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Nomenclatural, taxonomic, and faunistic notes on selected species of *Hydroporus* Clairville, 1806 (Coleoptera: Dytiscidae)

Заметки о номенклатуре, таксономии и фаунистике ряда видов из рода *Hydroporus* Clairville, 1806 (Coleoptera: Dytiscidae)

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KEY WORDS: Coleoptera, Dytiscidae, *Hydroporus*, lectotypes, new synonyms, first records.
КЛЮЧЕВЫЕ СЛОВА: Coleoptera, Dytiscidae, *Hydroporus*, лектотипы, синонимы, первые указания.

ABSTRACT. Several species of *Hydroporus* Clairville, 1806, chiefly members of the *Hydroporus planus*-group, are revised at least in part, and information on the taxonomy and the distribution of these and some other species of the genus is given. The following new synonymies are proposed: *Hydroporus transgrediens* Gschwendtner, 1923 = *Hydroporus discretus ponticus* Zaitzev, 1927 **syn.n.**; *Hydroporus goldschmidti* Gschwendtner, 1923 = *Hydroporus goldschmidti* var. *recidivus* Gschwendtner, 1923 **syn.n.**, and *Hydroporus tessellatus* (Drapiez, 1819) = *Hydroporus habelmanni* Wehncke, 1876 **syn.n.** Lectotypes of the following taxa are designated: *Hydroporus corsicus* Wehncke, 1872, *Hydroporus cyprius* Régimbart, 1878, *Hydroporus discretus ponticus* Zaitzev, 1927, *Hydroporus distinguendus* var. *estrellensis* Schaufuss, 1882, *Hydroporus limbatus* Aubé, 1838, *Hydroporus brucki* Wehncke, 1875, *Hydroporus analis* Aubé, 1838, *Hydroporus decipiens* Sharp, 1878, *Hydroporus habelmanni* Wehncke, 1876, and *Hydroporus bicolor* G. Müller, 1933. Several first records are given: *H. transgrediens* from Armenia, Azerbaijan, Iran, Turkey, and Turkmenistan, *H. pubescens* (Gyllenhal, 1808) from Georgia and Asian Russia (the Urals), and *Hydroporus marginatus* (Duftschmid, 1805) from Iran and Kazakhstan.

РЕЗЮМЕ. Ревизованы (по крайней мере, частично) некоторые виды из рода *Hydroporus* Clairville, 1806, большинство из которых относятся к группе *Hydroporus planus*. Приведены сведения по таксономии и распространению этих, а также некоторых других видов данного рода. Установлена синонимия следующих названий: *Hydroporus transgrediens* Gschwendtner, 1923 = *Hydroporus discretus ponticus* Zaitzev, 1927 **syn.n.**; *Hydroporus goldschmidti* Gschwendtner, 1923 = *Hydroporus goldschmidti* var. *recidivus* Gschwendtner, 1923 **syn.n.** и *Hydroporus tessellatus* (Drapiez, 1819) = *Hydroporus habelmanni* Wehncke, 1876 **syn.n.** Обозначены лектотипы следующих таксонов: *Hydroporus corsicus* Wehncke, 1872, *Hydroporus cyprius* Régimbart, 1878, *Hydroporus discretus ponticus* Zaitzev, 1927, *Hydroporus distinguendus* var. *estrellensis* Schaufuss, 1882, *Hydroporus limbatus* Aubé, 1838, *Hydroporus brucki* Wehncke, 1875, *Hydroporus analis* Aubé, 1838, *Hydroporus decipiens* Sharp, 1878, *Hydroporus habelmanni* Wehncke, 1876 и *Hydroporus bicolor* G. Müller, 1933. Следующие виды впервые указаны для ряда территорий: *H. transgrediens* — Азербайджан, Армения, Иран, Туркменистан и Турция, *H. pubescens* (Gyllenhal, 1808) — Грузия и азиатская часть России (Урал) и *Hydroporus marginatus* (Duftschmid, 1805) — Иран и Казахстан.

Introduction

The present authors have been dealing with members of the genus *Hydroporus* for several years and have studied a lot of material from a number of museums and private collections. These studies allow a new valuation of some taxa, and we take this opportunity to propose several new synonymies and designate some lectotypes. Further data of interest, such as on the distribution of these and some other taxa, have also been included, as well as several first records.

Material and methods

The following acronyms are used for the collections where material is located:

BMNH British Museum of Natural History, London, Great Britain (R. Booth)
CHF coll. H. Fery, Berlin, Germany; property of the NMW
CJH coll. J. Hájek, Praha, Czech Republic

CJS coll. J. Št'astný, Liberec, Czech Republic
CGW coll. G. Wewalka, Vienna, Austria
CKE coll. Ö.K. Erman, Erzurum, Turkey
CLH coll. L. Hendrich, Berlin, Germany
DEUM Department of Entomology, Moscow Lomonosov State University, Russia (V.Y. Savitsky)
IRSN Institut Royal des Sciences Naturelles de Belgique, Brussels, Belgium (M. Cludts, K. Desender)
MNB Museum für Naturkunde, Humboldt-Universität, Berlin, Germany (F. Hieke, M. Uhlig, B. Jaeger)
MCTR Museo Civico di Storia Naturale, Trieste, Italy (G. Alberti, A. Colla)
MNHN Muséum National d'Histoire Naturelle, Paris, France (H. Perrin)
MRTO Museo Regionale di Scienze Naturali, Torino, Italy (M. Daccordi)
NMB Naturhistorisches Museum Basel, Switzerland (M. Brancucci)
NMW Naturhistorisches Museum Wien, Austria, Vienna (M. Jäch)
OLML Oberösterreichisches Landesmuseum, Linz, Austria (F. Gusenleitner, C. Reitstätter)
SMNS Staatliches Museum für Naturkunde Stuttgart, Germany (W. Schawaller)
ZISP Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia (A.G. Kirejtshuk)
ZSM Zoologische Staatssammlung, München, Germany (M. Baehr, M. Kühbandner)

The following abbreviations are used in the text: TL (total length), MW (maximum width), hw (handwriting), and hw? (handwriting of an unknown person).

For the ink drawings, male genitalia were studied wet. The terminology denoting genitalia orientation follows Miller & Nilsson [2003]. All lectotype designations are made in order to support the stability of the nomenclature (cf. Article 74.7.3 of the ICZN [1999], and Anonymous [2003]).

Specifications of localities are taken from standard sources, such as Stiehlers Handatlas (Gotha, 1928/30), Microsoft Encarta World Atlas 2000, and The Times Atlas of the World, Comprehensive Edition (London, 1997). We have adopted the style of the latter source for the presentation of the names and co-ordinates of most localities. The authors' remarks are given in square brackets.

Results

Hydroporus planus-group

Hydroporus discretus Fairmaire & Brisout de Barneville, 1859

Fairmaire & Brisout de Barneville in Fairmaire, 1859: 28
Type locality — France, Marly

= *Hydroporus corsicus* Wehncke, 1872: 163 (Type locality — France, Corsica)
= *Hydroporus cyprius* Régimbart, 1878: 352 (Type locality — Cyprus)

Guignot, 1959: 393 (synonymy of *H. corsicus*); Miller et al., 1997: 27 (synonymy of *H. cyprius*); Balke & Fery, 1993: 95 (lectotype designation of *H. discretus*); Nilsson, 2001: 156, 2003: 60.

MATERIAL. **Type material**: **Lectotype** of *Hydroporus discretus* designated by Balke & Fery [1993: 95], stored in the MNHN.

Lectotype of *Hydroporus corsicus* (by present designation): ♂, a very small square label without any text, "Haag" [= collector?, hw Wehncke], "Corsica" [hw Wehncke], "Muséum Paris, ex coll. R. Oberthur, ex Wehncke", "Lectotype, *Hydroporus corsicus* Wehncke, 1872, des. H. Fery 2005" [red, printed]; placed in the drawer below a label "*corsicus* mihi" [hw Wehncke] (MNHN). **Paralectotype**: 1 ♀, "Habelm" [= collector Habelmann, hw Wehncke], "Muséum Paris, ex coll. R. Oberthur, ex Wehncke", and the respective red paralectotype label (MNHN). **Notes**: The paralectotype is assumed to belong to the syntype series, since it is prepared in the same manner as the lectotype. Wehncke [1872: 163] compared his new taxon with *Hydroporus longulus* Mulsant & Rey, 1861, a species which does not belong to the *planus*-group, but to the *Hydroporus longulus*-group. And, indeed, the two types and some other specimens studied from Corsica are somewhat elongate and at first glance resemble *H. longulus*.

Lectotype of *Hydroporus cyprius* (by present designation): ♂, "Chypre" [green, hw?], "*cyprius* Régimb." [hw Régimbart], "Muséum Paris, Coll Maurice Régimbart, 1908", "Lectotype, *Hydroporus cyprius* Régimbart, 1878, des. H. Fery 2005" [red, printed] (MNHN). **Paralectotypes**: 7 exs., one specimen with first and second labels as in the lectotype, the rest only with the first label; coll. Sedillot (MNHN). Each paralectotype is provided with its respective red label.

Additional material examined: **France**, **Corsica**: 2 exs., "Corse", "Muséum Paris, ex coll. R. Oberthur"; 4 exs., "Vizzavona, Corse", "*Hydroporus Corsicus* ([1]895)", "Corse, Damry", "Muséum Paris, ex coll. R. Oberthur"; 2 exs., "Rouisseau, Zonza", "*Hydroporus Corsicus*", "Corse, Damry", "Muséum Paris, ex coll. R. Oberthur"; 1 ex., "*Corsicus*", "Corse, Damry", "Muséum Paris, ex coll. R. Oberthur" (all in MNHN). 1 ♂, "F 37 (2B) Morosaglia, (Corte), Bocca di Riscamone, 570 m. 09°15E 42°26N. 01.10.[19]91. leg. GER [= Gerecke]"; 1 ♂, "Bastia, Corsika, V.1907, F. Hopp"; 1 ♀, "10.7.[19]86 Corse, Pinito, Porto, Quellmoos, Fery leg."; **Cyprus**: 7 exs., "31.3.[19]96 Zypern, nr Kannaviou, N Pafos, Bach, Fery leg."; 3 exs., "10.4.[19]96 Zypern, nr Kannaviou, N Pafos, Ezousa river, Fery leg."; 1 ♀, "4.4.[19]96 Zypern (Lim.), Mandria, SW Platres, Bach, Fery leg."; 5 exs., "8.4.[19]96 Zypern (La.), Vavatsinia, W Lefkara, Bach, Fery leg." (all in CHF).

