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***Coelambus discedens* SHARP 1882 is the second member of
the *Hydroporus tokui*-group!
(Coleoptera, Dytiscidae)**

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A b s t r a c t : *Coelambus discedens* SHARP 1882, has been found to belong to the *tokui*-group of *Hydroporus* CLAIRVILLE 1806. In addition to a new combination a replacement name has to be chosen, because the name is preoccupied by *Hydroporus discedens* RÉGIMBART 1877. This Chinese species is renamed *Hydroporus hygrotoides* nom.n., comb.n. due to its resemblance to some *Hygrotus* species.

Key words : Coleoptera, Dytiscidae, *Coelambus*, *Hygrotus*, *Hydroporus tokui*-group, replacement name, new combination, China, Japan.

Introduction

The present work has resulted from a study of the holotype of the Chinese *Coelambus discedens* SHARP 1882, as part of a planned comprehensive work on *Hygrotus* STEPHENS 1828. SHARP himself (1882: 396) expressed some doubts as to whether his new species belonged to *Coelambus* THOMSON 1860, but the holotype was never re-examined by subsequent workers. ZIMMERMANN (1930: 111) transferred the species to *Hygrotus*, something which is widely accepted at present for all other former *Coelambus*.

At the same time two specimens of a strange dytiscid became available, collected in the south-west of the Chinese province of Hunan, which on first glance strongly resembled representatives of *Hygrotus*. A comparison of external characteristics and particularly of the male genitalia immediately revealed that these two specimens belonged to Sharp's somewhat enigmatic but extremely characteristic species. On the other hand the lack of an epipleural carina at the shoulders was evidence that the species was misplaced in the *Hygrotini* PORTEVIN 1929. A strict use of diverse keys to Dytiscidae consistently placed the species in *Hydroporus*, in distinct contrast to the first glance appearance of the specimens.

From NILSSON'S & NAKANE'S work (1993) on Far East *Hydroporus* the close relationship of the specimens in question to *Hydroporus tokui* SATÔ 1985, was evident. Finally, the study of this species' genitalia showed, that Sharp's species is indeed different from Satô's species, although externally not distinguishable undoubtedly.

A simple transfer of *C. discedens* to *Hydroporus* proved to be impossible because the respective name is preoccupied by *Hydroporus discedens* RÉGIMBART 1877, which is

treated today as a junior subjective synonym of *Hydroporus incognitus* SHARP 1869. Thus a replacement name had to be chosen, and this shall be *Hydroporus hygrotoides* comb.n., nom.n. because of the strong resemblance of the species to representatives of *Hygrotus*.

Material and acknowledgements

The following acronyms for collections from which material has been studied are used in the text:

- BML British Museum, London, Great Britain (S. Hine)
 CAN coll. Dr. A. Nilsson, Umeå, Sweden
 CEM coll. E. Matsui, Arao City, Japan
 CGW coll. Dr. G. Wewalka, Vienna, Austria
 CHF coll. Dr. H. Fery, Berlin, Germany, property of the NMW
 NMW Naturhistorisches Museum Wien, Austria (Dr. M. A. Jäch)

I wish to express my sincere thanks to all colleagues mentioned above for their valuable assistance. In addition I thank Prof. M. Satô (Nagoya, Japan) and Dr. L.-J. Wang (Taipei, Taiwan) for making material available, and Dr. D. Bilton (Plymouth, Great Britain) for correcting the English of the manuscript.

The following abbreviations are used in the text: **hw** (handwriting), **TL** (total length), **LWH** (length without head), **MW** (maximum width), and **MH** (maximum height). For both species the parameters listed have been measured and simple statistical analyses conducted which resulted in the standard deviation ranges presented below. Comments in square brackets are those of the present author.

Description of the species

Both species treated in this work are very closely related. This is why the description of *H. hygrotoides* comb.n., nom.n. is rather comprehensive, but that of *H. tokui* is kept short, focussing on the differences from the other species.

Hydroporus hygrotoides comb.n., nom. n.

Coelambus discedens SHARP 1882: 396. - FENG 1932-1934: 24.

Hygrotus discedens (SHARP), ZIMMERMANN 1930: 111. - FENG 1932-1933: 24. - FENG 1933: 103. - WU 1937: 209. - ZAITZEV 1953: 128. - NILSSON 1995: 45.

