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A second Antillean species of *Amphoropsyche* Holzenthal, 1985 (Trichoptera, Leptoceridae)

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Abstract

The genus *Amphoropsyche* Holzenthal, 1985, included – besides a larger number of species from South America – only one Antillean species, from Dominica. A second Antillean species, *A. janstockiana* n. sp., is now described (male) from Saint Vincent. These two are sister species. Moreover, the female of an *Amphoropsyche* is described from Mustique; it probably belongs to *A. janstockiana* n. sp.

Résumé

Le genre *Amphoropsyche* Holzenthal, 1985, comprenait un certain nombre d'espèces d'Amérique du Sud, ainsi qu'une seule espèce antillaise (de Dominica). Le mâle d'une seconde espèce antillaise est maintenant décrit de Saint Vincent: *A. janstockiana* n. sp. D'autre part, la femelle d'une *Amphoropsyche* appartenant probablement à la même espèce nouvelle, est décrite de Mustique.

Introduction

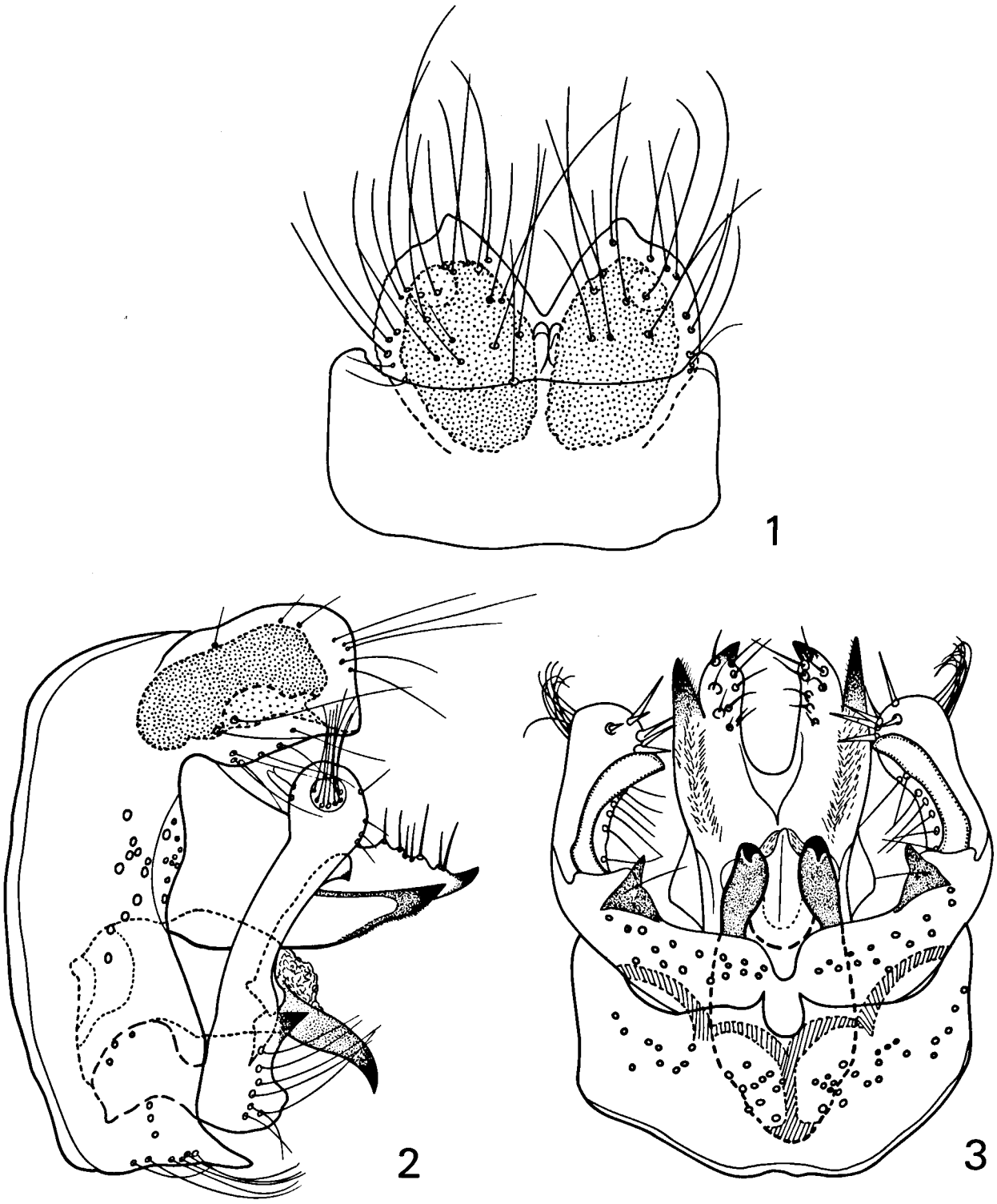
Flint (1968) described from the West Indian island of Dominica a new species of Leptoceridae (*insularis*) which he attributed with hesitation to the genus *Brachysetodes* Schmid, 1955, described for several species from Chile. Holzenthal (1985) removed *insularis* from *Brachysetodes*, and placed it – together with 9 other species from Ecuador, Colombia, and Venezuela – in the new genus *Amphoropsyche*. One more species was described by Holzenthal (1986) from Bolivia. The genus seems to be very speciose in mid-elevation streams of the northern Andes. It is characterized by several venation peculiarities, and by two interesting features of the male genitalia: presence of large glands inside the superior appendages (probably producing pheromones), and presence of a tuft of strong hairs near the gonopod apex, probably involved in spread of these pheromones.

