

PONTONIA MANNINGI, NEW SPECIES, A BIVALVE-ASSOCIATED SHRIMP
FROM THE TROPICAL AND SUBTROPICAL ATLANTIC
(DECAPODA: PONTONIINAE)

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A B S T R A C T

A review of material referred to as *Pontonia margarita* Smith, 1869, from both the East Pacific and the West Atlantic has shown constant morphological differences between these populations. Additional specimens from the East Atlantic, collected during the CANCAP Expeditions, could not be separated morphologically from the West Atlantic population. The Atlantic specimens are here described as *Pontonia manningi*, new species.

During the CANCAP Expeditions to the Canarian–Cape Verdean region of the North Atlantic Ocean (see Van der Land, 1987), several specimens of *Pontonia* were found which are similar to *P. margarita* Smith, 1869. *Pontonia margarita* was described from the Bay of Panamá on the East Pacific coast of the Americas. Holthuis (1951: 142) recorded specimens he referred to as *P. margarita* for the first time from Florida, in the West Atlantic. Holthuis compared material from both the East Pacific and West Atlantic but could not find characters sufficient to separate the Atlantic material from *P. margarita*. A comparison of a large number of specimens referred to as *P. margarita* from both the East Pacific and the West Atlantic as well as the CANCAP specimens from the East Atlantic, revealed several characters in which the Pacific and Atlantic populations show constant differences. In part, Holthuis already figured these differences (1951: pls. 43 and 44).

The Atlantic specimens are here described as a new species, *Pontonia manningi*. Abbreviations: pocl. = postorbital carapace length; don. = donated; AHF = Allan Hancock Foundation, Natural History Museum of Los Angeles County; MCZH = Museum of Comparative Zoology at Harvard; RMNH = Rijksmuseum van Natuurlijke Historie; USNM = United States National Museum, Smithsonian Institution.

Pontonia manningi, new species
Figs. 1–3, 4A–F

Pontonia margarita; Holthuis, 1951: 137 (in part), pl. 44; Hulings, 1961: 217; Bullis and Thompson, 1965: 8;

Williams, 1965: 48, 49 (in part); Wells and Wells, 1966: 57; Chace, 1972: 39 (in part); Markham, 1985: 46, 52, 128; Markham, 1988: 39; Williams *et al.*, 1989: 15. (Not *Pontonia margarita* Smith, 1869).

Material Examined.—**Holotype**: RMNH D 47999, ovigerous female (pocl. 5.69 mm), Caribbean Sea, 25 miles N of Margarita Island, depth 36.5 m, 9.xii.1954, leg. Teun Blok.

Paratypes.—**WEST ATLANTIC: Caribbean Sea**: RMNH D 42635, 2 ovigerous females (pocl. 5.31 mm), 1 female (pocl. 3.25 mm), 4 males (pocl. 1.94, 2.56, 3.44, 3.63 mm), 1 damaged specimen (pocl. 2.38 mm), same locality data as holotype. USNM 155653, 1 female, Netherlands West Indies, Bonaire, depth 42.5 m, 26.iv.1975, from hull of ship, in *Spondylus* sp. leg. R.V. Harrison. **U.S.A., North Carolina**: USNM 91891, 1 male, Vicinity of Cape Lookout, 18.ii.1951, inside live scallop *Pecten gibbosus*, leg. C. Broad. **U.S.A., Georgia**: USNM 214958, 1 specimen, off Georgia, 31°40.54'N 80°21.00'W, depth 27 m, 30.vii.1981. **U.S.A., Florida**: RMNH D 30418, 1 juvenile (pocl. 1.5 mm), Hollywood, N of Miami, ix.1974, leg. R. Guest. RMNH D 42636, 1 male (pocl. 3.50 mm), Fort Lauderdale, off Spoil Island, depth 3.5 m, 6.i.1974, leg. A. Calabrese, in *Chlamys mildredae* Bayer. RMNH D 42644, 1 male (pocl. 2.00 mm), N of Miami, third reef off Hollywood, depth 20–23 m, 18.v.1973, in *Spondylus americanus*. USNM 107108, 2 males, 2 ovigerous females, off Fort Pierce, depth 31–36.5 m, 26.i.1961, from *Pecten gibbus*, *Silver Bay* stations 2702, 2703, 2704. USNM 89030, 3 specimens, off Melbourne, Brevard County, E coast of Florida, 28°05'N 80°09'W, depth 53 m, 17.i.1940, *Pelican* station 168–1. **Gulf of Mexico**: USNM 89029, 1 specimen, W coast of Florida, 30°06'N 85°45'W, depth 14.5 m, 10.iii.1939, *Pelican* station 152–H. USNM 89028, 5 specimens, W coast of Florida, 29°29'N 85°53'W, depth 34.5 m, 10.iii.1939, *Pelican* station 153–2. USNM 101277, 5 males, 7 females (6 ovigerous), 30°03'N 87°12'W, depth 38.5 m, 13.ii.1957, 8' scallop dredge, *Oregon* station 1711 (Bullis and Thompson, 1965: 8, as *P. margarita*). USNM (acc. no. 247946), 11 specimens, *Oregon* station 3042, 26°06'N 96°25'W, depth 69.5 m, 13.x.1960, 71' bottom trawl, in *Aequipecten gibbus* (L.), [received 29.iv.1963, from

