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New data on African Eumolpinae from the collections of the Naturhistorisches Museum in Basel (Coleoptera, Chrysomelidae)

by Stefano Zoia¹⁾

Abstract. The following new taxa are described, mostly based on material preserved in the collection of the Naturhistorisches Museum in Basel: *Massartia sprecheriae* sp.nov. (Tanzania), *Pseudoxanthus snizeki* gen. et sp.nov. (Republic South Africa), *Dermoxanthus brancuccii* sp.nov. (Tanzania), *D. vittatus* sp.nov. (Tanzania) and *Lucignolo* gen.nov. *Lucignolo capensis* (Lefèvre, 1890) is comb.nov. for *Trichostola capensis* Lefèvre, 1890. New data are given for *Dermoxanthus gedyei* Bryant, 1958. The importance of the female reproductive organs in the systematics of subfamily Eumolpinae is briefly discussed.

Key words. Coleoptera – Chrysomelidae – *Massartia* – *Trichostola* – *Lucignolo* gen.nov. – *Pseudoxanthus* gen.nov. – *Dermoxanthus* – new genera – new species – new combination – Afrotropical Region

Introduction

The taxonomy of the Afrotropical Eumolpinae leaves much to be desired in terms of stable arrangement. An examination of a considerable proportion of the type specimens held in several European museums, and of important previously unidentified material, has once more highlighted the limits of the system to date. It has also, however, presented an opportunity to extend descriptions through previously underestimated features, such as the female reproductive organs, including the vagina, which exhibit, in some of the cases examined, very defining characteristics. The parts are very delicate (spermathecal gland, spermathecal duct, etc.) and any examination must be conducted with the greatest caution in order to preserve them, but the information they can provide is sometimes useful for taxonomy and possibly for phylogenetic studies as well.

Examination of the material held by the Naturhistorisches Museum Basel has allowed me to describe some new taxa, to redescribe a poorly-known species and to illustrate some interesting traits of the above-mentioned features.

Material

The following abbreviations are used for the institutions in which the material is deposited:

MDcoll The Mauro Daccordi Collection, Verona, Italy
MNHN Museum National d'Histoire Naturelle, Paris, France
NHMB Naturhistorisches Museum Basel, Switzerland
NHML The Natural History Museum, London
SZcoll The Stefano Zoia Collection, Milan, Italy

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T a x o n o m y

Massartia sprecheræ sp.nov.

Type locality: Momela Lake, Meru Mt, Tanzania.

Type material. Holotypus: Momella, Mt. Meru, Tanganjika, E. Haaf, XII.1959 [printed white label]; Holotypus *Massartia sprecheræ* n.sp., S. Zoia det. 2010 [printed red label] (♂). Type depository: NHMB.

Paratypes: Momella, Mt. Meru, Tanganjika, E. Haaf, XII.1959 (5 ♂♂, 7 ♀♀ NHMB; 2 ♂♂, 2 ♀♀ SZcoll); Mt. Meru, Tanganjika, leg. A. v. Nagy, 5100 ft, Nov. 1960 (3 ♂♂, 3 ♀♀, NHMB; 1 ♂, 1 ♀ SZcoll); Kenya, Lake Naivasha, 17.12.90, leg. Mauser (1 ♂, SZcoll).

Description. Body length of the holotypus 3.1 mm (length range of specimens examined: ♂♂ 2.8–3.3 mm, ♀♀ 3.1–3.4 mm).

Habitus as in Figs 1 and 2. Body uniformly black with metallic bluish to cupreous reflections; dorsum dark cupreous, suture dark metallic bluish; legs, antennae, labrum and palpi reddish.

Head: frons almost flat between the eyes; clypeus feebly sloping, not divided from the frons, strongly punctate-rugose proximally, less so distally, with a few very small setae; frons almost glabrous, with a longitudinal sulcus, more or less impressed, in the middle. Surface sparsely punctured, feebly alutaceous and with fine microreticulation between the punctures; in the area between the antennal insertions the punctation is stronger, deep, confluent; eyes moderately large and convex (in frontal view the distance between the eyes is about 2–2.3 times the width of a single eye) with a thin sulcus above, gradually widening towards the rear.

Antennae: Segment 1 ovoid, somewhat flattened on the outer side, 1.3 times as long as wide; segment 2 two-thirds the first in length and three-fifths as wide; 3 is 1.2 times longer than 4, more than three times as long as wide; 5 and 6 subequal in length, each of them a little shorter than 4; segment 7 a little longer than 6 and 1.8 times as long as wide; 8–10 subquadrate, shorter than 7; then 11 is 1.7 times as long as wide and 1.7 times longer than 10.

Pronotum 1.7–1.8 times wider than long, a little wider at base than at distal border; sides shortly sinuate at base, feebly widened to past mid-length, curved and tapering distally; distal corners not visible from above, not prominent; pronotal surface glabrous, sparsely and regularly punctate, surface between punctures flat, lustrous, wider than the diameter of each puncture; lateral borders moderately wide, complete, anterior seta arising immediately below the anterior corner. Prothoracic epimera impunctate, with strong microreticulation that forms longitudinal lines; post-ocular process (distal part of proepimera) with convex border, coarsely punctured, divided from epimera by a deep sulcus. Prosternum 1.2 times longer than wide at base, narrowing at centre, and divided from the post-ocular processes by a deep sulcus; prosternal distal border almost straight; surface with thin, scattered, translucent setae.

Mesothoracic episterna glabrous, microreticulated. Scutellum triangular, with curved sides, glabrous, lustrous, with a few small punctures.

Metathoracic epimera not punctate, glabrous, with strong microreticulation, six times as long as wide. Metasternum with thin translucent setae.

Legs robust, with small, pale-yellowish setae; femora swollen, with fine punctation; profemora with a very small median tooth, meso- and metafemora with an obvious

median tooth; protibiae feebly curved throughout, meso- and metatibiae almost straight, gradually widening from base to apex; emargination of the metatibiae weak. Tarsi robust; segments 1 and 2 in male pro- and mesotarsi widened, 1 nearly as wide as long. Claws bifid, inner tooth about half the length of the outer one, division beginning near the base of the claw.

Elytra elongate (length/width at humeral level = 1.4); sides evenly curved throughout, widening to the basal third, then tapering to the apices, which form a right angle; humeri prominent, not completely covering the elytral sides in dorsal view; elytra glabrous, shiny; punctation fine, main punctures arranged in 10 not very regular rows; interstriae with finer scattered punctation; surface between punctures flat, lustrous, without microreticulation. Elytral slope flat, with four tubercles in both sexes (Fig. 3). Epipleura impunctate, wide at base, gradually tapering to the elytral apex.

Aedeagus (Figs 21–22) sinuate in lateral view, the apex flat and wide in dorsal view; ostium large, dorsal.

Spermatheca as in Figs 4, 23, 24 with moderately long and narrowly-spiralled duct; spermathecal gland tubular, more than twice as long as the spermathecal body; vagina with an oblong, strong sclerotization, starting at the insertion of the spermathecal duct, and with three longitudinal rows of inner spinae (Figs 4, 23). Spiculum gastrale absent; styli small, sclerotized distally.

Distribution. Tanzania, Kenya.

Etymology. The species is named after Eva Sprecher-Uebersax, curator of the Frey collection (NHMB) and a well known specialist in Chrysomelidae and Lucanidae.

Differential diagnosis. A *Massartia* species characterized by the presence of four well-defined tubercles on the elytral slope (at present this feature is unique among the known African Eumolpinae).

