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**HYDROPSYCHE ANTILLES, AN UNUSUAL NEW SPECIES FROM
SANTO DOMINGO (Trichoptera, Hydropsychidae)**

By HERBERT H. ROSS, *Illinois Natural History Survey*, and BOYD B.
PALMER, *Polytechnic Institute, San German, Puerto Rico*

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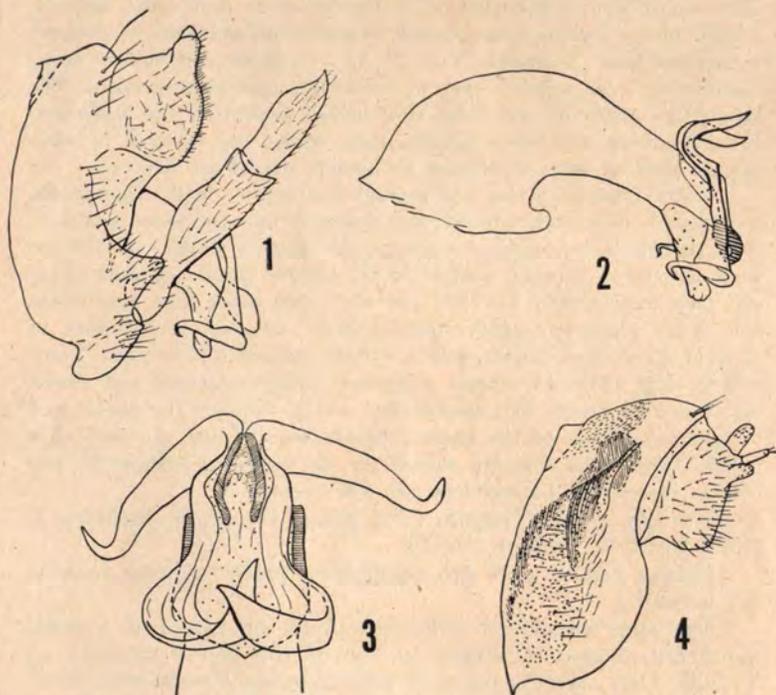
The following species is the second of the caddis fly genus *Hydropsyche* to be recorded from Santo Domingo. In 1941 Banks described *Hydropsyche domingensis* from this region, which until the present has been the only one known from the island.

The species described below is one of the most unusual in structure yet encountered in the genus. It differs from all of the North American forms in the biramous sclerotized proc-

esses at the apex of the aedeagus. On the basis of this and other characters, it fits into no previous group of the genus and a new group is therefore proposed for it.

ANTILLES GROUP

This group differs from others in the genus in the simple pretarsi of the males, which bear no clusters of black hairs as in other members of the genus. The structure of the aedeagus is also distinctive, especially the large basal portion and the curious apical processes. The female has many characteristics in common with the *Depravata Group*, notably the round lobes of the eighth sternite and the almost circular, deep clasper receptacle. It differs from this group in having no vestige of a brush at the apico-lateral corners of the eighth tergite. The middle tibia and tarsus of the female are only slightly flattened and expanded. In this respect also it is more similar to members of the *Depravata Group*.



Diagnostic Structures of *Hydropsyche antilles*. Fig. 1.—Male genitalia, lateral aspect; Fig. 2.—Aedeagus, lateral aspect; Fig. 3.—Apex of aedeagus, postero-dorsal aspect; Fig. 4.—Female ninth and tenth tergites, lateral aspect.

Hydropsyche antilles, new species

Male.—Length from head to tip of wings, 11 mm. Color brown, the venter of the body straw color, antennae and wings with markings only indistinct due to teneral condition. Eyes separated on dorsum by nearly twice dorsal width of eye. Malar space very short, only one-fifth lateral height of an eye. Venation typical for *Hydropsyche*; hind wings with *m-cu* distinct and at right angles to the veins it connects, M_{3+4} therefore separated markedly from Cu_1 .

Male genitalia (Fig. 1) with ninth segment annular and only moderately long, with a sharp posterior lobe extending over the base of the clasper. Tenth tergite fairly short, its apex divided into a smooth rounded mesal projection and a pair of raised lateral lobes which merge with the lateral margin, the posterior margin of this area bearing a brush of minute hairs; lateral portion of tenth tergite with a large membranous raised area of sparse setae. Claspers with apical segment distinct, two-thirds length of basal segment, its dorsal margin sinuate and the apex pointed, as seen from lateral view; basal segment somewhat moniliform, constricted to a narrow stalk near base, and expanded into a bulbous area beyond middle. Both segments of claspers with short hair. Aedeagus (Figs. 2, 3) with large and bulbous base, tapering to a moderately narrow, cylindrical, preapical portion. The apex bears a pair of very long, twin bladed structures, one blade proceeding laterad, the other dorsad; these blades are movable to some extent; between them is situated an arcuate sclerotized structure.

Female.—Similar in size and general structure to male. One of the specimens is more fully colored than others in the type series and indicates that the basal antennal segments have dark V-marks and that the wing pattern is irrorate, similar to *H. scalaris* Hagen. Middle tibiae and tarsi only slightly flattened and very little wider than hind tibiae and tarsi. Plates of eighth sternite evenly rounded, very similar to those of *H. scalaris*. Eighth tergite without apico-lateral brushes. Ninth tergite large (Fig. 4), clasper receptacle deeply excavated and almost round, clasper groove well marked, the portion between the groove and the anterior margin of the tergite slightly concave and spiculate with minute teeth. The entrance channel to the clasper receptacle is also densely spiculated. Lateral lobe not differentiated.

Holotype, male.—Trujillo City, Santo Domingo, January 3, 1940, Boyd B. Palmer, INHS.

Allotype female and two *paratype* females.—Same data as for holotype.

These specimens were collected along the banks of a small mountain stream tributary to one of the rivers running to Trujillo City. At the point of collection the stream was about twenty feet wide, a foot or so deep, and had a stony bottom and moderately strong current. The banks were somewhat open, partially shaded with shrubs and trees.