

FIRST RECORD OF *HYDROVATUS HORNI* CROTCH FROM THE ANTILLES WITH NOTES ON ITS KNOWN DISTRIBUTION AND STATUS (COLEOPTERA: DYTISCIDAE)¹

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ABSTRACT: *Hydrovatus horni* Crotch is reported for the first time from Cuba, distinguishing characters and a typical biotope are illustrated, the habitat is discussed, and its known distribution in Texas, Mexico, Guatemala, and Cuba is summarized. Also a lectotype is designated for *Hydrovatus major* Sharp which is shown to be a synonym of *H. horni*.

Through a cooperative program between the Institute of Zoology, Systematics Section, of the Academy of Sciences of Cuba and the Smithsonian Institution, we collected aquatic Coleoptera and other aquatic insects from 4-14 May 1981 in Cuba. Among the specimens collected was an attractive species of the dytiscid genus *Hydrovatus*. This distinctive beetle was much larger than the common species of *Hydrovatus* known from the New World. A review of the genus revealed that this was *Hydrovatus horni* described by Crotch in 1873 from specimens from Texas and described later as *Hydrovatus major* by Sharp in 1882 from specimens from Guatemala. We wish to report, for the first time, *Hydrovatus horni* in the Antilles, to illustrate the distinctive characteristics of the species, to describe its habitat, to summarize its known distribution, to designate a lectotype for *H. major*, and to report that the latter is a synonym of *H. horni*.

Hydrovatus horni Crotch

Figs. 1-6

Hydrovatus horni Crotch, 1873:378.

Hydrovatus major Sharp, 1882:335 [NEW SYNONYMY]

Diagnosis. — Form (Fig. 1) broadly oval; strong convex dorsally, moderately so ventrally. Length 3.7 mm; greatest width 2.7 mm. Head reddish-brown. Thorax reddish-brown except a piceous transverse macula along posterior margin on middle third of pronotum. Elytra reddish-brown with discal area of each elytron black; with a large reddish-brown macula basally in humeral area and another reddish-brown macula near base and close to elytral suture; with a reddish-brown C-shaped mark on apex of left elytron and a reversed C on right elytron; these C-shaped maculae merge laterally with the reddish-brown elytral margins. Head, thorax, and elytra microreticulate; venter mostly without microreticulation between

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punctures. Head with a few small punctures in a broadly U-shaped pattern between the eyes; pronotum coarsely sparsely punctate; elytra coarsely and very densely punctate; mesosternum and metasternum coarsely, densely punctate. Elytron each with a short, distinctive, deep, submarginal groove near base (Fig. 2). Male genitalia as illustrated (Figs. 3-5). The large size, color pattern, and submarginal elytral groove will readily distinguish *H. horni* from all other species of *Hydrovatus* presently known from the Western Hemisphere.

