A New Xanthid Crab from the Ryukyu Islands

Masatsune Takeda

Reprinted from
Bulletin of the Biogeographical Society of Japan
Vol. 35, No. 3: 39-44, figs. 1-6
December 24, 1980

Bulletin of the Biogeographical Society of Japan 35(3)39-44 December 24, 1980

A New Xanthid Crab from the Ryukyu Islands

Masatsune Takeda

(Received October 15, 1980)

In a small collection of crabs from the Yaeyama Group in the Ryukyu Islands recently brought to the author is an interesting crab having the subhepatic cavity at each side. It is without doubt referable to the genus *Hypocolpus* Rathbun, 1897, which is a substituted name of *Hypocoelus* Heller, 1861, preoccupied by the name for the Coleoptera. This genus was elaborately revised in detail together with the related genus *Euxanthus* Dana, 1851, by Guinot-Dumortier (1960). According to her excellent contribution, *H. diverticulatus* (Strahl, 1861), *H. granulatus* (de Haan, 1837), *H. perfectus* Guinot, 1960, *H. rugosus* (Henderson, 1893), *H. rugosus stenocoelus* Guinot, 1960, *H. punctatus* (Miers, 1884) and *H. abotti* (Rathbun, 1894) are known to date. The male specimen at hand is really close to *H. rugosus* and its subspecies in the general appearance of carapace, but readily distinguished from them by the different shape of subhepatic cavity and the development of a longitudinal crest each on the carpus of cheliped and on the carpi and propodi of ambulatory legs.

In the following lines this specimen is described as a new representative of *Hypocolpus*. The sole specimen, the holotype, is deposited in the National Science Museum, Tokyo (NSMT).

The author's cordial thanks are due to Mr. Seiichi Nagai, amateur collector in Kushimoto, Wakayama Prefecture, who provided the author with the interesting collections of crabs including the holotype of this new species. This species is dedicated to the late Dr. Nagamichi Kuroda, leading ornithologist and ichthyologist, who was kind enough to lend the comparative specimens of decapod crustaceans from Suruga Bay. to the author.

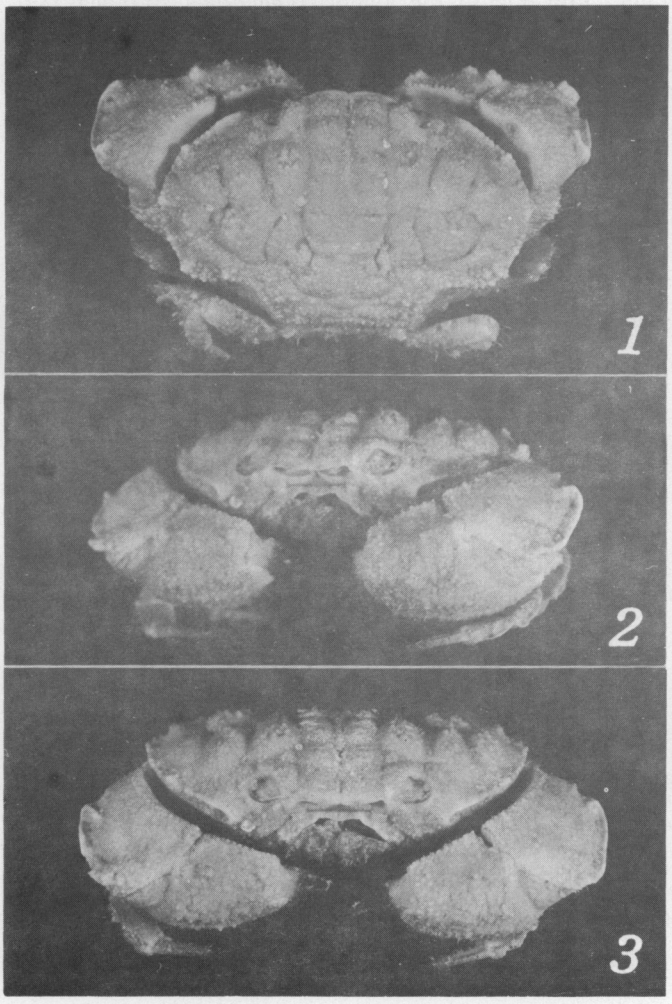
Family XANTHIDAE

Hypocolpus kurodai sp. nov.

(Figs. 1－6)

Material examined. Kerama Is., Yaeyama Group, Ryukyu Is.; 1 ♂, holotype (NSMT-Cr 6906); July 25, 1978; S. Nagai leg. Breadth of carapace, 23.5 mm; length of carapace, 15.0 mm.

