

New Records of Two Species of Decapod Crustaceans  
from Amami-Oshima Island, the Northern  
Ryukyu Islands, Japan

By

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**Abstract** *Upogebia carinicauda* (STIMPSON, 1860) [Minami-anajako] of the family Upogebiidae and *Mortensennella forceps* RATHBUN, 1909 [Hasami-kakuregani] of the Pinnotheridae are recorded from Amami-Oshima Island, the northern Ryukyu Islands as new additions to the carcinological fauna of Japan.

Dr. Masanori SATO of Kagoshima University sent us many specimens of decapod crustaceans for identification, which were collected by his research team at coastal muddy bottom of Amami-Oshima, the main island in the Amami Group, the northern Ryukyu Islands. Among them are two interesting species referable to the family Upogebiidae of the Anomura and the family Pinnotheridae of the Brachyura. One is *Upogebia carinicauda* (STIMPSON) and the other is *Mortensenella forceps* RATHBUN, both of which are new to Japanese waters.

The materials studied for the present paper are deposited in the National Science Museum, Tokyo (NSMT), the Senckenberg-Museum, Frankfurt a.M. (SMF), the Natuurhistorie Museum, Leiden (RMNH), and the Tokushima Biological Laboratory, Shikoku University, Tokushima (BLT).

The following abbreviations are used in the present paper. CL=Length of carapace including rostrum; CB=Breadth of carapace; TL=Total length. All measurements are given in millimeters.

## Systematic Accounts

## Family Upogebiidae

Genus *Upogebia* LEACH, 1814*Upogebia carinicauda* (STIMPSON, 1860)

[New Japanese name: Minami-anajako]

(Figs. 1-3)

## Restricted synonymy:

*Gebia carinicauda* STIMPSON, 1860, p. 23.*Axia* sp.? SCHMELTZ, 1881, p. 15.*Upogebia* (*Upogebia*) *carinicauda*: de MAN, 1928, pp. 22 (in list), 44 (in key), 60, pl. 3 figs. 6-6c, pl. 4 figs. 6d-n.—POORE & GRIFFIN, 1979, p. 292.—SAKAI, 1982, p. 35, figs. 6d, 8a, pl. A fig. 5, pl. C figs. 5, 6.—1984, p. 156.*Upogebia* (*Upogebia*) *kempi* SANKOLLI, 1972, p. 671, figs. 9, 10.*Upogebia darwini*: NGOC-HO, 1977, pp. 439-464 [in part], figs. 4a-c [in part, non *U. darwini*].*Upogebia carinicauda*: SAKAI, 1993, p. 91.

**Material examined.** Yanyu-higata, Tatsugo-cho, Amami-Oshima I., Ryukyu Is.; 16 May 1995; M. SATO *et al.*—Male (TL 38.0, CL 11.0) and female (TL 37.0, CL 10.5), NSMT-Cr 11729; Male (TL 39.0, CL 11.5) and female (TL 37.5, CL 10.5), SMF 23043; Male (TL 35.0, CL 10.5) and female (TL 39.0, CL 11.0), RMNH D46618; Females (TL 36.0, CL 10.0; TL 28.0, CL 8.0), BLT 6062.

**Diagnosis.** Male (Fig. 1). Anterior region of carapace including rostrum 1.7 times as long as posterior region. Rostrum 0.8 times as long as wide, its dorsal surface thickly setose, grooved in median line, and usually with four conical subterminal teeth (Fig. 2a); ventral surface unarmed. Gastric region dorsally

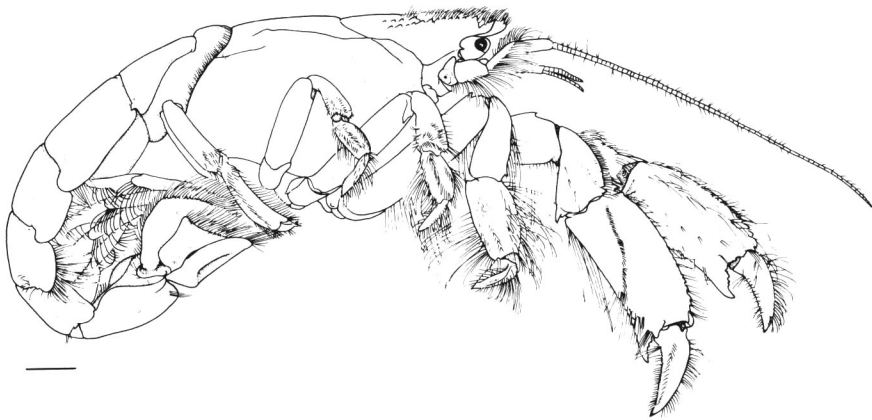


Fig. 1. *Upogebia carinicauda* (STIMPSON).—Male (NSMT-Cr 11729) from Amami-Oshima, lateral view. Scale, 2 mm.