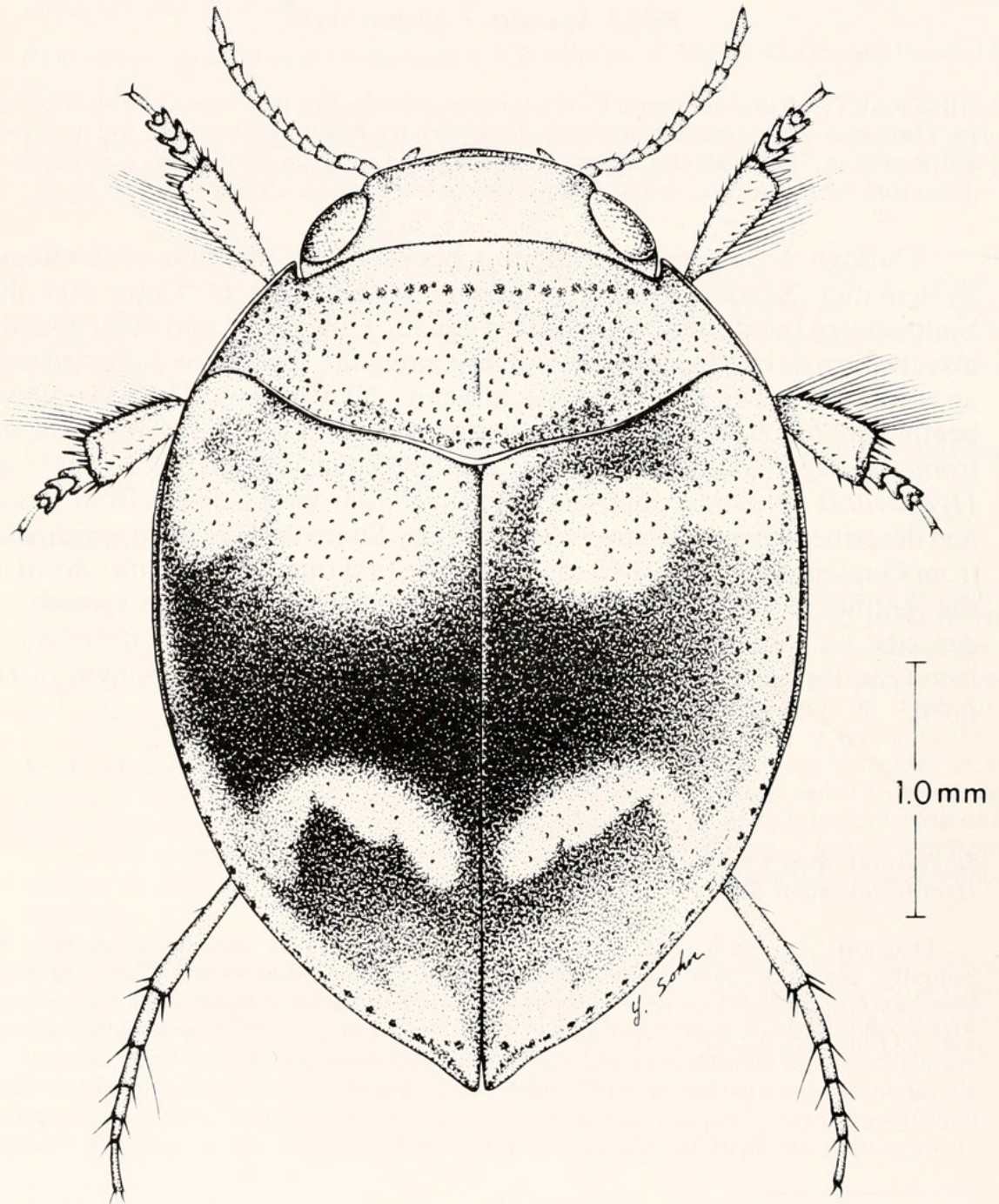


Fig. 1. *Hydrovatus horni* Crotch: habitus view.

Discussion. — Sharp (1882) in his magnum opus on the Dytiscidae of the world did not redescribe *H. horni* as he did other species in the genus, but in his description of *Hydrovatus major* he stated "It is closely allied to *Hydrovatus horni*, Crotch." Sharp, evidently, did not have access to Crotch's type-material nor other specimens of *H. horni*, but compared his Guatemalan specimens to Crotch's published description; otherwise he undoubtedly would have recognized that his specimens were the same species described previously by Crotch.

Habitat. — Our specimens of *Hydrovatus horni* were collected from the weedy margins of a pasture pond (Fig. 6) which also contained mats of the water hyacinth *Eichornia crassipes* (Mart.); the substrate of the pond was mud.

Known distribution of *Hydrovatus horni*. — Published type-locality given as "Texas". Additional records: UNITED STATES: Texas: [No additional locality data], Belfrage Colln., 1 female (USNM); Kingsville, C.T. Reed, 1 female (USNM); McAllen, 7-2-38, D.W. Craik, 1 male (USNM); Jim Wells Co., 7-24-38, J.G. Shaw, 1 male (USNM). MEXICO: Campeche: Campeche (21 mi. E.), 27 July 1964, Paul J. Spangler, 2 females (USNM); Jalisco: Magdalena (7 mi. N), 28 July 1963, Paul J. Spangler, 3 males, 3 females (USNM); Tamaulipas: San Jose, April 1910, J.D. Sherman Coll'n., 1 male, 1 female (USNM). GUATEMALA: Published type-locality of *H. major*, Duenas, 1879, G.C. Champion, 23