H o l o t y p e (♂): "Type" [round label with red margin, most probably mounted by J. Balfour-Browne], "Kiu Kiang" [hw Sharp, small round yellow label], "Kiu Kiang, China" [hw Sharp], "Sharp Coll., 1905-313", "Type 180, *Coelambus discedens* n.sp., Kiu Kiang" [hw Sharp], "Hydroporus hygrotoides comb.n., nom n., Fery det. 2000" [red] (BML).

T y p e l o c a l i t y: "China, (Kiu Kiang, found by Mr. George Lewis)" (SHARP 1882: 396). Kiu Kiang [= Jiujiang] is situated in Jiangxi province, ca. 150 km N Nanchang, and ca. 250 km SE Wuhan.

Additional material studied: 1♂, "China, SW-Hunan 1993, SW Huitong, 2.11., Umg. [= environs] Guangping, 350 m, leg. Schillhammer (8)" (NMW). 1♀, "China, SW-Hunan 1993, SW Huitong, 7.11., Umg. Guangping, 400 m, leg. L. Ji. (14)" (NMW).
Notes: Huitong is situated ca. 350 km WSW Changsha; see also the explanations in JÄCH & Ji (1995: 19).

Diagnosis: Habitus (Fig. 2) oval, strongly convex, subglobose, in particular the ventral surface which is surprisingly vaulted, giving the species a general appearance of a globose *Hygrotus*. Maximum width situated in the middle of total length, and between anterior and central third of elytra respectively. Maximum height between the first and second third of the elytra. Mature specimens have a dark brown to black patterning on a yellowish surface (Fig. 2). The yellow, however, is rather faint, and not as bright as in *Hygrotus*, with a weak contrast to the dark pattern. This weak contrast may be due to immaturity.

Head ferruginous with two dark brown spots near each eye, both connected on frons. Anterior margin of clypeus slightly raised, but not provided with a distinct rim as in e.g. *Hygrotus inaequalis* (F. 1776). In lateral view clypeus not curved evenly to the labrum (as in e.g. *Hydroporus planus* (F. 1781)), but stepped (as in e.g. *H. inaequalis*). Clypeus provided with two oblong grooves behind anterior margin. Punctuation on anterior margin absent, distinct behind margin, but rather fine and dense; very fine and dense in clypeal grooves. Punctuation coarse and less dense on centre of clypeus, with distance between punctures larger than their diameter; punctuation coarser and denser on frons. Vertex without punctures but distinctly microreticulated. A narrow area behind anterior margin of clypeus and beside eyes reticulated also, central part of clypeus and the frons, however, are smooth between punctures. A series of minute punctures present along inner side of each eye.

Pronotum dark brown, almost black before base, with sides broadly and anterior margin narrowly yellowish, dark and light parts not sharply separated, diffusely delimited. Sides of pronotum evenly curved and converging forwards, with maximum width at the base. Lateral margin of pronotum and elytron more or less continuous in outline in dorsal view. Posterior lobe of pronotum broad and little developed. Lateral pronotal beading distinct, somewhat thinner anteriorly. In lateral view a little broader than lateral elytral beading; in dorsal view not as broad as e.g. in the species of the *Hydroporus planus*-group, but broader than in the members of the *Hydroporus tristis*-group. Punctuation sparse on disc, punctures of same diameter as those on central clypeus; denser near anterior margin, denser and distinctly coarser before base; towards lateral margins progressively coarser and denser, rugose beside margin and laterally before base. Almost all punctures provided with a hair. Males with pronotum smooth between punctures, indistinctly microreticulated on a narrow stripe behind anterior margin only. In contrast, females with distinct microreticulation on both sides of pronotum and on a broader strip behind the anterior margin, thus leaving only a semicircle before base without reticulation.

Elytra yellowish with a dark brown to black pattern (Fig. 2). Lateral beading dark brown, in dorsal view visible only in anterior quarter and shortly before apex. Whole surface covered with an unusually coarse punctuation. Punctures with diameter of almost 0.04 mm, smaller than those on ventral surface. Distance between punctures more or less equal to their diameter, or slightly larger. Punctures almost uniformly distributed, but beside the suture, near the anterior margin and laterally interspersed with some scattered smaller punctures. Puncture lines absent, but where such lines typically occur the large

punctures are somewhat closer and interspersed with some smaller punctures. Almost all punctures provided with a hair, this setation, however, laterally and apically more distinct. Whole surface of elytra, including apical part, without any microreticulation. Lateral margin of elytra slightly ascending towards humeral angle, by no means, however, as strongly as in the globose *Hygrotus* species. Epipleuron in lateral view not visible to humeral angle.

