

**Revision of the southern African species of the genus *TyphlOLELEUPIUS* Fagel, 1964
(Coleoptera: Staphylinidae: Paederinae)**

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Abstract. The diagnosis and taxonomical position of the genus *TyphlOLELEUPIUS* Fagel, 1964 are considered. Five species belonging to the genus are recognised as follows: *T. capensis* sp. nov., *T. doryloides* Fagel, 1964, *T. elongatus* sp. nov., *T. minutus* sp. nov., and *T. podocarpus* sp. nov. Characters of all the species were described and illustrated. The distribution of the genus in southern Africa is mapped. A key to southern African species is presented.

INTRODUCTION

The family Staphylinidae is by far the largest family of the order Coleoptera with more than 55 440 species (Grebennikov & Newton 2009) and nearly 3 500 genera grouped into 33 subfamilies. Some of these genera were originally described on very limited material and are in need of critical revision.

The genus *TyphlOLELEUPIUS* Fagel, 1964 was described based on the nominotypical species *T. doryloides* Fagel, 1964. Fagel (1964) placed the genus *TyphlOLELEUPIUS* to the proximity of *Scopaeus* Erichson, 1840 sensu lato and to date this genus has been kept in the subtribe Scopaeina Mulsant et Rey, 1878 (Anonymous 2007). The body with the narrow neck is similar to that of Scopaeina, but the most important autapomorphy of the Scopaeina - a long trichobothrium dorsal of eyes, which anophthalmous species, is located in an excavation or furrow (Frisch & Oromí 2006), is absent in *TyphlOLELEUPIUS*. Tribal characters used for Western-Palaeartic Paederinae by Coiffait (1982) seems insufficient to determine the subtribal status of this genus. For these reasons *TyphlOLELEUPIUS* does not belong to Scopaeina and has to be placed as a taxon incertae sedis in the tribe Paederini.

Many characters of the genus *TyphlOLELEUPIUS* are the same as in *Caecoscopaeus* Coiffait, 1984, known from Tunisia only (neck narrow, eyes absent, anterior tibiae emarginate in proximal half, labrum bilobed), but the aedeagus in *Caecoscopaeus* is different - oval, with groups of several setae laterally (cf. Coiffait 1984: Figs 58 G, H), and the posterior margin of the metafemora in *Caecoscopaeus* has three short, tooth-like setae (Frisch, pers. comm.). *Caecoscopaeus* was removed from Scopaeina by Frisch et al. (2002).

The only species of *TyphlOLELEUPIUS* described till now - *T. doryloides* was found in six female specimens in Ngomi [= also named Ngome] forest (KwaZulu-Natal Province, South Africa). Missing male specimens of *T. doryloides* and a new species were found during author's trip to South Africa in November/December 2006. Additional species were found in

the collection of Ditsong National Museum of Natural History (formerly Transvaal Museum) in Pretoria.

MATERIAL AND METHODS

Dry-mounted specimens were studied under the MBS 10 binocular stereomicroscope. Line drawings were made by using ocular grid of the Zeiss compound microscope Laboval. Measurements were taken with the above mentioned compound or stereomicroscope by using ocular scale. Measurements and indices in this study are based on measurements of all the specimens cited in the text.

Terminology of structures of female genital segment follows Herman (2010) and Frisch (2010), who termed genital sclerites of female “lateral gonocoxal plates” which correspond with the term “valves” used by Uhlig (1989).

The following abbreviations are used to indicate the depository of specimens:

JJRC Jiří Janák, private collection, Rtyň nad Bílinou, Czech Republic;

MRAC Musée Royal de l’Afrique central, Tervuren, Belgium;

TMSA Ditsong National Museum of Natural History (formerly Transvaal Museum), Pretoria, South Africa.

Other abbreviations: n- number of specimens measured, L- length, W- width, M- arithmetic mean, R- ratio, HT- holotype, LT- lectotype, PT- paratype.

TAXONOMY

Typhlolelepius Fagel, 1964

Head elongate, eyes absent or strongly reduced and represented at most by a few ommatidia. Lateral parts of frons above antennal nozzles distinctly elevated, antero-lateral parts of temples with deep lateral longitudinal impression and separated from disc of head by longitudinal furrow (Fig. 4). Gular sutures fused (Fig. 1), postmentum absent, mentum transverse, with long anterior prominences, prementum strongly transverse. Neck very narrow, narrower than quarter the width of head. Labium simple (Fig. 20). Labial palpi 3-segmented, first segment small, second distinctly longer and wider, third very small, needle-shaped, shorter and distinctly narrower than second segment, galea and lacinia with slightly or moderately curved setae, maxillary palpi 4-segmented (Fig. 22), first segment short and bent, second segment longer and wider than next segment, third segment very large, elongate, with curved base, fourth segment very small, nipple-shaped, shorter than first segment. Labrum with two lobes, emarginate in middle (Figs 21, 24). Mandibles short and stout, with short, strong and obtuse teeth in middle. Antennae short, not geniculate, first segment very long, second segment longer than third. Pronotum elongate, prosternum large, prosternal process long and pointed (Fig. 2). Mesosternum with deep hollow and short process, metasternum without process. Elytra short, posterior margin not bordered. First sternite with longitudinal elevation. Legs short, femora wide, anterior tibiae moderately emarginate in proximal half (Fig. 3). Tarsi short, metatarsus with first segment distinctly longer than fifth segment, third and fourth segments bilobed.

Male. Sternite VIII narrowly and deeply emarginate. Aedeagus symmetrical, without parameres (Figs 25, 31, 32, 46).

Female. Genital segment with two elongate lateral gonocoxal plates (Fig. 37). No sclerotised spermatheca, vulva or bursa.

***Typhloteleupius capensis* sp. nov.**

(Figs 5, 8, 25-30)

Type locality. South Africa, Western Cape Province, Outenikwa Pass.

Type material. Holotype (♂): „S. Afr., S. Cape Mt Outenikwa Pass, 33.53S - 22.23E // 4.11.1978, E-Y: 1503, sifted, fynbos, leg. Endrödy-Younga // groundtraps with ferm. banana bait“, (TMSA).

Description (HT): Body length 5.1 mm, forebody length 2.5 mm. Reddish-brown, legs and antennae yellowish-red, tarsi yellow (Fig. 5). Body moderately convex.

Head (Fig. 8) oval, moderately convex, a fifth longer than wide ($R = 0.46/0.38 = 1.20$). Posterior angles rounded, base not emarginate. Lateral furrow delimiting anterior part of temples very short, in dorsal view about as long as half the length of antennomere 1. Eyes reduced to one ommatidium. Frons with distinct oval impressions, disc without any impression. Surface, except for unpunctured midline, moderately sparsely and moderately finely punctured, interstices between punctures about three times as large as diameter of puncture, microsculpture fine and sparse, consisting of longitudinal and oblique mesh and striae. Neck very narrow (head $W/\text{neck } W = 5.23$). Labrum distinctly roundly emarginate, with moderately long internal lobes. Antennae moderately short, segments 2-4 longer than wide, fifth segment slightly transverse ($L/W = 0.91$), segments 6-9 slightly transverse, tenth segment slightly transverse ($L/W = 0.92$).