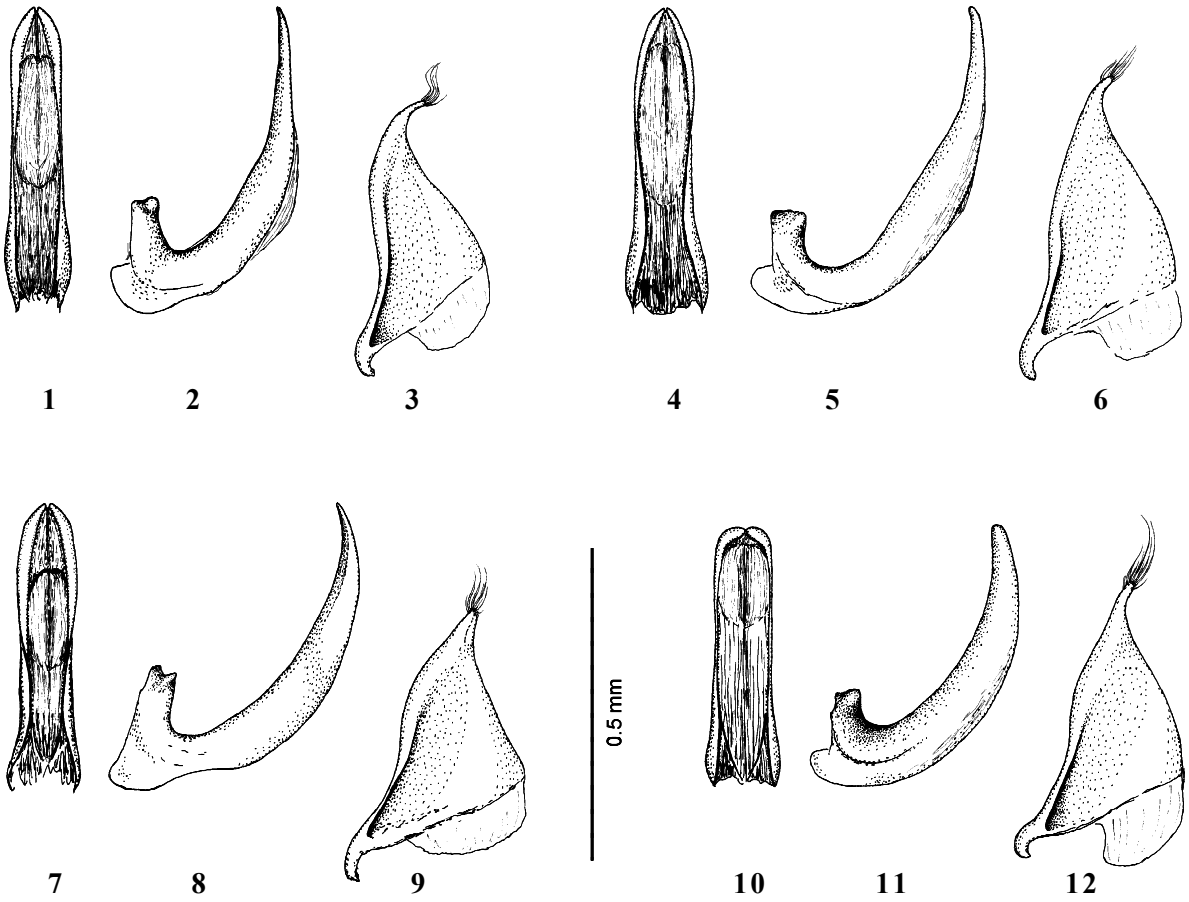
DESCRIPTIVE NOTES. Specimens from Corsica coincide more or less with central European ones. Those from Cyprus often have the elytra somewhat more brownish; in addition, we have observed that the gonocoxosterna are slightly longer and the gonocoxae more rounded apically. With respect to the high variability of *H. discretus*, however, these observations seem not to justify a treatment as proper species or subspecies. See also the 'Discussion' at the end of the section about *Hydroporus transgrediens* Gschwendtner, 1923. The male genitalia of a specimen from Bavaria, Germany, are given in Figs 1–3.

Hydroporus transgrediens Gschwendtner, 1923

Gschwendtner, 1923: 109 (*H. pubescens transgrediens*)
Type locality — Transcaspien, Neu-Saratow

= *Hydroporus discretus ponticus* Zaitzev, 1927: **syn.n.** (Type locality — Armenia, Yerevan distr., Daračičag [= Tsaghkadzor], ca. 40 km NNE Yerevan)

Zimmermann, 1931: 137 (*pubescens transgrediens*); Guignot, 1932: 372 (*pubescens* var. *transgrediens*); Zaitzev, 1951: 56 (*pubescens transgrediens*), 1953: 165 (*pubescens transgrediens*), 169 (*discretus ponticus*), 1972: 174 (*pubescens transgrediens*), 179 (*discretus ponticus*); Wewalka, 1992: 55 (lectotype designation of *H. pubescens transgrediens*); Ádám, 1996: 59 (*ponticus*); Nilsson, 2001: 156 (*discretus ponticus*), 158; Nilsson, 2003: 61 (*discretus* [= *ponticus*]), 65.



Figs 1–12. Male genitalia of *Hydroporus* spp.: 1–3 — *H. discretus*; 4–6 — *H. transgrediens*; 7–9 — *H. goldschmidti*; 10–12 — *H. planus*; 1–2, 4–5, 7–8, 10–11 — penis; 3, 6, 9, 12 — paramere; 1, 4, 7, 10 — ventral view; 2–3, 5–6, 8–9, 11–12 — lateral view.

Рис. 1–12. Гениталии самцов *Hydroporus* spp.: 1–3 — *H. discretus*; 4–6 — *H. transgrediens*; 7–9 — *H. goldschmidti*; 10–12 — *H. planus*; 1–2, 4–5, 7–8, 10–11 — пенис; 3, 6, 9, 12 — парамера; 1, 4, 7, 10 — снизу; 2–3, 5–6, 8–9, 11–12 — сбоку.

MATERIAL. **Type material**: **Lectotype** of *Hydroporus pubescens transgrediens*: ♂, "Transcaspia., Neu-Saratow"* [printed], "Type, Gschw" [greyish brown label, hw Gschwendtner], "Coll. Gschwendtner" [printed], "*Hydroporus pubescens transgrediens* Gschw" [hw Gschwendtner?], "Type" [red, hw?], "Lectotypus, *Hydroporus transgrediens* Gschw, det. G. Wewalka [19]91" [red, hw Wewalka] (OLML). **Paralectotype**: 1 ♂, first three labels as in the lectotype, "*pubescens* v. *transgrediens* Gsch., det. Gschwendtner" [hw Gschwendtner], "Type" [red, hw?], "Paralectotypus, *Hydroporus transgrediens*, det. G. Wewalka [19]91" [red, hw Wewalka] (OLML).

Lectotype of *Hydroporus discretus ponticus* (by present designation): ♂, "Daračičag [= Darachichag = Tsaghkadzor, ca. 40.32N 44.45E] & vic, distr. Erivan, 24.VIII.[19]12.", "Zoological Institute, Russian Academy of Sciences, St. Petersburg" [yellow], "Lectotype, *Hydroporus discretus ponticus* Zaitzev, 1927, des. H. Fery 2005" [red, printed] (ZISP). **Paralectotypes**: **Armenia**: 14 exs., the same label data as the lectotype; two specimens considerably damaged by dermestids; **Georgia**: 3 ♂♂, 1 ♀, "Baraleti [ca. 41.32N 43.29E], prov. Achalk., VI–VII. [19]16."; 1 ex., "Ordzhoch [not found on any map], doroga [= road], 28.6.[19]09, Bat. ob. [= Batumi oblast]" [Cyrillic], considerably damaged by dermestids; **Turkey**: 1 ♂, "Bajburt vic., distr. Erzerum, 18.VII.[19]17"; 1 ♀, "Kesalar, distr. Erzerum, 29.VII.[19]17", somewhat damaged; 1 ex., "Sadach, 7.VII.[19]17, E...itter [? illegible]" [hw?], considerably damaged by dermestids; according to Zaitzev [(1927: 17)] this locality is in "Trapezunt [= Trabzon] Province"; **Ukraine**: 3 exs., "Krim. Jalta district, Tauschan-Basar, 15.6.[19]07. W. Pliginskiy" [Cyrillic], one specimen considerably damaged by dermestids; 1 ♀, "Krim. Jalta district, Tauschan-Basar, 23.6.[19]07. W. Pliginskiy" [Cyrillic]; 1 ♂, "Krim. Angarsk-pass, puddle near road, 27.6.[19]07. W. Pliginskiy" [Cyrillic]; 1 ex. "Krim", considerably damaged by dermestids; 1 ♂, "Sebastopol, Krim 22.3.[19]06, W. Pliginskiy"; 1 ♀, "Sebastopol, Krim 8.4.[19]06, W. Pliginskiy"; 1 ♀, "Sebastopol, Krim 26.V.[19]06, W. Pliginskiy"; 1 ♀, "Tauria 89, Aluschta [ca. 44.41N 34.31E]" (ZISP). 1 ♂, "Sebastopol, Krim, Inkerman [suburb of Sevastopol], 6.3.[19]10 W. Pliginskiy." [Cyrillic in part], "334", "*Hydroporus* sp. n." [hw Reitter], "Reitter det." [printed], "*H. planus* var. aut n. sp., V. Pliginski. coll." [hw Reitter in part], "Reitter det." [printed], "*Hydroporus discretus ponticus*

* We have not found a locality named "Neu-Saratow" [= New Saratov = Novyy Saratov] on any map. There exists the village Novosaratovka [which can be roughly translated from Russian as "New Saratov Village"] (40.36N 45.35E) in Azerbaijan, a country that, however, does not belong to "Transcaspia". Possibly, "Transkaspien [= Transcapia]" is a misspelling of "Transcaucasia", and Novosaratovka might be the correct type locality, a solution which we assume to be the most probable. Nilsson [2003: 65] provides as distribution area "TM" [= Turkmenistan], which is certainly due to the statement in Wewalka [1992: 54] who gave "Turkmeniya" as distribution area.

Zaitz., Shaverdo H. det. 2000"; 1 ♀, "Krim, Jalta Kreis, village [?] Saki., 8.VIII.[19]13[?] W. Pliginskiy" [Cyrillic in part], "*Hydroporus discretus ponticus* Zaitz., Shaverdo H. det. 2000"; 1 ♂, "Tauria, village Saki, Yepatoria distr., 7.8.[19]12 W. Pliginski" [Cyrillic in part], "*H. planus* var. aut n. sp., V. Pliginski. coll." [hw Reitter in part], "Reitter det." [printed], "*Hydroporus discretus ponticus* Zaitz., Shaverdo H. det. 2000"; 1 ♀, "Tauria, village Saki, Yepatoria distr., 26.8.[19]12 W. Pliginski" [Cyrillic in part], "*H. planus* var. aut n. sp.?" [hw Reitter], "Reitter det." [printed], "*Hydroporus discretus ponticus* Zaitz., Shaverdo H. det. 2000"; 1 ♂, "Saki, Krim 18.8.[19]10, W. Pliginski" [Cyrillic in part], "*Hydroporus nigrita*" [hw Reitter], "Reitter det." [printed], "T.k. nadkrylya bez shagrenirovannogo fona, to eto *discretus*, v spisok voshyol kak *H. nigrita*, N 388 yeshcho raz poslat na proverku, W. Pliguinskii [= Since the elytra are without reticulate (shagreen) surface, this is *discretus*, was included in the checklist as *H. nigrita*, send No. 388 to be checked again]" ["W. Pliguinskii" printed in Latin; rest in Cyrillic, hw Pliginski?]. **Unknown localities**: 1 ex., "st. Passanaur, dist. Dušet, VII.[19]13", specimen almost totally destroyed by dermestids; 2 exs., "Suram, 6.VI.[19]17, Ahnger", one specimen considerably damaged by dermestids (all in ZISP). Each paralectotype is provided with its respective red label and the yellow label of the Zoological Institute of the Russian Academy of Sciences.

