

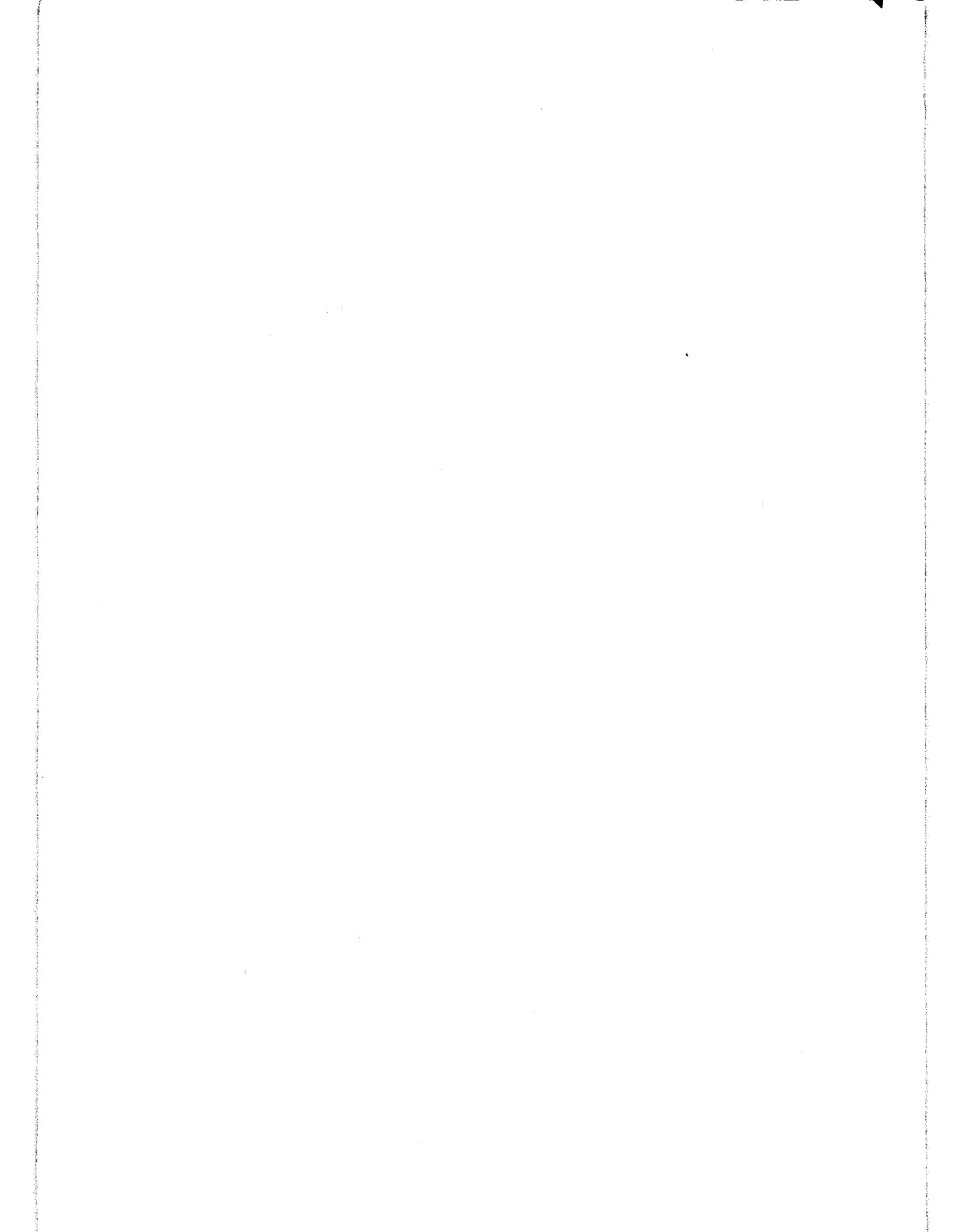
Holthuis 1977

**RÉSULTATS  
DES EXPÉDITIONS  
BIOSPÉOLOGIQUES  
CUBANO-ROUMAINES  
À CUBA**

Sous la direction de :

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ȘT. NEGREA, NICASIO VIÑA BAYÉS**

**TIRAGE À PART**



# On some freshwater and terrestrial *Crustacea* *Decapoda* from Cuba

by

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In two previous notes (Botosaneanu & Holthuis, 1970 and Holthuis, 1974), macrurous Decapoda collected during the 1969 and 1973 Cuban-Romanian Biospeological Expeditions to Cuba have been dealt with. The first of these two papers concerned itself exclusively, the second mainly, with species inhabiting subterranean waters. In the present note additional material from the same expeditions is treated; this material reached me too late to be included in the former two reports. The majority of the species of this new material originates from epigeal waters. It contains enough material of interest to justify its separate publication.

