

New species of *Epipleuria* Fürsch and *Rhyzobius* Stephens from southern Africa (Coleoptera: Coccinellidae: Coccidulini)

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Eight species of Coccidulini from southern Africa are described as new: *Epipleuria caputabdita* spec. nov., *Epipleuria hirsutula* spec. nov., *Epipleuria hirta* spec. nov., *Epipleuria lapidaria* spec. nov., *Epipleuria rugata* spec. nov., *Epipleuria ruthmuelleriae* spec. nov., *Epipleuria saxicola* spec. nov., and *Rhyzobius thoracicus* spec. nov. The male genitalia are illustrated and an identification key to all *Epipleuria* species is provided.

Keywords: Coleoptera, Coccinellidae, Southern Africa, Taxonomy, New Species, Identification Key.

INTRODUCTION

The genus *Epipleuria* Fürsch (type species *Rhyzobius epipleuralis* Pope, 1957) was described by Fürsch (2001); a key presented at the time included 16 new and one previously described species, originally placed in the genus *Rhyzobius*. The distribution of *Epipleuria* is restricted to the Afrotropical region, and, with the exception of the Kenyan species *E. mahnerti* Fürsch, 2001, to southern Africa. The genus *Rhyzobius* Stephens (type species *Nitidula litura* Fabricius, 1787: 52) was first mentioned in 1829 (Stephens, 1829: 239) and finally described in 1832 (Stephens, 1832: 373) as '*Rhizobius*', a misspelling (not an emendation as supposed by all later authors prior to Pope, 1957). Fürsch (1992) revised the genus and listed 13 Afrotropical and two introduced species. The genus has a worldwide distribution.

Material examined is preserved in the Transvaal Museum, Pretoria (TMSA), and duplicates will be deposited in TMSA and in the Zoologische Staatssammlung München (Fürsch collection) (ZSM/CF).

The new species are treated in alphabetical order. Outlines of the genitalia have been drawn by a drawing tube attached to a dissecting microscope. Measurements were made using an ocular micrometer.

SPECIES DESCRIPTIONS

Epipleuria caputabdita spec. nov., Figs 1–4

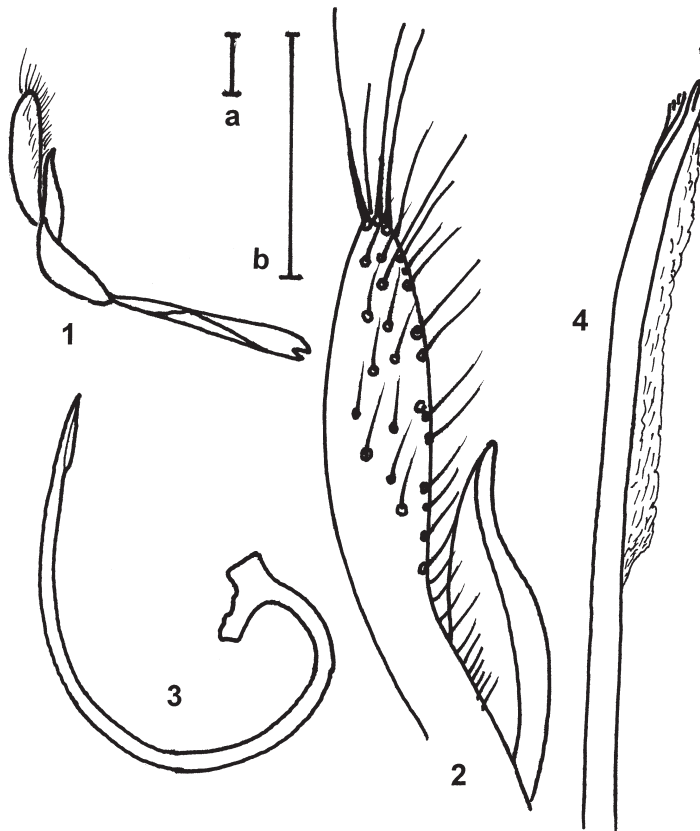
DIAGNOSIS. Broadly oval, reddish brown, legs reddish. This species may instantly be identified by its head, which is almost completely hidden under the pronotum. The structure of the male genitalia suggests an isolated position within the genus in the

vicinity of *Epipleuria endroedyi* Fürsch, 2001. The body outline resembles that of *Epipleuria globosa* Fürsch, 2001.

DESCRIPTION. Body length 2.3 mm, width 1.6 mm ($n = 1$). Head almost completely hidden under pronotum, only labrum and clypeus visible. Pronotum dark reddish brown, gradually becoming paler on front and sides. Front slightly concave, hind margin distinctly convex. Sides of pronotum slightly widening from base towards the middle, here widest, sharply narrowing towards frons. Edges of frons rounded, basal edges sharp. Surface of pronotum shiny, slightly furrowed from one side to the other, finely but distinctly and irregularly punctured, separated by about 0.5–3 diameters on disc, slightly coarser and closer towards side margins. Colour of elytra as on pronotum. Shoulders wider than pronotal base. Hairs rather long, directed forwards. Elytra regularly rounded, widest halfway their length. Setation as on pronotum, but directed apicad. Punctuation a little coarser than on pronotum, especially near side margin. Side margin complete, finely and horizontally bordered. Elytral border slightly narrower than adjoining punctures. Underside reddish brown. Prosternum slightly convex medially, but without carinae. Epipleuræ distinctly broad up to hind legs. Legs reddish.

TYPE MATERIAL. Holotype ♂, SOUTH AFRICA, Transvaal [now *Mpumalanga*]: Nelshoogte, Knuckles grassveld, 25°47'S 30°49'E, 24.x.1986, Endrödy-Younga, E-Y 2312, grass netting. – (TMSA). Aedeagus mounted on a rectangular piece of cardboard in water-soluble Hoyer's mixture.

ETYMOLOGY. From Latin *caput*, head, and *abditus*



Figs 1–4

Male genitalia of *Epipleuria caputabdita*, holotype. 1: Tegmen (a); 2: the same (b); 3: siphon (a); 4: siphonal tip (b). [Scale bars a, b in all figures = 0.1 mm.]