Additional material examined: **Ukraine**: 2 ♂♂, "Tauria [= Crimea]" [blue label]; 1 ex., "Tauria 89, Mshatka [= Yuzhnoye, ca. 44.24N 33.48E]" [hw?], considerably damaged by dermestids (all in ZISP); 10 exs., "Crimea (Ukraine), env. Morskoje [ca. 44.50N 34.48E], 24.04.1994" (NMB, CHF). **Russia**: 10 exs., "Kaukasus, Dagestan, Kurush, 2200–2400 m, 3.–6.7.1991, Martens, Schawaller et al." (SMNS, CHF). 1 ♂, "USSR, Caucasus, Krasnaja Poljana, 4.–8.7.1988, Dr. L. Danék lgt." (CJS). **Georgia**: 2 exs., "Kaukasus, Tiflis", one specimen considerably damaged by dermestids (ZISP). **Armenia** (formally a **first record** under the name *H. transgrediens*): We have studied a large amount of specimens collected by Shaverdo and Schillhammer in May 2001. The respective records are listed in Shaverdo [2003] under the name *H. discretus ponticus* and shall not be repeated here. **Azerbaijan** (**first record**): 6 exs., "Disar nr Ordubad, Nachitshewanski region, Znojko [collector] 22.VII.[1]933", "*Hydroporus discretus ponticus* Zaitz., Shaverdo H. det. 2000" (ZISP); **Turkey** (formally a **first record** from Turkey under the name *H. transgrediens*, however known from this country under the name *H. discretus ponticus* since Zaitzev [1927]): 4 exs., "Turquie: Artvin, SW Artvin, 1900 m, 9.VI.1986", "Besuchet – Löbl, Burckhardt" (CHF); 3 exs., "TR – Artvin (47), Artvin – Savsac, Schödl 4.6.[19]89" (CHF, further specimens in NMW); 1 ♂, "Turkey, Artvin prov., 8 km E Şavşat, Karagöl Sahara Nat. Park, 1930–2170 m, 4.–5.VII.2004, Jiří Hájek & Jan Růžička leg.", "41°13.5'N 042°27.1'E – 41°13.5'N 042°28.0'E, pasture / wet coniferous forest, (dominant *Picea*, *Abies*)" (CJH). 1 ♀, "ca. 13 km S Posof [ca. 41.30N 42.41E, in Ardahan prov.], 2000 m 18.VII.1983", "Anatolien, W. Heinz" (NMB). 1 ♂, "TR – Rize, İkisdere, Anzer Köyü Yaylasi, Göllerin Altındaki Dere, Brikinti, 29.6.[20]01, Erman, Ö.K. leg." (CKE). 1 ♂, 2 ♀♀, "TR – Rize, İkisdere, Sivrikaya Köyü, Köprü, Yanındaki Ihıca, 29.6.2001, Erman, Ö.K. leg."; specimens rather small, TL ca. 3.3 mm (CKE, CHF). 2 exs., "Turcia 3.IV.2000, Bolu vil. [= province], 10 km E Gerede, J. Hájek & M. Mikát leg.", "*Hydroporus discretus ponticus* Zaitzev, Jiří Hájek det. 2001" (CJH); 1 ♂, 1 ♀, "18.7.1992 TR Erzurum, MT Palandöken, stream on road Erzurum – Çam, 2300 m, Toledo leg." (CHF); 1 ♂, "21.7.1997 (TR) prov. Erzurum, Tortum – Uzundere road, ca. 5 km N Tortum, artesian well under bridge, Ö.K. Erman leg." (CHF); 6 exs., "26.4.2000 (TR) Erzurum, ca. 10 km S Tortum, ca. 2 km N Güzelyayla pass, ponds on meadow, Fery leg." (CHF); 8 exs., "26.4.2000 (TR) Erzurum, ca. 14 km S Tortum, ca. 2 km S Güzelyayla pass, ponds on meadow, Fery leg." (CHF); 1 ♂, 2 ♀♀, "TR – Erzurum, Oltu, Güryaprak Köyü Gölleri, 22.9.2001, Erman, Ö.K. Leg." (CKE, CHF); 1 ♂, 1 ♀, "TR – Erzurum, Oltu, Çarzof Köyü Gölleri, 22.9.2001, Erman, Ö.K. Leg." (CKE); 1 ♂, 2 ♀♀, "TR – Erzurum, Oltu, Göçedere, 22.9.2001, Erman, Ö.K. Leg." (CKE); 1 ♀, "TR – Erzurum, Şenkaya, Turnab Köyü, Şemerak, 23.09.2001, Erman, Ö.K. leg." (CKE); 7 exs., "18.9.2000 (TR) prov. Erzurum, Yedigöller, nr Uzunkavak, ca. 3000 m, ca. 20 km E İspir, Ö.K. Erman leg." (CHF); 9 exs., "18.4.2000 (TR) Erzurum, ca. 28 km SW Erzurum, N pass, ca. 1800 m, ponds on meadow, Fery leg." (CHF); 3 exs., "18.4.2000 (TR) Erzurum, ca. 43 km SW Erzurum, S pass, ca. 2000 m, ponds on meadow, Fery leg." (CHF); 1 ex., "Turkey 20.VI.2003, Erzurum vil. [= province] (ca 15 km W), Ilica env. (pools; sweeping), (39°55'N, 41°06'E; 1770 m), Jiří Hájek & Josef Hotový leg." (CJH); 1 ex., "TR 5.6. 1987, Van – Baskale 2600 m, Güzeldere P. [= pass], leg. Jäch (62)" (NMW); 2 exs., "Turkey 28.–29.VI.2003, Van vil. [= province] (ca 40 km SW), Gevaş env. (stream), (38°16'N, 43°03'E; 1880 m), Jiří Hájek & Josef Hotový leg." (CJH); 2 exs., "Turkey 27.–28.VI.2003, Van vil. [= province] (ca 45 km SE), Guselsu – Hoşap (stream), (38°18'N, 43°47'E; 2070 m), Jiří Hájek & Josef Hotový leg." (CJH); 1 ♀, "Umg. [= environs] Kayaboğaz, se Gevaş, 2100–2200 m, 31.VII.1985"*, "Südost-Anatolien, Heinz leg." (NMB); 5 exs., "Turkey 17.–18.VI.2003, K. [= Karaman] Maraş (ca 25 km SW), Fatih env. (stream), (37°26'N, 36°41'E; 1115 m), Jiří Hájek & Josef Hotový leg." (CJH); 2 exs., "TR – Isparta, Gelendost, 9–VI–[19]81 G. Sama" (CHF); 1 ♂, "TR – Antalya 24.5.[19]91, n Altinyaka 1100 m, leg. Schödl (32)" (NMW); 1 ex., "Turkei 21.6.[19]97, Göreme, lgt Jiří Hájek", "*Hydroporus discretus ponticus* Zaitzev, Jiří Hájek det. 2001" (CJH). 5 exs., "Simav Dag [ca. 39.07N 28.30E], 1978, 100/1500 m 16.VIII.", "W Anatolien, leg. Casale" (NMB); 3 exs., "TR 15.6. 1987, 80 km w. Istanbul, leg. M. Jäch (79)" (NMW). **Iran** (**first record**): 1 ♂, "Danavar-dagh, s.e. [= south-east of] Ushnuiyeh, 1600 m, 10.VIII.1969", "Azerbaijan (Iran), Heinz leg." (NMB). 21 exs., "15.8.1998 Iran, Kohkiluyeh & Boyer Ahmad, 7 km SW Yasuj, Elmi & Fery leg.", "Cheshmeh Sar-e-Ab Taveh, brook and pools (with stagnant water) (#2106)"; 4 exs., "15.8.1998 Iran, Fars, 17 km SE Sepidan (= Ardakan), Shesh Pir", "ditch with running water, Elmi & Fery leg. (#2108)"; 10 exs., "18.4.2001 Iran, Fars, 17 km SE Sepidan (= Ardakan), Shesh Pir", "ditch with running water, Elmi & Fery leg."; 168 exs., "16.8.1998 Iran, Fars prov., Bamoo-Nat. Park, spring Cheshmeh-ye-Ghanbari, Elmi & Fery leg. (#2109)"; 9 exs., "16.8.1998 Iran, Fars, Nat. P. Bamoo, Darreh-Bishen spring-stream system, Elmi & Fery leg. (#2113)" (all in CHF). **Turkmenistan** (**first record**, except that from the doubtful locus typicus — see above): 1 ♀, "Turkmenia, Bolshoi [= big] Balkhan [mountain range, ca. 200 km E Krasnovodsk, ca. 40N 55E], 10.VII.[19]40 leg. Starostin"; 1 ♂, "Turkmenia, Mary station [ca. 37.34N 61.48E; Mary = ancient Merw], leg Starostin" [Cyrillic]; 1 ♂, "Aj-Dere, W Kopet-dag, Iljitshev [collector], 30.IV.[1]952"; 1 ♂, "Kara-kala env., Turkmen., Steinberg [collector] 26.IV.[1]953" [Cyrillic] (all in ZISP). 1 ♂, 3 ♀♀, "Turkmenia, 20.05.[19]87., mountain range Kopet Dag, Schlucht [= gorge] Kuru Chudan, Wolkow D.A. leg." (DEUM). Three of the specimens from Turkmenistan are with rather yellowish spots near the base of elytra.

DESCRIPTIVE NOTES. For detailed descriptions of *H. transgrediens* see Gschwendtner [1923: 109] and Wewalka [1992: 55]. The species externally is similar to *Hydroporus pubescens* (Gyllenhal, 1808); it has, however, the last abdominal sternum distinctly reticulated, while that of *H. pubescens* is smooth. It is equally similar to *H. discretus*, however, on average slightly longer (TL 3.4–4.0 mm; *H. discretus*: TL 3.25–3.5 mm, reaching 3.8 mm in some southern European specimens), and the colour of the upper surface is dark brown and not black as it is at least in central and northern European populations of *H. discretus*. In most specimens, the elytra are lighter near the base; in a few specimens from Iran and Turkmenistan we have even observed distinct yellowish spots. The male genitalia are given in Figs 4–6. In lateral view, the penis is slightly more curved in apical third and lacks the convexity of the corrugated membrane in the

* This locality is either located in Siirt Province (ca. 37.53N 41.59E) or in Van Province (ca. 38.09N 43.09E).

middle part of the ventral surface, which is so characteristic of *H. discretus* (cf. Fig. 2).

DISCUSSION. Although *H. transgrediens* can be distinguished from "normal" central European *H. discretus* by its larger total length and differences in the shape of the penis, we cannot exclude the possibility that future investigations will reveal that the species belongs to a difficult complex of species, varieties and forms around *H. discretus* (see, e.g., Nilsson [2001: 156]), which is distributed over an enormous area reaching from the Canaries, North Africa; most of Europe; large territories in Russia; the Near, Middle, and Far East; and China. Not only the two species and the varieties and forms mentioned above must be included into such studies, but also other taxa which at present are treated as valid species, such as *Hydroporus errans* Sharp, 1882 and *Hydroporus feryi* Wewalka, 1992.

Hydroporus goldschmidti Gschwendtner, 1923

Gschwendtner, 1923: 101
Type locality — Kyrgyzstan, Issyk-Kul, Ton [= Tong] river*

= *Hydroporus goldschmidti* var. *recidivus* Gschwendtner, 1923: 103 **syn.n.** (Type locality — China, Xinjian, Tian Shan, between Aksu and Musart pass**)

Zimmermann, 1931: 130, 131 (*goldschmidti* var. *recidivus*); Zaitzev, 1953: 164 (including *goldschmidti* var. *recidivus*), 1972: 173 (including *goldschmidti* var. *recidivus*); V.B. Gueorguiev, 1963: 216 (as possible synonym of *H. glasunovi* Zaitzev, 1905); Wewalka, 1992: 54 (lectotype designation of *H. goldschmidti*), 58 (lectotype designation of *H. goldschmidti* var. *recidivus*); Nilsson, 1995: 53, 2001: 157, 158 (*recidivus*), 2003: 61, 64 (*recidivus*).

