

**ADDITIONS TO THE DECAPOD CRUSTACEAN FAUNA OF
NORTHEASTERN VENEZUELAN ISLANDS, WITH THE
DESCRIPTION OF THE MALE OF *Pinnotheres moseri*
RATHBUN, 1918 (DECAPODA: BRACHYURA:
PINNOTHERIDAE)**

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ABSTRACT

Records of the anomurans *Pachycheles chacei*, *P. riisei* (Porcellanidae), *Albunea paretii* (Albuneidae) and the brachyurans *Callinectes arcuatus* (Portunidae), *Armases ricordi* (Grapsidae) and *Pinnotheres moseri* (Pinnotheridae) from marine waters of northeastern Venezuelan islands extend the range of distribution of these species. The male of *Pinnotheres moseri* (a pea crab symbiotic of the tunicate *Ascidia nigra*) is described and illustrated for the first time.

Keywords: Anomura, Brachyura, Venezuela, *Pinnotheres moseri*.

INTRODUCTION

The monograph on decapod crustaceans of Venezuela by Rodríguez (1980) encouraged the search of both recorded and unrecorded species, and several additions have been made since then.

Recent decapods collections were made by the staff of the Laboratorio de Carcinología of the Universidad de Oriente (Venezuela) in the southern and central Caribbean. They resulted in further accounts of anomuran and brachyuran species that had not been recorded before in marine waters of northeastern Venezuelan islands.

This paper presents information on six species, whose distribution range is now extended. A first description is given for the male of *Pinnotheres moseri*.

MATERIALS AND METHODS

The material examined was collected in nearshore locations. With the exception of the specimens of *Pachycheles chacei*, which were lost, it is deposited in the collection of the Universidad de Oriente.

Shield length (SL), carapace width (CW) and carapace length (CL) were measured with a dial caliper; smaller structures with an ocular micrometer. Names of Latin American localities are given in Spanish or Portuguese, respectively. The information on species includes the names of the collector(s), and month, year, and locality of collections.

RESULTS

INFRAORDER ANOMURA

FAMILY PORCELLANIDAE

Pachycheles chacei Haig, 1956

Description: Haig, 1956: 9, pl. 1; 1960: 135, pl. 31, fig. 3. Werding, 1977: 190

Material: 1 male and 1 ovigerous female, inside an unidentified sponge, cohabiting with *Petrolisthes galathinus* (Laguna Las Marites, Isla Margarita) (10/1989) (G. Hernández).

Size: Male 7.0 mm CW, 5.9 mm CL; female 6.7 mm CW, 5.7 mm CL.

Range: Atlantic: from Bahía Caledonia (Panamá) to Cartagena (Colombia), Isla Margarita (Venezuela). Pacific: Guatemala to Ecuador.

Remarks: Haig (1956) described *P. chacei* on the basis of specimens collected in the southwestern Caribbean; she showed (1960) that the species was also distributed in the eastern Pacific (Panama and Colombia). Werding (1977) found *P. chacei* at Santa Marta (Colombia). The specimens from Laguna Las Marites are larger than those examined by the former authors and those by Gore & Abele (1976). Unfortunately, our material was lost.

Pachycheles riisei (Stimpson, 1858)

Description: Haig, 1956: 7, 12. Werding, 1977: 187, 192-193, fig. 14.

Material: 1 female (3/93), associated to *Millepora alcicornis*, from Punta Arenas, Isla Margarita (A. Figueredo).

Size: 5.4 mm CW; 4.8 mm CL.

Range: Florida, Puerto Rico, St. Thomas, Barbados, Tobago, Antigua, Brasil (Maceió, Alagoas, Ilha Trinidad), Colombia (Islas del Rosario, Santa Marta, Nenguange and Isla de Providencia), Isla Margarita (Venezuela).

Remarks: This is the first record of this species for Venezuela. Haig (1960) pointed out that *P. biocellatus* (Lockington, 1878), from the eastern Pacific, seems to be similar to *P. riisei*. She supposed that a comparison of specimens might show that they are conspecific. In this case, *P. biocellatus* would be a junior synonym of *P. riisei*.

FAMILY ALBUNEIDAE

Albunea paretii Guèrin, 1853

Description: Williams, 1984: 249, figs. 182-183.

Material: 1 female, Playa El Yaque, Isla de Margarita (Ángel Gómez).

Size: 24.3 mm CW; 26.6 mm CL.

Range: Western Atlantic: from North Caroline to Corpus Christi (Texas), West Indies to Santa Catarina (Brasil). Eastern Atlantic: from Cape Verde to Senegal and Ghana.

Remarks: The presence of *A. paretii* in Venezuelan waters was assumed by Rodríguez (1980) on the basis of records from closely neighboring Caribbean localities.