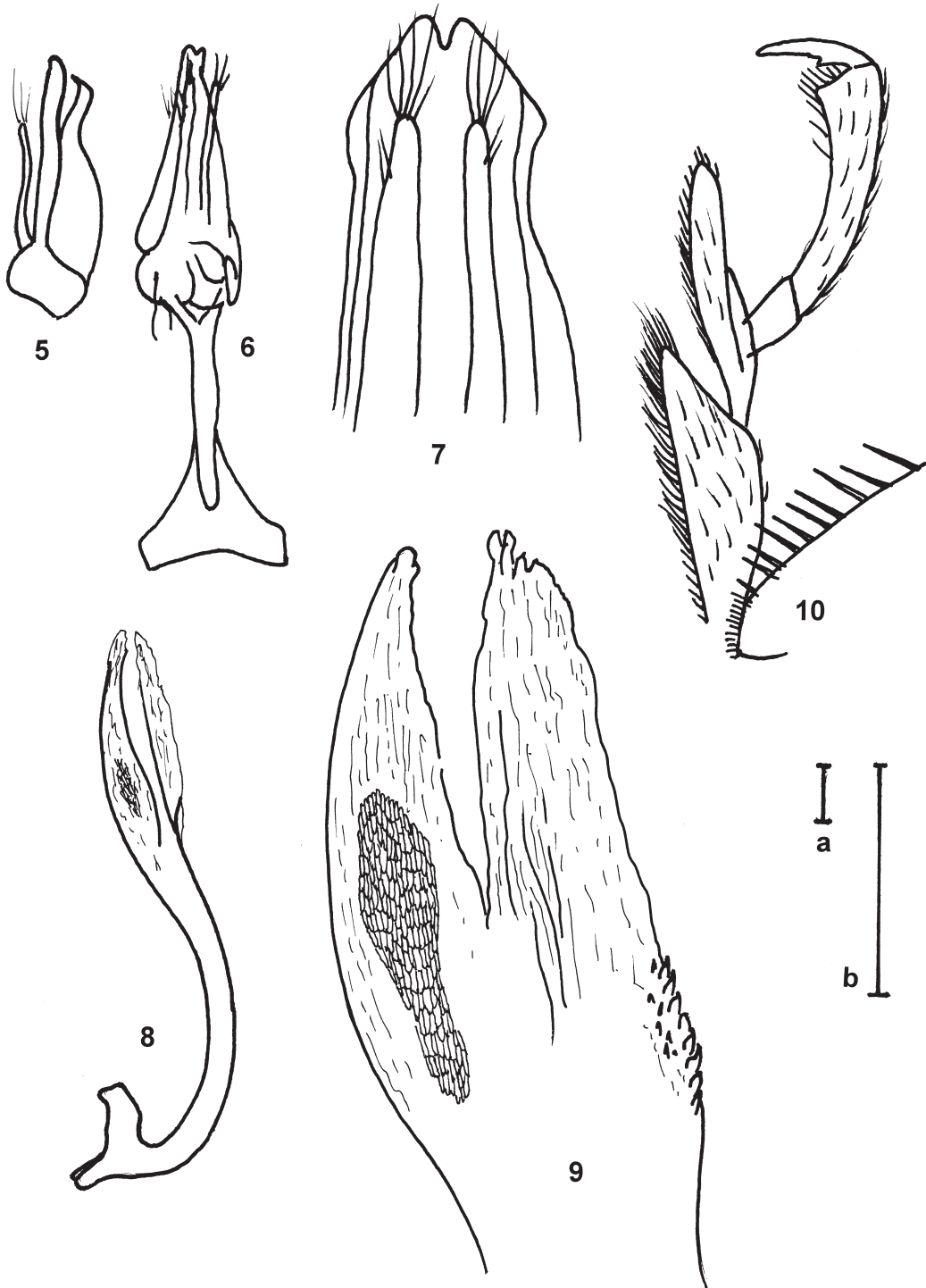
(-a, -um), hidden: the head of the new species is hidden below the pronotum.

***Epipleuria hirsutula* spec. nov., Figs 5–10**

DIAGNOSIS. Dark reddish brown, oval, pubescence half erect, with single setae protruding, resulting in a somewhat shaggy appearance. The species is best recognized by the shape of the aedeagus (Figs 5–7), though it does resemble that of *E. ruthmuelleriae* spec. nov. (Figs 28–30). Body outline very similar to *E. parva* Fürsch, 2001 and *E. gussmannae* Fürsch, 2001, but with a narrower apical region. Habitus similar to *E. ruthmuelleriae* spec. nov., but with striking bright sutural band; *Epipleuria endroedyi* Fürsch, 2001 has a narrower body.

DESCRIPTION. Body length 2.1 mm, width 1.3 mm ($n = 1$). Head dark reddish brown, clypeus and labrum yellow-brown. Surface shiny, punctation, especially on frons, strikingly coarse. Punctures

separated on frons by about half their diameter, behind clypeus 3–4 diameters. Eyes coarsely faceted, protruding hemispherically. Pronotum a little paler and more shiny than head. Frontal margin nearly straight, base distinctly convex. Side margins almost parallel-sided before the rounded hind edges, in frontal half slightly rounded, convergent. Front 'edges' broadly rounded. Surface shiny, dots smaller than on head, punctures separated by about 1–3 dot-diameters. Pubescence white, soft, directed forward. Scutellum minute. Elytra regularly oval, dark brown, beside the suture slightly paler. Shoulders as wide as pronotum base. Side margins horizontal, in width equalling a single adjoining dot. Punctures conspicuous, separated by about 0.25–0.5 diameters. Feebly shagreened, pubescence whitish yellow, with single hairs protruding. Under-side reddish brown, mouthparts and antennae yellow, legs brown. Prosternum with carinae, meso- and metasternum strikingly dotted. Epipleurae in front a little narrower than femora. Femoral line taking the form of a broad arch, approaching the



Figs 5–10

Male genitalia and tarsus of *Epipleuria hirsutula*, holotype. 5–7: Tegmen, 5: lateral view (a), 6: ventral view (a), 7: same (b); 8, 9: siphon (a, b); 10: hind tarsus (b).

hind margin of first sternite up to a distance of the diameter of 0.5–1 dot. First sternite densely and coarsely punctate. Median lobe appearing somewhat split in lateral view (Fig. 5), a feature not visible in ventral view (Figs 6, 7).

TYPE MATERIAL. Holotype ♂, SOUTH AFRICA, E. Transvaal [now *Mpumalanga*]: Uitsoek, high altitude grassveld, 25°15'S 30°34'E, 25.vi.1986, Endrödy-Younga, E-Y 2316. – (TMSA). Aedeagus mounted on a rectangular piece of cardboard in water-soluble Hoyer's mixture.

ETYMOLOGY. From Latin *hirsutulus* (-a, -um), a little shaggy or bristly.

***Epipleuria hirta* spec. nov., Figs 11–16**

DIAGNOSIS. Reddish brown, broadly oval, suture and pronotum darker. Coarsely punctate. Pubescence thin but protruding, resulting in a dishevelled appearance. This feature distinguishes it from the otherwise similar *E. rugata*. Aedeagus very similar to that of *E. trianguliloba* Fürsch, 2001, but with a different siphonal capsula; in addition, the tip of the median lobe is more regularly tapered in *Epipleuria trianguliloba*.

DESCRIPTION. Body length 2.2–2.3 mm, width 1.4–1.5 mm, elytral length 1.5 mm, pronotal width 1.1–1.2 mm ($n = 4$). Head shiny, smooth, with 10–11 dots on frons between eyes, nearly as big as eye facets. Clypeus a little paler than head, semicircular. Head hidden behind pronotum, semicircular up to frontal quarter of eyes. First antennomere long, curved, twice as wide as second, scantily hirsute. Pronotum: colour as on head, front margin concave, hind margin convex, sides rounded, widest just behind the centre and distinctly but finely bordered. Surface shiny and smooth, with similar punctation as on head; 1.5–2.5 diameters between dots. Yellow hairs semi-erect, directed forwards. Basal edges sharp, front edges rounded. Scutellum brown, shiny, minute. Elytra: slightly paler than pronotum. Suture, base and side margins narrower, darker. Distinctly coarser and more densely punctate than on pronotum. Interspaces usually measuring only one diameter, but adjoining near scutellum. Hairs long and erect, shaggy. Shoulders rounded, wider than pronotum base. Ventral aspect brown, prosternum with distinct parallel-sided carinae, interspaces as wide as second antennomere, on the front margin joining in an arch. Meso- and metasternum finely punctate, punctures wide apart. Legs, mouthparts and epipleurae yellow, frontal half of epipleurae nearly as wide as femora. Femoral line as a broad arch, approaching the hind

margin of first sternite up to a distance of the diameter of one dot. Abdominal plate densely and coarsely dotted. Aedeagus as in Figs 11–15.

