

For Dr. R. B. Manning,
With my best regards,
J. Miya

Two new records of the genera, *Athanopsis* and *Prionalpheus*,
from Japan, with description of a new species
(Crustacea, Decapoda, Alpheidae)*

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**Two new records of the genera, *Athanopsis* and *Prionalpheus*,
from Japan, with description of a new species
(Crustacea, Decapoda, Alpheidae)¹⁾**

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Abstract

The descriptions are given of two alpheid shrimps, *Athanopsis dentipes* n. sp. and *Prionalpheus sulu* Banner and Banner, 1971, from the west coast of Kyushu Island, Japan. The genera *Athanopsis* Coutière, 1897 and *Prionalpheus* Banner and Banner, 1960 are recorded for the first time from Japan.

Introduction

There have so far been recorded from Japan and adjacent waters alpheid shrimps of eight genera: *Alpheus*, *Athanas*, *Betaeus*, *Synalpheus*, *Automate*, *Aretopsis*, *Salmoneus* and *Batella* (Miya, 1972). In addition, the two species described here of *Athanopsis* and *Prionalpheus* have also been found in the Japanese waters. The former, *Athanopsis dentipes*, proved to be different from the only species, *A. platyrhynchus*, of the genus recorded in zoological publications (Coutière, 1897, 1899) and also from the two being described in Mrs. Banner's yet unpublished manuscripts (pers. comm.). The discovery of this new species makes it possible to give additional details for the genus. The latter, *Prionalpheus sulu* Banner and Banner, is of a species of the peculiar genus known by having very large mandibles of asymmetrical development. In the present specimens I also found the maxillulae showing slight asymmetrical development in shape and size.

The holotype of *Athanopsis dentipes* sp. nov. will be sent to the Muséum National d'Histoire Naturelle, Paris, and other materials reported upon are deposited in the collections of our Institute of Biology, Nagasaki University (IBNU).

1) Contributions from the Amakusa Marine Biological Laboratory, No. 264

I am most grateful to Mr. Takanobu Uchida, a former graduate course student of the Faculty of Fisheries of Nagasaki University, for his kindness in allowing me to study the specimen which is designated as the holotype of *Athanopsis dentipes* and to publish his record of its natural coloration. I wish to thank Prof. Taiji Kikuchi of the Amakusa Marine Biological Laboratory of Kyushu University who so kindly placed a small collection of alpheid shrimps, including *Prionalpheus sulu*, from Kuwa-jima I., Amakusa Islands at my disposal. I am most indebted to Mrs. Dora May Banner of the Hawaii Institute of Marine Biology of the University of Hawaii who at my request sent me her drawings of two unpublished species of *Athanopsis* to compare with the new species described here and who kindly reviewed the manuscript. Furthermore, I like to express my sincere thanks to the present and former staff of the Amakusa Marine Biological Laboratory for their cordial reception and invaluable help in my work up to this time and for the opportunity given to me of taking part in the publications of a jubilee number of the founding of the laboratory.

Description

Athanopsis dentipes sp. nov.

(Figs. 1 - 3)

Material examined: One male, holotype, Muséum National d'Histoire Naturelle, found in a shallow burrow of an echiuroid worm, *Thalassema ?mucosa* Ikeda, under a boulder in sandy mud bottom at LWS, in front of the Aquaculture Research Laboratory, Nagasaki Prefectural Institute of Fisheries, Nomo Bay, Nomozaki, Nagasaki Peninsula, April 15, 1972, 15:00-16:00, coll. T. Uchida. One male, paratype, IBNU, found free among night samples taken by a small hand net, under boulders on exposed sandy mud flat at LWS, along the upper growth limit of *Zostera marina* belt, in front of the AMBL, Tomoe Cove, Tomioka, Shimo-shima I., Amakusa Is., November 4, 1971, 02:10-03:20, coll. Y. Miya.

Description: The general body form is slender, not particularly compressed or depressed and shows close agreement with the condition in many species of *Athanas* (Fig. 1).

The carapace is glabrous. The rostrum is, in dorsal view, triangular and 1.0-1.3 times as long as broad at the base, and abruptly tapers on the distal fourth of the length (Fig. 2,A). It reaches forward as far as two-thirds of the second antennular segment and has a distinct dorsal carina running postward to the proximal third of the rostral length. In lateral view, it is blunt apically with the ventral lamella which is not so deep as indicated in *A. platyrhynchus* (Coutière, 1897, p. 302; 1899, p. 69, fig. 18). The orbital hood is not inflated and has a dull-pointed large extracorneal tooth which partially covers the eye dorsally and laterally. The concavity between the rostrum and the extracorneal tooth is deep

and broad. The pterygostomial margin is rounded.

The antennular peduncle is robust and consists of three subequal segments in length; the second segment is 0.8-1.3 times as long as broad. The stylocerite is slender with its dull-pointed apex reaching almost to the end of the second segment. The first segment is also armed with a sharp strong ventral tooth medially.