Notes. I refer the new species to the genus *Massartia* Selman, 1965 with reference to Selman's key (1972) to the African genera of Eumolpinae. *Massartia sprecheriae* sp.nov. is easily recognized by the presence of tubercles on the elytral slope, a feature that is unique among the African Eumolpinae described to date. It can also be distinguished from the other species of the genus by pronotal shape, with clearly sinuate sides near the base, and the metallic bluish coloration of the elytral suture, contrasting with the elytral colour.

Moreover, *M. sprecheriae* sp.nov. has interesting features in the female reproductive organs: to my knowledge, the presence of longitudinal rows of spinae in the vagina (Figs 4, 23) has never been reported in the whole subfamily Eumolpinae. A taxonomical interpretation of this character cannot be provided at present, as details of the female reproductive organs are seldom investigated and irregularly reported in species descriptions, tending to appear in only recent publications and usually not in detail. Moreover, studies in print often refer to only the spermathecal body. As far as I have been able to ascertain, the spermathecal body exhibits a certain morphological sameness in most cases, thus presenting a difficult interpretation in taxonomical studies (although certain remarkable exceptions do occur). Of greater importance are usually the length and shape of the spermathecal duct, whether it is spiralled or not, and probably the length and shape of the spermathecal gland as well.

The presence of sclerotized parts on the vaginal wall is also scarcely reported (ZOIA 2009), yet it seems less than rare in various Eumolpinae genera (for instance in *Apolepis* Baly, 1863 and in species belonging to the genera *Mesocolaspis* Jacoby, 1908 and *Lypestes* Baly, 1863).

Very few observations are available in the literature. Therefore a proper evaluation of these features in relation to their phylogenetic importance is not possible; however, they can, in fact, provide very useful information for taxonomy at species level.

I have not had the opportunity to examine female reproductive parts in the other *Massartia* species, nor in related genera. The presence or absence of sclerotized plates, or of other differentiated structures in the vagina, might provide useful information to strengthen the taxonomy in this group of genera.

***Lucignolo* gen.nov.**

Type species: *Trichostola capensis* Lefèvre, 1890.

Gender: Masculine.

Description. Body oblong, of small size, the prothorax narrower than the elytra, the latter oblong, convex, with humeri well developed, poorly protruding. Head orthognathous, scarcely retracted into the prothorax; eyes relatively small, prominent, not emarginate, ovoid; frons without sulcus near the inner border of the eyes; mandible short, robust; palpi with the final joint almost twice the second in length. First antennal segment large, ovoid, segment 2 smaller than the first, 3 longer than 2, with 3–6 slender, oblong, 7–11 moderately widened. Pronotum transverse, a little wider at base than at distal border, sides curved; pronotal base with a thin border, sides armed with small teeth; pronotum densely punctate and pubescent; anterior margin of the proepimera nearly straight, continuous with prosternal anterior margin, both finely bordered; prosternum oblong, more than three times longer than wide, convex longitudinally. Mesothoracic episterna quadrangular; metathoracic epimera oblong, moderately wide (about four times longer than wide), pubescent. Abdomen dorsally poorly sclerotized; pygidium sclerotized, without longitudinal groove, covered by the elytra; sternites finely pubescent. Elytra pubescent, irregularly punctured, with traces of rows at their sides; epipleura moderately wide at base, gradually tapering to the distal third of the elytra. Metathoracic wings fully developed. Legs moderately robust, with very fine pubescence; femora moderately widened, without median tooth in known species; tibiae almost straight; mesotibiae feebly emarginate near apex; metatibiae not emarginate; tarsal segment 2 longitudinally grooved; metatarsal segment 1 a third longer than 2; tarsal claws bifid.

Aedeagus tube-like, strongly flexed dorso-ventrally; apex wide and robust; tegmen open dorsally, the two arms not embracing the median lobe; ostium dorsal, transverse.

In female, spiculum gastrale present, styli evident, sclerotized.

Etymology. Named after Lucignolo [“Candlewick”], a unlucky character in Collodi’s “Pinocchio”, whose name is reminiscent of the shiny, delicate body of the species described in this genus.

Differential diagnosis. A genus closely related to *Odontionopa* Chevrolat, 1836 (Eumolpini) from which it mainly differs in having bifid claws and a pubescent dorsum, and in its smaller size.

***Lucignolo capensis* (Lefèvre, 1890) comb.nov.**

Trichostola capensis Lefèvre, 1890

Examined material. Type: Cap (MNHN, coll. Lefèvre); W Cape S. Afr., Gaasbaai [Gansbaai] 10–80 m 28-IX-1984 W. Wittmer (1 ♂, NHMB); South Africa, Cape Prov., Cape Peninsula, 6 km SE Scarborough, 200 m, 24.X.1993 P. Audisio leg. (1 ♀, SZcoll)

Description. Body length 2.2 mm (♂, Gansbaai), 2.4 mm (♀, Scarborough) (type 2.5 mm given by Lefèvre, 1890).

Habitus as in Figs 5 and 6. Body dark, metallic green with cupreous reflections; head and pronotum metallic cupreous; elytra metallic green; mouthparts and legs reddish; antennal segments 1–6 and 7 at base reddish, distal part of 7 and 8–11 darkened, almost black.

Head: frons moderately and regularly convex, with a thin longitudinal median sulcus; surface of frons and clypeus with fine and sparse punctation and clear microreticulation; clypeus not divided from the frons, almost flat; pubescence white, suberect, moderately long.

Antennae: Segment 1 less than twice as long as wide, ovate; 2 smaller, 1.5 times as long as wide, feebly bent; 3 thin, as long as 1, subequal to 4; segments 5 and 6 a little shorter than 4; then 7–11 wider, the 11 nearly 2.5 times as longer as wide.

Pronotum 1.5 times as wide as long, transversely convex, with a feeble transverse impression in the distal half; sides not bordered, convex, at maximum width in the basal third; each side with two small, acute teeth near the basal third, and a smaller tooth at the distal third (♂); in the examined ♀, with two very small teeth, asymmetrically arranged. Surface with close punctures, partially confluent in the feeble transversal impression, and with fine microreticulation between the punctures; punctures ocellated and bearing white, suberect hairs.

Scutellum oblong, finely punctate and pubescent.

Elytra oblong (length/width at humeral level = 1.4), convex; sides almost straight and feebly widening from base to one-third length, then regularly curved to the apices, which form a right angle; humeri visible, feebly prominent; punctation strong, irregular, close, partially confluent, with traces of arrangement in rows at sides and on the apical slope; surface between punctures convex, lustrous. Surface with alternate longer, erect, bent and feebly-widened setae and smaller, less erect setae; setae translucent, their colour largely derived from reflection of the surface beneath, so they appear yellowish. Epipleura punctured and pubescent, tapering from their base to the level of abdominal sternite 2.

Mesothoracic epimera subparallel, with wax secretion.

Aedeagus as in Figs 25 and 26, strongly bent dorso-ventrally; apex large, shortly divided into two lobes; ostium transverse and narrow.

Spermatheca as in Fig. 27, tapering in the distal third; spermathecal gland tubular, longer than the spermathecal body, ending with a small spherical chamber. Spiculum gastrale present, thin, as long as the two last sternites; styli sclerotized, relatively short.

Distribution. Republic South Africa.