Pronotum oblong oval, moderately convex, without lateral impressions, about half longer than wide ($R = 0.46/0.31 = 1.55$) and distinctly narrower than head ($R = 0.31/0.38 = 0.81$). Surface moderately sparsely and moderately finely punctured, similar as on head, microsculpture moderately distinct, consisting of longitudinal and oblique mesh and striae. Unpunctured midline reaching from base to basal third, with very fine middle furrow.

Elytra rounded trapezoidal, slightly convex on disc, about as long as wide ($R = 0.32/0.32 = 1.00$), with rounded humeri. Surface uneven, finely and sparsely punctured, without distinct microsculpture.

Abdomen slightly widened to segment VI, very finely and sparsely punctured. Surface with very fine microsculpture consisting of transverse mesh.

Male. Sternites III-VI without modifications, tergite VII as long as sternite VII, sternite VII longitudinally impressed along middle and with emarginate posterior margin, with numerous short and strong modified setae (Fig. 26), tergite VIII subtruncate (Fig. 28), sternite VIII (Fig. 27) narrowly and deeply emarginate in posterior third, tergite X (Fig. 29) and sternite IX (Fig. 30) rounded apically. Aedeagus (Fig. 25) 0.68 mm long, internal sac with four spines in internal sac.

Female unknown.

Differential diagnosis. *T. capensis* sp. nov. differs from other Afrotropical *Typhlroleleupius* by the wide head, lack of the base emargination and the primary and secondary sexual characters.

Etymology. The species is named after the Western Cape Province, where the type locality is situated.

Distribution. The new species is known only from Outenikwa Pass in South Africa (Western Cape Province) and may be endemic to the Outenikwa-mountains (Fig. 56).

Bionomics. The holotype was found in ground traps in fynbos [fynbos is the natural shrubland or heathland vegetation occurring in a small belt of southern parts of South Africa].

Typhlroleleupius doryloides Fagel, 1964

(Figs 1-4, 6, 7, 9, 10, 18-23, 31-42)

Type locality. South Africa, KwaZulu-Natal Province, Ngomi [Ngome] forest.

Type material. Holotype (♀): "Natal : Ngongoma distr., Ngomi Forest, dans l'humus (ZA. 37), N. Leleup XI.1960 // HOLOTYPUS *Typhlroleleupius* gen. nov., *doryloides* sp. nov., G. Fagel // G. Fagel det. 1964, *Typhlroleleupius*, *doryloides*, n. gen. n. sp. // HOLOTYPUS", (TMSA, examined). Paratypes: (4 ♀♀): same data as holotype, but „PARATYPUS *Typhlroleleupius* gen. nov., *doryloides* sp. nov. , G. Fagel // G. Fagel det. 1964, *Typhlroleleupius*, *doryloides*, n. gen. n. sp. // PARATYPUS", (TMSA, MRAC, examined).

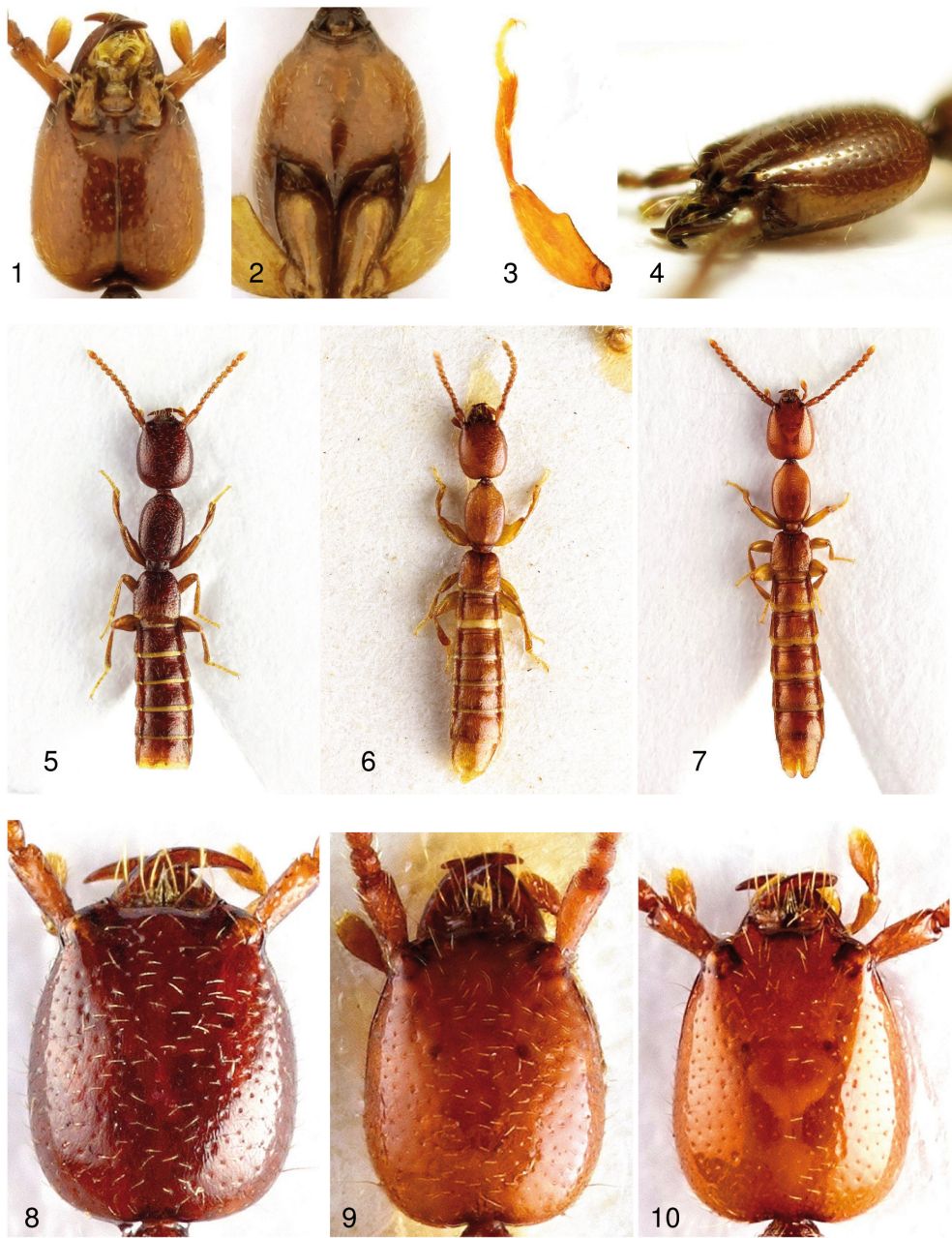
Additional material. „South Africa, KwaZulu-Natal, Ngomi Forest, 27°51'S, 31°23'E, 24-27.xi.2006, J. Janák leg. // forest litter on tree foot, sifting“, 10 ♂♂, 3 ♀♀, (JJRC, TMSA).

