

STUDIES ON THE FAUNA OF CURAÇAO AND OTHER
CARIBBEAN ISLANDS: No. 183

THE REDISCOVERY OF THE FRESHWATER
SHRIMP *MACROBRACHIUM CRENULATUM*
IN JAMAICA

by

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A record of the freshwater shrimps of Jamaica has been provided by HART (1961b). His study includes taxonomical comments and notes on the locations at which the various species were caught. Since then HOLTHUIS (1963a) has described a new subterranean freshwater shrimp, *Troglocubanus jamaicensis*, still known only from its type locality near Goshen, Jamaica, and CHACE & HOBBS (1969) have listed all the freshwater shrimps recorded in Jamaica up to that time. Subsequently, HUNTE (1975) reported the presence of *Atya lanipes* Holthuis in Jamaica for the first time.

Macrobrachium crenulatum Holthuis (1950a) has not been reported from Jamaica since 1910, and both HART (1961b) and CHOUDHURY (1971a) considered it no longer extant in the island. Extensive collecting during the present study has produced a single male specimen of this species with post-orbital carapace length 12.9 mm. The purpose of the present paper is to update the faunal record of Jamaican freshwater shrimps by confirming the disputed presence of *M. crenulatum* in the island. There are therefore fourteen species of freshwater shrimps now considered extant in Jamaica, and these are listed in the following Table. HUNTE (in press) has discussed the ecological factors affecting the distribution of the more common of these shrimps throughout Jamaica.

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LIST OF THE JAMAICAN FRESHWATER SHRIMPS

Name	Type Locality
Family ATYIDAE	
<i>Atya innocous</i> (Herbst), 1972	Martinique
<i>Atya lanipes</i> Holthuis, 1963a	St. Thomas, Virgin Islands
<i>Atya scabra</i> (Leach), 1815	México
<i>Jonga serrei</i> (Bouvier), 1909	Havana, Cuba
<i>Micratya poeyi</i> (Guérin-Méneville), 1855	Cuba
<i>Potimirim americana</i> (Guérin-Méneville), 1855	Cuba
<i>Potimirim mexicana</i> (De Saussure), 1857c	Veracruz, México
<i>Xiphocaris elongata</i> (Guérin-Méneville) 1855	Havana, Cuba
Family PALAEMONIDAE	
<i>Macrobrachium acanthurus</i> (Wiegmann), 1836	Coast of Brasil
<i>Macrobrachium carcinus</i> (Linnaeus), 1758	Jamaica
<i>Macrobrachium crenulatum</i> Holthuis, 1950a	Río Peje Bobo, Panamá
<i>Macrobrachium faustinum</i> (De Saussure), 1857c	Near Jacmel, Haiti
<i>Macrobrachium heterochirus</i> (Wiegmann), 1836	East coast of México
<i>Troglocubanus jamaicensis</i> Holthuis, 1963a	Near Goshen, Jamaica

SYNONYMY

- Palaemon olfersii*, SHARP, 1893 (part), p. 123.
Bithynis olfersii, RATHBUN, 1901 (part), p. 124.
Macrobrachium olfersii, SCHMITT, 1933a (part), p. 315.
Macrobrachium crenulatum HOLTHUIS, 1950a, p. 95.

GEOGRAPHICAL DISTRIBUTION

Macrobrachium crenulatum has been recorded in Panamá, Venezuela, and a number of the West Indian islands (Jamaica, Hispaniola, Puerto Rico, St. Croix, Guadeloupe, Dominica, Grenada, Trinidad).

HABITAT

The present specimen was collected at an altitude of about 50 ft in a tributary of the Black River in the parish of St. Elizabeth, Jamaica. The water in the tributary was clear and fresh, and the substratum was composed of mud and decaying vegetation. Current speed was extremely low. *M. crenulatum* had previously been caught in Jamaica at a low altitude site in a slow-moving stream in the parish of St. James (see HART, 1961b).

The species is apparently much more common in Puerto Rico than in Jamaica, and in the former island it occurs primarily in quiet pools at altitudes below 1300 ft (CHASE & HOBBS, 1969).

COLOUR IN LIFE

The carapace was predominantly dark red and had a red-black area dorsolaterally in the anterior half. The terga of the first, second, third and fourth abdominal somites were red-black; those of the fifth and sixth were of a lighter red tinged with blue. The third, fourth, fifth and sixth somites each had a yellow area in their posterior half; that of the third being the largest. The telson was bright

red with red-black and black spots surrounding the bases of the spines. The uropods were pale red with darker red and yellow patches. The antennal and antennular peduncles were dark red, the flagella were tan. The coxa of the pereiopods were grey; the more distal podomeres usually pale red. The chela of the first pereiopod was cream-tan with a blue-black stripe; that of the second pereiopod was black with white tips. The pleopods were pale red.

MORPHOLOGICAL FEATURES OF TAXONOMIC SIGNIFICANCE

The carapace was without a branchiostegal spine; but antennal and hepatic spines were present. The rostrum (Fig. 58a) possessed

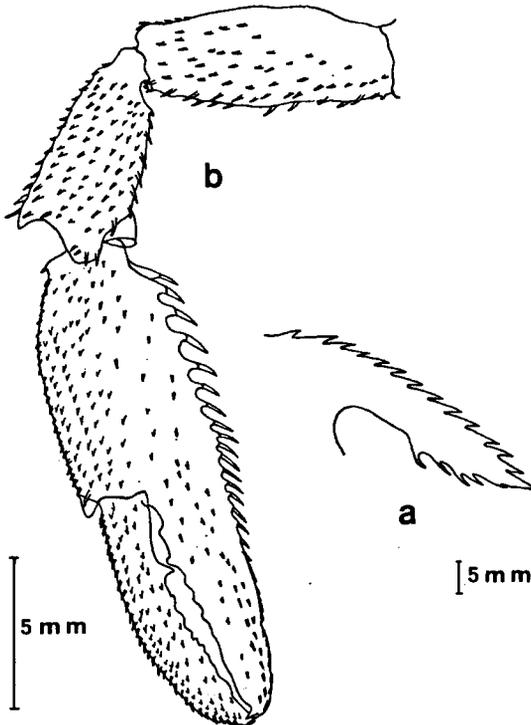


Figure 58. *Macrobrachium crenulatum* Holthuis. Morphological features of taxonomic significance. - A. Rostrum. - B. Major second pereiopod.

thirteen dorsal teeth and five ventral teeth, the most anterior of which was very small. The posterior four dorsal teeth were behind the orbital margin. The second pereopods were unequal in size and form and had thick pubescence on the palms and opposing margins of fingers. The carpus of the major second pereopod (Fig. 58b) was shorter than the palm or merus, and the fingers were about the same length as the palm. The palm was compressed and was not quite twice as long as wide. The spines along the mesial margin of the palm did not decrease in size near the middle portion of the palm but suddenly became smaller near the base of the fixed finger.

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