

# Descriptions of ten new species of *Hydrochus* from different parts of the World (Coleoptera: Hydrochidae)

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**Abstract.** Ten new *Hydrochus*-species are described (Coleoptera: Hydrochidae): from Australia *Hydrochus matthewsi*, *H. schoenmanni*, *H. verae*, *H. wewalkai* and *H. schillhammeri*; from South America *H. drechseli*, *H. johannapietersenae* and *H. jenniferiduae*; from Java *H. satishanandi*; from China, Malaysia and Thailand *H. rishi*.

**Samenvatting.** Tien nieuwe *Hydrochus*-soorten uit de hele wereld (Coleoptera: Hydrochidae). Tien nieuwe *Hydrochus*-soorten uit de Wereld worden beschreven: uit Australië *Hydrochus matthewsi*, *H. schoenmanni*, *H. verae*, *H. wewalkai* en *H. schillhammeri*; uit Zuid-Amerika *H. drechseli*, *H. johannapietersenae* en *H. jenniferiduae*; uit Java *H. satishanandi*; uit China, Maleisië en Thailand *H. rishi*.

**Résumé.** Dix espèces nouvelles d'*Hydrochus* du Monde entier (Coleoptera: Hydrochidae). L'auteur décrit dix espèces nouvelles d'*Hydrochus* d'Australie *Hydrochus matthewsi*, *H. schoenmanni*, *H. verae*, *H. wewalkai* et *H. schillhammeri*; d'Amérique du sud *H. drechseli*, *H. johannapietersenae* et *H. jenniferiduae*; du Java *H. satishanandi*; du Chine, Malaisie et Thaïlande *H. rishi*.

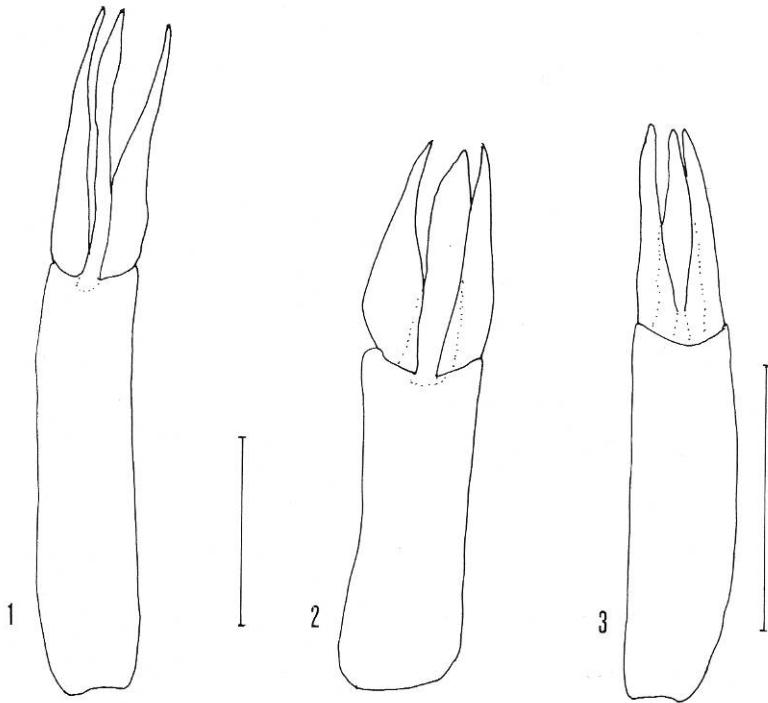
**Key words:** Coleoptera - Hydrochidae - World - new species.

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## Introduction

Hydrochidae is a family composed of 2 genera: *Hydrochus* Leach, 1817 with about 100 species and *Kiransus* Makhan, 1994 with only one species, named *Kiransus aschnae* Makhan, 1994 from Africa (Makhan 1994a). The Naturhistorisches Museum, Wien, Austria and the Zoölogische Museum Amsterdam, the Netherlands, sent me some *Hydrochus* specimens for identification. Ten new species were found among these samples. They will be presented below. Motschulsky (1860) described one new species for Australia, Blackburn (1898) described nine species for Australia, Makhan (1994b) described five species for Australia and in the present paper five more for Australia. Bruch (1915) described one new species for South America, Knisch (1924) described 16 species for South America, d'Orchymont (1939) described one new species for South America, Makhan (1992, 1993, 1994a, 1994b, 1995) described twenty five species for South America and in the present paper three more species for South America. d'Orchymont (1926) named a Java species as *Hydrochus lacustris* Nietner subspecies *inornatus*, while Makhan (1994a) raised it to specific rank. *Hydrochus satishanandi* sp.n. is the second species from Java. *Hydrochus japonicus* Sharp (1873) was the only species of the genus recorded from China, Malaysia and Thailand, another species *Hydrochus rishi* sp.n. is described here from the region mentioned above. The holotype of *Hydrochus satishanandi* sp.n. is deposited in the Zoölogische Museum Amsterdam, the Netherlands, the holotype of *Hydrochus rishi* sp.n. in the Chinese Academy of Sciences, Shenyang, China, and all other holotypes in the Coleoptera Collection of the Naturhistorisches Museum, Wien, Austria.

