

A New Genus and a New Species of the Parthenopidae  
from the Sea off the Ogasawara Islands  
(Crustacea, Brachyura)

By

Masatsune TAKEDA

(Biological Laboratory, Nihon University School of Medicine, Tokyo)

(Communicated by Yoshinori IMAIZUMI)

Through the courtesy of Dr. M. IMAJIMA of the National Science Museum, Tokyo, four specimens of crabs from the sea off the Ogasawara Islands collected by the coral fishing net at the depths of 180 meters are at the author's disposal for study. They are referred to four species of three families, one of which is a representative of a new genus and a new species of the Parthenopidae described in the present paper. The known species are *Oncinopus angustifrons* TAKEDA et MIYAKE (Majidae - 1 ovig. ♀ from off Yome-shima), *Xenocarcinus tuberculatus* WHITE (Majidae - 1 ovig. ♀ from off Yome-shima) and *Planes cyaneus* DANA (Grapsidae - 1 young ♀ from off Chichi-jima). The first was described on the specimens from the East China Sea and off Muko-shima in the Ogasawara Islands by the original authors in 1969, the second figured in detail by GORDON (1934) ranges from Sagami Bay through Hongkong southwards to Cumberland Group in the east coast of Australia, and the last is well known as an Indo-Pacific ocean drifting crab distinguished from its Atlantic analogue by CHACE (1951) and subsequently figured by EDMONDSON (1959), SAKAI (1965) and CROSNIER (1965).

All the specimens examined are preserved in the National Science Museum, Tokyo. The author is greatly indebted to Dr. M. IMAJIMA for giving him the opportunity to examine the interesting material. Cordial thanks are extended to Mr. Sugio KIHARA of the crew of the Second Yūki-maru who generously gave the material, and to Mr. Y. KOYAMA of the Gakken Co. Ltd. for the photograph.

**Glyptocarcinus** gen. nov.

*Diagnosis.* Carapace xanthoid with fine network formed by minute pits of various size. Dorsum rather well divided into regions by furrows and depressions. Front prominent with margin turned down. Median incision slit-like. Supraorbital border with two closed fissures near external orbital angle. Orbit deep, but imperfect due to two deep interruptions on infraorbital border and to small basal segment of

antenna. Buccal cavern widened anteriorly. Subhepatic and pterygostomial regions and third maxillipeds with thick club-shaped hairs. Anterolateral border of carapace strongly crested as a thin lobe with three teeth. Chelipeds equal. Fingers wide with blade-like cutting edges and pointed tips. Ambulatory legs not rounded.

Type-species. *Glyptocarcinus lophopus* sp. nov.

### ***Glyptocarcinus lophopus* sp. nov.**

(Fig. 1)

*Description.* The carapace is xanthoid with very uneven surface; the dorsum is finely reticulated with numerous minute, deep pits which are observable by the unaided eye, being fairly well divided into regions by some depressions; in the close observation the reticulation is beaded with pearly granules; the protogastric region is convex and subcircular in its outline, bearing a small epigastric region which is continuous with, but apparently placed at lower level than, the protogastric region; the mesogastric region is distinctly separated from the protogastric regions by the narrow shallow furrows; it is convex from side to side, but its posterior part is sunken together with a pair of the very deep, longitudinally ovate depressions behind the protogastric regions; those depressions are smooth without reticulation; behind the mesogastric region is a large, transverse region which may represent the cardiac region; its posterior border is rather angulated in the middle; further behind it a pair of the transverse regions is demarcated by a deep transverse furrow and a narrow longitudinal one; each of the regions is carinated along the posterior border and deeply concave just inside the angulated inner angle of the posterior border; the anterolateral region is not demarcated, being indicated by a wide shallow depression just outside the protogastric region; behind this depression is a transverse, more or less ridge-like region running from the last two anterolateral teeth to the posterior outer angle of the protogastric region.

