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A new species of *Myrmechusa* WASMANN, and catalogue of the species of the *Myrmechusa* group (Coleoptera: Staphylinidae, Aleocharinae)

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Abstract

A new species of *Myrmechusa* WASMANN (Coleoptera: Staphylinidae, Aleocharinae), *M. selindensis* sp.n., is described from eastern Zimbabwe. A key to the species of the *M. feae* group, in which the new species is placed, and an annotated catalogue of the *Myrmechusa* group (*Gapia* BLACKWELDER, *Myrmechusa* WASMANN, *Myrmechusina* CAMERON, and *Trichodonia* WASMANN) with their host ants and distribution are provided. Keys to the genera of the group and the species of *Myrmechusina*, based on the original descriptions, are given. The taxonomic situation of *Anomma* SHUCKARD, a subgenus of the ant genus *Dorylus* F., is discussed briefly.

Key words: Coleoptera, Staphylinidae, Aleocharinae, Lomechusini, *Gapia*, *Myrmechusa*, *Myrmechusina*, *Trichodonia*, Hymenoptera, Formicidae, *Dorylus*, taxonomy, Africa.

Introduction

The *Myrmechusa* group is represented by four genera: *Gapia* BLACKWELDER, *Myrmechusa* WASMANN, *Myrmechusina* CAMERON and *Trichodonia* WASMANN. The genus group was characterized by SEEVERS (1965) and can easily be recognized within the African members of the subtribe Myrmedoniina of the tribe Lomechusini by the following combination of characters: 1) pronotum very broad, explanate, 2) elytra and abdomen broad, 3) eyes large, and 4) antennae and tarsi slender and long.

The group was a subject of two studies: KOBlick & KISTNER (1965) revised *Myrmechusa*, and KISTNER & JACOBSON (1982) treated *Gapia*, *Myrmechusina* and *Trichodonia*. All species of the *Myrmechusa* group are myrmecophilous, synechtrans or scavengers living in the association to various species of the army ants of the genus *Dorylus* F. subgen. *Anomma* SHUCKARD (Table 1).

Acknowledgements & abbreviations

The following abbreviations are used in the text: CPH – coll. of the author (to be deposited in the Slovak National Museum in Bratislava); CMM – coll. Munetoshi Maruyama, Sapporo, Japan; TL – type locality; DR Congo – Democratic Republic of the Congo; HA – host ant.

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Table 1: Relation of the *Myrmechusa* group species to the host ants of the genus *Dorylus* subgen. *Anomma* and the geographical distribution:

