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NOTES ON SOME INDO-PACIFIC PONTONIINAE. XI. A RE-EXAMINATION OF *PHILARIUS LOPHOS* BARNARD, WITH THE DESIGNATION OF A NEW GENUS, *ISCHNOPONTONIA*

A. J. BRUCE

NOTES ON SOME INDO-PACIFIC PONTONIINAE. XI. A RE-EXAMINATION OF *PHILARIUS LOPHOS* BARNARD, WITH THE DESIGNATION OF A NEW GENUS, *ISCHNOPONTONIA*[1]

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ABSTRACT

Specimens of a pontoniinid shrimp from East Africa, the western Indian Ocean, and the Malayan Peninsula are described. The specimens are placed in a new genus *Ischnopontonia* and reasons are given for removing the species from the genus *Philarius* Holthuis, in which they had originally been placed as *P. lophos* by Barnard. The new genus is considered to be most closely related to *Anapontonia* Bruce and the differences between the two genera are listed. The data at present available on morphological variation, ecology, and distribution are given and a key for the separation of related genera is provided.

INTRODUCTION

During the period 1959 to 1962, collections of shrimps from the coral reefs of East Africa revealed the presence of an undescribed species inhabiting the coral. This species was described in 1962 on the basis of two specimens obtained from Moçambique by the late K. H. Barnard, who placed it in the genus *Philarius* Holthuis. Comparison of specimens, including the types, with examples of *P. gerlachei* (Nobili) revealed numerous important differences and suggested the two species were generically distinct. Subsequent collections have shown that the species is widespread in the western Indian Ocean and collections made recently in the Malayan region proved that the species is common there and that its range extends into the South China Sea.

A total of 118 specimens have been examined. All were obtained from the same host coral and showed marked adaptions to that particular habitat, some of which are shared by other shrimps that occur in the same niche.

Ischnopontonia gen. nov.

Diagnosis of Genus.—Commensal pontoniinid shrimps associated with madrepore corals. Body smooth, elongated, and strongly bilaterally compressed. Short, dorsally toothed rostrum. Antennal, hepatic, and supraorbital spines absent. Pleura rounded. Telson broad, with three pairs of terminal spines and two pairs of laterally placed posterior spines. Eyes small. Antennular peduncle short, basal segment with well developed stylocerite, flagella short. Basicerite unarmed laterally, scaphocerite nar-

[1]Contribution No. 22 from the Fisheries Research Station, Hong Kong.

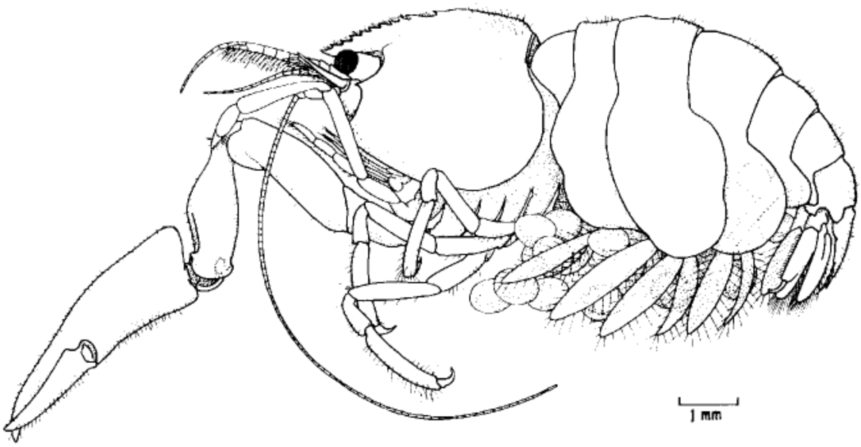

FIGURE 1. *Ischnopontonia lophos* (Barnard). Ovigerous female, Chango Island reef, Zanzibar.

row with large disto-lateral spine exceeding lamina, antennal flagellum well developed. Mandible without palp, molar process with sharp cutting edges. Maxillula with bifid palp and narrow laciniae. Maxilla with simple setose endite, setose palp and narrow scaphognathite. First maxilliped with endites of basis and coxa distinct, setose palp, well developed exopod with large caridean lobe, and large bilobed epipod. Second maxilliped normal with well developed exopod and simple epipod. Third maxilliped normal with exopod, small epipod, and rudimentary arthrobranch. First pereiopods normal. Second pereiopods well developed, similar and equal in size, slender, and with movements mainly in a vertical plane. Third to fifth pereiopods robust with simple strongly hooked dactyls, without hoof-shaped basal protuberances. Thoracic sternites unarmed. Endopod of male first pleopod elongated, simple, with a row of short spines along medial border and with plumose setae along lateral border and terminally. Appendix masculina of second pleopod shorter than appendix interna and with marginal rows of long spines. Uropods broad, considerably exceeding the telson, and with large fixed hook-like spine disto-laterally on exopod.

Type-species.—*Ischnopontonia lophos* (Barnard).