The species are dealt with in the order adopted in the paper by Chace & Hobbs (1969). For more details of the various species treated in the present paper, e.g., as far as their morphology, biology, variability, etc. is concerned, the fundamental paper by Chace & Hobbs should be consulted.

I want to express my gratitude to Dr. V. Decu and Dr. Șt. Negrea of the Institute of Speology "Emil Racoviță", Bucharest, who placed this material at my disposal.

For more informations on the stations see: L. Botosaneanu and Holthuis L.B., 1970, Jiménez Núñez, A. & coll., 1973 and Orghidan, T. & coll., 1977 (in this volume).

The abbreviation *cl* is used to indicate carapace length.

## *Decapoda Natantia*

### *Atyidae*

#### *Atya lanipes* Holthuis, 1963

\* Rijksmuseum van Natuurlijke Historie, Leiden, Netherlands.

Río Caburny, near "Topes de Collantes", Las Villas province, 1 May 1969, 1 ovigerous female.

The carapace length of this specimen is 15 mm (including the rostrum), or 12 mm (rostrum excluded). The tip of the rostrum reaches slightly beyond the end of the basal segment of the antennular peduncle. Its ventral margin bears two teeth in the distal part. The pterygostomial angle of the carapace is rounded or slightly angular, it is not produced into a sharp point as it is in the two type specimens, which both are males.

The abdominal pleura have their margins unarmed, although a few tubercles are present on their surfaces. The margins of the first to third pleura are rounded, those of the fourth to sixth end in a blunt posterior angle.

The second segment of the antennular peduncle is slightly longer than wide.

In contrast to the types the hairs are not conspicuously dense on the legs, only a fringe of soft hairs is visible over the lower outer surface of the carpus and propodus of the third and fourth pereopods. The carpus of the third to fifth pereopods has a strong anteroventral spine on the outer surface. The merus of pereopod 3 shows no spine at all, but those of the fourth and fifth legs have a strong anteroventral spine, sometimes followed by a few smaller ones. Very small spinules are scattered over the carpus and propodus. The fifth leg is peculiar in that its propodus has a very strong ventro-distal spine, which almost reaches the end of the dactylus and forms a kind of chela-like structure with it (fig. 1).

The eggs are numerous and small, they measure  $0.4 \times 0.7$  mm in diameter.

The specimen is considerably smaller than the types and is less slender. This might be due to the

fact that the present specimen is a female, while both types are males.

A juvenile specimen from Río Ceiba (1 March 1973) with *cl* 5,5 mm might also belong to the present species, but it is too immature to make a definite identification possible.

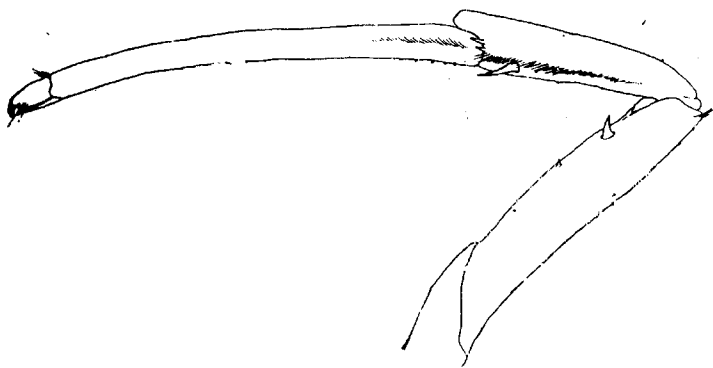


Fig. 1. — *Atya latipes* Holthuis, ovigerous female. Fifth pereopod.  $\times 25$ .