Genus/Species	Host ant: <i>Dorylus</i> (subg. <i>Anomma</i>)	Distribution
<i>Gapia</i> BLACKWELDER		
<i>gigantea</i> (WASMANN)	<i>burmeisteri</i> , <i>ornatus</i> , <i>rufescens</i> , <i>wilwerthi</i>	DR Congo, Rwanda, Angola, Ethiopia, Cameroon, Senegal, Guinea Bissau, Tanzania, Kenya, Zambia
<i>Myrmechusa</i> WASMANN		
<i>brunii</i> (EICHELBAUM)	unknown	Kenya
<i>camerounensis</i> KISTNER & KOBLICK	<i>rufescens</i>	Cameroon, Rwanda
<i>feae</i> BERNHAUER	<i>arcens</i> , <i>molestus</i>	Ghana, Senegal, Gambia, Ivory Coast
<i>grandis</i> BERNHAUER	unknown	DR Congo, Angola, Republic of Congo
<i>katangensis</i> KISTNER & JACOBSON	unknown	DR Congo, Tanzania
<i>kivuensis</i> KISTNER & JACOBSON	unknown	DR Congo
<i>kohli</i> WASMANN	<i>molestus</i> , <i>ornatus</i> , <i>wilwerthi</i>	DR Congo, Zimbabwe
<i>mirabilis</i> WASMANN	<i>molestus</i> , <i>ornatus</i>	Ethiopia, Kenya, Sudan, Ghana, Rwanda, Tanzania
<i>selindensis</i> HLAVÁČ	<i>burmeisteri</i>	Zimbabwe
<i>Myrmechusina</i> CAMERON		
<i>hartmanni</i> PACE	unknown	Tanzania
<i>tanzaniensis</i> PACE	unknown	Tanzania
<i>wasmanni</i> CAMERON	<i>terrificus</i> , <i>wilwerthi</i>	DR Congo
<i>Trichodonia</i> WASMANN		
<i>bicolor</i> KISTNER & JACOBSON	<i>molestus</i>	Tanzania
<i>dulcis</i> LAST	unknown	DR Congo, Zambia
<i>funeralis</i> WASMANN	unknown	Ethiopia
<i>laticollis</i> WASMANN	<i>burmeisteri</i> , <i>rufescens</i> , <i>sjoestedti</i>	Rwanda, DR Congo, Angola, Tanzania, Ghana
<i>parva</i> CAMERON	unknown	DR Congo, Zambia, Ghana, Nigeria, Ivory Coast
<i>ruandorum</i> PACE	unknown	Rwanda
<i>schoutedeni</i> BERNHAUER	<i>sjoestedti</i> , <i>wilwerthi</i>	DR Congo, Ghana, Angola, Cameroon, Equatorial Guinea
<i>schwabi</i> WASMANN	<i>rufescens</i> , <i>sjoestedti</i> , <i>wilwerthi</i>	DR Congo, Cameroon, Equatorial Guinea
<i>setigera</i> WASMANN	<i>burmeisteri</i> , <i>molestus</i> , <i>nigricans</i> ?, <i>wilwerthi</i>	DR Congo, Ghana, Angola, Ivory Coast, Cameroon, Zambia, Burundi, Senegal, Kenya, Nigeria, Ethiopia, Equatorial Guinea
<i>striatus</i> LAST	unknown	DR Congo