Redescription (n = 18): Body length 3.9-5.5 mm (M = 5.0 mm, HT = 4.6 mm), forebody length 2.1-2.5 mm (M = 2.1 mm, HT = 2.2 mm). Light reddish-brown, legs and antennae yellowish-red, tarsi yellow (Figs. 6, 7). Body moderately convex.

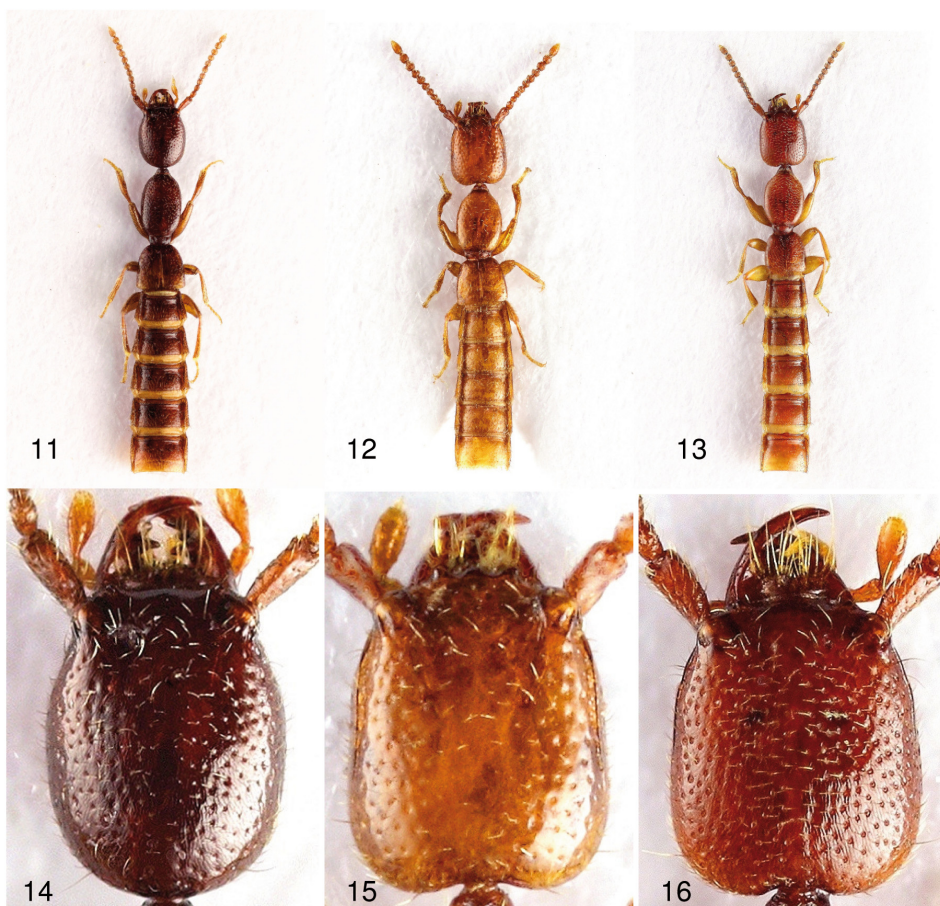
Head (Figs. 9, 10) oval, moderately convex, a quarter longer than wide (R = 1.23-1.32, M = 1.27, HT = 0.73/0.60 = 1.23). Posterior angles rounded, base slightly emarginate. Lateral furrow delimiting anterior part of temples moderately long, reaching slightly before middle of length of head (Fig. 4). Eyes absent, no ommatidia visible. Frons with shallow impressions, disc without any impressions. Surface except for unpunctured midline moderately sparsely and very finely punctured, interstices between punctures about four or five times as large as diameter of puncture, shining, without microsculpture. Neck very narrow (n = 2, head W/neck W = 6.1-6.3). Labrum distinctly triangularly emarginate in middle, with relatively short internal lobes (Fig. 21). Antennae moderately short, segments 2-4 longer than wide, fifth segment slightly transverse (L/W 0.82-0.98, M = 0.92, HT = 0.82), segments 6-9 slightly transverse, tenth segment mostly notably, rarely slightly transverse (L/W = 0.74-0.95, M = 0.84, HT = 0.74).

Pronotum oval, slightly convex, without lateral impressions, about a half longer than wide (R 1.52-1.60, M = 1.55, HT = 0.76/0.49 = 1.55) and distinctly narrower than head (R = 0.82-0.88, M = 0.84, HT = 0.49/0.60 = 0.83). Surface moderately sparsely and very finely punctured, slightly less sparsely and as finely as on head, shining, without microsculpture. Unpunctured midline with very fine middle furrow reaching from base towards middle.

Elytra rounded trapezoidal, flat, about as long as wide (R = 0.89-0.98, M = 0.94, HT = 0.49/0.52 = 0.95), with oblique humeri. Surface uneven, moderately sparsely and finely punctured, without distinct microsculpture.



Figs 1-10. 1-4, 6, 7, 9, 10- *Typhlolelepius doryloides* Fagel (1-4, 7, 10 male from Ngomi; 6, 9 holotype female). 5, 8- *Typhlolelepius capensis* sp. nov. (holotype male). 1- head ventrally; 2- pronotum ventrally; 3- anterior leg ventrally; 4- head laterally; 5-7: habitus, 8-10: head.



Figs 11-16. 11, 14- *Typhloleleupius elongatus* sp. nov. (holotype female). 12, 15- *Typhloleleupius minutus* sp. nov. (holotype male). 13, 16- *Typhloleleupius podocarpus* sp. nov. (holotype female). 11-13: habitus; 14-16: head.

Abdomen slightly widened to segment VII, very finely and sparsely punctured. Surface with very fine microsculpture consisting of slightly to moderately transverse mesh.

Male. Sternites III-IV without modifications, sternites V-VI slightly impressed in posterior third, tergite VII as long as sternite VII, sternite VII with deep oval impression in posterior half, with posterior margin not emarginate and with numerous short and moderately thick modified setae (Fig. 38), tergite VIII subtruncate (Fig. 40), sternite VIII (Fig. 39) narrowly and deeply emarginate in posterior two fifths, tergite X (Fig. 41) emarginate posterolaterally, sternite IX (Fig. 42) apically subtruncate with small prominence in the middle. Aedeagus (Figs 31-33) 0.74-0.85 mm long ($n = 10$, $M = 0,78$), internal sac with one spine, hardly visible among small thorns and elongate scales.

Female. Posterior margin of tergite VIII slightly rounded medially (Fig. 35), sternite VIII long, pointed apically (Fig. 34), lobes of tergite IX distinctly bent dorsally, tergite X slightly

emarginate posterolaterally (Fig. 36), pointed apically, lateral gonocoxal plates narrowed apically (Fig. 37).

Differential diagnosis. *T. doryloides* differs from others Afrotropical *Typhloleleupius* by the shining foreparts lacking microsculpture, very finely punctured head and pronotum, flattened elytra and the primary and secondary sexual characters.

Distribution. The species is known only from Ngomi [= Ngome] forest in KwaZulu-Natal Province and may be endemic to this area (Fig. 56).

