

Contribution to the knowledge of the Hydrophilidae of Malawi (Coleoptera: Hydrophilidae) FRANZ HEBAUER

ABSTRACT

Until now little was known about the Hydrophilid fauna of the African state Malawi. Now a large output from there could be evaluated for the first time. The species list is completed by well known records. A new species *Cercyon bezdeki* sp.n. from this area is described and illustrated. Another new species (*Helochares satoi* sp.n.) has been published in a separate paper (HEBAUER, 2003a), and further two new species of this output *Enochrus fosteri* sp.n. and *E. frieseri* sp.n. are published in a revisional paper on the African *Enochrus* (HEBAUER, 2003b).

KEY WORDS

Insecta, Coleoptera, Hydrophilidae, Africa, Malawi, check list, new species.

INTRODUCTION

The East African state of Malawi seems to be one of the most peculiar areas of the continent, comparable with the Cape Province, having a number of endemics not only in the fish fauna but also in water beetles. More than the Tanganyika Lake the Malawi Lake and the country itself are nearly completely surrounded by high mountains. Many water beetles, common in the whole Africa, might have been attained this area by passive migration (wind, birds etc.) but many other ancient inhabitants of Malawi have had no chance to escape from this isolated and deep valley and became endemics. Thus the quote of endemics in Hydrophilidae is clearly altered, compared with other areas of Africa except for the Cape Province, where the quote of endemics exceeds half the number of recorded species.

The updated checklist of Malawian Hydrophilidae, established by the recent outputs taken by J. BEZDEK in 2001-2002 lists more than 80 species, 3 of them seem to be endemics (*Cercyon bezdeki* sp.n., *Helochares satoi* HEBAUER, 2003a, *Enochrus frieseri* HEBAUER, 2003b).

The BEZDEK material is deposited in the private collection of Hans Hebauer, Rain-Dürnhart, Lower Bavaria, partly also in the collection of the author.

LOCALITIES

- a) Malawi S, Mulanje Mts. env., 22.-26.XII.2001, leg. J. Bezdek.
- b) Malawi S, Jali env., (30 km SE of Zomba), 26.-27.XII.2001, leg. J. Bezdek.
- c) Malawi S, Balaka env., 5.-6.I.2001, leg. J. Bezdek.
- d) Malawi S, Balaka env., 19.-20. XII.2001, leg. J. Bezdek.
- e) Malawi S, Masenjere env., (80 km S of Blantyre), 21.-22.XII.2001, leg. J. Bezdek.
- f) Malawi S, Chikawa env., (40 km S of Blantyre), 20.-21.XII.2001, leg. J. Bezdek.
- g) Malawi centr., Luwawa (30 km S of Mzimba), 26.-27.XII.2001, leg. J. Bezdek
- h) Malawi centr., Nkhotakota env., 2.-3.I.2002, leg. J. Bezdek.
- i) Malawi centr., Salima env., 5.-6.I.2002, leg. J. Bezdek.
- k) Malawi centr., Kasungu env., 27.-29.XII.2001, leg. J. Bezdek.
- l) Malawi centr., Kahingina Forest Reserve, 70 km N of Kasungunu, 29.-30.XII.2001, leg. J. Bezdek.
- m) Malawi centr., Dedza env., 6.-13. I. 2002, leg. J. Bezdek.
- n) Malawi centr., Dedza env., 16.-18.XII.2001, leg. J. Bezdek.
- o) Malawi N, Nkhata Bay env., (40 km SE of Mzuzu), 31.-XII.2001-1.I.2002, leg. J. Bezdek.
- y) After HANSEN, 1999.
- z) Additional material examined.

DESCRIPTIONS

Cercyon (Clinocercyon) bezdeki sp.n.

