

**A REPORT ON A SMALL COLLECTION OF PONTONIINE SHRIMPS FROM
THE NORTHERN INDIAN OCEAN**

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ABSTRACT

This report describes twenty-two species of pontoniine shrimps collected principally by the 'Te Vega' during the International Indian Ocean Expedition. Twenty species are now recorded from the Maldive Islands, eight for the first time. A new species *Periclimenaeus garthi* is also described here.

INTRODUCTION

THE Pontoniine shrimp fauna of the coral reefs of the northern Indian Ocean has been little studied since the time of Borradaile and Kemp. The former reported upon collections mainly from the Maldive Islands (Borradaile, 1917) and the latter from a wide range of localities from the Persian Gulf to the Mergui Archipelago (Kemp, 1922). A few species were latter collected in the 1957-58 Yale—Seychelles Expedition (Bruce, 1973).

The present report provides details of specimens collected principally by the 'Te Vega' on its * cruise, while participating in the International Indian Ocean Expedition, and made available through the kindness of Dr. J. S. Garth. All the localities referred to are in the Maldive Islands, unless otherwise stated.

I am most grateful to Dr. J. S. Garth for the opportunity to examine and report upon these specimens. Additional specimens were kindly provided by Dr. R. N. Mariscal. The coral hosts were identified by Dr. J. W. Wells.

Reference has already been made in Bruce (1969, 1970, 1972) and Garth (in press) to some of the information derived from this material.

LIST OF SPECIES COLLECTED

1. *Palaemonella tenuipes* Dana
2. *Palaemonella rotumana* (Borradaile)
3. *Periclimenes lutescens* auct*
4. *Periclimenes brevicarpalis* (Schenckel)

*Not previously recorded from the Maldive Islands

5. *Periclimenes spiniferus* De Man
6. *Periclimenes elegans* (Paulson)
7. *Periclimenes inornatus* Kemp
8. *Periclimenes holthuisi* Bruce*
9. *Periclimenaeus hecata* (Nobili) ?*
10. *Periclimenaeus garthi* sp. nov.*
11. *Anchistus custos* (Forsskal)
12. *Anchistus miersi* (De Man)
13. *Harpiliopsis beaupresi* (Audouin)
14. *Harpiliopsis depressus* (Stimpson)
15. *Harpiliopsis spinigerus* (Ortmann*)
16. *Fenera chacei* Holthuis
17. *Jocaste japonica* (Ortmann)
18. *Jocaste lucina* (Nobili)
19. *Coralliocaris superba* (Dana)*
20. *Coralliocaris nudirostris* (Heller)
21. *Coralliocaris venusta* Kemp*
22. *Coralliocaris viridis* Bruce*

SYSTEMATIC ACCOUNT

Family : *PALAEMONIDAE* Samouelle, 1819

Subfamily : *Pontoniinae* Kingsley, 1878

Palaemonella tenuipes Dana

Restricted synonymy :

Palaemonella tenuipes Kemp, 1922 : 123 (key), 129-131, figs. 7-8. Bruce, 1970 : 274 (key) 276, fig. 1.

Material examined : # 1067, 1♂, 1 ovig.♀, Hulule Is., Male Atoll, I.34 AA', 7 December 1964, coll. R. N. Mariscal.

Habitat : The specimens were collected from an example of the giant anemone *Radianthus ritteri* (Kwietnowski), but this association is considered accidental.

Distribution : Sparsely recorded from the Red Sea to the Line Islands, including the Sulu Sea, Fiji and Ellice and Marshall Islands. In the Indian Ocean, known from the Comoro, Seychelle and Chagos Islands, and Madagascar.

Remarks : Ortmann (1890) has also recorded this species from the Maldivic Islands, but Kemp (1922) considers this report unreliable. Borradaile (1917) has previously recorded this species from Goidu, Goifurfehendu Atoll and South Nilandu Atoll.

***Palaemonella rotumana* (Borradaile)**

Restricted synonymy :

Palaemonella vestigialis Kemp, 1922 : 123 (key), 123-126, figs. 1-2, pl. 3 fig. 2. Holthuis, 1952: 8, 24-27, figs. 2a-b 3.

Palaemonella rotumana—Bruce, 1970 : 274 (key), 276-279, fig. 2, pl. 1 e-f.

Material examined : # 317 : 1♀ (damaged), Galle Fort, Ceylon, GA 64-16a, 5 March 1964, coll. J. S. Garth. # 331 : 1♂, Dunidu Is., Male Atoll, GA 64-35, 19 April 1964, coll. J. S. Garth.

Habitat : The specimens were collected from colonies of *Acropora ramiculosa* (Dana) and *Pocillopora eydouxi* Milne-Edwards & Haime, but are not obligatory coral associates.

Distribution : Widespread and common throughout most of the Indo-West Pacific region from the Red Sea to Mocambique, eastwards to the Hawaiian Islands.

Remarks : The above specimens have also been referred to in Bruce (1970). The species has also spread recently through the Suez Canal into the eastern Mediterranean Sea. Kemp (1922) recorded specimens from Cheval Paar, Ceylon, and the Andaman and Mergui Islands.

***Periclimenes lutescens* auct.**

Restricted synonymy :

Harpilius lutescens Kemp, 1922 : 229 (key), 235-237, figs. 72-73.

Periclimenes (Harpilius) lutescens—Holthuis, 1952 : 12, 88-91, fig. 35 (partim).

Material examined : # 358, 1♂, 1 ovig. ♀, Wala Is., S. Nilandu Atoll, GB B-u 64, 23 April 1964, coll. G. Beardsley.

Host : *Acropora convexa* (Dana), (Scleractinia : Acroporidae).

Distribution : Sparsely recorded throughout the Indo-West Pacific region from the Red Sea to the Marquesa Islands.