I would like to make some corrections of the spelling in my 1995 paper: *Kiransus aschnae* Makhan, 1994 should read *Kiransus aschnae*, *Hydrochus soesilae* Makhan, 1994 should read *Hydrochus soesilae* and *Hydrochus daviniaae* Makhan, 1995 should read *Hydrochus daviniaae*.



Figures 1-3. Male genitalia of 1. *Hydrochus matthewsi* sp.n., 2. *Hydrochus schoenmanni* sp.n., 3. *Hydrochus verae* sp.n. (scale line 0.25 mm).

#### *Hydrochus matthewsi* sp. n.

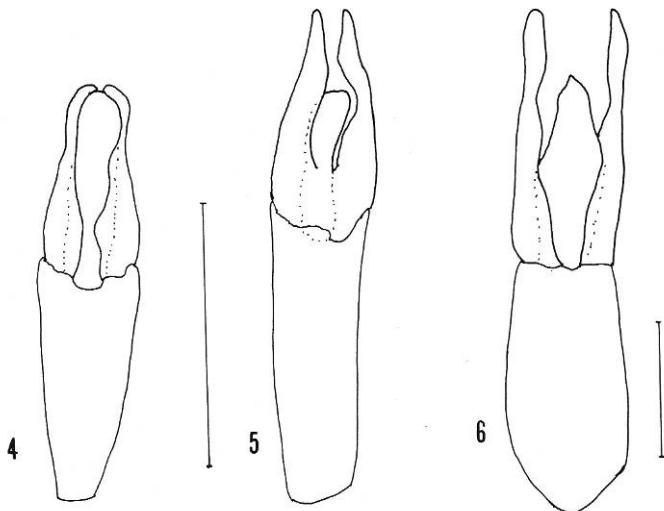
Holotype: ♂. Australia, Queensland, Marbeeba, 700 m, 22.I.1993, (G. Wewalka leg.) (only the holotype).

Description (holotype ♂): Body elongated, 3.9 mm in length, 1.3 mm in width. Dorsal side shiny. Colour of head, pronotum, scutellum and elytra brown, with a blue-green metallic gloss. Head with coarse punctures. Pronotum longer than wide, lateral area smooth. Disc with seven deep depressions. Anterior margin of pronotum with three depressions, one in the center, two behind this. Posterior margin with four depressions. Elytron length 2.4 mm, the posterior third widest, lateral area smooth, stria punctures wider than interstriae. 5th and 9th interstriae carinate almost the entire length, tubercles absent. Apical holes absent. Elytral apices broadened and rounded.

Male genitalia (Fig.1): Basal piece long, median lobe slightly longer than paramera.

Etymology: The species is named after Eric Matthews, Curator of the Coleoptera Collection, South Australian Museum, Adelaide, South Australia.

Remarks: This species seems to be allied to *H. parallelus* Blackburn (1898) from Australia and *H. schoenmanni* sp.n., but there is a difference in the shape of the male genitalia. *H. parallelus* paramera are wider than in all Australian species and the median lobe is short; the median lobe in *H. matthewsi* is narrower than in *H. schoenmanni* sp.n.



Figures 4-6. Male genitalia of 4. *Hydrochus wewalkai* sp.n., 5. *Hydrochus schillhammeri* sp.n. 6. *Hydrochus drechsleri* sp.n. (scale line 0.25 mm).

#### *Hydrochus schoenmanni* sp. n.

Holotype: ♂. Australia, Queensland, Marbeeba, 700 m, 22.I.1993 (G. Wewalka leg.) (only the holotype).

Description (holotype ♂): Body elongated, 4.0 mm in length, 1.3 mm in width. Dorsal side shiny, colour of head, pronotum, scutellum and elytra black, with a blue-green metallic gloss. Head with fine punctures. Pronotum longer than wide, lateral area smooth. Disc with nine large deep depressions. Anterior margin of pronotum with five depressions, two at the lateral side, one at the center, two behind this. Posterior margin with four depressions.