Inner face of elytra provided with a distinct carina near the margin in posterior half, this carina being slightly enlarged shortly before apex. This form of carina can also be observed in other *Hydroporus* species. Before the apex, however, it is not provided with a distinct lobe (the "ligula" in SHARP 1882: 389) as in *Hygrotus* and other genera of Hygrotini. Wings apparently well developed.

Ventral surface largely dark brown to blackish; head, prosternum, and epipleura of a lighter brown, prosternal apophysis darker; gula of the same colour as the genae. Metacoxae posteromedially, second sternum medially, and metacoxal processes ferruginous; sides of second sternite and the following sterna almost black, but hind margins shining through brownish. Mouthparts and legs ferruginous with femora darkened to a very small extent. Antennae light brown, articles slightly darkened distally, beginning with the fifth, progressively more darkened to last article. Epipleura, metasternum, metacoxal plates, and first two sterna provided with unusually large punctures (diameter until 0.06 mm); centre of metasternum in posterior half without punctures, anteriorly strongly punctate until anterior margin; punctures on sides of third sternum coarse also, but less than on first two; fourth and fifth sterna with punctures rather small and sparse. Last visible sternum in anterior third strongly vaulted and without punctures; in apical two thirds depressed and provided with very dense and coarse punctures, rugose. The whole ventral surface without any microreticulation between punctures. Most punctures on ventral surface provided with a single hair. Genae with distinct wrinkles beside the eyes, gula with some punctures. Prosternal apophysis longitudinally carinate posteriorly, sides narrowly flattened, provided with distinct long setae. Form of apophysis in terms of BALFOUR-BROWNE (1934: 249) is tectiform, its cross-section best fitting Fig. 18 (3) in this work. Apex of prosternal process rounded, contacting metasternum and separating the mesocoxae. Apophysis provided with a transverse ridge before middle (between anterior coxae); before this ridge with five to six sub-basal transversal grooves. Prosternum medially without depression at base of apophysis, here, however, rather rugosely sculptured. Metacoxal processes (Fig. 3) covering bases of trochanters; posterior margin not straight, but obliquely truncate, with an incision in the middle; in most specimens a further incision is present, close to each side. Metacoxal lines in posterior part somewhat diverging forwards, but anteriorly more or less parallel or even converging (Fig. 3). Femora and tibia provided with a reticulation of strongly elongate meshes (on basal part of hind femora less evident or absent), and with a more or less complete longitudinal medial row of punctures, otherwise unpunctured.

♂♂: Median lobe (Figs. 7a-c) close to that of *H. tokui*, but distinctly smaller and with apex stouter in dorsal view. Paramere Fig. 5. Anterior tarsi and claws not dilated.

♀♀: The single female studied has the pronotal microreticulation much more extended and in addition the punctation on sides of pronotum distinctly more rugose.

M e a s u r e m e n t s : TL 3.55 - 3.70 mm (3.6 ± 0.07 mm), LWH 3.10 - 3.25 mm (3.17 ± 0.08 mm), MW 2.05 - 2.10 mm (2.07 ± 0.02 mm), MH 1.45 - 1.55 mm ($1.49 \pm$

0.03 mm), TL/MW 1.72 - 1.78 (1.76 ± 0.02), LWH/MW 1.49 - 1.56 (1.53 ± 0.03), LWH/MH 2.08 - 2.19 (2.13 ± 0.04), MW/MH 1.37 - 1.40 (1.39 ± 0.02).

D i s t r i b u t i o n : At present known only from two localities in China: Kiu Kiang (= Jiuijiang) in Jiangxi province, and Huitong in the SW of Hunan province.

D e r i v a t i o n o m i n i s : The replacement name *hygrotooides* is chosen because of the external resemblance of the species to some representatives of *Hygrotus*, which has caused even the great David Sharp to describe it as a *Coelambus*.

Hydroporus tokui SATÔ

Hydroporus tokui SATÔ 1985a: 51. - SATÔ 1985b: 186. - NAKANE 1988: 20. - NILSSON & NAKANE 1993: 425. - NILSSON & SATÔ 1993: 94. - MORI & KITAYAMA 1993: 181.