Discussion. The new genus has no relationship with *Trichostola* Chapuis, 1874, in which the only known species has been included, and appears closely related to *Odontionopa*, mainly in terms of the morphology of proepimera and prosternum, the head conformation with ovoid and prominent eyes, and the proportions of the first three antennal segments; despite the obvious difference in size (*Odontionopa*: >3.5 mm), the two genera show similar habitus and in general a lustrous metallic coloration. Substantial differences exist however, in the bifid claws, shortly and superficially emarginate mesotibiae, pronotal sides with small teeth and no evident border in *Lucignolo* gen.nov. (vs. appendiculate claws, non-emarginate mesotibiae, pronotal sides usually with a clear and complete border, not toothed, in *Odontionopa*).

Odontionopa, *Lucignolo* gen.nov. and *Odontiomorpha* Jacoby, 1900 (ZOIA, *in press*) are a well-defined group of genera in the South African fauna, associated with *Lefevrea* Jacoby, 1897 and its relatives.

***Pseudoxanthus* gen.nov.**

Type species: *Pseudoxanthus snizeki* sp.nov.

Gender: Masculine.

Description. Body oblong, of medium size (3.2–4.2 mm), prothorax subcylindrical, narrower than elytra, the latter oblong, subparallel, with humeri well developed, poorly protruding. Head orthognathous, only very slightly retracted into the prothorax; eyes large, prominent, feebly emarginate at the antennal insertion; frons with traces of a sulcus near the inner side of the eyes; mandible short, very robust; palpi with the last segment as long as the 2nd. Antennal segment 1 oblong; 2 shorter than 1 and 3; from 3 to 11 thin, oblong; 7–11 slightly widened. Pronotum transverse, cylindrical, a little wider at distal border than at base; pronotal base with a thin border, sides bordered throughout; pronotum punctate, glabrous; anterior margin of proepimera feebly concave, not continuous with prosternal anterior margin, which projects forwards; prosternum oblong, four times longer than wide, almost flat. Mesothoracic episterna quadrangular; metathoracic epimera oblong, moderately wide (about four times as long as wide). Abdomen dorsally poorly sclerotized; pygidium sclerotized, without longitudinal groove, covered by the elytra; sternites finely pubescent. Elytra with long pubescence and longitudinally punctured; epipleura exposed, almost vertical, distally evanescent in the dorsal side of the elytra. Metathoracic wings fully developed. Legs moderately long, with very fine pubescence; femora toothed; tibiae straight; meso- and metatibiae emarginate near apex; first segment of metatarsi a third longer than the second; tarsal claws appendiculate.

Aedeagus tube-like, sinuate in lateral view; apex oblong, acute; tegmen open dorsally, the two arms short, not embracing the median lobe; ostium dorsal, large.

Spiculum gastrale absent, styli sclerotized (♀).

Etymology. From *pseudo-* [false] and *-xanthus* [blonde], the latter referring to the second part of the genus name *Dermoxanthus*, a closely related genus that includes only glabrous species.

Differential diagnosis. A genus related to *Dermoxanthus* Baly, 1859 (Adoxini) through its appendiculate claws, the structure of the ventral suture of the prothoracic epimera, and habitus; from *Dermoxanthus* it mainly differs in dorsum pubescent, size smaller, distal border of the prothoracic epimera concave and a lack of post-ocular processes (projections of the distal part of proepimera).

Pseudoxanthus snizeki sp.nov.

Type locality: Republic South Africa, Limpopo, Nylstrom.

Type material. Holotypus: RSA, NC, Limpopo, Nylstrom, 14.12.2008, Snížek lgt [printed white label]; Holotypus *Pseudoxanthus* n.gen. *snizeki* n.sp., S. Zoia det. 2010 [printed red label] (♂). Type depository: NHMB.

Paratypes: RSA, NC, Limpopo, Nylstrom, 14.12.2008, Snížek lgt (6 ♂♂, 13 ♀♀ SZcoll; 1 ♂, 1 ♀ MDcoll); RSA, NC, Limpopo, Modimole, 30.12.2008, Snížek lgt (2 ♀♀ SZcoll); Tsesebe, Bechuanaland, Zumpt, XII.55 (1 ♀ NHMB).

Description. Body length of holotypus 3.3 mm (length range of specimens examined: ♂♂ 3.2–3.7 mm, ♀♀ 3.3–4.2 mm).

Habitus as in Figs 7 and 8. Body testaceous, abdomen black; dorsum lustrous, testaceous; apical border of the scutellum, elytral suture and a band along the elytral sides, including the epipleura, black; legs, labrum and palpi reddish; mandibles black; antennae reddish, with segments 7–11 more or less darkened, rarely also segments 4–6 somewhat darkened.

Head: frons almost flat between the eyes; clypeus not inclined or only feebly so, not divided from the frons, punctate, pubescent; frons with long, thin, pale-yellowish hairs and with a longitudinal thin sulcus along midline. Surface with punctures relatively large, impressed, sparse; the surface between punctures smooth, smaller than puncture diameter; eyes large and convex (in frontal view the distance between the eyes is about 2.6 (♂)–3.2 (♀) times the width of a single eye), feebly emarginate near the antennal insertion; supraocular sulcus very thin, hardly visible.

Antennae: Segment 1 oblong, more than twice as long as wide; 2 smaller, oblong, 1.5 times as long as wide and three-fifths the length of the first; 3 as long as 1, or a little longer than it, oblong, about five times as long as wide; 4 longer than 3, six times as long as wide; 5 and 6 a little longer than 3 but shorter than 4; segment 7 as long as 6, gradually widening distally; 8–10 subequal, each a little shorter than 7; and 11 a little longer and wider than 10.

Pronotum 1.2(♂)–1.3(♀) times wider than long, a little wider at distal border than at base, with an obvious transversal arcuate impression on the basal third, moving at the sides towards the anterior pronotal corners; sides widening from base to mid-length, poorly tapering distally; basal corners tooth-like and prominent, with a long seta; distal corners not prominent, not visible from above; pronotal surface glabrous, sparsely and regularly punctate, the surface between punctures feebly convex, smooth, as wide as, or less than, the diameter of a puncture; lateral borders thin, complete, in male with short

hairs, anterior seta arising at level of the lateral border. Prothoracic epimera impunctate, glabrous, almost smooth; their distal border concave, sparsely pubescent. Prosternum (Fig. 9) oblong, four times as long as wide at mid-length; distal border feebly curved, wide, protruding and bent downwards; its base almost straight; surface with long, yellowish hairs.

Mesothoracic episterna glabrous, impunctate, smooth. Scutellum triangular, impunctate, smooth.

Metathoracic epimera about four times as long as wide, impunctate, smooth, except for a few hairs arising from very small punctures along the inner side of the ventral border. Metasternum with scattered, long, thin hairs.

Abdominal sternites with scattered yellowish hairs, the distal border of the last visible sternite concave in ♀.

Legs moderately long, forelegs longer in male, with thin, yellowish setae; femora almost impunctate, moderately swollen, male profemora more so; profemora with a small median tooth, meso- and metafemora with a stronger median tooth; tibiae straight; meso- and metatibiae emarginate distally, the emargination with a fringe of stronger setae along its border. The first segment of the male pro- and mesotarsi widened, about 1.7 times as long as wide. Claws appendiculate, with the inner tooth flat, the outer strongly bent downwards (Fig. 10).

Elytra elongate (length/width at humeral level = 1.7) with a feeble transverse impression on the basal third; sides almost straight, subparallel from base to the distal third, then tapering to the apices, which form a right angle; humeri prominent, covering the elytral sides in dorsal view; elytra pubescent, with moderately long, thin, yellowish, erect hairs; punctures strong, arranged in nine regular rows; interstriae narrower than the punctures, smooth. Epipleura exposed, almost vertical, with strong punctures from base to mid-length, smooth and pubescent in the distal third.

