

A new genus and species of the myrmecophilous tribe Sahlbergiini from Malaysia (Coleoptera: Staphylinidae: Aleocharinae)

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Abstract

Malayloeblius sausai, gen.n. et sp.n. (Coleoptera: Staphylinidae: Aleocharinae) is described based on material collected from colonies of *Dorylus* (*Dichthadia*) *laevigatus* SMITH and at light in Peninsular Malaysia. The genus is a member of the tribe Sahlbergiini. The key of genera and the annotated catalogue of species for Sahlbergiini is given.

Key words: Coleoptera, Staphylinidae, Aleocharinae, Sahlbergiini, *Malayloeblius*, *Dorylus*, taxonomy, Malaysia, new genus, new species, myrmecophily.

Introduction

The myrmecophilous tribe Sahlbergiini was established by KISTNER (1993) in the course of the redefinition of the tribe Dorylomimini, where the representatives of Sahlbergiini previously belonged. Kistner also provided a revision and a cladistic analysis of the tribe. Today the tribe Sahlbergiini consists of four genera, *Loeblius* PACE (one species from Nepal), *Malaybergius* KISTNER (one species from Malaysia), *Sahlbergius* BERNHAUER (one species from Kenya and one species from Democratic Republic of the Congo) and *Parasahlbergius* SEEVERS (one species from Ghana and one species from Liberia).

Very little is known about the behaviour and host ants of Sahlbergiini (KISTNER 1993: 355). The only host ant so far recorded with Sahlbergiini belongs to the genus *Aenictus* SHUCKARD, and *Loeblius* was collected with ants probably belonging to the subfamily Ponerinae (PACE 1985).

During an investigation of myrmecophilous insects of Peninsular Malaysia by the junior author, a new species belonging to a new genus was collected from colonies of the subterranean army ant *Dorylus laevigatus*. Additionally, some specimens of the same species attracted by light trap were collected during a joint collecting trip of Eduard Jendek and Ondrej Šauša.

Acknowledgement and abbreviations

The following abbreviations are used in the text: CPH – collection of Peter Hlaváč; CMM – collection of Munetoshi Maruyama; TL - type locality; HA – host ant. Our thanks go to Ondrej Šauša and Eduard Jendek, who gave us the material for study, as well as to Momčilo Popovič for the habitus drawings and to Ján Kodada for scan photographs and some figures. We are also grateful to Rosli Hashim and Sze Huei Yek (University Malaya) for granting a collecting permit and assistance during the field trip carried out by the junior author. This study was partly supported by a grant from Research Fellowship of the Japan Society for the Promotion of the Young Scientists (PD) to the junior author. Our thanks go also to Jonathan Cooter, Hereford, for his kind comments and language reviewing.

