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Three new Afrotropical Oedemeridae (Coleoptera: Tenebrionoidea)

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Abstract. Three new species of Oedemeridae from Afrotropical Region are described: *Ditylomorphus blairi* sp. n. (Botswana, Malawi, South Africa, Zimbabwe) that is closely related to *Ditylomorphus inconstans* (Blair, 1926), from which it differs mainly by its largely brown elytron, shorter parameres and slender aedeagus. *Ditylomorphula capitata* sp. n. (Cape Province, South Africa), very similar to *Ditylomorphula albalatei* Vázquez, 1996, from which it differs externally by its bigger, flavous head. *Asclerosibutia secularis* sp. n. (Tanzania), related to *A. lineaticollis* Pic, 1914, from which can be separated by its evenly dark pronotum and quite different aedeagus.

INTRODUCTION

We have identified three new species among the latest specimens available for study, which will be described in this paper. The descriptions must be regarded as a supplement to former revisions on the Afrotropical Oedemeridae (Vázquez 1996 and 2004).

MATERIAL AND METHODS

The methods follow Vázquez (1996). The following structural characters were measured (see Vázquez, 1996, figs. 7, 8):

EYW eye width
EL elytron length
EW elytron width
FWA width of frons between antennal pits (interantennal area)
FWE width of frons between eyes (interocular area)
HL head length
HW head width
PL pronotum length
PW pronotum width

The specimens studied are housed in the following collections:

Department of Entomology, University of Pretoria (DEUP)
Hungarian Natural History Museum (HNHM)
National Collection of Insect, Pretoria (SANC)
National Museum, Praha (NMPC)
Natural History Museum, Bulawayo (NHMB)
Transvaal Museum (TM)
Xavier A. Vázquez (XV)
Zoologisches Museum der Humbolt-Universität zu Berlin (ZMB)