Aedeagus (Figs 28, 29) S-shaped in lateral view, the apex flat, long, gradually tapering in dorsal view, the base with a longitudinal dorsal wide carina; ostium large, dorsal.

Spermatheca as in Fig 30, with long and narrow duct; spermathecal gland tubular, more than twice as long as the spermathecal body; vagina long, without sclerotization. Spiculum gastrale absent; styli small, sclerotized distally.

Etymology. The species is named after Miroslav Snížek, who personally collected the majority of the specimens studied.

Distribution. Republic South Africa.

Differential diagnosis. See a diagnosis of the genus.

Genus *Dermoxanthus* Baly, 1859

The genus *Dermoxanthus* is widespread in Africa between the tropics and includes 18 species-level taxa to date. BRYANT (1958) described four new taxa and provided a key to species. Unfortunately, this key is basically flawed and impractical. Moreover, the author used only one character per couplet, often variable (i.e. colour, punctuation, median cephalic impression, etc.), and had only a few specimens available for

examination: "They appear to be rare, as at present the British Museum has no long series" (BRYANT 1958). The taxonomy of the genus, based on this publication, remains confused. The current descriptions are based upon examination of types. A revision of the genus is planned.

***Dermoxanthus brancuccii* sp.nov.**

Type locality: Tanzania, Rungwe-Berge.

Type material. Holotypus: S. Tanganyika, Rungwe-Berge, 2500 m., I.1963, leg. E. Haaf [printed white label]; Holotypus *Dermoxanthus brancuccii* n.sp., S. Zoia det. 2010 [printed red label] (♂). Type depository: NHMB. Paratypes: S. Tanganyika, Rungwe-Berge, 2500 m., I.1963, leg. E. Haaf (7 ♂♂, 4 ♀♀ NHMB, 2 ♂♂, 2 ♀♀ SZcoll).

Description. Body length of the holotypus 6.7 mm (length range of specimens examined: ♂♂ 6.3–7.1 mm, ♀♀ 6.9–7.6 mm).

Habitus as in Figs 11 and 12. Body reddish, sometimes with partly-darkened propleura, metasternum and abdominal sternites; dorsum reddish; mandibles darkened near apex; sometimes also frons, a transverse band on the pronotum and elytral epipleura darkened; usually antennal segments (1–4 not always), femora in part, tibiae on the inner side and tarsi more or less darkened.

Head: frons glabrous, with a longitudinal sulcus in the middle; clypeus feebly inclined, not divided from the frons, with fine and sparse punctures, glabrous. Surface sparsely punctate; surface between punctures smooth, wider than puncture diameter, with barely visible microreticulation; eyes large, convex, distant (in frontal view the distance between the eyes is about 4(♂)–3.5(♀) times the width of a single eye) feebly emarginate near antennal insertion; supraocular sulcus short, very thin, with a setal insertion in its midlength. Mandibles robust.

Antennae: Segment 1 ovoid, with flat outer side, 1.5 times as long as wide; 2 small, rounded, less than half 1 in length; 3 elongated, 1.4 times 1 and 1.2 times 4 in length, about 2.5 times as long as wide; 5 subequal to 3; segments 6–11 densely pubescent, widening to apex; 6 and 7 subequal in length, a little shorter than 5; segments 8–10 subequal and a little shorter than 7; and 11 a little longer than 10.

Pronotum 1.2(♂)–1.4(♀) times wider than long, a little wider at base than at distal border; sides feebly sinuate, or almost straight near the base, tapering weakly distally; basal corners tooth-like and moderately prominent, with a long seta; distal corners not obvious, setal insertion on post-ocular process (distal part of proepimera) at the level of the pronotal side; pronotal surface glabrous, sparsely and regularly punctate, surface between punctures flat, smooth, on average wider than the diameter of each puncture; lateral borders absent. Prothoracic epimera sparsely punctate, glabrous; distal borders convex, extended into a post-ocular process. Prosternum oblong, 1.5 times as long as wide in its mid-length; distal border curved, not continuous with the border of the epimera; its base almost straight; surface with a few punctures and very thin, moderately long, gold pubescence.

Mesothoracic episterna glabrous, impunctate, with a fine microreticulation. Mesosternum with scattered, long, thin and golden hairs. Scutellum triangular, impunctate, with a very fine microreticulation.

Metathoracic epimera about 3.5 times as long as wide, impunctate, finely microreticulated. Metasternum glabrous, longer than the mesosternum.

Abdominal sternites almost glabrous, with only a few thin, yellowish hairs.

Legs long, with thin, silvery setae; pro- and mesofemora moderately swollen, almost impunctate, with very fine microreticulation; profemora unarmed, mesofemora with a very small tooth; metafemora widened, with a large acute tooth (smaller in ♀) (Figs 13, 14); pro- and metatibiae feebly curved outwards, mesotibiae curved inwards in ♂, almost straight in ♀; tibiae not emarginate distally. The first segment of the male pro- and mesotarsi widened, about 1.4 times as long as wide. Claws appendiculate, with the inner tooth flat, the outer strongly bent downwards.

Elytra elongate (length/width at humeral level = 1.5) with a feeble impression on the basal third; sides regularly bent, feebly widening from base to the basal third (♂) or to mid-length (♀), then tapering to the apex, which forms an angle of less than 90°, humeri prominent, covering the elytral sides in dorsal view; elytra glabrous, punctures fine, arranged in nine regular rows; interstriae wide, flat, impunctate, smooth. Epipleura impunctate, gradually tapering to the apex.

Aedeagus (Figs 31, 32) curved in the middle in lateral view; apex pointed; ostium large, dorsal; the two arms of the tegmen robust, reaching the dorsal side of the median lobe, separated dorsally; ejaculatory duct strong, greatly exceeding the length of the aedeagus (Fig. 32).

Spermatheca as in Fig. 33, with short, robust, closely-spiralled duct; spermathecal gland tubular, a little longer than the spermathecal body, ending with a small oval chamber; vagina without sclerotization. Spiculum gastrale absent; styli small, sclerotized distally.

Etymology. The species is named after Michel Brancucci, curator of the entomological collections of NHMB.

Distribution. Tanzania.

Differential diagnosis. A species related to *D. montanus* Bryant, 1958 in terms of general aspect, colour, pronotal shape and punctate-striate elytra with flat intervals; separated from *D. montanus* by longer antennal segment 3 and metafemora with a large tooth.

Notes. Only two other species of *Dermoxanthus* have flat elytral interstriae, as in *D. brancuccii* sp.nov.: *D. fulvus* Baly, 1859 (described from Cameroon, also known from Nigeria and the Guinea/Ivory Coast border) and *D. montanus* Bryant, 1958 (Kenya). *D. brancuccii* sp.nov. is very closely related to *D. montanus* Bryant, 1958 from which it can easily be distinguished by longer antennal segments, with segment 3 longer than 2 and 2.5 times as long as wide (as long as segment 2 and about twice as long as wide in *D. montanus*); metatibiae with a rather large tooth (not present in *D. montanus*); different shape of the pronotum; and a different colour of legs (nearly entirely black in *D. montanus*). *D. fulvus* is a larger species (about 9 mm long), almost uniformly yellow-reddish in colour, with only the tarsi and a part of antennae more or less darkened, a more cylindrical pronotum and elongated elytra with subparallel sides (for a photo of the type specimen see ZOIA 2010).