Holotypus (male): "Malawi centr. Dedza env., 6.-13.1.2002, leg. J. Bezdek" (coll. F. Hebauer).- Paratypes: 1 female: same data as holotype (coll. H. Hebauer); 2 exs.: "MALAWI: Chitipa District, Jembya Reserve, 8 km SSE Chisenga, 10-08S, 33-27E, 1,870 m, 11-20 Jan 1989, J. Rawlins, S. Thompson" (coll. F. Hebauer).

DIFFERENTIAL DIAGNOSIS

Among the present known larger African *Cercyon* *C. bezdeki* resembles greatly the species of the *pictus*-group (sensu BALFOUR-BROWNE, 1957:16), but it is clearly separate from those by the clypeus not at all produced in the middle. The attribution of the species of the *pictus*-group (*C. pictus*, *vulcanicus*, *pavidus*, *limbicollis*, *leachi*) to the indicated subgenus is problematic and needs revision. The new species described below is sufficiently characterized by the uniformly *ferrugineous* colour in combination with the concave mesosternal tablet and the finely and densely seriate elytra.

DESCRIPTION

Total length: 3.5 mm; total width: 2.2 mm.- Broadly oval, rather strongly convex. Uniformly ferrugineous, shining.

Head finely, very densely punctate; punctural interstices less than punctural diameter, without microsculpture. Anterior edge of clypeus almost straight. Maxillary palpi uniformly ferrugineous; antennae 9-segmented, antennal club not at all infuscated. Mentum trapezoid, widely concave medially, very finely, moderately densely punctate, intervals between punctation shining, without microsculpture. Pronotum widest at base, strongly narrowed anteriorly; sides evenly rounded, c. 2.33 times as wide (basally) as long (in the middle); lateral rim not continued around posterior angle, punctate as head. Elytra broadly oval, widest just behind shoulders, apex broadly rounded, c. 1.12 times as long as their combined width; 10 fine and close punctural series, slightly impressed from base to apex, slightly coarser laterally; series 6 - 9 abbreviated at base. Prosternum with a strong longitudinal median carina, somewhat laminate. Mesosternal tabella c. 4 times as long as wide, widest in the middle, point both anteriorly and posteriorly, distinctly concave below, with a few very coarse punctures. Metasternum without femoral lines, without anterolateral arcuate ridge, covered with dense reticulate microsculpture, dull, impunctate; elevated middle portion regularly pentagonal, irregularly coarsely punctate. Epipleura distinctly oblique in the thoracic region. Abdomen dull; first ventrite c. 3 times as long (in the middle) as second ventrite, with a distinct median longitudinal carina. Tibiae rather strongly spinose; tarsi long and slender, nearly as long as their tibiae. Aedeagus with the median lobe much shorter than parameres, the latter spoon-shaped (Fig. 1).

ETYMOLOGY: This species is dedicated to its finder, the coleopterist J. Bezdek.

DISTRIBUTION: At present known only from Malawi.

CHECK LIST

Species

Locality

<i>Berosus (Enoplurus) cuspidatus</i> ERICHSON, 1843	f, i
<i>Berosus (Enoplurus) furcatus</i> BOHEMAN, 1851	y
<i>Berosus (Enoplurus) tetracanthus</i> REGIMBART, 1906	i
<i>Berosus (s.str.) gebieni</i> KNISCH, 1922	a, b
<i>Berosus (s.str.) lesnei</i> D'ORCHYMONT, 1937	h
<i>Berosus (s.str.) neumanni</i> KNISCH, 1922	c
<i>Berosus (s.str.) rubiginosus</i> KUWERT, 1890	a, b, c, d, g, h, i, k
<i>Berosus (s.str.) ugandanus</i> BALFOUR-BROWNE, 1948	k
<i>Berosus (s.str.) vitticollis</i> BOHEMAN, 1851	a, b, c
<i>Regimbartia compressa</i> (BOHEMAN, 1851)	a, b, d, h, k
<i>Regimbartia nilotica</i> (SHARP, 1903)	z
<i>Regimbartia obsoleta</i> (REGIMBART, 1906)	b, c, d, h, i, l
<i>Allocotocerus segrex</i> (D'ORCHYMONT, 1939)	g, h, l, m, k
<i>Allocotocerus seriatus</i> (REGIMBART, 1906)	k
<i>Allocotocerus simplex</i> (REGIMBART, 1906)	b

