

**A new Cumacean Crustacea *Hemilamprops*
bigibba sp. nov. from Sagami Bay***

By

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With 3 Text-figures

The present paper deals with a new species of cumacean Crustacea, *Hemilamprops bigibba* sp. nov. (Family Lampropidae) which was found in a crustacean collection of the ecological survey of the deep-sea smaller macrobenthos obtained from the Sagami Bank and its adjacent area in Sagami Bay. The survey was carried out by Prof. Masuoki HORIKOSHI on board the *R. V. Tansei-Maru* of the Ocean Research Institute, University of Tokyo, from October 30th to November 1st in 1966 (KT-66-23) (HORIKOSHI, 1970).

My hearty thanks are due to Prof. M. HORIKOSHI of the Ocean Research Institute for giving me the specimen at my disposal for the study.

Hemilamprops bigibba sp. nov. (Figs. 1-3)

Description: The holotype is a female, length about 5.1 mm (exclusive of the telson). The carapace is one-third of the total body length, one-and-one-third times as long as wide and much less than twice as long as deep. The integument is rather thin, pellucid and without spinules or tubercles. As seen from above the carapace is almost ovoid in shape. A short dorso-median carina runs from just behind the ocular lobe backwards to about the middle of the carapace. Posterior to the frontal lobe there is a shallow longitudinal dorso-median gutter which is flanked by a short submedian carina on each side; the short submedian carinae extend from behind the frontal area to near the dorsal hind margin of the carapace. On each dorso-lateral portion there is an oblique dorso-lateral carina, which originates at the side of the pseudo-rostrum, somewhat encircles the frontal area and then approaches the dorsal margin of the carapace. The lateral border of the carapace is well defined by a strong carina which almost encircles the carapace. The pseudorostral lobes are short, meet in front of the ocular lobe for a distance about as long as the ocular lobe, and about one-tenth of the carapace length. The ocular lobe is almost ovoid in shape and bears discernible eyes.

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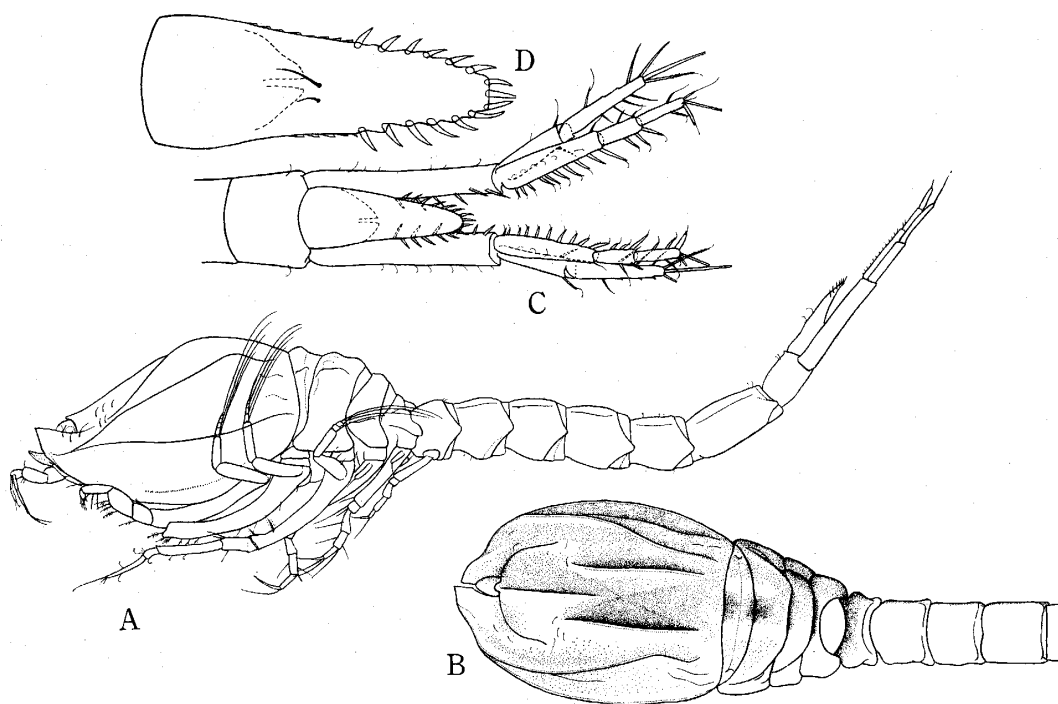


Fig. 1. *Hemilamprops bigibba* sp. nov., female (holotype), body length about 5.1 mm (exclusive of telson).