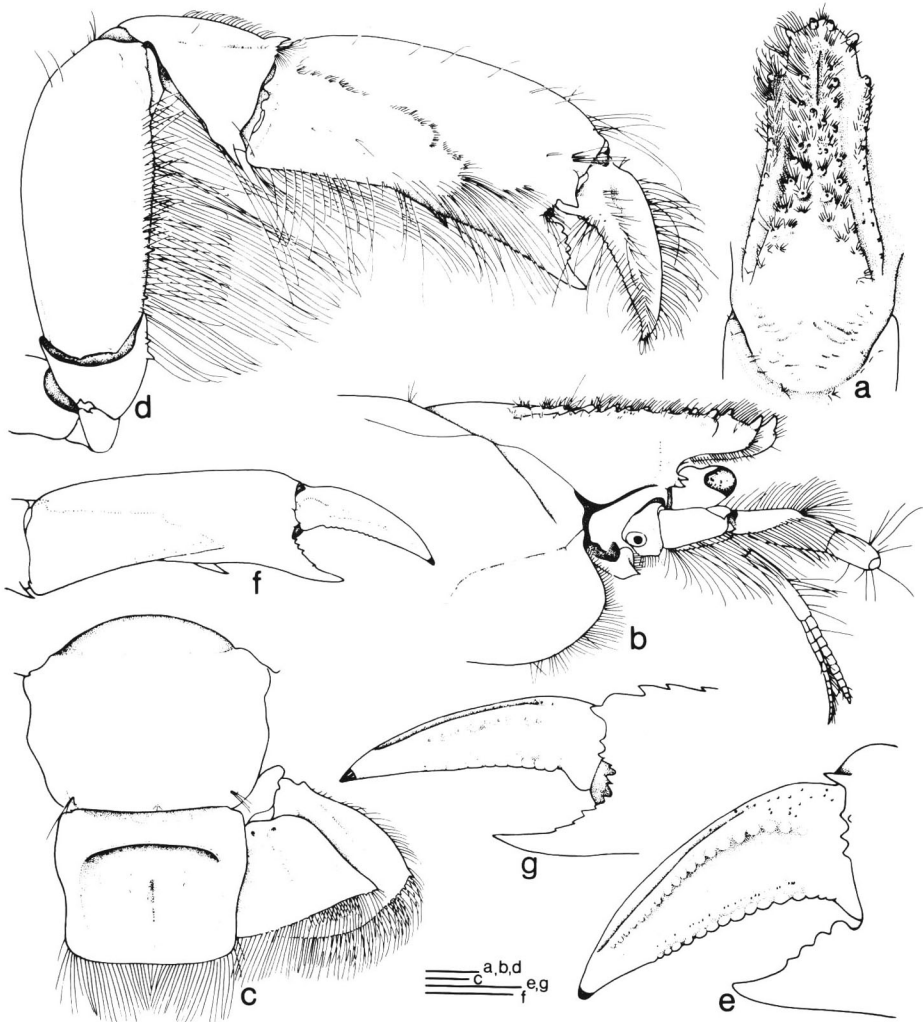


Fig. 2. *Upogebia carinicauda* (STIMPSON). — a, Anterior part of carapace, dorsal view; b, same, lateral view; c, abdominal somite 6 and tail fan in right side; d, male pereiopod 1 in right side, lateral view; e, dactylus of male pereiopod 1, mesial view; f, chela of female pereiopod 1, lateral view; g, dactylus of female pereiopod 1, mesial view. Scales, 1 mm.

setose with teeth; lateral ridge setose dorsally, armed with row of 11 teeth, and scarcely projecting forward to rostrum; ventral margin unarmed. Cervical groove unarmed, and linea thalassinica reaching short of posterior margin of carapace. Anterolateral margin with two teeth branched out at base (Fig. 2b).

Telson (Fig. 2c) 1.2 times wider than long, and 0.8 times as long as abdominal somite 6, dorsally with narrow slit medially in its posterior half; and

transverse part of U-shaped ridge sharply elevated in its posterior fourth.

Epistome with one strong distal tooth.

Antennular peduncle extending to middle of distal segment of antenna; segment 1 slightly shorter than segment 3, and unarmed, segment 2 about 0.25 times as long as segment 1. Antennal segment 1 and 2 unarmed; segment 3 with small subterminal tooth, segment 4 unarmed; distal segment unarmed, less than half length of segment 4. Scaphognathite rounded at tip.