Ischnopontonia lophos (Barnard, 1962)
Figs. 1-4

Philarius lophos Barnard, 1962

External Morphology.—The body is very strongly bilaterally compressed (Fig. 1). The carapace is smooth and its dorsal outline is frequently

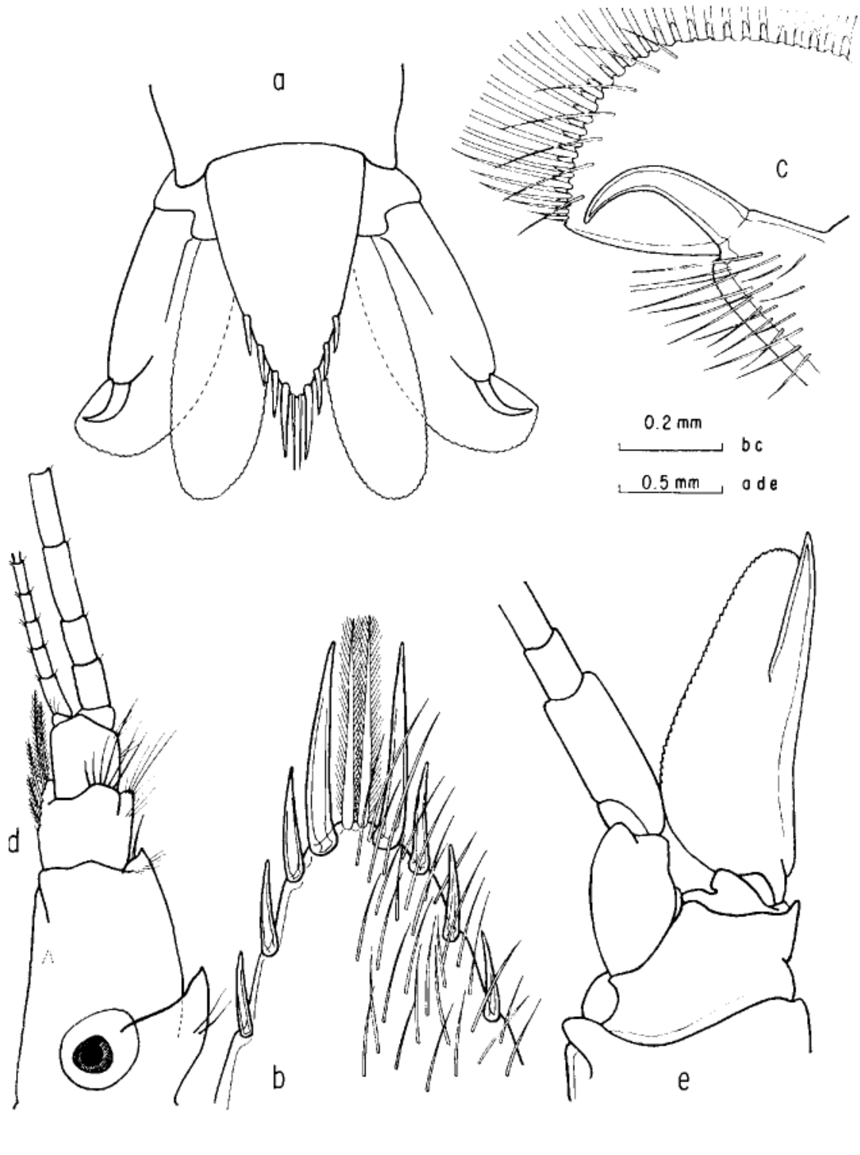

FIGURE 2. *Ischnopontonia lophos* (Barnard), Singapore. a, caudal fan; b, tip of telson; c, distal end of exopod of uropod; d, antennular peduncle; e, antennal peduncle and scaphocerite.

distinctly angled in lateral view. The rostrum extends anteriorly to the distal margin of the intermediate segment of the antennular peduncle. The rostral lamina is bilaterally compressed and without a distinct midrib. The dorsal margin is continuous with a well marked post-rostral carina that extends along the anterior five-eighths of the carapace. There is a uniform series of 7 to 14 large, acute, dorsal teeth of which generally half lie on the rostrum proper and half on the post-rostral carina. The rostral teeth decrease slightly in size anteriorly and the most posterior is separated from the adjacent tooth by a larger interval than between the rest of the series. The dorsal margins of the teeth are provided with long setae. The ventral margin of the rostrum lacks teeth and is concave except at the tip which is slightly upturned. The dorsum of the carapace frequently is angled posterior to the post-rostral carina and bears numerous scattered setae. The dorsal margin of the orbit is convex and continuous with the inferior margin of the rostrum. There are no supra-orbital spines. The inferior orbital angle is acutely pointed but antennal and hepatic spines are absent. The anterior ventral angle of the carapace is rounded and the posterior margin of the branchiostegite is broadly rounded.

