

***Psacotes gigantipalpus* sp. nov.**

(Figs 15–23)

Material examined. Holotype: ♂, labelled: «TANZANIA / Usambara Mts. / Rt. B124, 1300m / near Lushoto / 10–15.IX.1992 / A. FREIDBERG». Holotype dry-preserved, double-mounted on minuten, in perfect state, in coll. TAU, Tel-Aviv. Paratype: male, dissected and slide-mounted, same data as holotype, TAU.

*Diagnosis.* Very distinctive by the enormous development of the palpus, nearly as large as an eye (Fig. 17). The aedeagal plate with moderately elongate posteriorly directed process (Figs 21, 23) is also characteristic.

*Description.* Male. Head. Antennae gradually widening towards apex, about as long as head height, with flagellum 8-segmented, each flagellomere bearing one somewhat irregular whorl of setae, except last one, longer than preceding two, bearing 3 whorls of setae; eyes holoptic, forming a broad eye-bridge over antennae; three ocelli; palpus dark, largely developed, broadly triangular, entirely beset on external face by rounded sensilla and dense pilosity (Fig. 17), nearly as large as an eye and as long as antenna; face pilose under antennae; labella yellowish, pointed apically.

Thorax. Notum blackish, dull, weakly shining, with dense and long pilosity, longer than broad; a row of about 14 strong subalar setae; pleura lighter than notum, partly shining; antepnotum with an incomplete ventral cleft (Fig. 18); anterior spiracular sclerite (Fig. 18) rounded anterodorsally, elongate, twice as long as high, spiracular opening submedian, antero-dorsal; pleural setae: about 30 anepisternals,

