

A New Spider Crab from off Iriomote Island, the Ryukyu Islands

By

Masatsune TAKEDA

Department of Zoology, National Science Museum, Tokyo

Recently, through the courtesy of Mr. Katsumi SUZUKI, I had an opportunity to examine some specimens of crabs from off Unarizaki, Iriomote Island, the Yaeyama Group in the Ryukyu Islands, collected by him during the experimental trawling operation on board the T/V *Bôsei-Maru* of Tokai University. Although the littoral crab fauna of the Ryukyu Islands is rather well known, knowledge is very poor about offshore species with few records. The specimens obtained are, therefore, worthy of noting.

St. 1 — 24° 26' N, 123° 45' E, 70 m deep, by beam trawl, Aug. 13, 1977. Substratum was coral sand with a few scattered stones. Four specimens obtained were identified with *Oncinops neptunus* ADAMS et WHITE, 1848 (1 ovig. ♀) and *Chlorinoides longispinus* (DE HAAN, 1839) (1 ovig. ♀) of the Majidae, and *Liomera rubra* (A. MILNE EDWARDS, 1865) (1 juv.) and *Chlorodiella laevissima* (DANA, 1852) (1 ♂) of the Xanthidae. *O. neptunus* was already mentioned together with a male from the Ogasawara Islands by TAKEDA (1977) as the first record of occurrence in Japanese waters. It is otherwise mentioned here that the bathymetric range was extended down to 70 m in all the other species.

St. 2 — 24° 27' N, 123° 43' E, 130–165 m deep, by beam trawl, Aug. 13, 1977. Alcyonaceans and gorgonarians were dominant. A spider crab species represented by a male, a sole specimen from St. 2, is notable in having the subchelate last leg, which is unusual in the Majidae. It is kin to *Glypachaeus hyalinus* (ALCOCK et ANDERSON, 1894), which is a monotypical representative of the genus erected by ALCOCK (1895) and as recorded by the original authors (1894) and GRIFFIN (1974, 1976), is known from off Trincomalee, Sri Lanka, 50 m deep (type-locality), the northwestern Indian Ocean (east of Mombasa, off Cape Guardafui and mouth of the Gulf of Aden), 75–175 m deep, and east of Masbate Island, the Philippines, 145 m deep. The specimen at hand is, however, so different from the type-species in many features that it is described as new to science in this paper.

The holotype of the new species is deposited in the National Science Museum, Tokyo, and the other specimens are in the Marine Science Museum, Tokai University.

Before going further I wish to express my cordial thanks to Mr. Katsumi SUZUKI of the Marine Science Museum, Tokai University, who kindly placed the interesting collection at my disposal for study.

Grypachaeus tenuicollis sp. nov.

(Figs. 1-11)

Description of holotype. Male (NSMT-Cr. 5651). Length in median line without rostral spines, 12.2 mm, and greatest breadth at branchial regions without spines, 4.9 mm. In life it was uniformly pale pink, but is semi-transparent without peculiar color in spirit.