The abdominal segments are smooth with numerous setae on the dorsal aspects. The third segment is not produced posteriorly in the dorsal midline. The sixth abdominal segment is short and stout, with length and depth subequal, and is dorsally subequal to the length of the fifth segment. The pleura of the first four segments are broadly rounded. The pleuron of the fifth segment is bluntly produced posteriorly. The posterior lateral angle of the sixth segment is bluntly produced and the posterior ventral angle is acute. The telson is broad, 1.5 times longer than wide, with feebly convex lateral borders, bluntly rounded distally and dorsally convex with numerous long setae (Fig. 2a). The two pairs of "dorsal" telson spines are situated on the lateral margins of the posterior third of the telson and form a continuous series with lateral and intermediate pairs of terminal spines (Fig. 2b). The spines are robust and increase regularly in size distally. The intermediate spines are the longer and most robust and are about one-third the length of the telson and 2.5 times the length of the anterior lateral spines. The densely plumose submedian spines are slender and longer than the intermediate spines.

The eyestalk is short and sub-cylindrical, not reaching the tip of the rostrum, and slightly expanded proximally. The cornea is small and globular and one-half the length of the stalk in diameter. It is obliquely placed on the cornea when seen in dorsal view. No ocellus can be discerned.

The antennular peduncle is short, inclined dorsally and exceeds the tip of the rostrum by the length of the terminal segment and part of the intermediate segment (Fig. 2d). The proximal segment is 1.5 times longer than

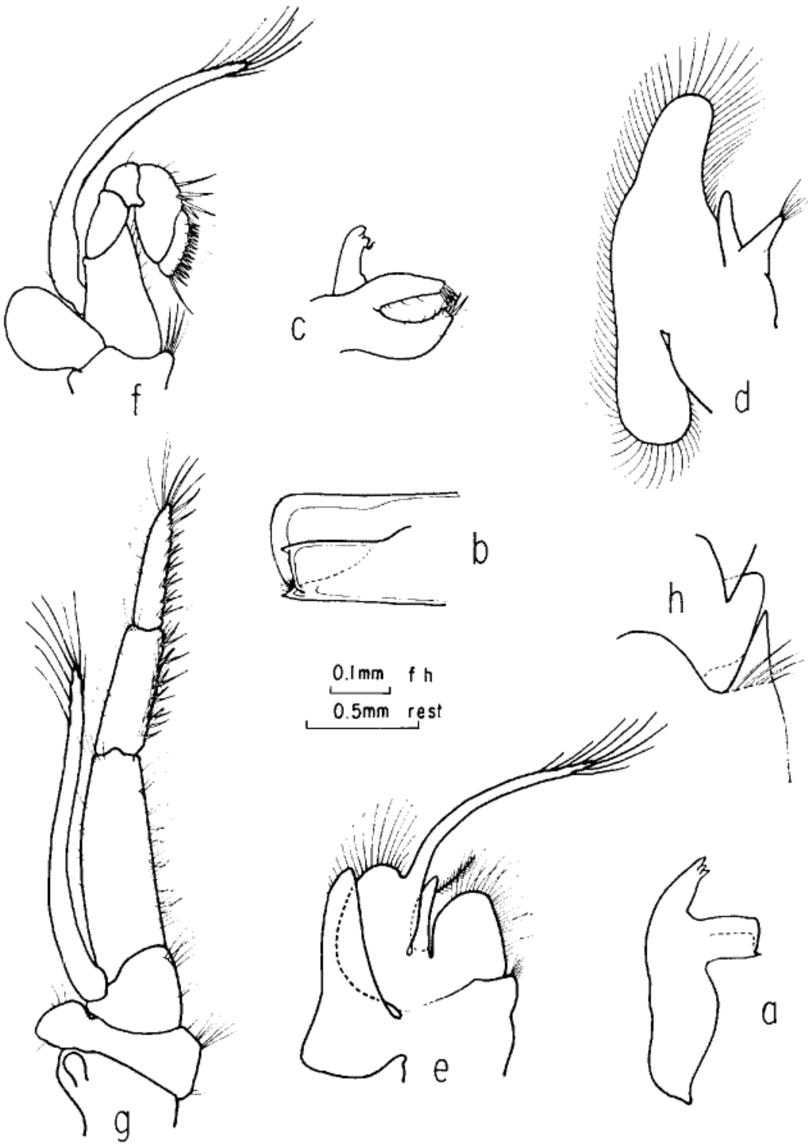

FIGURE 3. *Ischnopontonia lophos* (Barnard). Mouthparts: a, mandible; b, molar process of mandible; c, maxillula; d, maxilla; e, first maxilliped; f, second maxilliped; g, third maxilliped; h, disto-lateral angle of basal segment of antennular peduncle of Zanzibar specimen.

its basal width. The medial border is straight and the lateral border is convex, bearing a broad, acute, laterally projecting stylocerite, which extends anteriorly for half the length of the segment. The anterolateral angle of the basal segment of the peduncle is acute. A short blunt tooth is present ventrally, close to the medial border at about two-thirds of its length. The statocyst is conspicuous and contains a smoothly circular statolith. The intermediate and distal segments of the peduncle are of similar length but the intermediate is broader and produced into a small lobe disto-laterally. It bears several plumose setae along its medial border. The two segments are equal in length to two-thirds of the proximal segment. The lower flagellum is filiform, equal to about three-fifths of the post-orbital carapace length, and with 14 to 17 cylindrical segments. The upper flagellum is longer and more robust. The fused portion consists of six to eight segments and the shorter free ramus of one or two only. The longer ramus of the upper antennular flagellum is filiform with about 10 segments.

