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A remarkable new species of the genus *Sphallomorpha* Westwood from Irian Jaya (New Guinea).

2. Supplement to the “Revision of the Pseudomorphae of the Australian Region 1.”

(Insecta, Coleoptera, Carabidae)*

By Martin Baehr

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Sphallomorpha setifera, spec. nov. from Irian Jaya (New Guinea) is described. It bears a combination of several highly apomorphic character states (e.g. loss of preorbital, median mental, and both pronotal setae, arrangement of lateral mental setae, deeply excised clypeus) and some plesiomorphic states (simple pattern of internal sac in ♂ aedeagus, presence of elongate apical setae on both parameres). Hence an own *setifera*-group is erected for this species. The systematic position of this group is still uncertain, but may be near the *tamborinae*-group.

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Introduction

In a sample of carabid beetles, collected by A. Riedel in Irian Jaya (western New Guinea) and submitted by the collector, a single specimen of the genus *Sphallomorpha* was included that represents a remarkable new species and at the same time merits the erection of an additional new species-group. To my regret it was impossible to include this species in the first supplement to part 1 of my revision of the Pseudomorphae of the Australian region (Baehr 1993).

Methods

All abbreviations, chiffres, measurements, and used characters are the same as in the revision (Baehr 1992).

Deposition of types

The holotype of the new species has been presented to the Zoologische Staatssammlung München, but is deposited as permanent loan in the collection of the author (ZSM-CBM).

* Results of the entomological explorations of A. Riedel in New Guinea in 1991.

Small, ovate species with circular sutural spot; elytral striae absent; preorbital seta absent; clypeus excised; labrum 4-setose; mental tooth rather convex; mentum asetose; gular sutures obtusely angular; 2 gular setae present; glossa barely excised, apparently 4-setose; galea small, attenuate; antenna rather short; eyes very large, moderately projecting; anterior and posterior pronotal setae absent; posterior angles of pronotum obtusely convex; elytra with more than 15 marginal setae; excision of ♂ sternum VII rather shallow; internal sac of aedeagus rather simple, both parameres with a long and a short seta at apex; ♀ unknown.

A single conspicuous species occurring in the western part of Irian Jaya (western New Guinea).

Systematic position. This group combines highly apomorphic character states (e.g. loss of preorbital, median mental, and both pronotal setae, arrangement of lateral mental setae, excised clypeus, size reduction of marginal elytral setae, reduction of elytral striation) with very primitive states (e.g. simple internal sac of aedeagus, setose parameres). Hence, the actual position is not easily recognized, the more, because the single species bears a fairly well developed, almost tooth-like mental prominence and slightly angulate gular sutures. Its position may be near the *tamborinae*-group of the revision, the position of which group, however, is likewise uncertain, because the male of the single species *S. tamborinae* Baehr is still unknown.

Sphallomorpha setifera, spec. nov.

Figs 1-4

Types. Holotype: ♂, Irian Jaya, Panai-Pr., Nabire, Puspensaat, km 54, 500-700m, 13.-16.8.1991, leg. A. Riedel (ZSM-CBM).

Diagnosis. Small, convex, black species with circular, reddish sutural spot behind middle. Distinguished by glossy surface of pronotum and elytra, distinctly emarginate clypeus, absence of preorbital, median mental, and both pronotal setae, presence of a rather distinct, convex mental prominence, simple internal sac of ♂ aedeagus, and setose apex of both parameres.