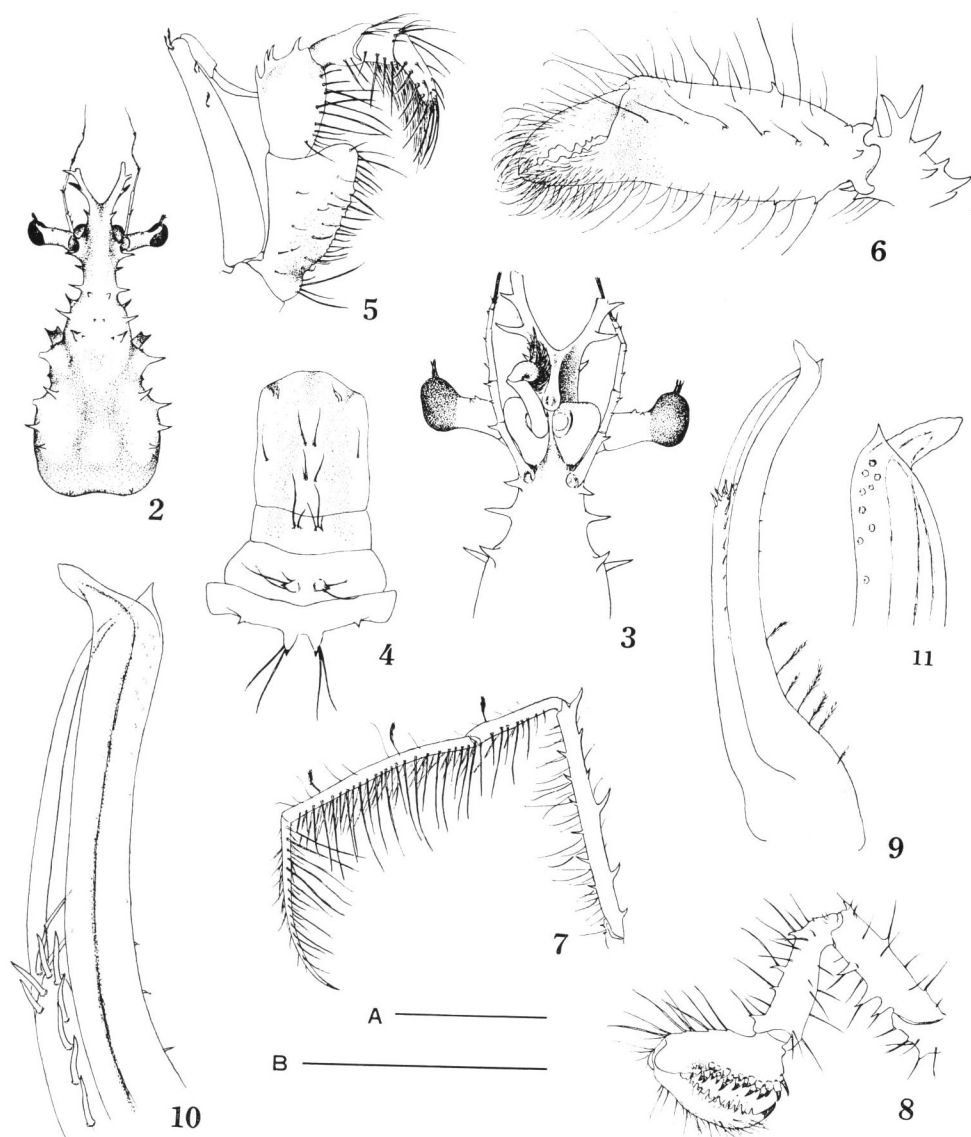
Carapace rather ill-calcified, elongated, with long neck, and armed with prominent spines disposed symmetrically.

Rostrum ending in two spines weakly curved inward, each of which has a spine at median part of its outer border and an extremely long one at lower part of the base; the latter directed considerably forward and outward, being visible in dorsal view; interantennular septum furrowed proximally and convex distally in frontal view, forming a bridge between antennular fossae of both sides in lateral view. A slender spine directed obliquely upward on outer border behind base of rostral spine. Rostrum widens proximally. Supraorbital border not distinctly delimited from lateral border of posterior part of rostrum, being medially armed with a slender spine directed obliquely upward and forward, its posterior end being produced into a large spine which is directed outward.

Eyestalk large, with a strong basal constriction, and movable backward, but en-



Fig. 1. *Grypachaeus tenuicollis* sp. nov., ♂, holotype.



Figs. 2-11. *Grypachaeus tenuicollis* sp. nov., ♂, holotype. — 2, Carapace in dorsal view; 3, fronto-orbital region in ventral view; 4, distal four segments of abdomen; 5, right third maxilliped; 6, left chela; 7, left first ambulatory leg; 8, left subchelate leg; 9, left first pleopod in abdominal view; 10 and 11, the same in abdominal and sternal view, respectively. Scale A — 0.5 mm for 9; 0.2 mm for 10 and 11. Scale B — 10 mm for 2 and 7; 5 mm for 3, 6 and 8; 2.5 mm for 4 and 5.

tirely exposed in all positions; two minute spinules at its anterior border, and a small tuft of setae distally.

Basal segment of antennule extremely bulged, movable, and visible in dorsal view in front of base of eyestalk; proximal part of rostrum forms an incomplete antennular fossa. Basal segment of antenna movable and armed with a spinule, and following two segments with two or three distant spinules. A slender spine directed nearly downward just outside of excretory opening.

Buccal cavern widens distally, and its antero-external angle strongly produced. Third maxilliped rather pediform, with merus elongate and much narrower than ischium; outer border of merus distally with three or four curved spines.