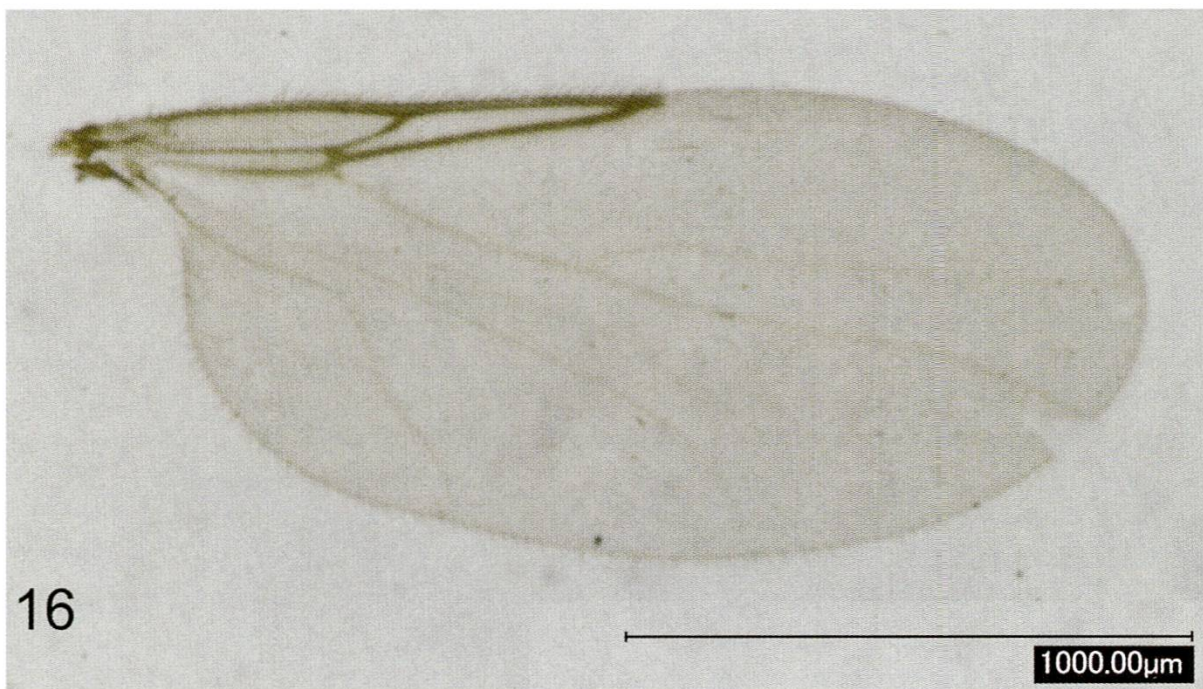
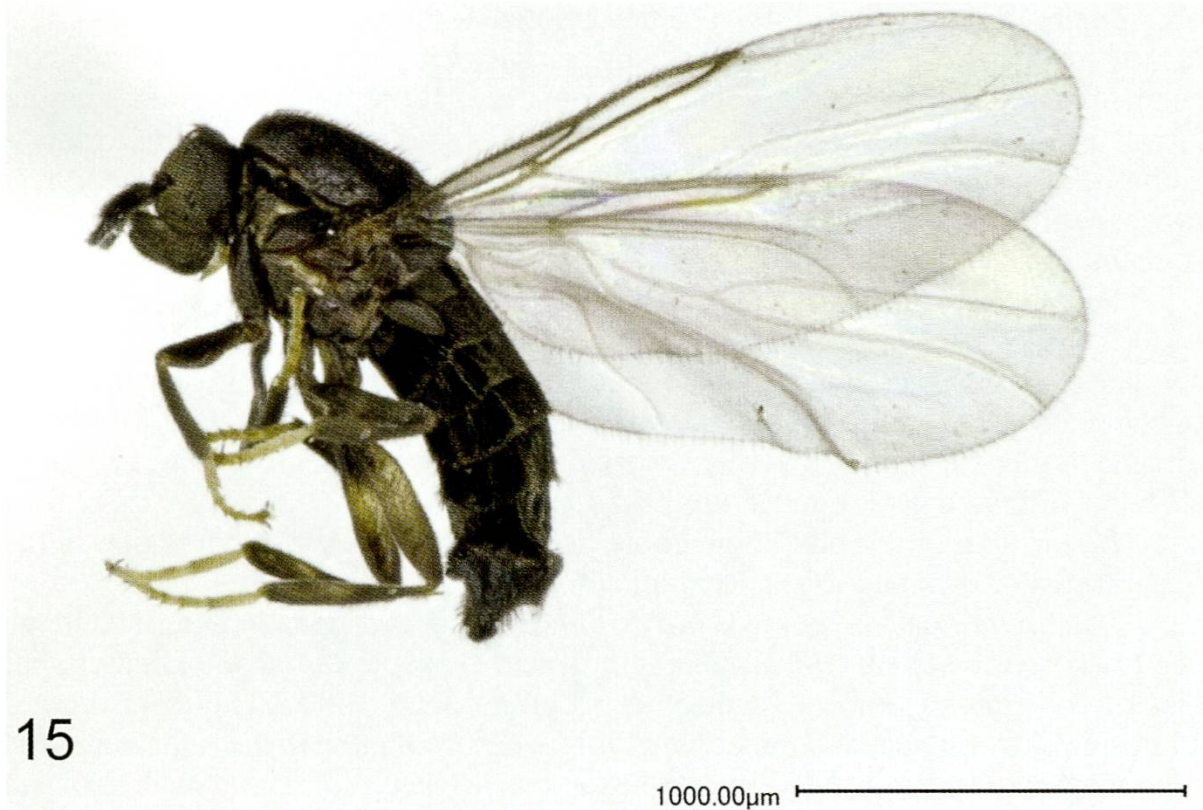
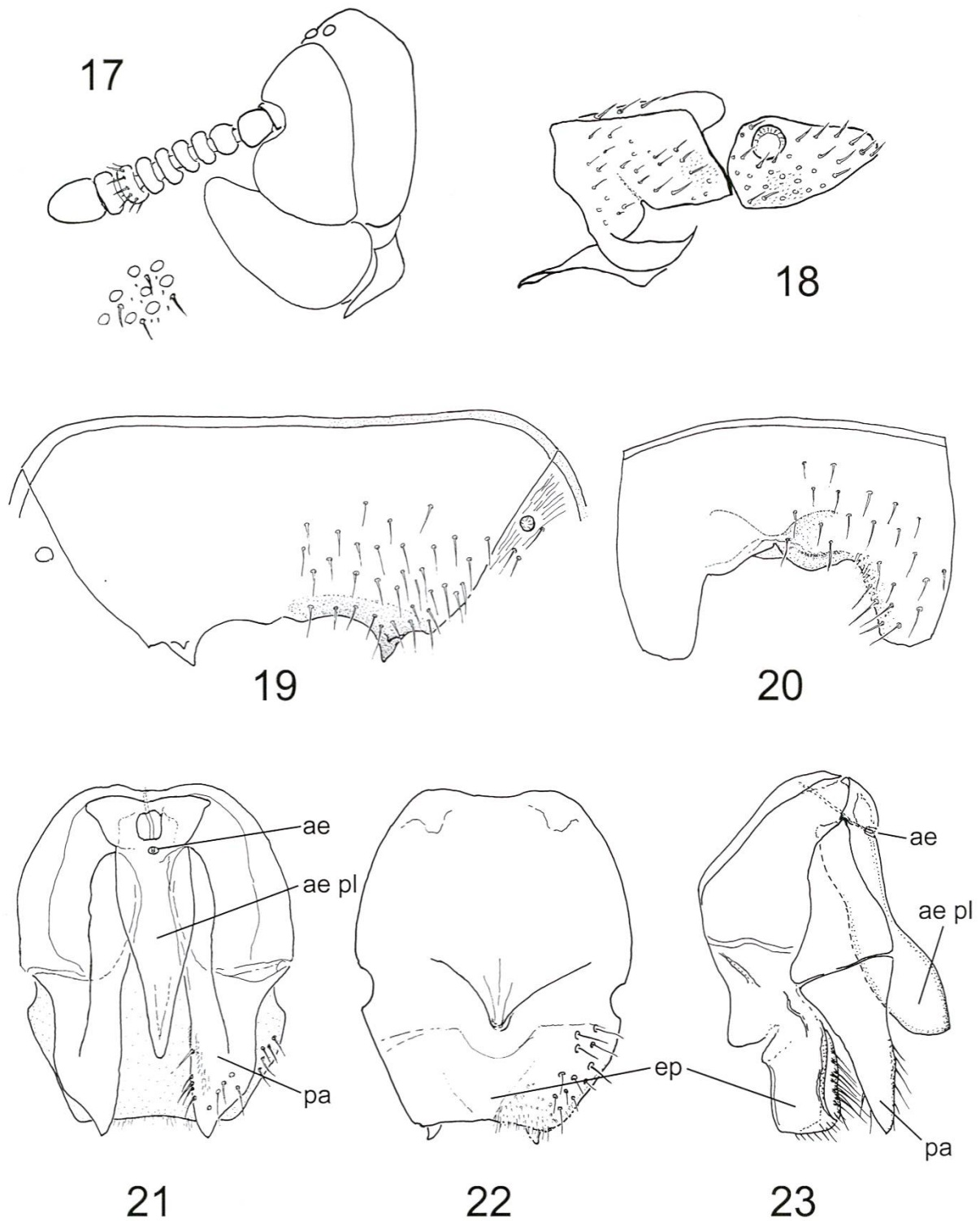