Bionomics. All the specimens were collected by sifting in indigenous forest. Specimens found by the author were collected by sifting forest litter among roots of trees near a brook at a depth of 10 to 30 cm (Figs 18, 19).

***Typhloleleupius elongatus* sp. nov.**
(Figs. 11, 14, 43-45)

Type locality. South Africa, Western Cape Province, Swartberge.

Type material. Holotype (♀): „S. Afr., Swartberge, Blesberg-E, 2000m, 23.25S - 22.41E // 16.12.1987, E-Y1533, groundtraps, 76 days, leg. Endrödy-Younga // groundtraps with ferm. banana bait“, (TMSA). Paratype (♀): same data as holotype, but „groundtraps with meat bait“, (JJRC).

Description (n = 2): Body length 5.4-5.6 mm (HT = 5.4 mm), forebody length 2.5-2.6 mm (HT = 2.5 mm). Reddish-brown, legs and antennae yellowish-red, tarsi yellow (Fig. 11). Body moderately convex.

Head (Fig. 14) oval, moderately convex, much longer than wide (R HT = 0.45/0.35 = 1.29, PT = 1.31). Posterior angles completely rounded, base not emarginate. Lateral furrow, delimiting anterior part of temples very short, in dorsal view less distinct, ending distinctly before head midlength. Surface moderately densely and moderately coarsely punctured, interstices between punctures about twice as large as diameter of puncture, microsculpture moderately distinct, consisting of longitudinal and oblique mesh and striae. Neck very narrow (head W/neck W HT = 5.17, PT = 5.10). Labrum distinctly roundly emarginate, with moderately long internal lobes. Antennae moderately short, segments 2-4 longer than wide, fifth segment about as long as wide (L/W HT = 1.00, PT 0.96), segments 6-10 transverse, tenth segment distinctly wider than long (L/W HT 0.73, PT 0.66).

Pronotum oval, moderately convex, about half longer than wide (R HT = 0.46/0.30 = 1.55, PT 1.53) and distinctly narrower than head (R HT = 0.30/0.35 = 0.86, PT 0.88). Surface densely and moderately coarsely punctured, similarly as on head, microsculpture moderately distinct, consisting of longitudinal and oblique mesh and striae. Unpunctured midline with very fine middle furrow, reaching from base to anterior third.

Elytra rounded trapezoidal, slightly convex on disc, a little longer than wide (R HT = 0.34/0.32 = 1.03, PT 1.03), with broadly rounded humeri. Surface uneven, finely and sparsely punctured, without distinct microsculpture.

Abdomen slightly widened to segment VII, finely and sparsely punctured.

Male. Unknown.

Female. Tergite VIII broadly and shallowly rounded apically (Fig. 44), sternite VIII wide and short, pointed apically (Fig. 43), tergite X pointed apically, lateral gonocoxal plates rounded apically (Fig. 45).

Differential diagnosis. *T. elongatus* sp. nov. differs from others Afrotropical *Typhloleleupius* by its slender body, elongate oval head and pronotum and the primary and secondary sexual characters.

Etymology. The species is named after its elongate head and pronotum.

Distribution. The new species is known only from Swartberge Mountains in South Africa (Western Cape Province) and may be endemic to these mountains (Fig. 56).

Bionomics. Both type specimens were found in ground traps at 2000 m a.s.l.

***Typhloleleupius minutus* sp. nov.**

(Figs 12, 15, 46-52)

Type locality. Lesotho, Sani Pass.

Type material. Holotype (♂): „S. Afr., E. Lesotho, Sani Pass Valley, 29.38S - 29.12E // 10.3.1976, E-Y: 1066, from under stones, leg. Endrödy-Younga”, (TMSA).

Description (HT): Body length 3.4 mm, forebody length 1.6 mm. Light reddish-yellow, tarsi yellow (Fig. 12). Body slightly convex.

Head (Fig. 15) rounded rectangular, slightly convex, a quarter longer than wide ($R = 0.32/0.26 = 1.22$), slightly widened posteriorly. Posterior angles rounded, base distinctly emarginate. Lateral furrow delimiting anterior part of temples very long, reaching to basal third of head. Eyes completely absent, no ommatidia visible. Frons with distinct impressions, disc with shallow impressions. Surface, except for unpunctured midline, moderately sparsely and moderately coarsely punctured, interstices between punctures about twice to thrice as large as diameter of puncture, without microsculpture. Neck narrow (head W/neck W = 5.37). Labrum distinctly roundly emarginate, with moderately long submedial lobes. Antennae very short, segment 2 longer than wide, segments 3-9 transverse, fifth segment distinctly transverse ($L/W = 0.77$), tenth segment slightly transverse ($L/W = 0.86$).

Pronotum oval, maximal width at middle, disc slightly convex, with shallow lateral impressions in basal half, about a third longer than wide ($R = 0.30/0.21 = 1.39$) and distinctly narrower than head ($R = 0.21/0.26 = 0.81$). Surface sparsely and moderately finely punctured, punctures distinctly finer than those on head, without microsculpture. Unpunctured, relatively wide midline with extremely fine furrow reaching from base to middle.

Elytra rounded trapezoidal, flattened, slightly transverse ($R = 0.21/0.24 = 0.90$), with rounded humeri, without any impression. Surface uneven, very finely and sparsely punctured, without distinct microsculpture.

Abdomen slightly widened to segment VII, very finely and very sparsely punctured, very shining, with only hardly visible vestigial microsculpture.

Male. Sternites III-VI without modifications, sternite VII longitudinally impressed along middle and with posterior margin with two narrow emarginations (Fig. 47), tergite VIII

subtruncate (Fig. 49), sternite VIII (Fig. 48) narrowly and deeply emarginate in posterior half, tergite X obtusely pointed (Fig. 50) and sternite IX (Fig. 52) truncate apically with some fine teeth at posterior margin. Aedeagus (Fig. 46) 0.55 mm long, internal sac without dents.

Female unknown.

Differential diagnosis. *T. minutus* sp. nov. differs from others Afrotropical *Typhloleleupius* by its small body size, very long lateral furrow on the head and flattened, shiny body.

Etymology. The species is named after its small body in comparison to other species from South Africa.

Distribution. The new species is known only from Sani Pass valley in Lesotho and may be endemic to this part of Drakensberg Mountains (Fig. 56).

Bionomics. The holotype was found under stones.

Typhloleleupius podocarpus sp. nov.

(Figs 13, 16, 17, 53-55)

Type locality. South Africa, Eastern Cape Province, Hogsback.