Remarks : Not previously recorded from the Maldiv Islands, Common in *Acropora* spp. in East African and Seychelle waters.

***Periclimenes brevicarpalis* (Schenkel)**

Restricted synonymy :

Periclimenes (Harpilius) brevicarpalis Holthuis, 1952 : 10, 69-73, fig. 27. Bruce, 1973 : 133-134, fig. 1a, b.

Material examined : # 1064, 2♂, 2♀, Funidu Is. Male Atoll, I. 24B, 27A, 5 November 1964, coll. R.V. Mariscal.

Hosts : All specimens collected from *Stoichactis giganteum* (Forsskal) (Actinaria, Discosomidae).

Distribution : Common and widespread throughout most of the Indo-West Pacific region from the Red Sea to Mocambique eastwards to Palau and the Santa Cruz Islands.

Remarks : This species has been previously recorded from the Maldivic Islands by Bruce (1973) and it is also reported from the Andaman Islands by Kemp (1922). The rostral dentition in the males is $\frac{6}{1}$, $\frac{8}{2}$ and the females $\frac{5}{1}$, $\frac{6}{1}$.

Periclimenes spiniferus De Man

Restricted synonymy :

Periclimenes (Falciger) spiniferus Borradaile, 1917 : 366 (key), 369, pl. 52 fig. 1.

Material examined : # 422, 2♂, 1 ovig. ♀, Imma Is., GA 64—20, 19 March 1964, coll. J. S. Garth.

Habitat : Collected from dead coral.

Distribution : Widespread throughout the Indo-West Pacific to Tahiti and Wake Island, but absent from the Red Sea and Persian Gulf.

Remarks : Previously recorded from the Maldivic Islands by Borradaile (1917), Goifurfehendu and Male Atolls, and also from the Chagos Archipelago. Kemp (1922, 1925) also reported this species from the Gulf of Mannar, the Andaman and Nicobar Islands. This species is probably the commonest free-living pontonine shrimp in the Indo-West Pacific region.

Periclimenes elegans (Paulson)

Restricted synonymy :

Periclimenes (Falciger) dubius Borradaile, 1917 : 367 (key), 373.

Periclimenes (Ancylocaris) elegans Kemp, 1922 : 171 (key), 215-218, figs. 60-62.

Periclimenes (Harpilius) elegans Holthuis, 1952 : 11, 81-82. fig. 31.

Material examined : # 314 : 2♂, Galle Fort, Ceylon, GA 64-16c, 5 March 1964, coll. G. S. Garth. # 390, 1 ovig. ♀, NE of Hare Is., Gulf of Mannar, GA 64-13a, 22 February 1964, coll. J. S. Garth.

Habitat : From dead coral colony bases.

Distribution : Reported from the Red Sea to Palau and the Marshall Islands.

Remarks : Previously reported from the island of Minikoi by Borradaile (1917). Also reported by Kemp (1922, 1925) from the Andaman Islands, Nicobar Islands and Madras Harbour.

Periclimenes inornatus Kemp

Restricted synonymy :

Periclimenes (Ancylocaris) inornatus Kemp, 1922 : 170 (key), 191-194, figs. 43-46.

Material examined : #1068, 16 spms. (1 ovig. ♀), Funidu Is., Male Atoll, I-27B, 5 November 1964 ; 2 juv. ♂, Hulule Is., Male Atoll, I-34A, 7 November 1964 ; 7 spms. (1 ad. ♀), Funidu Is., Male Atoll, I-38A, 9 November 1964, coll. R. N. Mariscal.

Hosts : *Radianthus ritteri* (Kwietniewski), I-27B, I-38A ; *Stoichactis giganteum* (Forsskal) I-34A.

Distribution : Recorded from the Andaman, Comoro and Seychelle Islands in the Indian Ocean, and the South China Sea and Palau Islands. The occurrence of this species in the Maldive Islands has been indicated by Bourdon (1967).

Remarks : This species is a common and widespread associate of *Radianthus* anemones but the Palau material was obtained from corals (Miyake & Fujino, 1968).

Periclimenes holthuisis Bruce

Restricted synonymy :

Periclimenes (Periclimenes) aesopius Holthuis, 1952 : 34-37, figs. 5-6.

Periclimenes holthuisi Bruce, 1969 : 258-259.

Material examined : # 397, 1 spm., Kuludu Is., Miladumadulu Atoll, GA-64-28, dredge, 23 fms., 27 March 1964, coll. J.S. Garth.

Host : Not recorded.

Distribution : Recorded from Hong Kong and the South China Sea, Japan, Indonesia, New Guinea, New Caledonia, NE Australia, and Zanzibar.

Remarks : It is probable that the material recorded by Pearson (1905) as *Urocaris longicaudata*, from Aripu Paar, Ceylon, and by Borradaile (1917) as *Urocaris* sp., ? *U. longicaudatus*, from N. Male Atoll, should be referred to the present species. This species has been found in association with sea anemones, jellyfish and fungiid corals.

Periclimenaeus ? hecata (Nobili) (Fig. 1)

Coralliocaris hecate Nobili, 1904 : 232 ; 1906 : 58, pl. 3 fig. 2.

Periclimenaeus hecate Bruce, 1975 : 1574-1577, figs. 11-12, 13e.

Material examined : # 352, 1♂, 1 ovig. ♀, Wala Is., South Nilandu Atoll, GB B-4 64, 23 April 1964, coll. G. Beardsley.

