

**A New Hydrophilid Genus from Madagascar**  
**(Coleoptera: Hydrophilidae)**  
**by FRANZ HEBAUER & MICHAEL HANSEN (†)**

**ABSTRACT**

A new Hydrophilidae genus *Hemikruia* gen. n. from Madagascar is described. It belongs to the subfamily Sphaeridiinae and the tribe Coelostomatini, closely related to the genus *Kruia* SPANGLER & PERKINS, 1981, described from Liberia. The new genus comprises one species at present, *Hemikruia aspericollis* sp. n. The male genitalia and the hind wing are figured.

**KEY WORDS**

Coleoptera, Hydrophilidae, Sphaeridiinae, tribe Coelostomatini, new genus, new species.

**INTRODUCTION**

After the sudden death of Michael Hansen I found among his papers an advanced draft for the description of a "possible new hydrophilid genus" *Hemikruia* from Madagascar. So I felt obliged to him to complete his description and to draw the figures.

**ACKNOWLEDGEMENTS**

I would like to thank the Bernice Pauahi Bishop Museum, Honolulu for loan of the type specimen for this study. Thanks are due to Prof. Dr. Garth N. Foster for reading the English manuscript.

**Genus *Hemikruia* HEBAUER & HANSEN, gen. n.**

**Type species:** *Hemikruia aspericollis* sp. n., here designated.

**Etymology:** The generic name is a combination of the Greek "hemi" , half, and "*Kruia*", a genus of Coelostomatini. The gender is feminine.

**Body** rather broadly oval, moderately convex (Fig. 1). Labrum relatively soft and pale, partly retracted under clypeus. Clypeus forming a shelf above antennal bases, reaching almost to outer edge of eyes, anterior margin somewhat convex, anterior corners rounded. Eyes of moderate size, separated ca. 5 x the width of one eye, somewhat protruding from outline of head, anterior margin moderately strongly emarginate.

**Head** rather weakly narrowed behind eyes. Maxillary palpi a little more than one third  $\times$  as long as width of head, second segment swollen, somewhat thicker than following segments, third segment a little shorter than second segment, fourth segment symmetrical, ca. as long as third segment. Mentum almost ca.  $1\frac{2}{3}$   $\times$  as wide as long, slightly narrowed posteriorly, rather strongly depressed anteromedially, anterior margin somewhat convex, very slightly emarginate medially. Labial palpi a little shorter than mentum, second segment somewhat elongate, with well developed subapical wreath of long and dense setae, third segment ca. as long as second segment, slightly narrower, symmetrical. Gula forming a transversely broad triangle, strongly narrowed anteriorly in somewhat concave lines, gular sutures fused for some distance anteriorly. Posterior tentorial pits small, very closely aggregated. Antennae 9-segmented, ca.  $2/3$   $\times$  as long as width of head, first segment long, second only ca.  $1/4$   $\times$  as long as first, third to fifth segments small, third elongate, fourth and fifth shorter, of subequal size, sixth segment forming a rather small, but very differentiated cupule, seventh to ninth segments forming a compact, pubescent club, which is ca. twice as long as wide.

**Pronotum** widest at base, narrowed anteriorly, surface rather evenly convex, without transverse series of punctures on posterior margin.

**Prosternum** well developed, somewhat convex medially, non-carinate, but with median, dentiform tubercle at anterior margin, prosternal process pointed, reaching midlength of procoxae. Procoxal cavities not closed posteriorly.

**Mesosternum** fused to mesepisterna, with rather strong, almost vertical, dentiform process behind middle, the process extended anteriorly in a short, anteriorly bifurcate median carina, and posterolaterally in a rather short, almost transverse ridge on each side; mesosternum with a well defined, rather deep anteromedian groove for the reception of prosternal process. Metasternum flat on lateral portions, bluntly raised medially, middle portion somewhat convex, with moderately narrow, anteromedian projection which is widely separated from mesosternal elevation; metasternum very densely and finely pubescent, more sparsely pubescent on middle portion, without femoral lines. Metepisterna ca.  $4$   $\times$  as long as wide, almost parallel-sided.

Abdomen with 5 ventrites of subequal length (1st and 5th a little longer), weakly convex, all ventrites somewhat dull, with uniform, very fine and dense, rather inconspicuous pubescence. First ventrite without median carina (except for a very short rudiment basally), posterior margin of 5th ventrite simply rounded.

**Elytra** with 10 well defined longitudinal series of punctures (and a similar marginal series), sutural series rather sharply impressed posteriorly, less so anteriorly, the remaining series slightly impressed. Epipleura well developed, very wide anteriorly, narrowed behind to level of metacoxae, only moderately widely continued to apex, moderately strongly oblique, pseudopipleura moderately wide throughout, rather strongly oblique. Scutellum of moderate size, triangular, slightly longer than wide.