The front is prominent with almost truncated margin in the dorsal view; there is a median deep, slit-like incision; in the front view the free margin of each lobe is turned down and sinuated in the middle; in the dorsal view each lateral angle is not angulated, its ventral prolongation being small; the supraorbital border rapidly retreats with two closed fissures near the external orbital angle. The eyestalk bears a tuft of club-shaped hairs and two or three high tubercles with rounded tips. The external orbital angle is conical but not at all prominent in the dorsal view due to the downwards curvature.

The anterolateral border of the carapace is overhanging as a thin plate with three sharp teeth, its lower surface being rather shallowly excavated; the border behind the external orbital angle is considerably concave, and the first tooth is placed at some

distance behind the external orbital angle; the first and second teeth are conical, the latter being larger; the third is sharp, and its posterior slope forms the posterolateral border of the carapace which is strongly convergent and interrupted by the transverse furrow in front of the posterior border of the carapace.

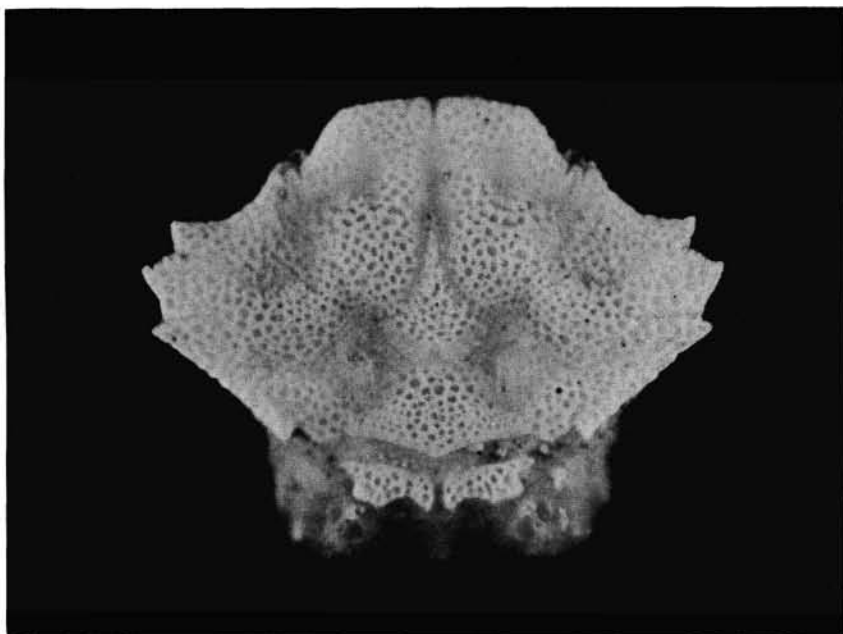


Fig. 1. *Glyptocarcinus lofhopus* gen. et sp. nov., holotype.

The infraorbital border is deeply interrupted just below the external orbital angle and inside the infraorbital angle; the former is deeply incised as V, but the latter is a large bight; between the interruptions is a high tubercle with its tip truncated and ornamented with two or three pits; there is a similar but smaller tubercle at the subhepatic region; the infraorbital angle is sharp and narrowly tuberculated with ventral granulated crest; the orbit is deep, but rather imperfect due mainly to two large interruptions and partly to the concavity of the inner part of the infraorbital angle and the small basal segment of the antenna. The antennule is folded fairly obliquely, bearing the movable basal segment ornamented by several pits. The flagellum of the antenna is fine and as long as the major diameter of the orbit. All the surfaces of the subhepatic and pterygostomial regions, the third maxillipeds and the abdomen are thickly covered with characteristic club-shaped hairs, in the subhepatic and pterygostomial regions the hairs forming the complex sinuous lines: in the pterygostomial region and the third maxilliped several high tubercles with rounded tips are implanted.

The buccal cavern is slightly widened anteriorly with a granulated crest at each anterior outer angle; the ischium is ornamented by a longitudinal furrow, being studded with tubercles; the merus is quadrate with strongly angulated anterior outer angle.