Description

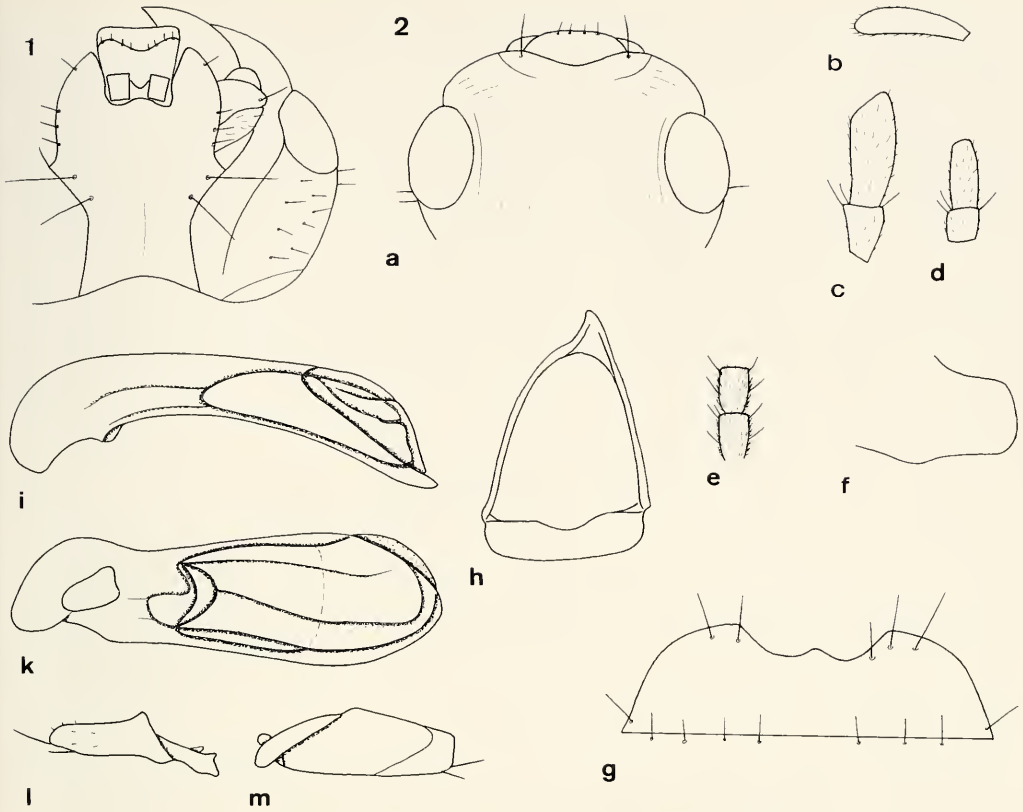
Measurements. Length: 6.4 mm. Ratios. Width pronotum/head: 1.62; width elytra/pronotum: 1.13; width/length of pronotum: 2.28; length/width of elytra: 1.21; length elytra/pronotum: 3.13.

Colour (Fig. 3). Black. Elytra with well delimited, slightly serrate, circular, reddish sutural spot in posterior two thirds that laterally attains about position of 4th stria. Scutellum reddish-piceous. Pronotum and elytra with indistinct, narrow reddish margin. Labrum, mouth parts, and antennae reddish to reddish-piceous. Legs reddish-piceous, femora somewhat lighter, tarsi darker. Lower surface reddish, head slightly darker.

Chetotaxy (Figs 1, 2a,g, 3). Supraorb: 1; preorb: -; clyp: 1; labr: 4; ment.med: -; ment.lat: 3 + 1; gloss: 4; gul: 2; postorb: 1-2; suborb: c. 8; pron.ant: -; pron.post: -; proeps: 1 + 1; marg: c. 16; st VI: 3-4; ♂ st VII: 2-3; ♀ st VII: ?.

Head (Figs 1, 2a-e). Moderately wide, fairly convex, frontal impressions barely recognizable. Clypeus considerably emarginate, clypeal suture distinct. Lateral border of head slightly convex, rather transversal, in front of eyes slightly bent. Eyes very large, slightly projecting from lateral border of head. Labrum wide, short, anteriorly straight. Mentum with rather distinct, convex tooth-like prominence. Wings of mentum fairly elongate, apically obtuse, subapically convex, medially almost straight. Lateral mental setae showing a remarkable arrangement with 3 rather elongate setae in basal part and a single seta in apical part. Glossa triangularly excised, border with sharp edge. Dorsal part much surpassing ventral, not excised, apparently impilose. Gular setae extremely elongate. Terminal segment of labial palpus elongate, slightly widened, though not securiform, that of maxillary palpus narrow, slightly attenuate. Median segments of antenna depressed, c. 1.6 x as long as wide. Microreticulation fine, though rather distinct, surface with moderately dense, very fine punctures, impilose, glossy. Palpi with rather dense pilosity. Galea with several short hairs on anterior border. Ventral surface of head impilose.

Pronotum (Fig. 3). Rather narrow, convex. Apex little excised, straight. Anterior angles little projecting, acute, though in a rather wide angle. Lateral borders slightly convex, widest immediately at posterior



Figs 1 and 2a-m. *Sphallomorpha setifera*, spec. nov. Details of head, prosternum, and genitalia. 1. Ventral surface of head. 2a. Dorsal surface of head. b. Galea. c. Terminal segments of labial palpus. d. Terminal segments of maxillary palpus. e. 5th and 6th segments of antenna. f. Prosternal process. g. δ sternum VII. h. δ genital ring. i. Lateral view of aedeagus. k. Lower surface of aedeagus. l. Right paramere. m. Left paramere. Mouth parts to same scale.

angles. Angles distinct, obtusely convex, basal border near angles convex, in middle gently bisinuate. Lateral margin with extremely fine border line. Discal impressions barely indicated. Microreticulation distinct, though very fine and somewhat superficial, surface with scattered, fine punctures, impilose, glossy.

Elytra (Fig. 3). Rather short and wide, convex, widest slightly in front of middle, laterally evenly rounded. Apex moderately wide, oblique, slightly convex. Striae absent, even position of striae difficult to detect. Series of marginal pores slightly spaced in middle, pores extremely fine, difficult to see, setae very short. Microreticulation fine, rather superficial, isodiametric, surface with sparse, fine punctures, impilose, glossy.