Fig. 15–16: *Psacotes gigantipalpus* sp. nov. ♂: — 15. Habitus; — 16. Wing; (photographs Matthias Borer).

7 subalars, 2 (plus 5 weak) subspiraculars; 3 weak lower epimerals; a row of 10 strong marginal scutellars.

Wing (Fig. 16). Membrane hyaline, densely beset with short micropilosity; anterior veins sclerotized, brown; posterior veins hyaline, devoid of macrosetae; costal vein ending clearly beyond middle of wing;  $R_{4+5}$  straight along most course,



Figs 17–23: *Psacotes gigantipalpus* sp. nov. ♂: — 17. Head, lateral view, with detail of outer surface of palpus; — 18. Anteprepronotum and spiracular sclerite; — 19. Sternite 7; — 20. Tergite 7; — 21. Genital capsule, ventral view; — 22. Genital capsule, dorsal view; — 23. Genital capsule, lateral view. Abbreviations: ae – aedeagus; ae pl – aedeagal plate; ep – epandrium; pa – paramere.

joining C after a short, hardly marked curve;  $M_{1+2}$  short, medial fork complete,  $M_1$  and  $M_2$  more than twice longer than stem, slightly diverging apically; wing fold well marked,  $M_4$  running straight along most of its extension, curved anteriorly towards wing margin apically, but not reaching margin; CuA sinuous, incurved

before middle then directed obliquely in a gentle curve, not reaching wing margin. Halter dark, knob elongate, stem short, bearing a row of 4 setae.