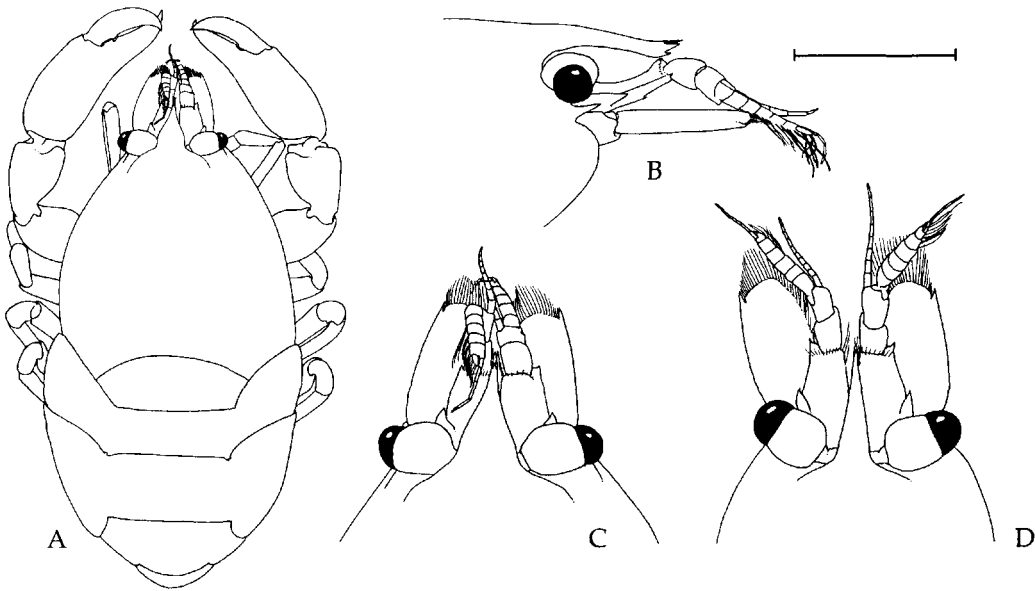


Fig. 1. *Pontonia manningi*, new species, from Margarita Island, Caribbean Sea. Holotype, ovigerous female (RMNH D 47999, pochl. 5.69 mm): A, entire animal in dorsal aspect; B, anterior region in lateral view; C, anterior region in dorsal view. Paratype, male (RMNH D 42635, pochl. 3.44 mm): D, anterior region in dorsal view. Scale: A, 4 mm; B–D, 2 mm.

Pascagoula Fisheries Station, Gulf and South Atlantic Fisheries Exploration, Pascagoula, Mississippi, through Dr. R. Harvey Bullis Jr. **EAST ATLANTIC: Canary Islands:** RMNH D 45622, 1 ovigerous female (pochl. 9.1 mm), CANCAP 2.D07, S coast of Hierro, W of Punta de los Saltos, Puerto de Naos, 27°39'N 18°00'W, rocky bottom, depth 10–15 m, scuba diving, 3.10.ix.1977, in *Spondylus gaederopus* Linnaeus, 1758. **Cape Verde Islands:** RMNH D 45623, CANCAP 6.133, 1 male (pochl. 3.34 mm), S of São Vicente, 16°47'N 25°02'W, depth 50–60 m, sand, shells and calcareous algae. 1.2 m Agassiz trawl, 19.vi.1982. RMNH D 45624, CANCAP 6.109, 1 juvenile (pochl. 1.94 mm), S of Santa Luzia, 16°44'N 24°46'W, depth 55–80 m, calcareous algae and epifauna. 1.2 m Agassiz trawl, 16.vi.1982.

Description.—Body (Fig. 1A) subcylindrical, somewhat depressed. Carapace smooth. Rostrum (Figs. 1B–D) well developed, distally ending in sharp point, reaching halfway of second segment of antennular peduncle, slender, triangular, without dorsal carina, with ventral carina in distal part; subdistal dorsal tooth with few long simple setae in front; subdistal ventral tooth situated just proximally or at level of subdistal dorsal tooth slightly convex in lateral view. Inferior orbital angle slightly produced, angular. Antennal spine well developed, acute, reaching level of produced anterolateral margin, situated somewhat below level of inferior orbital angle. Anterolateral angle of carapace produced,

broadly rounded. Eyestalk about as long as wide, cylindrical, posteriorly somewhat swollen; stalk slightly broader than diameter of hemispherical cornea.

Antennula (Fig. 2A) with peduncle and flagella well developed. Basal segment with distinct acute distolateral tooth, not extending beyond proximal fourth of intermediate segment, distal margin small, slightly produced, sinuous; stylocerite short, small, less than half length of scaphocerite, with distal acute tip; small medioventral spine present. Intermediate segment slightly longer than wide. Distal segment slightly longer than wide. Upper flagellum well developed, biramous, with 3–6 proximal segments fused; short free ramus one- or two-segmented; longer free ramus with five or six segments. Lower flagellum with 8 to 12 segments.