<i>Allocotocerus subaeneus</i> (ERICHSON, 1843)	a, c, k
<i>Thysanarthria atriceps</i> (REGIMBART, 1903)	h
<i>Amphiops globus</i> ERICHSON, 1843	a, c, g, i, k, l
<i>Amphiops lasioides</i> REGIMBART, 1903	e, h, i, k
<i>Amphiops senegalensis</i> (CASTELNAU, 1840)	a, e, h, i, k
<i>Paracymus amplus</i> WOOLDRIDGE, 1971	a
<i>Paracymus chalconus</i> REGIMBART, 1903	a, k, l, y
<i>Laccobius (Microlaccobius) algiricus</i> HANSEN, 1999	z
<i>Laccobius (Hydroxenus) caffer</i> BOHEMAN, 1851	d
<i>Laccobius (Microlaccobius) minor</i> (WOLLASTON, 1867)	z
<i>Laccobius (Microlaccobius) praecipuus</i> KUWERT, 1890	z
<i>Laccobius (Hydroxenus) revelierei</i> PERRIS, 1864	a, k
<i>Agropydrus albescens</i> (REGIMBART, 1903)	z
<i>Helochares (s.str.) dilutus</i> (ERICHSON, 1843)	c, d
<i>Helochares (s.str.) dollmani</i> BALFOUR-BROWNE, 1950	a
<i>Helochares (s.str.) longipalpis</i> MURRAY, 1859	a, f, k, l
<i>Helochares (s.str.) pallens</i> (MACLEAY, 1825)	a, b, c, h, i, o
<i>Helochares (s.str.) satoi</i> HEBAUER, 2003a	c, d
<i>Helochares (Hydrobaticus) blaesius</i> D'ORCHYMONTE, 1936	a, c, d
<i>Helochares (Hydrobaticus) congruus</i> D'ORCHYMONTE, 1939	d
<i>Helochares (Hydrobaticus) crispus</i> D'ORCHYMONTE, 1939	a, c, d, g, l
<i>Helochares (Hydrobaticus) meracrus</i> BALFOUR-BROWNE, 1950	c, d, h, i, k, l
<i>Helochares (Hydrobaticus) mersus</i> D'ORCHYMONTE, 1939	c, d, e, f, h, m
<i>Helochares (Hydrobaticus) notaticollis</i> REGIMBART, 1906	m
<i>Helochares (Hydrobaticus) phallicus</i> D'ORCHYMONTE, 1936	c, d
<i>Helochares (Hydrobaticus) skalei</i> HEBAUER, 2002a	c, k, l, m
<i>Chasmogenus africanus</i> (D'ORCHYMONTE, 1937)	a, k
<i>Chasmogenus patrizii</i> (BALFOUR-BROWNE, 1948)	a, h, k, m, o
<i>Enochrus (Methydrus) anticus</i> (REGIMBART, 1905)	k
<i>Enochrus (Methydrus) cf. anticus</i> , sp.n.?	k
<i>Enochrus (Methydrus) circumductus</i> (REGIMBART, 1905)	g, k, m
<i>Enochrus (Methydrus) fosteri</i> HEBAUER, 2003b	b, k
<i>Enochrus (Methydrus) friesei</i> HEBAUER, 2003b	a, c, h, i, m
<i>Enochrus (Methydrus) meracrus</i> BALFOUR-BROWNE, 1952	a, h, k, m, o
<i>Enochrus (Methydrus) pallas</i> BALFOUR-BROWNE, 1958	g, h
<i>Enochrus (Methydrus) leileri</i> HEBAUER, 2002b	h
<i>Enochrus (Methydrus) rubidus</i> KNISCH, 1924	z
<i>Enochrus (Methydrus) cf. meracrus</i> BALFOUR-BROWNE, 1952	k
<i>Sternolophus (Neost.) angolensis</i> (ERICHSON, 1843)	a, c, d, k
<i>Sternolophus (s.str.) unicolor</i> CASTELNAU, 1840	a, b, c, d, f
<i>Hydrochara elliptica</i> (FABRICIUS, 1801)	y, z
<i>Hydrochara fulvofemorata</i> (FAIRMAIRE, 1869)	a, d
<i>Hydrobiomorpha celata</i> MOUCHAMPS, 1959	z
<i>Hydrobiomorpha cultrifera</i> (REGIMBART, 1903)	y, z
<i>Hydrobiomorpha straeleni</i> BALFOUR-BROWNE, 1950	d, m
<i>Hydrobiomorpha wehncki</i> (PAULINO D'OLIVEIRA, 1880)	z
<i>Hydrobiomorpha zetha</i> (BALFOUR-BROWNE, 1950)	z
<i>Cyclotypus tinctus</i> HEBAUER, 2002a	z
<i>Coelostoma (s.str.) aethiopicum</i> REGIMBART, 1903	i, ?e
<i>Coelostoma (s.str.) deplexum</i> BALFOUR-BROWNE, 1950	d
<i>Coelostoma (s.str.) erinna</i> BALFOUR-BROWNE, 1950	h, k
<i>Coelostoma (s.str.) jeanneli</i> MOUCHAMPS, 1958	d
<i>Coelostoma (s.str.) orchymonti</i> MOUCHAMPS, 1958	h
<i>Coelostoma (s.str.) phalacroides</i> REGIMBART, 1903	
<i>ssp. congoensis</i> MOUCHAMPS, 1958	a, d, i, k, n
<i>Coelostoma (s.str.) ?punctulatum</i> (KLUG, 1833)	m
<i>Coelostoma (s.str.) remotum</i> MOUCHAMPS, 1958	?a, d, k
<i>Coelostoma (s.str.) rhomphea</i> D'ORCHYMONTE, 1936	a, c, e, k, m, n
<i>Coelostoma (s.str.) rohani</i> D'ORCHYMONTE, 1930	a, c, h, k, m
<i>Coelostoma (s.str.) rutarum</i> D'ORCHYMONTE, 1936	a, c, d, i
<i>Coelostoma (Lachnocoelostoma) horni</i> (REGIMBART, 1902)	g, i, o,