INFRAORDER BRACHYURA

FAMILY PORTUNIDAE

Callinectes arcuatus Ordway, 1863

Description: Garth & Stephenson, 1966: 43; pl. V, fig. A; pl. VIII, fig. A; pl. X, fig. A; pl. XII, fig. D. Williams, 1974: 752, figs. 8, 18f, 20g-h, 24.

Material: 1 male (6/1989, Laguna Las Marites) (G. Hernández).

Size: 125 mm CW, 54 mm CL.

Range: Pacific: from California to Perú; Islas Galápagos. Atlantic: Estado Sucre, and Isla Margarita (Venezuela).

Remarks: Lares (1987) reported *C. arcuatus* for the first time for the Caribbean on the basis of specimens collected near Cumaná, Estado Sucre. This author has suggested that Pacific species of the genus *Callinectes* (e.g. *C. arcuatus*, *C. toxotes* and *C. bellicosus*) must have migrated through the Canal de Panamá. Since *C. danae* is very similar to *C. arcuatus*, it is possible that some specimens of the former species previously collected in the Caribbean had been confused with the latter.

FAMILY GRAPSIDAE

Armases ricordi (H. Milne Edwards, 1853)

Description: Abele: 1992: 32, figs. 23c, 26, 27.

Material: 30 males and 11 females (4 ovigerous) (Laguna Las Marites) (G. Hernández).

Size: Males: 8.2 to 21.8 mm CW, 7.5 to 19.7 mm CL; non ovigerous females 10.5 to 19.5 mm CW, 10.3 to 17.5 mm CL; ovigerous females 15.5 to 21.9 mm CW, 14.2 to 19.9 mm CL.

Range: Bermuda, Florida, Gulf of Mexico, Bahamas, West Indies, continental coasts of Central and South America to Surinam.

Remarks: Rodríguez (1980) reported this species from western Venezuela (Bahía El Tablazo, Playa Las Mercedes, Estado Zulia).

FAMILY PINNOTHERIDAE

Pinnotheres moseri Rathbun, 1918 (Fig. 1)

Description of the female: Rathbun, 1918: 94.

Description of the male: Carapace glabrous, firm but not hard, suborbicular, width-length ratio equals to 0.88 to 1.0; surface uneven, regions well defined. Front arcuate, advanced, with a median sinus (Fig. 1A). Eyes red in live and recently preserved specimens.

Peduncle of the antennules 3-segmented (Fig. 1F); first article broad, pubescent; second and third articles with setae on the internal margin. The third article with two rami; the inner ramus 2-segmented, the second segment with three marginal setae, one subterminal seta, and four terminal setae; the outer ramus 4-segmented, with numerous terminal aesthetascs on segments 2-4.

Antennae originate within orbits, uniramous, 5-segmented, with simple and plumose short setae, whose number decreases abruptly towards the distal segments. The fifth segment with two unequal plumose setae distally (Fig. 1G).

External maxillipeds slanting, separated in their insertion, distally convergent. Ischium and merus fused, paved with areolets which bear setae. Carpus inserted in the anteroexternal angle of the merus, bended inward. Propodus oblong, as long as the carpus. Dactylus absent. Peduncle of the exognath with a setous external blade-like projection; flagellum entire, with several rows of simple setae distally (Fig. 1E).

Chelipeds (P1) hairy, stouter than legs. Ischium with a truncate projection in the flexor margin. Merus and carpus uneven. Chelae with the external surface more pubescent than the internal one; fingers to palm length ratio equals 0.8; cutting edge of the fingers with several teeth as illustrated (Fig. 1C). Spiniform tip of the movable finger crossing inside spiniform tip of fixed finger.

Relative lengths of the walking legs are P4-5 P2-3. Size of the articles decreases in the following order: merus, propodus, dactylus, carpus and ischium; all of them hairy, except for the dactylus (Fig. 1D). Dactyli of the last pair distinctly longer than those of the other legs; dactili falcate; flexor margin with about seven spinules; extensor margin with 2-5 smaller spinules; those of the first pair less developed.

Abdomen hairy, consisting of seven free segments (including the telson). Pleopod long, reaching the telson, and with numerous setaeas illustrated (Fig. 1H).