H o l o t y p e (♂): not studied; according to the original description (SATÔ 1985a: 52) labelled "Mt. Kitaizumi-dake, Miyagi Pref., 10.IX.1978, T. Watanabe leg.", stored in the collection of the National Scientific Museum (Natural History), Tokyo. **A l l o t y p e** and **P a r a t y p e s :** 19 exs., same data as the holotype; 6 exs., same data, but "20.VIII.1978"; 3 exs., "Ômi-machi, Miyagi Pref., 6.IX.1987, T. Watanabe leg."; 3 exs., "Kuwanuma, Miyagi Pref., 28.VIII.1978, T. Watanabe leg."; all preceding specimens in the collection of the National Scientific Museum (Natural History), Tokyo. 1 ex., "Mt. Izumi-ga-take, Miyagi Pref., 29.VI.1980, T. Watanabe leg.", in coll. T. Watanabe, Tokyo. **P a r a t y p e s s t u d i e d :** 2♂♂, "53.8.20" in addition two Japanese signs on the same label, "Kitaizumi-dake, Miyagi Pref. Japan, Aug. 20. 1978, T. Watanabe leg." (CGW). 1♀, "53.8.28" in addition two Japanese signs on the same label, "Kuwanuma, Miyagi Pref., 28-VIII-1978, T. Watanabe leg." (CAN). 1♀, "Kuwa-numa, Mt. Kitaizumi-dake, Miyagi Pref. Japan, 20-VIII-1978, T. Watanabe leg." (CGW). 1♀, "Kuwa-numa, Mt. Kitaizumi-dake, Miyagi Pref. Japan, 6-IX-1978, T. Watanabe leg." (CGW). 1♂, 1♀, "Kuwa-numa, Mt. Kitaizumi-dake, Miyagi Pref. Japan, 10-IX-1978, T. Watanabe leg." (CGW). 1♂, "Kuwanuma, Mt. Kitaizumi-dake, Miyagi Pref. Japan, 28-VIII-1978, T. Watanabe leg." (CHF). 1♂, "Kuwa-numa, Mt. Kitaizumi-dake, Miyagi Pref. Japan, 10-IX-1978, T. Watanabe leg." (CHF). 2♀♀, "Mt. Kitaizumi-dake, Miyagi Pref., 10-IX-1978, T. Watanabe" (CHF). All paratypes studied with an additional yellow label: "Paratype, *Hydroporus, tokui* M. Satô, Det. M. Satô, 1985".

T y p e l o c a l i t y : Japan, Honschu, Miyagi Pref., Mt. Kitaizumi-dake.

A d d i t i o n a l m a t e r i a l s t u d i e d : 1♂, "Ishinuma pond, Matsuo village., Iwate pref., 16.VIII.1997, leg. E. Matsui", "*Hydroporus tokui*, M. Satô, det. E. Matsui" (CEM).

N o t e s : According to NILSSON (1993: 425) a further female is known: "Japan, Honshu, Kuwanuma, Mayagi-Ken, 21.viii.197?, leg. B. Yamaya, in Uesugi Museum, Yenezawa-shi".

D i a g n o s i s : For a detailed description the reader is referred to SATÔ's work (1985a: 51). *H. tokui* is difficult to distinguish undoubtedly from *H. hygrotooides* comb.n., nom.n. by external characteristics. It is, however, somewhat larger, a little more elongate, and more attenuated before the apex (Fig. 1). Metasternum less vaulted, thus whole habitus appearing a little less globose. Punctuation on disc of pronotum finer and distinctly sparser. On elytra punctures a little smaller and sparser, distance between punctures equal to one and a half times their diameter. Punctuation on ventral surface a little sparser, particularly on first two sterna.

♂♂: Median lobe in dorsal and lateral view Fig. 6a-c; paramere Fig. 4. SATÔ (1985a: 53) denotes the apex of the median lobe in dorsal view as "truncate with rounded corners". NILSSON & NAKANE (1993: 419) call the penis apex "blunt". This, however, is true only if the lobe is observed in a dorsal view which is perpendicular to its central part (indicated by arrow S in Fig. 6). If the lobe is observed perpendicularly to the apex

(arrow A) it clearly shows a more or less evenly rounded outline as in Fig. 6a. To figure the form of the lobe's apex more thoroughly an additional frontal view (Fig. 6c) on the top of the lobe is provided which is indicated by arrow C in Fig. 6. Thus it seems to become clearer that the sides of the apex are distinctly raised above the central part. This particular form of the lobe's apex additionally gives it a somewhat truncate appearance when observed in the same direction as SATÔ (1985a: 53) or NILSSON & NAKANE (l.c.) (see arrow S).

