

Taxonomic Position of *Sissantobius mandibularis* (Lansberge) and Synonymy of *Orphnus* over *Sissantobius* (Coleoptera, Scarabaeidae, Orphninae)

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ABSTRACT

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Examination of the holotype of *Sissantobius mandibularis* (Lansberge, 1886) shows that this species shares all the taxonomic characters of the genus *Orphnus* and is closely related to *O. gilleti* Benderitter. Synonymy of *Orphnus* MacLeay over *Sissantobius* Ritsema is therefore established.

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INTRODUCTION

The scarab beetle subfamily Orphninae includes 2 tribes and 12 nominal genera (Arrow 1912; Paulian 1948, 1977, 1984; Nikolajev 1990) distributed mostly in tropical regions. The African continent has the most diverse fauna of orphnines with 6 genera and more than 100 described species. There are comprehensive taxonomic works on the larger genera, *Orphnus* MacLeay (Paulian 1948; Petrovitz 1971) and *Hybalus* Brulle (Baraud 1991), but the smaller groups are still poorly studied.

One of the less known taxa of the Afrotropical Orphninae is the monotypic genus *Sissantobius* Ritsema, 1888. The only species of the genus, *S. mandibularis* (Lansberge, 1886), was described from a single female and no additional specimens are known. Recently I had the opportunity to examine the holotype of *S. mandibularis* and compare it with the original description and with specimens of different species of *Orphnus* and other Orphninae genera.

SYSTEMATICS

Lansberge (1886) erected *Drepanognathus* for two species, *D. mandibularis* Lansberge, 1886 from South-West Africa and *D. falciger* Lansberge, 1886 from Madagascar. The generic name, however, was preoccupied by *Drepanognathus* Smith, 1858 (Formicidae) so Ritsema (1888) proposed *Sissantobius* as a substitute name.

Paulian (1977) designated *S. mandibularis* the type species of the genus *Sissantobius* and described a new species, *S. ferculoides* from Madagascar. Later he examined the type of *S. mandibularis* and found that it was not congeneric with Madagascar species (Paulian 1992). For the Madagascar species of *Sissantobius* he described a new genus *Madecorphnus* Paulian, 1992, with the type species *M. falciger* (Lansberge 1886) and the following diagnosis: body middle-sized, flat, punctuation of pronotum and head very sparse and fine, elytra without striae (only sutural stria feebly marked), mandibles and border of clypeus asymmetrical in males.

Having established that *S. mandibularis* was not congeneric with the Madagascar species of the genus, Paulian did not study it in any more detail.

In the short description of *Drepanognathus* (= *Sissantobius*), Lansberge mentions three characters distinctive for the taxon: depressed body, short clypeus, and long mandibles. Examination of the holotype of *S. mandibularis* shows that the beetle is as convex as the majority of *Orphnus* species and the shape of its clypeus is also typical of *Orphnus*. The shape of the mandibles, which look more prominent because of the shorter labrum, is also characteristic of a few species of *Orphnus*: *O. gilleti* Benderitter, *O. copridoides* Paulian, and *O. declivis* Schmidt.

Because the taxonomic characters of the species fit the diagnosis of *Orphnus* as it was commonly considered since the 19th century, the new synonymy is here established: *Orphnus* MacLeay, 1819 = *Sissantobius* Ritsema, 1888, syn.n.

The holotype of *S. mandibularis* is very similar to females (5 specimens examined) of *O. gilleti* and differs mostly in its smaller size and the sculpture of the clypeus. Since the original description of the species is incomplete the holotype is here re-described.

***Orphnus mandibularis* (Lansberge, 1886),
comb.n.**

Drepanognathus mandibularis Lansberge, 1886.
Sissantobius mandibularis (Lansberge, 1886): Arrow, 1912; Paulian, 1977, 1992.