The antennal peduncle is short and the basicerite is robust but unarmed laterally (Fig. 2e). The merocerite and ischiocerite are small and the carpocerite is cylindrical reaching beyond the middle of the lateral border of the scaphocerite. The antennal flagellum is well developed and about four or more times the post-orbital carapace length. The scaphocerite is robust with a very strong disto-lateral spine that greatly exceeds the tip of the lamella and reaches the level of the tip of the antennular peduncle. The lamina is widest at one-third of its length and tapers distally to a narrow rounded tip. The lateral border is slightly sinuous, concave proximally, and convex distally. The setae along the medial border are very long and a few submarginal setae are also present along the ventral border distally. The aperture of the excretory gland forms a large knob ventro-medially on the coxocerite.

The mandibles lack palps (Fig. 3a). The incisor processes are well developed and bear three or four acute teeth. The molar processes have sharp cutting edges medially, a longer edge dorsally, and a shorter edge ventrally, separated posteriorly by a small acute tooth (Fig. 3b). The anterior edge of the shorter edge also bears a small tooth. A few short bristles are present in the central depression near the posterior tooth. The maxillula has a well developed bilobed palp, the lower lobe bearing a short hooked process (Fig. 3c). The upper lacinia is slender and bears four stout teeth distally. The lower lacinia is also narrow and bears three stout setae distally with a number of slender setae. The maxilla bears a single tapering endite with a few slender setae distally (Fig. 3d). The palp is well developed, tapering and blunt, and devoid of setae. The scaphognathite is also well developed and narrow. The first maxilliped has basial and coxal endites separated by a distinct notch (Fig. 3e). The basial

