

**Six new species of the genus *Helochaeres* MULSANT, 1844,
subgenus *Hydrobaticus* MAC LEAY, 1871 from Africa and Asia.
(Coleoptera: Hydrophilidae)
by Franz Hebauer**

ABSTRACT:

Six new species of the genus *Helochaeres* MULSANT, 1844 from the Old World, *H. (Hydrobaticus) cancellatus* sp. n. from Sri Lanka, *H. (H.) interjectus* sp. n. from Madagascar, *H. (H.) loticus* sp. n. from Thailand, *H. (H.) nigroseriatus* sp. n. from Zimbabwe, *H. (H.) ubudensis* sp. n. from Bali and *H. (H.) serpentinus* sp. n. from South Africa are described in this paper. The male genitalia of all described species are figured.

KEY WORDS:

Coleoptera, Hydrophilidae, *Helochaeres*, *Hydrobaticus*, new species, Africa, Asia.

INTRODUCTION

The *Helochaeres* subgenus *Hydrobaticus* is mainly distributed in Africa, South and South-East Asia and Australia. Few species occur in America. A recent review of the African species (HEBAUER 1996) lists 66 species. The Oriental species are treated in various papers (D'ORCHYMONT 1919, 1925, 1940, 1943 a, b, 1949, HEBAUER 1995 a, b, 1998 a, b) with a total of 23 species. C. H. S. WATTS (1995) revised the Australian members of this subgenus, resulting in the recognition of 12 valid species. Two further Australian species are just under description (HEBAUER, in press). From Japan there are known only 3 species (HEBAUER 1995, MATSUI 1995). Only two species are known from Central and North America.

In this paper 6 species of this problematic subgenus can be added as new to science. Some presumed new species cannot be described until immature males and females not associated with males are supplemented by definitive males.

ABBREVIATIONS:

CFH Coll. Franz Hebauer, Deggendorf-Ulrichsberg
MNS Museum für Naturkunde Stuttgart (W. Schawaller)
MZL Museum of Zoology and Entomology Lund University (R. Danielsson)
NME Naturkundemuseum Erfurt (M. Hartmann)
NMW Naturhistorisches Museum Wien (M. Jäch)
ZMN Zoologisches Museum an der Humboldt-Universität Berlin (M. Uhlig)

DESCRIPTIONS

Helochaeres (Hydrobaticus) cancellatus sp. n.

Holotypus: (male): Ceylon, W. Prov. Labugama, 24 mls ESE Colombo, 21.1.1962, Loc. 17: \ On rocks covered by trickling water \ Lund University Ceylon Expedition 1962. Brinck-Andersson-Cederholm. (MZL).

Paratypes: 4 males, 4 females (same data).

Diagnose: This *Helochaeres* is an extremely isolated species among all forms of this subgenus. It may be readily recognized by the grid-shaped punctural series of elytra with almost rectangular punctures and by the very coarse punctation with shagreened interstices on head and pronotum, also by the relative length of the tarsal segments. This species recalls a large *Acidocerus*.

Description: 3.5 mm x 1.7 mm (3.0-3.5 mm).- Body shape broad oval, nearly parallel-sided, moderately convex. Surface dirty yellow, with very coarse sculpture.- Head entirely coarsely densely punctate, punctural interstices shagreened. Clypeal suture deeply impressed, dark. Labrum infusate. Maxillary palpi moderately long, yellow, last joint slightly darkened apically. Pronotum sculptured like head, laterally broadly flattened. Elytra with 12 series of very large rectangular blackened punctures, interstices smaller than punctural size, almost costiform. Scutellar stria of 10-12 punctures. Elytral flanks explanate; legs yellowish. Claw segment of hind tarsi almost as long as the preceding segments combined (like *Acidocerus*!). Aedeagus elongate, basal piece of about half length of parameres, the latter narrow, nearly parallel-sided, apically converging, distinctly enlarged at inner side of last third. Median lobe very thin, extending far beyond the parameres and with a whip-shaped tip as long as parameres, laterally dentate from base to last third. (Fig. 1).

Etymology: Lat.: cancellatus = grid-shaped (referring the sculpture of elytra).

Distribution: Only known from the type locality.

Helochaeres (Hydrobaticus) interjectus sp. n.

Holotypus (male): E-Madagascar (12) Morarano Chrome-Ambakireni, 10 km W Maheriara, 21.1.1995, 1200 – 1300 m, leg. J. Janak (NMW).

Paratypes: 1 female: Madagascar est, 1.000-1.200 m, P. N. Ranomafana / Vohiparara, 21.-24.1.1993, J. Janak leg. (NMW); 1 male, 1 female: Madagascar est, 1.000-1.200 m, Anosibe Jfody pr. / Moramanga, 31.1.-2.2.1993, J. Janak lgt. (NMW, CFH).

Diagnose: The aedeagus and the almost obsolete elytral series suggest that this presumed endemic species is closely related to *H. dilutus* (Erichson) and *H. lividus* (Forster), in the subgenus *Helochaeres* s. str.