Legs unremarkable, dark, except posterior femora, obscurely brownish medially, and tarsi, pale yellow, strongly contrasting with rest of legs.

Abdomen dark, dull, with sparse pilosity, that becomes denser and longer towards tip of abdomen; seven pregenital segments; tergites and sternites 1–3 unsclerotized, 4 and 5 narrow, 6 wide; pregenital segment 7 with a complete anterior line of sclerotization, which is also developed on anterior margin of pleural membranes joining tergite and sternite; sternite 7 (Fig. 19) twice as long as wide, more heavily sclerotized along posterior margin, which is shallowly emarginated medially, with a pair of acute, tooth-like sublateral projections; tergite 7 (Fig. 20) nearly as long as wide, more heavily sclerotized medially along posterior margin, with a complex, deep median emargination; spiracles on pleural membrane, close to sternite.

Genital capsule (Figs 21–23) simple, epandrium consisting of a simple, broad convex setose plate, apically truncate; parameres triangular, elongate, simple, setose along inner margin; aedeagal plate strongly developed, elongate, conical, with a sub-basal rounded hole through which a short aedeagus protrudes.

Female. Unknown.

*Distribution.* Only known from the type-locality, in Tanzania.

*Etymology.* The specific epithet of the species name comes from the Latin words *gigas*, for ‘giant’, and *palpus*, ‘palp’, as a reference to the largely developed maxillary palpus in this species; the name is used as an apposition.

*Psacotes caudata* sp. nov.

(Figs 24–26)

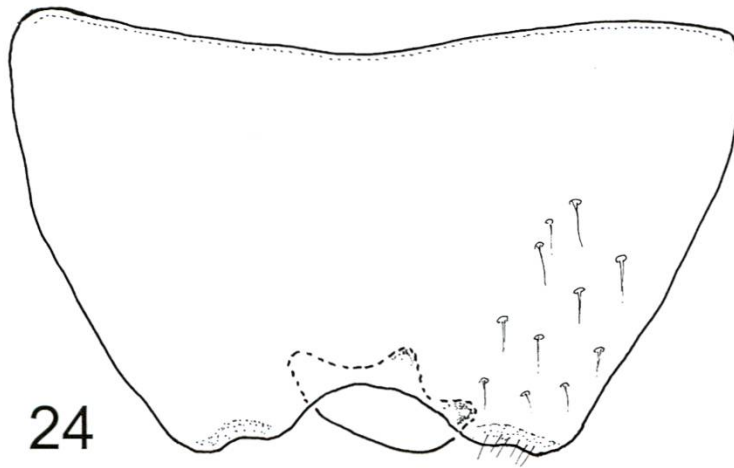
Type locality. Botswana, Serowe.

*Material.* Holotype: male, labelled: «BOTSWANA: Serowe / Farmer’s Brigade / Aug 1991, SE2226BD / Per Forchhammer / Malaise Trap». Holotype in poor condition (right wing lacking, apex of left wing damaged), [formerly dry-preserved, glued on card,] dissected and slide-mounted, CMNHP.

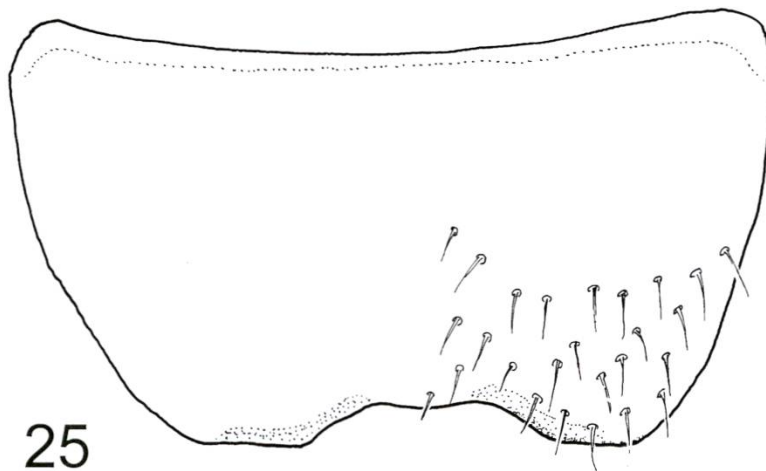
*Diagnosis.* Male aedeagal plate with an elongate, tail-like conical process (Fig. 26).