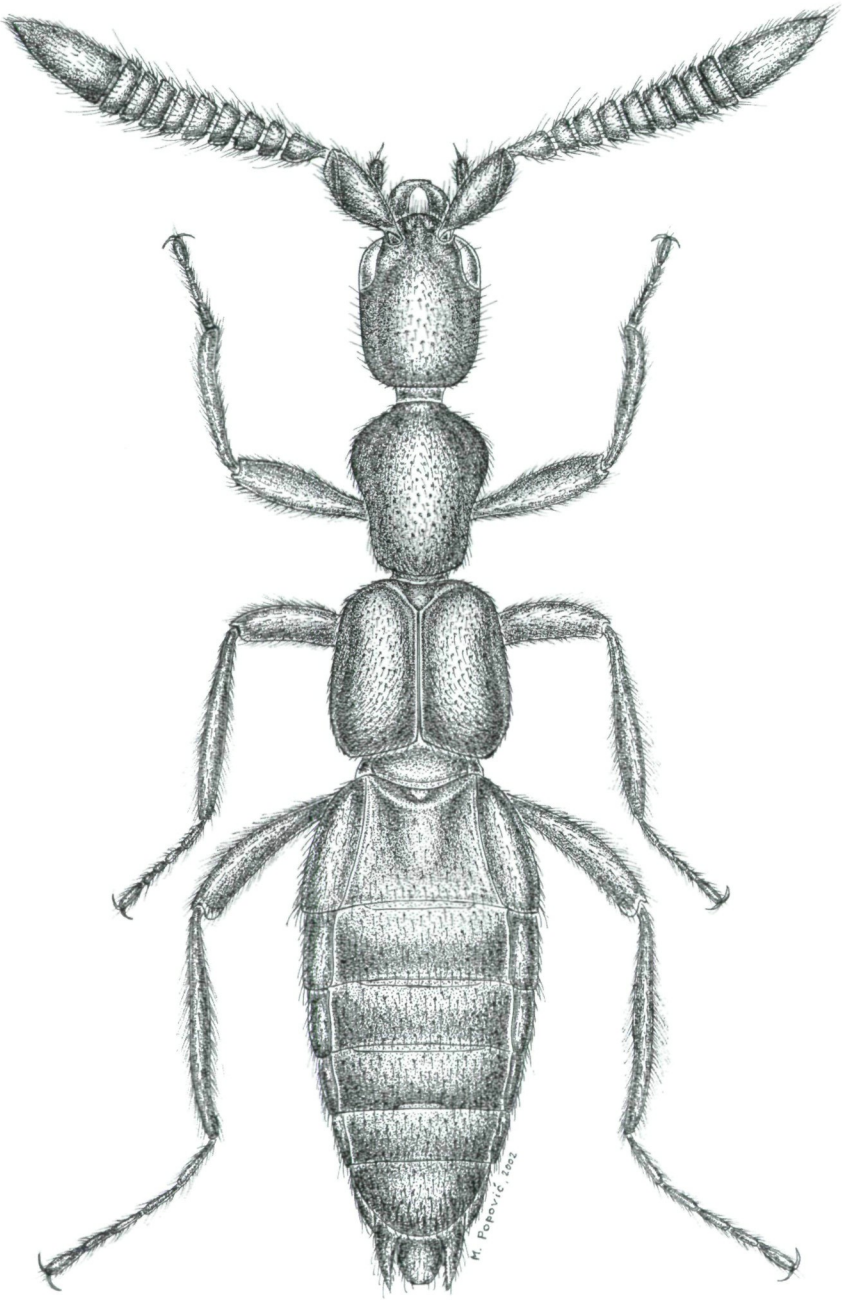


Fig. 1: *Malayloeblius sausiai* sp.n., habitus, dorsal view.

***Malayloeblius* gen.n.**
(Figs. 1 - 21)

TYPE SPECIES: *Malayloeblius sausai* sp.n. Gender masculine.