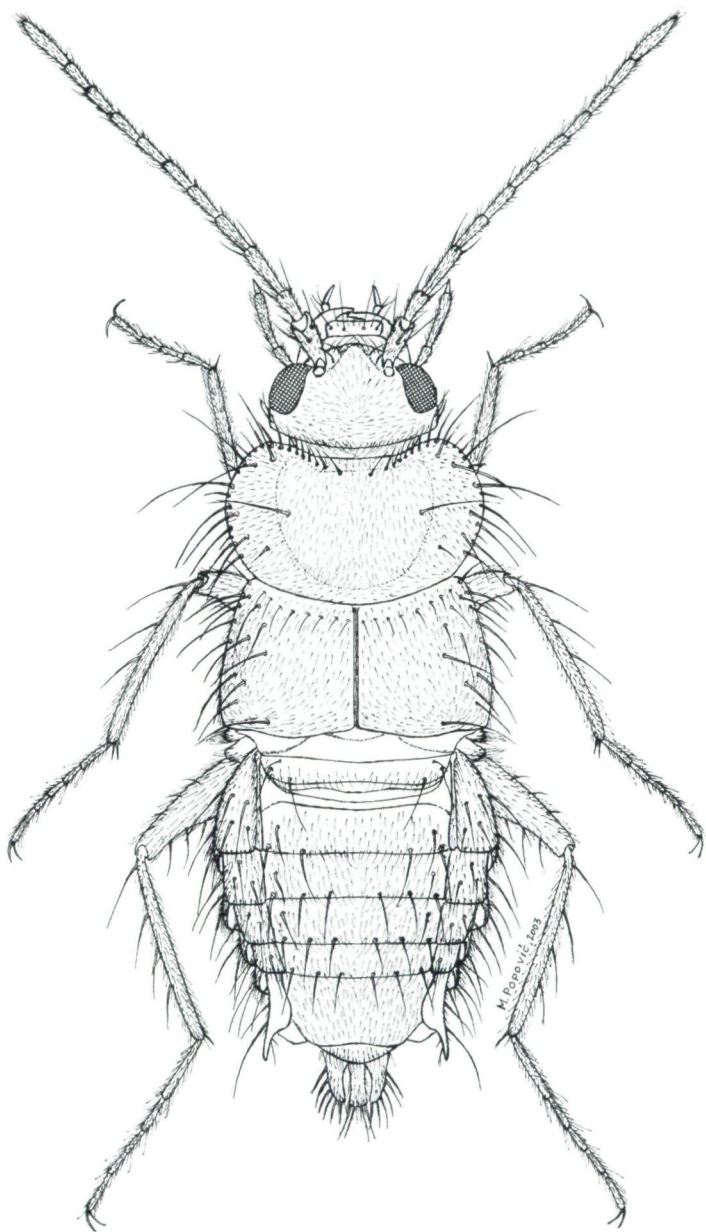
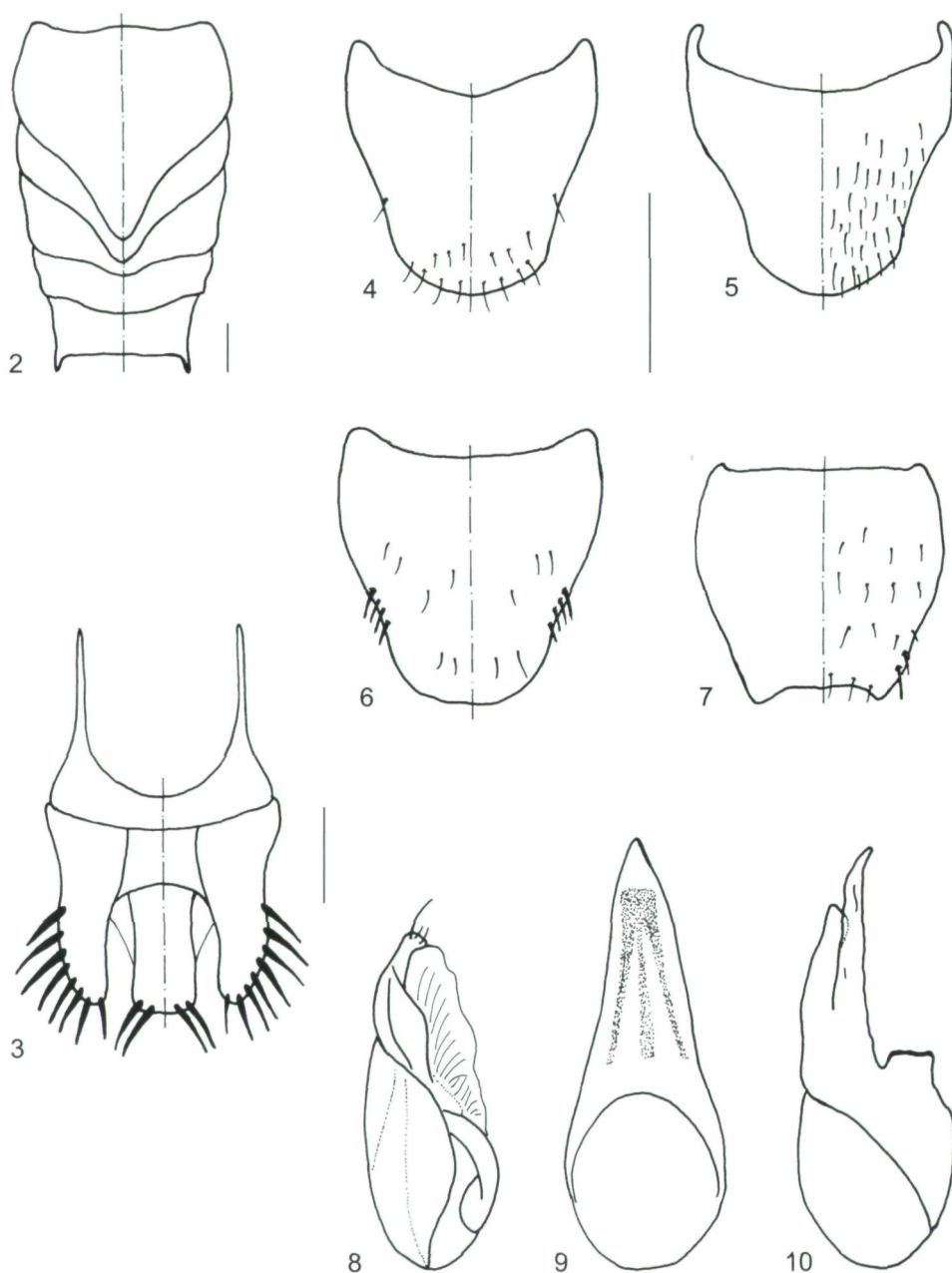


Fig. 1: Habitus of *Myrmechusa selindensis*.