Description : The two specimens agree closely with the previously available descriptions. Both specimens have a slender, slightly depressed rostrum, with an

almost straight, toothless ventral border. The dorsal margin bears five acute teeth, all situated distinctly in advance of the orbital margin. In the male, the first tooth is smaller than the rest of the series, and in the female the fifth tooth is the smallest. The third maxilliped is unusual in the presence of particularly long simple setae on the penultimate and terminal segments of the endopod. The setae on the latter are over 1.5 times the length of the segment. One detached first pereiopod from each specimen is preserved and shows no special features. Both major second pereiopods and one minor second pereiopod are also preserved but detached. In the latter the

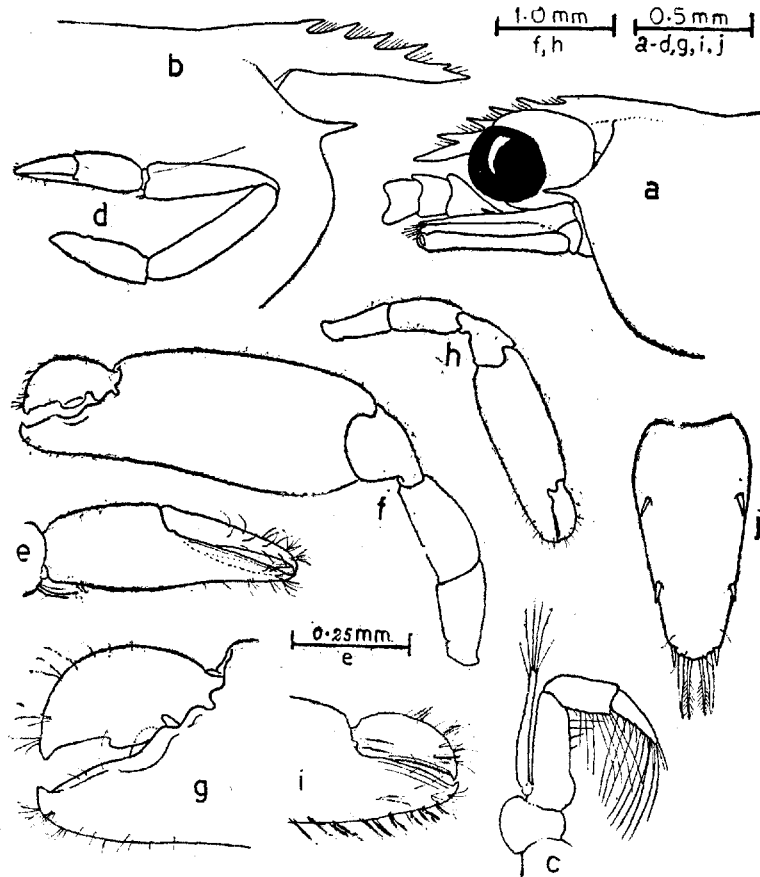


Fig. 1. *Periclimenaeus? hecate* (Nobili): a. Anterior carapace, rostrum and antennal peduncles, male, b. anterior carapace and rostrum, female, c. third maxilliped, d. first pereiopod? female, e. chela of first pereiopod, f. major second pereiopod? male, g. fingers of major second pereiopod, h. minor second pereiopod, i. fingers of minor second pereiopod, j. telson, female.

teeth, nineteen in number, on the cutting edge of the dactyl appear slightly smaller than in the type material and the cutting edge itself is very feebly concave. All ambulatory pereiopods are missing. The uropods are typical. The posterior telson spines are relatively long, about 0.28 of the telson length in the female.

Measurements : Post-orbital carapace length ♂ 1.2 mm ; ♀ 1.4 mm.

Host : Not recorded.

Distribution : Known only from Jibuti, Somalia and Malindi, Kenya.

Remarks : The specimens cannot be referred with certainty to *P. hecate* (Nobili) on account of the loss of the ambulatory pereopods. The small differences in the telson and minor second pereopod may only represent individual variation. The very long setae on the distal segments of the endopod of the third maxilliped may indicate that this material should be referred to a different species. In most species of the genus these setae are generally shorter than the length of the terminal segment. The host of the present specimens is unknown but since the material was collected from corals, an encrusting sponge or ascidian is most likely, as in the case of the Kenyan specimens of *P. hecate*, which were found in a cavity in a very small saclike, encrusting ascidian *Diplosoma*, attached to the base of a coral colony.

***Periclimenaeus garthi* sp. nov. (Figs. 2-4)**

Material examined : # 426, 1 ovig. ♀, Dunidu Is., Male Atoll, GA 64-35, 19 April, 1964, coll. J. S. Garth.

Description : A medium sized, robustly built species, with a generally smooth body. The rostrum is short and strongly depressed, slightly exceeding the anterior margin of the proximal segment of the antennular peduncle. The lamina is shallow with a slender, acute tip. The dorsal margin bears a pair of small acute proximal teeth, situated well in advance of the orbital margin, separated by a distinct gap from a similar but smaller tooth situated close to the tip. The ventral margin is without teeth. The midrib is obsolete. Supra-orbital spines or tubercles are lacking. The inferior orbital angle is obsolete but the antennal spine is well developed, slender and acute. The antero-lateral angle of the carapace is produced as a distinct rounded lobe. The sixth abdominal segment is about twice as long as deep. The pleura of the first four segments are rounded, and the fifth bluntly subrectangular. The sixth segment has the posterior ventral angle large and acute. The telson is broad anteriorly, tapering strongly posteriorly, about 1.8 times the length of the sixth segment. The dorsal spines are small, submarginal, with the anterior pair situated close to the anterior margin and posterior pair at about 0.6 of telson length. The posterior spines are normal. The posterior margin of the telson bears a small acute median process.

The proximal segment of the antennular peduncle is broadest at half its length, with the lateral margin feebly concave ; the anterolateral margin produced, with a well developed acute tooth. The stylocerite is broad, pointed, reaching the middle of the segment length. The intermediate and distal segments are short and stout, subequal, together equal to two-thirds of the length of the proximal segment. The flagella are normal, short. The basicerite is stout ; the carpocerite exceeds the proximal segment of the antennular peduncle, and is about four times longer than wide. The scaphocerite is 2.3 times as long as broad, extending beyond the proximal segment of the antennular peduncle ; the lateral border is straight with a small acute-distolateral tooth, well exceeded by the rounded anterior margin of the lamella.