Mandible (Fig. 3a) denticulate on cutting edge, bearing a strong posterior tooth. Maxilla 1 (Fig. 3b) with palp distally deflected (Fig. 3c), and bearing rounded thickness. Maxilla 2 (Fig. 3d) with palp. Maxilliped 1 (Fig. 3e) with

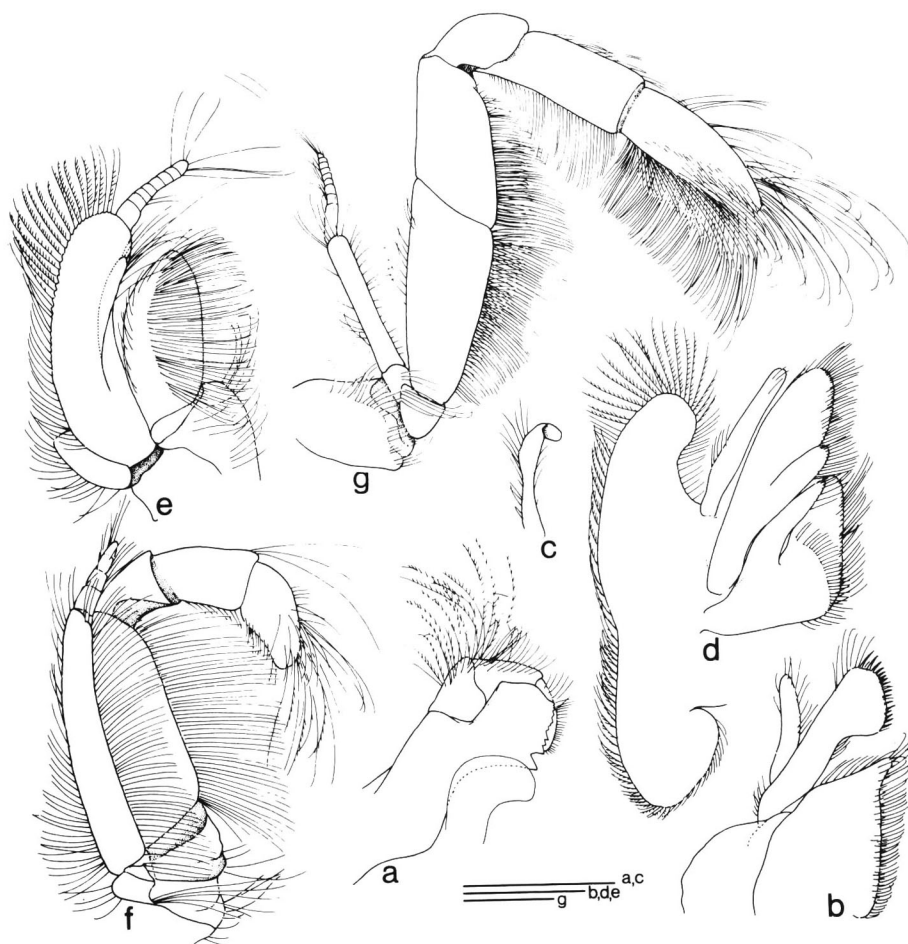


Fig. 3. *Upogebia carinicauda* (STIMPSON). — a, Mandible, lateral view; b, maxilla 1, lateral view; c, palp of maxilla 1, mesial view; d, maxilla 2, lateral view; e, maxilliped 1, lateral view; f, maxilliped 2, lateral view; g, maxilliped 3, lateral view. Scales, 1 mm.

exopod bearing a segmented protrusion. Maxilliped 2 (Fig. 3f) with dactylus bearing a tuft of thick setae distally. Maxilliped 3 (Fig. 3g) with coxa and ischium unarmed; exopod overreaching distal margin of endopod ischium.

Pereiopods 1 (Fig. 2d) subchelate and equal. Coxa with one small distal tooth on posterior margin; basis unarmed; ischium with two teeth on ventral margin. Merus 2.3 times as long as wide, with row of small teeth on ventral margin, and subterminal tooth on dorsal margin. Carpus half times as long as merus, with strong distoventral and distodorsal teeth, and a row of dorsomesial teeth; mesial surface with two distal teeth. Propodus twice as long as wide, dorsal margin usually with a row of small teeth; lateral surface with a row of setae, and with a sharp tooth on distal margin; mesial surface with four small teeth on distal margin; ventral margin with a sharp tooth. Fixed finger strong, bearing a row of proximal teeth on cutting edge. Dactylus 0.6 times as long as propodus, dorsomesial region thickly setose; mesial surface (Fig. 2e) with row of rounded tubercles; cutting edge with row of rounded teeth. Pereiopod 2 with coxa bearing a tooth on posterior margin; basis unarmed. Pereiopod 3 with coxa bearing a tooth on posterior margin; genital pore present; basis unarmed. Pereiopod 4 with coxa unarmed; basis unarmed. Pereiopod 5 with coxa unarmed; basis unarmed.