Figs. 2 – 10: *Myrmechusa selindensis*: 2) abdomen, ♀; 3) abdominal segments IX and X, ♂; 4) tergite VIII, ♂; 5) tergite VIII, ♀; 6) sternite VIII, ♂; 7) sternite VIII, ♀; 8) left paramere; 9) aedeagus, dorsal view; 10) aedeagus, lateral view. Scales: 2 = 0.4 mm; 4-7 = 0.6 mm; 3, 8-10 = 0.2 mm.

***Myrmechusa selindensis* sp.n.**

TYPE LOCALITY: Gungunyana forest, Mt. Selinda, eastern Zimbabwe.

TYPE MATERIAL: **Holotype** ♂♂ (CPH): "E Zimbabwe, Mt. Selinda, Gungunyana forest, 25.xii.1998, M. Snížek lgt.". **Paratypes** (CPH, CMM): 4 ♂♂, 1 ♀♀, same label data as holotype.

DESCRIPTION: Body length about 7.0 mm. Colour reddish brown, head, disc of pronotum and apical parts of elytra almost black; elytra with dark reddish brown humeral spot, margin of pronotum yellowish brown. Abdomen, appendages, and the dorsal surface of the head, pronotum, and elytra covered with fine yellow setae emerging from microstructure composed of sinuous lines. Antennae very long and slender, all segments clearly elongate; scape 1.7 times as long as pedicel and 1.2 times as short as segment III, segments IV-X subequal in length, apical segment longest, about 1.2 times as long as segment III and 1.75 times as long as each segment IV-X. Macrochaetotaxy of the head, pronotum, and elytra as in Fig. 1. Pronotum about 1.3 times as long as elytra and wider than head and elytra. Median posterior projection of abdominal sternites III and IV of female robust, gradually fastigiate (Fig. 2). Abdominal sternites and tergites VIII of both sexes simple (Figs. 4-7), tergite VIII in female without apical excision. Abdominal segments IX and X fused together, median lobe (tergite X) not bifurcate (Fig. 3). Aedeagus as in Figs. 8-10.

DIFFERENTIAL DIAGNOSIS: The new species belongs to the *M. feae* group which is defined by the abdominal sternites III, IV, V and VI of female being provided with projections (Fig. 2).

HABITAT: All specimens were collected in raids of the host ant. Host ant was determined by the author as *Dorylus* (subg. *Anomma*) *burmeisteri* SHUCKARD. The determination was confirmed by Brian Taylor.

DISTRIBUTION: Known only from type locality.

ETYMOLOGY: The name of the species is derived from the Selinda mountains where the species was collected.

Key to the species of the *Myrmechusa feae* group

- | | | |
|---|--|--------------------|
| 1 | Median lobe (tergite X) bifurcated from the posterior tip to about the middle of the segment or beyond. | 2 |
| - | Median lobe (tergite X) not bifurcated | 3 |
| 2 | Projection from abdominal sternite IV of female evenly pointed, subtriangular | <i>mirabilis</i> |
| - | Projection from abdominal sternite IV of female with two points | <i>kivuensis</i> |
| 3 | Projection from abdominal sternite III very slender, acuminate (KOBLOCK & KISTNER 1965: Fig. 4A), abdominal tergites VIII with an excision at apex in female (KOBLOCK & KISTNER 1965: Fig. 4H) | <i>feae</i> |
| - | Projection from abdominal sternite III robust, gradually fastigiate (Fig. 2), abdominal tergites VIII without the excision, simple in female (Fig. 6) | <i>selindensis</i> |

Remark on the ant genus *Dorylus* subgenus *Anomma*

After the separation of Aenictinae as a subfamily, the Dorylinae became monotribic and monogeneric. Only recently another genus, *Yunodorylus* XU has been described (XU 2000). *Yunodorylus* is monotypic whereas *Dorylus* had a lot of species, subspecies and varieties with a lot of taxonomic confusion. BOLTON (1995) listed 62 species and 71 subspecies and varieties.