The eyes are normal, with the cornea hemispherical and oblique and the peduncle stout, broader than the cornea in dorsal view.

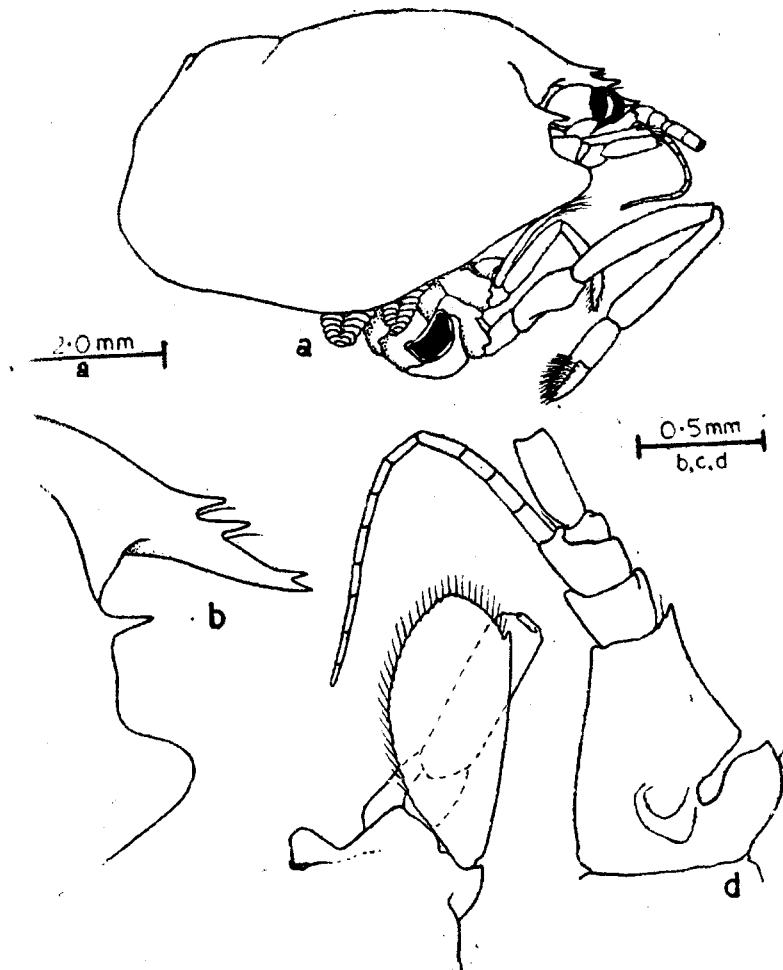


Fig. 2. *Periclimenaeus garthi* sp. nov., holotype female: a. anterior carapace and appendages, b. anterior carapace and rostrum, c. antennula, and d. antenna.

The mouthparts are typical of the genus *Periclimenaeus*. The mandible is without a palp. The molar process is well developed with some small acute teeth and setal brushes distally. The incisor process is slender, tapering, with two distal teeth only, a robust medial tooth and a more slender lateral tooth. The palp of the maxillula was lost in dissection. The upper lacinia is moderately broad, with eight short stout simple teeth. The lower lacinia is slender, with numerous setae. The maxilla has a slender, non-setose palp. The endite is well developed, feebly tapering, simple, with about 16 distal setae. The scaphocerite is slender, about 3.2 times longer than wide, with the antero-medial margin concave. The first maxilliped has a slender palp, with a slender simple terminal seta. The basal endite is large, sparsely

setose medially, and feebly separated by a small notch from the feebly developed coxal endite, which is without setae. The caridean lobe is well developed and a feebly bilobed epipod is present. The second maxilliped shows no special features. A simple epipod, without a podobranch is present. The third maxilliped has the ischio-