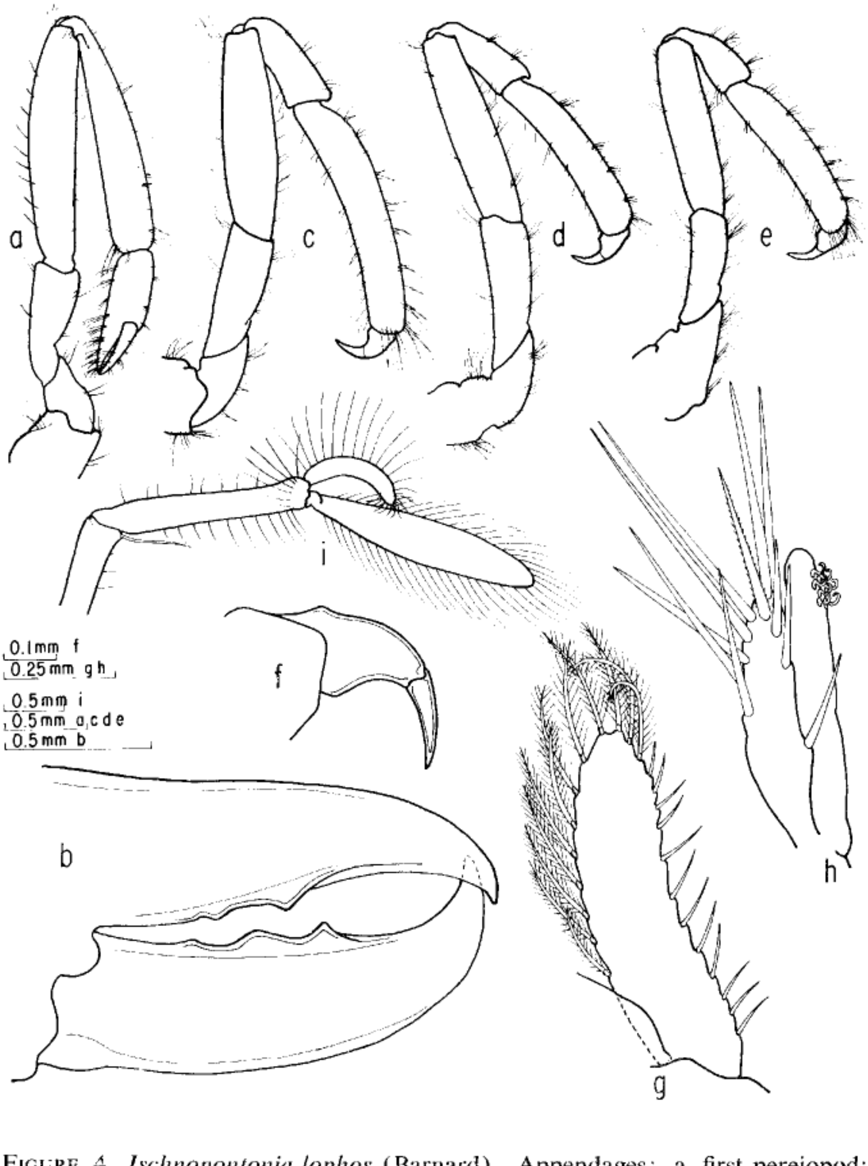

FIGURE 4. *Ischnopontonia lophos* (Barnard). Appendages: a, first pereiopod; b, fingers of second pereiopod; c, third pereiopod; d, fourth pereiopod; e, fifth pereiopod; f, dactyl of third pereiopod; g, endopod of male first pleopod; h, appendix interna and appendix masculina of male second pleopod; i, female first pleopod.

endite is densely fringed with long setae along its medial border but the coxal endite bears only a small tuft of short setae at the distal end of its medial border. The palp is well developed, exceeding the level of the anterior margin of the basial endite, and bears a single long plumose seta subterminally on its medial border. The exopod is normal with a conspicuous caridean lobe. The epipod, which is feebly bilobed, is unusually large and reaches anteriorly to the level of the distal margin of the caridean lobe. The second maxilliped is normal with a large simple epipod and well developed exopod (Fig. 3f). There is no podobranch. The third maxilliped is robust and reaches anteriorly to the distal margin of the carpocerite (Fig. 3g). The two distal segments are subequal in length and bear numerous groups of short spines along their medial borders. The merus and ischium are together equal to the combined length of the two distal segments, and are four times longer than the maximum width of the ischium. The exopod reaches to the middle of the penultimate segment. A small epipod is present on the coxa, which is slightly produced medially. A rudimentary arthrobranch is present. The exopods and epipods are conspicuously exposed in lateral view.

The first pereiopods exceed the carpocerite by the length of the chela and carpus (Fig. 4a). The fingers of the chela are slightly shorter than the palm and bear entire cutting edges. Tufts of setae are numerous especially along the ventral border. The carpus is 1.75 times the length of the chela, narrowed proximally and 5.5 times longer than the greatest width. The merus is subequal to the length of the carpus, both segments bearing numerous setae. The ischium is one-half the length of the merus and 1.5 times the length of the basis. The coxa is provided with a feeble, setose, disto-medial process.

The second pereiopods are well developed, robust, and similar. They are directed anteriorly and their medial surfaces normally lie in apposition. The joints are so articulated that movement is mainly in a vertical plane and only a limited amount of lateral movement is possible. The chela presents a triangular outline, being greatly expanded posteriorly and the articulation with the carpus lies at the ventral region of the posterior surface. The palm is subcircular in section and tapers distally to the fingers which are robust, oval in section, and oppose in a horizontal plane. The free finger is distinctly curved. The tips of the fingers are strongly hooked and the tip of the free finger lies dorsally to the fixed finger (Fig. 4b). The surfaces of the chela are smooth but numerous setae are present especially on the fingers. The cutting edges oppose throughout their lengths. The free finger bears two small teeth at the distal end of the proximal half of the cutting edge, the distal half being entire. On the fixed finger there are two or three slightly more robust teeth, with an entire cutting edge distally. The carpus is slightly longer than the palm, and is expanded centrally and unarmed. The distal third of its dorsal surface is depressed and forms a recess for the postero-dorsal end of the palm when the joint is flexed. The disto-lateral border of the carpus is produced to form a rounded lamina that limits abduction of the chela. The merus is slightly shorter than the carpus and is unarmed. It is bowed dorsally with the ventral surface hollowed to form a recess for the proximal ventral aspect of the carpus. The disto-ventral angle of the merus is laterally expanded to form a rounded lamina that lies externally to the proximal end of the carpus. The ischium is strongly bilaterally compressed and twice as wide distally as proximally. It is two-thirds of the length of the merus and the articulation with the merus is oblique. The basis and coxa are stout and unarmed.

The third to fifth pereiopods are similar but decrease in length posteriorly (Fig. 4C-4). The third pereiopod exceeds the tip of the scaphocerite anteriorly by the dactyl and half the length of the propod. The dactyl of the third pereiopod is robust and simple, strongly curved, with a distinctly marked unguis and a slight basal expansion (Fig. 4f). The posterior margin of the dactyl, including the basal protuberance, is sharply edged. The propod is bowed dorsally, about five times longer than wide, with numerous tufts of setae, especially along the dorsal aspect, but lacking spines. The carpus is slightly less than one-half, and the merus is eight-tenths, the length of the propod. Both segments are setose and unarmed. The ischium is two-thirds of the length of the merus and the basis is three-quarters of the length of the ischium. The lengths of the propods of the third to fifth pereiopods are in the ratio of 75 : 58 : 55, and the meri are in the ratio of 66 : 63 : 58. The sternites of the thoracic segments are unarmed.