WHEELER (1922) gave a key to the subgenera (*Dorylus*, *Anomma*, *Dichthadia* GERSTÄCKER, *Typhlopone* WESTWOOD, *Alaopone* EMERY and *Rhogmus* SHUCKARD) which is kept valid till now. TAYLOR (2002), when studying the myrmecological fauna of West Africa, had recognized the big mess which governed the taxonomic situation of the subgenus *Anomma* and revised it as a part of his excellent contribution on the ants of West Africa and the Congo Basin. He synonymized a lot of subspecies, varieties and provided a key of workers of this region. His effort considerably cleared up the situation and now we know 25 species from the region, 19 species are described based on workers and also keyed in his work. Another six species are described based on the male or the queen and are absent in the key. His new concept is also reflected in the catalogue.

Annotated catalogue with generic key of the species of the *Myrmechusa* genus group

- 1 Vestiture of black macrochaetae on the pronotum, elytra and abdomen present 2
- Vestiture of black macrochaetae absent *Myrmechusina*
- 2 Shape of the pronotum more ovate 3
- Shape of the pronotum less ovate *Gapia*
- 3 Number of macrochaetae on pronotum reduced, lateral depressions on the dorsal surface of the pronotum shallow, spinous apical angle on abdominal sternite VII absent, abdominal segments IX-X more generalized *Trichodonia*
- Not fitting all aspects of above description *Myrmechusa*

Gapia BLACKWELDER, 1952: 167, new name for *Acanthonia* WASMANN, preoccupied by *Acanthonia* HÄCKEL, 1881 and *Acanthonia* POPOFSKY, 1904

Gapia BLACKWELDER: KISTNER & JACOBSON (1982: 99) (redescription, phylogeny)

Acanthonia WASMANN, 1916: 96. Type species: *Acanthonia gigantea* WASMANN, by monotypy

Acanthonia WASMANN: BLACKWELDER (1952: 34) (discussion of genotype and homonymy); SEEVERS (1965: 277); LAST (1977a: 195) (error)

gigantea WASMANN, 1916: 97 (*Acanthonia*, TL: DR Congo, St. Gabriel near Kisangani)

Myrmechusa WASMANN, 1908: 38. Type species: *Myrmechusa mirabilis* WASMANN, by monotypy

Myrmechusa WASMANN: WASMANN (1917: 262) (further generic features, especially mouthparts); BERNHAUER (1938: 324) (key to species); BLACKWELDER (1952: 253); KOBLICK & KISTNER (1965: 28) (revision of the genus, ethology, key to species); KISTNER & JACOBSON (1982: 105) (key to species, phylogeny)

Zyracanthus CAMERON, 1952: 455. Type species: *Zyracanthus turneri* CAMERON, synonymized by LAST (1981: 221)

brunni EICHELBAUM, 1908: 92 (*Myrmedonia*, TL: Kenya: Kilimanjaro, Kibonoto; HA: unknown)

Note: this species was not included in the revision of *Myrmechusa* (KOBLICK & KISTNER 1965) without any comment but it was stated in the genus by SEEVERS (1965).

camerounensis KOBLICK & KISTNER, 1965: 34 (*Myrmechusa*, TL: Cameroon, Edéa & Rwanda, Rukara, Lake Mohasi)

= *mirabilis* WASMANN: LAST (1956: 205) – in part (*Myrmechusa*, TL: Rwanda, Rukara, Kibugu terr., Lake Mohasi)

feae BERNHAUER, 1927: 207 (*Myrmechusa*, TL: "Portuguese Guinea")

= *mirabilis* WASMANN: LAST, 1973: 145 (Ghana, Ashanti region, Kumasi, Nhasu)

grandis BERNHAUER, 1938: 323 (*Myrmechusa*, TL: DR Congo, Katanga, Lulua, Kapanga)

katangensis KOBLICK & KISTNER, 1965: 38 (*Myrmechusa*, TL: DR Congo, Katanga, Lubumbashi & Tanganyika, Matengo Highland WSW of Songea)

kivuensis KISTNER & JACOBSON, 1982: 108 (*Myrmechusa*, TL: DR Congo, Parc National Albert, Massif Ruwenzori, Kalonge)

kohli WASMANN, 1916: 93 (*Myrmechusa*, TL: DR Congo, St. Gabriel near Kisangani)