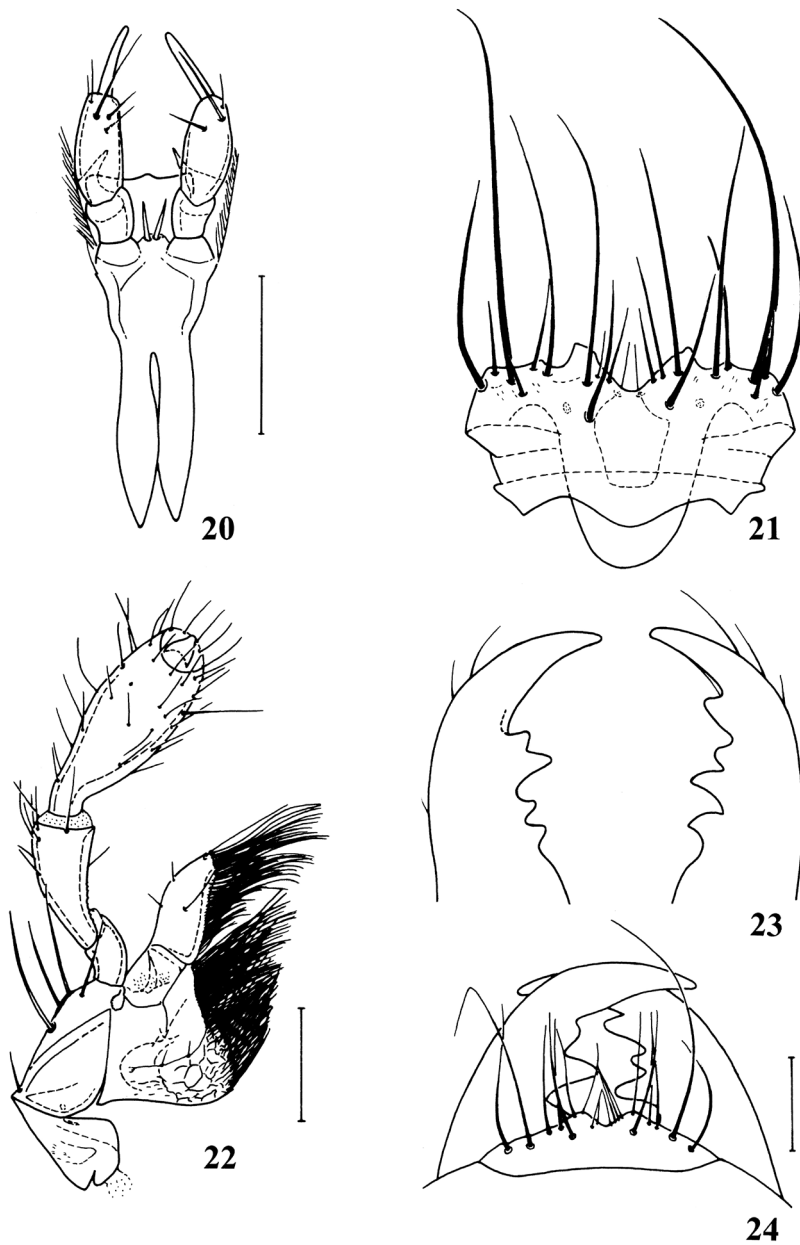
Type material. Holotype (♀): „South Africa, Eastern Cape, Hogsback, 970-1300 m, 32°35'S 26°56-57'E , 5-7.xii. 2006, J. Janák leg. // forest litter at tree foot, sifting“, (TMSA).



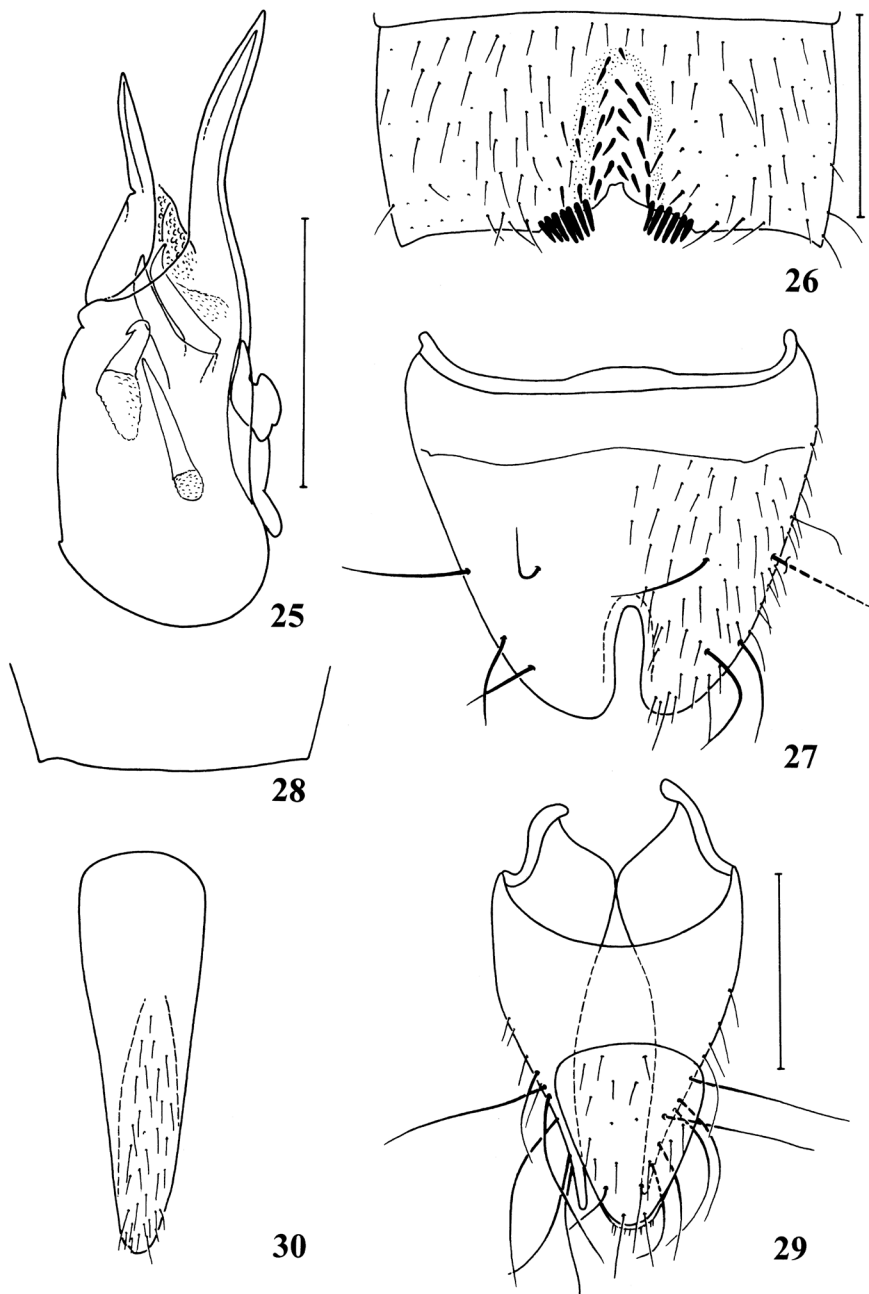
Fig. 17. Forest near Hogsback, the type locality of *Typhloleleupius podocarpus* sp. nov. Arrow indicates the place at which the holotype specimen was collected.