The basicerite projects as the short lateral and somewhat longer ventral tooth distally. The carpocerite is stout and 2.8 times as long as broad and reaches beyond the end of the antennular peduncle. The scaphocerite is faintly convex laterally and ends in a small distal spine which falls short of the truncated anterior margin of the lamella; it is 1.8 times as long as broad and exceeds the end of the antennular peduncle.

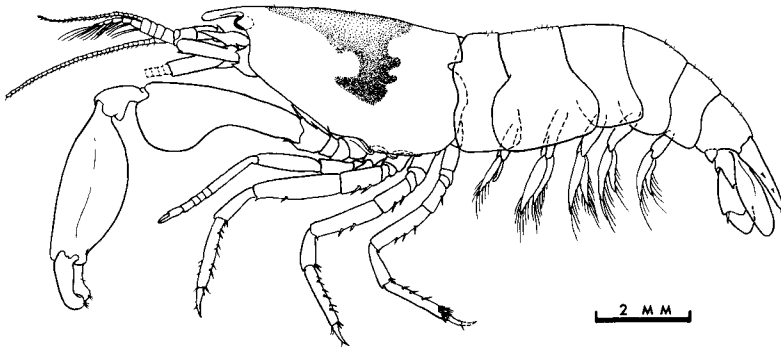


Fig. 1. *Athanopsis dentipes* sp. nov., holotype male, carapace length of 5.4 mm, showing its natural color pattern.

The mouthparts have been removed from the left side of the pairs of the holotype male, and show close resemblance to those of *Athanas* (Fig. 3). The mandible has the strong molar process, the incisor process bearing eight teeth, and two-segmented palp (Fig. 3,A). The maxillular distal endite is provided with a comb formed by a row of blunt serrated spinules and a row of plumose hairs; the palp is bifurcated at the end, the distal lobe with two long plumose hairs terminally and the proximal with a long plumose hair (Fig. 3,B). The maxilla is composed from the thumb-like proximal endite bearing a simple hair apically, the slightly bilobed distal endite with short plumose hairs along the truncated medial margin, the slender and naked palp, and somewhat broad ear-shaped scaphognathite (Fig. 3,C). The distal endite of the first maxilliped is broad and oblong with a fringe of plumose hairs and a row of plumose hairs on its outer surface; the two-segmented palp is elongated and furnished with a long plumose hair at the apex of the small distal segment and many long or short plumose hairs medially on the proximal segment; the caridean lobe of the exopod is considerably broadened with

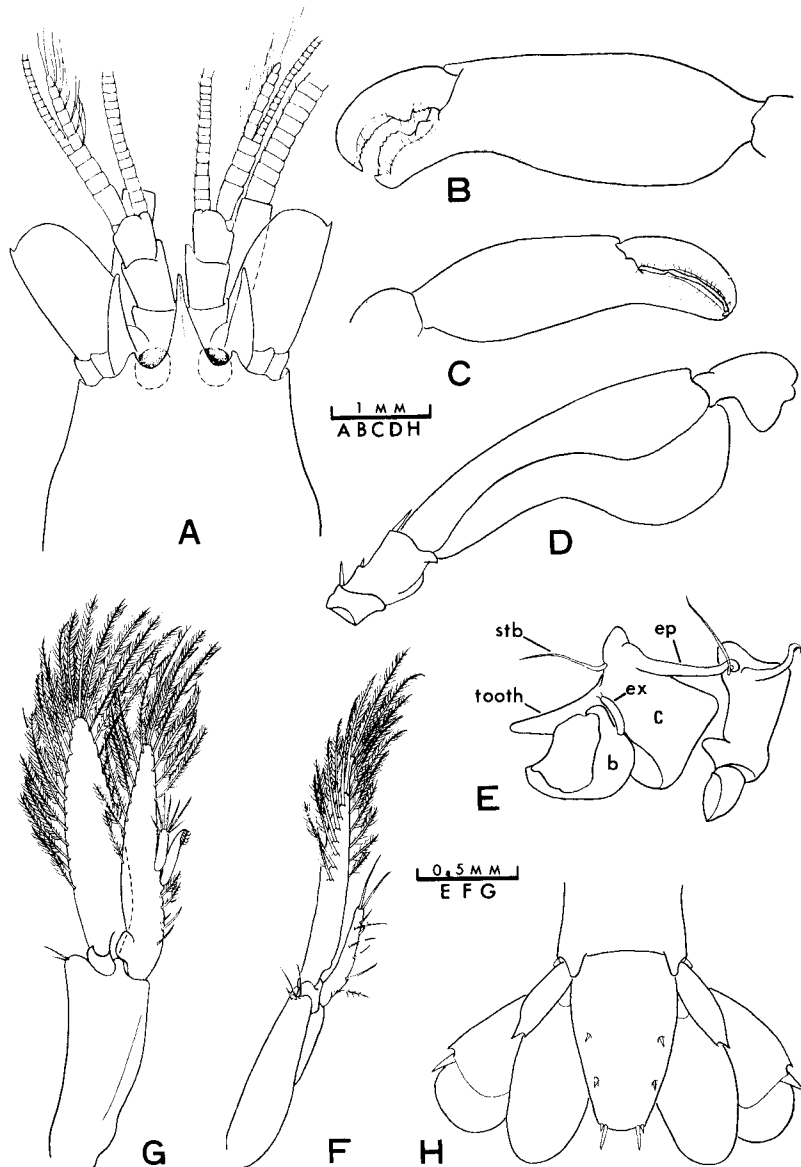


Fig. 2. *Athanopsis dentipes* sp. nov., holotype male. A, Frontal part of body in dorsal view; B, outer surface of large chela; C, outer surface of small chela; D, large cheliped, from ischium to carpus, in inner view; E, coxa and basis of left first and