TYPE MATERIAL. Holotype ♂, SOUTH AFRICA, [Eastern Cape]: Transkei, Ntsubane forest, 31°27'S 29°44'E, 06.xii.1988, Endrödy-Younga, E-Y 2600, on fungous logs. – (TMSA). Aedeagus mounted on a rectangular piece of cardboard in water-soluble Hoyer's mixture.

Paratype (1♂): same data as holotype, microscope slide 3830 (ZSM/CF).

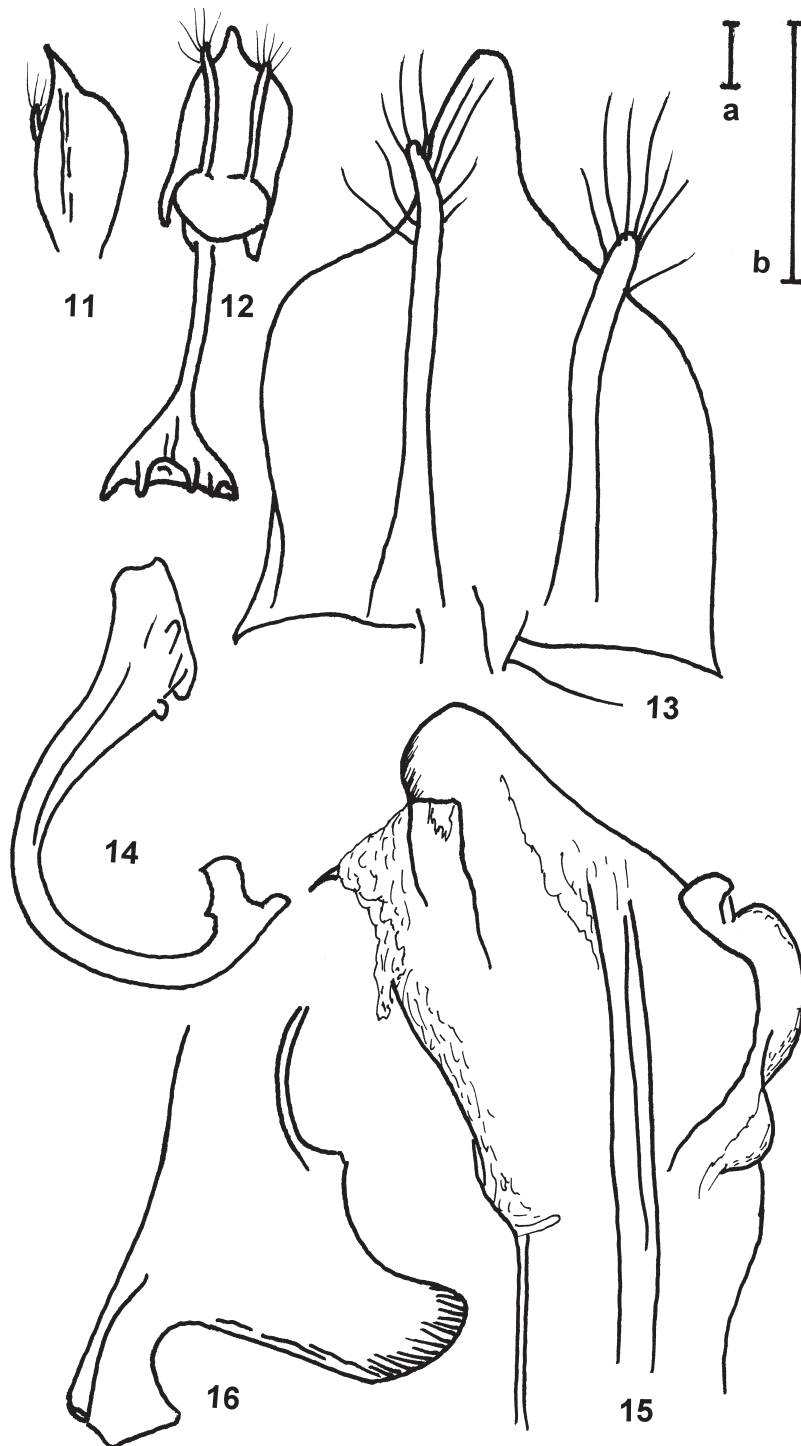
ADDITIONAL MATERIAL EXAMINED. (2♂): SOUTH AFRICA, [KwaZulu-Natal]: 1♂, Zululand; Dukuduku Forest Sta[tion], 28°22'S 32°19'E, 02.iv.1974, Endrödy-Younga, E-Y 310, disturb[ed] for[est] litter. [Eastern Cape]: 1♂, Alexandria 20 km N, 33°33'S 26°23'E, 07.xii.1987, Endrödy-Younga, E-Y 2556, on flowers. – (TMSA).

ETYMOLOGY. From Latin *hirtus* (-a, -um) = hairy.