A ♂ paratype of *D. brancuccii* sp.nov. has a teratological antenna, doubled as from segment 4; antennal segment 3 is widened from base to apex to support the two separate fourth segments (Figs 15, 16).

***Dermoxanthus gedyei* Bryant, 1958**

Type material examined. Holotypus: Nairobi Kenya Colony 5.450ft -IV-27 A. F. J. Gedye; Type (♀, NHML). Magamba, Usambara, O. Afr., E. Haaf, XI.1959 (1 ♀ NHMB; 1 ♀ SZcoll).

Additions to original description. I here provide photos of a *D. gedyei* specimen (NHMB) (Figs 17, 18). Body length in the specimens examined: 5.9 (holotype), 6.6 mm and 7.5 mm.

Spermathecal body oblong (Fig. 34), without a widened basal portion, showing transverse thickening of the wall and some internal divisions; duct short, robust, closely spiralled; spermathecal gland tubular, shorter than the spermathecal body, ending with a small oval chamber; vagina without sclerotization. Spiculum gastrale absent; styli small, poorly sclerotized distally.

Male unknown.

Distribution. Kenya.

Note. BRYANT (1958) based his description on a single ♀ specimen (for a photo of holotype see ZOIA 2010) and gave “allied to *D. alternans* Wse. [WEISE 1909], but much paler and the legs pale and unarmed”. A specimen identified by Bryant as *D. alternans* is preserved in the NHML and was possibly a reference for the above sentence; however, the characters of this specimen do not match Weise’s syntypes preserved in the collections of the Museum für Naturkunde in Berlin and in the MNHN Paris and possibly refer to a different, perhaps undescribed, taxon.

The two specimens here examined match the *D. gedyei* holotype closely; they differ from *D. alternans* in flat interstriae 1–3 on the elytral discus (*vs.* convex), pronotum not sinuate near base, or poorly so (*vs.* narrowing before base, with sinuate sides), legs reddish (the specimen has the distal part of femora and tibiae partially darkened) (*vs.* distal part of femora and tibiae black), antennae almost completely reddish (*vs.* darkened from segment 4).

***Dermoxanthus vittatus* sp.nov.**

Type locality: Tanzania, Magamba.

Type material. Holotypus: Magamba, Usambara, O. Afr., E. Haaf, XI.1959 [printed white label]; Holotypus *Dermoxanthus vittatus* n.sp., S. Zoia det. 2010 [printed red label] (♂). Type depository: NHMB.

Paratypes: Magamba, Usambara, O. Afr., E. Haaf, XI.1959 (3 ♂♂, 3 ♀♀ NHMB, 1 ♂, 2 ♀♀ SZcoll).

Description. Body length of the holotypus 5.9 mm (length range of specimens examined: ♂♂ 5.3–5.7 mm, ♀♀ 6.1–7.0 mm).

Habitus as in Figs 19 and 20. Body yellow-reddish, with partly blackish metathoracic epimera and lateral border of mesosternum; frequently in females also

prothoracic epimera, part of pro-, meso- and metasternum, distal and lateral portions of abdominal sternites more or less widely darkened; dorsum reddish, with two longitudinal black stripes on the pronotum which continue on the head until the rear borders of the eyes; each elytron with two black stripes: one along the suture and one intersecting interstriae 6 and 7, the two stripes separate; elytral sides and apex reddish; mandibles with black distal half; palpi sometimes with darkened last segment, labrum and antennal segments reddish; legs reddish, in females usually more or less darkened.

Head: frons glabrous, with a very thin, longitudinal sulcus in the middle; clypeus flat, not divided from the frons, punctured, glabrous. Surface sparsely punctate; surface between punctures smooth, as wide as puncture diameter, with barely visible (only at high magnification) micropunctures; eyes moderately large, convex, distant (in frontal view the distance between the eyes is about 2.4–2.5 times the width of a single eye), feebly emarginate near the antennal insertion; supraocular sulcus thin, reaching the rear border of the eye, with a setal insertion in its mid-length.

Antennae: Segment 1 wide, oblong, with flat outer side, 1.8 times as long as wide; 2 small, ovoid, half 1 in length; 3 elongated, 1.4 times 1 and 1.2 times 4 in length, about four times as long as wide; 5 subequal to 3, while 6–11 densely pubescent, widening to apex; 6 and 7 subequal in length, a little shorter than the 5; then 8–10 subequal and a little shorter than the 7; and 11 as long as 10.

Pronotum 1.2 times wider than long, a little wider at base than at distal border; sides sinuate near the base, feebly widened to the apical third, then poorly tapering distally; basal corners tooth-like, scarcely prominent, with a long seta; distal corners tending to vanish, setal insertion on post-ocular process (distal part of proepimera) at the level of the pronotal side; pronotal surface glabrous, sparsely and regularly punctate, surface between punctures flat, on average wider than the diameter of each puncture, with barely visible (only at high magnification) micropunctures; lateral borders absent. Prothoracic epimera glabrous, with strong punctuation in the proximal and distal parts, smooth in the middle; distal border convex, extended into a post-ocular process. Prosternum oblong, 2.5 times as long as wide at its mid-length; distal border regularly concave, not continuous with the border of epimera; its base almost straight; surface with a few punctures and very thin, moderately long, sparse, gold pubescence.

Mesothoracic episterna glabrous, almost impunctate, with fine microreticulation. Mesosternum with scattered, sparse, moderately long, thin, golden hairs. Scutellum triangular, with very fine microreticulation and micropunctures.

Metathoracic epimera about four times as long as wide, impunctate, finely microreticulated. Metasternum nearly glabrous, longer than the mesosternum.

Abdominal sternites almost glabrous, with a few thin yellowish hairs.

Legs long, femora glabrous, tibiae with yellowish setae; pro- and mesofemora moderately swollen, almost impunctate, with a very fine microreticulation, unarmed; metafemora swollen, with a small acute tooth (smaller in ♀); pro- and mesotibiae straight, metatibiae curved outwards in male; tibiae not emarginate distally. The first segment of the male pro- and mesotarsi widened, about 1.4 times as long as wide. Claws appendiculate, with the inner tooth flat, the outer strongly bent downwards.

Elytra elongate (length/width at humeral level = 1.6) with a very feeble impression on the basal third; sides almost straight (♂) or feebly bent (♀) from base to the distal third, then rounded and tapering to the apex, which form a right angle; humeri moderately prominent, covering the elytral sides in dorsal view; elytra glabrous; punctures fine, arranged in nine regular rows; interstriae wide, feebly convex, with barely visible (at high magnification) micropunctures; the penultimate interstria (near the elytral side) convex, feebly raised. Epipleura impunctate, gradually tapering to the apex.

Aedeagus (Figs 35, 36) bent in the middle in lateral view; apex pointed, triangular; ostium large, dorsal; the two arms of the tegmen robust, short, reaching the lateral sides of the median lobe; the ejaculatory duct strong, greatly exceeding the length of the aedeagus, as shown in Fig. 36.

Spermatheca as in Figs 37, 38, tubular, divided into small chambers connected by round passages; duct short, robust, closely spiralled; spermathecal gland tubular, shorter than the spermathecal body, ending with a small oval chamber; vagina without sclerotization. Spiculum gastrale absent; styli small, sclerotized distally.

Distribution. Tanzania.

Etymology. The name *vittatus* [bandaged] refers to the black stripes that characterize this taxon.