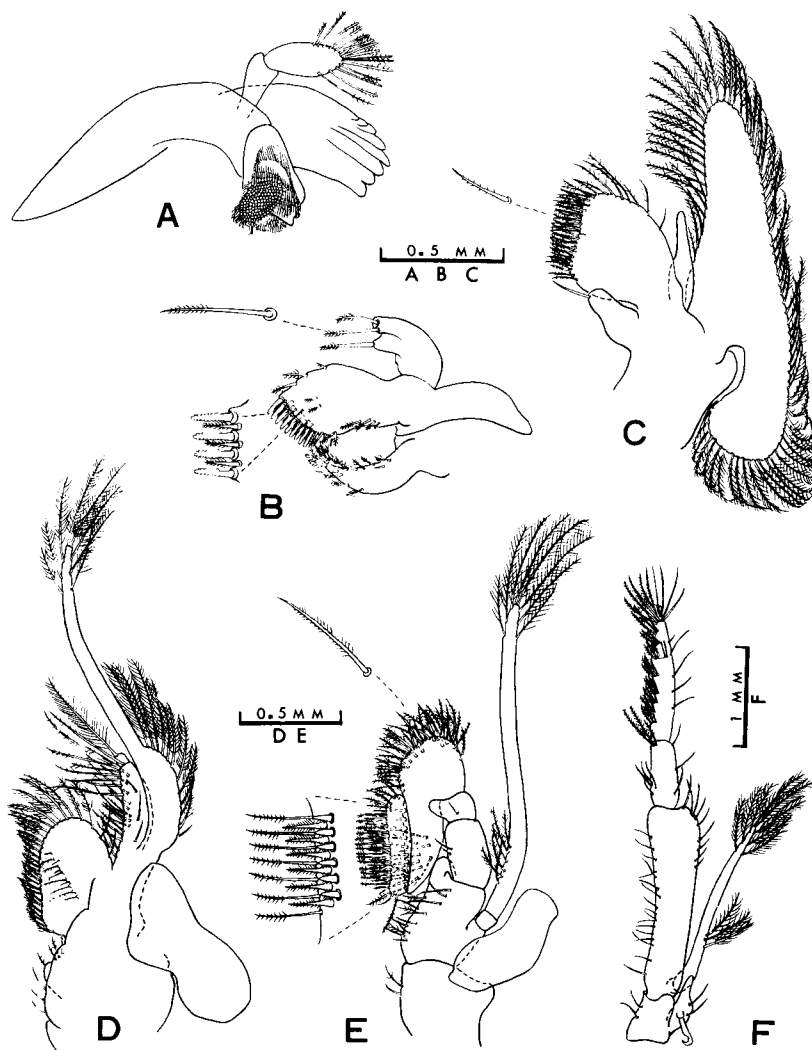


Fig. 3. Mouthparts of *Athanopsis dentipes* sp. nov., holotype male. A, Inner surface of left mandible; B, outer surface of left maxillula; C, outer surface of left maxilla; D, outer surface of left first maxilliped; E, outer surface of left second maxilliped; F, outer surface of left third maxilliped.

(Explanation of Fig. 2, continued from the previous page):--- second pereopods in outer view; b, basis; c, coxa; ep, epipod; ex, rudimentary exopod; stb, setobranch; tooth, coxal tooth; F, right first pleopod in inner view; G, right second pleopod in inner view; H, tail fan in dorsal view.

a fringe of long plumose hairs (Fig. 3,D). The second maxilliped has five-segmented endopod, of which the first (ischium) is not separated from the basis and its medial margin projects as a rounded projection distally; the fifth segment (dactylus) is narrow and oblong, with a row of long plumose hairs, a row of medium plumose hairs and a row of short and strong spinules along the medial margin (Fig. 3,E). The third maxilliped is rather short and extends beyond the caropocerite by the distal half of the ultimate segment; the antepenultimate segment slightly broadens toward the end and almost truncated at the dorsodistal corner (Fig. 3,F).