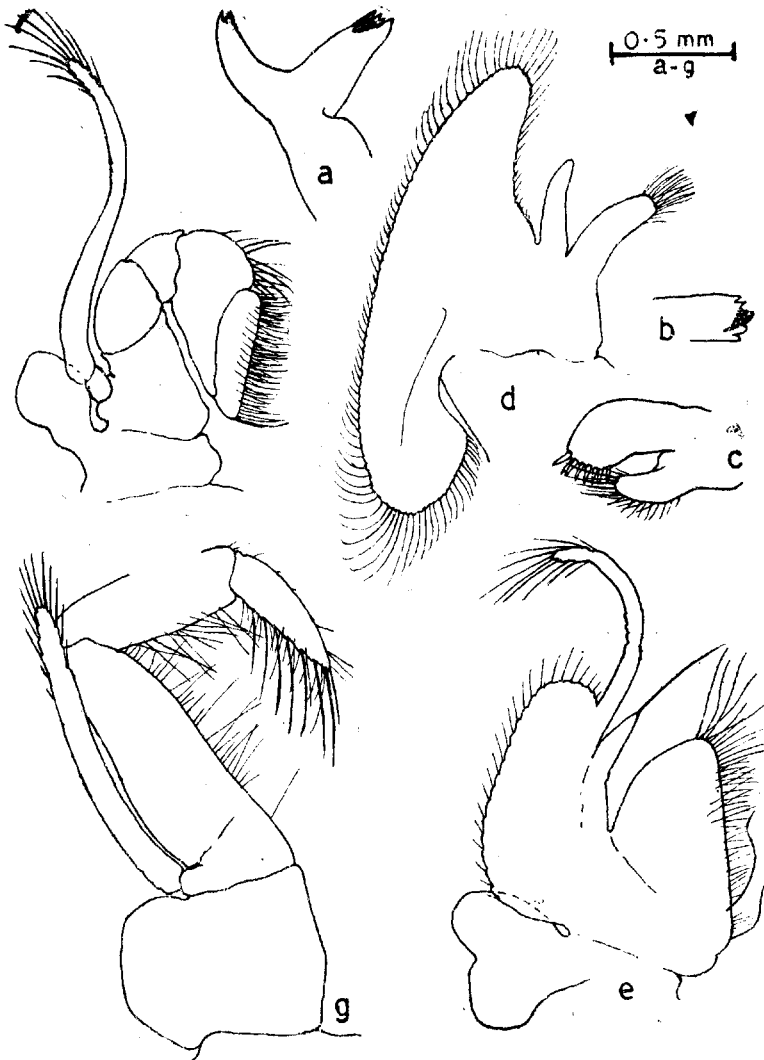


Fig. 3. *Periclimenaeus garthi* sp. nov., holotype female: a. mandible, b. molar process, c. maxillula (palp lacking), d. maxilla, e. first maxilliped, f. second maxilliped, and g. third maxilliped.

merus almost completely fused with the basis. The whole segment is a little more than three times longer than broad, and the medial border is sparsely setose. The penultimate and terminal segments together slightly exceed the length of the antepenultimate segment. The penultimate segment is about three times longer than wide, about 0.6 of the penultimate segment length, tapering, with a few groups of

slender simple setae ventrally. The coxal segment is robust, with a well developed epipod laterally. There is no arthrobranch present. All maxillipeds have simple well developed exopods with numerous plumose setae distally. The exopods of the third maxilliped distinctly exceeds the end of the ischiomerus.

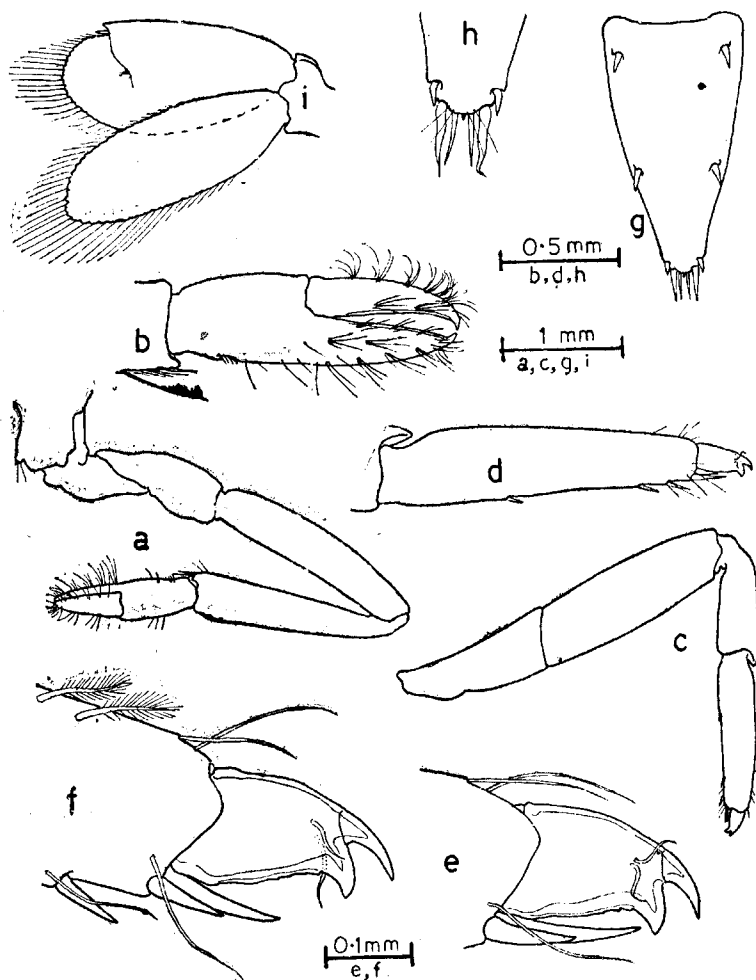


Fig. 4. *Periclimenaeus garthi* sp. nov., holotype female: a. first pereiopod, b. chela of first pereiopod, c. third pereiopod, d. propod, and dactyl of third pereiopod, e. dactylus of third pereiopod, f. dactylus of fourth pereiopod, g. telson, and h. posterior telson spines.

The first pereiopods are normal, neither stout nor slender; exceeding the carpo-cerite by the carpus and chela. The palm of the chela is subcylindrical, slightly compressed and slightly shorter than the fingers, which are stout and blunt, feebly subspatulate with entire lateral cutting edges. The carpus is about 1.5 times the length of the chela, moderately enlarged distally and subequal to the merus. The second pereiopods are both lacking. The ambulatory pereiopods are moderately robust. The dactylus of the third pereiopod is short and stout, biunguiculate, with a stout accessory spine, and with minute tubercles along with distal ventral border of

the corpus. The propod is about 4.5 times longer than wide, tapers feebly distally with a few spines on the ventral border and at the disto-ventral angle. On the third pereopod the disto-ventral propodal spines are particularly long, on reaching to the ventral border of the accessory spine. The carpus and merus are unarmed. The uropods are normal, with the lateral margin of the exopod entire, bearing only a small disto-lateral tooth and mobile spine.

Measurements: Post-orbital carapace length 6.0 mm.

Type: The single specimen is designated as the holotype and deposited in the collections of the Allen Hancock Foundation.

Host and colouration: Unknown.

Remarks: The lack of the second pair of pereopods prevents an accurate assessments of the exact systematic position of *P. garthi*. It is also not apparent whether or not the characteristic dentition of the rostrum is a normal feature or a developmental abnormality, with the loss of a dorsal tooth from the interval preceding the distal tooth.