Description: 6.0 mm x 3.0 mm. (4.5 – 6.0 mm).- Body shape oval, moderately convex; surface dirty yellowish brown, slightly infuscated, very densely finely punctate.- Head uniformly densely, rather finely punctate, punctural interstices smaller than punctural size, shagreened. Labrum and antennal club black. Maxillary palpi as long as head and half of pronotum, yellow. Pronotum punctate as head, slightly darkened medially in the shape of an M. Elytra punctate like head and pronotum, serial punctures of elytral striae very fine, longitudinally separated by a distance wider than their diameter, not at all striiform, less evident on disc, coarser laterally. Scutellar stria wanted. Legs dark brown. Underside black. Aedeagus compact, with parameres apically terminating to widely distant and broadly button-shaped rounded clubs with two strong spines besides the prolonged median lobe. (Fig. 2).

Six new species of the genus *Helochares* MULSANT from Africa and Asia

Etymology: Latin: interjectus = inserted (between the subgenera *Helochares* s. str. and *Hydrobaticus* mainly concerning the shape of aedeagus).

Distribution: Presumably endemic.

***Helochares (Hydrobaticus) loticus* sp. n.**

Holotypus (male): N-Thailand: Lom Sak, 40 km N Phetchabun, ca. 120 m, August 1987, leg. W. Thielen (MNS).

Paratypes: 4 males, 4 females (same data).

Diagnose: This species is very similar in size, sculpture and colour to some sympatric ones. The identification not can be certain in the absence of males taken at the same time.

Description: 4.0 mm x 2.0 mm.- Body shape oval, moderately convex, surface yellow.- Head densely moderately coarsely punctate, shining. Labrum infuscated. Maxillary palpi slender, as long as head and half of pronotum, uniformly yellow. Pronotum punctate like head. Elytra with 12 slightly impressed series of punctures, hardly to distinguish from the interval punctation. The irregular series of coarser punctures much more distinct. Intervals flat, punctate like head and pronotum. Legs yellow. Aedeagus very distinct, elongate and parallel-sided, parameres apically sinuated and strongly narrowed there; median lobe narrowed and pointed terminally, accompanied by a pair of long spines. (Fig. 3).

Etymology: The shape of the aedeagus recalls a lotus bloom.

Distribution: Only known from type locality.

***Helochares (Hydrobaticus) nigroseriatus* sp. n.**

Holotypus (male): NE Zimbabwe, Umgebung Kotwa, Broken Causeway, 17°0'S 32°45'E, 8. 1986, leg. M. Lillig, S. Potel (NME).

Paratypes: 6 males, 6 females (same data; NME); 143 ex. (all immature!): Zambia, Kafue NP, Chunga Camp, 15°02'35" S 26°00'09" E, 27.3.1993, lux, leg. M. Uhlig (ZMB).

Diagnose: The aedeagus of this species suggests being closely related to *H. striatus* BOHEMAN, *H. strictus* D'ORCHYMONT and *H. ivani* HEBAUER. From all these allied it differs in having stronger serial punctures of the elytral striae, evidently coarser than the interstitial punctures. It is readily distinguishable by its much smaller size from *H. ivani*, which has weaker serial punctures.

Description: 4.4 mm x 2.3 mm (4.4 – 5.1 mm).- Body shape broadly oval, moderately convex, surface yellowish brown, with black elytral series and infuscated parts of head and labrum, shining.- Head finely densely punctate, shining. Mid of labrum and forehead, postfrons and clypeo-frontal suture black. Maxillary palpi moderately long and slender, reaching back to anterior third of pronotum, yellow. Pronotum and elytra punctate as head. Serial punctures of elytral striae black, moderately strong and closely approximated, laterally and apically much coarser, but not confluent and not striiform. Punctuation of the elytral interstriae dense and much finer than serial punctures, shining. Irregular series of coarser punctures on 3rd and 5th interval distinct. Scutellar stria composed of 12 punctures of the same size as the serial punctures. Legs brown. Aedeagus from the

same type as in *H. striatus* BOHEMAN, evenly converging at apical third, median lobe narrow, short, with large membrane, accompanied by a pair of rather compact spines with hardly outward hooked tips.

Parameres cylindrical, distinctly narrowed at base (Fig. 4).

Etymology: Characterising the black elytral series.

Distribution: Known from Zambia and Zimbabwe up to now.

***Helochares (Hydrobaticus) ubudensis* sp. n.**

Holotypus (male): Bali, Ubud, BA 7, 10. & 11.10.1990, 180 m, Balke (NMW).

Paratypes: 1 male: (same data; CFH); 1 female: Bali, Ubud, BA 1 & 2, 25.-26.8.1990, 180 m, Balke (NMW); 2 male, 1 female: West Malaysia/Pahang, Kuala Lipis surr., small pools in secondary forest, 13.-14.4.1997, 60 m, Balke & Hendrich leg. (NMW, CFH).

Diagnose: This species cannot be separated from *H. lentus* and some other allied sympatric species in the absence of males. In contrast the structure of the aedeagus is not likely to be confused with that of any other Oriental species.