Differential diagnosis. A species related to *D. gedyei* Bryant, 1958 from which it differs mainly in the presence of black longitudinal stripes on the dorsum and some darkened ventral parts of the body, and in spermathecal morphology.

Notes. *D. vittatus* sp.nov. can be distinguished from the known species of *Dermoxanthus* by the presence of the black stripes on the dorsum. It is closely related to *D. gedyei*, as shown both by the external morphology and the characteristic spermatheca; the new species differs from *D. gedyei*, besides coloration, in smaller size, different length of spermathecal duct and a greater number of internal divisions of the spermatheca.

Acknowledgements

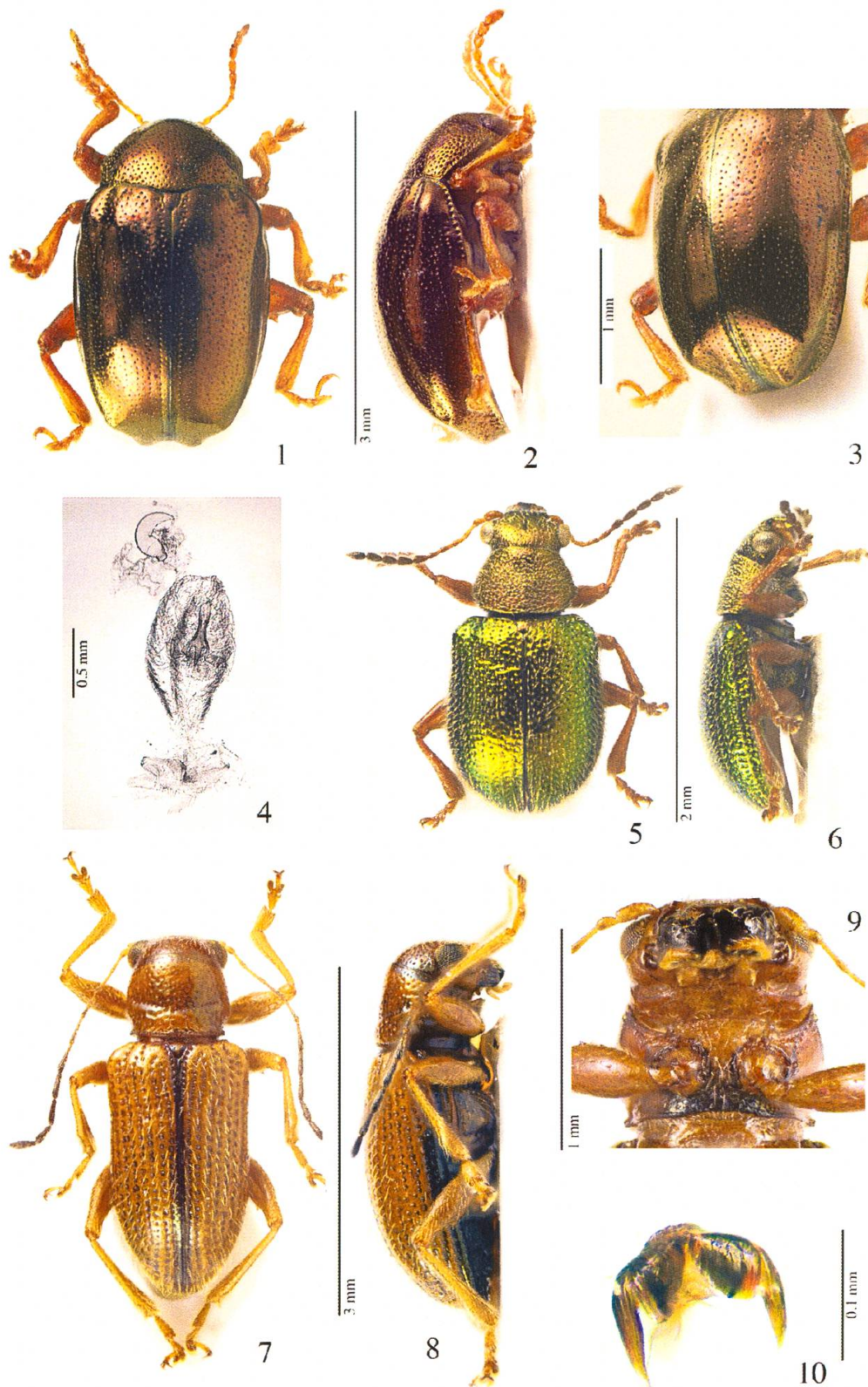
I wish to thank Michel Brancucci (NHMB) and Eva Sprecher-Uebersax (NHMB) for the opportunity to study a large part of the material employed in the current study.