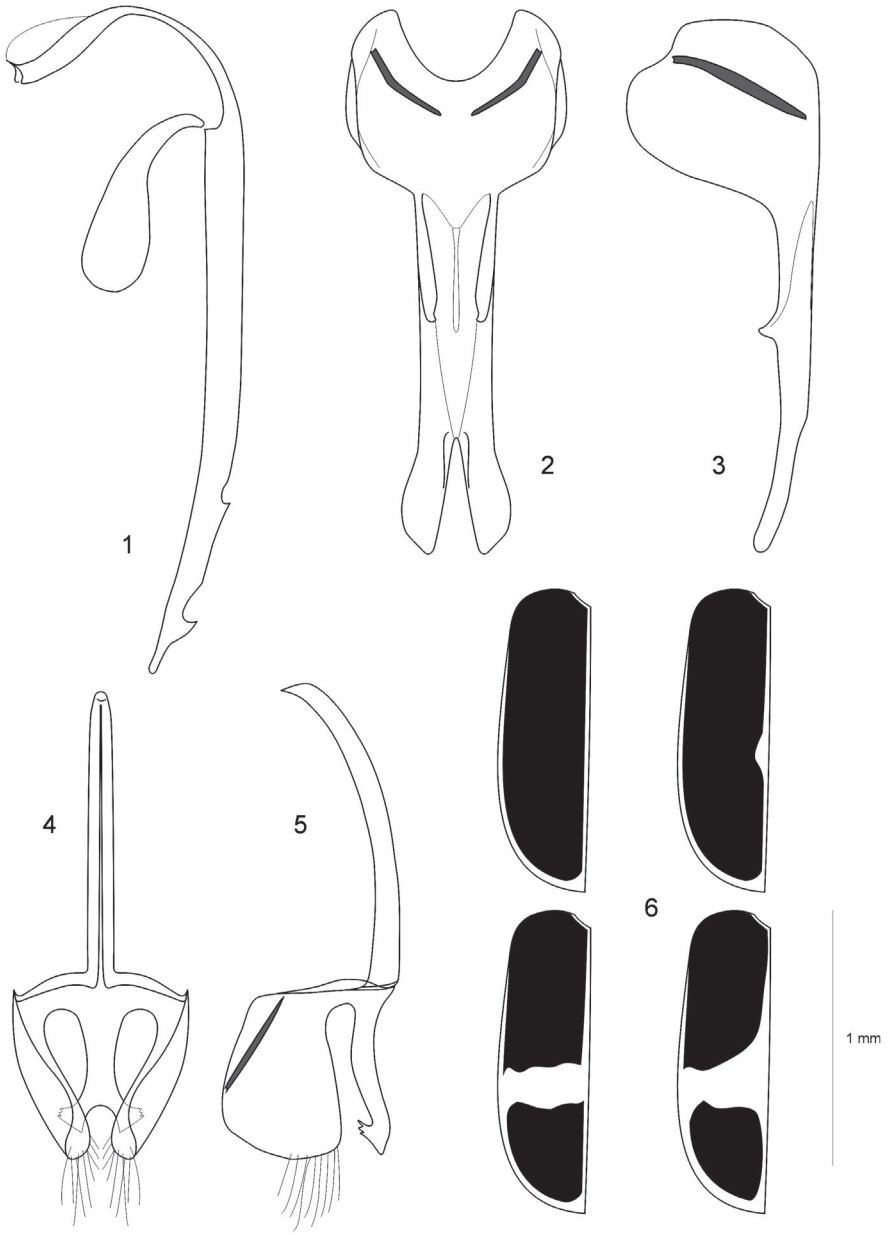
DESCRIPTION OF SPECIES

Ditylomorphus blairi sp. n.
(Figs 1-6)

Type material. Holotypus (♂) (NMPC): S Africa 22-24.11.1997 25 km W Pretoria Saartjiesnek; S25.46 W27.54 S. Bily leg. [white, printed]. Paratypus: (1 ♂) (NMPC): same data as the holotypus. (1 ♂) (NMPC): S Africa, North Prov. Watenberg; S24.22 E27.33 Geelhoutbosh farm S. Bily leg.; 15-18.11.97. (1 ♂) (XV): South Africa, NTL nr Richards Bay, 28.25 S 32.15 E, X.1985 P. E. Reavell / Collected at light. (1 ♂) (XV): S. Afr.: Zululand, Hluhluwe Game Res., 28.05 S 32.04 E / 18.11.1992; E-Y: 2853, ground and logs, leg. Endrödy-Younga. (1 ♀) (XV): Botswana, Serowe Farmers Brigade 22.25S 26.44E 16.X.1988 P. Forchhammer / Collected at light.

Additional material. Malawi. 1 ♀ (NHMB): Zomba, Nyasaland, XI-1945, Nat. Museum S. Rhodesia / Com. Inst. Ent. Coll. No. 10969 / Ananca inconstans Blair, G.E. Bryant det. Zimbabwe. 1 ♀ (NHMB): Penkridge, S. Rhodesia, 27-X-1927, R.H.R. Stevenson / Ananca inconstans Blair. 1 spec. (ZMB): Nyanga NP., Rhodes Dam, lux, 26-XI-1-XII-93, M. Uhlig. South Africa. 1 ♀ (TM): Thabazimbi, SE 24 27 Cb, 13-XI-1983, E. Holm / at light. 1 ♂ (ZMB): Tschakoma Miss., S. Wessmann / Zool. Mus. Berlin. 1 ♀ (DEUP): W-Pretoria (Shoemansville), XI-87, E. Holm. 1 ♀ (SANC): Messina Nature Res., 11-12-II-1985, M.W. Mansell / National Coll. of Insects, Pretoria, S. Afr. 1 ♀ (TM): Malta Forest, N. Transvaal, 9-X-78, M. Keeping. 1 spec. (TM): N Province Amatola, Scott farm, 26-I-98, R. Müller / E-Y: 3316, at light. 2 spec. (TM): Zululand, Hluhluwe Game Res., 20-XI-92 and 26-XI-92, Endrödy-Younga. 2 spec. (TM): E Transvaal, Blyde River Canyon, J. Klimaszewski / light trap. 1 ♀ (SANC): Nyala Game Ranch nr. Empangeni, 11-IX-1982, P. Reavell / National Coll. of Insects, Pretoria, S. Afr.