***Epipleuria lapidaria* spec. nov., Figs 17–23**

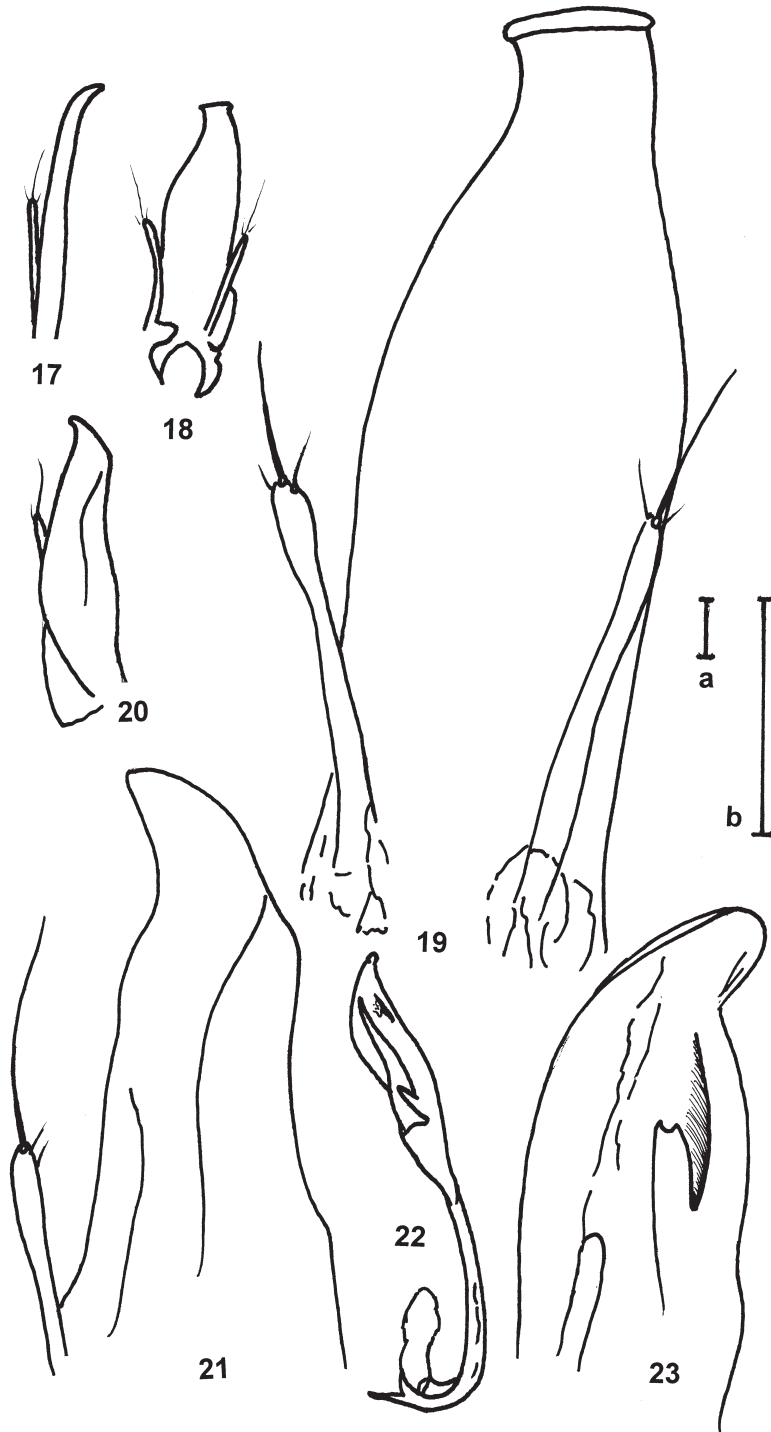
DIAGNOSIS. Ochre (holotype) to reddish brown, regularly oval. Outline between pronotum and elytra without visible notch. The sympatric *Epipleuria inexpectata* Fürsch, 2001, has a similar aedeagus, but is longer (1.9–2 mm). See also under *Epipleuria saxicola* spec. nov. from Lesotho; this species has parameres nearly as long as the basal lobe, whereas in *E. lapidaria* they are only half as long (see Fig. 19).

DESCRIPTION. Body length 1.7 mm, width 1.1 mm, elytral length 1.2 mm ($n = 3$). Two-thirds of head hidden under pronotum. Surface of head shiny, densely punctate. Dots nearly as big as eye facets, with only 0.5 diameter distance between the dots. Clypeus equally long and wide. Pronotum widest at base, from here roundly narrowed. Pronotal front margin concave in a semicircle, base more convex. Anterior edges of pronotum more rounded than posterior ones. Side margins slightly bordered, distinctly rounded. Surface of pronotum densely dotted and coarser than on head (0.5–1 diameter apart), nearly invisibly shagreened. Yellow setation inconspicuous. Scutellum small, brown. Elytra on light specimens all around with narrow brown border as in holotype, widest medially. Base approximately as wide as that of pronotum. Punctuation dense, about as on pronotum. Lateral margins finely and completely bordered. Pubescence yellow, inconspicuous. Ventral side yellowish brown. Prosternum with converging carinae. Epipleurae as wide as hind femora, besides the hind margin of



Figs 11–16

Male genitalia of *Epipleuria hirta*, holotype. 11–13: Tegmen, 11, 12: lateral and dorsal view (a), 13: dorsal view (b); 14: siphon (a); 15: siphonal tip (b); 16: siphonal capsula (b).



Figs 17–23

Male genitalia of *Epipleuria lapidaria*. 17,18: Tegmen of paratype in lateral and dorsal view (a); 19: tegmen of paratype, dorsal view (b); 20–23: holotype. 20, 21: tegmen (a, b); 22, 23: siphon (a) and siphonal tip (b).

metasternum suddenly narrowing, the distal one-third very thin. Femoral line reaching only the middle of first sternite. Aedeagus as in Figs 17–23. Parameres slender, only half as long as median lobe. Siphonal tip bearing a tooth (Fig. 23).

TYPE MATERIAL. Holotype (♂): SOUTH AFRICA, [Western Cape]: Cape-Cederb[er]g, east track, 650 m, 32°23'S 19°24'E, 21.viii.1983, Endrödy & Penrith, E-Y 1958, ground traps 66 days with faeces bait. – (TMSA). Aedeagus mounted on a rectangular piece of cardboard in water-soluble Hoyer's mixture.

Paratypes (1♂, 1♀). [SOUTH AFRICA]: 1♀, same data as holotype but traps with meat bait (TMSA); 1♂, *ibidem* but 800 m, 32°29'S 19°22'E, E-Y 1954, groundtraps with banana bait (ZSM/CF).

ETYMOLOGY. From Latin *lapidarius* (-a, -um), living under stones.

***Epipleuria rugata* spec. nov.**, Figs 24–27

DIAGNOSIS. Dark brown, body short and oval, distinctly brachypterous. Superficially quite similar to *Epipleuria hirta* spec. nov. Body outline and colour nearly the same, but lacking the shaggy setation; punctuation smaller and less dense. *Epipleuria rugata* has an uniformly parabolic femoral line, which is flatter externally in *E. hirta*. In addition, the aedeagus is highly characteristic: median lobe broad, with small notch on its tip (Figs 24, 25), parameres thin, ¾ length of median lobe, base of trapes triangular (Fig. 24).

DESCRIPTION. Body length 2.05 mm, width 1.4 mm ($n = 2$). Head brownish black, clypeus brown, mouthparts and antennae yellow. Surface smooth and shiny, densely and coarsely punctate. Dots only a little smaller than the rounded eye facets. Head visible up to hind margin of eyes. Pubescence long, white and soft. Pronotum widest at base, brown, punctuation similar to that on head in parts they are touching. Soft pubescence directed anteriorly. Side margins finely and completely bordered, as wide as diameter of one dot. Front and hind margins regularly convex and concave, respectively. Anterior edges of pronotum obtuse, posterior angle sharply edged. Scutellum small but distinct. Elytra distinctly convex, of the same brown as the pronotum. Shoulders only a little wider than pronotal base. Side margins slightly wider than the diameter of one dot. Surface smooth and shiny, dots larger than on pronotum but less dense. Pubescence yellow, semi-erect, slightly curved and directed apically. Ventral side brown. Femoral line a regular arch, its apex two-fifths distant from the hind margin of the first sternite. Prosternal carinae

slightly converging, united to form an arc in front. Anterior half of epipleurae slightly narrower than femora. Aedeagus as in Figs 24–27.

TYPE MATERIAL. Holotype (♂): SOUTH AFRICA, [Eastern Cape]: Alexandria, 20 km N [of], 33°33'S 26°23'E, 07.xiii.1987, Endrödy-Younga, E-Y 2556, on flowers. – (TMSA). Aedeagus mounted on a rectangular piece of cardboard in water-soluble Hoyer's mixture.