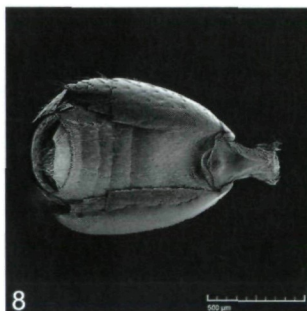
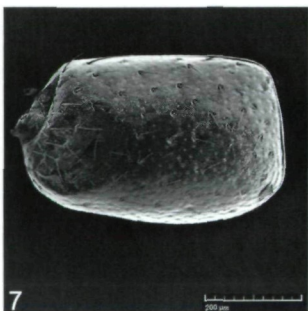
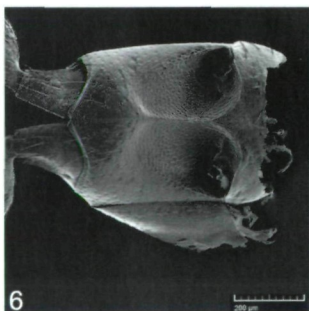
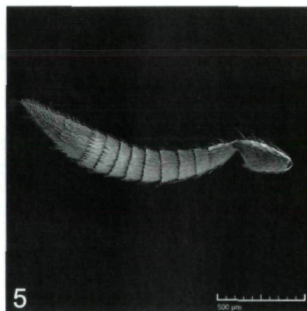
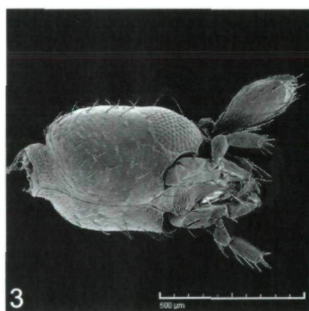
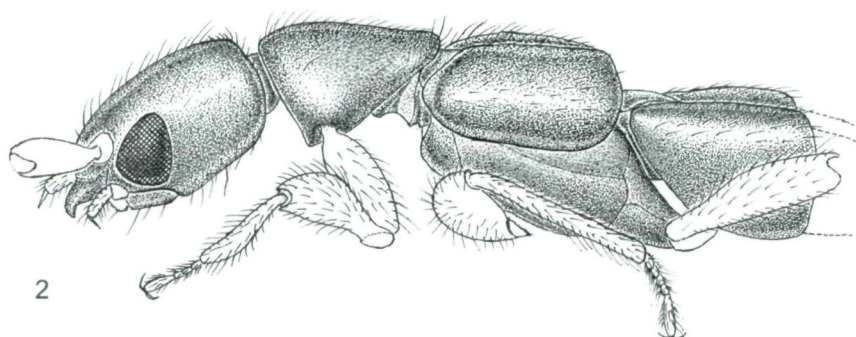
DIAGNOSIS: *Malayloeblius* is a member of the tribe Sahlbergiini based on the presence of the characters emphasized by KISTNER (1993). It is most closely related to *Sahlbergius* and *Loeblius*, through the following synapomorphies: 1) petiole of some antennal segments exposed; 2) first antennal segment elongate; 3) head elongate, longer than wide; 4) procoxal cavities closed behind by the lateral edges of the pronotum. From *Loeblius* it is distinguished by the presence of eyes, by the lateral border of the pronotum constricted and by one pair of paratergites on the abdominal segment III. From *Sahlbergius* it is distinguished by the narrower gula, by the thinner pro- and mesotarsi, and by only the anterior edge of the abdominal segment III constricted.

DESCRIPTION: Body (Fig. 1) myrmecoid, elongate and slender, moderately covered with setae. Length 1.5 - 1.7 mm. Head (Figs. 3, 4) rectangular, subparallel-sided, with distinct neck; about 1.5 times as long as wide; eyes large, slightly protuberant, somewhat triangular in lateral view (Fig. 2); temples longer than eyes. Antennae (Fig. 5) long, stout and densely covered with minute setae, scape oval, about twice as long as pedicel and about twice as long as wide; pedicel conical, longer than wide; segments III - X transverse; apical segment pointed at apex, longer than VII - X combined. Labrum (Fig. 9) transverse, more than twice as wide as long, posterior margin straight, anterior margin with shallow small lateral and deep median excavations, narrowed posteriorly. Mandibles (Fig. 10) almost symmetric, without any teeth but with small serrations at antero-medial margin, sharply pointed at apex. Maxilla (Fig. 11) with large galea, dilated at apex, with short setae; lacinia smaller, pointed at apex, with few stout bristles on inner margin, reaching two thirds of galea length. Maxillary palpi with segment II short, shorter than III, both with long setae. Labial palpi (Fig. 13) with segment I large, more than twice as long as segment II and much wider; segment III thin, about as long as II. Gula very thin and very long, gular sutures parallel, very close to one another. Mentum (Fig. 12) with lumpy anterior margin, widest at base, with deep postero-medial excavation. Pronotum panduriform, widest in apical third, about as long as head, with surface smooth, triangular in lateral view. Meso- and metasterna as in Fig. 6; mesosternum narrow, mesosternal process short and pointed, extending about 0.25 of length of mesocoxal cavities, which are very large; metasternal process also short, slightly shorter than mesosternal process and also pointed, isthmus long, metasternum with fine, shallow median groove, apex of metasternum triangular. Elytra (Fig. 7) about as long as pronotum with sparse pubescence, elytron longer than wide. Hind wings fully developed. Abdomen (Fig. 8) slightly petiolate, segment II short and narrow, less than half as long as III and distinctly narrower than apex of elytra, segment III largest, distinctly wider than apex of elytra, segments V-VII of about similar length, one pair of paratergites on abdominal segment III present. Legs (Figs. 16 - 18) long, tarsal formula 4-5-5, covered with long yellowish setae, pro- and mesothoracic tarsi relatively thin, femora slightly clavate, metatarsi longer than mesotarsi, protrochanters small, much smaller than procoxae, metatrochanters very large, as large as metacoxae.