A: lateral view. B: anterior portion of body, dorsal. C: fifth and sixth abdominal segments with uropods and telson, dorsal. D: telson, dorsal.

The combined length of all the free thoracic segments is slightly less than two-thirds of the carapace length. The first free thoracic segment is exposed dorsally. The sides of the second to fourth segments are rather prominent. The fifth segment is very alike the abdominal segment in appearance as seen from the side. The second segment is the longest. The dorsal submedian carina is well marked on the first and second segments.

The abdomen is about as long as the cephalothorax; the abdominal segments are fairly short; the fifth segment is one-and-a-half times as long as the fourth, and about half as long as the sixth.

The telson (Fig. 1, C and D) is nearly twice as long as the last abdominal segment and a little shorter than the peduncle of the uropod; it is widened at the base; its sides are serrate near the base and provided with 6 pairs of robust lateral spines on their distal halves; on the apex there are 3 end spines.

The antennule (Fig. 2, A) bears three peduncular segments; its first segment is the longest, more than as long as the distal two segments combined; its third segment is the shortest and about two-thirds as long as the second. The main flagellum is three-segmented; the first segment is the longest, more than the length of the distal two segments combined; the third segment is very small, less than half as long as the second; the third segment bears subequal aesthetascs and small setae. The accessory flagellum bears subequal two proximal segments only and distal part is missing.

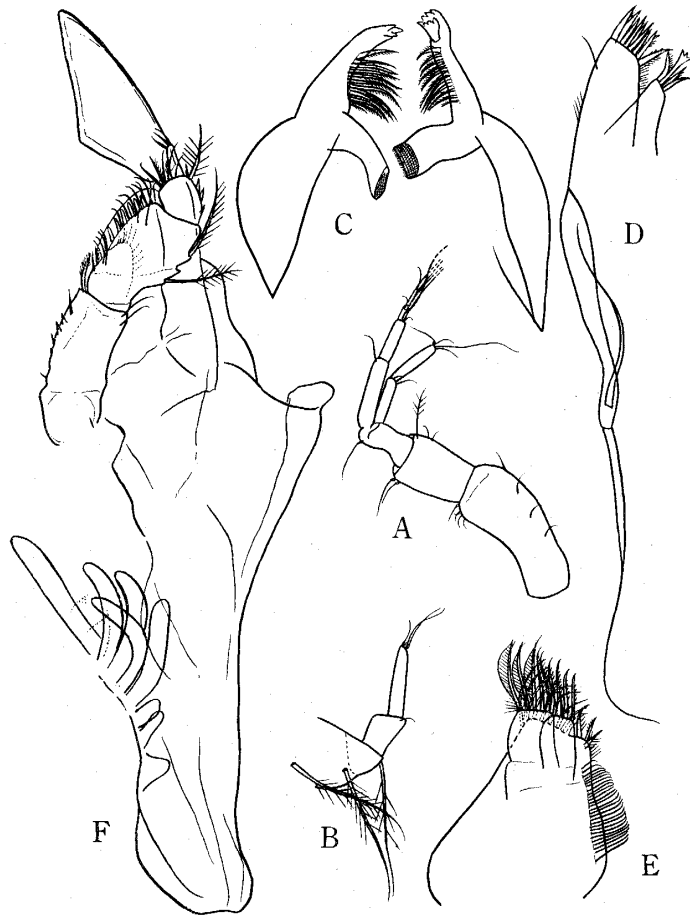


Fig. 2. *Hemilamprops bigibba* sp. nov., female (holotype).
A: antennule. B: antenna. C: mandibles. D: maxillule.
E: axilla. F: first maxilliped.