Description of holotype. Carapace transversely elliptical, not markedly convex; dorsum well divided into regions which are convex and thickly covered with minute granules of various size; inter-regional furrows deep and linear; frontal region convex laterally; epigastric region (1M) more or less circular, and widely and shallowly separated from supraorbital and protogastric regions, and shallowly and narrowly from frontal region; protogastric region (2M) subdivided into inner smaller and outer larger subregions by a longitudinal deep furrow; mesogastric region (3M) prominent, its anterior end just reaching the level of posterior end of 1M; metagastric region (4M)



Figs. 1-3. *Hypocolpus kurodai* sp. nov., holotype. Breadth and length of carapace, 23.5 and 15.0 mm, respectively.

linear, but strongly convex fore and aft, being medially followed by a minute areolet; anterolateral regions (1-6L) distinct except for 1L which is only faintly demarcated and nearly confluent with 2L; 3L prominent and oblique in direction, 4L rounded and obtusely pointed at its dorsal tip, 5L very prominent and evenly convex as a whole, 6L triangular, about half of 5L and ornamented with a small round tip at median part of inner border just outside of 4M; a small areola behind 4 and 5L; cardiac region (1P) large and provided with an accessory areolet at median part of its posterior border; intestinal region (2P) not prominent and indistinctly subdivided into two.

Front with two convex lobes in dorsal view, which are nearly confluent with each other, but a median slit is still traceable; lateral end of each frontal lobe curved downward and thus deeply separated from supraorbital angle; inner half of supraorbital border raised, while outer half is thick, but not raised at all.

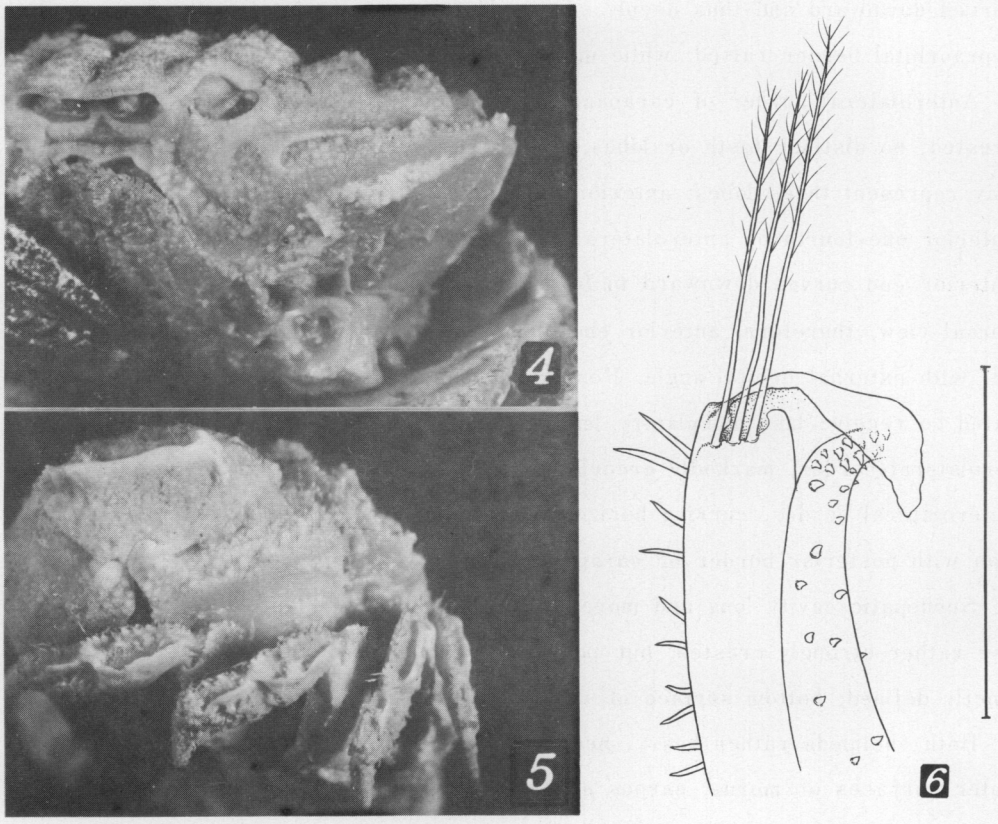
Anterolateral border of carapace strongly arched, granulated and more or less crested; no distinct teeth or lobes, but three equidistant tuberculated granules may represent three lobes; anterior part directed toward subhepatic region, and anterior one-fourth of anterolateral border forms a roof of subhepatic cavity; anterior end curved downward to form anterior boundary of subhepatic cavity; in dorsal view, therefore, anterior end of anterolateral border not directly connected with external orbital angle. Posterolateral surface of carapace deeply excavated to receive last ambulatory leg; posterolateral border much shorter than anterolateral border, markedly granulated, forming a strong angle at junction with anterolateral border, curving horizontally inward and then running obliquely to junction with posterior border of carapace.

Subhepatic cavity long and more or less streamlined; its roof and anterior border rather strongly crested, but posterior narrow end and lower border not distinctly defined; bottom surface of cavity with scattered granules of good size.

Both chelipeds rather heavy, nearly equal in size, or the left hardly larger; outer surfaces of merus, carpus and palm roughened by minute granules of various size, but inner surfaces nearly smooth and truncated to fit tightly to carapace; merus small and for its most part disguised under carapace; carpus large and equipped with a strong crest which forms an outer border of carpus, posterior end of crest curving and extending shortly onto upper surface; palm with about

four longitudinal rows of granules on outer surface and some tubercles with aggregated granules on outer upper surfaces; fingers sharply toothed; each finger with four or five conical teeth on cutting edge and two or three longitudinal furrows throughout length.