♂ ♀: Differences to males in pronotal sculpture as in *H. hygrotoides* comb.n., nom.n.

M e a s u r e m e n t s : TL 3.65 - 4.15 mm (3.88 ± 0.13 mm), LWH 3.25 - 3.65 mm (3.48 ± 0.11 mm), MW 2.00 - 2.20 mm (2.11 ± 0.06 mm), MH 1.35 - 1.65 mm (1.46 ± 0.08 mm), TL/MW 1.77 - 1.94 (1.84 ± 0.05), LWH/MW 1.58 - 1.74 (1.65 ± 0.04), LWH/MH 2.13 - 2.69 (2.40 ± 0.13), MW/MH 1.34 - 1.55 (1.45 ± 0.06).

D i s t r i b u t i o n : Japan, so far known only from northern Honshu.

Discussion

When SHARP (1882: 396) described *Coelambus discedens* he mentioned: "I am not sure that it is rightly placed in *Coelambus*", but gave no reasons for his doubts. He placed the species into his Group 1 of *Coelambus* which he characterised as follows (l.c. p. 395): "Labrum much concealed, head rounded in front, and with a more or less distinct raised margin; form usually very short, (the margin on the head is always fine, sometimes very indistinct and obsolete)." In this group he included such species as e.g. the Palaearctic *H. inaequalis* and *Hygrotus versicolor* (SCHALLER 1783), as well as the Nearctic *Hygrotus punctatus* (SAY 1824) (= *sayi* J. BALFOUR-BROWNE 1944) and *Hygrotus acaroides* (LECONTE 1855) (see Group I. in ANDERSON 1971: 505) All these species have a rather oval and convex habitus, and have been treated for a long time as "real" *Hygrotus* in contrast to the more elongate oval *Coelambus* which, however, today are also included in *Hygrotus*.

Obviously SHARP (l.c. p. 396) has overlooked that *C. discedens* lacks the humeral carina on the epipleuron, the most conspicuous feature of Hygrotini. No author after Sharp seems to have studied the holotype of *C. discedens*, and in addition the species has not been collected since that time, meaning that Sharp's mistake remained undiscovered.

The lack of any microsculpture on the elytra will have been the reason that SATÔ (1985a: 53) placed *H. tokui* in the *H. planus*-group. The species, however, displays important characteristics, partially unique within *Hydroporus*, which induced NILSSON & NAKANE (1993: 425) to create its own species group. Their definition of the *Hydroporus tokui*-group must be slightly changed (see below), nevertheless, it shall be reproduced here (l.c. 425):

- "Elytron and ventral surface without microreticulation. Pronotum with narrow lateral bead and posterior lobe short and broad. Elytral lateral margin weakly ascending to humeral angle. Metacoxal process with posterior margin conjointly rounded. Metasternum, metacoxal plate and abdominal sterna 1-2 very coarsely punctate." In addition these authors mention (l.c. p. 426): "elytron with relatively coarse punctation", "head with anterior margin raised", and "body broad". The coarse punctation of the elytra and large parts of the ventral surface "in combination with the

reduced microsculpture and largely ferruginous body indicate a close relationship with the chiefly East Palaearctic *sibiricus*-group".

The *Hydroporus sibiricus*-group sensu NILSSON & NAKANE (l.c. p.426) includes *Hydroporus sibiricus* J. SAHLBERG 1880, *Hydroporus punctipennis* J. SAHLBERG 1880, and *Hydroporus laticollis* ZIMMERMANN 1922 (section III sensu ZIMMERMANN 1931: 122). I have compared the two species of the *H. tokui*-group with many other *Hydroporus* and particularly with typical material of the three members of the *H. sibiricus*-group and found that:

- The members of the *H. sibiricus*-group indeed have a uniform ferruginous upper surface and resemble in this respect several specimens of the *tokui*-group studied. Mature *H. hygrotoides* comb.n., nom.n. and *H. tokui*, however, have a yellowish surface with a more or less distinct dark brown pattern (Figs. 1-2). The coloration as described by SATÔ (1985a: 51) is assumed to be due to the immaturity of the specimens studied by him: "Dorsal surface dark brown, though central portion of vertex, broad lateral areas of pronotum, broad laterobasal areas and apical portions of elytra vaguely lighter than other parts ...". It shall be noted that I have been able to observe this pattern with clearness only after the specimens have been degreased in Xylol for some hours. The fundamental elytral patterning, however, can be observed in immature specimens also when the elytra are lifted and transmitted light is used.
- To the knowledge of the present author, there is no other *Hydroporus* with such a coarse punctation of the elytra, the elytral punctation of the members of the *H. sibiricus*-group being much finer and denser, although rather coarse within *Hydroporus*.
- The only characteristic which is common to the members of the *H. tokui*- and the *H. sibiricus*-groups is the unusually coarse punctation of the metacoxae and metasternum.
- In addition it must be noted here that the term "metacoxal process conjointly rounded" is somewhat misleading (see. Fig. 3). I believe it is better to use the term "obliquely truncate". This shape of the metacoxal processes is somewhat reminiscent of *Neoporus* GUIGNOT 1931. I have studied a few members of *Neoporus*, however, and came to the opinion that these are not closely related to the *tokui*-group species.