<i>Coelostoma trilobum</i> MÜLLER, 1942	d, i
<i>Cercyon (Arcocercyon) dieganus</i> REGIMBART, 1903	a, b, c, g, h, i
<i>Cercyon (Arcocercyon) luteus</i> D'ORCHYMONT, 1942	a, b, h
<i>Cercyon (Arcocercyon) lutulentus</i> D'ORCHYMONT, 1942	m
<i>Cercyon (s.str.) putricola</i> WOLLASTON, 1867	b, h
<i>Cercyon (s.str.) sturmii</i> ROTH, 1851	m
<i>Cercyon (Clinocercyon) bezdeki</i> sp.n.	m
<i>Sphaeridium fallaciosum</i> BALFOUR-BROWNE, 1950	y

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AUTHORS' ADDRESS:

Dr. habil. Franz Hebauer
Johann-Krümpel-Str. 1
D - 94447 Plattling, Germany

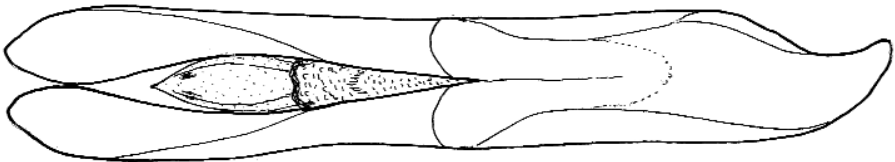


Fig. 1. *Cercyon (s.str.) bezdeki* sp.n., holotypus, aedeagus.

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