**Anterior and posterior coxae** almost contiguous, middle coxae somewhat separated. All femora entirely glabrous (except for very sparse, extremely short and inconspicuous hairs), with sharp and complete tibial grooves on inner face (a little weaker on anterior femora, especially basally). Tibiae relatively stout and moderately strongly flattened, especially middle and posterior tibiae, with relatively fine and sparse spines on outer face. Tarsi 5-segmented, with long and moderately dense setae beneath; first segment of middle and hind tarsi ca.  $1\frac{1}{2}$   $\times$  as long as second segment, claws rather large, moderately curved.

**Hind wings** ca.  $1\frac{3}{4}$   $\times$  as long as elytra, r4 ("r-m crossvein") rising from about middle of radial cell ("pigmented area at anterior wing margin"); medial ("cubita") spur very short, rising from media posterior ("cubitus") slightly proximal to medial ("m-cu") loop; basal cell elongate, reaching a little less than halfway towards posterior wing margin; wedge cell not demarcated (i.e., open distally); anal ("jugal") lobe well developed, demarcated from remainder of wing by a sharp excision at posterior wing margin.

**Discussion:** The genus has all the diagnostic features of Coelostomatini given by HANSEN (1991) (maxilla not examined), except for a few details in the wing venation (i.e., slightly more distally placed r4 and more proximally placed medial spur; both characters occur to some extent in several other coelostomatine genera and are actually only slight deviations from the venation pattern described by HANSEN). Other wing characters are typical of more derived coelostomatines (*Coelostoma*, *Phaenonotum*, *Coelofletium*, *Dactylosternum*, etc.), especially the presence of 5 (rather than fewer) veins running to the posterior wing margin behind media

posterior ("cubitus") (unique within Hydrophilidae). Moreover, the distally open wedge cell is characteristic for the mentioned genera as well as *Hemikruia*. Judging from its long basal segments of middle and posterior tarsi and its compact antennal club, *Hemikruia* is apparently most closely related to *Dactylosternum* and allied genera (*Dactylostethus*, *Rhachioestethus*, *Galapagodacnum* and *Kruia*). It differs from all these genera in the markedly different mesosternal elevation which is dentiform and widely separated from anterior metasternal projection, and (except for *Galapagodacnum*) by almost non-carinate first ventrite. It differs furthermore from *Dactylostethus*, *Rhachioestethus* and *Galapagodacnum* by the evidently punctato-striate elytra, from *Kruia* by the much more even and regularly striate elytra, and from most *Dactylosternum* by the finely pubescent pronotum and elytra (see species description). *Hemikruia* differs from other genera of coelostomatini, e.g., by its widely separated meso- and metasternal elevations (except for *Quadriops*), compact antennal club, pubescent dorsal face, and (except for *Coelofletum*) entirely glabrous lower face of femora.

***Hemikruia aspericollis* HEBAUER & HANSEN, sp. n.**

**Holotypus (male, unicum):** Madagascar: Malagasy Rep.: Perinet, 900-1000 m, 10-17.i.1971 / J., J. H. & M. Sedlacek Colls.- The holotype is preserved in the collection of the Bernice Pauahi Bishop Museum, Honolulu.(BPBM).

**Length:** 4.8 mm; breadth: 2.9 mm.- Body rather broadly oval, moderately convex. Colour dark reddish brown, head a little darker posteriorly, pronotum and elytra with slightly paler margins. Head and pronotum somewhat dull, with very fine, partly obsolete, reticulate microsculpture and very dense punctation composed of intermixed, moderately coarse and very fine punctures, giving the surface a somewhat irregularly rugose appearance; anterior portion of head, notably middle and anterior portion of clypeus much more finely sculptured, with extremely fine punctation partly obscured by the reticulate microsculpture. Maxillary palpi, antennae and legs reddish; antennae with blackish club.

**Pronotum and elytra** with fine and rather sparse, yellow pubescence.

**Elytra** a little more shining than head and pronotum, with similar, very fine microsculpture, serial punctures moderately coarse and very dense, standing in slightly impressed striae, interstices very finely and rather sparsely punctate; elytral margins narrowly and slightly explanate.

Aedeagophore simply trilobate, with the median lobe narrowly tongue-shaped, as long as the parameres; all lobes tapered to ends; basal piece rather short; 9th sternite not reduced, with large median sclerite, exceeding the lateral struts.

**Etymology:** The name of the new species is derived from Latin: asper = rough; collis = neck.

**Bionomics:** Nothing is known about the habitat of this species.

**DISTRIBUTION:** Known only from the type locality.

**REFERENCES**

- HANSEN, M. 1991. The Hydrophiloid Beetles. Phylogeny, Classification and a Revision of the Genera (Coleoptera, Hydrophiloidea).- Biologiske Skrifter. Det Kongelige Danske Videnskabsbernes Selskab 40: 1- 368.
- SPANGLER, P. J. & PERKINS, P. D. 1981. A new genus and species of water scavenger beetle from Africa (Coleoptera: Hydrophilidae: Sphaeridiinae).- Pan-Pacific Entomologist 57: 220-226.