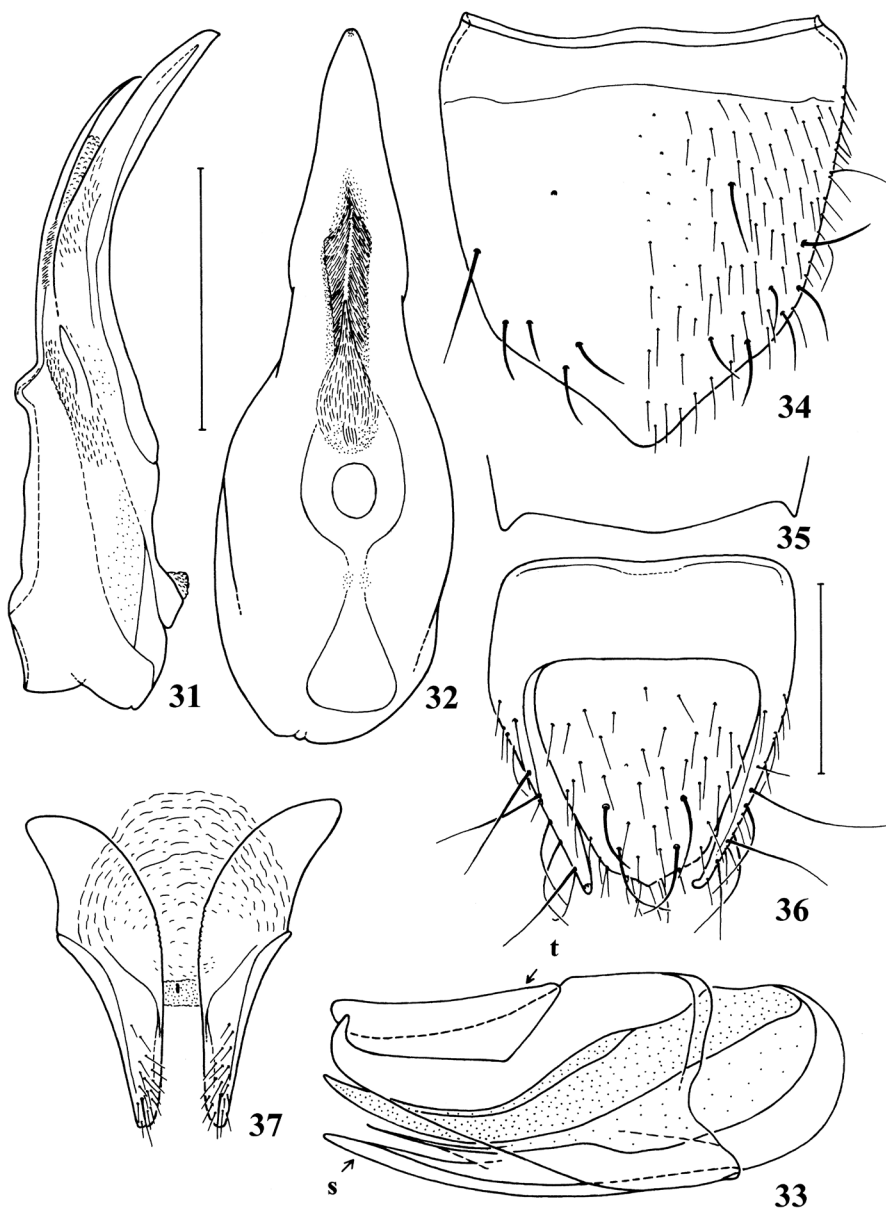
Fig. 18-19. Ngomi forest. 18- Arrow indicates the locality, at which the specimens of *Typhloleleupius doryloides* were collected. 19- Arrow indicates the place, at which the specimens of *T. doryloides* were collected.



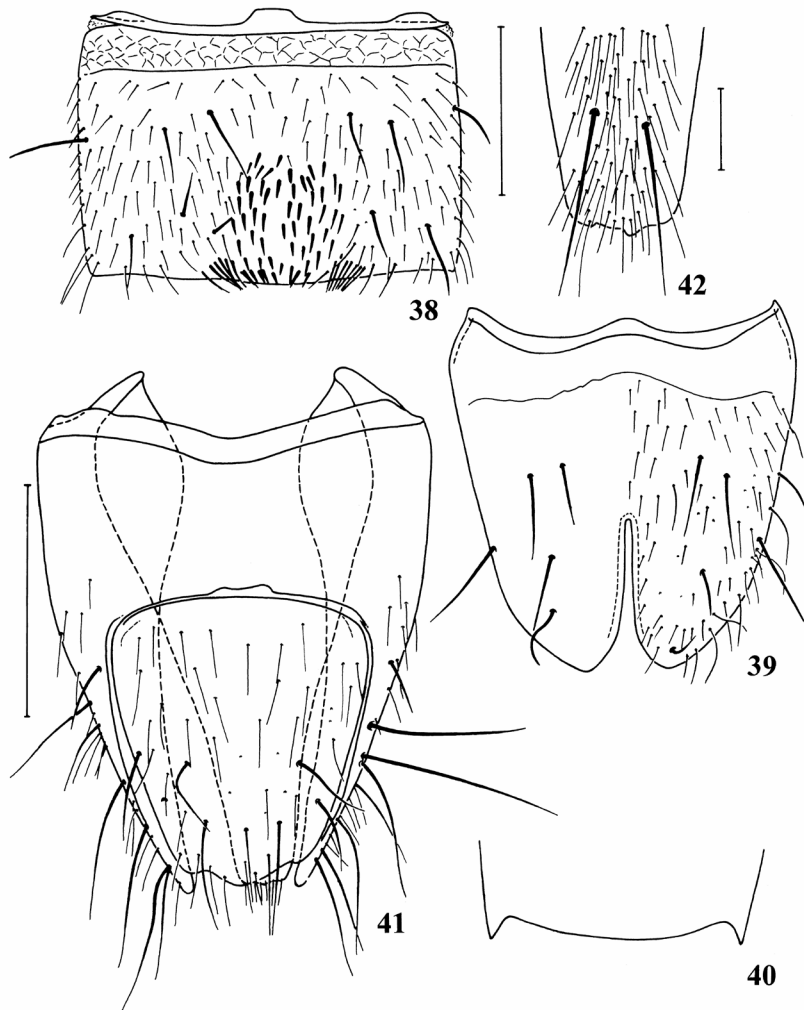
Figs 20-24: *Typhloleleupius doryloides* Fagel (male from Ngomi). 24- *Typhloleleupius elongatus* sp. nov. (holotype female). 20- labium; 21- labrum; 22- maxilla; 23- mandibles; 24- labrum and mandibles. Scale bars: 0.1 mm (20 = 21, 24 = 23);