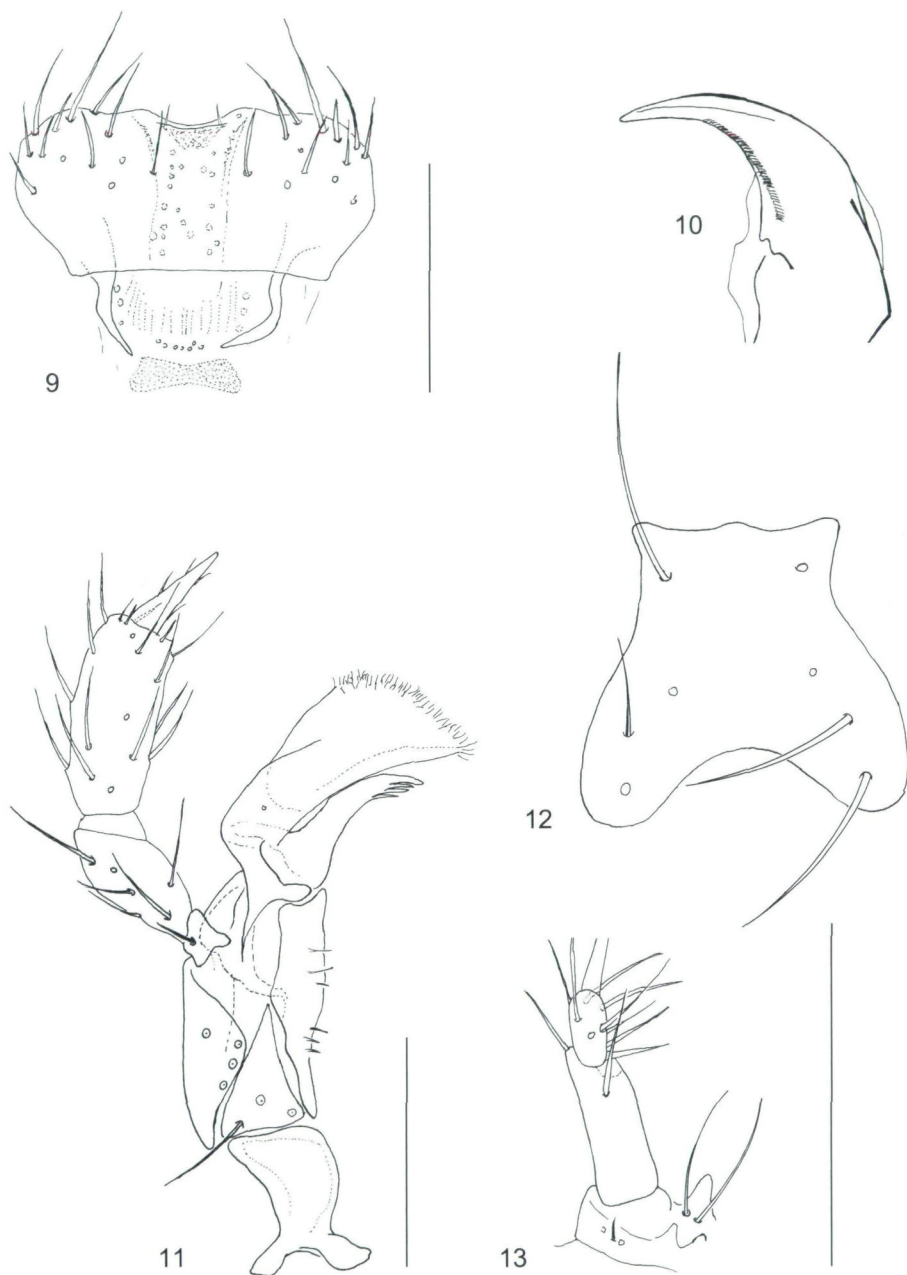
SEXUAL DIMORPHISM: None apparent.