MATERIAL. **Type material**: **Lectotype** of *Hydroporus goldschmidti*: ♂, "Jssyk - Kul, Ton-Fluss." [printed], "Type, Gschw" [greyish brown, hw Gschwendtner], "Coll. Gschwendtner" [printed], "*Hydroporus Goldschmidti* ♂ Gschw." [hw Gschwendtner], "Type" [red, hw?], "Lectotypus ♂, *Hydroporus goldschmidti* Gschw, det. G. Wewalka [19]91" [red, hw Wewalka] (OLML). **Paralectotypes**: **Kyrgyzstan**: 1 ♀ (strongly matt), "Jssyk - Kul, Ton-Fluss." [printed], "Type, Gschw" [greyish brown, hw Gschwendtner], "Coll. Gschwendtner" [printed], "*Hydroporus Goldschmidti* ♀ Gschw." [hw Gschwendtner], "Type" [red, hw?], "Paralectotypus ♀, *Hydroporus goldschmidti* Gschw, det. G. Wewalka [19]91" [red, hw Wewalka]; 1 ♀ (weakly matt), "Jssyk - kul, Ton-Fluß." [hw Gschwendtner], "Type, Gschw" [greyish brown, hw Gschwendtner], "Coll. Gschwendtner" [printed], "*Hydroporus Goldschmidti* ♀ intersex. Gschw." [hw Gschwendtner], "Type" [red, hw?], "Paralectotypus ♀, *Hydroporus goldschmidti* Gschw., det. G. Wewalka [19]91" [red, hw Wewalka] (all in OLML). **China**: 1 ♂, "Ost-Turkestan, Bagratsch-Kul" [printed], "Cotype, Gschw" [greyish brown, hw Gschwendtner], "*Hydroporus Goldschmidti* Gschw." [hw Gschwendtner], "Type" [red, hw?], "Paralectotypus ♂, *Hydroporus goldschmidti* Gschw, det. G. Wewalka [19]91" [red, hw Wewalka] (OLML); 1 ♀ (strongly matt), "Ost-Turkestan, Bagratsch-Kul" [printed], "Type!" [hw Zimmermann], "Samml. A. Zimmermann", "Cotypus, *Hydroporus Goldschmidti* Gschw., Zool. Staatssammlung München" [red, hw? non-authorised curatorial designation], "Paralectotype, *Hydroporus goldschmidti* Gschwendtner, 1923, Fery 2004" [red] (ZSM). **Notes**: Judging by the original description, Gschwendtner did not know females of this species with smooth elytra. Most probably, he used the term "intersex" in the meaning of "reticulation of the upper surface between that of strongly reticulated females and that of smooth males". 1 ♂, "Issyk-Kul, Ton-Fluss." [hw?], "Type, Gschw" [greyish brown, hw Gschwendtner], "Coll. Gschwendtner" [printed], "*Goldschmidti* Gschw., det. Gschwendtner" [hw Gschwendtner?], "Type" [red, hw?], "Paralectotypus ♂, *Hydroporus goldschmidti* Gschw, det. G. Wewalka [19]91" [red, hw Wewalka] (OLML); 1 ♀ (strongly matt), "Issyk - kul, Ton-Fluss." [hw?], "Type, Gschw" [greyish brown, hw Gschwendtner], "Coll. Gschwendtner" [printed], "*Goldschmidti* Gschw., det. Gschwendtner" [hw Gschwendtner?], "Type" [red, hw?], "Paralectotypus ♂, *Hydroporus goldschmidti* Gschw, det. G. Wewalka [19]91" [red, hw Wewalka] (OLML); 2 ♀♀ (weakly matt), "Issyk - kul, Ton-Fluß." [hw Gschwendtner], "Cotype, Gschw" [greyish brown, hw Gschwendtner], "Paralectotypus ♀, *Hydroporus goldschmidti* Gschw., det. G. Wewalka [19]91" [red, hw Wewalka]; one specimen with additional "7211, *Goldschmidti*" [hw?] (CGW). Zimmermann [1931: 131] studied at least a part of the syntype series. It is assumed that he kept this specimen for his collection. Wewalka [1992: 54] gave for "Bagratsch-Kul": "China, Sinkiang-Uighur, Bagratsch-Kul or Po-ssu-teng Hu". Today this lake is called "Bosten Hu"; it is in Xinjian province, its co-ordinates are ca. 42N 87E [H. Schütze in litt.].

Lectotype of *Hydroporus goldschmidti* var. *recidivus*: ♀, abdomen without inner parts, "Thian shan, Aksu-Musart, coll. Winkler" [printed], "Type, Gschw" [greyish brown, hw Gschwendtner], "*Goldschmidti* var *recidivus* Gschw" [hw Gschwendtner], "Coll. Gschwendtner" [printed], "Type" [red, hw?], "Lectotypus ♀, *Hydroporus recidivus* Gschw, det. G. Wewalka [19]91" [red, hw Wewalka] (OLML). **Paralectotypes**: 1 ♀, abdomen absent, first two labels as in the lectotype except "Cotype" instead of "Type", "*Hydroporus Goldschmidti* var. *recidivus* Gschw" [hw Gschwendtner], "Paralectotypus ♀, *Hydroporus goldschmidti* Gschw, det. G. Wewalka [19]91" [red, hw Wewalka] (CGW); 1 ♂, first two and fourth label as in the lectotype, third label as in the female paralectotype, "*Hydroporus* ? *goldschmidti* Gschw, det. G. Wewalka [19]91" [hw Wewalka], "Paralectotype, *Hydroporus recidivus* Gschwendtner, 1923, Fery 2000" [red] (OLML). **Notes**: This male became automatically a paralectotype when Wewalka [1992: 58] selected the lectotype from the syntype series. This is why we have provided this specimen with the respective red label, although Wewalka refrained to do so, because he believed — correctly — this specimen to belong to *H. goldschmidti*, not to *H. recidivus*.

Additional material examined: **Uzbekistan**: 1 ♂, 2 ♀♀, "Uzbekistan, Tashkent Province, Yakka-tut near Burchmulla, 26.7.–3.8.2004, 41°38'N 70°03'E, Hendrich leg. Loc. 1a"; see Hendrich & Hendrich [2005: 430] (CLH). **Kyrgyzstan**: 1 ♀, "Kirghizia: Issyk - Kul bank S Chon-Urjukty [ca. 42.43N 77.50E], 19.–23.VI.1993 1600 m, leg. Schawaller"; 1 ♀, "Kirghizia: Chatkalskij Alatau, Sary-Celek [near Arkit, ca. 41.47N 71.56E], 27.–31.V.1993, 1400–1600 m, leg. Schawaller" (all in SMNS). 2 ♂♂, 3 ♀♀ (all smooth), "Kyrgyzstan: Sandalasch G.K. [= Gebirgs-Kette = mountain range], Chatkal riv., ca. 2000 m, 5.VII.1997, leg. Dolin (K – 9/97)" [ca. 41.50N 70.55E, Dolin in litt.]; 3 ♂♂, 6 ♀♀ (all smooth), "Kyrgyzstan: Sandalasch G.K. [= mountain range], Chapchama Pass env., 1600 m, 6.VII.1997, leg. Dolin (K – 10/97)" [ca. 41.40N 70.50E, Dolin in litt.]; most probably the Chap-Chyma Pass, ca. 41.32N 70.48E [see Schütze & Kleinfeld 1997: 94]; 1 ♀, "Kyrgyzstan, Ferganski range, nr. Bergut pass [not found on any map], 2015 m, 24.6.1996, leg. Dolin (n 37)"; specimen with pronotum totally reticulated, but elytra smooth (all in NMW); 4 ♂♂, 3 ♀♀, "Kyrgyzstan, W Tien Shan, Chatkal gorge, Stab [not found on any map] env., 29.VII.1998, 1800 m, leg. Dolin (K – 9/98)" (NMW); 3 ♂♂, "Kyrgyzstan, Tshatkal valley, Shtab 2000 m, 28.07.[19]99, V. Dolin" (CJH); 2 ♂♂, "Kyrgyzstan, Mt. Rg., Tshatkal, 2000, Shtab, 28\2906[19]98" (CJS); 13 ♂♂, 1 ♀ (smooth), "28.7.1999 Kyrgyzstan, Tschatkal mountain range, nr Stab, Bach und Pfützen, Dolin leg."; found together with *Hydroporus glasunovi* Zaitzev, 1905 (NMW). **China**: 1 ♀, "Thian-Shan, Musart" [printed], "*Hydroporus goldschmidti* var. *recidivus* Gschw., det. G. Wewalka [19]72" [hw Wewalka], "*Hydroporus recidivus* Gschw, det. G. Wewalka [19]91" [hw Wewalka]; 2 ♂♂, 5 ♀♀ (all ♀♀ matt), "Bagratsch-Kul" [some labels printed, others hw Wewalka], the males with "*Hydroporus* ♂ *goldschmidti* Gschw, det. G. Wewalka [19]91" [hw Wewalka], the females with similar

* According to Schütze & Kleinfeld [1997: 143], the Tong river rises ca. at 41.52N 77.02E and flows into the southern shores of the Issyk-Kul near 42.11N 76.55E

**This locality should have about the following co-ordinates: 42.30N 80.40E

labels, but with the female sex symbol or without any such symbol (all in CGW). 1 ♂, 1 ♀ (matt), "Ost-Turkestan, Bagratsch-Kul" [hw Wewalka], "Locus typicus aus der Typenserie [= locus typicus of the type series], G. Wewalka" [hw Wewalka in part], "*Hydroporus goldschmidti* Gschw., det. G. Wewalka [19]72" [hw Wewalka in part]; specimens with head brownish, but not as light as in the types of *H. recidivus* (MRTO). **Inexact localities**: 1 ♂, "Turkestan"; 1 ♀ (smooth) "Samarkand" (all in NMW). Both specimens are rather old and have the head as brownish as in the types of *H. recidivus*. Samarkand is certainly used in the sense of the 19th century Russian Empire area of Samarkand which enclosed today's southern Uzbekistan and northern Tajikistan (see Schütze & Kleinfeld [1997: 80]). Definitely, this specimen has not been collected in China.

DESCRIPTIVE NOTES. *Hydroporus goldschmidti* resembles externally *Hydroporus planus* (Fabricius, 1781), and shares with this species the reticulated last abdominal sternum. It has, however, the sides of the pronotum — at least the lateral rim — in most specimens brownish, the elytra of more reddish brown, and the total length on average smaller. The lighter spots behind the base of elytra are often rather distinct, whilst the elytral base of *H. planus* is only rarely considerably lightened. Body length and shape are strongly variable, as well as the extension of the pronotal reticulation, and cannot be used to separate the two taxa as it has been done by Wewalka [1992] who constructed, however, his key on the base of only a few examined specimens. On the other hand, *H. goldschmidti* and *H. planus* can be easily separated by the shape of the male genitalia (cf. Figs 7–9 and 10–12).

MEASUREMENTS. TL: 3.3–4.2 mm, MW: 1.7–2.1 mm, TL/MW: 1.9–2.1 (lectotype of *H. goldschmidti*: TL: 3.9 mm, MW: 2.0 mm; lectotype of *H. recidivus*: TL: 4.0 mm, MW: 2.1 mm).