Pleopod 1 absent. Uropod about as long as telson, endopod with a proximal protuberance on anterior margin, and another small proximal tooth on dorsal surface; protopod unarmed.

*Female.* Pereiopod 1: Merus 3.0 times as long as wide, with row of small teeth on ventral margin, and one subterminal tooth on dorsal margin; carpus 0.4 times as long as merus, with strong ventrodorsal tooth, and dorsodorsal tooth; mesial surface with row of teeth on dorsal margin, and two teeth on distal margin; propodus (Fig. 2f) three times as long as wide, and with one sharp tooth on ventral margin. Fixed finger simple, projecting forward; dactylus 0.6 times as long as propodus, dorsomesial margin thickly setose; mesial surface (Fig. 2g) with row of rounded tubercles. Pleopod 1 simple, biarticulate.

*Remarks.* This species is characteristic in the transverse carina on the dorsal surface of telson, and four subterminal teeth on the rostrum. It is the first time that this species has been recorded from Japan.

*Type locality.* Hong Kong.

*Distribution.* Indo-West Pacific, from Hong Kong through several localities in the West Pacific to Samoa and northern Australia, and through Sri Lanka and India in the Indian Ocean to Madagascar.

## Family Pinnotheridae

Genus *Mortensenella* RATHBUN, 1909*Mortensenella forceps* RATHBUN, 1909

[New Japanese name: Hasami-kakuregani]

(Fig. 4)

*Mortensenella forceps* RATHBUN, 1909, p. 111.—1910, p. 337, fig. 21, pl. 1 fig. 18.—TESCH, 1918, p. 227 (in list).—MONOD, 1932, p. 153.—SCHMITT *et al.*, 1973, p. 131 (in list).—DAI *et al.*, 1980, p. 137, fig. 9.—DAI *et al.*, 1986, p. 404, fig. 222.—DAI & YANG, 1991, p. 439, fig. 222.

*Material examined.* Yanyu-higata, Tatsugo-cho, Amami-Oshima I., Ryukyu Is.; 16 May, 1995; M. SATO *et al.*—Male (CL 3.5, CB 5.0) and female (CL 3.5, CB 5.0), NSMT-Cr 11730); Male (CL 3.4, CB 4.9), SMF 23044.

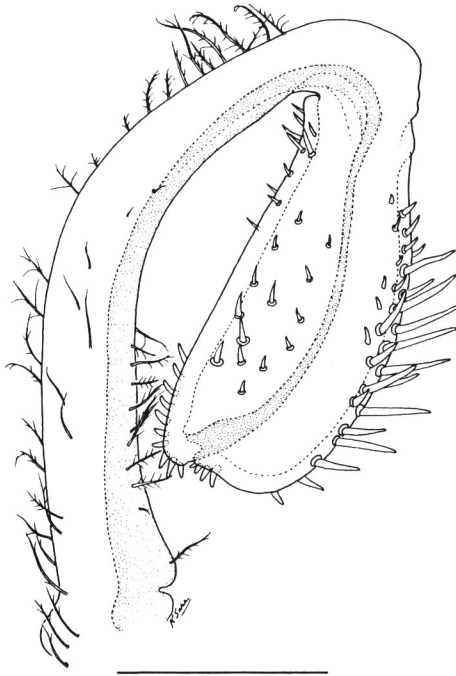


Fig. 4. *Mortensenella forceps* RATHBUN. — First male pleopod in right side, ventral view. Scale, 1 mm.

*Remarks.* This small species, the monotypical representative of the genus *Mortensenella*, is generically characteristic in having the broad third maxillipeds filling the buccal cavity, with the fused ischium and merus leaving only a faint suture line at its median part, and also with the distal three segments articulating

end to end. The diagnostic features characteristic of this species are briefly noted in the following lines.

The carapace is narrowly elliptical, with the regularly convex lateral borders minutely crenulated along its whole length; the dorsal surface smooth and weakly convex in both directions, without areolation except for a median transverse furrow separating the gastric and cardiac parts. The male chelipeds of both sides are same and comparatively heavy for the small carapace, with both fingers leaving a wide gape armed with a conical tooth at each edge and meeting at the sharp horny tips. The male abdomen is seven-segmented and constricted at the fifth segment. The male first pleopod is curiously formed and of generic value, being shaped like a bean bud; the basal segment is slender with the suture on lateral margin; horny endpiece is oval and swollen, recurved towards the base along the lateral margin of basal segment, with suture inside the mesial part of the tip (Fig. 4).

*Type locality.* Koh Chang, Thailand.

*Distribution.* Known from the type locality and Hainan Island in the South China Sea.

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