Antenna (Fig. 2B) with basicerite short, laterally unarmed; carpocerite short, reaching 2/3 to 3/4 of lamella of scaphocerite, moderately stout; scaphocerite with lamella about 2.0 times as long as central width, distal margin truncate, medial margin convex, lateral margin slightly convex with small, slightly medially curved, distolateral tooth not reaching anterior margin of lamella, distolateral tooth about 0.05 times length of scaphocerite;

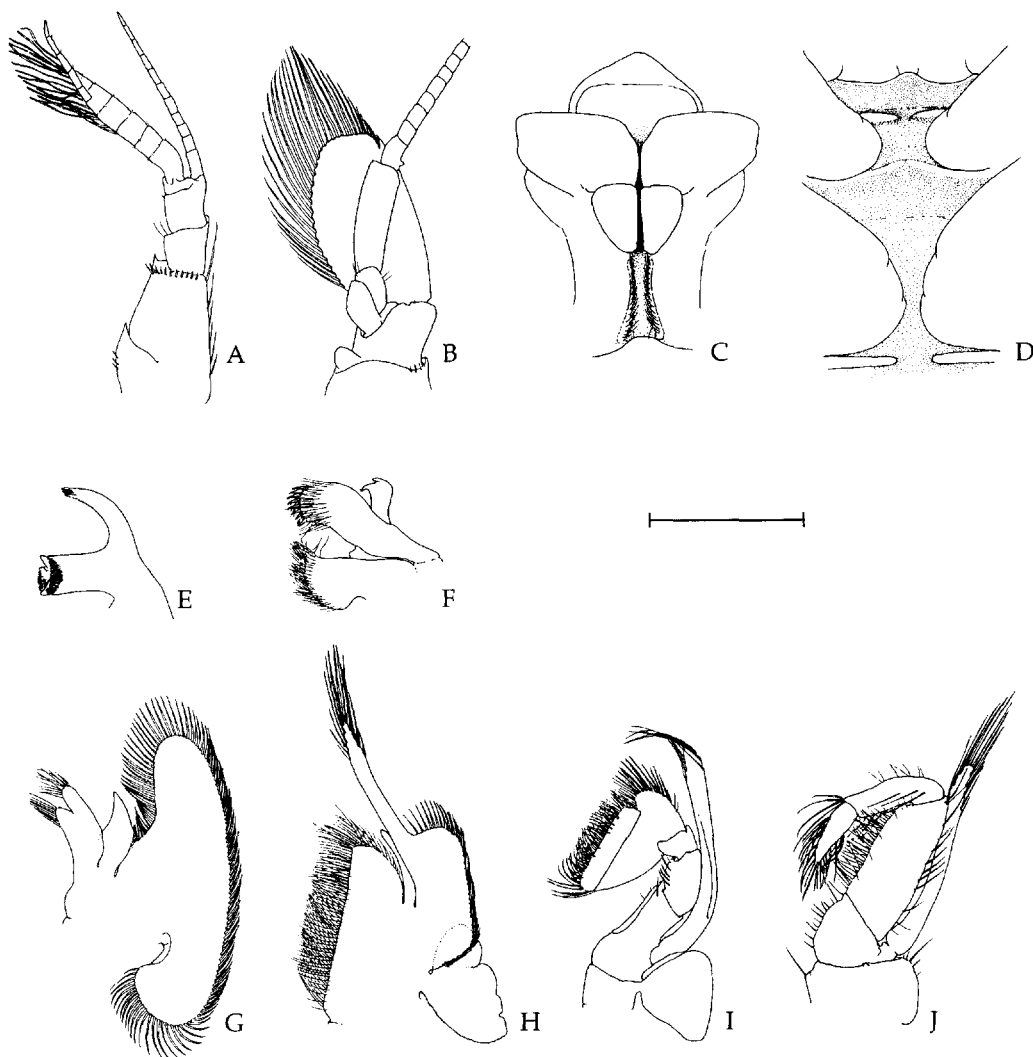


Fig. 2. *Pontonia manningi*, new species, from Margarita Island, Caribbean Sea, paratype, ovigerous female (RMNH D 42635, poel. 5.31 mm). A, antennula in dorsal view; B, antenna in ventral view; C, paragnath; D, second to fifth thoracic sternites; E, left mandible; F, left maxillula; G, left maxilla; H, left first maxilliped; I, left second maxilliped; J, left third maxilliped. Scale: A, B, 1.5 mm; C, D, 1 mm; E-J, 0.6 mm.

incision between distolateral tooth and lamina indistinct.

Epistome and labrum normal. Paragnath (Fig. 2C) well developed, alae with large transverse rectangular distal lobes, and with more or less triangular submedian ventral lobes; corpus rather short, narrow, with median groove, bordered by slightly oblique setose carinae. Second thoracic sternite formed into broad triangular medially rounded process between second maxillipeds, with some setae on medially rounded process.

Third thoracic sternite (Fig. 2D) with shallow lateral carinae posteromedian of third maxillipeds, with shallow notch.

Fourth thoracic sternite (Fig. 2D) with shallow lateral carinae posteromedian of first pereiopods, with shallow broad notch in between; with median shallow ridge between the first pereiopods.

Fifth thoracic sternite (Fig. 2D) with shallow lateral plates posteromedian of second pereiopods, with very broad medial excavation in between.