Subhepatic lobe more or less conical in dorsal view, its summit being armed with a slender spine directed obliquely downward and outward. Gastric, cardiac and branchial regions naked without setae, demarcated by shallow, wide indistinct furrows, but not much convex dorsally. Anterolateral part of gastric region armed with a slender spine directed very weakly forward and upward; anterior median part with two pairs of small tubercles, anterior one of which is larger; protogastric part with a large tuberculated spine directed obliquely outward, forward and upward, and with a spinule at a short distance from the main one; posterior median part with a weak convexity. A conical lobe outside of gastric region prominent, and armed with a slender spine directed outward and only slightly upward and with a tiny spinule at anterior slope of lobe, being separated from anterior lateral border of gastric region by a rather deep depression, from posterior part of gastric region by a shallow furrow, and from branchial region by a deep and wide depression. In dorsal view a long lamellar plate of antero-external angle of buccal cavern visible in front of this conical lobe outside of gastric region. Cardiac region rounded in its outline, and not tuberculated at all, its height of summit being on the same level with branchial region. Branchial region armed with three marginal and one anterior median spines; of three marginal spines, the first nearly horizontal and directed outward, the second slightly backward and upward, and the last smaller than the precedings and almost parallel with the second; anterior median spine also slender and more strongly directed upward than marginal spines. A small tuberculated spine at lateral end of posterior border of carapace just above base of last leg.

Chelipeds large and spiny, with rather sparse setae of various lengths. Merus cylindrical, with some spiniform tubercles on its upper border and several spines each on its lower borders; terminal spine of upper border the longest. Carpus with several spines; distal one near articulation with palm prominent and basally branched off. Palm weakly compressed and twice as long as fingers, being armed with a longitudinal row of some conical tubercles on its outer surface and some scattered ones on its proximal part. Fingers with obtuse teeth and more or less tufted hairs.

First three pairs of ambulatory legs long, hairy and spiny; most of hairs long, stiff and evenly set. Each merus with three or four spines on its anterior border and several on its posterior border; a prominent spine at its terminal end of anterior border.

Anterior borders of carpi and propodi each with some spinules. Last leg rather stout and subchelate; merus and carpus also spiny; posterior border of propodus bears series of sharp spines with horny tips and receives folded-back dactylus, apposed edge of which is spinate with more than ten small but sharp spines.

Sternum with sparse hairs; each of fifth to seventh sternite armed with two spines at either side of abdomen, viz., one in the middle and one at lateral end just near base of ambulatory legs. Abdomen six-segmented; in dorsal view first two segments visible, each having a pair of spinules in the middle; third segment armed with two prominent spines in the middle and a spinule on either side of them; fourth segment only with two median spinules, but fifth segment without spinules; last segment long and rather quadrate, fused segments being indicated only by two small tufts of setae.

Remarks. The contour of carapace of the majid species of the Inachinae is sometimes different between the two sexes. The male first pleopod of *Glypachaeus hyalinus* (ALCOCK et ANDERSON) was figured by GRIFFIN (1974), but unfortunately, the other morphological differences between the two sexes are unknown. The present species is represented only by a male specimen, but its distinctive difference in armature and shape of the carapace is, without doubt, a warrant for the specific distinction. The male first pleopods of the two species seem also to be considerably different from each other in the formation of the apical parts.

Literature

- ALCOCK, A., 1895. Materials for a carcinological fauna of India. No. 1. The Brachyura Oxyrhyncha. *J. Asiat. Soc. Bengal*, **64**: 157–291, pls. 3–5.
- & A. R. ANDERSON, 1894. Natural history notes from H. M. Indian marine survey steamer "Investigator." Ser. II, no. 14. An account of a recent collection of deep-sea Crustacea from the Bay of Bengal and Laccadive Sea. *Ibid.*, **63**: 141–185, pl. 9.
- GRIFFIN, D. J. G., 1974. Spider crabs (Crustacea: Brachyura: Majidae) from the International Indian Ocean Expedition, 1963–1964. *Smiths. Contr. Zool.*, (182): i–iii + 1–35.
- 1976. Spider crabs of the family Majidae (Crustacea: Brachyura) from the Philippine Islands. *J. nat. Hist.*, **10**: 179–222.
- TAKEDA, M., 1977. Crabs of the Ogasawara Islands, V. A collection made by dredging. *Mem. Natn. Sci. Mus., Tokyo*, (10): 113–140, pls. 12–17.