Diagnosis. Length. Male: 11.6-13.8 mm, female: 12.9-16.1 mm.
It is very similar and closely related to *D. inconstans* (Blair) from which it differs as follows (see also Vázquez 1996: Figs 85-105):



Figs 1-6. *Ditylomorphus blairi* sp. n.: 1- median lobe, lateral view; 2- tegmen, ventral view; 3- tegmen, lateral view; 4- sternite IX, ventral view; 5- sternite IX, lateral view; 6- colour pattern of elytron (schematic).

Ditylomorphus blairi sp. n.	*Ditylomorphus inconstans* (Blair, 1926)
Elytron mainly dark brown, with suture, apex and lateral margin yellow and usually a more or less wide yellow, transverse stripe on middle (Fig. 6)	Elytron mainly yellow, with two dark brown spots (humeral and preapical)
Disc of pronotum flatter, with a shallow, transverse depression on anterior half	Disc of pronotum less flattened, without a transverse depression on anterior half
Medial projection of male sternite IX longer (Figs 4-5)	Medial projection of male sternite IX shorter
Parameres short, less than ¼ of tegmen length (Fig. 2)	Parameres longer, about 1/3 of tegmen length
Parameres enlarged and divergent (Fig. 2)	Parameres not enlarged and parallel
Median lobe relatively long and slender (Fig. 1)	Median lobe relatively short and stout

Remarks. Blair (1926) and Vázquez (1996) treated *Ditylomorphus inconstans* (Blair) and *D. blairi* sp. n. as a single, variable species. The figure 96 (right) in Vázquez (1996) is the apex of the aedeagus of *D. blairi* rather than *D. inconstans* (Blair). The material available shows that no intermediate forms occur between both species, either in colour or in genital features.

Distribution. Botswana, Malawi, South Africa, Zimbabwe.

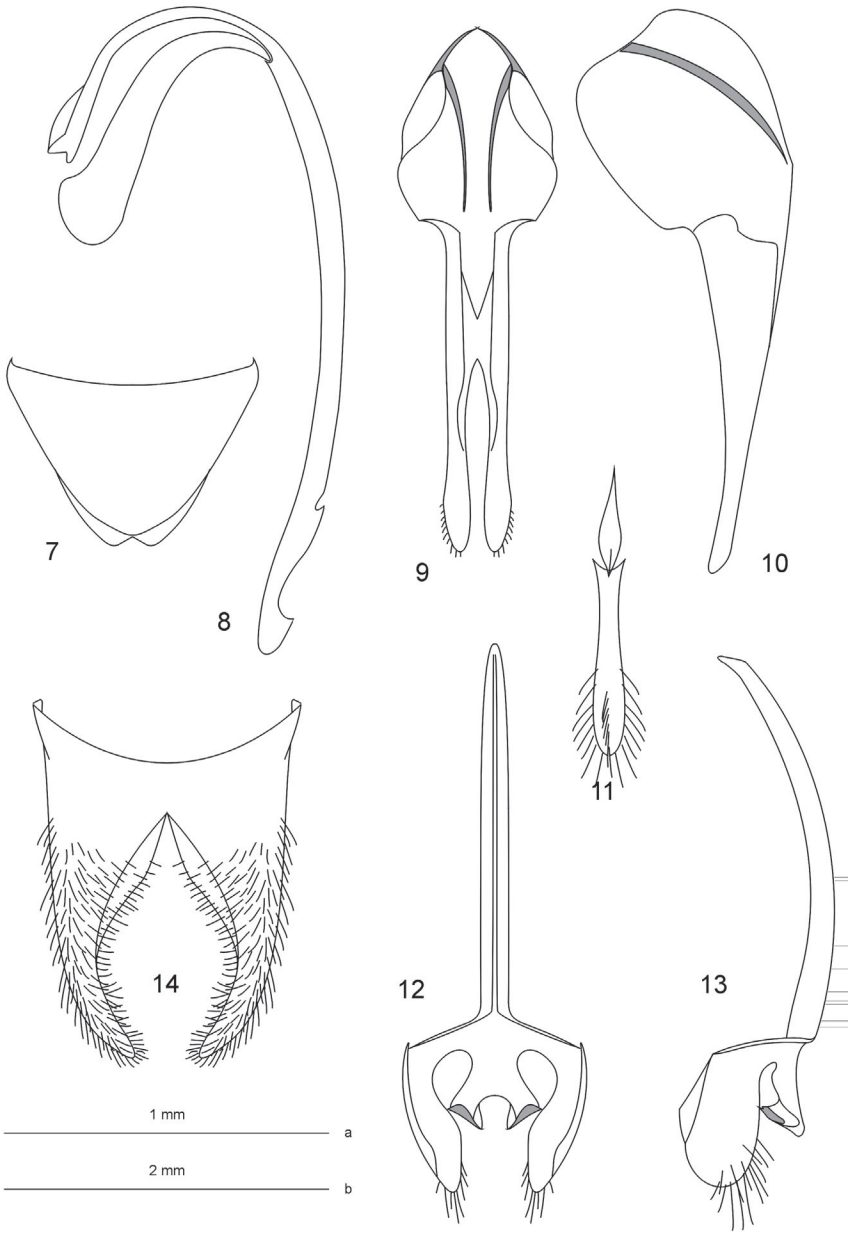
Name derivation. We are dedicating the species to Kenneth Gloyne Blair, who described *D. inconstans*, which type series included specimens of both *D. inconstans* and the new species described here.