The single example appears to be most closely related to *P. spongicola* Holthuis. The principal differences between the two species are that *P. spongicola* has (i) six dorsal rostral teeth, longer and more slender than in *P. garthi*, with a long slender upcurved rostral tip, (ii) a more strongly developed disto-lateral spine on the scaphocarite, (iii) the incisor process of the mandible with three small distal teeth, (and also a small spine on the middle of the lateral border), (iv) the maxillary endite is feebly bilobed, (v) first pereopod with carpus about 1.1 times length of chela, (vi) the ambulatory pereopods are more robust, the propod swollen, less than three times longer than wide and with short disto-ventral spines only, (vii) the dactyls of the ambulatory pereopods with slender, acute erect spines along the proximal ventral margin of the corpus, (viii) the telson about 2.3 times longer than wide, tapering less strongly, with longer dorsal spines, at about 0.2 and 0.6 of the length, which are distinctly longer than the intermediate posterior spines, and (ix) the exopod of the uropod with large acute disto-lateral angle and spine, only feebly exceeded by the lamina.

***Anchistus custos* (Forsskal)**

Restricted synonymy:

Anchistus inermis Kemp, 1922 : 249 (key), 249-252, fig. 81.

Anchistus custos Holthuis, 1952 : 13, 105-109, figs. 43-44.

Material examined: # 391 : 2♂, 3 ovig. ♀, reef 0.5 miles N of Hare Is., Gulf of Mannar, GAO64 13c, 22 February 1964, coll. J. S. Garth.

Host: *Pinna bicolor* Gmelin, (Lamellibranchia : Pinnidae).

Distribution: Common and widespread throughout the Indo-West Pacific from the Red Sea and East Africa to Fiji and the Santa Cruz Islands.

Remarks: Previously recorded from the Gulf of Mannar by Kemp (1922), who also reported this species in the Andaman and Nicobar Islands.

Anchistus miersi (De Man)

Restricted synonymy :

Anchistus miersi Kemp, 1922 : 249 (key), 255-256, fig. 85.

Holthuis, 1952 : 13, 110-111, fig. 45. Bruce, 1973 : 136, fig. 1c-3.

Material examined : # 394, 1 ovig. ♀, Imma Is., Male Atoll, GA-64-20, 19 March 1964, coll. J. S. Garth. # 424-5, 4♂, 3 ovig. ♀, Kagi Is., Male Atoll, GA-64-23, 22 March 1964, coll. J. S. Garth.

Host : *Tridacna* sp., (Lamellibranchia, Tridacnidae).

Distribution : Widespread throughout the whole Indo-West Pacific region from the Red Sea to the Gambier Archipelago.

Remarks : Previously recorded from Male Atoll by Borradaile (1917) and Bruce (1973). Also known from the Seychelles Islands, Andaman Islands and Mergui Archipelago.

One male (#425) was provided with an acutely pointed rostrum that was devoid of teeth. The rostra in the other specimens were normal.

Harpiopsis beaupresi (Audouin)

Restricted synonymy :

Harpiopsis beaupresi Borradaile, 1917 : 379 (key), 379-380, fig. 21, pl. 55. Holthuis, 1952 : 16, 181-182, fig. 89.

Material examined : #319 : 11 spms., Galle Fort, Ceylon, GA 64-16c, 5 March 1964, coll. J. S. Garth. # 324 : 4 spms. (damaged), Imma Is., Male Atoll, GA 64-22a, 21 March 1964, coll. J. S. Garth. # 316, 1♂, 2 juv., Dunidu Is., Male Atoll, GA 64-35, 19 April 1964, coll. J. S. Garth. # 330, 1 ovig. ♀, Dunidu Is., Male Atoll, GA 64-35, 19 April 1964, coll. J. S. Garth. # 356, 8 spms. (damaged), Wala Is., S. Nilandu Atoll, GB B-4 64, 23 April 1964, coll. Beardsley.

Hosts : All specimens were obtained from *Pocillopora* colonies ; *P. woodjonesi* Vaughan, # 324, # 326 ; *P. eydouxi* Milne-Edwards & Haime, # 330, # 356.

Distribution : Common and widespread throughout the Indo-West Pacific region from the Red Sea to Hawaii.

Remarks : This species has been previously recorded from Goidu, Goifurfe-hendu Atoll and Hulule, Male Atoll, by Borradaile (1917) and from the Chagos Archipelago (Borradaile, 1917) and Andaman Islands (Kemp, 1922).

Haripiliopsis depressus (Stimpson)

Restricted synonymy :

Haripiliopsis depressus Kemp, 1922 : 228 (key), 231-234, figs. 69-70.

Haripiliopsis depressus Borradaile, 1917 : 379 (key), 380, pl. 56, fig. 22. Holthuis, 1951:70-75, pls. 21, 22 a-f ; 1952 : 16, 182-184, fig. 90. Bruce, 1973 : 139-140.

Material examined : # 313, 1 ovig. ♀, Galle Fort, Ceylon, GA 64-16, 5 March 1964, coll. J. S. Garth. # 318, 1♀, idem. # 323, 1 spm. (damaged), Imma Is., Male Atoll, GA 64-22a, 21 March 1964, coll. J.S. Garth. # 327, 1♀, Dunidu Is., Male Atoll, GA 64-35, 19 April 1964, coll. J. S. Garth. # 353, 12 spms, Wala Is., S. Nilandu Atoll, GB B-4, 64, 23 April 1964, coll. Beardsley.

Hosts : All specimens were obtained from *Pocillopora* colonies ; *P. wood-jonesi* Vaughan, # 323, # 327 ; *P. eydouxi* Milne-Edwards & Haime, # 353.

Distribution : Common and widespread throughout the whole of the Indo-West Pacific region from the Red Sea to the Hawaiian Islands.

Remarks : This species has been previously recorded on the Maldive Islands, from Hulule, Male Atoll ; Goidu, Goifurfehendu Atoll and Naifaro, Fadiffolu Atoll, by Borradaile (1917) and from Funado Is., N. Male Atoll, by Bruce (1973).