Lower surface (Fig. 2f). Prosternal process narrow, rather elongate, apex straight, ventral surface straight, without any hairs or setae. Metepisternum c. 1.8 x as long as wide.

Legs. Moderately elongate. Metatarsus c. as long as metatibia. 1st segment of metatarsus slightly shorter than 2nd and 3rd segments together.

δ genitalia (Figs 2g-m). Sternum VII rather wide, with fairly shallow, slightly bisinuate excision. Genital ring wide, triangular, basal border barely convex, basal plate wide, anteriorly rather excised, left arm slightly convex. Aedeagus depressed, rather curved, remarkably widened to apex. Apex rounded off. Orificium rather short. Internal sac short, simply folded, for pattern see figs 2i,k. Right paramere straight, apex rounded off. Left paramere elongate, narrow, apex transversely cut off. Both parameres with a longer apical and a shorter subapical seta below.

♀ genitalia. Unknown.

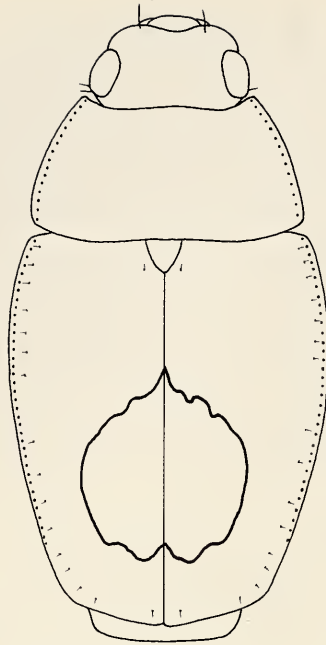


Fig. 3. *Sphallomorpha setifera*, spec. nov. Habitus. Length: 6.4 mm.



Fig. 4. *Sphallomorpha setifera*, spec. nov. Distribution.

Variation. Unknown.

Distribution (Fig. 4). Western part of Irian Jaya (western New Guinea). Known only from type locality.

Material examined (1). Only the holotype.

Habits. Not specified. Holotype collected in August in rather low altitude, presumably at light.

Etymology. The name refers to the seta-bearing δ parameres.

Recognition

For identification of *S. setifera*, the keys to the species-groups and to the species in my revision (Baehr 1992) must be changed as explained below. Because of the presence of a rather distinct, convex mental prominence, this species-group and species, respectively, may be found under both couplets 2. and 6. in the key to the species-groups, and 2. and 152. in the key to the species.

Updated key to the species-groups

- 2. Dorsal surface metallic *speciosa*-group
- Dorsal surface not metallic 2a.
- 2a. Clypeus distinctly emarginate. Both parameres with elongate seta at apex. New Guinea
..... *setifera*-group
- Clypeus not distinctly emarginate. Parameres asetose or at most with short setae at apex 3.
- 23. Clypeus distinctly emarginate. Both parameres with elongate seta at apex. New Guinea
..... *setifera*-group
- Clypeus not distinctly emarginate. Parameres asetose or at most with short setae at apex 23a.
- 23a. ♂♂ 24.
- ♀♀ 37.

Updated key to the species

- 8. Elytra with distinct colour pattern 8a.
- Elytra unicolorous, at most vaguely lighter in middle 10.
- 8a. Small species (<7 mm). Gular sutures moderately and obtusely angulate. Both parameres with elongate seta at apex. New Guinea *setifera*, spec. nov.
- Larger species (>9 mm). Gular sutures markedly angulate. Parameres asetose at apex 9.
- 152. Labrum asymmetrically excised, right part advanced (Figs 122a, 128a-137a). Elongate, canoe-shaped, convex, glossy species (Figs 284, 287-295). Lateral borders usually not or very inconspicuously light coloured (in a very small species only). Supraorbital seta absent. Apex of aedeagus (so far known) bent or pointed down (Figs 128i-136i) 153.
- Labrum not asymmetrically excised, evenly convex, or straight, or medially advanced (Figs 120a, 124a, 144a, 181a). Usually less convex, not canoe-shaped species. Lateral borders usually with wide, more or less distinct light margin. Supraorbital seta usually present, absent only in a rather large species (7.9 mm) with remarkably short head and without median mental setae. Apex of aedeagus (so far known) not bent down 160a.
- 160a. Clypeus distinctly emarginate. Median mental setae absent. Both pronotal setae absent. Both parameres with elongate seta at apex. New Guinea *setifera*, spec. nov.
- Clypeus not distinctly emarginate. Median mental and both pronotal setae usually present, median mental seta absent only in a large species (7.9 mm) with remarkably short head and without supraorbital seta. Parameres asetose or at most with short setae at apex 161.

Acknowledgements

Thanks are due to the collector A. Riedel for presenting the specimen to me.

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