DISTRIBUTION: Malaysia. One female representing an undescribed species is known from Laos.

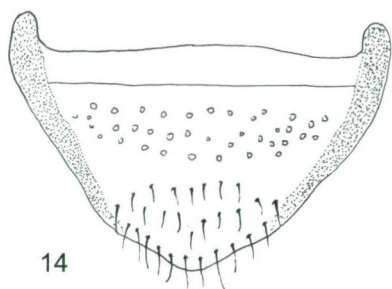
ETYMOLOGY: The genus name is a combination of "Malay" from Malaysia, the country of the discovery, and "*Loeblius*", reflecting the similarity to the genus *Loeblius*.



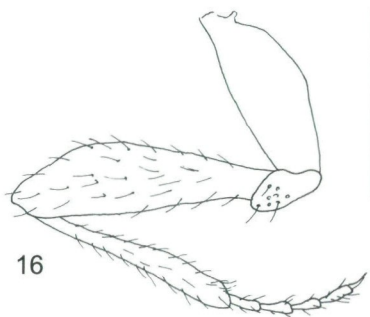
Figs. 2 - 8: *Malayloeblius sausai* sp.n.; 2) habitus, part, lateral view; 3) head, latero-ventral view; 4) mouth parts, latero-ventral view; 5) antenna; 6) meso- and metasternum; 7) left elytron; 8) abdomen, ventral view.



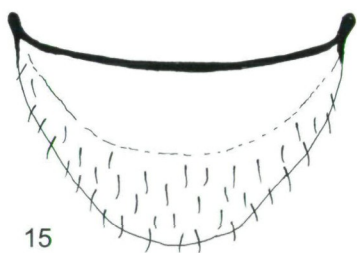
Figs. 9 - 13: *Malayloeblius sausai* sp.n.; 9) labrum; 10) right mandible; 11) maxilla; 12) mentum; 13) labial palpus. Scale: 0.2 mm.



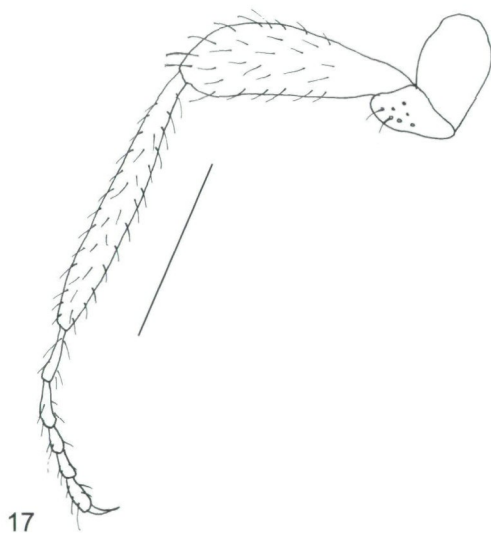
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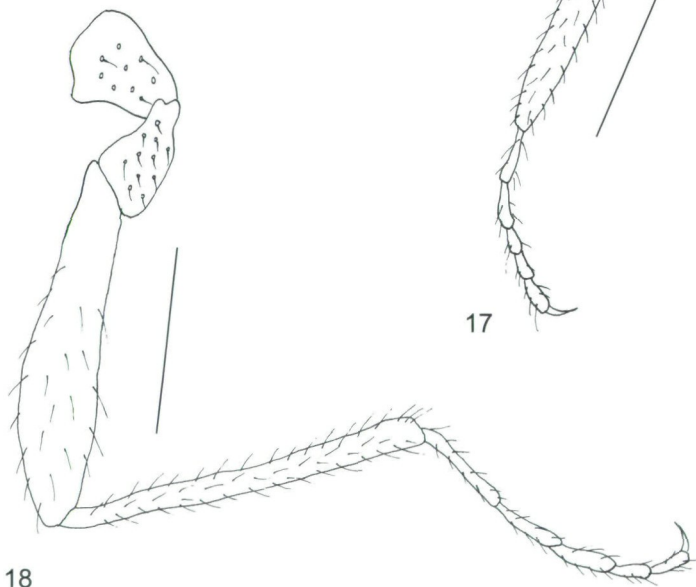
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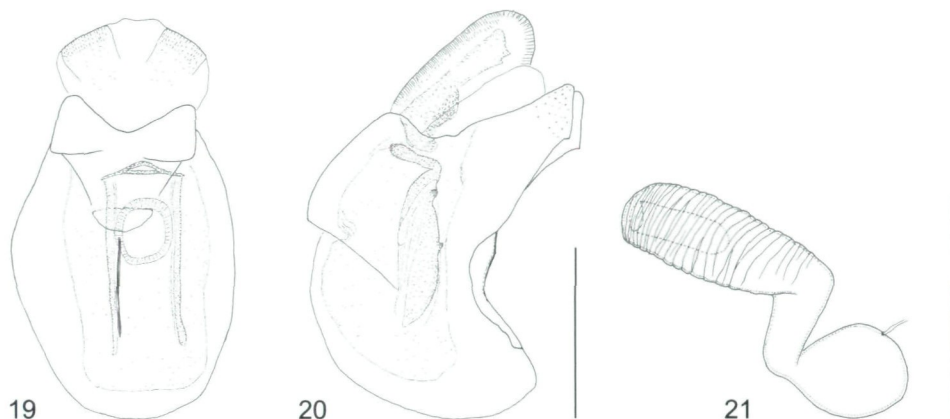