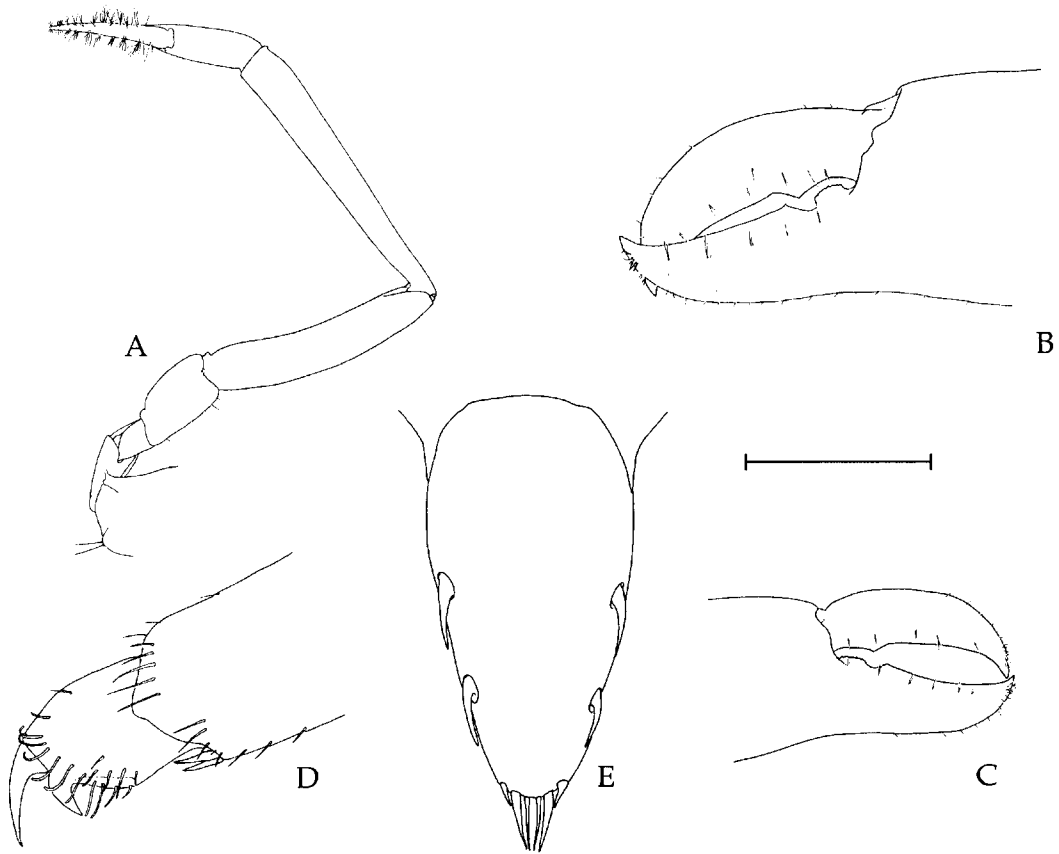


Fig. 3. *Pontonia manningi*, new species, from Margarita Island, Caribbean Sea, paratype ovigerous female (RMNH D 42635, poel. 5.31 mm). A, first pereiopod; B, chela of major left second pereiopod; C, chela of minor right second pereiopod; D, dactylus of third left pereiopod; E, telson. Scale: A, 2.25 mm; B, C, 1 mm; D, 0.6 mm; E, 1 mm.

Sixth to eighth thoracic sternites unarmed, broadening posteriorly.

Mandible (Fig. 2E) with incisor process slender, with 3–6 distal teeth and without row of small teeth on medioventral border, molar process normal.

Maxillula (Fig. 2F) with upper lacinia broad with 2 rows of serrulate spines and many long slender setae medially; lower lacinia very broad, densely setose distoventrally and marginally, without spines; palp feebly bilobed.

Maxilla (Fig. 2G) with well-developed proximally broad palp, proximal lateral border with row of short setae; basal endite well developed, bilobed, distal lobe slightly longer than proximal lobe, both with long slender minutely serrate setae along distomedian border, median border without setae; coxal endite obsolete, median margin convex, nonse-

tose; scaphognathite about 3 times longer than wide, with well-developed, broad anterior and posterior lobes.

First maxilliped (Fig. 2H) with well-developed, simple, slender nonsetose palp; coxal and basal endites completely fused, large and broad, fringed with many simple, long and finely serrate setae; exopod with well-developed caridean lobe, flagellum broad, with several long plumose setae distally, epipod bilobed, lower lobe larger than upper lobe.

Second maxilliped (Fig. 2I) with dactylar segment narrow, with numerous finely serrate spiniform setae medially; distomedial lobe of propod produced, rounded, with stout simple marginal setae, ventrolateral margin devoid of setae; carpus distomedially angular, without setae; merus with median row of plumose setae; basis fused to ischium, segment medi-

ally excavate, with or without few distomedian setae; exopod normal, without proximal setae; coxae not produced medially, with subtriangular epipod not bearing a podobranch.

Third maxilliped (Fig. 2J) with ischiomerus partly fused with basis; ischiomerus about 3 times as long as wide, basal margin convex, both segments with row of long slender setae along median border; penultimate segment about 3 times longer than wide, slightly less than half ischiomerus length; distal segment slightly shorter than penultimate segment, tapering distally, with several rows of slender minutely serrate setae medially; exopod well developed, slightly longer than ischiomerus segment; coxal segment not produced medially, with well-developed oval lateral plate, without epipod or arthrobranch.