*Description.* Male. Body length, 1.5 mm. Brown in general colour (but probably not fully coloured specimen), except palpus and labella, yellowish-brown, a median pale ring on posterior tibia, all tarsi contrastingly yellow; halter brown; dull, except for thoracic pleura, shining. Labella elongate, pointed; antenna as long as head height, widening towards apex, with a 8-segmented flagellum, last segment rounded, somewhat longer than combined length of two preceding ones; each flagellomere bearing a single row of setae; palpus very large, nearly as long as eye height, rounded at apex and base, sausage-shaped.

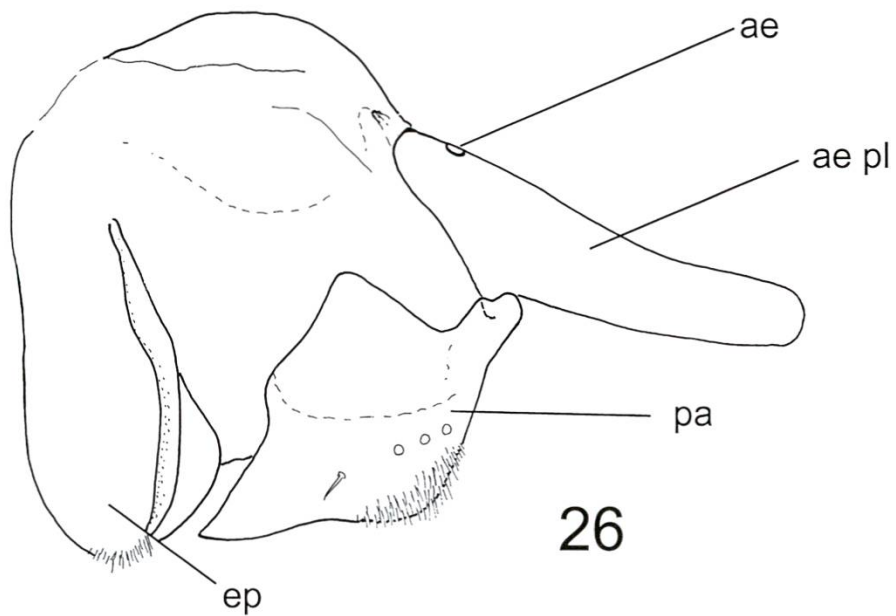
Thorax. Notum clearly longer than wide; a well marked row of 15 long supralars; 10 strong marginal scutellars; spiracular sclerite triangular, elongate, nearly twice as long as high; about 16 anepisternals and a row of about 10 upper anepisternals.



24



25



26

Figs 24–26. *Psacotes caudata* sp. nov. ♂: — 24. Tergite 7; — 25. Sternite 7; — 26. Genital capsule, lateral view.  
Abbreviations: ae – aedeagus; ae pl – aedeagal plate; ep – epandrium; pa – paramere.

Wing. 1.6 mm; membrane light whitish, anterior veins light brownish, posterior veins translucent; wing venation similar to that of *P. gigantipalpus*; halter with 3 setae on stem.

Abdomen. Sternites 1–2 unsclerotized, sternites 3–7 sclerotized, 3 narrow, 4–6 wider, 7 of normal size; pregenital segment 7 with a complete anterior ring of sclerotization, which is also present on pleural membranes, sternite and tergite very close together anteriorly, nearly fused, spiracles present basally on pleural membrane, close to tergite; both sternite and tergite 7 (Figs 24–25) with a complex posterior median emargination, a separate, small inner sclerite at the posterior margin of tergite 7 (Fig. 25).

Genital capsule (Fig. 26) as high as long, with elongate, conical, tail-shaped prominent aedeagal plate, with a rounded hole at base through which protrudes the short aedeagus; epandrium truncate apically, convex, somewhat roof-shaped, parameres widened, beak-like, directed dorsally, apically acute, setose.