Description: 4.5 mm x 2.2 mm.- Body shape oval, moderately convex, surface dirty yellow.- Head rather finely, densely punctate, shining. Labrum unfuscated medially. Maxillary palpi long and slender, reaching back to the first third of pronotum. Pronotum punctate like head. Elytra slightly widened behind middle. Serial punctures very fine and dense, black, hardly larger than the interstitial punctures, intervals wide and even. Irregular series of coarser punctures on 5th interval distinct. Scutellar stria composed of 8-10 distinct punctures. Legs yellow. Aedeagus with long and narrow parallel-sided median lobe and just so long parameres, these flat and strongly narrowed from base to pointed apices, basally with two pairs of slender spines (Fig. 5).

Etymology: The type locality is Ubud, Bali.

Distribution: Until now only known from the type locality.

***Helochares (Hydrobaticus) serpentinus* sp. n.**

Holotypus (male): R. S. Africa, Prov. Wilderness NP, Lang Wie, 33°59'0" S 22°40'6" E, Malachite bird hide, *Juncus kraussii*-bush litter sievings, 30.11.1996, leg. B. + M. Uhlig (ZMB).

Paratypes: 1 male, 2 females (same data).

Diagnose: Very similar in size, sculpture and colour to *H. bohemani* D'ORCHYMONT. It differs from that species in having much finer serial punctures of the elytral striae and distinctly longer maxillary palpi. The shape of the aedeagus is quite distinct.

Description: 6.0 mm x 2.8 mm. - Body shape oval, moderately convex. Surface yellowish brown, shining.- Head finely densely punctate. Labrum clear. Maxillary palpi long and very slender, reaching back beyond mid of pronotum. Pronotum punctate like head. Serial punctures of elytral striae fine, not impressed on disc, a little coarser laterally. Intervals flat and wide, very finely punctate. Irregular series of coarser punctures hardly recognizable. Elytra infuscated at disc, except base, 1st interval, apex and margin. Legs yellowish. Aedeagus long, but rather compact, cylindrically arched, parameres flat, apically widened and slanting at outer side. Median lobe narrow and long, apically spoon-

shaped and strongly curved downward. The main spines sinuate, reaching the ends of the parameres. (Fig. 6).

Etymology: Concerning the characteristic twisted main spines of aedeagus.

Distribution: Only known from type locality.

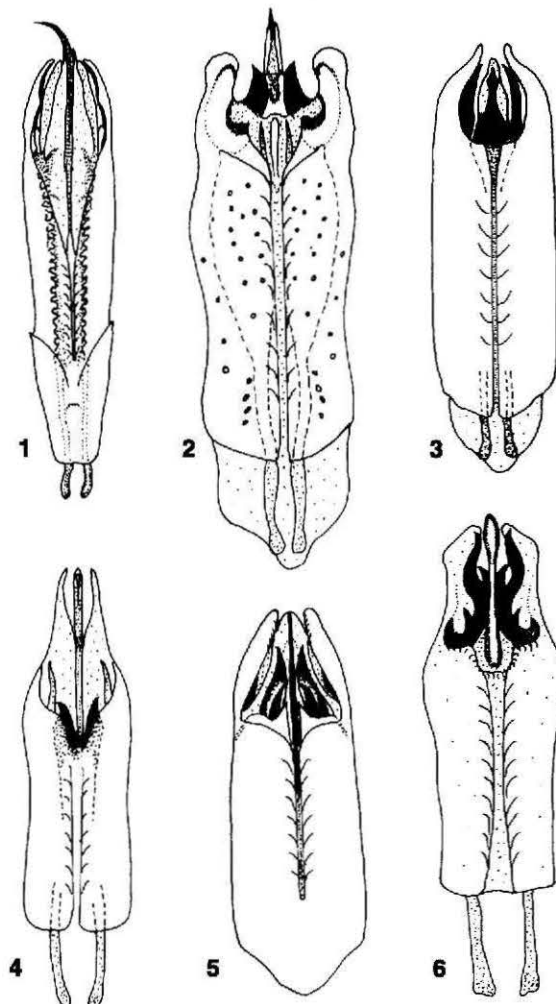
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Figures:

Fig. 1. *Helochares (Hydrobaticus) cancellatus* sp. n. (holotype):
Aedeagus, dorsal view (1.15 mm).

Fig. 2. *Helochares (Hydrobaticus) interjectus* sp. n. (holotype):
Aedeagus, dorsal view (1.35 mm).

Fig. 3. *Helochares (Hydrobaticus) loticus* sp. n. (holotype):
Aedeagus, dorsal view (1.10 mm).

Fig. 4. *Helochares (Hydrobaticus) nigroseriatus* sp. n. (holotype):
Aedeagus, dorsal view (1.00 mm).

Fig. 5. *Helochares (Hydrobaticus) ubudensis* sp. n. (holotype):
Aedeagus, dorsal view (1.70 mm).

Fig. 6. *Helochares (Hydrobaticus) serpentinus* sp. n. (holotype):
Aedeagus, dorsal view (1.85 mm).

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