First pereopods (Fig. 3A) slender, extending beyond scaphocerite; chela with fingers slightly longer than palm; fingers slender, with several rows of finely serrate setae, cutting edges entire; carpus almost twice as long as chela, unarmed; cleaning apparatus at joint of propodus and carpus strongly reduced or absent; merus 0.75 of carpus length, straight, unarmed; ischium short, about 0.4 times merus length; basis about as long as ischium; coxa robust with sparsely setose ventromedial carina.

Second pereopods similar in form, unequal in size. Major cheliped (Fig. 3B) with palm subcylindrical, without carinae, smooth, with few setae in distal part; fingers about 0.6–0.7 times palm length; dactylus with large, simple, triangular proximal tooth, distal part entire, tip strongly hooked; fixed finger with blunt denticulate tooth just proximal of tooth on dactylus and blunt triangular tooth just distal of tooth on dactylus, distal part of cutting edge entire, tip strongly hooked; carpus short, stout, expanding distally, as long as distal breadth, unarmed, with distomedial excavation; merus short, stout, about as long as carpus, distomedial border excavate; ischium short, stout, without distomedial protuberance, slightly shorter than merus; basis and coxa stout, without armature. Minor cheliped (Fig. 3C) with palm subcylindrical, without carinae, smooth, with few setae in distal part; fingers 0.7 times palm length; fingers as major cheliped, tooth on dactylus and median tooth on fixed finger may be crenulate as proximal truncate tooth on fixed finger.

Ambulatory pereopods robust. Dactylus of third pereopod (Fig. 3D) with curved, sim-

ple unguis; corpus strongly compressed, flexor margin with large acute strongly recurved distal accessory tooth, dorsal border with row of simple short setae, flexor margin slightly convex with rows of simple setae; propodus about 4 times longer than wide, with 2 distoventral short spines; carpus 0.66 propodus length, unarmed; merus slightly longer than propodus, unarmed; ischium, basis and coxa without special features. Fourth and fifth pereopods similar.

Abdomen smooth; pleura of first three segments large, broadly rounded; fourth small and rounded; fifth very small and rounded. Sixth abdominal segment with pleura ending in acute tooth, strong distolateral tooth present. Telson (Fig. 3E) 1.5–2.0 times as long as sixth abdominal segment, almost twice as long as its proximal width; posterior border without median process; 2 pairs of rather large dorsal spines at about 0.35–0.45 and 0.60–0.73 of telson length, marginal, 0.20–0.25 times as long as telson; posterior margin with 3 pairs of spines, lateral spines rather small, about 0.05 times telson length, marginal; intermediate and submedian spines larger than lateral spines, about as long as dorsal spines, submedian spines more slender than intermediate spines.

Uropods with protopod posterolaterally blunt; exopod with lateral border convex, with small mobile spine posteriorly, without posterolateral tooth; endopod extending well beyond exopod, as long as telson.

Ova numerous, length about 0.6 mm.

Color.—Williams (1965: 49) described the color of specimens from North Carolina: "Glassy, translucent; internal organs clearly visible; ovigerous females with two colors of eggs, one with light, muddy green eggs and ovarian ova of same color, another with pale orange eggs (from specimens taken in *Aequipecten gibbus* off Drum, Inlet, N.C., in 20-fathom water, April 14, 1960)."

Size.—Postorbital carapace length of adult specimens usually between 3.0–6.0 mm. Largest specimen encountered measures 9.1 mm pocl. This specimen was found in a large specimen of *Spondylus gaederopus* Linnaeus, 1758. Maximum size is probably related to the size of the host.

Distribution.—West Atlantic Ocean, from North Carolina to Caribbean Sea and the Gulf

Table 1. Morphological characters differing in *P. manningi*, new species, and *P. margarita* Smith, 1869.

	<i>P. manningi</i> , new species	<i>P. margarita</i> Smith, 1869
Rostrum	Ventral tooth robust, proximal of level of dorsal tooth (rarely at level of dorsal tooth).	Ventral tooth small, distal of level of dorsal tooth (rarely at level of dorsal tooth).
Antennula	Distolateral margin of basal segment with distinct tooth.	Distolateral margin of basal segment lacking tooth.
Antenna	Distolateral tooth of scaphocerite directed slightly inward.	Distolateral tooth of scaphocerite directed strongly inward.

of Mexico; East Atlantic Ocean, from the Canary Islands and Cape Verde Islands. It is presumed that those records of *P. margarita* from the East Atlantic in literature actually belong to the new species.

Hosts.—Mollusca: Lamellibranchia: *Aequipecten gibbus* (Linnaeus, 1758) (cf. Williams, 1965; Wells and Wells, 1966; present record); *Pecten gibbosus* (present record) [unclear which species is meant here, could