The chelipeds are equal and not heavy; the anterior border of the ischium is crested with a terminal high lobe, being fringed with club-shaped hairs; the anterior and posterior borders of the merus are strongly crested with granulated margins; the upper surfaces of the crests are rather concave, and the subterminal part of the posterior crest is more or less angulated; the outer and inner surfaces of the merus and outer surfaces of the carpus and palm are remarkably reticulated with granulated ridges and pits of various size and shape; the inner angle of the carpus is strongly produced as a conical thin lobe, being followed behind and below by a smaller one; both borders of the palm are more or less crested, and three or four longitudinal ridges are distinguished each on the outer and inner surfaces; each finger is wide and blade-like with several conical small teeth on the thin cutting edge; when the fingers are closed, no gape is left, the tips crossing each other; the colour of the fingers is almost restricted to the cutting edges.

Unfortunately, in the holotype all the ambulatory legs are detached, so that the pairs cannot be determined with certainty except the last pair. All the legs are thin and similar in shape and armature; the ischium is thickly covered with club-shaped hairs; the surfaces of the merus, carpus and propodus are roughened by irregular pits and granules; the anterior and the posterior upper and lower borders of the merus are strongly crested, so that a longitudinal deep cavity is formed by the posterior two crests; in the carpi and propodi of the first three pairs the anterior borders are crested with two strong teeth in the carpus and one in the propodus, and the posterior upper and lower borders are more or less angulated each with a thick fringe of club-shaped hairs; in the posterior upper border of the propodus two long hairs are always distinct; in the propodus of the last pair the posterior upper and lower borders are united along the proximal half, being fringed by club-shaped hairs; the dactylus bears the thick fringes of club-shaped hairs along the anterior and posterior borders.

*Holotype.* Female, NSMT-Cr. 863; S.S.E. 2 miles off Yome-shima I., Ogasawara Is., 180 m deep; August 12, 1969, collected by S. KIHARA.

*Measurements* (in mm). Breadth of carapace, 12.2; length of carapace, 8.6; breadth of front, 4.1.

*Remarks.* The new species is seemingly close to *Liomera boninensis* (ODHNER) of the family Xanthidae in the features such as the general appearance of the carapace, the armature of the anterolateral border of the carapace and the formation of the ambulatory legs. The new species is, however, referred to the family Parthenopidae due to the reticulated ornamentation of the carapace, chelipeds and ambulatory legs, the overhanging thin anterolateral border of the carapace, the imperfect orbits and the

chelae with dark-coloured, blade-like cutting edges characteristic of the Parthenopidae.

It is less easy to determine the position of the new genus in the Parthenopidae, since there are no genera which appear to be closely related and the knowledge of the Parthenopidae is not exhaustive in spite of the important contributions by ALCOCK (1895), RATHBUN (1925), FLIPSE (1930), SAKAI (1938), MONOD (1956), GARTH (1958) and other authorities. Although the Parthenopidae is subdivided into the Parthenopinae, Aethrinae, Zalasiinae and Eumedoninae, the diversity of the forms is in reality conspicuous. On one hand, the Parthenopinae and Aethrinae are close to each other, but in the latter the chelipeds are not heavy and the ambulatory legs are concealed beneath the carapace in flexion. As discussed by GUINOT (1966), the Parthenopidae is related to the Leucosiidae through some genera of the Aethrinae. On the other hand, the Eumedoninae and Zalasiinae are rather xanthoid forms, the latter being remarkably so and in due time probably transferred to the Xanthidae. In the Eumedoninae, to which the new genus is tentatively referred, the junction of the anterolateral and posterolateral borders of the carapace is usually strongly produced to be angulated. It is shortly noted that *Dentoxanthus* STEPHENSEN originally referred to the Xanthidae and monotypically represented by *D. iranicus* STEPHENSEN from the Iranian Gulf and the Bay of Bengal may be transferred to the Eumedoninae. Some genera of the Eumedoninae such as *Eumedonus*, *Harrovia*, *Ceratocarcinus* and *Dentoxanthus* may be the specialized forms derived from the new genus, bearing the developed rostrum, the strong lateral angle of the carapace and the reduced anterolateral teeth. The thin overhanging anterolateral border of the carapace of the new genus may be the prototype of the curiously expanded form in some genera such as *Cryptopodia* and *Heterocrypta* referred to the Aethrinae.

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