The first pair of pereopods is well developed, almost symmetrical in shape and size, and folded beneath the body. The large chela is 3.0-3.5 times as long as high and 0.8 times the length of carapace (Fig. 2,B). Both fingers are curved inward and crossing at their tips; the movable finger is 0.4 times as long as the palm and its cutting edge is armed with minute serrations and a large subtriangular tooth fitting to a broad concavity between the proximal blunt tooth and the distal serrated cutting edge of the immovable finger. The palm is smooth, 2.3-2.8 times as long as high, and subcylindrical with the weakly convex inner face and the strongly swollen outer face. The carpus is short and cup-shaped. The merus is as long as the palm, 2.4-3.5 times as long as high at the highest part ^{S/} of the semicircular outer lamellar projection, and deeply excavated medioventrally, forming an excavation where the outer face of the chela fits when it is flexed (Fig. 2,D). The ischium is one-third the length of merus and armed with three spines along the dorsal margin. The coxa projects as a strong tooth at the anterior medial corner (Fig. 2,E).

The small chela is 3.0-3.4 times as long as high and 0.6 times the length of carapace; both fingers are not so much strongly curved as in the large chela, and have almost entire cutting edges (Fig. 2,C). The palm is 2.1-2.3 times as long as high and subcylindrical. The merus is 1.3 times as long as the palm, and 2.5-3.3 times as long as high at the highest part of the semicircular projection which is less developed than in the larger merus.

The second pereopod reaches forward as far as the apex of the third maxilliped; the carpus comprises five articles with a ratio, 10 : 1-2 : 1-2 : 1-2 : 3.

The third pereopod has the slender simple dactylus; the propodus bears eight weak spines along the ventral margin; the carpus has a pair of weak spines at the distal end of the ventral margin; the merus is 3.4-3.5 times as long as broad and armed with a small distal tooth and a movable spine on the ventral margin; and the ischium bears two spines on its ventral margin. The fourth and fifth pereopods are similar to the third with the exception that the merus of the fourth pereopod bears two spines on its ventral margin and that of the fifth three spines. In the fifth pereopod the propodus bears three weak spines and distally three rows of bristles on its ventral margin; the ischium bears a single ventral

spine.

The branchial formula consists of the following gills:

	Maxillipeds			Pereiopods				
	I	II	III	I	II	III	IV	V
Pleurobranchs	-	-	-	1	1	1	1	1
Arthrobranchs	-	-	-	-	-	-	-	-
Podobranchs	-	-	-	-	-	-	-	-
Epipods	1	1	1*	1*	1*	1*	-	-
Setobranchs	-	-	-	1	1	1	1	-
Exopods	1	1	1	r	-	-	-	-

1* : hook-like epipod; r: rudiment.

The abdomen is smooth and sparsely pubescent dorsally. The sixth abdominal somite has a movable plate at the posteroventral corner of the pleuron. The first pleopod has the short endopod bearing simple hairs sparsely (Fig. 2,F). The second pleopod is provided with the appendix masculina which bears a tuft of simple hairs apically and which is two-thirds the length of the rather stout appendix interna (Fig. 2,G). The uropod has the elongated scale-like protopod; the lateral margin of the exopod ends in a small distal tooth, associated with a strong movable spine more medially.

The telson is 3.4-4.1 times as long as broad at the posterior margin; the lateral margins are slightly convex (Fig. 2,H). The dorsal surface is smooth and rounded, with two pairs of spines, the anterior pair is situated at the midlength and the posterior pair at the distal fourth of the length. The posterior margin is slightly rounded and bears two pairs of spines, the inner of which is longer than half the breadth of the posterior margin.

Measurements of types: Measurements of body and some appendages of the type specimens are as follows:

	Holotype male	Paratype male
Total length	14.1 mm	9.2 mm
Carapace length	5.4 mm	3.4 mm
Telson length	1.7 mm	1.2 mm
Large cheliped,		
Chela length	4.2 mm	2.7 mm
Merus length	3.4 mm	2.1 mm
Small cheliped,		
Chela length	3.4 mm	2.0 mm
Merus length	3.0 mm	1.9 mm
Third pereiopod,		
Dactylus length	0.6 mm	0.4 mm
Propodus length	1.6 mm	1.0 mm
Merus length	1.8 mm	1.1 mm

Color in life: The natural color was recorded from respective specimens, which were kept alive for a short time, by Mr. Uchida and me. The shrimp is entirely colorless transparent, adorned only with a large carmine red hastatus mark on the carapace middorsally (Fig. 1). It extends forward to near the basis of eyes middorsally and extends ventrolaterally in an irregular pattern to near the branchial region on both sides of the carapace.

The coloration of this species is clearly different from that of *A. platyrhynchus* recorded by Coutière himself at Djibouti (1897, p. 303; 1899, p. 496). *A. platyrhynchus* is furnished with some orange red transverse bands on the colorless thorax and abdomen and the same color irregular blots on the chelae of the first pereopods. This color note of *A. platyrhynchus* seems to be allied to those of *Athanas dimorphus* Ortmann (Coutière, 1899, p. 496; Miya's unpublished data) and *Athanas marshallensis* Chace (Miya and Miyake, 1968, p. 149).

Habitat: The present specimens were collected under boulders on exposed sandy mud flats at LWS. One of them (holotype) was found in a shallow burrow of an echiuroid worm, *Thalassema ?mucosa* Ikeda, under a boulder.