The pleopods are biramous and particularly long and slender in the female. The endopod of the first pleopod is reduced in size in both male and female. In the male it is about four times longer than wide and slightly curved medially (Fig. 4g). It bears a series of 12 short setae along four-fifths of its medial border, proximally. The distal one-fifth of the medial border and the whole lateral border bear long plumose setae. In the female the endopod is strongly curved laterally, with long plumose setae along the medial border and numerous stout curved setae near the tip of the lateral border (Fig. 4i). The second pleopod in the male has a short, stout, appendix masculina which bears a series of five spines on both its medial and lateral borders (Fig. 4h). These spines increase in length distally and there is also a single terminal spine. Some of the spines are serrated. An appendix interna is present on the medial border of the endopod of the second to fifth pleopods, and exceeds the distal extremity of the appendix masculina on the male second pleopod. The uropods exceed the tips of the telson spines and the endopod of the uropod exceeds the tip of the telson by one-half its length (Fig. 2a). The lateral border of the exopod is feebly convex, thickened, and strongly setose. Its disto-lateral extremity is well marked and a large, laterally hooked, fixed spine is present (Fig. 2c). The diaeresis is conspicuous and beyond it, the lamella is produced laterally, lying ventrally to the hooked spine. The lateral margin of the terminal portion of the exopod is angulated, at the level of the tip of the lateral spine. The proximal portion of the margin is thickened and devoid of setae and the distal portion bears plumose setae which are continuous with those of the medial border. The dorsal surface of the tip of the exopod also bears numerous long, simple, submarginal setae. The endopod, which has setose margins, exceeds the exopod by one-sixth of the length of the endopod.

The ova are relatively few and large. A typical female, post-orbital carapace length 2.7 mm, carried 40 eyed ova, 0.72×0.50 mm; another, carapace length 2.3 mm carried 110 non-eyed ova, 0.50×0.40 mm.

Variation.—Considerable variation was found in the number of teeth on the dorsal edge of the rostrum and post-rostral carina. The original male and female have 12 and 10 teeth respectively and the range for the whole series of specimens extends from 7 to 15 teeth. The examination of the number of dorsal teeth showed no correlation with carapace length.

Only small differences are present between the western Indian Ocean populations and the Malayan populations. The number of rostral teeth varies from 7 to 14 in the 50 specimens of western Indian Ocean origin, with a mean of 10.24 and standard deviation of 2.41. In the 68 specimens of Malayan origin the range is from 9 to 15, with a mean of 10.88 and standard deviation of 1.00.

The other difference noted between the two groups of specimens concerned the dactyls of the third to fifth pereiopods which are slightly longer, more slender, and less curved in the Malayan specimens than in those from the western Indian Ocean.

The angulated dorsal profile of the carapace is most marked in the large ovigerous females. In the smallest specimens, the dorsal profile is almost straight and the rostrum is directed anteriorly and not depressed.

The antero-lateral angle of the basal segment of the antennular peduncle also shows some variation and is long and acute in some of the Zanzibar specimens (Fig. 3h).

Size.—Specimens ranged from 0.8-2.5 mm post-orbital carapace length for the males and 1.1-3.15 mm for the females. The smallest ovigerous female had a post-orbital carapace length of 2.0 mm.

Colour Pattern.—The body and limbs of the shrimp are mainly transparent with minute red dots. A conspicuous triangular white patch, apex directed anteriorly, is present on the posterior part of the dorsum of the

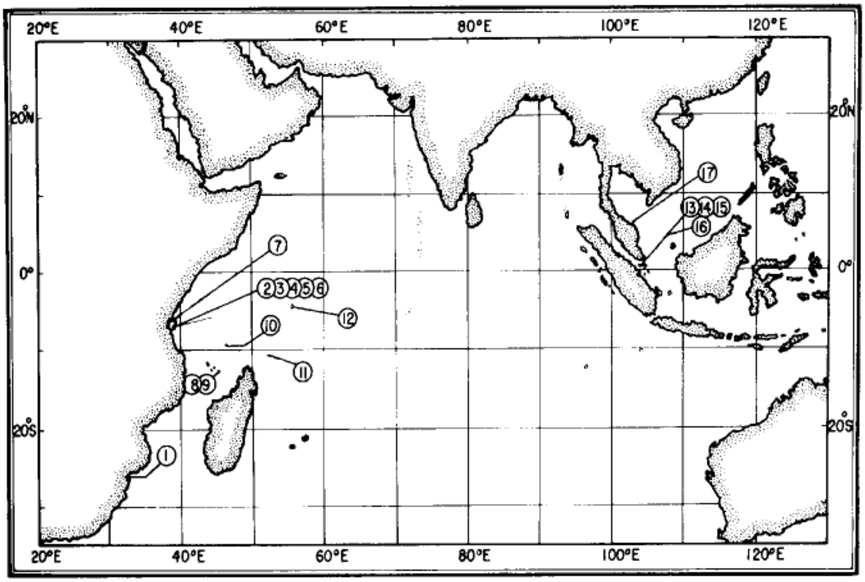

FIGURE 5. The distribution of *Ischnopontonia lophos* (Barnard), showing the localities referred to in the text.

carapace. A similar but small transverse patch is found on the non-articular dorsal surface of the first abdominal segment, and another larger patch on the dorsum of the second abdominal segment. A large triangular patch, apex directed anteriorly, is also present on the third segment. A further patch of white extends over the posterior two-thirds of the sixth abdominal segment, including posterior ventral and lateral angles, and also extending over the anterior fourth of the telson. The eyestalks and corneae also are white. Some or all of the white patches are commonly absent, especially in juveniles, but the white eyestalks are almost always present.