Female. Unknown.

*Distribution.* Only known from the type-locality in Botswana.

*Etymology.* The specific epithet of the species name is a feminine adjective derived from the Latin word «cauda», meaning «tail», in reference to the striking tail-like projection of the male genital plate capsule.

#### DISCUSSION

*Psacotes* gen. nov. clearly belongs to the Scatopsinae, as can be inferred by considering the sperm pump lying free in the abdomen and other synapomorphies of the subfamily. Its tribal placement, however, is less evident. The Rhegmoclematini can be discarded, as there are setae on the stem on the halter and there are no macrosetae on the wing membrane or on posterior veins. The relatively short  $R_{4+5}$ , the vestiture of microtrichia on most of the body, and the relatively simplified structure of the male terminalia would not allow its inclusion in the Scatopsini. At a first look the male genital capsule is similar to that of the Colobostematini genus *Colobostema* Enderlein, 1926, but this resemblance is superficial. In fact, the genus presents several synapomorphies of the Swammerdamellini or of some of its subclades (Amorim 1982): antepnotum partly divided by a ventral cleft,  $R_{4+5}$  reaching C shortly beyond the middle of wing, and the presence of a well-developed aedeagal plate in the male terminalia. The type-species of the genus proposed here was originally described by Cook (1962) as belonging to the catch-all genus *Rhexoza* Enderlein. As a matter of fact, *Rhexoza* was originally understood by Cook (1956) in a very broad sense, grouping all Swammerdamellini species except for those placed in the genera *Swammerdamella* Enderlein and *Coboldia* Melander, 1916 (e.g., Cook 1965b). More recently, arguing that *Rhexoza* was polyphyletic, Cook (1975, 1978) erected new genera for different groups of species formerly included in the genus. Freeman (1990) and Amorim (2007) continued to dismantle *Rhexoza* describing several additional genera for species that belonged to *Rhexoza* s.l.

The sclerotized sternites 3–7 in the Afrotropical species gathered in this new genus suggest a rather basal position within the tribe. This condition is seen in all genera of Swammerdamellini except *Pararhexosa*, *Swammerdamella*, and *Coboldia*, other genera of the tribe having gradually lost the sclerotization of sternites 3–7. Very typical of *Psacotes* are its strongly developed maxillary palpi, to some extent

similar to what is seen in the genus *Pararhexosa*. This new genus, however, strongly differs from the latter by the shape of the head, higher than long (longer than high in *Pararhexosa*), the shape of the elongate spiracular sclerite (short, triangular in *Pararhexosa*), and the well-developed aedeagal plate in the male terminalia (not present in *Pararhexosa*). As seen above, *Pararhexosa* has some similarities with *Aztecacatops* and *Octaseps*. *Psacotes* in fact shares some apomorphic features with the terminal taxa of the Swammerdamellini: the antepronotum deeply incised ventrally (a division more advanced than in *Abrhexosa* Freeman, 1990 or *Cooka* Amorim, 2007, but less complete than in *Brahemyia* Amorim, 2007), considerably short aedeagus, protruding through a rounded hole in the basal part of the strongly developed aedeagal plate (as in *Brahemyia*). The sclerotized abdominal sternite 4 (unsclerotized in *Abrhexosa*, *Quateiella*, *Cooka* and *Brahemyia*) in *Psacotes*, however, is a plesiomorphic condition that does not allow it to fit close to these three genera. A formal phylogenetic analysis of the Swammerdamellini is still necessary to properly establish the relationships between the genera of the tribe.

KEY TO THE SPECIES OF *PSACOTES* NOV. GEN. (MALES ONLY)

1. Process of aedeagal plate conical, bifurcate apically (Fig. 11); palpus sausage-shaped, about half as long as eye height (D.R. Congo) ..... *P. processa* (Cook)
- Process of aedeagal plate not bifurcate apically; palpus about as long as eye height or larger .....
2. Process of aedeagal plate tail-like, regularly narrowing towards apex, strongly diverging from genital capsule (Fig. 26); palpus sausage-shaped, about as long as eye height (Botswana) ..... *P. caudata* sp. nov.
- Process of aedeagal plate narrowest towards middle, widening in the apical half, directed posteriorly (Fig. 23); palpus enormous, triangular, as long as eye height, almost as large as an eye (Fig. 17) (Tanzania) .....  
..... *P. gigantipalpus* sp. nov.