DISCUSSION. The area of distribution of the original type series of *H. goldschmidti* is in the Tian Shan mountain range, and reaches from eastern Kyrgyzstan to north-western China (Xinjian). The locus typicus of *H. recidivus* is within *H. goldschmidti*'s distribution area. Furthermore, one paralectotype of *H. recidivus* is very similar to *H. goldschmidti*; in particular, the penis coincides absolutely with that of *H. goldschmidti* (see also Wewalka [1992: 58]). In addition, we have not found significant differences in the female genitalia of the two taxa. The only differences between *H. recidivus* and *H. goldschmidti* are the colour of the head and the pronotum: head in large parts reddish brown in *H. recidivus*, only at anterior and posterior margins (elsewhere dark brown) in *H. goldschmidti*; sides of pronotum lighter brown to rather large extent in *H. recidivus*, only rim of pronotum lighter brown in most *H. goldschmidti*. All these observations induced us to treat *H. recidivus* as a junior subjective synonym of *H. goldschmidti*.

DISTRIBUTION. China (Xinjian), Kyrgyzstan, Uzbekistan.

Hydroporus pubescens (Gyllenhal, 1808)

Gyllenhal, 1808: 536 (*Hyphydrus pubescens)*
Type locality — Sweden

= *Hydroporus distinguendus* var. *estrellensis* Schaufuss 1882: 559 (Type locality — Portugal, Serra da Estrêla)*

Stephens, 1828: 61; Zimmermann, 1920: 100 (including synonymy of *H. distinguendus* var. *estrellensis*); Wewalka, 1992: 59; Nilsson & Holmen, 1995: 50; Nilsson, 2001: 158, 2003: 64.

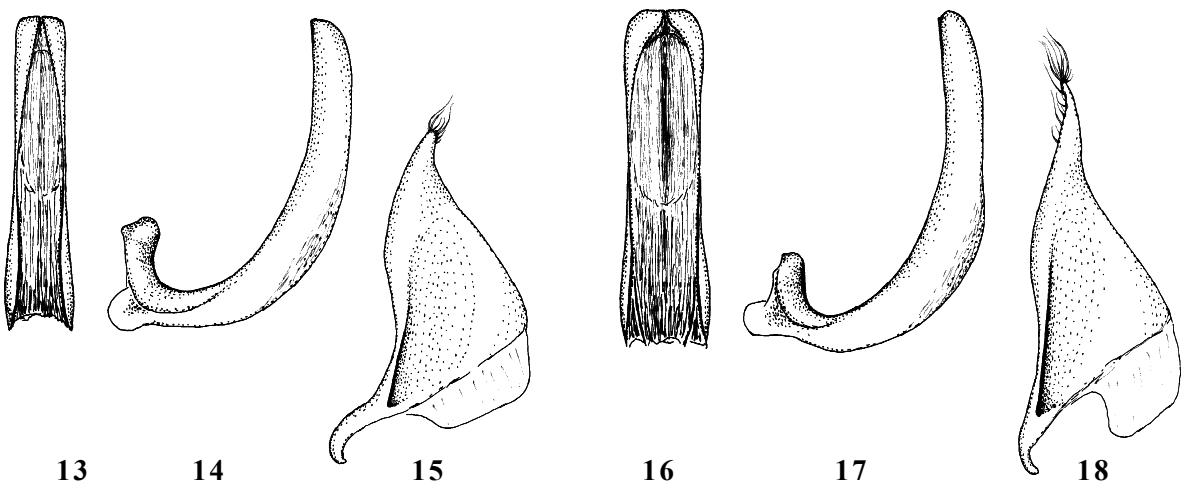
MATERIAL. Syntypes of *Hyphydrus pubescens* not studied. **Type material**: **Lectotype** of *Hydroporus distinguendus* var. *estrellensis* (by present designation): ♂, "Estrella, 18/6.[18]67" [hw Schaufuss], "Coll. L.W. Schaufuß" [printed], "*distinguend.* var *estrellensis*, Estrella Schauf." [hw Schaufuss], "Zool. Mus. Berlin", "Lectotype, *Hydroporus distinguendus* var. *estrellensis* Schaufuss, 1882, des. H. Fery 2005" [red, printed] (MNB). **Paralectotypes**: 1 ♀, the specimen is provided with copies of lectotype labels; 1 ♀, "Estrella, 18/667" [hw Schaufuss], "Coll. L.W. Schaufuß" [printed], "Zool. Mus. Berlin"; 1 ♂, "Type" [printed], "*Hydr. disting.* var *estrellensis* Schauf, 18/6 1867 Estrella" [hw?], "Zool. Mus. Berlin"; 1 ♂, "Type" [printed], "*Hydr. disting.* var *estrellensis*, Schauf. I. 18/6 1867 Estrella" [hw?], "Zool. Mus. Berlin" (all in MNB). Each paralectotype is provided with its respective red label. **Notes**: Lectotype and the first paralectotype originally were glued onto the same card; they have been separated by us and each glued onto its own card. The lectotype lacks both hind tarsi and the last two right mid tarsomeres.

Additional material examined: **Latvia**: 1 ♀, "Kurland, Sundur, Aug. 1917, leg. Salchert" (MNB). **Georgia** (**first record**): 7 exs., "SSSR−Caucasus, Sno [ca. 90 km N Tbilisi, ca. 42.35N 44.38E] 1800 m, 26.6.[19]57 Říha" (CHF). **Turkey**: 10 exs., "Uludag, 1850 m, 2.VIII.1984", "Türkey [sic!], R. Kinzelbach et al.", "84/23" (NMB, CHF). Specimens with rather light elytra; rim of pronotum in most specimens brownish. **Azerbaijan**: 130 exs., "17.5.1999 Azerbajdzhan: Talysch [= Talysh, mountains in southern Azerbaijan], Hirkan-Wald, Aurora Umg. [= environs], 600 m, Dolin leg."; 2 ♂♂, 2 ♀♀, "17.5.1999 Azerbajdzhan: Talysch, Hirkan-Wald, Parakent Umg., 20−180 m, Dolin leg." 6 exs., "25.5.1999 Azerbajdzhan: Talysch, Suwant (Plateau), 1760 m, Dolin leg."; 30 exs., "Azerbajdzhan: Talysch, Zuwant plateau, 1500 m, Gosmoljan env. [ca. 38.40N 48.21E], 27.5.2000, leg. Dolin (AT 5)"; 1 ♂, 3 ♀♀, "31.5.1999 Azerbajdzhan: Talysch, Astara Umg. [= environs; ca. 38.28N 48.52E], Bach und Fluss, Dolin leg." (all in NMW); 1 ♀, "Palekesh env. [ca. 38.30N 48.37E], 13.−15.V.1992", "Aserbaidschan, A. Schamaev" (NMB); 1 ♀, "Azerbaijan Talysch Mts., km 14−18, Rte Lenkoran−Lerik, 30.IV.−9.V.2001, T. Lackner", "Coll. Hendrich, Berlin"; 1 ♀, "Azerbaijan Talysch Mts., Lerik mountains, 1700m, 1.−3.V.2001, T. Lackner", "Coll. Hendrich, Berlin" (all in CLH); **Iran**: 1 ♂, "Iran: Gilan, 20 km E Khalkhál, 1900 m, 13.−16.V.2000, leg. J. Rejsek" (SMNS); 1 ♂, "Iran, centr. Gilan, Masuleh, (37.10N/48.58E), 55 km WSW Rasht, J. Rejsek 15.−17.4.[19]99"; 1 ♂, "Iran, NE Mazandaran, Nahar Khoran, (36.45 N/54.28 E), 6 km south Gorgan, J. Rejsek 15.−17.4.[19]99"; 1 ♀, "Iran, W Mazandaran, 10 km NW Hasan Keif, (36.36N/51.10E), J. Rejsek 20.−21.4.[19]99" (all in CJS); 1 ♂, "7.8.1995 Iran, W. Azerbayjan, 75 km N Saghez, wetland (t15), 1400 m, Elmi leg. (#1650)"; 1 ♂, "2.9.1998 Iran, Ardebil, 53 km W Assalem, stream, 1980 m, Elmi leg. (#2131)"; 1 ♂, "18.4.2001 Iran, Fars, 17 km SE Sepidan (= Ardakan), Shesh Pir", "ditch with running water, Elmi & Fery leg." (all in CHF). **Tunisia**: 1 ♂, "Tunesien, 28.3.[19]91, Toujane, Quelle [= spring], leg. Wewalka (T3)" [hw Wewalka] (NMW). 9 exs., "7.4.[19]92 Tunesien, NE Tunis, Carthago, Rinnsal [= streamlet], Fery leg."; 2 exs., "8.4.[19]92 Tunesien, S Tunis, El Zahra, Tümpel [= pond], Fery leg." (all in CHF). **Algeria**: 1 ♂, "Edough, juin [18]85", coll. Bedel (MNHN). **Russia** (**first record** from Asian Russia — the Urals): 1 ♂, 3 ♀♀, "Chelyab. obl. [= Chelyabinskaya oblast = Chelyabinsk area], Ilmensk. zap. [= Ilmenskiy zapovednik = Ilmenskiy Nature Reserve], 22.VI.1941" [Cyrillic] (DEUM).

DESCRIPTIVE NOTES. Specimens from the southern part of the distribution area often have the elytra — in particular the basal part — somewhat lighter yellowish brown. In specimens from Iran these markings are particularly light and rather sharply delimited.

DISTRIBUTION. Europe; Russia (at least southern European regions and the South Urals); North Africa except Egypt; Turkey; Cyprus; the Near East; Iran.

* Usually *Hydroporus distinguendus* Desbrochers des Loges, 1871 is treated as junior subjective synonym of *Hydroporus jonicus* L. Miller, 1862



Figs. 13–18. Male genitalia of *Hydroporus* spp.: 13–15 — *H. limbatus*; 16–18 — *H. brucki*.; 13–15, 16–17 — penis; 15, 18 — paramere; 13, 16 — ventral view; 14–15, 17–18 — lateral view.

Рис. 13–18. Гениталии самцов *Hydroporus* spp.: 13–15 — *H. limbatus*; 16–18 — *H. brucki*.; 13–15, 16–17 — пенис; 15, 18 — парамера; 13, 16 — снизу; 14–15, 17–18 — сбоку.

Hydroporus limbatus Aubé, 1838

Aubé, 1838: 292
Type locality — Italy, Sardinia

Zimmermann 1931: 134; Guignot, 1959: 390; Franciscolo, 1979: 336; Wewalka, 1992: 48; Nilsson, 2001: 157, 2003: 62.

MATERIAL. **Type material**: **Lectotype** of *Hydroporus limbatus* (by present designation): ♀, "*Limbatus*" [hw Aubé], "Museum Paris, Coll. Aubé", "Lectotype, *Hydroporus limbatus* Aubé, 1838, Fery des. 2004" [red, printed]; specimen originally pinned, placed in the drawer behind a label "1975 *Hydroporus* Clairville, *Limbatus* Aubé" [hw Aubé] (MNHN). **Notes**: The lectotype has been glued onto a rectangular card by the senior author. It lacks the last six articles of the right antenna and the last tarsomere of the left hind leg. Behind the lectotype stands a female prepared in the same manner; it does not bear any label, except "Museum Paris, Coll. Aubé" (MNHN). This specimen is a *Hydroporus lucasi* Reiche, 1866, as can be easily seen by the reticulated last abdominal sternum and the dense and rugose punctation of its apical third. This specimen is not treated as paralectotype because it does not fit some details of the original description of *H. limbatus*, e.g., the rather coarse punctation of elytra and the absence of puncture lines. Aubé's description of *H. limbatus* suggests that the author had only a single specimen at his disposal. Since this is, however, not stated explicitly, the existence of syntypes instead of a holotype must be assumed (Recommendation 73F of the ICZN [1999]).