Elytron length 2.6 mm, the posterior third widest, lateral area smooth, stria punctures wider than interstriae. Interstriae convex, tubercles absent. Apical holes absent. Elytral apices broadened and rounded.

Male genitalia (Fig. 2): Basal piece long, paramera longer than median lobe.

Etymology: This species is named after Heiner Schönmann from Austria.

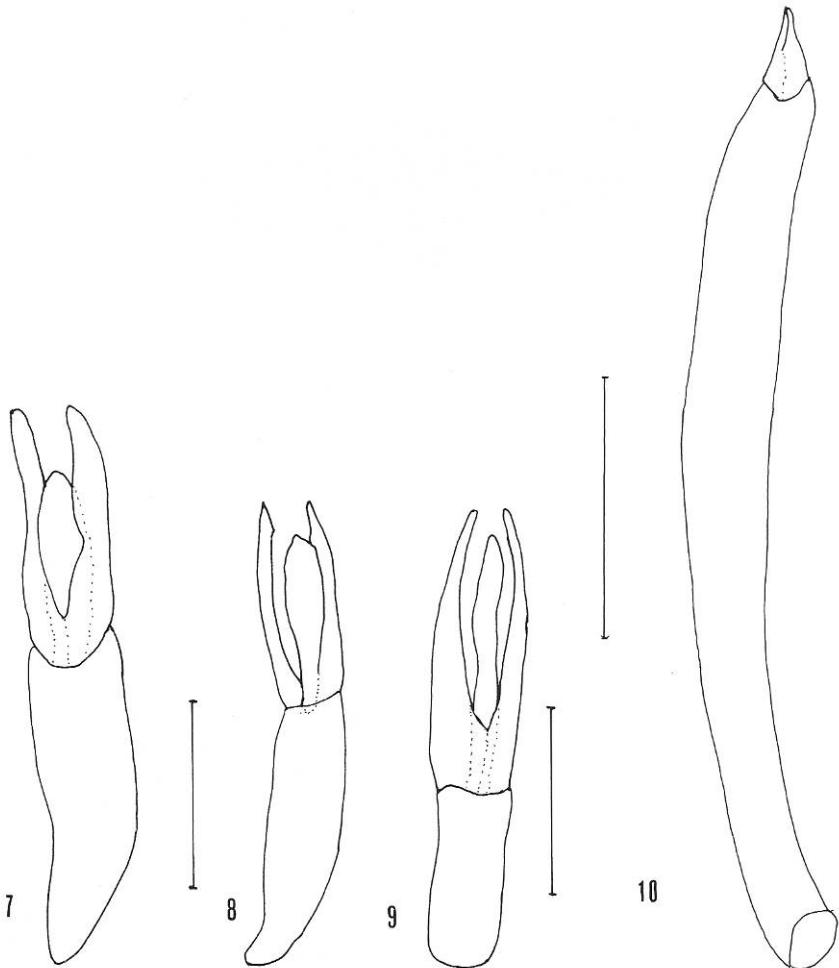
Remarks: This species is very similar to *H. matthewsi* sp.n., but there is a difference in the shape of the male genitalia: the median lobe in *H. schoenmanni* sp.n. is wide while it is narrow in *H. matthewsi* sp.n.

#### *Hydrochus verae* sp. n.

Holotype: ♂. Australia, Dalrymple 300 m, 30 km N. Charters Towers, 18.I.1993 (G. Wewalka leg.).

Paratypes: 2♂♂ and 5♀♀ (same data as holotype).

Description (holotype ♂): Body elongated, 2.5 mm in length, 1.0 mm in width. Dorsal side shiny. Colour of head, pronotum, scutellum and elytra black, with a blue-green metallic gloss. Head with coarse punctures. Pronotum longer than wide, and lateral area with granules. On disc depressions absent.



Figures 7-9. Male genitalia of 7. *Hydrochus johannapietersenae* sp.n., 8. *Hydrochus jenniferiduae* sp.n., 9. *Hydrochus satishanandi* sp.n. (scale line 0.25 mm.).  
Figure 10. Male genitalia of *Hydrochus rishi* sp.n. (scale line 0.25 mm).

Elytron length 1.6 mm, the posterior third widest, lateral area smooth, stria punctures same width as interstriae, interstriae flat. Elytral apices rounded. Apical holes absent. Male genitalia (Fig. 3): Basal piece long, paramera longer than median lobe.

Etymology: This species is named after my niece Vera Makhan.