During my study of a small collection of adult West Indian caddisflies from the British Museum (N.H.) a few male specimens from the island of Saint Vincent were discovered, which proved to represent a new species of *Amphoropsyche* – the second one known from the West Indies. One female specimen from Mustique, certainly belonging to the same genus and distinct from *A. insularis* (Flint), probably belongs to the same species.

The terminology I use in the descriptions is sometimes different from that used by Holzenthal (1985) and so are, too, some interpretations of genitalic structures.

Amphoropsyche janstockiana n. sp. (Figs. 1–3)

Material. – Four ♂♂ (pinned, abdomens cleared in KOH and preserved in vials with glycerin) from the West Indian island of Saint Vincent; on the labels of 3 specimens there is also the mention "Windward side"; on a label with the 4th specimen "1500 feet" is marked Leg. H.H. Smith. No sampling date. These specimens were collected by the very active American field naturalist Herbert Huntingdon Smith in 1895 and presented to the British Museum in November of the same year by the West



Figs. 1–3. Male genitalia of *Amphoropsyche janstockiana* n. sp. from Saint Vincent: 1, IXth tergite and superior appendages, dorsal; 2, lateral view; 3, ventral view.

Indian Exploration Committee. Holotype and one paratype in the B.M. (N.H.); two paratypes in the Zoological Museum of the University of Amsterdam.

Remark. – This species was not collected during an extensive hydrobiological survey of Saint Vincent (Harrison & Rankin, 1976), nor was I able to rediscover it during a trichopterological trip to this island in February 1989.

Description of ♂. – Length of forewing: 4–4.5 mm. Forewing vestiture very dense, golden-yellow, with few and inconspicuous darker spots (e.g. towards the wing tip). Venation like in other species of the genus. Antennae variegated, white with brown.
Genitalia (Figs. 1–3). IXth sternite with mediodistal sinus, on both sides of which is a pointed projection. Superior appendages massive, coalescent in their basal part, but for slightly less than half of their length separated by deep triangular excision; each appendage with small, blunt distoventral point; inside superior appendages, the pair of large glands very characteristic for *Amphoropsyche*: dark, but near distal end with paler area possibly corresponding to a void, surface imbricate, scales roughly pentagonal and with striations. Xth segment (in lateral view) high basally, then regularly narrowing and obliquely descending towards the sharply pointed and medially directed tip; dorsal margin anterior to this tip irregular and with spines; laterodistally, on each side, very strong, sharply pointed blades almost reaching apex of Xth segment; in ventral view the segment is distally divided in two parts through a very deep and broad oval sinus, and its lateral parts (i.e. proximad to the laterodistal blades) are covered by rows of minute spinules. Inferior appendages in ventral view largely distant, curved in such a manner as to delimit a vast oval area, proximally coalescent on median line but distally on this line separated by a small sinus; main branch of inferior appendage in lateral view long and slender, with basal heel followed by a strong, sclerotized triangular projection directed posteriad and mediad; distal part of this main branch inflated and with the tuft of hairs inserted on a paler area which is characteristic for the genus; at about midlength of the ventral side of the main branch there is a rather faint suture between coxopodite and harpago, and on this suture is inserted an annex branch, slender, slightly club-shaped (but in lateral view with apex slightly hooked). Phallic apparatus mainly characterized by the pair of long and strong parameres with sharp downturned tips almost reaching apex of apparatus.

Derivatio nominis. – This species is named after Prof. Dr. J.H. Stock, on the opportunity of his retirement.