Additional material examined: **Portugal**: 1 ♀, "Portugal mer. reg. Faro, Trafal /1/, 02.03.2004 Mantič lgt., louka-sladká voda" (CJH); 1 ♀, "7.11.[19]89 Portugal, Algarve, Vila Real, Tümpel, Fery leg."; **France**: 11 exs., "4.2.[19]96 France, Camargue, Étang du Charnier, Fery leg."; 1 ♂, 1 ♀, "Il [sic!] de Ré"; 1 ♀, "27.9.[19]88 France, Camargue, Aigues-Mortes, Lache, Fery leg."; 1 ♂, "31.3.[19]86 France, Herault, Agde, Wassergraben, Fery leg."; **Italy**: 1 ♀, "Sardinien 24.5./20.6.[19]65, Laloletta, Budberg"; 8 exs., "14.7.[19]81 Italia, Sardegna, Fertilia, Alghero, Tümpel, Fery leg."; 2 exs., "Italie: Sicile – Catania, embouchure du Simeto, 11.04.[19]99, leg. G. Carron" (all in CHF). **Unknown locality**: 1 ♂, "*Hydroporus* exotique [?], *velubinus* mihi., h. [Dejean often used an "h." as abbreviation of "habitat", but here it was not followed by any locality.] D. Latreille"; a greyish and shiny label, text almost illegible, only perceptible if appropriately illuminated; the word "exotique" in red ink and of unknown hw, the rest in black ink, hw most probably that of Dejean; on the reverse "1221, 1222, 1223" [hw?], "Ex Musæo Dejean" [printed], "*limbatus*" [hw Régimbart?], "D. Sharp Monogr." [printed], "Muséum Paris, ex coll. R. Oberthur, ex Wehncke"; specimen placed in the drawer behind a label "*limbatus* Aubé" [hw Wehncke] (MNHN). This specimen originally was mounted on a pin, and it has been glued onto a rectangular card by the senior author.

DESCRIPTIVE NOTES. This species is similar to *H. brucki*, but the punctation of the elytra is coarser and less dense; the puncture lines are only exceptionally and very weakly perceptible. The yellowish margin on sides of pronotum is somewhat narrower. In lateral view, the margin of the elytra is only weakly ascending towards humeral angle. According to Franciscolo [1979: 336] the total length is 4.0–5.0 mm; the examined specimens have 4.0–4.7 mm (lectotype 4.0 mm). The male genitalia are given in Figs 13–15; compare those of the externally similar *H. planus* in Figs 10–12.

DISTRIBUTION. Italy, France, Spain, Portugal, Morocco, Algeria, Tunisia, and Libya. In Franciscolo [1979: 336], Corfu, Attica, and Crete are given additionally; these records, however, no doubt must be attributed to *H. brucki*.

Hydroporus brucki Wehncke, 1875

Wehncke, 1875: 234
Type locality — Greece, Thessaloniki ["Saloniki"]*

Zimmermann, 1931: 135; Zaitzev, 1953: 165, 1972: 174; Wewalka, 1992: 48; Nilsson, 2001: 156, 2003: 60.

MATERIAL. **Type material**: **Lectotype** of *Hydroporus brucki* (by present designation): ♀, "*Brucki*" [hw Wehncke], "Turcia, Salonichi" [hw Wehncke], "*Hydroporus brucki* Wenck., aus Coll. Oberthur" [hw Wewalka], "Muséum Paris, ex coll. R. Oberthur, ex Wehncke", "Lectotype, *Hydroporus brucki* Wehncke, 1875, Fery des. 2004" [red, printed]; specimen originally glued onto a small triangular tip, placed in the drawer behind a label "*Brucki* mihi" [hw Wehncke] (MNHN). **Paralectotype**: 1 ♀, a very small quadratic label without any text, "Muséum Paris, ex coll. R. Oberthur, ex Wehncke", and the respective red paralectotype label; specimen placed behind the lectotype, prepared in a similar manner as the lectotype (MNHN). **Notes**: Both specimens have been glued onto larger rectangular cards by the senior author. The lectotype lacks the left protarsus, three right protarsomeres, left mesotibia and mesotarsus, four right mesotarsomeres, left metatarsus, and the last right metatarsomere. The paralectotype lacks three left mesotarsomeres and the right metatarsus.

* In 1875, Thessaloniki belonged still to the Turkish (Ottoman or Osman) Empire

Additional material examined: **Greece**: 1 ♂, "Griechenland 1991, Ebrosebene (2), leg. Schödel 16.V." (NMW); 1 ♂, "Corfu, Paganetti"; 1 ♂, "Kephallenia 1905, Argostolion, O. Leonhard"; 4 exs., "Kephallenia, Paganetti"; 1 ♂, "GR (38), Makedonia (CHA), Chalkidiki, Chlomón Oros, Tal am Südhang QU 32, 16. 650 m, 29.05.[19]91., leg. CIT & GER"; 1 ex., "Olympos, Graecia, 2100 m, 4.6.[19]37, Coll. Bartoň"; 1 ex., "Gr. Ins. Lesbos, 4 km W. Agiassos, leg. Malicky 26.5.[19]75"; 1 ex., "GR 95−21: Insel Lesbos, SE, 12 km W Mitilíni, Flußmündung [= river mouth], Tümpel [= pond]; leg. D. Grimm. 17.−21.V.1995"; 10 exs., "GR Korinth 12.6.[19]86, Kato Alephori, leg. H. Hebauer" (all in CHF).

DESCRIPTIVE NOTES. The punctation of the elytra is rather dense and fine, approaching almost that of *Hydroporus marginatus* (Duftschmid, 1805). Other characteristic features are the broadly brownish sides of the pronotum and smooth abdominal sterna (in contrast to *H. planus*), the distinct puncture lines on the elytra, and the margin of the elytra distinctly ascending towards humeral angle (in contrast to *H. limbatus*). According to Zimmermann [1931: 135], its total length is 4.0–4.3 mm, yet most of the examined specimens are distinctly longer: 4.5–4.7 mm, only one of these has 4.3 mm, another one 4.4 mm; the total length of the two types is 4.5 mm. The male genitalia are given in Figs 16–18.

DISTRIBUTION. Greece, Turkey, Cyprus, and Lebanon.

Hydroporus analis Aubé, 1838

Aubé, 1838: 294
Type locality — Italy, Sardinia

Zimmermann, 1931: 133; Guignot, 1959: 394; Wewalka, 1992: 47; Nilsson, 2001: 156, 2003: 60.

MATERIAL. **Type material**: **Lectotype** of *Hydroporus analis* (by present designation): ♂, "Sardaigne" [a small round label, hw Aubé], "Museum Paris, Coll. Aubé", "Lectotype, *Hydroporus analis* Aubé, 1838, Fery des. 2004" [red, printed]; specimen placed in the drawer above a label "1976 *Hydroporus* Clairville, *Analis* Aubé" [hw Aubé?] (MNHN). **Notes**: The lectotype was originally pinned; it has been glued onto a rectangular card by the senior author. It lacks two left protarsomeres and the right hind leg. In the original description Aubé wrote "Il a été trouvé en Sardaigne et fait partie de la collection de M. Chevrolat". We have not been able to locate syntypes of *H. analis* in the collections of the IRSN or BMNH where parts of the collection of Chevrolat are said to have been preserved (see Horn et al. [1990: 71)]. However, we have no doubt that the specimen from the collection Aubé has been used by the author for his description. We assume that Aubé has kept the specimen for his collection after the study of Chevrolat's material.

Additional material examined: **France**, **Corsica**: 1 ♂, "8.8.[19]74 Serriera, b. Porto (Corse), fast ausgetrock. Fluß, Fery leg."; 1 ex., "2.4.[19]80 Korsika, Serriera, Fluß am Strand, Fery leg."; 1 ♂, "3.4.[19]81 Korsika, Serriera, Lache am Strand, Fery leg."; 3 exs., "10.4.[19]81 Corse, Serriera (Porto), Tümpel, Fery leg."; 12 exs., "10.4.[19]81 Corse, Serriera, Tümpel, Fery leg."; 1 ex., "18.7.[19]82 Corse, Serriera, Bach, Fery leg."; 2 exs., "7.4.[19]80 Korsika, Francardo, Waldbach, Fery leg."; 1 ex., "7.4.[19]80 Corse, Casamozza, ehem. Kiesgrube, Fery leg."; 3 exs., "13.4.[19]81 Corse, Casamozza, Tümpel, Fery leg."; 1 ♀, "13.4.[19]81 Corse, b. Barchetta, Fluß Golo, Fery leg."; 1 ♂, "24.7.[19]81 Corse, Sc. di St. Regina, Fluß Golo, Fery leg."; 1 ♂, "28.7.[19]81 Corse, Nähe Fango, Bach, Fery leg."; 25 exs., "13.7.[19]83 Corse, Ponte Leccia, Stranciacone, Fery leg."; 2 exs., "19.4.[19]79 Korsika, Cargèse, Wiesenbach, Fery leg."; 1 ex., "26.7.[19]82 Corse, Südlich Cargèse, Lache, Fery leg."; 1 ex., "1.8.[19]74 Soccia (Corse), Tümpel, Fery leg."; 8 exs., "8.4.[19]80 Korsika, Nördl. Sagone, Fluß, Fery leg." (all in CHF). **Italy**: 2 exs., "I. Sardinien (201), östl. Badde Suelzu, leg. Malicky 19.10.[19]81"; 14 exs., "18.7.[19]81 Sardinien, Villagrande, Bach, Fery leg."; 8 exs., "18.7.[19]81 Sardinien, Villagrande, Tümpel, Fery leg."; 2 exs., "Sardinien: NU, Stat. Arzana 800 m, 21.IV.1992, leg. Schawaller"; 23 exs., "Appennino Romagnolo, Passo d. Muraglione, m 850 21.2.1993, leg. F. Pederzani" (all in CHF).

DESCRIPTIVE NOTES. *Hydroporus analis* and *H. decipiens* are the only members of the *planus*-group that have a strongly rugose abdomen. Their upper surface is similar to that of the lighter coloured *H. pubescens* specimens. The male genitalia of *H. analis* are shown in Figs 19–21. The total length of the specimens studied is 3.4–3.8 mm (lectotype 3.7 mm). Franciscolo [1979: 331] gives 3.3–3.5 mm, Zimmermann [1931: 134] 3.5–3.75 mm.

DISTRIBUTION. Italy, France (Corsica); records from Austria, Greece, Algeria, and Tunisia [Franciscolo, 1979: 341] should be confirmed; those from North Africa possibly must be attributed to *H. decipiens*.