The species has so far not been reported from Cuba. It was known from St. Thomas (type locality) and Puerto Rico (vid. Chace & Hobbs, 1969: 62).

*Jonga serrei* (Bouvier, 1909)

Río Ceiba. Oriente province, March 1, 1973, 1 ovigerous female; Río Caco yugüin, Oriente province, March 10, 1973, 160 specimens (including 61 ovigerous females); Río Miel, near "Baracoa", Oriente province, April 3, 1973, 88 specimens (including 33 ovigerous females).

The carapace length of the specimens varies from 1.5 to 10 mm, that of the ovigerous females ranges between 6 and 10 mm.

This species was originally described from Cuba (vicinity of Havana), and is now known from a great part of the West Indies: Jamaica, Cuba, Puerto Rico, Dominica, Barbados. Chace & Hobbs (1969: 70) also report material from Costa Rica. The *Rijksmuseum van Natuurlijke Historie* possesses material from Guadeloupe, Martinique, St. Lucia, Trinidad and Tobago.

In the samples from Río Miel and Río Caco yugüin the present species was the most abundant component.

*Micratya poeyi* (Guérin-Méneville, 1855)

Río Yumurí, at "Yumurí del Sur" near "Baracoa", Oriente province, March 20, 1973, 3 specimens (2 ovigerous females); Río Miel, near "Baracoa", Oriente province, March 26, 1969, 1 juvenile; Río Ceiba, Oriente pro-

vince, March 1, 1973, 7 specimens; Arroyo Guayaro, near "Barrio Cocal", idem, March 2, 1973, 1 juvenile.

Most specimens are juveniles (*cl* 2–6 mm), the only ones that are adult are the two ovigerous females, which have the carapace length 8 and 9 mm.

*Micratya poeyi* was originally described (as *Atya Poeyi*) from Cuba. It has since been reported from a large part of the West Indies (Jamaica, Cuba, Puerto Rico, Dominica and Martinique), while Chace & Hobbs (1969: 75) mentioned a specimen from Costa Rica, which also seems to belong here. The *Rijksmuseum van Natuurlijke Historie* at Leiden furthermore possesses material of this species from Grenada, Barbados and Curaçao.

*Potimirim americana* (Guérin-Méneville, 1855)

Resurgent of the Cueva del Indio, Camagüey province, April 15, 1973, 7 specimens.

The specimens have the carapace length between 4 and 9 mm.

The males showed the characteristic appendix masculina on the second pleopod.

*Potimirim americana* was first described (as *Caridina americana*) from Cuba. It is now known also from Jamaica and Trinidad.

*Potimirim mexicana* (De Saussure, 1857)

Río Ceiba, Oriente province, March 1, 1973, 2 males, 1 female; Río Caco yugüin, Oriente province, March 10, 1973, 1 ovigerous female.

The males from Río Ceiba have a *cl* of 4 mm and show the appendix masculina characteristic for the species. The ovigerous female (*cl* 7 mm) from Río Caco yugüin is much larger, but also seems to belong to the present species.

*Potimirim mexicana* was originally described from Veracruz, México, and has later been reported from Central America as far south as Costa Rica and also from Jamaica, Cuba and Puerto Rico.

*Typhlatya garciai* Chace, 1942

Cueva de las Represas, Gran Caverna de Santo Tomás, Sierra de los Órganos near the village of "Quemado Pineda", Pinar del Río province, April 12, 1973, 3 specimens (1 ovigerous female).

The carapace length of the specimens varied between 4 and 4.5 mm. The ovigerous female

(*cl* 4.5 mm) carried about 10 large eggs, the diameter of which was 0.8 to 1.0 mm. This is the first ovigerous female to be reported for the species.

The specimens in all respects agree with Chace's (1942) description of the species.

*Typhlatya garciai* seems to be restricted to the island of Cuba. It was originally reported by Chace (1942) from the "Potrero del Molino" cave, Las Cuatrocientas Rozas, Bañes, Oriente province. Botosaneanu & Holthuis (1970: 122) dealt with numerous specimens of this species obtained at or very close to the type locality. The present material forms the third lot of the species to be reported upon. It greatly extends the known range of the species, as it is taken in Pinar del Río province, the westernmost province of Cuba, while the type locality is in Oriente province, the easternmost of the Cuban provinces.