NILSSON & NAKANE (1993: 426) emphasise "The generic assignment of *Hydroporus tokui* is preliminary as the genus *Hydroporus* currently is not defined by a single synapomorphy. A generic revision is badly needed and should pay special attention to *H. tokui*." I confirm this view which now must be extended to *H. hygrotoides* comb.n., nom.n. also.

Notes on biology

The knowledge about the habitats preferred by the two species of the *tokui*-group is poor. JÄCH & JI (1995: 19) report for *H. hygrotoides* comb.n., nom.n. a "small river, flowing through rice terrace, partly dammed up; slightly polluted, ca. 1 m wide, ca. 350 m a.s.l." (CWBS no. 28, collecting no. 8). They provide for the other locality a "small river, 0,5 m - 1 m wide, partly canalized, partly vanishing beneath the gravel, ca. 400 m a.s.l." (CWBS no. 35, collecting no. 14). Colleague E. Matsui gave the following hints on the locality where he has found *H. tokui* (private communication): "The species inhabits the

Ishinuma pond in the "chilly land", a region which is called "Tohoku" in Japanese. Ishinuma pond is situated in an altitude of about 900 m, halfway up of Mt. Iwate (2041 m). In the winter season the Tohoku region is wrapped up by much snow."

Zusammenfassung

Im Rahmen einer geplanten umfassenden Arbeit zur Gattung *Hygrotus* STEPHENS 1828, wurde der Holotypus des aus China stammenden *Coelambus discedens* SHARP 1882, untersucht. Es stellte sich bereits nach einer oberflächlichen Untersuchung heraus, dass die betreffende Art weder zu *Coelambus* THOMSON 1860, noch zu *Hygrotus* gehört. Zufällig hatte der Autor wenig später die Gelegenheit, zwei in China, im Südwesten der Provinz Hunan gesammelte, auf den ersten Blick äußerst ungewöhnlich anmutende und an Vertreter der Gattung *Hygrotus* erinnernde Dytisciden zu begutachten.

Diese Exemplare wurden einerseits als mit dem Holotypus von *C. discedens* übereinstimmend erkannt. Auf der anderen Seite wies das Fehlen des in der Nähe der Schultern gelegenen, schräg verlaufenden Grats auf den Epipleuren eindeutig darauf hin, dass die Art in der Gattung *Hygrotus* völlig falsch untergebracht ist. Eine strikte Anwendung verschiedener Bestimmungsschlüssel für Dytiscidae erwies in jedem Fall die Zugehörigkeit der untersuchten Tiere zur Gattung *Hydroporus* CLAIRVILLE 1806.

Wiederum zufällig wurde beim Studium einer Arbeit von NILSSON & NAKANE (1993) über *Hydroporus* aus dem Fernen Osten die Ähnlichkeit der chinesischen Tiere mit *Hydroporus tokui* SATÔ 1985, aus Japan erkannt. Ein Vergleich der männlichen Genitale jedoch zeigte schließlich, dass es sich trotz aller externer Übereinstimmung um zwei voneinander verschiedene Arten handeln musste.

Ein einfacher Transfer von *C. discedens* in die Gattung *Hydroporus* verbietet sich, da der entsprechend zu wählende Name von *Hydroporus discedens* RÉGIMBART 1877, vorbelegt ist, welcher wiederum ein jüngeres subjektives Synonym von *Hydroporus incognitus* SHARP 1869, ist. Es musste deshalb ein Ersatzname gefunden werden, welcher wegen der äußerlichen Ähnlichkeit mit Vertretern der Gattung *Hygrotus* zu *Hydroporus hygrotoides* comb.n., nom.n. gewählt wurde.