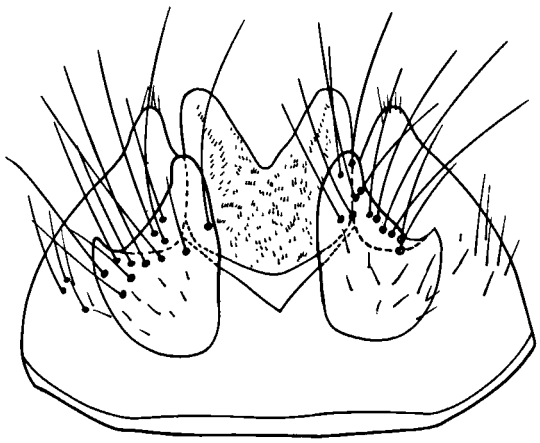
Affinities. – The new species is closely related only with *A. insularis* (Flint), this being a pair of sister species. The two Lesser Antillean species share the golden pubescence of the forewings and many structural features of the male genitalia. The following characters of the male genitalia are distinctive for *A. janstockiana* n. sp.: complex formed by the two superior appendages more deeply cleft medially, inferior appendages with stronger triangular projection of coxopodite, phallic apparatus with much longer and stronger parameres, and especially a Xth segment completely differing from that of *A. insularis* in general shape and in many details.

This is one more fine case of speciation, in the Lesser Antilles, through vicariant events, starting from a South American lineage.

A female of *Amphoropsyche* from Mustique (*A. janstockiana* n. sp. ?)

Material. – One female specimen simply labelled "W. Indies ... Mustique Is.", pinned, abdomen cleared in KOH and preserved in a vial with glycerin; not designated as type; preserved in the B.M. (N.H.). This specimen was, too, collected by H.H. Smith, and presented to the British Museum in 1899, again by the West Indian Exploration Committee.

Description. – Length of forewing: 4.5 mm. Forewing vestiture very dense, golden-yellow. Wing venation as in other *Amphoropsyche*.
Genitalia (Figs. 4–5). IXth segment ventrally and dorsally widely and deeply excised in its distal half, the Xth segment being placed in this excision;



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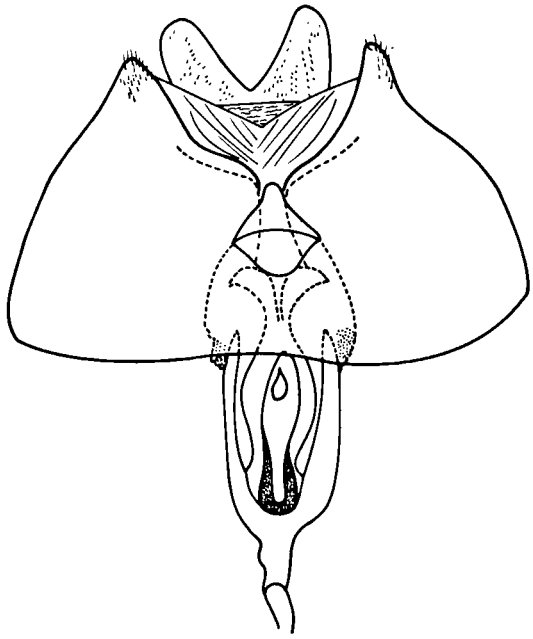

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Figs. 4–5. Female genitalia of *Amphoropsyche* sp. (*janstockiana* n. sp. ?) from Mustique: 4, dorsal view; 5, ventral view.

laterodistally with well individualized conical (blunt) projections with minute setae. On IXth tergum are placed the large but not very long cerci with long setae; the cerci do not reach the end of the Xth segment, they are widely separated medially, broad basally (where their limits are faint), narrowing to the blunt apices, and with distolateral borders rather deeply emarginated. The Xth segment is a relatively simple, deeply bilobed, roughly pentagonal plate furnished with minute spinules. Vaginal apparatus quite complex (Fig. 5).

Affinities. – The golden vestiture of forewings, different from the dark-brown one of most described *Amphoropsyche* species, places this specimen near *A. insularis*. The female genitalia are, however, very different in many respects, those of the specimen from Mustique having, e.g., much stronger laterodistal projections of the IXth segment, much shorter cerci with different shape, and especially a characteristically deeply cleft Xth segment, protruding beyond all other parts of the genitalia. It is quite possible that this is the female of *A. janstockiana* n. sp. (Mustique and Saint Vincent belong to the same group of islands, being separated only by some 30 km).

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