*Xiphocaris elongata* (Guérin-Ménéville, 1855)

Río San Vicente, near "Rancho San Vicente", Pinar del Río province, June 6, 1969, 1 ovigerous female; Río Caco yugüin, Oriente province, March 10, 1973, 4 specimens; Río Miel, near "Baracoa", Oriente province, April 3, 1973, 1 specimen.

The ovigerous female from Río San Vicente is the largest specimen, it has *cl* 10 mm (exclusive of the rostrum) and 27 mm (with rostrum). The other specimens are much smaller (*cl* 3–5 mm without rostrum, 6–14 mm with rostrum). In all specimens the rostrum is long and slender.

The species was first described from Cuba (type locality near Havana) and has subsequently been reported from many other West Indian islands (Jamaica, Hispaniola, Puerto Rico, St. Croix, Dominica, St. Lucia and Barbados). *The Rijksmuseum van Natuurlijke Historie* holds in addition material of the species from Montserrat, Guadeloupe, La Désirade, Martinique, Grenada, Tobago and Curaçao.

*Palaemonidae*

*Macrobrachium acanthurus* (Wiegmann, 1836)

Río Caco yugüin, Oriente province, March 10, 1973, 25 specimens; Laguna de Baconao, with freshwater, Oriente province, March 24, 1973, 20 juveniles.

The largest specimen (*cl* 28 mm) has a well developed bopyrid parasite in the right branchial chamber. One of the small specimens (*cl* 12 mm) from the same sample (Río Caco yugüin) also is bopyrized, but the parasite is still very small.

*Macrobrachium acanthurus* has a wide distribution in the Atlantic drainage of the American continent, having been reported from North Carolina (U.S.A.) to Río Grande do Sul (Brazil); it is also commonly met with in the West Indian Islands.

*Macrobrachium faustinum* (De Saussure, 1857)

Resurgent of the Cueva del Indio, Pinar del Río province, April 15, 1973, 1 male and a juvenile; Río Ceiba, Oriente province, March 1, 1973, 1 specimen; Pozo Azul a resurgent of freshwater, Yateritas, Oriente province, April 2, 1969, 12 juveniles (3 with bopyrids); Río Miel, near "Baracoa", Oriente province, April 3, 1973, 18 juveniles (3 with bopyrids); Río Caco yugüin, Oriente province, March 10, 1973, 1 specimen and 3 juveniles; Río Jojo, near "Vegueta del Sur", Oriente province, February 22, 1973, 1 juvenile; Laguna de Juragua, a lake of freshwater, Oriente province, March 4, 1973, 7 juveniles.

The identity of the juveniles is not quite certain, as the juveniles of related species often are extremely similar.

Several of the specimens have branchial bopyrid parasites. Some of the hosts are very young (*cl* 6, 7, 9, 11 and 12 mm).

All the present specimens have the rostrum relatively short and closely dentate, and clearly belong to the epigeal form of this species; none of the animals has the slender, widely dentate rostrum of the obscuricolous form.

*Macrobrachium faustinum* has a wide distribution throughout the West Indies.

*Palaemon pandaliformis* (Stimpson, 1871)

Laguna de Baconao, with freshwater, Oriente province, March 24, 1973, 39 specimens (including 4 ovigerous females); Cayo Las Piedras, Isla de Pinos, April 20, 1973, 2 specimens, a puddle of freshwater.

The carapace length of the examined specimens varies from 5 to 16 mm, that of the ovigerous females from 11 to 16 mm.

The species is known in the Central and South America (Guatemala to S. Brazil), and in the West Indies. It has been reported before from Cuba.

*Troglocubanus gibarensis* (Chace, 1943)

Cueva de los Panaderos, near "Gibara", near the N.W. coast of Oriente province, March 8, 1973, 1 specimen.

The specimen was taken close to the type locality: Agua del Montañes, El Jobal, Barrio de Cupeysillo, Termino de Gibara, Oriente province. Apart from there, the species has also been reported from Las Villas province (Botosaneanu & Holthuis, 1970).