The antenna has four segments; the distal segment is long and slender.

The mandibles are boat-shaped and provided with 12 or 11 setae and a lacinia mobilis.

The maxillule and maxilla are as shown in Fig. 2, D and E.

The first maxilliped has about 8 or 9 lobules on the branchial apparatus.

The second maxilliped (Fig. 3, A) has the short and indistinctive ischium.

The basis of the third maxilliped is a little longer than the remaining distal segments together and slightly narrowed towards the distal end; the distal portion is much wider than the ischium, not at all produced outwards and bears two long and a short plumose setae. The ischium is very short. The merus and carpus are a little expanded laterally. The carpus is one-and-a-half times as long as the merus. The propodus is about three-fourths as long as the carpus. The dactylus is nearly half as long as the propodus and has a long curved distal spine, which is much more than the length of the dactylus.

The first two pairs of pereopods bear well developed exopods, while the third and fourth pairs have rudimentary two-segmented exopods. The second

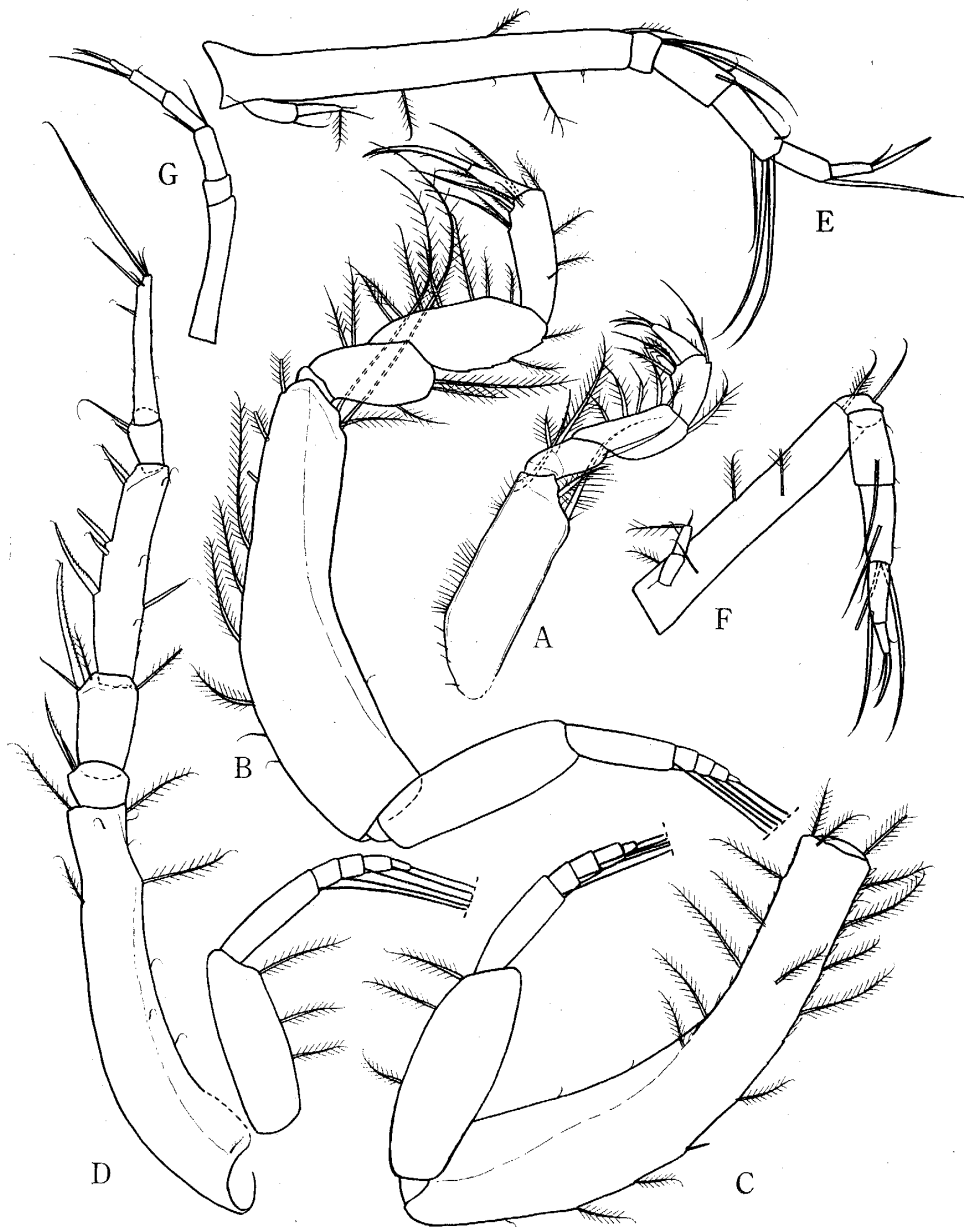


Fig. 3. *Hemilamprops bigibba* sp. nov., female (holotype).

A-B: second and third maxillipeds. C: first pereopod with basis and exopod (distal segments are missing). D-G: second (D) to fifth (G) pereopods.

peraeopod is slightly more than one-and-one-third as long as the third, which is about one-and-one-third as long as the fourth. The fifth peraeopod is the shortest, a little less than two-thirds of the length of the fourth.

The basis of the first peraeopod is almost cylindrical and a little less than one-and-a-half as long as the basis of the second peraeopod; its distal segments are missing.

The basis of the second peraeopod is slender, about four-fifths as long as the remaining distal segments together. The ischium is short and provided

with a strong spine on the inner distal angle. The merus has a spine on the inner distal angle. The carpus is about twice as long as the merus and a little longer than the propodus and dactylus combined; its inner border there are 5 lateral spines. The dactylus is two-thirds as long as the carpus and provided with 3 spines, distal one of which is the longest, nearly as long as the propodus and dactylus combined.

