

Description of Excorallana yamamuroae sp. nov., (Crustacea, Isopoda) preliminary record of the genus in Japan

journal or	Bulletin of the Toyama Science Museum
publication title	
number	12
page range	13-17
year	1988-10-31
URL	http://repo.tsm.toyama.toyama.jp/?action=repos
	itory_uri&item_id=558

Description of *Excorallana yamamuroae* sp. nov., (Crustacea, Isopoda) preliminary record of the genus in Japan*

Noboru Nunomura Toyama Science Museum

日本近海から初めて報告されたキバウオノエ属(甲殻類:等脚目)の一新種、 Excorallana yamamuroae の記載

布村 昇 富山市科学文化センター

鹿児島県上甑島の汽水湖、貝池から発見された Excorallana 属 (甲殻類、等脚目)を新種 Excorallana yamamuroae (和名:ヒメキバウオノエ)として記載した。本種はアメリカ太 平洋岸バハ・カリフォルニアから知られている Excorallana kathae (Menzies) と最も類似 するが、(1) 腹尾節側方のくぼみの欠如、(2) 体の後方の剛毛の欠如、(3) 第一触角の 第一節が著しく肥厚していること、(4) 腹部の代わりに胸部後半の背板に突起が有ること 等で区別される。本種はまた、西インド諸島から知られている Excorallana subtilus とも類 似するが、(1) オス胸部背板に突起が有ること、(2) 腹尾節が後端が丸いこと、(3) 目が比較的小さいこと、(4) 胸部基板が、より顕著であること、(5) 第一触角鞭数が多いこと等によって区別される。

A new species of isopod, belonging to the flabelliferan family Corallanidae, is here described from the brackish water of the Lake Kai-ike, Kami-koshiki Islands, Kagoshima ken, Kyushu, western Japan.

I wish to express my hearty thanks to Dr. Masumi Yamamuro, the University of Tokyo, for her kindness in collecting such interesting specimens.

Genus Excorallana Stebbing

(Jap. name: Kiba-uonoe-zoku, new)

This may be the first record of the genus Excorallana from Japan and its neiboring.

Excorallana yamamuroae sp. nov.,

(Japanese name: Hime-kibauonoe, new)

(Figs. 1-2)

Material Examined: $1 \circlearrowleft$ (holotype, 8.6mm in body length), $2 \Lsh \Lsh (1 \Lsh \text{ allotype, 8.8mm})$ in body length and $1 \Lsh \text{ paratype, 9.4mm}$ in body length), Lake Kai-ike, Kamikoshiki Island, Kagoshima ken, coll. Masumi Yamamuro, Nov., 1984; $2 \Lsh \Lsh (5.6 \backsim 5.9 \text{mm})$ in body length),

^{*}Contributions from the Toyama Science Museum, No. 73

Kai-ike, Aug. 25, 1985. Type series is deposited as follows: Holotype (TOYA-Cr 7632), allotype (TOYA-Cr 7633) and a paratype (TOYA-Cr 7634) at the Toyama Science Museum, a paratype (OMNH Ar-3255) at the Osaka Museum of Natural History, and a paratype (NSMT Cr-9391) at the National Science Museum, Tokyo.

Description: Male — Body oblong, about 2.3 times as long as wide. Color dull yellow in alcohol. Cephalon trapeozoidal in shape and bears a pair of projections on anterodorsal part. Eyes rather big, each composed of about 70 ommatidia. Pereonites IV-VII somewhat longer than the anterior ones. Epimera of pereonites II-VII distinct and rather big. Pereonites V and VII with a pair of rather remarkable projections on each posterior part. Pereonite VI with 2 pairs of projections on posterodorsal part. Pleonite I invisible in dorsal view. Pleonites II and III almost equal in length. Pleonite IV expanded posteriorly in both lateral sides. Pleonite V rather long than any other pleonites and with a low projections at medial part. Pleotelson almost triangular and round in apical part. Both rami of uropod as equally protruded backwards.

Antennule (Fig. 2 A), reaching pereonite 2, composed of 14 segmets, 1st segment big and

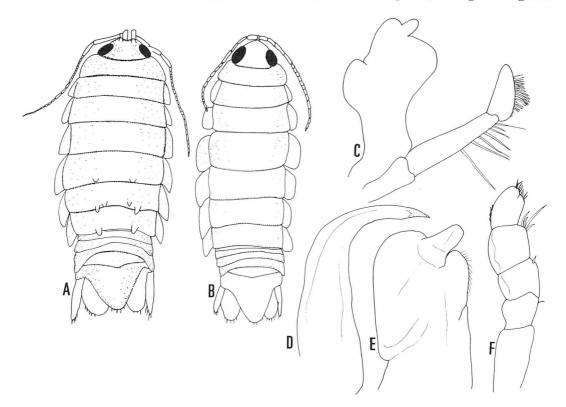


Fig.1 Excorallana yamamuroae sp. nov.,

- A. Dorasal view of holotype male; B. Dorsal view of allotype female; C. Mandible;
- D. Maxillule; E. Maxilla; F. Maxilliped (C-F. holotype male).