### *Macrura Reptantia*

#### *Astacidae*

##### *Procambarus niveus* Hobbs & Villalobos, 1963

Cueva de las Represas, gours, Gran Caverna de Santo Tomás, Sierra de los Órganos, near the village "Quemado Pineda", Pinar del Río province, April 12, 1973, 3 males, 1 female.

The locality of the present material has already been described by Holthuis (1974). The present specimens form part of the material dealt with at the previous occasion.

The males have *cl* 23 to 24 mm; in the female it is 20 mm.

In the collection there is also a small female (*cl* 15 mm) of this species labelled Río Miel, near "Baracoa", Oriente province, April 3, 1969. This locality is separated from the type locality of the species for almost the full length of the island, and all the other material from the Río Miel examined by me is epigeal.

##### *Procambarus cubensis rivalis* (Faxon, 1912)

Hoyo de Fanía, a well in Gran Caverna de Santo Tomás, Sierra de los Órganos, Pinar del Río province, April 13, 1973, 28 specimens.

The specimens have *cl* between 6 and 17 mm, and include males, females and many juveniles. All have the eyes normally developed and agree well with the descriptions given in the literature of this subspecies.

The animals were found in the underground stream of the system of the Cueva Grande de Santo Tomás, but only there where, at the Hoyo de Fanía, it was exposed to full daylight.

*Procambarus cubensis rivalis* was originally described from San Diego de Los Baños in Pinar del Río province, and so far it is only known from that province.

### *Brachyura*

#### *Pseudothelphusidae*

##### *Epilobocera cubensis* Stimpson, 1860

Río Brazo Seco, Oriente province, March 18, 1973, 4 specimens; Río Contramaes-

tre, at "Pozo Caliente", Oriente province, March 21, 1973, 1 specimen; Arroyo de los Guineos, Oriente province, February 23, 1973, 1 specimen; Río Indio, Gran Piedra, Oriente province, March 26, 1969, 1 specimen.

All specimens are juvenile (*cl* 7 to 15 mm) and their specific identity therefore is not fully certain.

The species is so far only known from Cuba and seems to be widely distributed over the island.

#### *Grapsidae*

##### *Sesarma roberti* H. Milne Edwards, 1853

Río Caco yugüin, Oriente province, March 10, 1973, 1 female.

The specimen has a carapace length of 10 mm.

*Sesarma roberti* has a wide distribution in the West Indies (Cuba to Trinidad) and it is known also from the Atlantic coast of Central America (Mexico to Nicaragua). Chace & Hobbs (1969: 186) deal extensively with the ecology of this species.

#### *Ocypodidae*

##### *Ocypode quadrata* (Fabricius, 1787)

Atlantic coast near "Laguna de Baconao", Oriente province, March 24, 1973, 2 juveniles.

The two specimens collected are very small (*cl* 6 and 7 mm), but unmistakably belong to the present species.

*Ocypode quadrata* is a typical inhabitant of sandy beaches, and occurs along the Atlantic coast of America from Rhode Island (U.S.A.) to southern Brazil, and the West Indies.

##### *Uca rapax* (Smith, 1870)

Nueva Gerona, mangrove swamps, Isla de Pinos, April 23, 1973, 3 males, 2 females; Laguna de Baconao, mangrove swamps, Oriente province, March 24, 1973, 1 female.

The carapace breadth of the males ranges from 11 to 16 mm, that of the females from 7 to 9 mm.

*Uca rapax* is one of the common West Indian and East American fiddler crabs, inhabiting mangrove swamps and mud flats. Its range extends from N. E. Florida (U.S.A.) to southern Brazil, including the West Indies.

## Crustáceos decápodos acuáticos y terrestres de Cuba

## Resumen

Se presenta la lista de unas especies de crustáceos decápodos terrestres y acuáticos recogidos durante las dos expediciones bioespeológicas cubano-romanas, realizadas a Cuba, en 1969 y 1973. La mayoría de estas especies son epigeos.