At the same sandy mud flat of Tomoe Cove *Athanas japonicus* Kubo is common, but *Athanas marshallensis* Chace and *Salmoneus gracilipes* Miya are rare inhabitants, living under boulders and other shelters slightly buried in sandy mud bottom in lower mediolittoral zone (Miya and Miyake, 1968, p. 145; Miya, 1972, p. 40).

On the other hand, only known species, *Athanopsis platyrhynchus*, was found under stones slightly buried in sands near the low water mark at the Bay of Tadjourah, Djibouti, where *Athanas djiboutensis* Coutière, *A. dimorphus* Ortmann, and *Alpheopsis equalis* Coutière were also collected together by Coutière (1899, p. 496).

Relationship: The genus *Athanopsis* has contained a single species, *A. platyrhynchus* Coutière, 1897 known only from the two type specimens from Djibouti. However, I was recently informed by Mrs. Banner of the descriptions of two others in her manuscripts, one of them from Australia which was in press in the Records of the Australian Museum and another from the Red Sea. I received the drawings of these two Banner's unpublished species which she kindly sent me upon my request. I carefully compared the present material with them, and made sure that *A. dentipes* could be clearly distinguished from them as well as *A. platyrhynchus*.

A. dentipes may be immediately distinguished from *A. platyrhynchus* by the coloration of the species in life: A large carmine red hastatus mark present on transparent thorax in contrast with some orange red transverse bands on the colorless thorax and abdomen of *A. platyrhynchus*. The first pair of pereopods probably affords the most useful means distinguishing the two species when the color pattern has disappeared. Those appendages in the male of *A. dentipes* are of nearly symmetrical development, with the peculiar semicircular lamelliform merus.

In *A. platyrhynchus*, the male first pereopods indicated by Coutière (1897, p.302; 1899, p. 176, figs. 210, 211) are of clearly asymmetrical development in shape and size and completely similar to those of the female of *Athanas djiboutensis* (Coutière, 1899, p. 177, figs. 207, 208; Miya and Miyake, 1968, p. 132, fig. 1,C; Banner and Banner, 1973, p. 307, fig. 3,c,d). Other characteristics which may be useful to some extent in separating *A. dentipes* and *A. platyrhynchus* are provided by 1) the rostrum with vertical lamella ventrally, which is one of the generic characters mentioned by Coutière, and which of *A. dentipes* is shallower than in *A. platyrhynchus* (Coutière, 1899, p. 69, fig. 18); 2) the rostrum, 3) stylocerite, and 4) scaphocerite which are more elongated than those of *A. platyrhynchus* (Coutière, 1899, p. 141, fig. 135).

On the other hand, *A. dentipes* can be readily distinguished from Banner's unpublished "*Athanopsis* sp. from Australia" and also "*Athanopsis* sp. from the Red Sea" by the following characters: 1) In *A. dentipes*, the meri of the third, fourth and fifth pereopods bear a small tooth at the distal corner of ventral margin, from which the species name comes, as well as bearing one, two and three movable spines, respectively, along that margin. While, in "*Athanopsis* sp. from Australia," the merus of those pereopods is armed only with movable spines along the ventral margin, and "*Athanopsis* sp. from the Red Sea" has neither ventrodiscal tooth nor ventral spines. 2) In *A. dentipes* and "*A. sp. from the Red Sea*," the telson bears two pairs of dorsal spines, which are absent in "*A. sp. from Australia*." 3) "*A. sp. from the Red Sea*" is provided with the shorter rostrum and the longer ventral tooth on the basicerite than either *A. dentipes* or "*A. sp. from Australia*."

Prionalpheus sulu Banner and Banner, 1971

(Figs. 4 - 6).

Prionalpheus sulu Banner and Banner, 1971, pp. 264 (key), 268, fig. 2.

Material examined: One male and one ovigerous female, IBNU, obtained from a colony of *Acropora* sp. collected in 5-10 m deep, Kuwa-jima I., Ushibuka, Amakusa Is., September 24, 1975, coll. T. Kikuchi.

Description: The present specimens are a male and an ovigerous female, measuring 12.0-14.7 mm long (carapace length of 4.3-5.2 mm), and agree closely with the information provided by Banner and Banner (1971). The carapace and abdomen are stoutly built, smooth and polished, with the antennae, third maxillipeds and first pereopods densely covered with coarse hairs (Fig. 4,A).