Ditylomorphula capitata **sp. n.**

(Figs 7-14)

Type material. Holotype (♂) (NMPC): "RSA: W Cape Clanwillan Pakhuispas 17.i.2001 M. Snížek lgt." [white, printed]. Paratypes (3 ♂♂, 6 ♀♀) (NMPC & XV): same data as the holotype. The coordinates of Clanwillan are 32º10'51"S 18º53'09"S.

Description. Male. Length: 7.8-9.9 mm. Flavous with both basal and apical thirds of elytra brown; tips of mandibles piceous. Body clothed by short and flavous pubescence. Head vaulted and short (HW/HL: 1.5), about as wide as pronotum (HW/PW: 1.0-1.1); puncturation fine, dense and moderately deep, between punctures slightly microsculptured. Mandibles clearly bifid. Eyes large, moderately vaulted, shallowly emarginate. Interocular area wide (FWE/EYW:1.6-2.2), wider than interantennal area (FWE/FWA: 1.3-1.5). Last palpomere large, widest in basal half, outer margin slightly emarginate apically, 0.9-1.0 as long as antennomere I. Antennae long, reaching about apical third of elytra, antennomere I 2.6-2.9 x as long as II, antennomere III 2.8-3.2 x as long as II, antennomeres III-VI feeble increasing gradually in length, antennomeres VII-VIII subequal in length, antennomeres VIII-X decreasing gradually in length, antennomere XI subequal in length to X (XI/X: 0.9-1.1), and indistinctly emarginate; antennomeres VIII-XI slightly arcuate. Pronotum strongly cordiform, as long as wide (PL/PW: 1.0), depression very shallow, almost indistinct. Puncturation similar to that on head. Elytra subparallel, elongate (EL/EW: 3.1-3.2), with tour faint costae. Surface finely, rugosely punctate. Tarsi slender, segment I about 1.5



Figs 7-14. *Ditylomorphula capitata* sp. n.: 7- last segment, ventral view; 8- median lobe, lateral view; 9- tegmen, ventral view; 10- tegmen, lateral view; 11- tegminite; 12- sternite IX, ventral view; 13- sternite IX, lateral view; 14- male sternite VIII. Figs 8-14: scale a; Fig. 7: scale b.

x as long as II in protarsi, about twice in mesotarsi, about 2.5x in metatarsi. Last sternite (Fig. 7) rounded at apex, barely shorter than pygidium. Pygidium (Fig. 7) shallowly emarginate apically. Projections of sternite VIII (Fig. 14). Medial projection of sternite IX (Fig. 12, 13) stout and minutely denticulate. Tegminite (Fig. 11). Parameres thick, inconspicuously pubescent, divided approximately to 1/3 length of tegmen (Figs 9, 10). Median lobe (Fig. 8) arcuate ventrally from proximal teeth onwards, with two pairs of teeth, distal pair fused medially.