Sur quelques *Crustacea Decapoda* d'eau douce et terrestres de Cuba

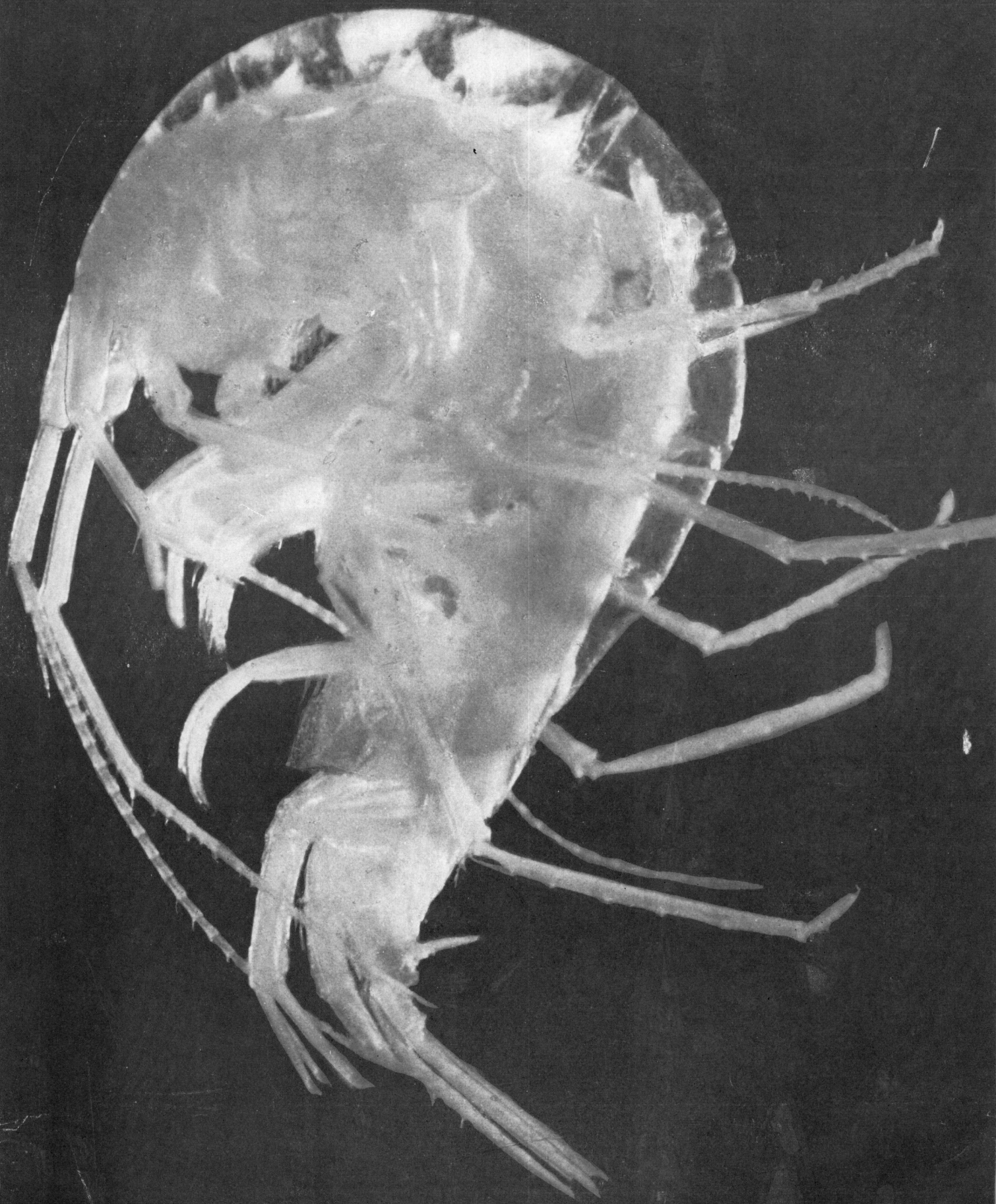
## Résumé

L'auteur présente la liste de certaines espèces de Crustacés Décapodes terrestres et d'eau douce, recueillies au temps des deux expéditions biospéologiques cubano-roumaines réalisées en 1969 et 1973. La plupart des ces espèces sont épigées.

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*Photo VII.* — Amphipode du genre *Bogdiella*, de Cueva de México (Camagüey), collecté par N. Viña Bayés. Cliché: T. Orghidan.

**РЕЗУЛЬТАТЫ КУБИНО-РУМЫНСКИХ ЭКСПЕДИЦИЙ В КУБЕ, ТОМ II**