The basis of the third peraeopod is long and cylindrical in shape, about one-and-a-half as long as the remaining distal segments together. The merus and carpus are subequal in length. The dactylus is about two-thirds as long as the propodus, which is slightly more than two-thirds as long as the carpus. There are 3 long distal setae on the carpus and a such seta on the propodus. The dactylus has a long spine and a short seta on the distal end.

The peduncle of the uropod (Fig. 1, C) is a little more than twice as long as the last abdominal segment and provided with 6 spines on the distal inner border. The endopod is about as long as the peduncle and longer than the exopod; its first segment is a little more than the combined length of the second and third segments; the third segment is a little longer than the second; the inner border of the first, second and third segments bear 10 lateral, 3 lateral, 3 lateral and 2 end spines respectively. The second segment of the exopod is a little longer than the first; the second segment has 4 spines on the inner and outer borders respectively and 3 end spines.

Material: 1 ♀ holotype; St. 16 (35°10'09"N, 139°20'54"E), depth 704 m, silt-sandy bottom, collected by Prof. M. HORIKOSHI (31, Oct. 1966 KT-66-23). The type specimen will be deposited in the Ocean Research Institute, University of Tokyo.

Remarks: The general appearance of the new species is very similar to some species of *Lamprops* and *Paralamprops*. The new species is represented by female sex only, but it is distinguishable from *Lamprops* species by having the carapace without a distinct antennal notch: from *Paralamprops* it is easily distinguished by that the basal segment of the uropod exopod is not extremely short.

H. bigibba is also closely allied to *H. gracilis* HART (1930), *H. mawsoni* HALE (1937), *H. lata* HALE (1946) and *H. miyakei* GAMÔ (1967). From the above mentioned species the new species is aberrant in that the carapace is provided with different sculpture and ornamentation of carinae, and the segment of the thoracic and uropodal appendages with different relative length.

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