Description. Holotype, female. Small-sized beetle (length 6.7 mm, width 3.4 mm) with elongated, oval, strongly shiny body (Fig. 1). Colour dark brown, clypeus, legs, and underside of body lighter.

Clypeus wide, with almost straight anterior margin, rounded laterally, finely bordered. Genae very small, not protruding past eyes. Eyes relatively large (their diameter equal to distance between eye and gula in ventral view), incompletely divided by canthus into almost equal dorsal and ventral parts. Frontal suture absent but head with a distinct transverse impression. Dorsal surface of clypeus impunctate.

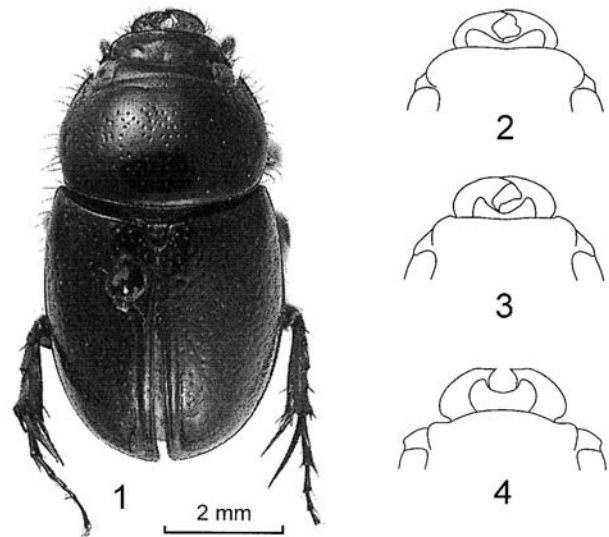
Labrum bilobed, wide, deeply sinuate in the middle and relatively feebly protruding past clypeus (Fig. 2). *Pronotum* convex, trapezoidal, with rounded lateral margins and base, about 2 times wider than long, not excavated antero-laterally and without processes. Anterior angles obtuse, posterior angles widely rounded, unclear in dorsal view. Pronotum finely bordered. Lateral margins somewhat crenulate in dorsal view. Dorsal surface with rounded punctures (larger punctures separated by 3-5 their diameters on disc becoming sparser laterally). Lateral margins with long yellowish setae.

Elytra convex, with feebly marked humeral umbones. Their maximum width is approximately in the middle. Sutural stria distinct but not reaching apex of elytron, other striae absent. Elytra punctate with punctures separated by 2-3 their diameters on disc and arranged in irregular rows. Lateral margins with long yellowish setae in basal half.

Scutellum narrowly rounded apically, about one-tenth the length of elytra.

Wings fully developed.

Anterior tibiae of typical scarabeoid shape, with 3 strong outer teeth. Lateral margin basad of outer teeth not crenulate. Apical spur of anterior tibiae acute, almost straight. Anterior tarsi well developed, about four-fifths the length of tibiae. Claws one-third the length of apical tarsal segment. Apical segment of anterior tarsi as long as segments 3 and 4 together, slightly wider than other segments. Ventral surface of anterior tibiae smooth with two rows of setae



Figs 1-5. 1. *Orphnus mandibularis* (Lansberge), holotype, female, habitus; 2. *idem*, head; 3. *O. gilleti* Benderitter, female, head; 4. *O. macleayi* Castelnau, female, head.

along sides and a few very long setae in the middle. Ventral surface of femora sparsely punctate, with one longitudinal keel.

Middle and posterior legs are similar in shape; posterior femora and tibiae about one-eighth longer than the middle ones. Tibiae somewhat triangular with two apical spurs, inner margin only slightly concave with one transverse keel. Upper spur of tibiae slightly longer than two basal segments of tarsi. Claws one-third the length of last tarsal segment. Femora almost impunctate.

Abdominal sternites irregularly punctate, pubescent with sparse long setae. Sternite 6 as long as sternites 2-5 together in middle.

Pygidium transverse, irregularly punctate, hidden under elytra.