The rostrum is, in lateral view, sharply pointed with a shallow ventral keel and has a tuft of hairs apically. In dorsal view, it is an equilateral triangle, with the apex reaching to the middle of the first antennular segment, and at the base merges with the gentle curve of the anterior margin of orbital hoods. The rostral ridge is absent. The orbital hoods are not inflated and completely cover

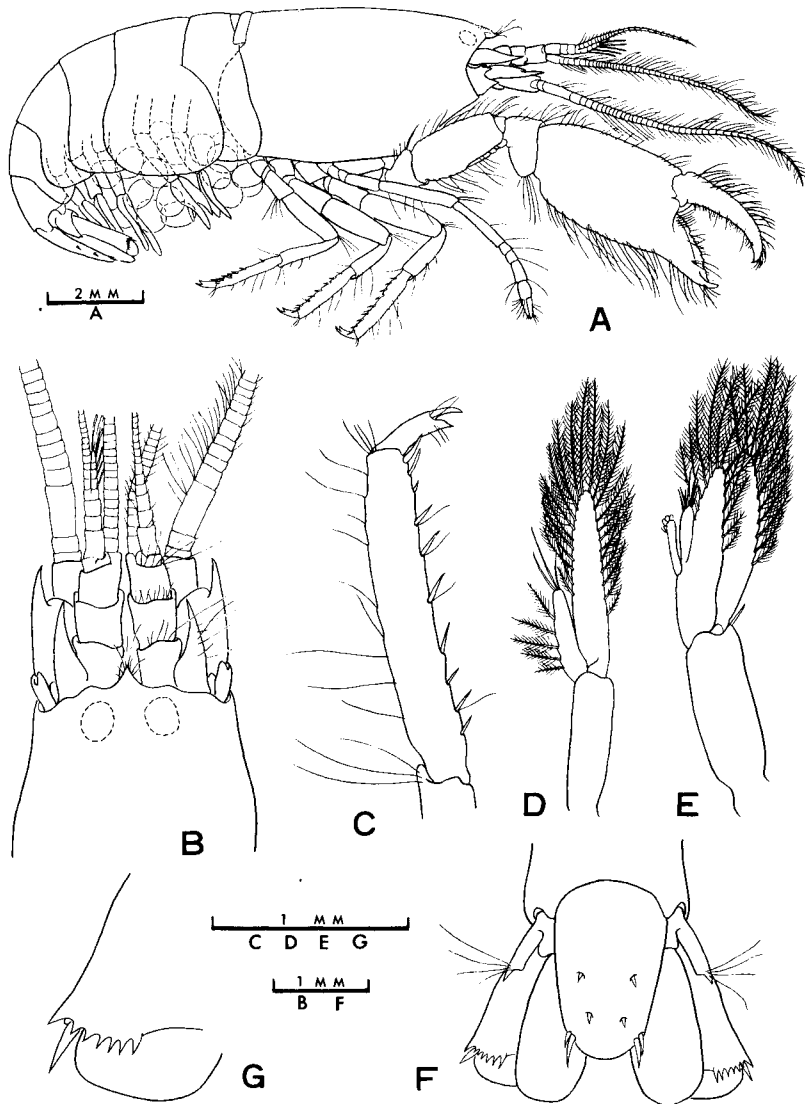


Fig. 4. *Prionalpheus sulu* Banner and Banner, 1971. A, An ovigerous female, carapace length of 5.2 mm; B, frontal part of body in dorsal view; C, dactylus and propodus of right third pereopod; D, left first pleopod of a male, carapace length of 4.3 mm, in inner view; E, left second pleopod of same male in inner view; F, tail fan in dorsal view; G, a part of left uropodal exopod in dorsal view. (B, C, F and G, from ovigerous female in A).

the eyes dorsally and laterally. The pterygostomial margin is angular.

The antennae are robust and hairy. The antennular peduncle consists of three subequal segments; the second one is somewhat broader than long. The stylocerite is slender and reaches to the end of the second segment by the sharp apex. The first segment bears also a large ventral tooth medially (Fig. 5, vt). A pair of strong sharp teeth is present on the sclerite at the base of the antennular peduncles (Fig. 5, t.sc).

The basicerite of the antenna projects as a sharp ventral tooth. The carpocerite is stout, twice as long as broad, and reaches about to the end of the antennular peduncle. The scaphocerite is feebly convex laterally, with the sharp and strong tooth reaching almost to the end of the carpocerite; the lamella is 1.2-1.5 times as long as broad and somewhat reaches over the end of the second antennular segment.

The mandibles are well developed in comparison with other mouthparts with characteristically enlarged and asymmetrical incisor processes (Fig. 5, md; Fig. 6,A,B). Both molar process and palp are absent. There is a blunt projection on the inner side of the basal part of incisor process, where we can generally find a molar process, if it were present; this projection of the left mandible is distinctly larger than that of the right mandible (p in Fig. 6,A,B). The rectangular incisor process of the left mandible is represented by five elongated teeth;

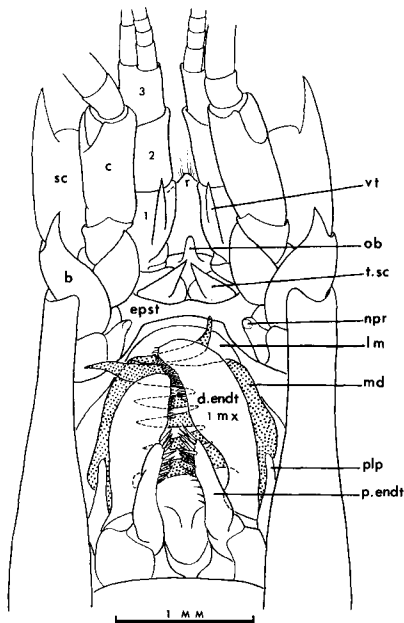


Fig. 5. Frontal part of body of *Prionalpheus sulu* in ventral view, ovigerous female in Fig. 4, A.