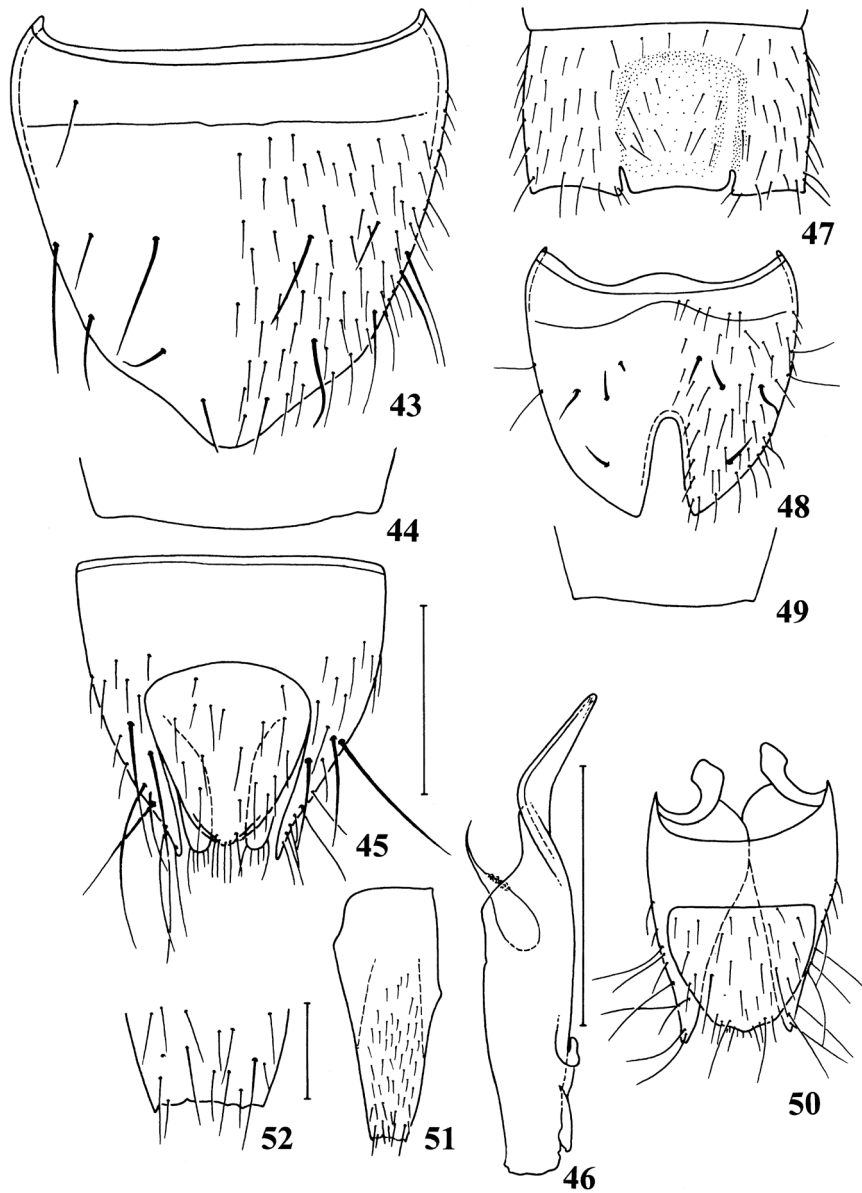
Figs: 25-30: *Typhloleleupius capensis* sp. nov. (holotype male). 25- aedeagus, laterally; 26- male sternite VII; 27- male sternite VIII; 28- posterior margin of male tergite VIII; 29- male tergite IX/ X; 30- male sternite IX. Scale bars: 0.3 mm (29 = 27 = 28 = 30).



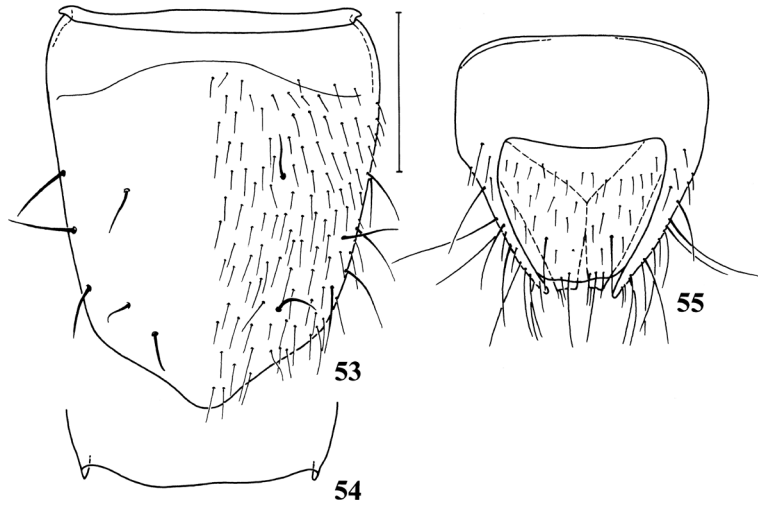
Figs 31-37: *Typhloleleupius doryloides* Fagel (male/female from Ngomi). 31- aedeagus, laterally; 32- aedeagus ventrally; 33- aedeagus with sternite IX (= s) and tergite IX/X (= t); 34- female sternite VIII; 35- posterior margin of female tergite VIII; 36- female tergite IX/X; 37- female lateral gonocoxal plates. Scale bar: 0.3 mm (31 = 32, 36 = 33 = 34 = 35 = 37);



Figs 38-42: *Typhloleleupius doryloides* Fagel (male from Ngomi). 38- male sternite VII; 39- male sternite VIII; 40- posterior margin of male tergite VIII; 41- male tergite IX/X; 42- apical part of sternite IX. Scale bars: 0.05 mm (42) and 0.3 mm (38 = 39 = 40).



Figs 43-52. 43-45- *Typhloleleupius elongatus* sp. nov. (female holotype). 46-52- *Typhloleleupius minutus* sp. nov. (male holotype). 43- female sternite VIII; 44- posterior margin of female tergite VIII; 45- female genital segment; 46- aedeagus lateral; 47- male sternite VII; 48- male sternite VIII; 49- posterior margin of male tergite VIII; 50- male tergite IX/X; 51- male sternite IX; 52- posterior margin of sternite IX. Scale bars: 0.05 mm (52) and 0.3 mm (45 = 43 = 44 = 47 = 48 = 49 = 50 = 51).



Figs 53-55. *Typhloleleupius podocarpus* sp. nov. (female holotype). 53- female sternite VIII; 54- posterior margin of female tergite VIII; 55- female genital segment. Scale bar: 0.3 mm.



Fig. 56. Distribution of *Typhloleleupius* in southern Africa. 1- *T. doryloides* Fagel; 2- *T. elongatus* sp. nov.; 3- *T. capensis* sp. nov.; 4- *T. podocarpus* sp. nov.; 5- *T. minutus* sp. nov.

Description (HT): Body length 5.9 mm, forebody length 2.5 mm. Light reddish-brown, legs yellowish (Fig. 8). Body flattened.

Head (Fig. 13) rounded subrectangular, flattened, a fifth longer than wide ($R = 0.45/0.38 = 1.17$), slightly widened posteriad. Posterior angles completely rounded, base distinctly emarginate. Lateral furrow delimiting anterior part of temples long, reaching to head midlength. Eyes completely absent, no ommatidia visible. Frons with distinct impressions, disc with large impressions reaching to head midlength. Surface, except for unpunctured midline, moderately densely and moderately coarsely punctured, interstices between punctures about twice as large as diameter of puncture, microsculpture very coarse, consisting of longitudinal and oblique mesh and striae. Neck very narrow (head W/neck W = 5.25). Labrum distinctly roundly emarginate, with moderately long internal lobes. Antennae moderately short, segments 2-4 longer than wide, fifth segment slightly transverse (L/W 0.86), segments 6-9 slightly transverse, tenth segment slightly transverse (L/W 0.89).