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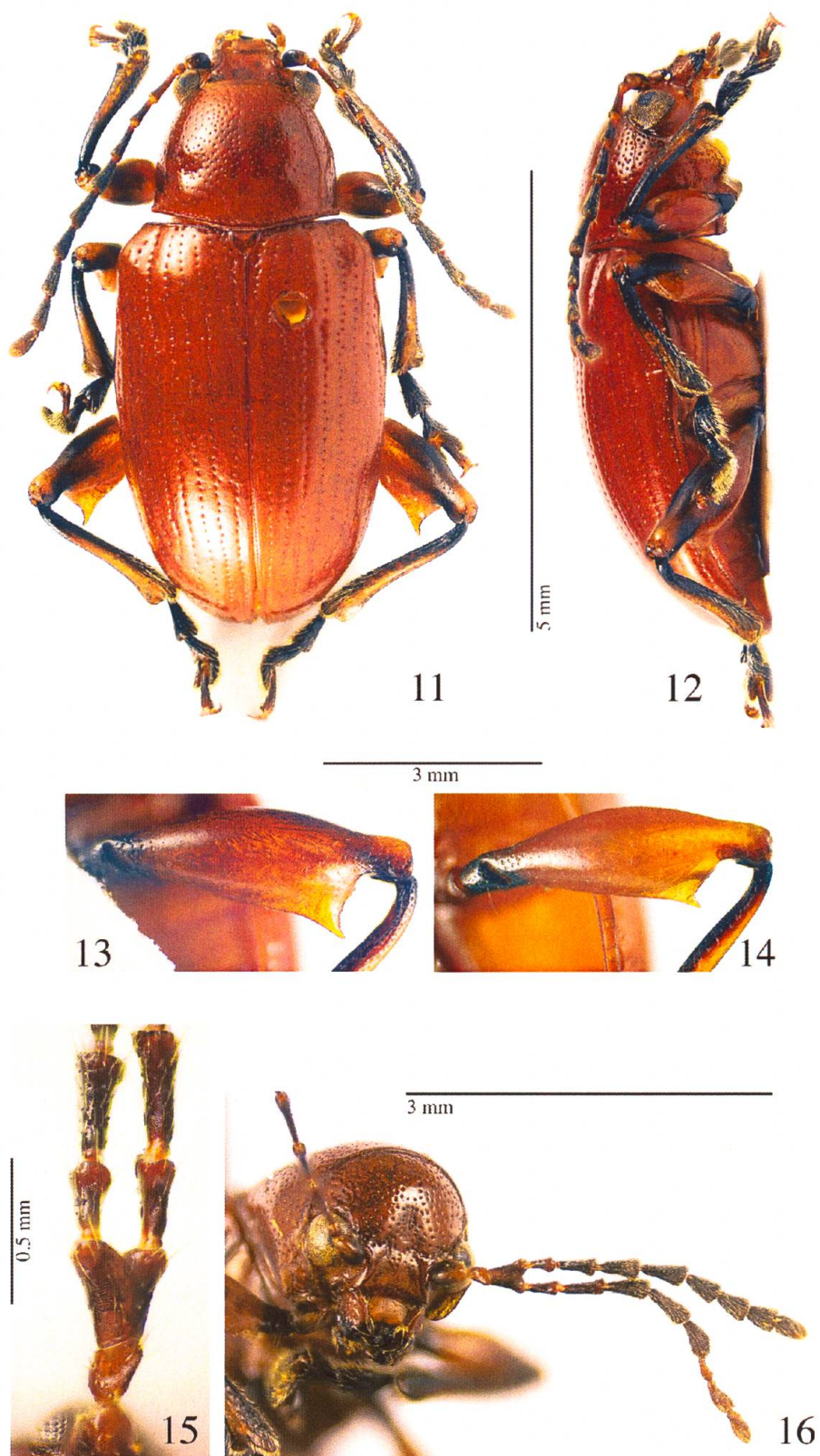
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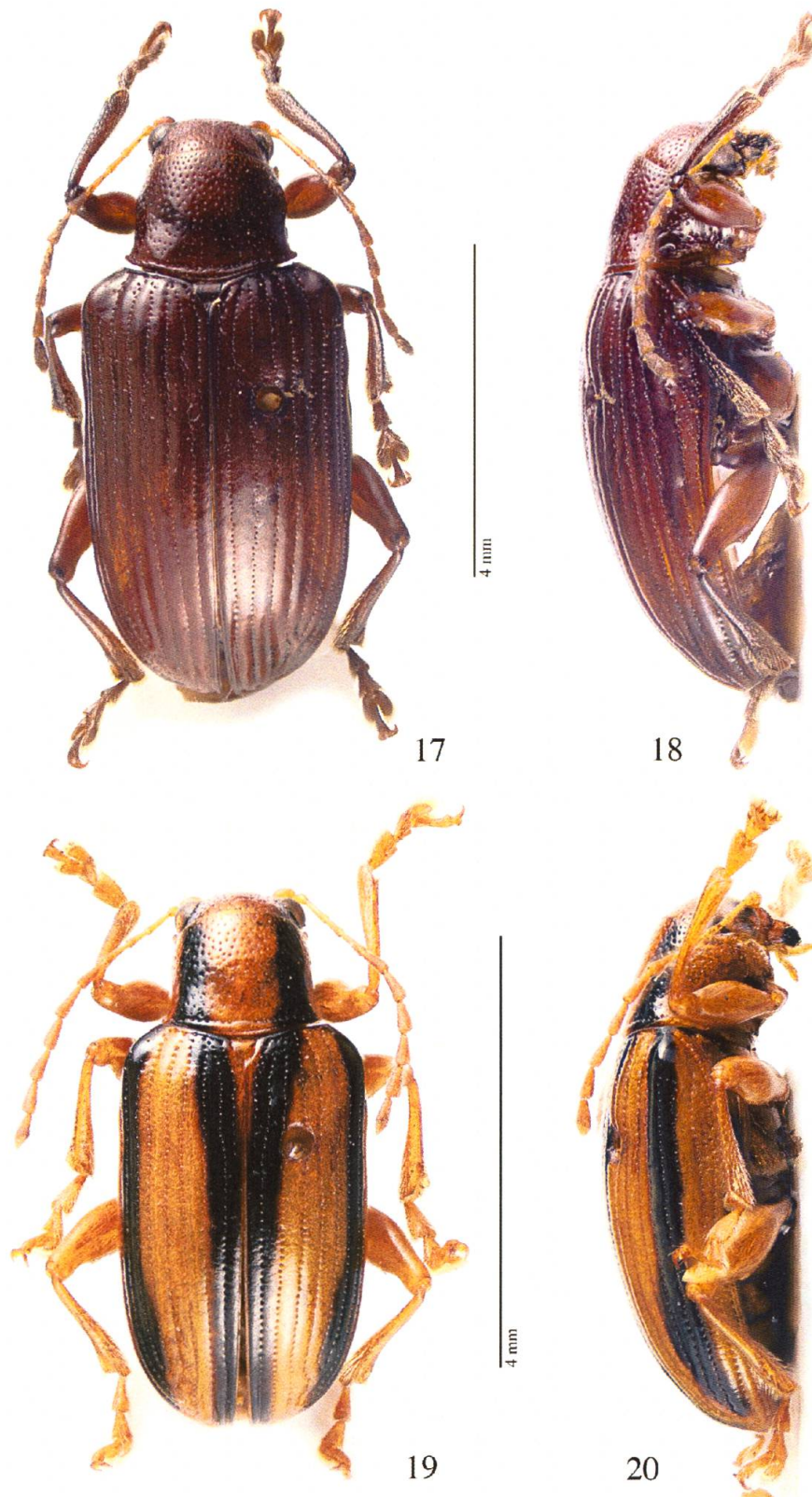
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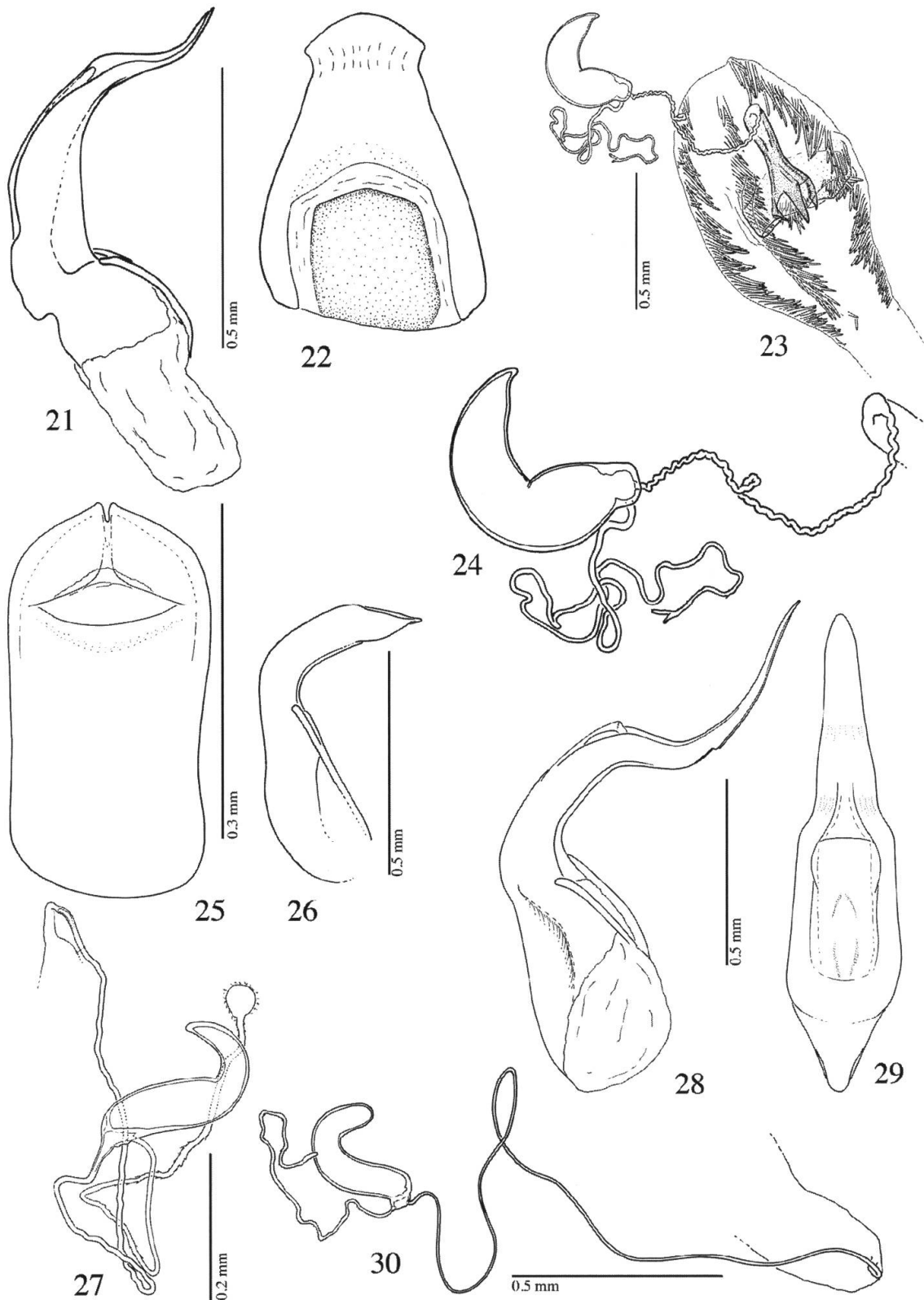
Figs 1–10. 1–4. *Massartia sprecheriae* sp.nov.: 1 – holotype ♂, dorsally; 2 – idem, laterally; 3 – paratype, apical slope of elytra; 4 – paratype, spermatheca and vagina with sclerotized plate at spermathecal duct insertion and rows of inner spinae. 5–6. *Lucignolo capensis* (Lefèvre): 5 – dorsally (♂, RSA: Gaansbaai); 6 – idem, laterally. 7–10. *Pseudoxanthus snizeki* gen. et sp.nov.: 7 – holotypus ♂, dorsally; 8 – idem, laterally; 9 – ♀ paratype, prostenum; 10 – ♀ paratype, front claws.