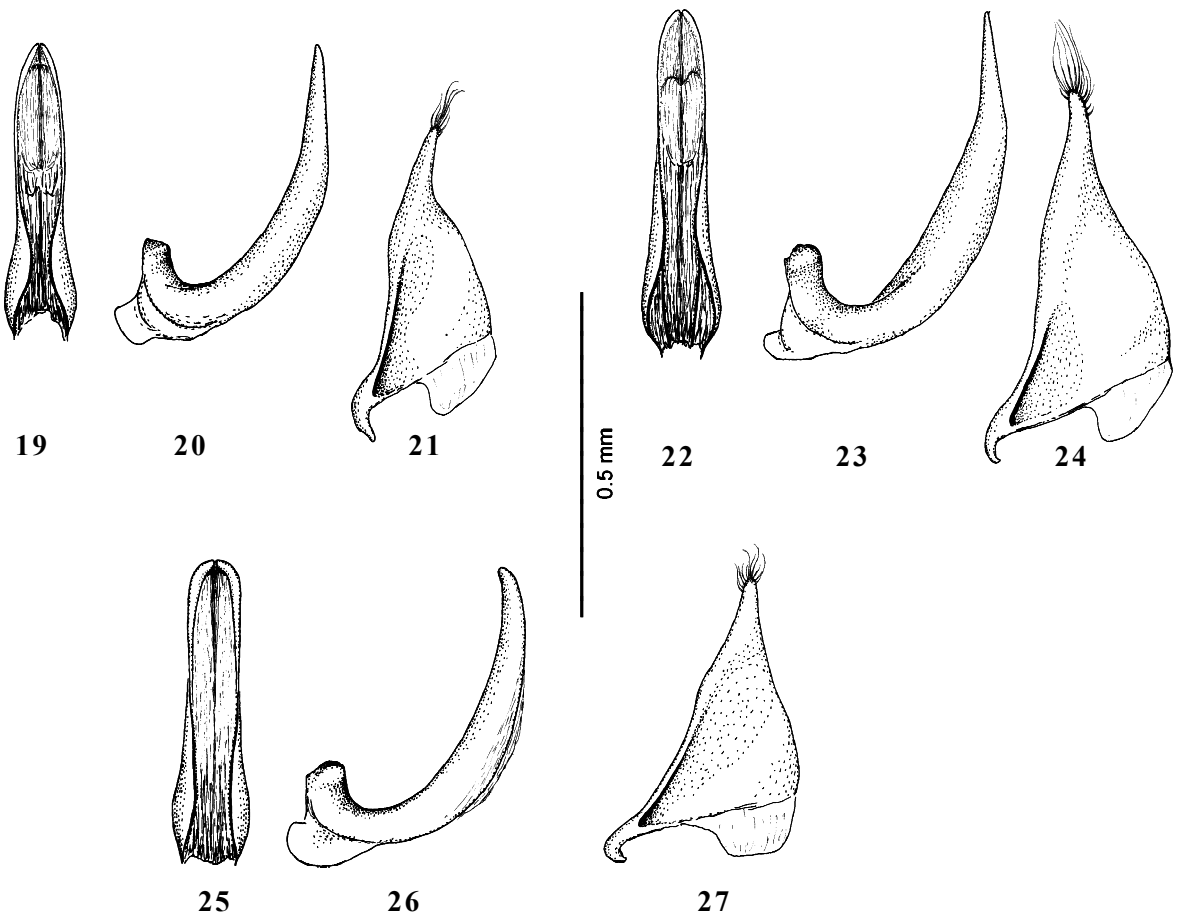
Hydroporus decipiens Sharp, 1878

Sharp, 1878: 113
Type locality — Spain, Sierra de Guadarrama

Zimmermann, 1931: 134 (*analis decipiens*); Franciscolo, 1979: 340 (*analis* [= *decipiens*]); Fery & Fresneda, 1988: 342 (*analis decipiens*); Ribera et al., 1999: 57; Nilsson, 2001: 156, 2003: 60.

MATERIAL. **Type material**: **Lectotype** of *Hydroporus decipiens* (by present designation): ♀, "*Hydroporus decipiens* Sharp, Type D.S." [on glue card, hw Sharp], "Type" [printed, round label with red margin, most probably mounted by J. Balfour-Browne], "Spain" [printed], "Sharp Coll, 1905 − 313" [printed], "Guadarrama" [hw Sharp], "Type 410, *Hydroporus decipiens*, Europe" [hw Sharp], "Lectotype, *Hydroporus decipiens* Sharp, 1878, Fery des. 2005" [red, printed] (BMNH). **Paralectotype**: 1 ♀, "*Hydroporus decipiens* Sharp, Ind. typ. D.S., Guadarrama" [on glue card, hw Sharp; the word "*decipiens*" on a small piece of paper glued onto the card], "Spain" [printed], "Spain" [printed], "Sharp Coll, 1905 − 313." [printed], "Syntype" [printed, round label with light blue margin, most probably mounted by J. Balfour-Browne], and the respective red paralectotype label (BMNH). **Notes**: The lectotype lacks the last three articles of the right antenna. R. Booth (BMNH) kindly communicated: "There is a label in the collection, probably in Garth Foster's handwriting, indicating that *H. decipiens* is a valid species and not a synonym of *H. analis*." According to the original description, Sharp has studied at least one further specimen from Monchique (southern Portugal) collected by Camille van Volxem. In the BMNH, however, no further material could be localised.

Additional material examined: **Portugal**: 1 ♂, 2 ♂♂, "9.8.[19]84 Portugal, Serra Estrella, b. Manteigas, Bach, 600 m, Fery leg."; 8 exs., "4.8.[19]89 Portugal, Serra Estrela, Umg. [= environs] Manteigas, kl. Bach, Fery leg."; 1 ♂, "22.7.1991 (P) Guarda-distr., Serra da Estrêla, N Manteigas, ca. 1100 m, Rinnsal, Fery leg."; 7 exs., "9.8.[19]84 Portugal, Serra Estrella, südl. Guarda, Rinnsal, Fery leg."; 9 exs., "14.8.[19]85 Portugal, Serra Estrela, Penhas Douradas, Bach, 1150 m, Fery leg."; 8 exs., "14.8.[19]85 Portugal, Serra Estrela, Penhas Douradas, Bach, 1000 m, Fery leg."; 9 exs., "21.7.[19]87 Portugal, Serra da Estrêla, Umg. [= environs] Torre, ca. 1900 m, Moortümpel, Fery leg."; 1 ex., "30.1.[19]94 Portugal, Minho, Serra de Arga, Rinnsal, 800 m, Fery leg."; 1 ♀, "20.7.[19]87 Portugal, Odemira, Cercal, Rinnsal, Fery leg." (all in CHF). **Spain**: 1 ♂, 1 ♀, "Esp. Salamanca prov., La Alberca 1000 m, 5.6.2002 R. Sejkora lgt." (CJH); 15 exs., "23.7.[19]87 España, Prov. Leon, Astorga (südl.), Bach/Tümpel, Fery leg."; 1 ♂, "6.7.[19]92 España, Prov. León, Noceda, NE Ponferrada, Bach, Fery leg."; 10 exs., "22.7.[19]87 España, Prov. Zamora, Puente de Sanabria, Bach, Fery leg."; 5 exs., "21.3.[19]89 España, Prov. Zamora, Justel, östl. Sanabria, Bach, Fery leg."; 12 exs., "3.11.[19]89 España, Prov. Zamora, O. [= E of] P. d. Sanabria, Bach, Justel, Fery leg."; 1 ♂, "4.4.1999 Spain, Burgos, ca. 3 km W Soncillo, ca. 30 km E Reinosa, ponds on meadow, Fery leg."; 1 ♂, "6.7.[19]88 Espagna, S. d. Gredos, Avila, Tormellas, Bach, Fery leg."; 2 exs., "9.7.[19]88 España, Prov. Avila, S. d. Gredos, Gredos, 1800 m, Quelltümpel, Fery leg."; 30 exs., "3.8.[19]89



Figs 19–27. Male genitalia of *Hydroporus* spp.: 19–21 — *Hydroporus analis*; 22–24 — *H. decipiens*; 25–27 — *H. zimmermanni*; 19–20, 22–23, 25–26 — penis, 21, 24, 27 — paramere; 19, 22, 25 — ventral view; 20–21, 23–24, 26–27 — lateral view.

Рис. 19–27. Гениталии самцов *Hydroporus* spp.: 19–21 — *Hydroporus analis*; 22–24 — *H. decipiens*; 25–27 — *H. zimmermanni*; 19–20, 22–23, 25–26 — пенис, 21, 24, 27 — парамера; 19, 22, 25 — снизу; 20–21, 23–24, 26–27 — сбоку.

España, Prov. Avila, Sierra de Gredos, Gredos, Tümpel, 1800 m, Fery leg."; 3 exs., "9.7.[19]95 España, Prov. Avila, Sierra de Gredos, Gredos, Rinnsal, 1800 m, Fery leg."; 1 ♂, "22.5.[19]90 España, Prov. Guadalajara, S. d. Alto Rey, Bustares, Bach, Wiese, Fery leg."; 2 exs., "16.6.[19]90 España, Prov. Guadalajara, S. d. Alto Rey, Bustares, Rinnsal, Fery leg."; 1 ♂, "19.2.[19]90 España, Prov. Guadalajara, Anquela del Ducado, salzh. Lache [= salty puddle], Fery leg."; 8 exs., "24.7.[19]87 España, Prov. Madrid, Sierra de Guadarrama, Lozoya, Bach, 1300 m, Fery leg."; 2 exs., "1.7.[19]92 (E) Toledo, SW Los Yébenes, Bachtümpel, Fery leg."; 2 exs., "27.5.[19]90 España, Prov. Cáceres, S Coria, Cañaveral, Bachtümpel, Fery leg."; 1 ♂, "2/iv/1996 Spain Cácares [sic!], Arroyo de las Canteras, 5 km NE of Trujillo, granite stream, D.T. Bilton leg."; 1 ♀, "8.7.[19]95 (E) Palencia, Ledigos, E Sahagun, Rio Cuenza, Bach, Fery leg."; 1 ex., "27.5.[19]90 España, Prov. Ciudad Real, W Retuerta del Bullaque, Rinnsal, Fery leg."; 8 exs., "27.5.[19]90 España, Prov. Ciudad Real, W Retuerta del Bullaque, Bachtümpel, Fery leg."; 1 ex., "4.8.[19]85 Espagna, Sierra Nevada, Laujar, Paterna del Rio, Rio de Alcolea, ca. 100 m, Fery leg."; 8 exs., "19.7.[19]87 España, Prov. Cadiz, nördl. Jimena d. l. Frontera, Zufluß d. Rio Hozgarganta, Fery leg." (all in CHF).

DESCRIPTIVE NOTES. Externally similar to *H. analis*, in particular, with respect to the rugose surface of abdomen. Yellowish spots on elytra more prominent. On average longer, total length of specimens studied 3.6–4.2 mm (lectotype 4.0 mm, paralectotype 3.9 mm). The male genitalia are figured for the first time (Figs 22–24).

This taxon has been treated by most authors of the last century either as a synonym or a variety of *H. analis*. Ribera et al. [1999: 57] were the firsts who re-instated *H. decipiens* as a valid species, but did not give any reason for their procedure.

DISTRIBUTION. Portugal and Spain; see also the notes under the distribution of *H. analis*.

Hydroporus crinitisternus Shaverdo & Fery, 2001

Shaverdo & Fery, 2001: 34
Type locality — Kazakhstan, Talassky Alatau range, 40 km SW Dzhambul [= Auliye-Ata]

Nilsson, 2001: 156.

MATERIAL. **Kazakhstan**: 1 ♂, 1 ♀, "E Kazakhstan, S Tarbagatay Mts., 4 km NE Petrovskoe [ca. 47.03N 82.18E], 1100 m, 22.VI.2001, leg. W. Schawaller" (SMNS).