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## Designation of the Neotype of *Dihammus pseudobianor* Breuning, 1935 (Coleoptera, Cerambycidae)

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The Neotype of *Dihammus pseudobianor* Breuning, 1935, originally in coll. G. Frey, ex coll. K. Itzinger, is designated.

Keywords: Coleoptera, Cerambycidae, Lamiinae, Lamiini, neotype.

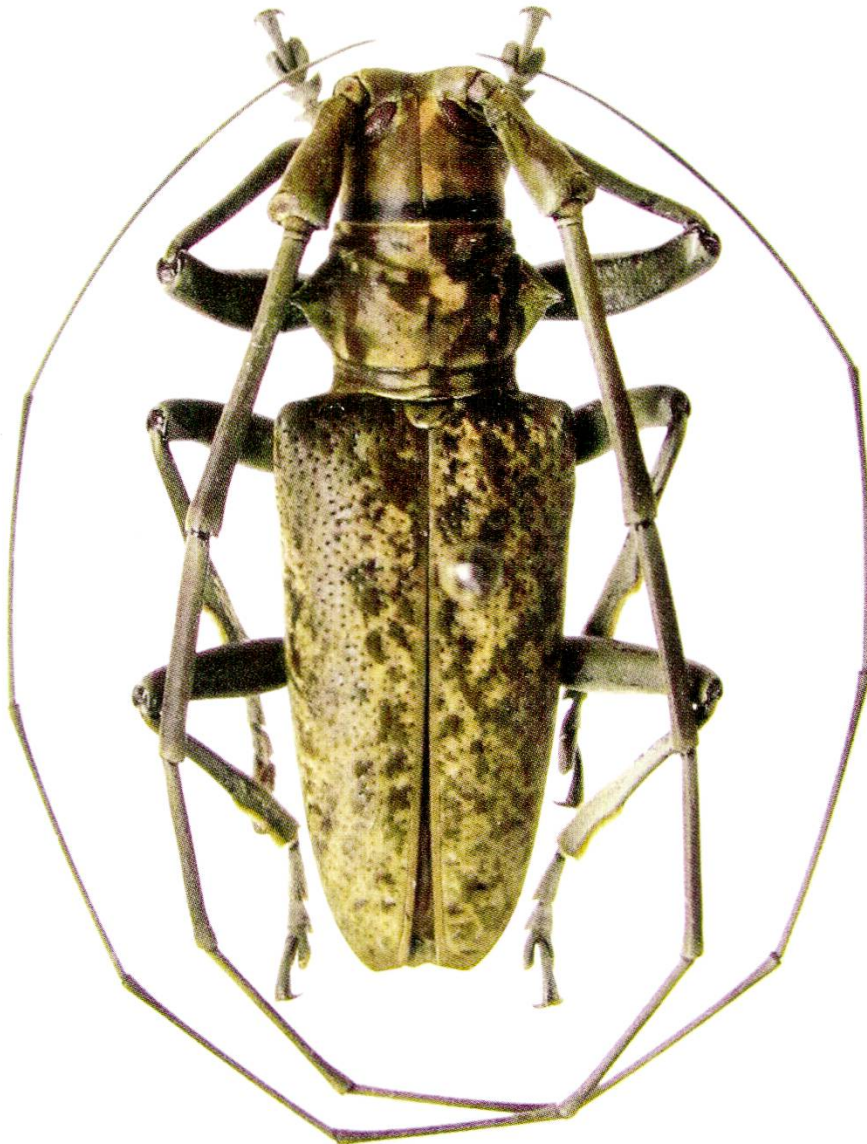


Fig. 1. Neotype of *Dihammus pseudobianor* Breuning, 1935.

## INTRODUCTION

Breuning (1935) described *Dihammus pseudobianor* on the basis of a claimed male originating from Samar (Philippines), 26 mm long, and belonging to the collection of Dr. Karl Itzinger, Wien.

This collection was sold to the Museum G. Frey, Tutzing (Germany) in 1957 (Scherer 1976) and then, together with the collection Frey, to the Naturhistorisches Museum Basel (Switzerland) in 1987 (Scherer 1987).