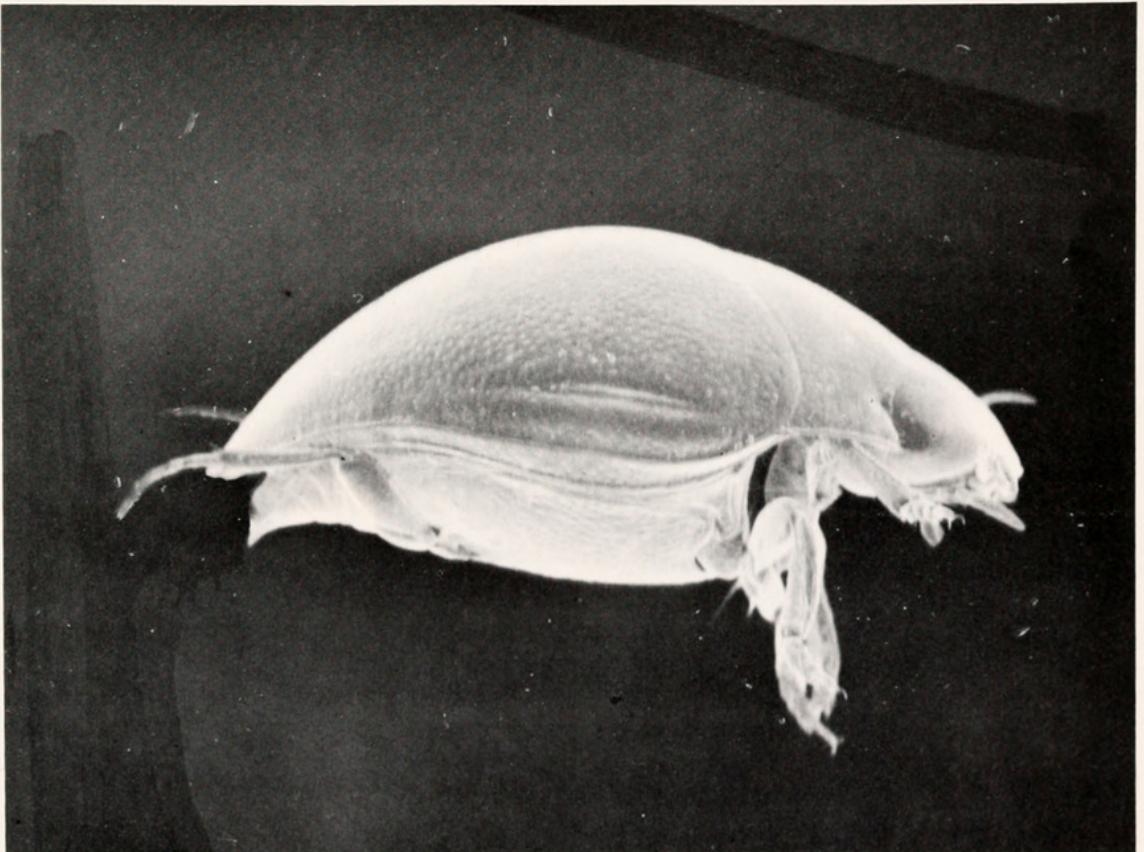
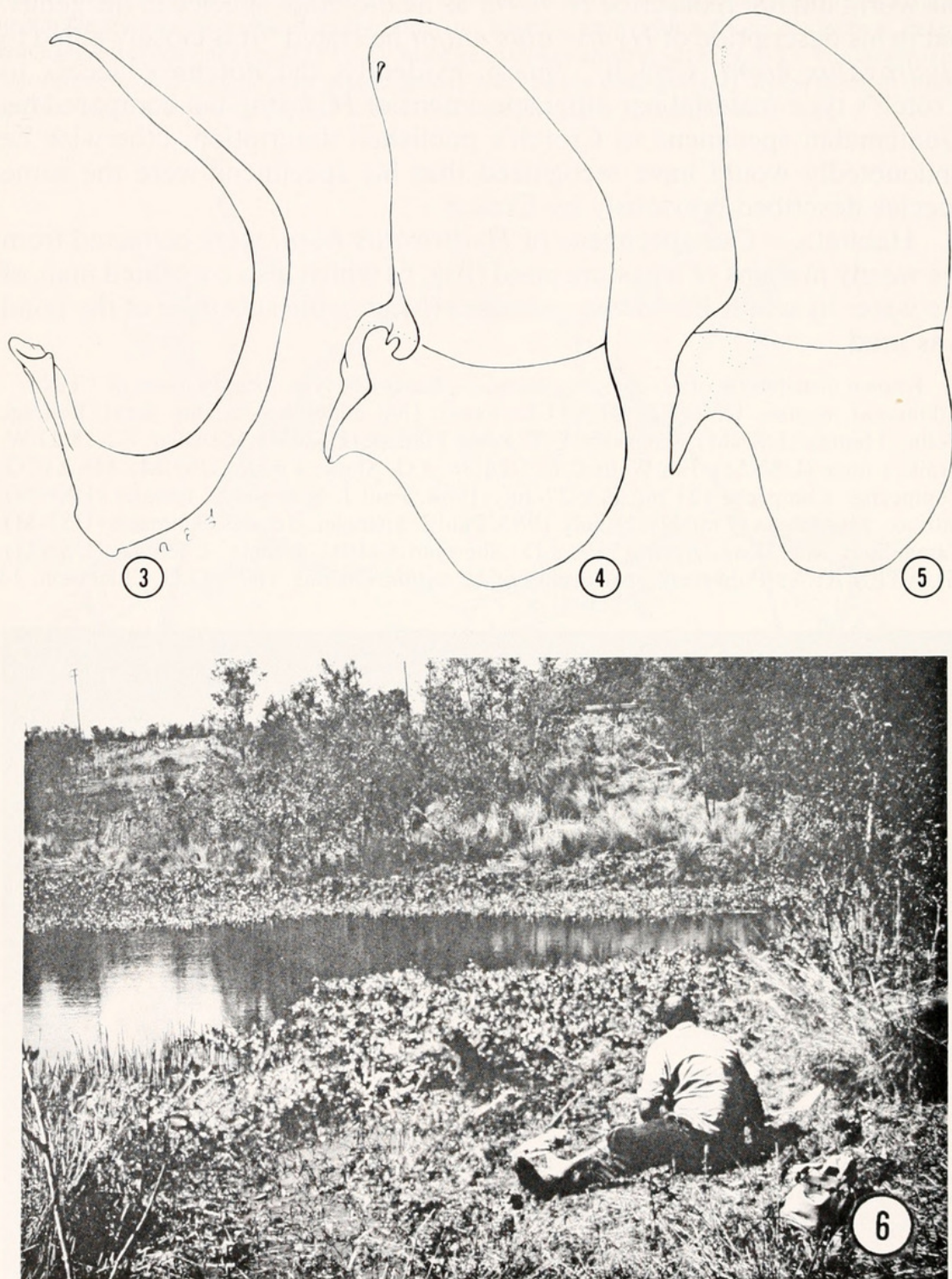