Distribution: This new record completes well the known distribution of this rather poorly known species, which so far has only been recorded from south-eastern Kazakhstan and western Mongolia. The species seems to prefer the transition between the plain and mountainous regions. It should be noted that the Mongolian locality and the Kazakh ones are well connected by the Irtysh valley.

Hydroporus tessellatus-group

Hydroporus tessellatus (Drapiez, 1819)

Drapiez, 1819: 43 (*Dytiscus tessellatus*)
Type locality — Belgium, Moosel

= *Hydroporus habelmanni* Wehncke, 1876: 76 **syn.n.** (Type locality — Dalmatia*)

Heyden, 1883: 30 (*habelmanni*), 1891: 62 (*pubescens* var. *habelmanni*), 1906: 116 (*tesselatus* var. *habelmanni*); Seidlitz, 1887: 72 (*pubescens* var. *habelmanni*); Jacobson, 1908: 425 (*pubescens habelmanni*); Zimmermann, 1920: 100 (*pubescens habelmanni*); Burmeister, 1939: 226 (*pubescens* f. *habelmanni*); Franciscolo, 1979: 334 (*pubescens* ab. *habelmanni*); Wewalka, 1986: 278 (*pubescens habelmanni*); Angelini, 1988: 47 (*pubescens habelmanni*); Balke & Fery 1993: 93 (neotype designation of *H. habelmanni*); Nilsson, 2001: 166, 2003: 65.

MATERIAL. **Type material**: **Neotype** of *Hydroporus tessellatus* designated by Balke & Fery [1993: 93], stored in the IRSN.

Lectotype of *Hydroporus habelmanni* (by present designation): ♀, a small quadratic label without text, "Dalmatia" [hw Wehncke], "ex Wehncke, Muséum Paris, ex coll. R. Oberthur", "Lectotype, *Hydroporus habelmanni* Wehncke, 1876, Fery des. 2004" [red, printed]; glued onto a small triangular tip, placed in the drawer behind a label "*Habelmanni* mihi" [hw Wehncke] (MNHN). **Paralectotype**: 1 ♂, "Steinheil" [? nearly illegible, hw Wehncke], "Elba" [hw Wehncke], "ex Wehncke, Muséum Paris, ex coll. R. Oberthur", and a respective red paralectotype label; placed behind the lectotype and prepared in the same manner (MNHN). **Note.** The lectotype is an immature *Hydroporus tessellatus* (Drapiez, 1819) with a total length of 3.5 mm; it lacks the left hind tarsus. Both types have been re-glued by the senior author onto larger rectangular cards.

NOTES. It was not possible to identify the paralectotype of *H. habelmanni* undoubtedly. It is an extremely immature specimen of ca. 3.3 mm total length and resembles *H. pubescens* insofar as it has the elytra as well as the last abdominal sternum smooth between the punctures. On the other hand, the punctation on the apical third of this segment is rather sparse and not densely and almost rugosely punctate as it is typical for *H. pubescens*; the punctures are distinctly separated one from another and the smooth spaces between them clearly perceptible. The sculpture of this segment resembles much more that of *H. limbatus*, a species which has, however, usually a distinctly higher total length (see above). Additionally, due to the high immaturity it was not possible to identify the specimen by the shape of the aedeagus. A further reason to designate not the Elba specimen but the "Dalmatia" one as lectotype is that the latter fits better Wehncke's description with respect to some minute features which, however, shall not be explained here in detail. In the Wehncke collection, there stands a third specimen behind the lecto- and paralectotype which, however, is not treated as belonging to the syntype series because it is not mentioned in the original description: 1 ex., "Smyrna [= Izmir, Turkey]" [hw Wehncke], "ex Wehncke, Muséum Paris, ex coll. R. Oberthur" (MNHN). This specimen is — like the lectotype — an immature *H. tessellatus*.

The designation of a specimen of *H. tessellatus* as lectotype is — at first sight — not in accordance with Recommendation 74A of the ICZN [1999], since in the last decades *H. habelmanni* was treated as a synonym of *H. pubescens*. It seems, however, to be absolutely necessary to base the designation of the lectotype on the specimen of clear identity and not on the one which might give rise to future doubts.

DISCUSSION. The synonymy of *H. habelmanni* has been treated in different ways (cf. list of references above). Gozis [1914: 161] treated the taxon as a variety of *H. tessellatus*, and some pages further [Gozis 1915: 178] as a variety of *H. pubescens*, however, remarking in a footnote that the majority of authors of that time preferred the former view. Burmeister [1939: 226] called the taxon a "form" of *H. pubescens*, but not expressly giving it infrasubspecific rank (cf. ICZN [1999], Article 45.6, which might be applied here analogously, although such cases are not treated by the Code). To our knowledge, Franciscolo [1979: 334] was the first who gave it expressly infrasubspecific rank and called it "ab. *habelmanni*". However, Wewalka [1986: 278] and Angelini [1988: 47] still listed it as a subspecies of *H. pubescens*, whereas B. Guéorgiev [2004: 398] was the first who provided this taxon simply as a synonym of *H. pubescens*.

As shown above, populations of *H. pubescens* from the Mediterranean, which usually are longer, broader, more vaulted, and have the base and the margins of elytra more yellowish than more northern ones, in the last decades have been treated either as a subspecies or as a colour variety of this species and called "*habelmanni*". The designation of the lectotype of *H. habelmanni* is at the same time a synonymisation of this name with *H. tessellatus*. Thus, these southern populations of *H. pubescens* lose their name, but, at present, we do not see the necessity to give them another one.

Hydroporus zimmermanni G.[J.] Müller, 1926

Müller, 1926: 288
Type locality — Slovenia, Pivka [= St. Peter = San Pietro del Carso], ca. 30 km E Trieste [Italy]

= *Hydroporus bicolor* J.[G.] Müller 1933: 202 (Type locality Slovenia, Pivka)

Müller, 1928: 260, 1933: 201; Zimmermann, 1931: 127; Gschwendtner, 1939: 34 (*bicolor*); Zaitzev, 1953: 167 (including *bicolor*), 1972: 176 (including *bicolor*); V.B. Guéorguiev, 1960: 27, 28 (*bicolor*), 1965: 492 (including *bicolor*), 1971: 13 (including synonymy of *H. bicolor*); Nilsson, 2001: 167, 2003: 65.

MATERIAL. **Type material**: **Holotype** of *Hydroporus zimmermanni*: ♂, "Carniolia, St. Peter, 9.4.[19]11", "*Hydroporus Guernei* Rég." [hw Zimmermann], "Museo Civico di Trieste", "Typus" [red], "Zimmermanni Müll., Tipo" [green, hw J.[G.] Müller] (MCTR). **Notes**: Müller's [1926: 288] original description of *H. zimmermanni* contains no hint on the number of syntypes studied. In a later publication [Müller 1928: 260] the author provided "... the single exemplaire of *H. Zimmermanni* ..."; Zimmermann's [1931: 127] remark can be interpreted in the same way: "Type from St. Peter in Krain ...". Thus Müller has a single exemplare of a new species. So, this specimen is a holotype by monotipy (Recommendations 72.4.1.1 and 73.1.2. of the ICZN [1999]).

Lectotype of *Hydroporus bicolor* (by present designation): ♂, "Istr. [= Istria] St. Peter, 16.4.33, Springer" [printed, hw Springer (?) in part], "Petel. jezero" [hw Springer?], "Cotypus" [red], "Museo Civico di Trieste", "Lectotype, *Hydroporus bicolor* J.[G.] Müller, 1933, des. H. Fery 2005" [red, printed] (MCTR); **Paralectotypes**: 1 ♀, first four labels as in the lectotype; 1 ♀, "S. Pietro, Petelinsko jezero" [hw Springer (?)], "Springer, 16.4.33" [hw Springer?], "Museo Civico di Trieste", "Typus" [red], "bicolor m., det. J. Müller" [hw J.[G.] Müller?] (all in MCTR). Each paralectotype is provided with the respective red label.

Additional material examined: **Slovenia**: 1 ex., "S. Pietro, Petelinsko jezero" [hw Springer?], "Springer, 16.4.33" [hw Springer?], "Museo Civico di Trieste"; abdomen externally glued onto the card, genitalia missing; 2 exs., "Istr. St. Peter, 16.4.33, Springer" [date hw Springer?], "Petel. jezero" [hw Springer?], "Museo Civico di Trieste" (all in MCTR). 2 exs., "Galško jezero [not found on any map], 7.V.1956", "Slovenia, leg. Pretner"; genitalia absent (MRTO). 4 exs., "Petelinsko Jezero", "7.V.1956.",

* This coincides more or less with today's Croatia

"Slovenija, leg. Pretner" (NMW, CHF). 4 exs., "Petelinsko Jezero, Pivka, 21.4.1963", "YU Slovenien, leg. Pretner"; **Serbia and Montenegro**: 14 exs., "Crna Gora [= Montenegro], Durmitor, Škrcko Jezero, 1933.VII.13, leg. Dr. J. Fodor" (all in CHF).

DESCRIPTIVE NOTES. The types of *H. bicolor* deviate from other *H. zimmermanni* only by the almost uniformly light yellowish elytra. Thus, the contrast between these and the black pronotum is more prominent. The other separating characters given by Müller [1933: 202] are not sufficient to create a new species. The male genitalia are figured for the first time (Figs 25–27). The total length of the specimens studied is 3.9–4.3 mm.

DISTRIBUTION. According to Nilsson [2003: 65], this species is distributed in Slovenia, Croatia, Serbia and Montenegro, Bosnia Herzegovina, and Bulgaria; the latter, however, must be excluded due to the following observations: Hlisnikovský [1955: 96] recorded *H. zimmermanni* from Bulgaria. We have studied two females with the same collecting data: "Sozopol [ca. 42.25N 27.41E] Bulg. or. 16.V.[19]39, Hlisnikowski". These specimens have a total length of 4.4–4.5 mm and are thus distinctly longer than *H. zimmermanni*. In addition, the punctation of the elytra is much denser and finer, the spaces between punctures are not reticulated. The specimens resemble *Hydroporus inscitus* Sharp, 1882, or even *Hydroporus multiguttatus* Régimbart, 1887 (*Hydroporus marginatus*-group), but they are definitely not *H. zimmermanni*. For a solution of this problem, the study of males is indispensable.

Hydroporus marginatus-group

Hydroporus marginatus (Duftschmid, 1805)

Duftschmid 1805: 269 (*Dytiscus marginatus*)
Type locality — Austria, Kleinmünchen, near Linz

Stephens, 1828: 56; Franciscolo, 1979: 327; Nilsson, 2001: 160, 2003: 62.

Type material: According to Gusenleitner [1984], all Duftschmid's types must be treated as not to be found.

Material examined: **Turkey**: 1 ♂, "Dumlu-daol. bei Akdagköy, 2300–2900 m, 21.V.1989", "Anatolia or. [= orientall], Heinz leg." (NMB). **Kazakhstan (first record)**: 1 ♂, "N-Kazakhstan Reg., Markakol, Alekseyevka, 1700 m 27.VI.1987, V. Dolin" (NMB). **Iran (first record)**: 4 exs., "15.8.1998 Iran, Kohkiluyeh & Boyer Ahmad, 7 km SW Yasuj, Elmi & Fery leg.", "Cheshmeh Sar-e-Ab Taveh, brook and pools (with stagnant water) (#2106)" (CHF).

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