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Figs. 14 - 18: *Malayloeblius sausai* sp.n.; 14) 8th tergite, male; 15) 8th sternite, male; 16) prothoracic leg; 17) mesothoracic leg; 18) metathoracic leg. Scale: 0.2 mm.



Figs. 19 - 21: *Malayloeblius sausiai* sp.n.; 19) aedeagus, ventral view; 20) aedeagus, lateral view; 21) spermatheca. Scale: 0.1 mm.

Key to Genera of Sahlbergiini (adapted from KISTNER 1993: 315)

- | | | |
|---|--|---------------------------------------|
| 1 | Petiole of some antennal segments covered with projections from the anterior margins of the antennal segment..... | <i>Parasahlbergius</i> SEEVERS |
| - | Petiole of some antennal segments exposed | 2 |
| 2 | Head as long as wide..... | <i>Malaybergius</i> KISTNER |
| - | Head longer than wide | 3 |
| 3 | Abdominal segment III with two pairs of paratergites, without eyes | <i>Loeblius</i> PACE |
| - | Abdominal segment III with one pair of paratergites | 4 |
| 4 | Head not rectangular, gula relatively wide, pro- and mesothoracic tarsi flattened and thickened, Africa..... | <i>Sahlbergius</i> BERNHAUER |
| - | Head rectangular, gula relatively narrow, pro-and mesothoracic tarsi relatively thin, normal in appearance, Malay Peninsula & Laos | <i>Malayloeblius</i> gen.n. |

Malayloeblius sausiai sp.n.

(Figs. 1 - 21)

TYPE LOCALITY: Pahang, Malaysia.

TYPE MATERIAL: (14 specimens): HOLOTYPE, ♂: "Malaysia: Pahang distr., 30km NE Raub, Laba Lembik, 3°56' N; 101°38' E, 300 m, 22.iv.-15.v.2002, Jendek & Šauša leg.", CPH. PARATYPES: 8 exs., the same data as holotype (CPH, CMM); 2 exs., Ulu Gombak, Selangor, Malaysia, 2.iii.2003, Maruyama leg. (from colonies of *Dorylus laevigatus*); 1 ex., same data, but 4.iii.2003; 2 exs., same data, but 21.v – 3.vi.2003 (CPH, CMM).

DIAGNOSIS: This species is similar to *Loeblius nepalensis* PACE in general appearance, but easily distinguished from it by the presence of eyes. See also diagnosis of *Malayloeblius*.