Remarks: This species is very similar to *H. diversiceps* Blackburn (1898) from Australia, by the absence of depressions on the pronotum, but *H. verae* sp.n. can easily be distinguished by its smaller size.

### *Hydrochus wewalkai* sp. n.

Holotype: ♂. Australia, Queensland, Townsville 10 m, 17.I.1993 (G. Wewalka leg.) (only the holotype).

Description (holotype ♂): Body elongated, 3.2 mm in length, 1.1 mm in width. Dorsal side shiny. Colour of head, pronotum, scutellum and elytra black, with a blue-green metallic gloss. Head with fine punctures. Pronotum longer than wide, lateral area smooth. Disc with seven large, deep depressions. Anterior margin of pronotum with three depressions, one in the center, two behind this. Posterior margin with four depressions.

Elytron length 2.0 mm, the posterior third widest, lateral side smooth, interstriae wider than stria punctures, all interstriae carinate in almost the entire length. Apical side with two holes. Elytral apices rounded.

Male genitalia (Fig. 4): Basal piece long, parameres longer than median lobe.

Etymology: This species is named after Günther Wewalka from Austria.

Remarks: This species is similar to *H. schillhameri* which has ten depressions on the pronotum while in *H. wewalkai* sp.n. the pronotum has only seven depressions.

### *Hydrochus schillhameri* sp. n.

Holotype: ♂. Australia, 10 km S. Tully, S. Innistajj 30 m, 25.I.1993 (G. Wewalka leg.) (only the holotype).

Description (holotype ♂): Body elongated, 2.7 mm in length, 0.9 mm in width. Dorsal side shiny. Colour of head, pronotum, scutellum and elytra green, with a blue-green metallic gloss. Head with fine punctures. Pronotum longer than wide, lateral area smooth. Disc with ten large, deep depressions. Anterior margin of pronotum with six depressions, two at the lateral side, one in the center, two behind this. Posterior margin with four depressions.

Elytron length 1.8 mm, the posterior third widest, lateral area smooth, stria punctures wider than interstriae, 3rd, 5th and 8th interstriae carinate in almost the entire length, tubercles absent. Apical holes absent. Elytral apices rounded.

Male genitalia (Fig. 5): Basal piece as long as paramera, paramera longer than median lobe.

Etymology: This species is named after Harald Schillhammer from Austria.

Remarks: This species is very similar to *H. wewalkai* sp.n. in which the basal piece of the male genitalia is narrow, while in *H. schillhameri* sp.n. it is widened.

### *Hydrochus drechseli* sp. n.

Holotype: ♂. Paraguay, Central Asuncion, 9.I.1992 (U. Drechsel leg.) (only the holotype).

Description (holotype ♂): Body elongated, 3.8 mm in length, 1.1 mm in width. Dorsal side shiny. Colour of head, pronotum, scutellum and elytra black, with a blue-green metallic gloss. Head with coarse punctures. Pronotum longer than wide, lateral area smooth. Disc with five large deep depressions. Anterior margin of pronotum with three depressions, one in the centre, two behind this.

Elytron length 2.5 mm, the posterior third widest, lateral area smooth, interstriae wider than stria punctures, tubercles absent, interstriae flat. Apical side with three holes. Elytral apices rounded.

Male genitalia (Fig. 6): Basal piece short, paramera longer than median lobe.

Etymology: This species is named after the collector U. Drechsel.

Remarks: This species is similar to *H. battjai* Makhan, 1992 from Suriname. *H. drechseli* sp.n. has a short median lobe, *H. battjai* a long one.

### *Hydrochus johannapietersenae* sp. n.

Holotype: ♂. Paraguay, Guaira, Zorilla, 16/20.XI.1992, (U.Drechsel leg.) (only the holotype).

Description (holotype ♂): Body elongated, 3.5 mm in length, 1.1 mm in width. Dorsal side shiny. Colour of head, pronotum, scutellum and elytra coppery, with a blue-green metallic gloss. Head with coarse punctures. Pronotum longer than wide, lateral area smooth. Disc with five deep depressions. Anterior margin of pronotum with three depressions, one in the center, two behind this. Posterior margin with two depressions.

Elytron length 2.1 mm, the posterior third widest, lateral area smooth, stria punctures coarse, wider than interstriae, tubercles absent, interstriae flat. Apical side with two holes. Elytral apices broadened and rounded.

Male genitalia (Fig. 7): Basal piece long, paramera longer than median lobe.

Etymology: The species is named after my sister in law Johanna Pietersen.