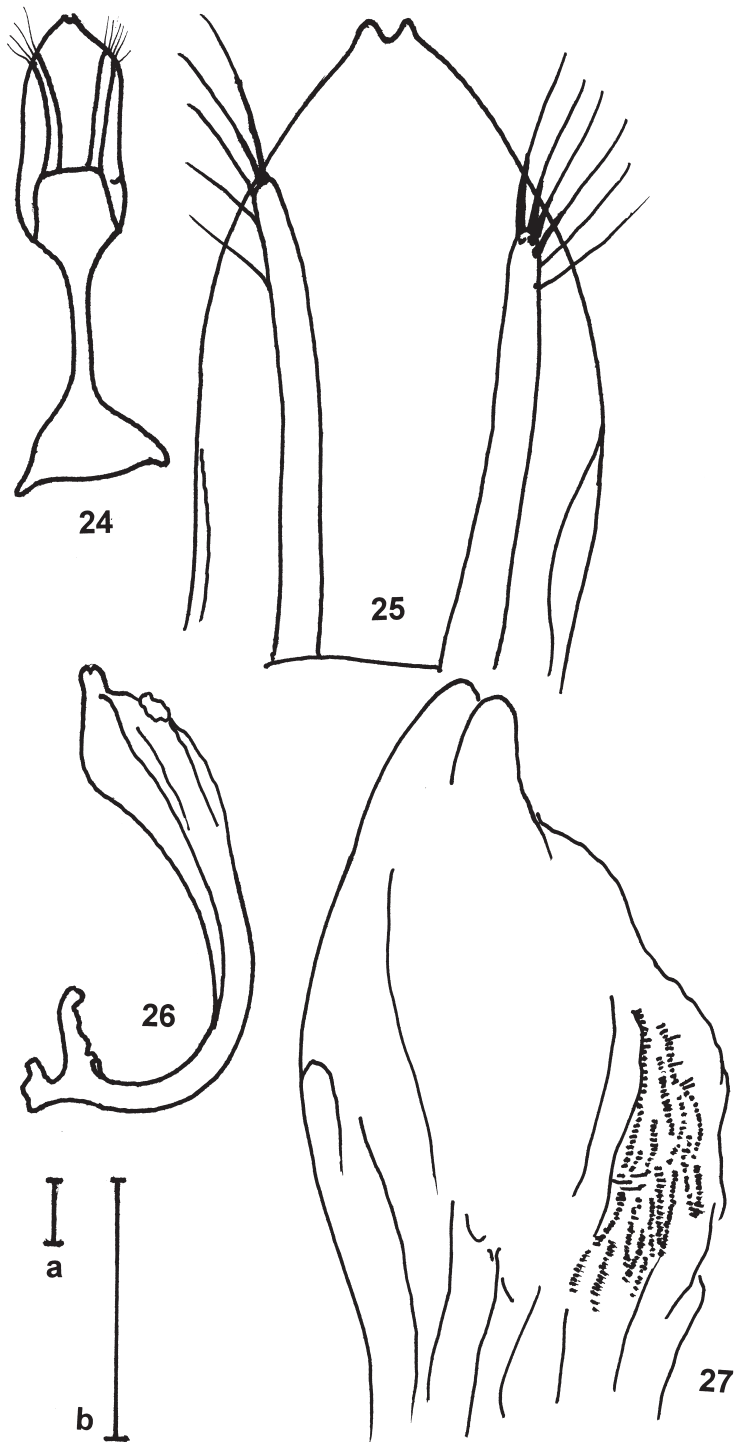
Paratype (1♂). SOUTH AFRICA, [KwaZulu-Natal]: Dukuduku Forest Station, 26°22'S 32°19'E, 02.iv.1974, Endrödy-Younga, E-Y 310, disturb[ed] forest litter. Microscope slide No. 3839 (ZSM/CF).

ETYMOLOGY. From Latin *rugatus* (-a, -um), wrinkled, on account of the small folds on the cuticle.

***Epipleuria ruthmuelleriae* spec. nov.**, Figs 28–32

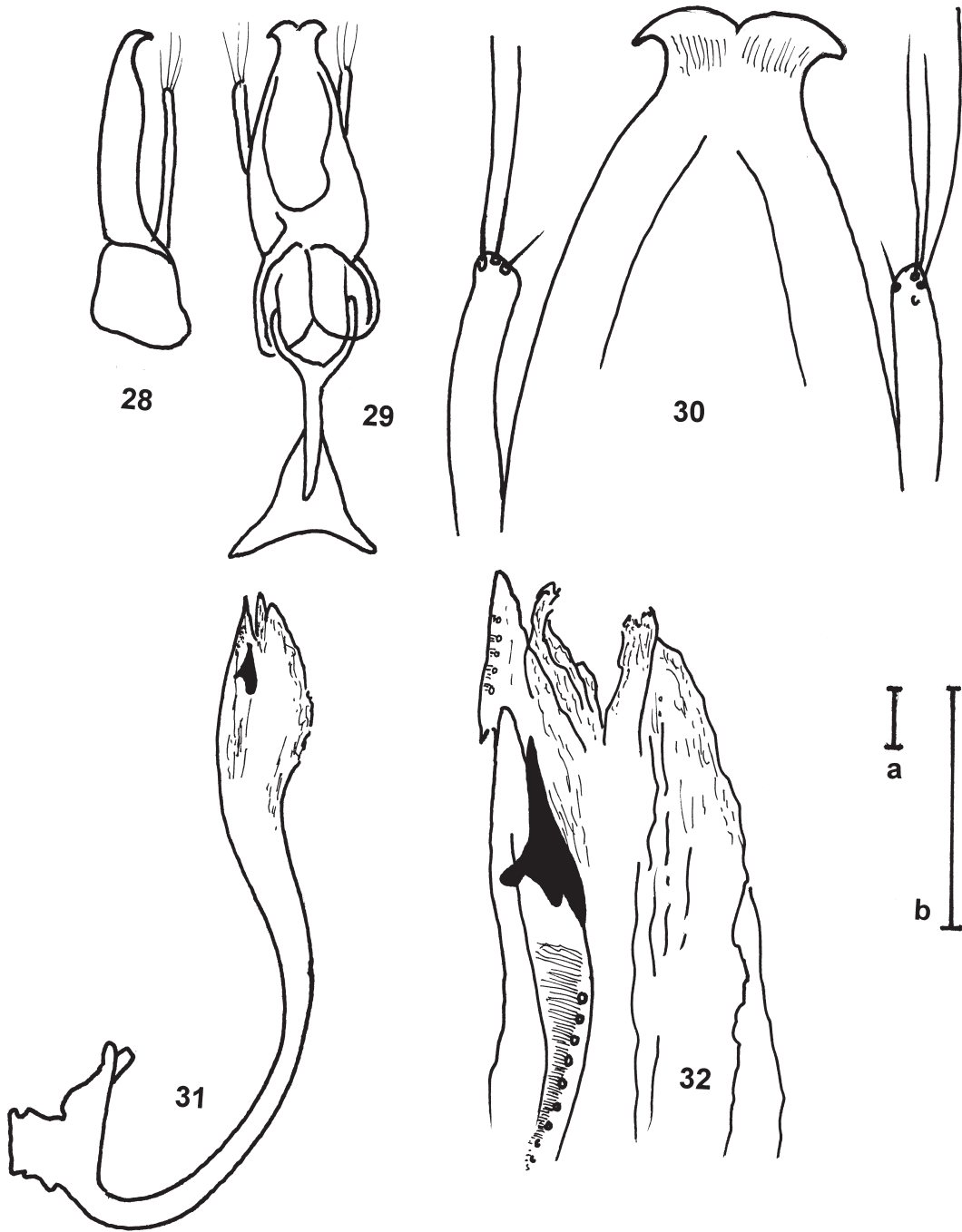
DIAGNOSIS. Elongate-oval, reddish brown, elytra on both sides with broad dark brown border. Deceivably similar to *E. rufosuturalis* Fürsch, 2001, in both body contour and coloration; punctuation a little less pronounced, especially on pronotum. The most reliable diagnostic character is provided by the tip of the median lobe: it is more strongly curved against the parameres than in *E. rufosuturalis*, and it is split (Figs 29, 30).