= *mirabilis* WASMANN: LAST (1956: 205) – in part (*Myrmechusa*, TL: Rwanda, Gitarama, Nyanza terr.)

mirabilis WASMANN, 1908: 38 (*Myrmechusa*, TL: Ethiopia: Schoa prov., Let Marefia)

= *csikii* BERNHAUER, 1915: 177 (*Zyras*, TL: Tanganyika, Mt. Oldeani, Ngorongoro) synonymized by KOBLICK & KISTNER (1965: 32)

= *turneri* CAMERON, 1952: 455 (*Zyracanthus*, TL: unknown), synonymized by LAST (1981: 221)

selindensis HLAVÁČ, sp.n. (*Myrmechusa*, TL: Zimbabwe, Mt. Selinda, Gungunyana forest)

Myrmechusina CAMERON, 1926: 88. Type species: *Myrmechusina wasmanni* CAMERON, by original designation & monotypy

Myrmechusa CAMERON: BLACKWELDER (1952: 253); KISTNER & JACOBSON (1982: 94) (redescription)

hartmanni PACE, 2001: 204 (*Myrmechusina*, TL: Tanzania: 25 km S of Babati)

tanzaniensis PACE, 1986: 105 (*Myrmechusina*, TL: Tanzania: Usa river)

wasmanni CAMERON, 1926: 89 (*Myrmechusina*, TL: DR Congo, Lundu)

Key to the species of *Myrmechusina* (based on the original descriptions)

- 1 Antennal segments VII, VIII and IX transverse, head not reticulated..... *hartmanni*
- Antennal segments VII, VIII and IX elongate, head reticulated..... 2
- 2 Antennal segment II as long as III, only head reticulated..... *tanzaniensis*
- Antennal segment II much shorter than III, head and pronotum reticulated *wasmanni*

Trichodonia WASMANN, 1916: 95. Type species: *Trichodonia setigera* WASMANN, designated by BLACKWELDER (1952: 394)

Trichodonia WASMANN: BLACKWELDER (1952: 394); SEEVERS (1965: 277); KISTNER & JACOBSON (1982: 75) (redescription, key to species, phylogeny)

bicolor KISTNER & JACOBSON, 1982: 81 (*Trichodonia*, TL: Tanzania, Tanga Distr., Amani)

dulcis LAST, 1977b: 952 (*Trichodonia*, TL: DR Congo, Katanga, Kolwezi & Zambia, Mpika, Muchlinga Mts.)

funeralis LAST, 1959: 64 (*Trichodonia*, TL: Ethiopia, Addis Abeba)

laticollis WASMANN, 1916: 95 (*Trichodonia*, TL: DR Congo, St. Gabriel near Kisangani)

parva CAMERON, 1950: 75 (*Trichodonia*, TL: DR Congo, Parc National Albert, volc. Nyamuragira, Nyasheke & Shamuheru)

= *angusta* LAST, 1977a: 83 (*Trichodonia*, TL: Ghana) synonymized by KISTNER & JACOBSON (1982: 86)

- ruandorum** PACE, 1996: 240 (*Trichodonia*, TL: Rwanda, Kayove)
- schoutedeni** BERNHAUER, 1929: 249 (*Trichodonia*, TL: DR Congo, Haut Uele, Moto)
- schwabi** WASMANN, 1916: 96 (*Trichodonia*, TL: Cameroon, Grand Batangan)
- setigera** WASMANN, 1916: 95 (*Trichodonia*, TL: DR Congo, St. Gabriel near Kisangani)
 = *gracillis* LAST, 1967: 116 (*Trichodonia*, TL: Angola, Marco de Canavezes, Distr. Benguela & Alto Chicapa, Gungo River & Campipopo River 120 km SSW of Dundo) synonymized by KISTNER & JACOBSON (1982: 90)
 = *laticollis* WASMANN: LAST, 1973: 145 (*Trichodonia*, TL: Ghana and Nigeria) misidentification
- striatus** LAST, 1977b: 953 (*Trichodonia*, TL: DR Congo, Musosa)

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