TYPES

The male specimen, described by Barnard, is selected as a lectotype, and the female as a paralectotype. Both are held in the collections of the South African Museum, Capetown, catalogue No. A 10652. Material has been deposited in the British Museum (Natural History), the Rijksmuseum van Natuurlijke Historie, Leiden, and the Smithsonian Institution, Washington.

ECOLOGICAL DATA

All specimens were obtained from the oculinid coral *Galaxea fascicularis* L. The host occurs commonly on coral reefs in the western Indian Ocean between low water, spring-tide level and 2 fathoms below. Colonies usually are from a few inches up to 18 inches (45.7 cm) in width and the polyps are expanded in daylight. In small colonies only a single pair of shrimps was found, but in larger colonies two pairs, and also juveniles, sometimes were found. The shrimps occur close to the transverse septa that join the corallites. When the coral is first removed from the sea the shrimps usually are active, moving rapidly from one part of the colony to the other between the polyps. In this respect *Ischnopontonia lophos* resembles the alpheid shrimp *Racilius compressus* Paulson which is commonly found in the same coral colonies. Two other shrimps also are frequently found in association with *Ischnopontonia lophos*. These are the pontoniinids *Platycaris latirostris* Holthuis and *Anapontonia denticauda* Bruce, both rather sluggish and inactive species.

Distribution

The distribution of *Ischnopontonia lophos* is shown on the chart (Fig. 5); the localities where the shrimps have been found are indicated by numbers.

1. The type locality is Inhaca Island, Delagoa Bay, Moçambique.
2. Mazizini, west coast of Zanzibar Island, 6°12.0′S, 39°12.0′E.
3. Chukwani, west coast of Zanzibar Island, 6°15.5′S, 39°13.6′E.
4. Pange Reefs, off west coast of Zanzibar, 6°11.4′S, 39°9.7′E.
5. Chango Reefs, off west coast of Zanzibar, 6°5.3′S, 39°9.7′E.
6. Kibandiko Island reefs, off west coast of Zanzibar, 6°7.9′S, 39°10.6′E.
7. Maziwi Island, off Pangani, Tanzania.
8. Mounimeri Island, Zaoudzi, Mayotte, Comores.
9. Pamanzi Island, Zaoudzi, Mayotte, Comores.
10. Aldabra, 9°20.0′S, 46°27.0′E.
11. Farquhar Island, 10°7.0′S, 51°11.0′E.
12. Victoria, Mahé, Seychelles, 4°37.5′S, 55°28.0′E.
13. Pulau Salu, Singapore, 1°12.9′N, 103°42.8′E.
14. Pulau Sudong, Singapore, 1°12.7′N, 103°43.65′E.
15. Pulau Renget, Singapore, 1°13.65′N, 103°50.9′E.
16. Pulau Pawaii, Singapore, 1°11.2′N, 103°43.0′E.
17. Pulau Perhentian Besar, Malaya, 5°53.6′N, 102°44.6′E.

Discussion

Ischnopontonia lophos (Barnard) was originally placed in the genus *Philarius* 1952, a genus which at present consists of two closely allied coral-inhabiting shrimps. The second pereiopods of both the Moçambique specimens are detached and it is probable that they were examined in this state by Barnard as the shrimps are very ready to autotomize these limbs when detached from their coral host. Without the second limbs attached, the extreme bilateral compression of the body is less striking but even so, the closest parallel is to the alpheid shrimp *Racilius compressus* Paulson, which was described as being like "paste-board." *Philarius* is described by Holthuis (1952) as clumsy but not depressed in general body form, but the specimens examined by the author have a distinctly depressed appearance. Kubo (1940) in describing *P. imperialis* also notes that the body is slightly depressed. Neither *P. gerlachei* (Nobili) nor *P. imperialis* approach the highly compressed form found in *Ischnopontonia*.