Though the species was already well defined, the revision of the Philippine *Acalolepta* of the group *rusticatrix* (Vitali 2016) needed the examination of this holotype. The research was unsuccessful since the collection Frey contained only a label mentioning «Hü / 30.II.86» (Sprecher, *in litt.*), in all likelihood referable to the loan to K. E. Hüdepohl which occurred in late February 1986. But the type specimen was not present in the Zoologische Staatssammlung München either, where the collection Hüdepohl is currently located (Neven & Balke, *in litt.*). Specimens from Samar are absent in both museums. The designation of a neotype is necessary for reasons of taxonomic stability, according to the ICZN (1999), Art. 75.

## TAXONOMY OF THE SPECIES

The species was characterised by «pubescence brune jaunâtre à fort lustre soyeux, formant de taches nuageuses plus claires et plus sombres, écusson couvert de la même pubescence» (Breuning 1935). The antennae «presque deux fois plus longues que le corps» suggest that the holotype was, actually, a female since also small males show antennae at least more than twice as long as the body.

Breuning (1944) knew the species only on the basis of the type specimen. Afterwards, Breuning (1949) transferred all *Dihammus* species to *Cypriola* Thomson, 1865 and then (Breuning 1961) to *Acalolepta* Pascoe, 1858. The specific validity of *pseudobianor* remained, however, unchanged up to Hüdepohl (1988), who

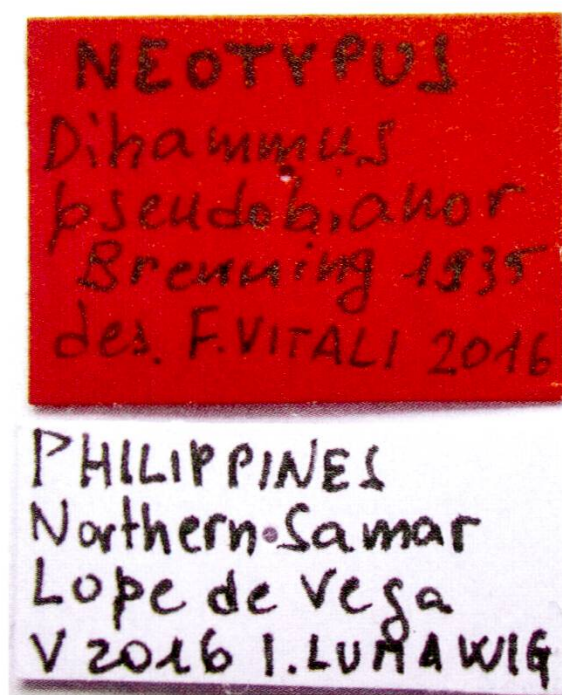


Fig. 2. Labels of the neotype of *Dihammus pseudobianor* Breuning, 1935.

considered it a subspecies of *Acalolepta rusticatrix* (Fabricius, 1801). In the same paper, Hüdepohl recorded *pseudobianor* from Negros, Batanes, Luzon, Panay, Sibuyan, Romblon and Palawan, and the typical *rusticatrix* from Negros, Leyte and Mindanao.

This systematic setting was evidently wrong since two subspecies were contemporaneously present in Negros; thus, Vitali (2016) established again the specific validity of *pseudobianor*, supported by the analysis of the genitals.

## RESULTS

In May 2016, I bought from a Philippine international seller a specimen from Samar, which is able to substitute the missing holotype in the collection Frey.

That specimen (Fig. 1) is a male, 24 mm long, in perfect condition and with prepared genitals, carrying the following labels (Fig. 2):

Philippines / Northern Samar / Lope de Vega / V. 2016 I. Lumawig (on a white label); NEOTYPUS / *Dihammus pseudobianor* / Breuning, 1935 / des.[ignated] F. Vitali, 2016 (on a red label).

The neotype specimen is stored in the Naturhistorisches Museum Basel, Frey collection.

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## ZUSAMMENFASSUNG

Der Neotypus von *Dihammus pseudobianor* Breuning, 1935, ursprünglich in der Sammlung G. Frey, ex Sammlung K. Itzinger, wird festgelegt.

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