Pronotum oval oblong, maximum width in anterior third, disc slightly convex, with shallow lateral impressions in middle, about a third longer than wide ($R = 0.45/0.32 = 1.39$) and distinctly narrower than head ($R = 0.32/0.38 = 0.84$). Surface sparsely and moderately finely punctured, punctures distinctly finer than those on head, microsculpture fine, finer than on head, consisting of irregular mesh. Unpunctured midline with very fine furrow, reaching from base to basal third.

Elytra rounded trapezoidal, very slightly convex on disc, about as long as wide ($R = 0.32/0.34 = 0.95$), with rounded humeri and with moderately deep longitudinal impression in middle. Surface uneven, finely and sparsely punctured, without distinct microsculpture.

Abdomen slightly widened to segment VII, finely and sparsely punctured and with fine microsculpture consisting of transverse mesh.

Male. Unknown.

Female. Tergite VIII subtruncate apically (Fig. 54), sternite VIII moderately wide, shortly pointed apically (Fig. 53), tergite X largely rounded, lateral gonocoxal plates of genital segment slightly emarginate apically (Fig. 55).

Differential diagnosis. *T. podocarpus* sp. nov. differs from other Afrotropical *Typhloleleupius* by its flattened body and longitudinal impressions of the head, pronotum and elytra.

Etymology. The species is named after the yellow tree (*Podocarpus*), because the holotype was found in the humus among the roots of this tree.

Distribution. The new species is known only from the forest near Hogsback in South Africa (Eastern Cape Province) and may be endemic to this region (Fig. 56).

Bionomics. The holotype was found by sifting humus (up to 40 cm deep) among fine roots around a high *Podocarpus* tree in an elevation of about 1000 m a.s.l. (Fig. 17).

KEY TO SOUTHERN AFRICAN SPECIES

1. A distinctly smaller species, total length about 3.4 mm. Basal third of head slightly convex (Fig. 15). Lesotho: Sani Pass Valley. *T. minutus* sp. nov.
- Larger species, total length at least 3.9 mm. Basal third of head distinctly convex. 2

2. Head and pronotum very finely and sparsely punctate (Figs. 6, 7, 9, 10), transverse distance between punctures on head and pronotum on average 4-5 times as large as diameter of puncture. South Africa: KwaZulu-Natal Province: Ngomi [Ngome] forest..... *T. doryloides* Fagel, 1964
- Head and pronotum coarsely and densely punctured, transverse distance between punctures on head and pronotum on average 2-3 times as large as diameter of puncture. 3
3. Base of head distinctly emarginate medially, posterior angles distinct, slightly rounded, anterolateral furrows on each side of head deep and long (Fig. 16), head with coarse microsculpture consisting mostly of longitudinal striae. South Africa: Eastern Cape Province: Hogsback. *T. podocarpus* sp. nov.
- Base of head straight, not emarginate medially, posterior angles less distinct, distinctly rounded, anterolateral furrows on each side of head less distinct and short, head with fine or moderately distinct microsculpture consisting of longitudinal and oblique striae and mesh. 4
4. Head and pronotum wider and shorter, head distinctly wider than elytra (Figs. 5, 8). South Africa: Western Cape Province: Outenikwa Pass. *T. capensis* sp. nov.
- Head and pronotum very narrow and long, head only slightly wider than elytra (Figs. 11, 14). South Africa: Western Cape Province: Swartberge. *T. elongatus* sp. nov.

SUMMARY

The number of hitherto known species of the genus *Typhloleleupius* is five. Four species occur in South Africa and one in Lesotho (Fig. 56). The genus is also represented in Madagascar. Several undescribed species were found during author's six trips to Madagascar between 1993 and 2004 (Janák, in prep.).

All the species are endemic and endogean and can be mainly collected by sifting. The most effective method used by the author was sifting the humus (up to depth of 40 cm) among fine roots around high trees in forest (Figs 17-19) and subsequent extraction in Winkler-Moczarski selectors (Besuchet et al. 1987). Many more species are to be expected.

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REFERENCES

- ANONYMOUS 2007: *Tree of Life Web Project*. 2007. Paederini Fleming 1821. Version 26 April 2007 (temporary). <http://tolweb.org/Paederini/61513/2007.04.26> in The Tree of Life Web Project, <http://tolweb.org/> (accessed 18 November 2012).
- BUSUCHET C., BURCKHARDT D., H. & LÖBL I. 1987: The "Winkler/Moczarski" selector as an efficient extractor for fungus and litter Coleoptera. *The Coleopterists Bulletin* 41: 392-394.
- COIFFAIT H. 1982: Coléoptères staphylinides de la région paléarctique occidentale IV. Sous famille Paederinae, Tribu Paederini 1 (Paederi, Lathrobii). *Nouvelle Revue d'Entomologie, Supplément 7*: 1-440.
- COIFFAIT H. 1984: Coléoptères staphylinides de la région paléarctique occidentale V. Sous famille Paederinae, Tribu Paederini 2. Sous famille Euaesthetinae. *Nouvelle Revue d'Entomologie, Supplément 8*: 1-424.
- FAGEL G. 1964: Un remarquable Paederinae aveugle. *Revue de Zoologie et Botanique Africaine* 69 (3-4): 389-392.
- FRISCH J. 2010: On the taxonomy and biogeography of West Palaearctic Scopaeina Mulsant & Rey (Staphylinidae, Paederinae) with emphasis on the Middle East. *Deutsche Entomologische Zeitschrift* 57 (2): 159-202.

- FRISCH J., BURCKHARDT D. & WOLTERS V. 2002: Rove beetles of the subtribe Scopaeina Coiffait (Coleoptera: Staphylinidae) in the West Palaearctic: Phylogeny, biogeography and species catalogue. *Organisms, Diversity & Evolution*, Jena 2 (1): 27-53.
- FRISCH J. & OROMÍ P. 2006: New species of subterranean *Micranops* Cameron from the Canary Islands. *Deutsche Entomologische Zeitschrift* 53: 23-37.
- GREBENNIKOV V. V. & NEWTON A. F. 2009: Good-bye Scydmaenidae, or why the ant-like stone beetles should become Staphylinidae sensu latissimo (Coleoptera). *European Journal of Entomology* 106: 275-301.
- HERMAN L. 2010: Generic revision of the Procirrina (Coleoptera: Staphylinidae: Paederinae: Pinophilini). *Bulletin of the American Museum of Natural History* 347: 1-78.
- UHLIG M. 1989: Zur Morphologie der weiblichen Terminalia einiger Staphylinidenarten (Coleoptera). *Verhandlungen IX. SIEEC Gotha* 1986: 227-237.

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