DESCRIPTION. Body length 2.2–2.3 mm, width 1.2 mm ($n = 2$). Head reddish brown, labrum yellow, surface shiny, densely punctate. Punctures smaller than eye facets, spaces in between equalling 1–1.5 diameters. Eyes protruding semicircularly. Prosternum reddish brown, surface shiny, more densely punctate than on head. Front edges well-rounded, hind edges sharp. Pronotal front slightly concave, posteriorly more distinctly convex. Lateral margins slightly rounded, narrowly and completely bordered. Front and hind margins indistinctly bordered. Pubescence white, directed strictly anteriorly. scutellum minute. Elytra dark brown with broad reddish brown sutural band. Shoulders protruding, broadly rounded. Elytral sides dropping steeply, marginal border horizontal, in width equaling the diameter of a single dot. Pubescence white, stiff, directed perfectly posteriorly (i.e. not at all laterally). Punctuation as on pronotum. Underside reddish brown, distinctly and densely punctate. Antennae, mouthparts and legs yellow. Femoral line parabolic, extending to middle of first sternite. Femoral plate scarcely punctate, remainder of first sternite densely dotted. Apex of median lobe double-tipped (Figs 29, 30). Siphonal tip with sclerotized tooth (Figs 31, 32).



Figs 24–27

Male genitalia of *Epipleuria rugata*, paratype. 24, 25: Tegmen (a, b); 26, 27: siphon (a) and siphonal tip (b).



Figs 28–32

Male genitalia of *Epipleuria ruthmuellerae*, holotype. 28–30: Tegmen in lateral and ventral view (a, b); 31, 32: siphon (a) and siphonal tip (b).

TYPE MATERIAL. Holotype (♂): SOUTH AFRICA, [Western Cape]: Namaqualand, Soutpan dunes, 31°15'S 17°52'E, 01.viii.1989, Endrödy-Younga, E-Y 2623, litter under bushes. – (TMSA). Aedeagus mounted on a rectangular piece of cardboard in water-soluble Hoyer's mixture.

Paratype (1♂): SOUTH AFRICA: same data as holotype (ZSM/CF), microscope slide 3826.

ETYMOLOGY. Dedicated to the collection manager of the Coleoptera section of the Transvaal Museum, Ms Ruth Müller.

Epipleuria saxicola spec. nov., Figs 33–36

DIAGNOSIS. Body dark brown, broadly oval, pointed at the end of elytra. May be confused with *E. lapidaria* spec. nov. above but with its minimum length of 2.1 mm it is consistently longer than the other species, which at most measures 1.7 mm. The body outline of the latter is more regularly oval than in the pointed *E. saxicola*. In *E. lapidaria* the shoulders are more strongly drooping, causing a small notch to be present between pronotum and elytra, which does not border on the pronotum. In addition, the pubescence is more distinctive, the elytral punctation is considerably denser, and the parameres are longer than in *E. lapidaria*.

DESCRIPTION. Body length 2.1–2.3 mm, width 1.4–1.6 mm ($n = 2$). Head dark brown, hidden under prothorax until hind margin of eyes. Punctures much smaller than eye facets, about 15 present on frons between eyes. Pronotum dark brown, anterior margin slightly concave, stronger and more densely punctate than on head, widest on base, from here to the front narrowing in a flat arch. Scutellum minute. Elytra dark brown, solidly fused. Punctuation coarser than on pronotum, spaces in between equalling at most half a dot in diameter. Elytral margins dropping steeply to the narrow border. Elytral base as broad as pronotum, elytra widest medially. Pubescence denser than on pronotum. Brachypterous. Underside: epipleurae in anterior two-fifths as broad as femora, then distinctly narrow. First sternite with coarser punctation than the following, which are noticeably reticulate. Femoral line not reaching centre of first sternite, its inner branch slightly convex, outer branch concave and representing a counterpart as it were. Apex of median lobe curved, parameres thin, nearly as long as basal lobe. Siphonal tip thickened.

TYPE MATERIAL. Holotype (♂): LESOTHO: Sani Pass Valley, 29°39'S 29°12'E, 10.iii.1976, Endrödy-Younga, E-Y 1066, from under stones. – (TMSA). Aedeagus mounted on a rectangular piece

of cardboard in water-soluble Hoyer's mixture.

Paratype (1♀): LESOTHO: Hodson's Peak, 3000 m, 29°37'S 29°17'E, 11.iii.1976, Endrödy-Younga, E-Y 1067, from under stones (ZSM/CF).