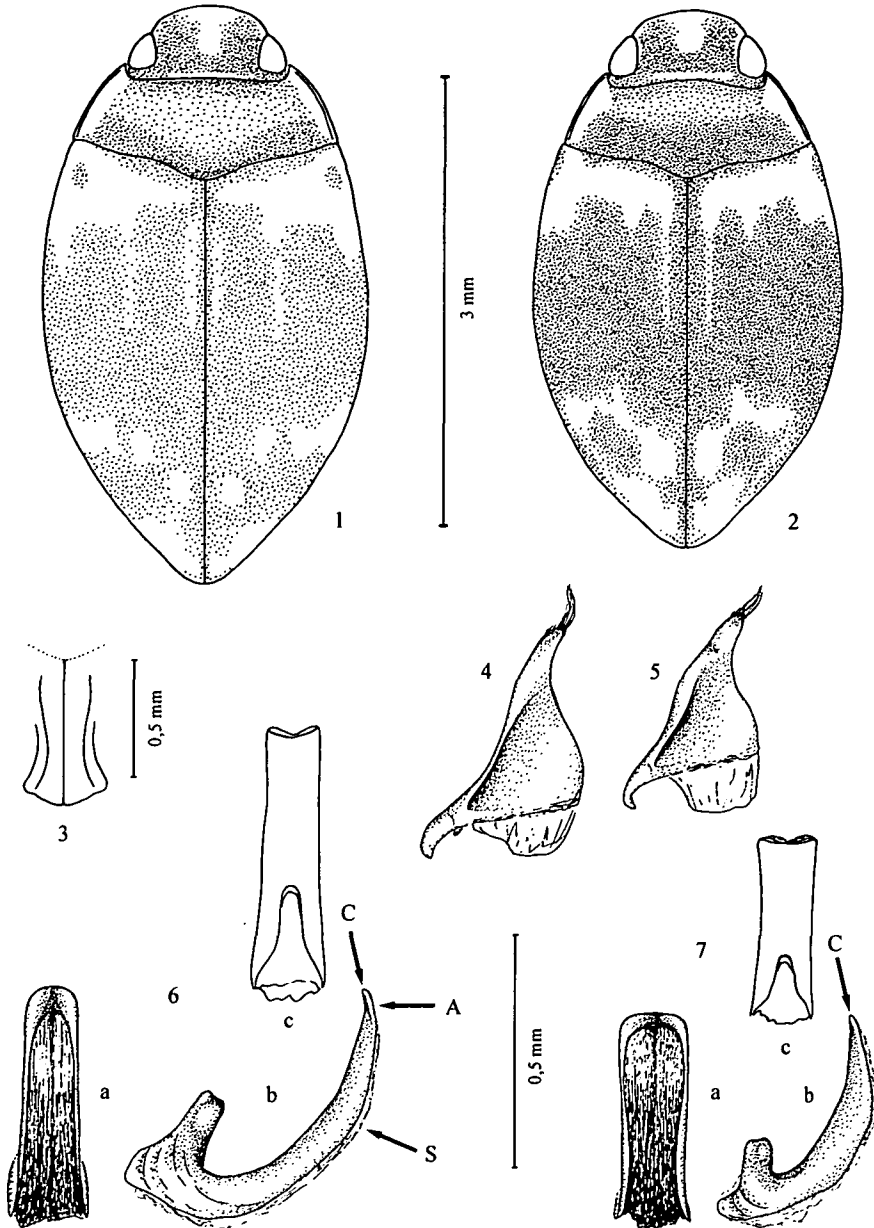
H. hygrotoides comb.n., nom.n. ist demnach der zweite Vertreter der von NILSSON & NAKANE (1993: 425) aufgestellten *Hydroporus tokui*-Gruppe. Deren Arten sind gekennzeichnet durch breite und hohe Körperform, ungewöhnlich grobe Punktierung großer Teile der Ober- und Unterseite bei gleichzeitigem Fehlen einer Mikroretikulation auf den Elytren und der Unterseite, fast kantigen Vorderrand des Clypeus sowie schräg abgeschnittenen Hinterrand der Metacoxalfortsätze. Die Gruppe ist innerhalb der Gattung recht stark isoliert. NILSSON & NAKANE (1993: 426) sehen sie wegen anderer Merkmale noch am nächsten verwandt mit der *Hydroporus sibiricus*-Gruppe in ZIMMERMANN'S Sektion III (1931: 122), zu welcher *Hydroporus sibiricus* J. SAHLBERG 1880, *Hydroporus punctipennis* J. SAHLBERG 1880, und *Hydroporus laticollis* ZIMMERMANN 1922, gehören. Von dieser Ansicht wird allerdings in der vorliegenden Arbeit zumindest teilweise Abstand genommen.