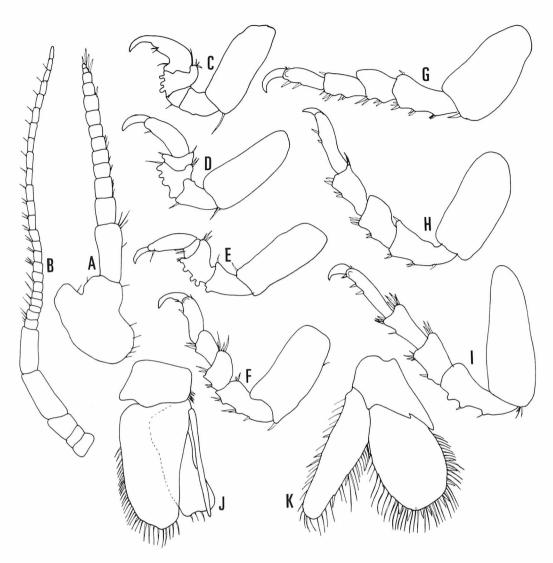


Fig.2 Excorallana yamamuroae sp. nov.,
A. Antennule; B. Antenna; C-I. Pereopods 1~7; J. Pleopod 2 in male; K. Uropod.
(All: holotype male).

almost square.

Antenna (Fig. 2 B), reaching the anterior margin of the 5th pereonal somite, peduncular composed of 5 segments and flagellum composed of 24 segments.

Mandible (Fig. 1 C) with low cutting edge; palp with segment 2 more than twice longer than 1 or 3; lateral margin of segment 2 with 4 large and 3 moderately stiff setae.

Maxillulle (Fig. 1 D); outer lobe forming a single, large and recurved tooth.

Maxilla (Fig. 1 E) rectangular with a big process.

Noboru Nunomura

Maxilliped (Fig. 1 F); endite small; palp 5-segmented, 1st to 4th segments subequal in length; terminal segment small than the other ones.

Pereopods $1\sim3$ (Fig. 2 C-E); basis big and rectangular; ischium small and triangular; carpus triangular with 3 setae on inner margin and $3\sim4$ setae on outer distal corner; carpus short; propodus stout.

Pereopods 4~6 (Fig. 2 F-H); basis oblong; ischium elongated triangular, with 3 groups of setae on inner margin; merus rectangular with 2 groups of 3 setae on inner margin; carpus rectangular with 2 groups of 2 setae on inner margin; propodus rather long.

Pereopod 7 (Fig. 2 I); basis big and rectangular; ischium long with 3; merus quadrate; carpus rectangular; propodus elongated.

Penes unfortunately broken.

Pleopod 2 (Fig. 2 J); endopod rectangular with a narrow and linear stylus, almost as long as endopod; exopod rectangular but narrower than endopod.

Uropod (Fig. 2 K); basis triangular; endopodite ovate with a fringed setae and 9 spines around the margin; exopodite lanceolate with many setae and $5\sim6$ spines around the margin.

Female — Similar to male but without any tubercles on dorsal surface of pereonal somites.

Remarks: The present new species is most closely allied to Excorallana kathae reported from Baja California, North America, but the new species is separated from E. kathae in the following features: (1) lack ofnotches of lateral part of pleotelson, (2) lack of seta on posterior half of the body, (3) remarkably stout 1st pedunclar segment of antennule and (4) presence of tubercles on the posterior half of pereonal somites.

The present new species is also allied to *Excorallana subtilis* (Hansen) reported from St. Thomas, West Indies. But the new species is separated from *E. subtilus* in the following features: (1) presence of tubercles on the dorsal surfaces of 5th to 7th pereonal somites in male, (2) rounder posterior margin of pleotelson, (3) smaller eyes, (4) more prominent epimera of pereonal somites and (5) more numerous segmentations of flagella of antennule.

References

- Bowman, T.E., 1977. Isopod crustaceans (except Anthuridae) collected on the Presidental Cruise of 1938. Proc. Biol. Soc. Wash. 89: 653-666.
- Hansen, H.J., 1905. Revision of the European marine Form of the Cirolaninae a subfamily of Crustacea Isopoda. J. Linn. Soc. London, 3377-372. pls. xxxiii-xxxv.
- Kussakin, O,G., 1979. Marine and brackish water Isopoda of the cold and temperate waters of the Northern Hemisphere, Suborder Flabellifera. Opredelitili po Faune SSSR, 122 1-470. (in Russian).
- Menzies, R.J. 1962. The Marine isopoda fauna of Bahia de San Quintin, Baja California, Maxico. Pacific Naturalist, 3 (11): 337-348.
- Richardson, H.R. 1901. Key to the isopods of Atlantic coast of North America with des-

- criptions of new and little known species. Proc. U.S. Nat. Mus, 23: 493-579.
- Richardson, H.R. 1905. A monograph of Isopod of North America. Bull. U.S. Natl. Mus. 54:1-727.
- Schultz, G.A. 1969. How to know the marine isopod. Wm. C. Company.
- Thielemann, M., 1910. Beiträge zur Kenntnis der Isopoden fauna Ostasiens. Abhandl. Wiss., Suppl., 3: 1-109.
- Yamamuro, M. 1987. Macrobenthic Faunas of Two Brackish Lagoons with Different salinity in Kamikoshiki Island, Kagoshima Prefecture. Jap. J. Limnol., 48 (3): 177-186.