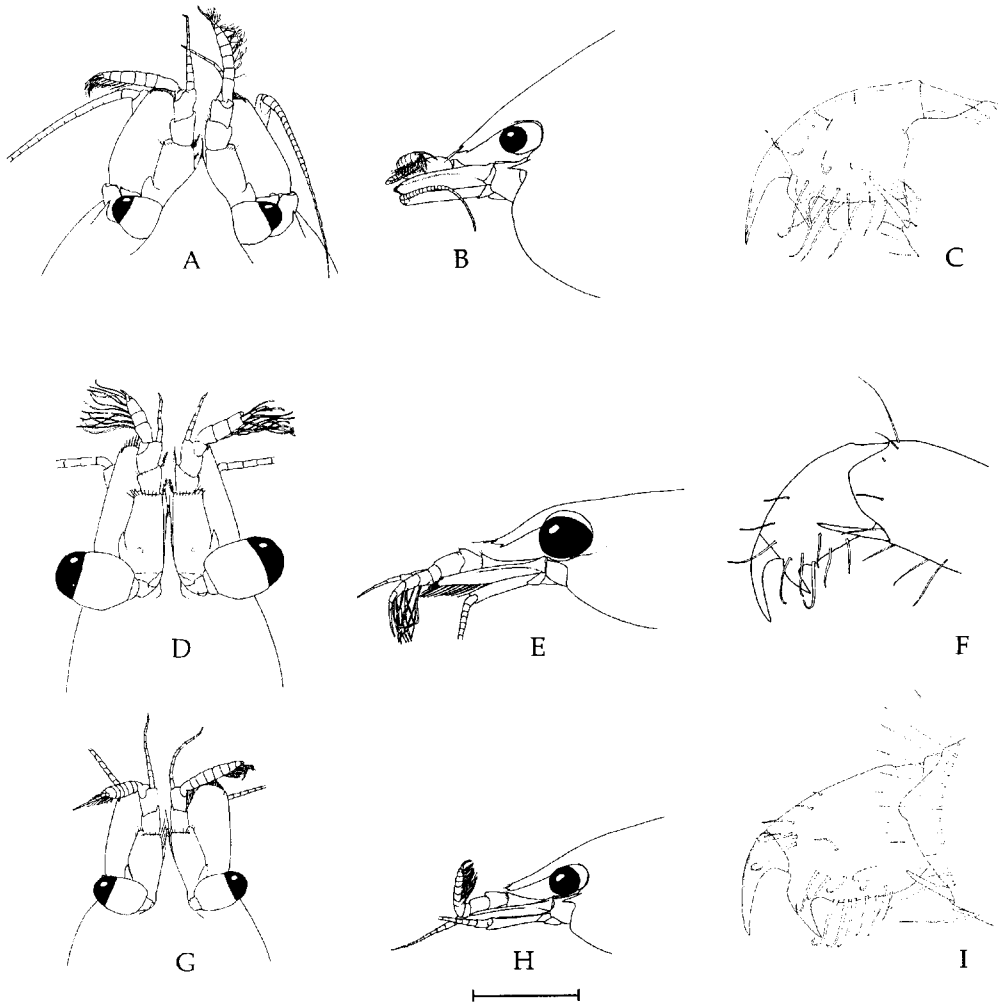


Fig. 4. *Pontonia manningi*, new species, from the East Atlantic. A–C, Canary Islands, ovigerous female (RMNH D 45622, pochl. 9.1 mm); D–F, Cape Verde Islands, juvenile (RMNH D 45624, pochl. 1.94 mm); G–I, *Pontonia margarita* Smith, 1869. Male from (RMNH D 42581, pochl. 4.31 mm). A, D, G, anterior part in dorsal view; B, E, H, anterior part in lateral view; C, F, I, dactylus of third pereopod. Scale: A, B, G, H, 2 mm; D, E, 1 mm; C, I, 0.25; F, 0.15 mm.

be misspelling of *Aequipecten gibbus* (Linnaeus, 1758) or *Plicatula gibosa* Lamarck, 1801]; *Spondylus americanus* Hermann, 1781 (present record); *Spondylus gaederopus* Linnaeus, 1758 (present record); *Pteria colymbus* (Roeding, 1798)(cf. Williams, 1965); *Chlamys mildredae* Bayer, 1941 (present record).

Etymology.—I take great pleasure in dedicating this species to one of the foremost carcinologists, Raymond B. Manning.

Remarks.—Wells and Wells (1966) described a new bopyrid isopod, *Bopyrina pontoniae* from the branchial chambers of *P. manningi* new species, [recorded as *P. margarita* by Wells and Wells]. This bopyrid was synonymized with *Schizobopyrina urocaridis* (Richardson, 1904) by Markham (1988: 39).

For a comparison between *P. manningi* new species, and *P. margarita* Smith, 1869, material of *P. margarita* from various localities has been studied (see Appendix 1). Morphological differences between *P. manningi*, new species, and *P. margarita* Smith, 1869, are presented in Table 1.

Holthuis (1951: pl. 44, fig. h) figures a rather robust preterminal spine on the distal part of the propodus of the third pereopod, in addition to the two distoventral spines, in a specimen from Florida. In the material examined by the author this spine has not been encountered. In *P. margarita* a rather small preterminal median spine, in addition to the two distoventral spines, is usually present (Fig. 4I).

The only difference between the few East Atlantic specimens (Fig. 4A–F) and the West Atlantic specimens is found in the ventral lamina of the rostrum being less developed in the East Atlantic specimens. This character is shared with specimens of *P. margarita* (Fig. 4G–I). The difference in the breadth of the rostrum between the specimen from the Canary Islands (Fig. 4A) and that from the Cape Verde Islands (Fig. 4D) can be related to a difference in size. In general the breadth of the rostrum increases with the size of the specimen.