Many of the reported occurrences of this species may refer to the closely related *H. spinigerus*, which may often be present on the same host colonies.

***Harpiliopsis spinigerus* (Ortmann)**

Restricted synonymy :

Harpilius depressus var. *gracilis* Kemp, 1922 : 228 (key), 234- 235, fig. 71.

Harpiliopsis depressus var. *spinigerus* Holthuis, 1952 : 16, 184-185.

Material examined : # 354, 5 spms, Wala Is., S. Nilandu Atoll, GB B-4 64, 23 April 1964, coll. G. Beardsley.

Host : *Pocillopora verrucosa* Milne-Edwards & Haime (Scleractinia : Pocilloporidae).

Distribution : Originally described from Samoan material, subsequently recorded from the Andaman Islands by Kemp (1922). Also known from Kenya, Zanzibar and the Seychelles Islands.

Remarks : As noted above, this species closely resembles *H. depressus*, and the two species may be found together on the same coral host. It is probable that some of the reports of *H. depressus* refer to this species.

***Fennera chacei* Holthuis**

Restricted synonymy :

Fennera chacei Holthuis, 1951 : 71-174, pl. 54. Bruce, 1965 ; 80-82 fig. 1 ; 1974.

Material examined : # 351 : 1♂, 3 ovig. ♀, Wala Is., S. Nilandu Atoll, GB B-4, 64, 23 March 1964, coll. G. Beardsley.

Host : *Pocillopora eydouxi* Milne-Edwards & Haime (Scleractiria : Pocilloporidae).

Distribution : Recorded from Kenya, the Seychelle and Maldive Islands and the Great Barrier Reef. Also occurs in the Eastern Pacific region.

Remarks : The specimens have been previously described in Bruce (1965). Specimens have also been found in *Pocillopora verrucosa* (Ellis & Solander) and in association with *Harpiliopsis depressus* and *H. spinigerus*.

Jocaste japonica (Ortmann)

Restricted synonymy :

Jocaste japonica Bruce, 1969 : 299, 300, fig. 1 ; 1974 : 198-199, fig. 7.

Material examined : # 320, 4 spms., (badly damaged), Dunidu Is., Male Atoll, GA 64-19c, 18 March 1964, coll. J. S. Garth. # 321, 5 spms. (badly damaged), idem. # 325, 1♂, 1♀ Kuludu Is., Milladumadulu, GA 64-27a, 27 March 1964, coll. G. S. Garth. # 329, 1♂, 1 ovig.♀, Dunidu Is., Male Atoll, GA 64-35, 19 March 1964, coll. J. S. Garth. # 332, 1 spm., Gan Is., Addu Atoll, GA 64-41, 30 April 1964, coll. J. S. Garth. # 333, 1 juv., idem. # 335 1 spm. (damaged) idem. # 336, 1 spm. (damaged), idem. # 342, 1♂, Dawafuri Is., N. Maladmadulu Atoll, GB A-z 64, 21 April 1964, coll. G. Beardsley. # 343, 1 spm., Wala Is., S. Nilandu Atoll, GB B-2 64, 23 April 1964, coll. G. Beardsley. # 344, 2♂, 2 ovig. ♀, Wala Is., S. Nilandu Atoll, GB B-v 64, 23 April 1964, coll. G. Beardsley. # 345, 5 spms. (1 ovig. ♀), Wala Is., S. Nilandu Atoll, GB B-x 64, 23 April 1964, coll. G. Beardsley. # 346, 3♂, 3♀, 3 ovig., ♀ Dawafuri Is., N. Malosmadulu Atoll, GB A-w 64, 64, 21 April 1964, coll. G. Beardsley. # 348, 1♂, 1♀, Gan Is., Addu Atoll, GB C-1 64, 30 April 1964, coll. G. Beardsley. # 349, 8 spms. (3 ovig. ♀), Dawafuri Is., Malosmadulu Atoll, GB A-x 64, 21 April 1964, coll. G. Beardsley. # 350, 10 spms. (4 ovig. ♀), Dawafuri Is., Molosmadulu Atoll, GB A-3 64, 21 April 1964, coll. G. Beardsley. # 360, 4 spms, Wala Is., S. Nilandu Atoll, GB B-t-64, no date, coll. G. Beardsley.

Hosts : All specimens were collected from *Acropora* coral colonies : *A. diversa* (Brook), # 333 ; *A. humilis* (Dana), # 321, # 325, # 329, # 332, # 335, # 342, # 343, # 346, # 348, # 350 ; *A. nasuta* (Dana) # 320, # 336 ; *A. rotumana* (Gareiner), # 344, # 345, # 349, # 360.

Distribution : Abundant in the western Indian Ocean, extending eastwards to the Marshall Islands and the Palau Islands. Apparently absent from the Red Sea.

Remarks : The above records have been previously referred to in Bruce (1969). This species is probably the commonest pontoniine coral commensal in the Indo-West Pacific region. Borradaile (1917) has also recorded this species from Saya de Malha, and it has also been reported from Fundao Is., Male Atoll, by Bruce (1974).

Jocaste lucina (Nobili)

Restricted synonymy :

Jocaste lucina Bruce, 1969 : 299, 301, fig. 2; 1974 : 199, fig. 8.

Material examined : # 316 : 1♀, Galle Fort, Ceylon, GA 64-16a, 5 March 1964, coll. J. S. Garth. # 357 ; 1 spm., Gan Is., Addu Atoll, GB C-4b 64, 30

April 1964, coll. G. Beardsley. # 392, 1 spm., between Neptune and Triton Bas-tions, Galle Fort, Ceylon, GA 64-16b, 5 April 1964, coll. J. S. Garth. # 395, 1 spm., Imma Is., Male Atoll, GA 64-22c, 21 March 1964, coll. J. S. Garth.