DESCRIPTION: Body length: 1.5 - 1.7 mm; 0.8 - 0.9 mm (from front margin of head to apices of elytra at suture), combined width of elytra about 0.35 mm. Body surface finely punctate and slightly shining. Head, antennae, and elytra dark brown, pronotum, mouthparts, legs, and abdominal segments lighter; pubescence yellow. Head (Figs. 3, 4) 1.5 times as long as wide; surface sparsely covered with setae; eyes large, triangular in lateral view and slightly protuberant, temples long, a little less than twice as long as diameter of eyes. Antennae (Fig. 5) about as long as combined length of head and pronotum; scape very large, oval, widest in apical third, narrowed to the base; pedicel triangular, reduced from apex to base, almost twice as short as scape and longer than wide, segments III - X transverse, gradually dilated from III - X, segment X 1.5 times as wide as segment III, apical segment sharply pointed at apex, 2.3 times as long as wide at base; relative length of segments from base to apex: 12: 6: 2.5: 3: 4: 3: 3: 2.5: 3: 3: 16. Pronotum 1.15 times as long as wide and almost as long as head, widest in apical third, strongly narrowed behind, triangular in lateral view, flat; surface evenly covered with long, yellow setae. Elytra (Fig. 7) slightly widened posteriorly, elytron 1.6 times as long as wide, surface evenly covered with long, yellow setae. Abdomen (Fig. 8) with segment III largest, about 1.45 times as long as IV and slightly wider than segment IV, about 1.3 times as wide as elytra, segments V and VI about the same length, segment VII shorter. Legs (Figs. 16 - 18) with procoxae large and long, almost as large as femora; segment I and II of protarsi about the same length; metatarsi very long, 1.7 times as long as mesotarsi, metatarsal segment I 1.5 times as long as II; mesotarsal segment I 1.3 times as long as II.

Male: posterior margin of 8th tergite (Fig. 14) with sides sinuate, broadly rounded apically apex with regular setation; 8th sternite (Fig. 15) evenly rounded. Apical lobe of aedeagus (Figs. 19, 20), bifid and symmetric in ventral view, and truncate laterally at apex.

Female: Spermatheca as in Fig. 21.

HABITAT: Some specimens were collected from colonies of *D. laevigatus* and some were collected at light. The ants were attracted by palm oil baited traps (WEISSFLOG et al. 2000) and the beetles were found together with the ants.

ETYMOLOGY: Named in honour of Ondrej Šauša, Bratislava, Slovakia, one of the collectors of the new species.

Annotated catalogue of species of the tribe Sahlbergiini KISTNER

***Loeblius* PACE, 1985: 293.** Type species: *Loeblius nepalensis* PACE, by original designation & monotypy; KISTNER, 1993: 332

nepalensis PACE, 1985: 296 (*Loeblius*; TL: Nepal, Godawari; HA: "blind ants of the family Ponerinae" but probably a species of *Dorylus* according to KISTNER 1993)

***Malaybergius* KISTNER, 1993: 316.** Type species: *Malaybergius aenictophilus* KISTNER, by original designation & monotypy

aenictophilus KISTNER, 1993: 320 (*Malaybergius*; TL: Malaysia, Selangor, Ulu Gombak & Negeri Sobilan, Pasoh Forest Reserve; HA: *Aenictus* sp.)

***Malayloeblus* gen.n.** Type species: *Malayloeblus sausai* HLAVÁČ & MARUYAMA

sausai sp.n. (*Malayloeblus*; TL: Malaysia: Pahang distr., 30 km NE Raub, Laba Lembik; HA: *Dorylus* (*Dichthadia*) *laevigatus* SMITH)

Parasahlbergius SEEVERS, 1965: 200. Type species: *Parasahlbergius liberiae* SEEVERS, by original designation

liberiae SEEVERS, 1965: 201 (*Parasahlbergius*; TL: Liberia, Suakoko); KISTNER, 1993: 324

gotwaldi KISTNER, 1993: 324 (*Parasahlbergius*; TL: Ghana, New Tafo; HA: *Aenictus decolor* MAYR)

Sahlbergius BERNHAUER, 1927: 387. Type species: *Sahlbergius mirabilis* BERNHAUER, by monotypy

mirabilis BERNHAUER, 1927: 379 (*Sahlbergius*; TL: Kenya, Tana River); KISTNER, 1993: 330

aenictophilus KISTNER, 1993: 330 (*Sahlbergius*; TL: Democratic Republic of the Congo, Parc National de la Garamba; HA: *Aenictus weissii* SANTSCI)

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