ACKNOWLEDGEMENTS

Dr. Raymond B. Manning and Lilly Manning are thanked for their warm hospitality when I was visiting the United States National Museum (Smithsonian Institution) to study the extensive collections of *Pontonia*. I thank Dr. L. B. Holthuis for reviewing the manuscript. J. Goud is acknowledged for checking the names of bivalve hosts.

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APPENDIX 1

Material of *P. margarita* Smith, 1869, examined for comparison.—**EAST PACIFIC: U.S.A., California:** RMNH D 4131, 1 male, (pocl. 6.25 mm), in pearl oyster, leg. D. H. ten Kate. **Mexico:** RMNH D 42582, ca. 15 specimens, Guaymas, Sonora, depth 9–12 m, in *Pinctada mazatlanica* (Hanley, 1856), 28.vi.1981, leg. Alex Kerstitch, don. M. Wicksten, no. AK810628 (identified as *P. pinnae* Lockington, 1878, by M. Wicksten). RMNH D 42583, 3 specimens, Guaymas, Sonora, depth 9 m, rocks, 24.ii.1981, leg. Alex Kerstitch, don. M. Wicksten (identified as *P. pinnae* Lockington, 1878, by M. Wicksten). MCZH, 2 ovigerous females (pocl. 8.13, 8.44 mm), 2 males (pocl. 5.75, 7.13 mm), Guaymas, Sonora, San Carlos Bay, near yacht club and motel, depth 4–6 m, in *Pinctada mazatlanica*, 15.viii.1962, leg. J. A. Beatty, Paul Dayton, A. Schwanden. USNM 62417, 4 specimens, 1927, received