Hosts : *Acropora ramiculosa* (Dana), 316 ; *Acropora tenuis* (Dana), # 357 (Scleractinia : *Acroporidae*).

Distribution : Common and widespread throughout most of the Indo-West Pacific region, including the Red Sea, and extending as far eastwards as Tahiti.

Remarks : The above specimens have been previously referred to in Bruce (1969). The species has also been reported by Kemp (1922) from the Andaman Islands and Cheval Paar, Ceylon. It is apparent that most of Kemp's specimens belong to *J. lucina* s. str., and not to *J. japonica*, although he considered the two names to be synonyms.

***Coralliocaris superba* (Dana)**

Restricted synonymy :

Coralliocaris superba Kemp, 1922 : 269 (key), 272-274. figs. 98-99. Holthuis, 1952 : 17, 189-191, fig. 92.

Material examined : # 322 ; 1♂, 1♀, Imma Is., Male Atoll, Islands, GA 64-20-a, 10 March 1964, coll. J. S. Garth. # (340 ; 6 spms., Wala Is., S. Nilandu Atoll, GB Bz-64, 23 April 1964, coll. G. Beardsley. # 347, 1♂, 1♀, Gan Is., Addu Atoll, GBC-1 64, coll. G. Beardsley.

Hosts : Each lot was obtained from a colony of *Acropora humilis* (Dana), (Scleractinia, *Acroporidae*).

Distribution : Common and widespread throughout the Indo-West Pacific region from the Red Sea to Tahiti and the Society Islands.

Remarks : Previously reported by Kemp (1922) from the Andaman and Nico-bar Islands but not recorded from the Maldiv Islands.

***Coralliocaris nudirostris* (Heller)**

Restricted synonymy :

Oedipus nudirostris Heller, 1862 : 279, pl. 3 fig. 25.

Coralliocaris nudirostris Borradaile, 1917 : 382 (key), 384.

Material examined : # 334 : 1♂, Gan Is., Addu Atoll, GA 64-41, 30 April 1964, coll. J. S. Garth.

Host : *Acropora humilis* (Dana), (Scleractinia : *Acroporidae*)

Distribution : Known only from the Red Sea, Kenya, Seychelles Islands, Maldiv Islands and Tahiti.

Remarks : Previously recorded from Goifurfehendu Atoll by Borradaile (1917).

Coralliocaris venusta Kemp

Restricted synonymy :

Coralliocaris venusta Kemp, 1922 : 269 (key), 274-276, figs. 100-101.

Material examined : # 341 : 4 juv., Wala Is., S. Nilandu Atoll, GB B-3, 64, 23 April 1964, coll. G. Beardsley. # 359, 1 ovig. ♀, S. Nilandu Atoll, GB B-4 64, coll. G. Beardsley.

Hosts : Both lots of specimens were obtained from colonies of *Acropora convexa* (Dana), (Scleractinia : Acroporidae).

Distribution : Recorded sparsely from the Red Sea to Samoa.

Remarks : Reported by Kemp (1922) from the Gulf of Mannar. All specimens had rostra without dorsal or ventral teeth, as reported by Patton (1966) for many specimens from the Great Barrier Reef. The first lot of specimens were found in the same host as specimens of *C. superba*.

Coralliocaris viridis Bruce

Restricted synonymy :

Coralliocaris viridis Bruce, 1974 : 222-224, fig. 1.

Material examined : # 315, 1♀, Galle Fort, Ceylon, GA 64-16a, 5 March 1964, coll. J. S. Garth., # 328, 1♂, 1♀, Dunidu Is., Male Atoll, GA 64-35, 19 April 1964, coll. J. S. Garth.

Hosts : *Acropora ramiculosa* (Dana), *A. humilis* (Dana), (Scleractinia, Acroporidae)

Distribution : This species has so far only been recorded from Kenya, Zanzibar, Madagascar and the Great Barrier Reef.

Remarks : This species closely resembles *C. graminea* and it is possible that some of the reports of Kemp (1922) and other authors of *C. graminea* may refer to this species.

DISCUSSION

This report provides data of twenty-two species of pontoniine shrimps, twenty of which are now recorded from the Maldive Islands, eight for the first time. Thirteen species have also been previously recorded from the Maldive Islands, principally by Borradaile, (1917). The present pontoniine fauna therefore consists of thirty-three species, six of which have not been recorded from any other localities so far. These additional species are listed in the following table, those species known only from the Maldive Islands indicated by an asterisk.

<i>Periclimenes psamathe</i> (De Man)	<i>P. incertus</i> Borradaile
<i>P. longirostris</i> (Borradaile)	<i>P. ceratophthalmus</i> Borr.

<i>P. cornutus</i> Borradaile*	<i>P. maldivensis</i> Bruce*
<i>P. nilandensis</i> Borradaile	<i>Periclomenaeus fimbriatus</i> Borr.
<i>P. brockettii</i> Borradaile*	<i>Conchodytes tridacnae</i> Peters
<i>P. suvadvivensis</i> Borradaile*	<i>Pontonides maldivensis</i> (Borrs.)*
<i>P. tenuipes</i> Borradaile	

The present fauna of the Maldive Islands may conveniently be compared with that of the Andaman Islands studied by Kemp (1922, 1925) and which is listed by Johnson (1962). This list indicates the presence of twenty-six species of which thirteen are also known to occur in the Maldive Islands. Of the fourteen other species, *Periclimenes agag* Kemp and *Periclimenes signatus* Kemp, are so far known only from the Andaman Islands. Excluding from consideration these two species and the six known only from the Maldive Islands, there are eleven species present in the Andaman Islands that have not been found in the Maldive Islands and fourteen species found in the Maldive Islands that have not been recorded from the Andaman Islands. However, these species are mostly common Indo-West Pacific species and it is certain that more extensive investigations will reduce the faunal differences between the two groups of islands as well as increase the total number of species known from both.

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