Remarks: This species seems to be allied to *H. variabilis* Knisch, 1921 from Brasil, but there is a difference in the shape of the male genitalia. The paramera in *H. variabilis* are wide while in *H. johannapietersenae* sp.n. they are flat.

### *Hydrochus jenniferiduae* sp. n.

Holotype: ♂. Paraguay, Paraguari, Sapucay, 4.XI.1992, (U. Drechsel leg.). Paratypes: Paraguay, Paraguari, Sapucay, 4.XI.1992, 2♂♂ (U. Drechsel leg.). Paraguay, Paraguari, Sapucay 1/3.IV.1992, 5♂♂ and 4♀♀ (U. Drechsel leg.).

Description (holotype ♂): Body elongated, 2.7 mm in length, 1.1 mm in width. Dorsal side shiny, colour of head, pronotum, scutellum and elytra black, with a blue-green metallic gloss. Head with coarse punctures. Pronotum longer than wide, lateral area smooth. Disc with five large, shallow depressions. Anterior margin of pronotum with three depressions, one in the center, two behind this. Posterior margin with two depressions.

Elytron length 1.7 mm, the posterior third widest, lateral side smooth, stria punctures wider than interstriae, 3rd, 5th and 9th interstriae carinate almost the entire length, tubercles absent. Apical side with four holes. Elytral apices rounded.

Male genitalia (Fig. 8): Basal piece long, paramera longer than median lobe.

Etymology: This species is named after my sister in law Jennifer Makhan-Idu.

Remarks: This species is very similar to *H. pietersenae* Makhan, 1993 from Paraguay, but there is a difference in the shape of the male genitalia, the paramera in *H. pietersenae* are very short while they are long in *H. jenniferiduae* sp.n.

### *Hydrochus satishanandi* sp. n.

Holotype: ♂. Java, Tjilatjap, XI.1917 (F.C. Drescher leg.) (only the holotype).

Description (holotype ♂): Body elongated, 3.9 mm in length, 1.4 mm in width. Dorsal side shiny. Colour of head, pronotum, scutellum and elytra black, with a blue-green metallic gloss. Head with coarse punctures. Pronotum longer than wide, and lateral area with granules. Disc with five large deep depressions. Anterior margin of pronotum with three depressions, one in the center, two behind this. Posterior margin with two depressions.

Elytron length 2.5 mm, the posterior third widest, lateral area smooth, stria punctures same width as interstriae, interstriae flat. Elytral apices rounded. Apical holes absent.

Male genitalia (Fig. 9): Basal piece short, paramera longer than median lobe.

Etymology: This species is named after my son Satishanand Makhan.

Remarks: This species is very similar to *H. inornatus* (d'Orchymont, 1926) from Java, but there is a difference in the shape of male genitalia, the median lobe in *H. inornatus* is

wide while it is narrow in *H. satishanandi* sp.n.

### *Hydrochus rishi* sp. n.

Holotype: ♂. China. SW. Huitong, Guangping, 400 m, 6.II.1993 (Schönnmann & Schillhamer leg.). Paratypes: China. SW. Huitong, Guangping, 400 m, 6.II.1993, 1♂ and 4♀♀ (Schönnmann & Schillhamer leg.); China, SE. Guangxi distr., Liuwan mts, 500 m, 20.XI.1993, 1♂ (Ji leg.); Malaysia, Perak ca 10 km NE. Gerik, 3.XI.1992, 1♂ (M. Jäch leg.);

Thailand, Betong, Cang dun vill., Yala distr., 25.III-22.IV.1993, 1♀ (Horak & Strand leg.).

Description (holotype ♂): Body elongately oval, 2.7 mm in length, 1.0 mm in width. Dorsal side shiny. Colour of head, pronotum, scutellum and elytra black, with a blue-green metallic gloss. Head with coarse punctures. Pronotum long as wide, and lateral area smooth. Disc with seven large deep depressions. Anterior margin of pronotum with three depressions, one in the center, two behind this. Posterior margin with four depressions. Elytron length 1.6 mm, the posterior third widest, lateral area smooth, interstriae wider than stria punctures, 3rd, 4th, 5th and 9th interstriae carinate almost their entire length, tubercle on 5th interstriae very prominent. Elytral apices rounded. Apical holes absent.

Male genitalia (Fig. 10): Basal piece very long, paramera longer than median lobe.

Etymology: This species is named after my son Rish Wan Makhan.

Remarks: *H. rishi* sp.n. can easily be distinguished by its smaller size; the similar *H. japonicus* Sharp, 1873 is larger and more elongated.

### Acknowledgements

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