Fig. 2. *Hydrovatus horni* Crotch: submarginal groove in elytron, lateral view, 24X.



Figs. 3-6. *Hydrovatus horni* Crotch, male genitalia: 3, median lobe, lateral view; 4, right paramere, medial view; 5, left paramere, lateral view; 6, biotope, pasture pond near Motel Los Jazmines, Vinales, Cuba.

syntypes (BMNH): Izabal: Morales (1 mi. N), 16-18 Aug. 1965, Paul J. Spangler, 1 male, 8 females (USNM). CUBA: Pinar del Rio: Vinales, near Motel Los Jazmines, 7 Feb. 1981, P.J. Spangler and A. Vega, 6 males, 6 females (ASC & USNM). ASC = Academy of Sciences of Cuba; BMNH = British Museum (Natural History); USNM = U.S. National Museum of Natural History, Smithsonian Institution.

Type-data (*H. major*). — The Sharp collection in the British Museum (Nat. Hist.), London, contains 23 syntypic specimens under the name of *H. major*. Six of these were examined. These are glued onto three cards with two specimens on each card and each card attached to a pin. At the lower left corner of each card is the number 1122. Beneath each card are three labels which state as follows: Label 1—"Duenas Guatemala G.C. Champion". Label 2—"B.C.A. Col. I. 2. *Hydrovatus major* Sharp". Label 3—"Syntype" [a round label]. One pin bearing a pair of specimens also bears a label "TYPE". The male on the left side of the card with a male sex symbol beneath it was dissected for comparison of its genitalia with that of the Cuban specimen illustrated (Figs. 1-5) and was found to be the same. The genitalia from this male has been placed in glycerine in a microvial pinned beneath the "TYPE" label. Because Sharp did not designate type-specimens in his *Biologia Centrali-Americana* treatise, the type-label obviously was added later, but it has not been validated through publication. Therefore, this male is here designated as the lectotype. A label stating "Lectotype male, *Hydrovatus major* Sharp, Spangler des. 1981" was attached to the pin bearing the male. An additional label was attached as follows: "*H. major*" Shp. (= *H. horni* Cr.) fide P.J. Spangler."

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REFERENCES CITED

- Crotch, G.R. 1873. Revision of the Dytiscidae of the United States. Transactions American Entomological Society 4:383-424.
 Sharp, D. 1882. On aquatic carnivorous Coleoptera or Dytiscidae. Scientific Transactions Dublin Society 2(2):179-1003, pls. vii-xviii.
 Young, F.N. 1956. A preliminary key to the species of *Hydrovatus* of the Eastern United States (Coleoptera: Dytiscidae). Coleopterists' Bulletin 10:53-54.



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