Differential diagnosis *Labrum* bilobed, wide, deeply sinuate in the middle and relatively feebly protruding past clypeus. The species is similar to *O. gilleti*, *O. copridoides*, and *O. declivis* in having wide labrum which is deeply sinuate in the middle and feebly protruding past clypeus (Fig. 2, 3). Most of other *Orphnus* species have the labrum relatively longer and more protruding past clypeus (Fig. 4). *O. mandibularis* is most similar to *O. gilleti* but differs by its smaller size (length of known specimens of *O. gilleti* varies from 9 to 10 mm) and in lacking any traces of tubercles on the clypeus. It should be noted, however, that *O. gilleti* and *O. copridoides* are known from only a few specimens which are insufficient to appreciate the intraspecific variability.

Distribution The type specimen bears a hand-written label 'Greshof. Sissant Z.W.Afr.'. The label was

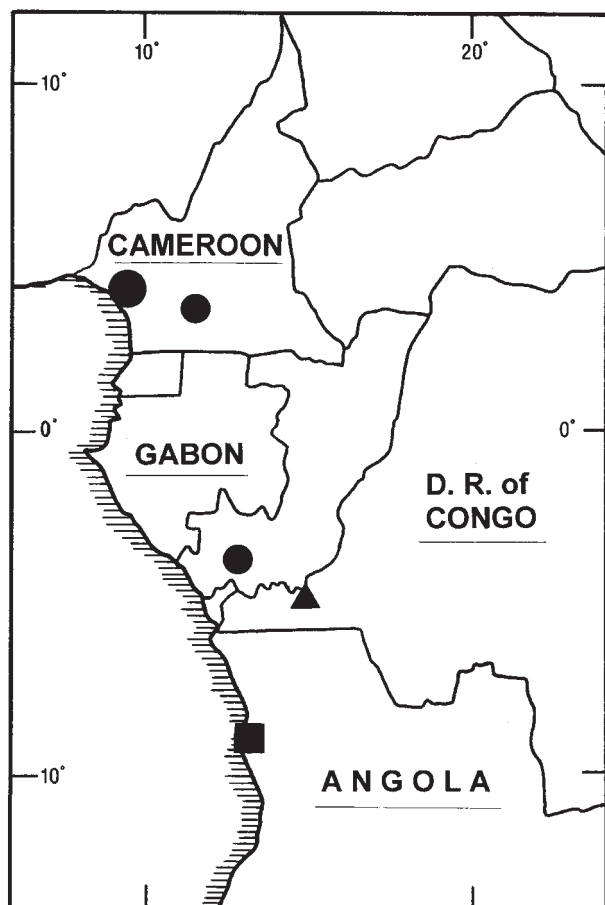


Plate 5. Distribution map of *O. mandibularis* and related species (■ – *O. mandibularis*, ● – *O. gilleti*, larger sign indicates the type locality; ▲ – *O. copridoides* Paulian).

cited in the original description of the species and by Paulian (1992) with no more precise definition of the locality. I was unable to trace 'Sissanto' with the available maps and gazetteers. In the literature, however, there is a short curriculum vitae of the collector, Anton Greshoff. Fransen *et al.* (1997) wrote that 'from 1877 to 1879 he [Greshoff] was the chief of the trading post (factorij) at Chissambo (= Quinsembo, Angola)' and mentioned that he also made extensive travels in the Congo area.

Quinsembo (Quicembo, 13° 05' E 7° 73' S) is situated in the Zaire Province of Angola. It is probable that the toponym 'Sissanto', on which the name of the genus was based, is either a variant spelling of Chissambo (Quinsembo) or the latter was misspelled.

Known localities of *O. mandibularis* and related species are limited to a narrow area on the west coast of the African continent from latitude 5° N to 10° S (Fig. 5). It is possible, however, that the species are more widely distributed in the evergreen tropical forests of the Congo basin.

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