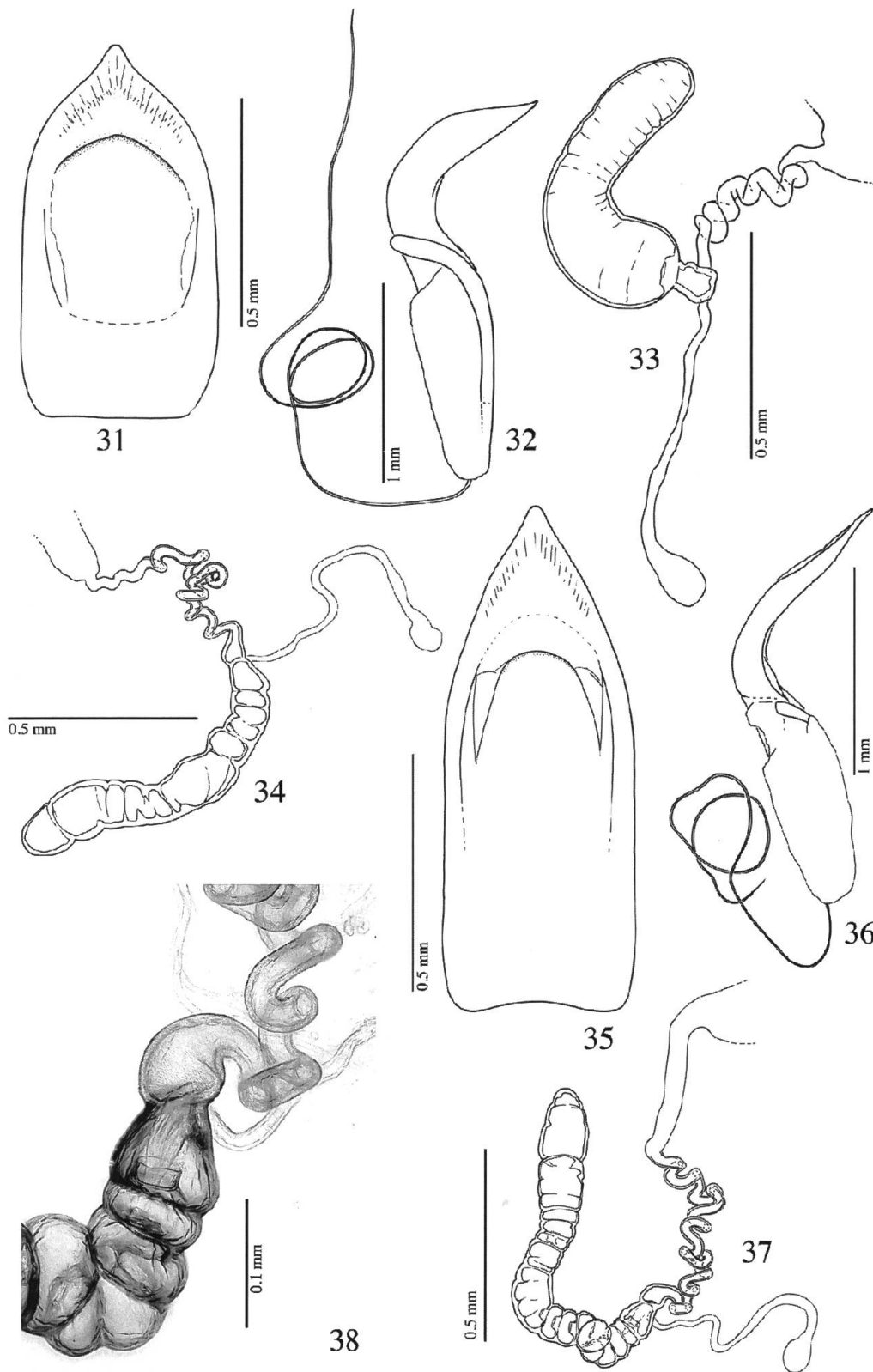
Figs 11–16. *Dermoxanthus brancuccii* sp.nov.: 11 – holotypus ♂, dorsally; 12 – idem, laterally; 13 – metatibia, ♂ paratype; 14 – metatibia, ♀ paratype; 15–16 – teratological antenna in a ♂ paratype.



Figs 17–20. 17–18. *Dermoxanthus gedyei* Bryant (♀, Magamba, Usambara): 17 – dorsally; 18 – laterally.
19–20. *D. vittatus* sp.nov. (♂, holotype): 19 – dorsally; 20 – laterally.



Figs 21–30. 21–24. *Massartia sprecherae* sp.nov.: 21 – aedeagus, laterally (holotype); 22 – idem, dorsally; 23 – spermatheca and vagina with sclerotized plate at spermathecal duct insertion and rows of inner spinae; 24 – spermatheca. 25–27. *Lucignolo capensis* (Lefèvre): 25 – aedeagus, dorsally (RSA: Gaansbaai); 26 – idem, laterally; 27 – spermatheca (RSA: Scarborough). 28–30. *Pseudoxanthus snizeki* gen. et sp.nov.: 28 – aedeagus, laterally (holotypus); 29 – idem, dorsally; 30 – spermatheca.



Figs 31–38. 31–33. *Dermoxanthus brancuccii* sp.nov.: 31 – aedeagus, dorsally (holotype); 32 – idem, laterally; 33 – spermatheca. 34. *D. gedyei* Bryant, 1958 (♀, Magamba, Usambara): spermatheca. 35–38. *D. vittatus* sp.nov.: 35 – aedeagus, dorsally (holotype); 36 – idem, laterally; 37 – spermatheca; 38 – idem, particular.