References

- ANDERSON R. (1971): A Revision of the Nearctic Representatives of *Hygrotus* (Coleoptera: Dytiscidae). — *Annals of the Entomological Society of America* **64** (2): 503-512.
- BALFOUR-BROWNE F. (1934): Systematic Notes upon British Aquatic Coleoptera, Part V (continued and concluded). — *The Entomologist's Monthly Magazine* **70**: 247-255.
- FENG H.T. (1932-1933): Aquatic Insects of China. Article II. Catalogue of Chinese Dytiscidae. — *Peking Natural History Bulletin* **7** (1) (1932): 17-37.

- FENG H.T. (1933): Classification of Chinese Dytiscidae. — Peking Natural History Bulletin 8 (2): 81-146.
- JÄCH M.A. & L. JI (1995): Introduction: 5-32; in JÄCH M.A. & JI L.: Water beetles of China 1. — Zoologisch-Botanische Gesellschaft in Österreich und Wiener Coleopterologenverein, Vienna: 1-410.
- MORI M. & A. KITAYAMA (1993): Dytiscoidea of Japan. — Osaka, Kankyo-Kasaku Ltd.: 1-217 [in Japanese].
- NAKANE T. (1988): The beetles of Japan (new series) 85. — Nature Insects 23 (10): 19-23 [in Japanese].
- NILSSON A.N. & T. NAKANE (1993): A revision of the *Hydroporus* species (Coleoptera: Dytiscidae) of Japan, the Kuril Islands, and Sakhalin. — Entomologica scandinavica 23 (1992): 419-428.
- NILSSON A.N. & M. SATÔ (1993): Five *Hydroporus* species new to Japan and the Kuril Islands, with additional records of other species (Coleoptera: Dytiscidae). — Transactions of the Shikoku Entomological Society 20 (2):87-95.
- NILSSON A.N. (1995): Noteridae and Dytiscidae; Annotated check list of the Noteridae and Dytiscidae of China (Coleoptera): 35-96; in JÄCH M.A. & JI L. (editors): Water Beetles of China 1. — Zoologisch-Botanische Gesellschaft in Österreich und Wiener Coleopterologenverein, Vienna: 1-410.
- SATÔ M. (1985a): New aquatic beetles from Japan. — Transactions of the Shikoku Entomological Society 17 (1-2): 51-55.
- SATÔ M. (1985b): Dytiscidae: 183-201; in UÉNO S.-I., KUROSAWA Y. & SATÔ M. (editors): The Coleoptera of Japan in Color 2. — Hoikusha, Osaka: 1-514 [in Japanese].
- SHARP D. (1882): On Aquatic Carnivorous Coleoptera or Dytiscidae. — Scientific Transactions of the Royal Dublin Society 2: 179-1003.
- WU C.F. [HU JINGFU] (1937): Catalogus insectorum sinensium (Catalogue of Chinese insects) III. - The Fan Memorial Institut of Biology, Peiping (Beijing): 1-1312.
- ZAITZEV F.A. (1953): Fauna of the U.S.S.R., Coleoptera 4, Amphizoidae, Hygrobiidae, Haliplidae, Dytiscidae, Gyrinidae. — Moskau/Leningrad: 1-377.
- ZIMMERMANN A. (1930): Monographie der paläarktischen Dytiscidae, I. Noterinae, Laccophilinae, Hydroporinae (1. Teil). — Koleopterologische Rundschau 16: 35-118.
- ZIMMERMANN A. (1931): Monographie der paläarktischen Dytiscidae, II. Hydroporinae (2. Teil; Die Gattung *Hydroporus* Clairv.). — Koleopterologische Rundschau 17: 97-159.

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Figs. 1-7: Habitus of (1) *Hydroporus tokui*; (2) *H. hygrotoides* comb.n., nom.n.; metacoxal processes of *Hydroporus hygrotoides* comb.n., nom.n. (3); parameres of *H. tokui* (4), *H. hygrotoides* comb.n., nom.n. (5); median lobe in dorsal view (a) (indicated by arrow A), lateral view (b), and frontal view (c) (indicated by arrow C) of *H. tokui* (6), *H. hygrotoides* comb.n., nom.n. (7); for arrow S ("Satô's view") see text.

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