Explanation of lettering: r, rostrum; ob, ocular beak; t.sc, tooth on sclerite at the base of antennules; epst, epistome; lm, labrum; 1, 2, 3 and vt, antennular first, second, third segment and ventral tooth of first segment; b, c, sc and npr, basicerite, carpocerite, scaphocerite and nephropore (opening of antennal gland); md, incisor process of left and right mandibles (dotted), partly covered by maxillular distal endites; d.endt lmx, p.endt and plp, maxillular distal endite, proximal endite and palp.

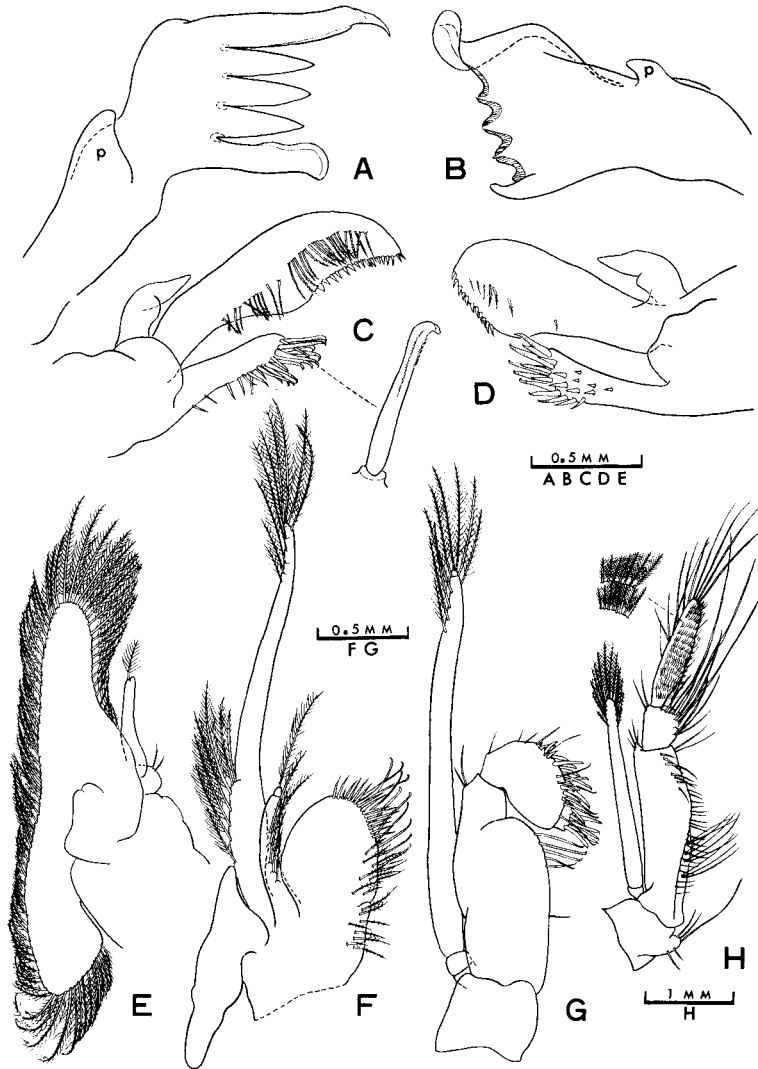


Fig. 6. Mouthparts of *Prionalpheus sulu*, ovigerous female in Fig. 4, A. A, Inner surface of left mandible; p, projection; B, inner surface of right mandible; p, projection; C, inner surface of left maxillula, with an enlarged hook-like bristle on proximal endite; D, inner surface of right maxillula; E, inner surface of left maxilla; F, inner surface of left first maxilliped; G, inner surface of left second maxilliped; H, inner surface of left third maxilliped.

the anteriormost tooth is about twice as long as the next three, curves outward and ends in a sharp apex; the posteriormost tooth is slightly longer than the adjacent tooth and ends in a rounded apex with a blade along the anterior margin. The subtriangular incisor process of the right mandible is quite different from the left; the anteriormost tooth turns outward along the axis to form a fold, in which the anteriormost tooth of the left mandible is situated, and abruptly turns inward distally at the blunt apex; four medial teeth are short and subtriangular, the anterior three ending in a minute pointed apex; the posterior tooth is elongated and blunt at the apex.

The maxillulae are also asymmetrically developed with elongated pyriform distal endites (Fig. 5, d.endt lmx; Fig. 6,C,D). That of the left maxillula has the sinuous medial margin fringed with 17 spinules distally, and bears a row of plumose hairs along the axis on the inner surface. The distal endite of the right maxillula is almost naked on the inner surface and about 0.8 times as long as the left, with the round medial margin bearing 11 spinules distally. The proximal endite is armed with about two dozens of hook-like bristles bearing a row of spinules and a row of granules along the axis. The palp carries two naked lobes.