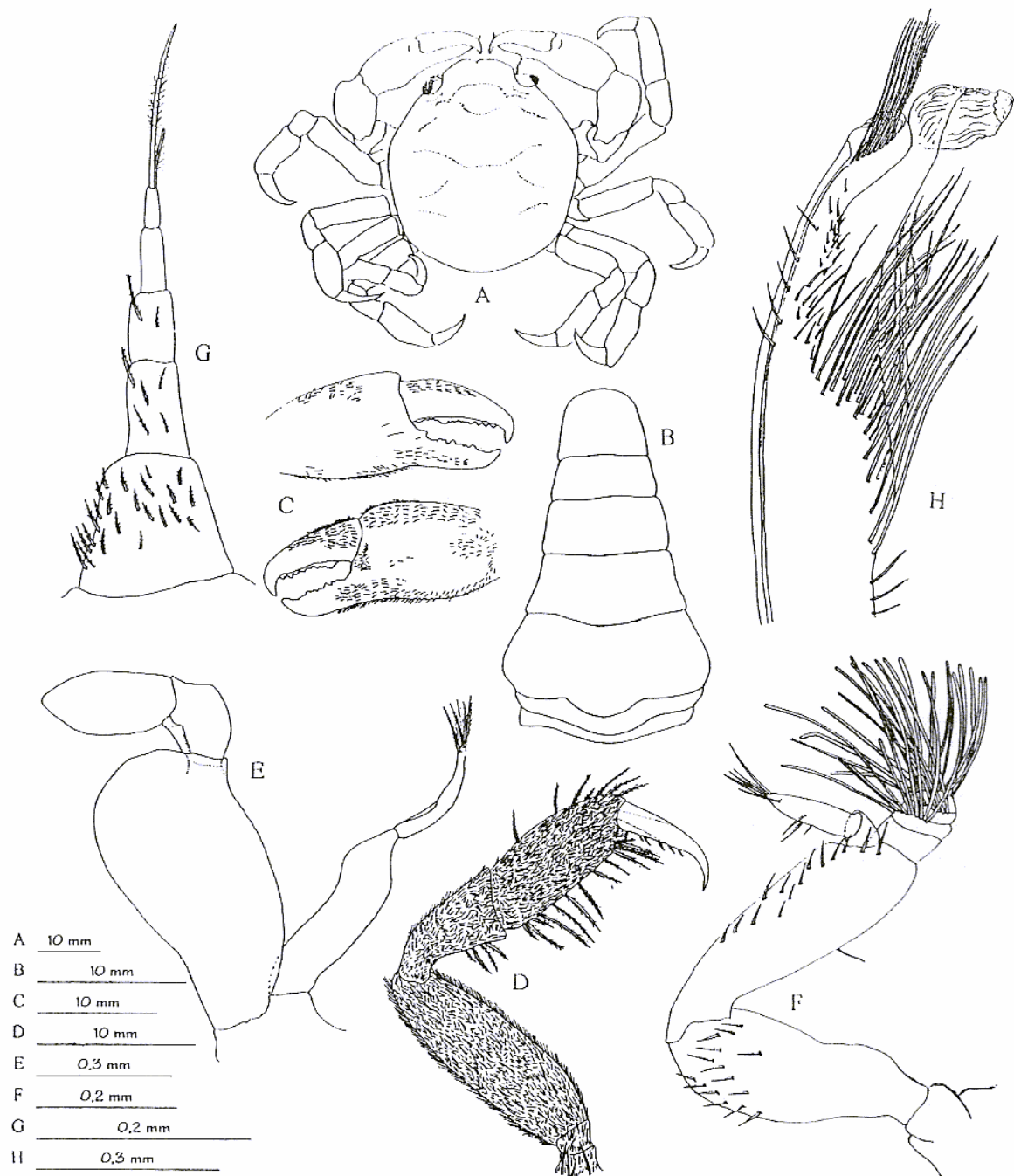


Figure 1. *Pinnotheres moseri* Rathbun, 1918, male: A) dorsal view (denuded); B) abdomen (denuded); left chela (internal and external view); D) penultimate walking leg; E) third maxilliped (denuded); F) antennule; G) antenna; H) pleopod.

Material: 6 females and 12 males, collected inside black ascidians (*Ascidia nigra*) adhered to mangrove roots from Laguna de La Restinga (Isla Margarita) and to piles of the pier belonging to Universidad de Oriente at Boca del Río (Isla Margarita).

Size: Males: 1.9 to 5.4 mm CW, 2.1 to 5.8; females: 6.1 to 13.0 mm CW, 6.7 to 12.8 mm CL.

Range: West coast of Florida, Jamaica, Isla Margarita (Venezuela).

Remarks: *P. moseri* Rathbun, 1918; *P. chamae* Roberts, 1975 and *Epulotheres angelae* Manning, 1993 are three close related pinnotherid species (Manning, 1993). Rathbun (1918) erected the taxon *P. moseri* from an ascidian host; she had no male specimens. When Roberts (1975) described *P. chamae* from the jewel box (*Chama congregata*), he compared the females of this pea crab with those of *P. moseri*, since he did not collect males of the former species. Manning (1993) erected the monotypic genus *Epulotheres* with *E. angelae* from Barbados (host: the mussel *Brachidontes modiolus*) as its type species, and he made an exhaustive comparison of the females of the three species cited (males of *E. angelae* were not available at that time). The description of male *P. moseri* presented here allows for further comparisons of these three species. It is the first record of *P. moseri* from Venezuelan waters.

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