- from Sec. Agricultura y Fomento. USNM 85409, 11 specimens, Tres Maria Islands, María Madre, 1.v.1925, leg. California Academy of Science Expedition to Revillagigedo Islands. USNM 85411, 1 specimen, Tres Maria Islands, María Madre, depth 7–18 m, 13–24.v.1925, leg. California Academy of Science Expedition to Revillagigedo Islands. USNM 85410, 1 specimen, Tres Maria Islands, María Madre, 17.v.1925, leg. California Academy of Science Expedition to Revillagigedo Islands. USNM (acc. no. 247441), 1 specimen, Mazatlan, 12.viii.1962, leg. J. and J. Burch. USNM, 5 specimens, Tenacatita Bay, 19°8'N 104°51'W, 4.xii.1937, in pearl oyster, leg. F. E. Lewis and M. S. Stranger. USNM 25206, 2 specimens, southern part of Gulf of California, depth 18 m, *Albatross* station 2828, from pearl oyster. USNM 25208, 4 specimens, Gulf of California, Lower California, off San Gosef Island, depth 31 m, *Albatross* station 3002. USNM 25207, 1 specimen, Gulf of California, Lower California, off San Gosef Island, depth 33 fm, *Albatross* station 3001. USNM 87438, 1 male, 1 ovigerous female, Point Escondido, from University of California, no further data. USNM (acc. no. 207834), many specimens, Lower California, Espirito Santo Island, 12.ix.1931, common in pearl oysters, 2 specimens to each oyster, leg. S. A. Glassell. AHF 602–36, 1 male, Lower California, Agua Verde Bay, south shore, diving and netting, 18.iii.1936, Allan Hancock Expedition station 602–36. AHF 652–37, 1 ovigerous female, Gulf of California, San Francisco Island, shore, 9.iii.1937, inside oyster, Allan Hancock Expedition station 652–37. AHF 518–36, 16 specimens, Gulf of California, North Bay of San Francisco Island, shore, 25.ii.1936, Allan Hancock Expedition station 518–36. AHF 510–36, 1 male specimen, Gulf of California, Espirito Santo Island, Cove S of Ballenas Bay, shore, sand, rock, 22.ii.1936, Allan Hancock Expedition station 510–36. AHF 608–36, 3 males, 1 ovigerous female, Gulf of California, Espirito Santo Island, Ballenas Bay, shore, tide flats, sand, rock, in pearl oysters, 21.iii.1936, Allan Hancock Expedition station 608–36. AHF 512–36, 1 male, 2 females, Gulf of California, Espirito Santo Island, Middle Point of Ballenas Bay, shore, rock, 23.ii.1936, Allan Hancock Expedition station 512–36. AHF 604–36, 1 ovigerous female, Gulf of California, Espirito Santo Island, San Gabriel Bay, shallow water, coral, 20.iii.1936, Allan Hancock Expedition station 604–36. AHF 591–36, 1 ovigerous female, 1 male, 1 juvenile, Gulf of California, Puerto Escondido, 16.iii.1936, shore, Allan Hancock Expedition station 591–36. **Costa Rica:** RMNH D 10087, 2 ovigerous females (pocl. 7.50, 8.13 mm), Puntarenas, Realejo, don. Museum Copenhagen through Oersted. RMNH D 10088, 2 males (pocl. 7.25, 7.13 mm), 3 ovigerous females (pocl. 7.88, 7.88, 8.50 mm), Puntarenas, don. Museum Copenhagen. AHF 2441–2, 1 ovigerous female, 1 male, Isla Olarinta, Puntarenas, 21.i.1982, depth 6 m, rocks, leg. R. Du Bois. RMNH D 42581, 1 male (pocl. 4.31 mm), 1 ovigerous female (pocl. 6.06 mm), Golfo Dulce, sandy rocky bottom, depth 4–7 m, vi.1987, in *Pinctada mazatlanica* (Hanley), leg. Ingo Wehrtmann. USNM 90182, 2 specimens, Port Parker, shore of small island at entrance, 9.ii.1935, leg. W. L. Schmitt, Allan Hancock Expedition station 466–35. USNM 90186, 1 specimen, Puerto Culebra, 24.ii.1934, shore collecting south of Mala Point, bay-side, leg. W. L. Schmitt, Allan Hancock Expedition station 256–34. USNM 90188, 6 specimens, Playa Blancas, depth 27.5 m, 8.ii.1935, along N point, mud, sand, algae, leg. W. L. Schmitt, Allan Hancock Expedition station 461–35. USNM 90187, 1 specimen, Playa Blancas, 8.ii.1935, shore, shale beach between beach and rocky reef, leg. W. L. Schmitt, Allan Hancock Expedition station 465–35. **Panamá:** MNHN–Na 1960, 2 males (pocl. 6.94, 7.5 mm), Panamá, collected by Smith, 1899. RMNH D 9249, 3 ovigerous females (pocl. 5.63, 6.56, 6.56 mm), 1 male (pocl. 5.94 mm), Bahía Honola, 10.iii.1933, Allan Hancock expedition station 114–33. RMNH D 10086, 5 ovigerous females (pocl. 5.94, 5.69, 7.69, 6.50, 4.88 mm), Taboga Island, x.1915, in pearl-oyster, Dr. Th. Mortensen's Pacific expedition 1914–15. USNM 90175, 5 specimens, Jicarita Island, 20.ii.1934, shore, rock, in pearl oyster, leg. W. L. Schmitt, Allan Hancock Expedition station 243–34. USNM 48806, 1 specimen, Canal Zone, i.1914, leg. J. Zetek, station 230. USNM 90180, 2 specimens, Secas Islands, 4.ii.1935, tidepool, shore, reef, each specimen in a separate pearl oyster, leg. W. L. Schmitt, Allan Hancock Expedition station 446a–35. USNM 90181, 6 specimens, Pinas Bay, depth 3.5–7 m, tidepool, coral, from pearl oyster, 29.i.1935, leg. W. L. Schmitt, Allan Hancock Expedition station 444–35. USNM 90184, 5 specimens, Pinas Bay, shore rocks, 28.i.1935, leg. W. L. Schmitt, Allan Hancock Expedition station 436–35. USNM 90185, 2 specimens, Secas islands, 5.ii.1935, from pearl oysters, leg. W. L. Schmitt, Allan Hancock Expedition station 452a–35. USNM 90193, 12 specimens, Bahía Honda, depth 3.5 m, 10.iii.1933, in pearl oyster, coral from near east point, leg. W. L. Schmitt, Allan Hancock Expedition station 114–33. AHF 114–33, 4 specimens, Bahía Honda, depth 3.5 m, 10.iii.1933, in pearl oyster, coral from near east point, leg. W. L. Schmitt, Allan Hancock Expedition station 114–33. USNM 90194, 14 specimens, Panama Bay, 2.ii.1935, from pearl oyster, leg. W. L. Schmitt, station 445–35. USNM (acc. no. 229243), 4 specimens, Saboga Island, Pearl Islands, P. S. Galtsoff coll. sta. 4, in pearl oysters, received 11.iii.1960 from A. G. Humes. **Colombia:** USNM 90174, 2 specimens, Octavia Bay, 27.i.1935, shore on island, shingle, leg. W. L. Schmitt, Allan Hancock Expedition station 433–35. USNM 90178, 7 specimens, AHF 405a–35, 2 specimens, Gorgonia Island, 22.i.1935: shore, rock and sand, leg. W. L. Schmitt, Allan Hancock Expedition station 405–35. USNM 90177, 9 specimens, Port Utria, 24.i.1935, shallow water, coral, from pearl oyster, leg. W. L. Schmitt, Allan Hancock Expedition station 418–35. USNM 90183, 5 specimens, Port Utria, shore, from pearl oysters, taken among rocks at low tide, 23.i.1935, leg. W. L. Schmitt, Allan Hancock Expedition station 413–35. USNM 90179, 9 specimens, Cupica Bay, shore, west side, between second island and peninsula, 26.i.1935, from pearl oysters under rocks, leg. W. L. Schmitt, Allan Hancock Expedition station 427–35. USNM 90192, 14 specimens, AHF 232–34, 4 specimens, Port Utria, 14.ii.1934, in pearl oyster, leg. W. L. Schmitt, Allan Hancock Expedition station 232–34. AHF 239–34, 1 ovigerous female, Port Utria, shore, 14.ii.1934, Allan Hancock Expedition station 239–34. USNM 90195, Gorgonia Island, 22.i.1935, shore, rock, from pearl oyster, leg. W. L. Schmitt, Allan Hancock Expedition station 405a–35. **Galapagos Islands:** USNM 85412, 3 specimens, N. Seymour Island, 11.vi.1932, Templeton Crocker Expedition, station 4. USNM 90176, 2 specimens, Tower Island, Darwin Bay, 26.ii.1933, shore, in pearl oyster, leg. W. L. Schmitt, Allan Hancock Expedition station 101–34. **OTHER:** RMNH D 4754: 1 ovigerous female (pocl. 7.19 mm), 1 male (pocl. 4.19 mm), no further data.