The maxilla is composed from the elongated ear-shaped scaphognathite, the slender horn-shaped palp with a short plumose hair subterminally, and the small oval distal endite with two simple hairs, and the naked and faintly trilobed proximal endite (Fig. 6,E).

In the first maxilliped, the large oval distal endite is furnished with more than a dozen of short spinules and a dozen of long hook-like hairs along the distomedial margin and some plumose hairs on the inner surface proximally (Fig. 6,F). The proximal endite is separated from the distal by a slight notch, with some plumose hairs medially. The two-segmented palp is very slender; the distal segment is quite small with a long plumose hair apically, and the proximal segment has five plumose hairs arising from the inner surface. The exopod is provided with the narrow caridean lobe with seven plumose hairs. The epipod is elongated.

The second maxilliped has the characteristically developed endopod; the ultimate segment is very short and rectangular, bearing seven rather strong hooked spinules; the penultimate segment is semicircular, with more than a dozen of the same hooked spinules along the distomedial margin; the antepenultimate segment is not clearly separated from the proximal, which is moderately expanded, rectangular, and about twice as long as broad (Fig. 6,G).

The third maxilliped is stout and densely covered with long or short hairs and extends beyond the antennular peduncle by the distal half of the ultimate segment; the antepenultimate segment is rather broad, and projects triangularly at the distal corner of the dorsal margin (Fig. 6,H). The protopod has a rounded projection with some hairs ventrally.

The male specimen lacks the first pair of pereopod. On the female only the right first pereopod is present. It is polished and smooth, densely fringed with long hairs along the dorsal and ventral margins of all the segments. The chela is equal to the length of the carapace and strongly compressed; the cutting edges of both fingers are minutely serrated and hairy. The palm is 1.5 times as long as high and 1.2 times as long as the movable finger. The merus is twice as long as high, without any spines or teeth. The dorsodistal margin of the ischium has a strong projecting hair.

The second pereopod reaches forward as far as the apex of the third maxilliped; the carpus consists of four articles having a ratio of 10 : 1-2 : 2 : 3-4.

The next three pereopods are rather short, robust and hairy. The dactylus of the third pereopod is slender and biunguiculate; the dorsal unguis is twice as long as the ventral one and narrower at the base (Fig. 4,C). The propodus bears 11 spines of which the distal two grow in a pair. The carpus and merus are unarmed, the latter is 2.8-3.0 times as long as broad. The ischium has or has not a ventral spine.

The branchial formula is as follows:

	Maxillipeds			Pereopods				
	I	II	III	I	II	III	IV	V
Pleurobranchs	-	-	-	1	1	1	1	1
Arthrobranchs	-	-	-	-	-	-	-	-
Podobbranchs	-	-	-	-	-	-	-	-
Epipods	1	1	-	-	-	-	-	-
Setobbranchs	-	-	-	-	-	-	-	-
Exopods	1	1	1	-	-	-	-	-

The male first and second pleopods show no special features (Fig. 4,D,E).

The sixth abdominal somite has a triangular movable plate at the posteroventral corner of the pleuron. The uropodal exopod is armed with a strong distolateral movable spine and seven teeth along the diaeresis, the outermost tooth is the largest one, the second is the smallest and the next five increase in size medially (Fig. 4,F,G).

The telson is 2.5 times as long as broad at the posterior margin which is rounded; the lateral margins are nearly straight. The dorsal surface is gently rounded and smooth, bearing two pairs of spines; the anterior pair is inserted at the midlength, and the posterior pair is about midway between the anterior pair and the posterior margin.

Color in life: No color notes have been taken.

Habitat: All the known specimens have been found from living or dead coral heads in shallow waters. More data unknown.

Remarks: The present material corresponds very well with Banner and Banner's

(1971) description and figures, except in the following points: 1) In Japanese specimens, the rostrum is poorly demarked from orbital hoods, and proportionately shorter and broader at the base than that of the type specimens from the Philippines. 2) The pterygostomial margin is triangular, but not as much projected forward as in the type specimens. It approaches the condition found in *P. brachytomeus* (Banner and Banner, 1960, p. 297, fig. 2, as *Prionalpheus* sp.). 3) In the maxillulae the pyriform distal endites are somewhat asymmetrical, the left one of them is more elongated, with more numerous spinules and hairs, than the right. While, in the types, "maxillules of symmetrical development," with the elongated "middle lobe" (= distal endite) were noted by Banner and Banner (1971, p. 268, fig. 2,k). And 4) in the present specimens, seven teeth are present along the diaeresis of the uropodal exopod instead of six as in the type specimens.

Distribution: This species has been previously reported from Zamboanga, Mindanao and Jolo Island in the southern Philippines (type localities) and collected from dead coral from 6-12 feet deep.

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