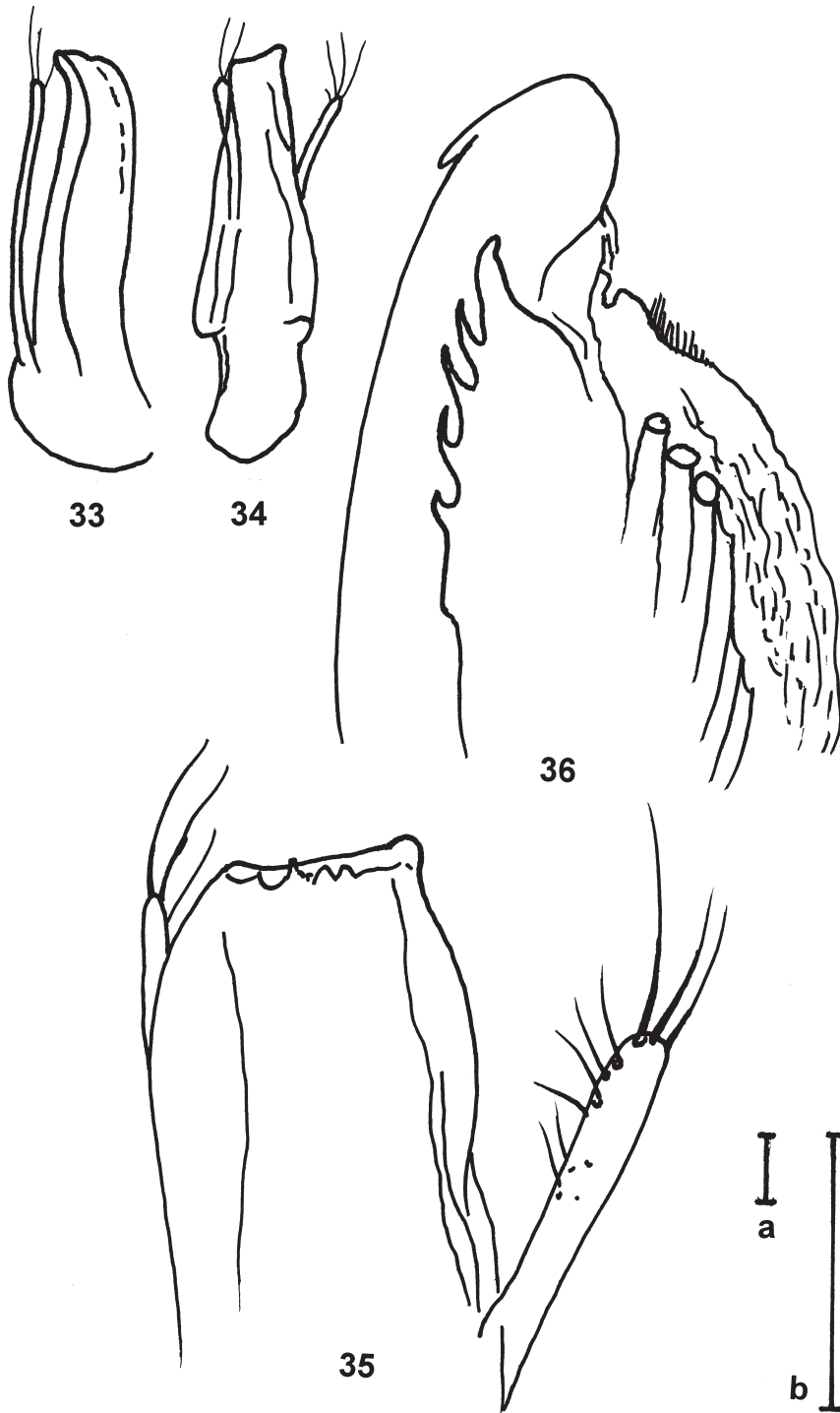
REMARKS. Unfortunately the types are severely damaged. In the holotype the tip of the right elytron and the posterior one-third of the abdomen are missing on the right-hand side; the paratype has the right elytron detached.

ETYMOLOGY. From Latin *saxicola*, an inhabitant of rocks.

Key to species of *Epipleuria*

The key includes 24 species. It is meant for identification only, and mostly suitable only for males because of the use of genital characteristics. In this genus body shape and colour are very similar, therefore dissection of the aedeagus is recommended, as the shape of the median lobe and the siphon, especially its tip, provide important diagnostic characters. As the elytra are fused along the suture, separation of the abdomen is only possible from the ventral side. The abdomen is to be opened from the membranous dorsum. The key provided by Fürsch (2001: 30) is hereby updated.

- 1 (2) Head hidden under pronotum
..... *E. caputabdita* spec. nov.
- 2 (1) Head not completely hidden under pronotum 3
- 3 (4) Body conspicuously elongated 6
- 4 (5) Body dark brown on both sides. Median lobe double-tipped apically (Figs 29, 30)
..... *E. ruthmuelleriae* spec. nov.
- 5 (4) Body uniformly yellowish brown. Median lobe slender apically, upper half curved towards the conspicuously curved parameres *E. longissima* Fürsch, 2001
- 6 (3) Body not conspicuously elongated, oval, more or less rounded 7
- 7 (14) Hemispherical to rounded 8
- 8 (11) Maximum length 1.7 mm 9
- 9 (10) Length 1.7 mm. Basal lobe twice as long as the thin parameres
..... *E. lapidaria* spec. nov.
- 10 (9) Length 1.5 mm (males unknown)
..... *E. punctillum* Fürsch, 2001
- 11 (8) Longer than 1.9 mm 10
- 12 (13) Basal lobe conical in lateral view, tapering towards tip. *E. globosa* Fürsch, 2001
- 13 (12) Basal lobe in lateral view parallel-sided until tip (Fig. 33) *E. saxicola* spec. nov.
- 14 (7) Not conspicuously rounded, rather oval . 19
- 15 (18) Elytral pubescence dishevelled 16
- 16 (15) Basal lobe in dorsal view with notch at its tip (Fig. 7). *E. hirsutula* spec. nov.



Figs 33–36

Male genitalia of *Epipleuria saxicola*, holotype. 33–34: Tegmen in lateral and dorsal view (a); 35: the same in ventral view (b); 36: siphonal tip (b).

- 17 (16) Basal lobe in dorsal view with appendix on its tip (Fig. 13) *E. hirta* spec. nov.
- 18 (15) Elytral pubescence directed posteriorly, not dishevelled 19
- 19 (20) Pronotal punctation very dense, with wrinkled aspect *E. rugata* spec. nov.
- 20 (19) Pronotal punctation distinct, but without wrinkled aspect. 21
- 21 (30) Body regularly oval, approximately 2 mm long. 22
- 22 (23) Very distinctly punctate. Body approximately 1.6 mm long *E. natalensis* Fürsch, 2001
- 23 (22) Punctation moderately deep, or sparse and fine. 24
- 24 (25) Punctation sparse and fine. Pronotum tapering forward, its front edges rounded. Pronotal side margin turning into front margin . . . *E. parcepunctata* Fürsch, 2001
- 25 (24) Punctation slightly more conspicuous but not marked 26
- 26 (25) Femoral line steeply parabolic. Front edges of pronotum distinctive. Maximum length 1.6 mm, ovate and strongly convex. Basal lobe with small depression on top *E. namaquaensis* Fürsch, 2001
- 27 (26) Femoral line flat 28
- 28 (29) Elytral base not forming a straight line, shoulders appearing 'pulled forward'. Siphonal tip split *E. ventricosa* Fürsch, 2001
- 29 (28) Elytral base straight *E. epipleuralis* (Pope, 1957)
- 30 (21) Body broadly or oblong oval, nearly cylindrical or drop-shaped, widest in anterior one-third of elytral length 31
- 31 (32) Elytra widest in anterior one-third. 33
- 32 (31) Elytra oval or nearly cylindrical 39
- 33 (34) Basal lobe in ventral view nearly forming an even-sided triangle. Body outline relatively broad. Elytra with deep dots *E. trianguliloba* Fürsch, 2001
- 34 (33) Basal lobe not as above. Body outline more slender. 35
- 35 (38) Pronotum widest at base, evenly tapering towards head 36
- 36 (37) Pronotal surface finely punctate and reticulate. Basal lobe in lateral view curved towards parameres *E. katbergensis* Fürsch, 2001
- 37 (36) Pronotal surface strongly punctate, smooth and shiny. Basal lobe in lateral view abruptly narrowing in its upper one-third . . . *E. gussmannae* Fürsch, 2001
- 38 (35) Pronotum a little narrower at base, strongly tapering towards head. Elytra more distinctively punctate than in *E. trianguliloba* and