Female. Differs from the male as follows. Length: 10.4-12.3 mm. HW/HL: 1.5-1.7, HW/PW: 0.9-1.0. Eyes smaller, less vaulted, interocular area somewhat wider (FWE/FWA: 1.2-1.4). Last palpomere smaller, widest about in middle, 0.7-0.8x as long as antennomere I. Antennae shorter, reaching about elytral midlength, segment I 2.7-3.1 x as long as II, antennomere III 2.5-2.7 x as long as II. EL/EW: 3.0-3.3. Last abdominal segment as in male (Fig. 7), apodeme of sternite VIII not forked at apex, clearly longer than pygidium, as long as ovipositor. Internal copulatory organs similar to that of *Ditylomorphula albalatei* Vázquez, 1996, i. e., bursa copulatrix small and spherical, spermatheca longer than bursa copulatrix.

Diagnosis. It is closely related to *Ditylomorphula albalatei* Vázquez. The new species can be differentiated externally by its head shorter and more vaulted, flavous (brown in *D. albalatei* Vázquez), as well as by its less extended elytral spots. The male genitalia are very similar in both species, but the apical tooth is more distant from the apex in the new species. The shape of the head is somewhat similar to that of *Ditylomorphula subfasciata* (Blair, 1926).

Distribution. South Africa.

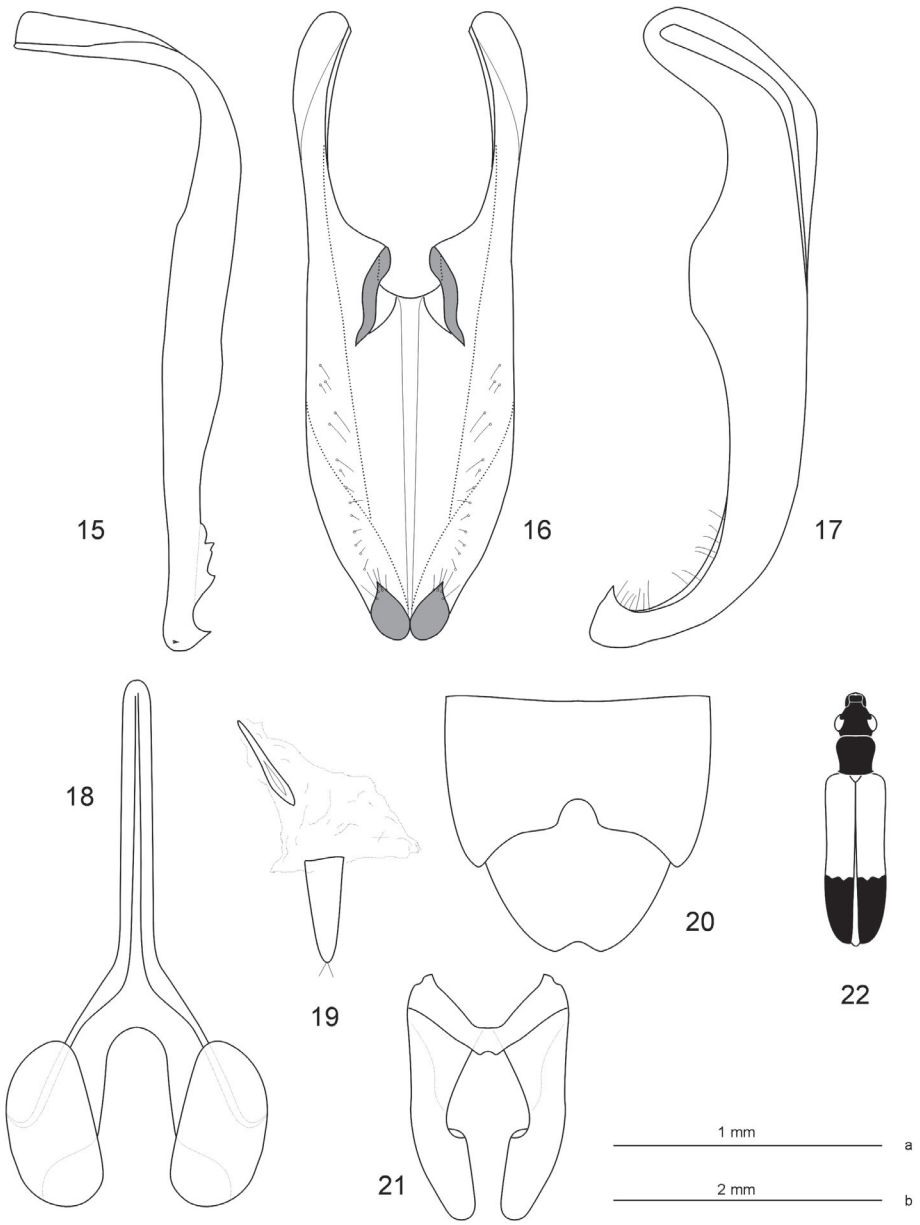
Name derivation. The specific epithet means "big-headed", in relation to the large head of the new species.