Ambulatory legs not stout; anterior border of each merus thin and fringed with thick plumose hairs; posterior border truncated, and its upper border thus formed rather strongly crested; anterior border of each carpus armed with several sharp granules and stiff setae; upper border ornamented with a strong longitudinal crest which curved anteriorly, and thus anterior half of upper surface deeply excavated along its crest; in propodus a similar crest developed on proximal half of upper surface, and distal surface markedly roughened by granules.



Figs. 4-6. *Hypocolpus kurodai* sp. nov., holotype. 4, carapace showing subhepatic cavity; 5, cheliped and ambulatory legs of left side, showing crests on cheliped carpus and amdulatory carpi and propodi; 6, distal end of left first pleopod in abdominal view. Scale bar represents 1 mm.

Remarks. In general the known species and subspecies are close to each other in the general formation of carapace and male first pleopod, but readily distinguished from each other by the surprisingly different subhepatic cavity. In the new species the subhepatic cavity is imperfect without distinct lower border and with granules of good size on the bottom surface. The general appearance of carapace is rather close to that of *H. rugosus* (Henderson) from the Gulf of Manaar and its subspecies *stenocoelus* Guinot from Mauritius, but readily distinguished from them by the shape of subhepatic cavity.

In addition, a strong crest on the carpus of cheliped is characteristic for the new species; the upper surface of the carpus is smooth only with minute granules in the new species, but in *H. rugosus* and its subspecies the outer and upper surfaces are markedly roughened with tubercles instead of a strong crest along the outer border. The longitudinal crests on the carpus and propodus of ambulatory legs are strongly developed in the new species, very imperfectly in the subspecies and not developed in *H. rugosus*. It is not sure at present whether the number of apical hairs of the male first pleopod is reliable to distinguish the species, but it must be noted that the male first pleopod of the new species is closer to that of the subspecies in the curvature of the apical end and to that of *H. rugosus* in having three long hairs instead of one in the subspecies. The new species may take the position closer to the subspecies. It seems to be possidle to elevate the subspecies to the specific level.

In Japanese waters this species is really the fourth of the genus *Hypocolpus*. In addition to the well known species *H. granulatus* (de Haan), two other species *H. diverticulatus* (Strahl) and *H. abotti* (Rathbun) had been recorded by A. Milne Edwards (1865) and Takeda (1972), respectively. The old record of *H. diverticulatus*, the typespecies of *Hypocolpus*, was unfortunately slipped from the recent literature Japan.

literature

Guinot-Dumortier, D., 1960. Révision des genres *Euxanthus* Dana et *Hypocolpus* Rathbun (Crust. Decap. Brach.). Remarques sur les cavités sous-hépatiques et les coaptations des *Hypocolpus*. Mém. Mus. Natn. Hist. Nat., Paris, Ser. A (Zool.), 20 : 153-218, pls. 1-12.

Milne Edwards, A., 1865. Etudes zoologiques sur les crustacés récents de la famille des cancériens. Nouv. Arch. Mus. Hist. Nat., Paris, 1 : 179-308, pls. 11-19.

Takeda, M., 1972. Further notes on the unrecorded xanthid crabs from the Ryukyu Islands. Biol. Mag., Okinawa, 9 : 15-24.

(This study is supported by a Grant-in-aid for Scientific Research from the Ministry of Education, Science and Culture, no. 334035. Masatsune Takeda, Department of Zoology, National Science Museum, Tokyo)

琉球列島産オウギガニ科の1新種

武 田 正 倫

慶良間諸島で採集されたカニ類中に，下肝域に特徴的なくぼみをもつクボミオウギガニ属 *Hypocolpus* の雄が1個体見い出されたが，従来知られている6種1亜種とは異なるものであった。甲の一般的な形態は *H. rugosus* (Henderson) と *H. r. stenocoelus* Guinot に似るが，下肝域のくぼみの形態が異なるほか，鋏脚の腕節および歩脚の腕節と前節に板状に強く発達した稜があることにより容易に区別される。

なお，日本産としてはクボミオウギガニ *H. granulatus* (de Haan) とケブカクボミオウギガニ *H. abotti* (Rathbun) の2種が知られているが，古く A. Milne Edwards (1865) により模式種の *H. diverticulatus* (Strahl) が記録されていたことを指摘した。

筆者は駿河湾産十脚類の標本について故黒田長禮博士にいろいろお世話になった。ここに記載した特徴的なカニの新種を *H. Kurodai* として感謝の気持を表わし，ヒメクボミオウギガニという新和名を提唱する。

(武田正倫　国立科学博物館分館　160 東京新宿百人町5－23－1)

Biogeographical Society of Japan

c/o The Watanabe Ichthyological Institute

3-48-1 Yoyogi, Shibuya-ku, Tokyo, 151 Japan

Phone: 03 (370) 4357, 5855