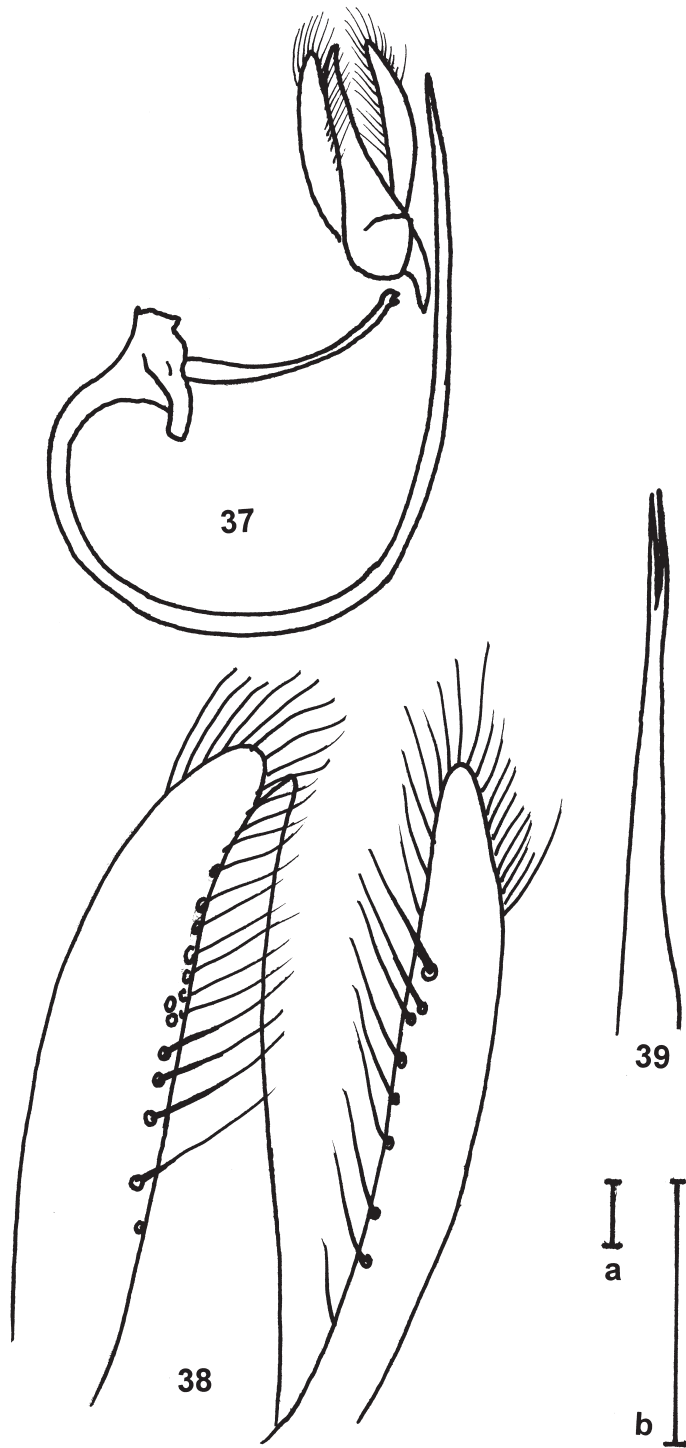
- E. gussmannae*. Curvature of basal lobe resembling that of a vulture's beak *E. inexpectata* Fürsch, 2001
- 39 (32) Body longitudinally oval 42
- 40 (41) Elytra dark brown, suture paler, weakly rounded. *E. rufosuturalis* Fürsch, 2001
- 41 (40) Colouration of body evenly reddish brown *E. parva* Fürsch, 2001
- 42 (39) Body broadly oval or cylindrical 43
- 43 (44) Distribution limited to East Africa *E. mahnerti* Fürsch, 2001
- 44 (43) Distribution limited to southern Africa . . . 45
- 45 (46) 1.5–1.7 mm long. Siphonal tip curved and split. Basal lobe curved, S-shaped *E. popei* Fürsch, 2001
- 46 (45) Longer than 2 mm. Parameres distinctly longer than basal lobe *E. endroedyi* Fürsch, 2001

***Rhyzobius thoracicus* spec. nov., Figs 37–39**

DIAGNOSIS. Recognizable by the brown, longitudinally oval body, pointed at apex of the elytra and the medial width of the pronotum exceeding that of the elytra. The sympatric *Rhyzobius densepunctatus* Pope, 1957 has a similar colouration and aedeagus (Fürsch, 1992, Fig. 8), but its pronotum is widest near the base and the punctation is denser. These two species are the only pure brown *Rhyzobius* species without any black marks in South Africa.

DESCRIPTION. Body length 2.5 mm, width 1.6 mm, elytral length 1.9 mm; pronotal width 1.2 mm ($n = 2$). Brown without black marks. Head shiny, densely and finely punctate. Punctures smaller than eye-facets. Pubescence yellowish white, inconspicuous. Pronotum: frontal margin a flat concave arch, sides rounded, completely and distinctly bordered, widest in middle, hind margin from the scutellum curving outwards to hind margin edges, the latter sharply right-angled. Surface shiny, densely punctate as on head. Pubescence long, directed anteriorly, on the sides directed laterad. Scutellum forming an even-sided triangle, densely punctate. Elytra at base as wide as pronotal base, then widening, reaching their greatest width medially. Punctures dense and distinctly bigger than on pronotum, partly touching. Pubescence inconspicuous as on pronotum, directed posteriorly throughout. Side margin finer than on pronotum. Underside of the same brown as upper side. Femoral line a regular flat arch, extending slightly beyond the centre of first sternite. Median lobe nearly as long as parameres; the latter stout, bearing soft hairs (Fig. 38). Siphonal tip with two spikes (Fig. 39).

TYPE MATERIAL. Holotype (♂): SOUTH AFRICA,



Figs 37–39

Male genitalia of *Rhyzobius thoracicus*, holotype. 37: aedeagus (a); 38: tegmen in ventral view (b); 39: siphonal tip (b).

[*Western Cape*]: Groenlandberg, 1000 m, 34°09'S 19°08'E, 14.xi.1973, Endrödy-Younga, E-Y 249, from under stones. – (TMSA). Aedeagus mounted on a rectangular piece of cardboard in water-soluble Hoyer's mixture.

Paratype (1♂). SOUTH AFRICA, [*Western Cape*]: same data as holotype (Gen. Prp. 3829) (ZSM/CF).

ETYMOLOGY. From Latin *thoracicus* (-a, -um), distinguished by its thorax, here actually referring to the pronotum.

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REFERENCES

- FABRICIUS, I. C., 1787. *Mantissa insectorum*. Hafniae. 348 pp.
- FÜRSCH, H., 1992. Annotated checklist of African *Rhyzobius*-species (Col. Coccinellidae). *Coccinella* 4 (1/2): 61–76. Universität Passau.
- FÜRSCH, H., 2001. Die Gattung *Epipleuria* gen. n. (Coleoptera, Coccinellidae, Coccidulinae). *Mitteilungen der Münchner Entomologischen Gesellschaft* 91: 5–33.
- POPE, R. D., 1957. Coleoptera, Coccinellidae. In: *South African animal life* 4, pp. 292–322. Uppsala.
- STEPHENS, J. F., 1829. Coccinellidae. In: *A systematic catalogue of British Insects: Being an attempt to arrange all the hitherto discovered indigenous insects in accordance with their natural affinities*, pp. 230–240. Baldwin & Cradock, London.
- STEPHENS, J. F., 1831–32. Family LIII. – Coccinellidae, Latreille. In: *Illustrations of British entomology. Mandibulata* 4, pp. 327–398. Baldwin & Cradock, London.