Asclerosibutia secularis sp. n.

(Figs 15-22)

Type material. Holotype (♂) (HNHM): "Africa or. Katona" [white, printed] / "Arusha-Ju 1905." [white, printed]. Fore left leg and left maxillary palp missing, left antennae broken from 6th antennomere onwards, right one from 5th onwards. The coordinates of Arusha are 3º21'54"S 36º40'22"E.

Description. With the characters of the genus *Asclerosibutia* after Vázquez (2004). Male. Length: 10.5 mm. Piceous, with basal two thirds of elytra yellow, epistome yellowish distally, basal two segments of maxillary palps testaceous, mandibles rusty, antennomeres 1-2 yellowish ventrally (Fig. 22). Head clothed with dense and relatively short, mainly black pubescence; antennomeres stout, about 3x as long as wide. Pronotum about as long as wide, depressions deep; pubescence longer than that of head, especially on sides, black on disc, whitish on sides. Scutellum sulcate longitudinally. Elytra barely enlarged distally, costae 1 and 2 moderately marked, costa 4 stronger, raised; pubescence long, on interval 2 conspicuously combed inwards, diverging on costa



Figs 15-22. *Asclerosibutia secularis* sp. n.: 15- median lobe; 16- tegmen, ventral view; 17- tegmen, lateral view; 18- sternite IX, ventral view; 19- tegminite; 20- last segment, ventral view; 21- male sternite VIII; 22- colour pattern (schematic). Figs 15-19: scale a; Figs 20-21: scale b.

2, yellow on yellow integument, black with silver shine on black one. Pygidium (Fig. 20) with evenly arcuate sides, barely emarginate at apex. Last sternite (Fig. 20) with medial, semicircular emargination. Projections of sternite 8 (Fig. 21) barely concave and untoothed. Sternite 9 (Fig. 18). Tegmen navicular (Figs 16, 17). Tegminite (Fig. 19). Median lobe (Fig. 15) straight, very slightly sinuate ventrally in distal quarter, apical hook double, remaining teeth simple, apex with one small denticle on each side.
Female unknown.

Diagnosis. It is closely related to *Asclerosibutia lineaticollis* Pic, 1914; the last abdominal segment, the sternites 8 and 9, and the tegmen are quite similar in both species. The median lobe differs in general outline and especially in the shape of the teeth. Externally, the new species can be separated from *A. lineaticollis* Pic by its evenly dark pronotum, straight border between black area on elytra and loos of golden hairs on head and pronotum. The sulcus on the scutellum might be a good diagnostic character, but more specimens are needed to evaluate the eventual variability of such character.

Distribution. NE Tanzania.

Name derivation. The holotype of the new species was waiting during a century to be described. The specific name means a century old in Latin.

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