**AUTHOR'S ADDRESSES:**

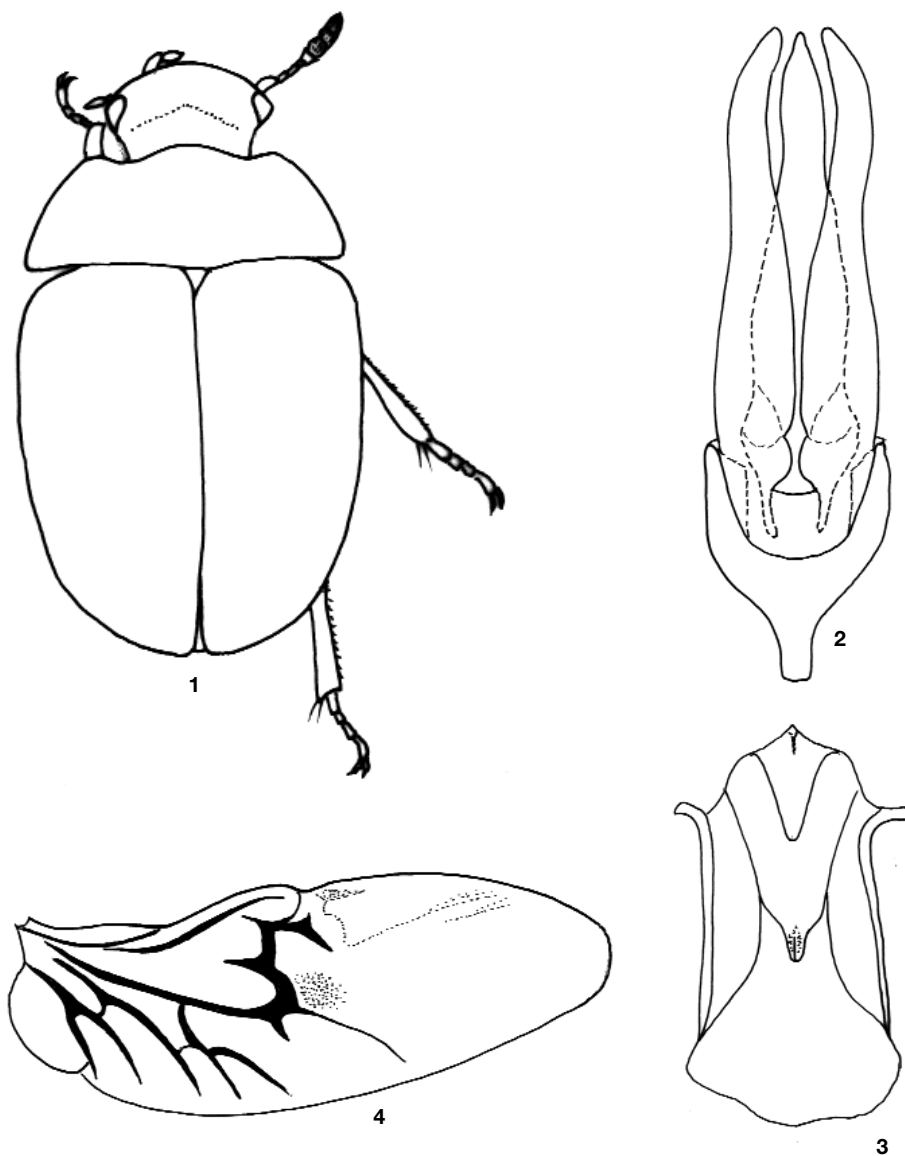
**Dr. Franz Hebauer**

Ulrichsberg 7

D-94539 Grafing, Germany (formerly University of Kassel, Germany).

**Dr. Michael Hansen** <sup>†</sup>  
( )

Department of Entomology, Zoological Museum,  
Universitetsparken 15, DK-2100 Copenhagen, Denmark



Figures: *Hemikruia aspericollis* HEBAUER & HANSEN, sp. nov.,  
 Fig. 1. body shape.  
 Fig. 2. aedeagus (dorsal view).  
 Fig. 3. sternum 9 (male).  
 Fig. 4. hind wing.

# ZOBODAT - [www.zobodat.at](http://www.zobodat.at)

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Acta Coleopterologica](#)

Jahr/Year: 2002

Band/Volume: [18\\_3](#)

Autor(en)/Author(s): Hebauer Franz, Hansen Michael

Artikel/Article: [A New Hydrophilid Genus from Madagascar \(Coleoptera: Hydrophilidae\) 25-28](#)