Other features that separate *Ischnopontonia* from *Philarius* are the absence of an antennal spine in the former. Both *P. gerlachei* and *P. imperialis* have distinct antennal spines situated close to the anterior margin of the carapace immediately below the inferior orbital angle (Kemp, 1922; Kubo, 1940). In *Philarius* the rostrum is well developed, far exceeding the antennular peduncle, and typically bearing dorsal and ventral teeth. This contrasts with the short rostrum of *Ischnopontonia* which bears only a dorsal series of teeth. The telson in *Philarius* has two pairs of dorsal spines in the positions typical of the majority of the Pontoniinae and not placed around the margins of the distal third of the telson as in *Ischnopontonia*. The mouthparts of the two genera do not present any striking differences but it may be noted that in *Philarius* the scaphognathite is broad and the caridean lobe very small while in *Ischnopontonia* the scaphognathite is narrow and the caridean lobe large. The palp of the maxillula is simple in *Philarius* and bilobed in *Ischnopontonia*. Both species of *Philarius* lack arthrobranchs on the third maxillipeds but a rudimentary arthrobranch is present in *Ischnopontonia*. In *Philarius* the second pereiopods are articulated to move in a mainly horizontal plane, in marked contrast to *Ischnopontonia* where movement is largely limited to the vertical plane. Finally, the exopod of the uropod is provided with a small, mobile spinule disto-laterally in *Philarius* whereas in *Ischnopontonia* this position is occupied by a large, fixed, hooked spine.

In *Philarius* the sternite of the segment of the first pereiopod bears a long ventrally projecting spine. There is no sternal spine in this position in *Ischnopontonia*. Descriptions of pontoniinid shrimps do not usually include any reference to the presence or absence of spines in the ventral thoracic region even in well known species. The author's preliminary observations indicate that these spines are of value as a generic feature of many pontoniinid shrimps.

The genus *Ischnopontonia* is most closely related to *Anapontonia* Bruce (In Press). This genus contains only a single species *A. denticauda* and is also found in the coral *Galaxea fascicularis*. Many of the characteristics that distinguish *Ischnopontonia* from *Philarius* are also found in *Anapontonia*. The genera *Ischnopontonia* and *Anapontonia* may be separated by the following features:

Feature	*Anapontonia* Bruce	*Ischnopontonia* gen. nov.
Body form	Moderately bilaterally compressed	Extremely compressed
Antennae	Markedly reduced	Small but normal

Labrum	Greatly enlarged	Normal
Telson	Dorsal spines absent	Dorsal spines situated on distal margin
Mandible	Incisor process reduced	Incisor process normal
Maxilla	Endites absent	A simple endite present
Second maxilliped	Epipod absent	Epipod present
Third maxilliped	Exopod a short rigid rod	Exopod normal
Uropod	Lateral margin with series of strong teeth	Lateral margin with a single large hook-like spine distally.

The new genus may be conveniently separated from the related genera by the following key.

Pontoniinae with compressed, dorsally toothed rostrum, lacking mandibular palp, with exopods on all maxillipeds, well developed scaphocerite, no basal protuberances on dactyls of third to fifth pereiopods, rounded pleura on first five abdominal segments, unsegmented carpi on first pereiopods, and similar second pereiopods.

1. Scaphocerite oval with lamella exceeding disto-lateral tooth .... *Anchistus*
1. Scaphocerite narrow, tapering, with disto-lateral tooth exceeding lamella 2
2. Antennal spine distinct .... *Philarius*
2. Antennal spine absent 3
3. Body moderately compressed, dorsal spines of telson absent, lateral margin of exopod of uropod with numerous large teeth .... *Anapontonia*
3. Body extremely compressed, dorsal telson spines situated laterally on distal third of telson, lateral margin of exopod of uropod armed with single large hooked spine .... *Ischnopontonia*

The shrimps are well adapted to moving in the narrow spaces between corallites and the form of articulation of the joints of the second pereiopod are not found in any other pontoniinid genus, although there is some approach to it in *Anapontonia*. The active shrimps associated with *Galaxea fascicularis* (*Ischnopontonia lophos, Anapontonia denticauda,* and *Racilius compressus*) each have a "holdfast" type of caudal fan and also show a reduction in the length of the rostrum and an absence of carapace spines which would facilitate forward movement between the corallites.

Acknowledgments

I am grateful to Dr. R. U. Gooding who collected the Malaysian specimens of *Ischnopontonia* and to Dr. J. R. Grindley who enabled me to examine the type specimens of *Philarius lophos* Barnard. I am also grateful to the National Science Foundation which enabled me to participate aboard the R/V Anton Bruun on its ninth cruise in the U.S. Programme in Biology in the International Indian Ocean Expedition.

Sumario

Notas Sobre Pontoniinae en el Indo-Pacífico. XI. Un Re-exámen de *Philarius lophos* Barnard

Se describen ejemplares de un camarón pontoniinido de África oriental, el Océano Índico occidental y la península Malaya. Los ejemplares son colocados en un nuevo género *Ischnopontonia* y se dan los motivos por lo que se quita esta especie del género *Philarius* Holthuis, en el cual fueron originalmente situados como *P. lophos* Barnard. El nuevo género está considerado como mas relacionado con *Anapontonia* Bruce y se enumeran las diferencias entre los dos géneros. Se dan los datos que están disponibles en el presente sobre variación morfológica, ecología y distribución, y se provee una clave para la separación de los géneros relacionados.

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