Bull. Natl. Mus. Nat. Sci., Ser. A, Suppl. 3, pp. 1–14, March 22, 2009

Mysids of the Tribes Leptomysini and Heteromysini (Mysida: Mysidae: Mysinae) from the Ogasawara Islands, Southern Japan, with Descriptions of Two New Species

Kouki Fukuoka

Ishigaki Tropical Station, Seikai National Fisheries Research Institute,
148–446 Fukai-Ohta, Ishigaki, Okinawa, 907–0451 Japan
E-mail: fukuokak@fra.affrc.go.jp

Abstract Mysids belonging to the tribes Leptomysini and Heteromysini are reported from shallow and deep waters around the Ogasawara Islands, southern Japan. Two new species, *Doxomysis ishimarui* and *Iimysis ogasawaraensis*, are described. *Australomysis hispida*, *Neobathymysis japonica*, and *Pseudomysidetes japonicus* are recorded from the Ogasawara Islands for the first time.
Key words: Mysida, Leptomysini, Heteromysini, *Doxomysis*, *Iimysis*, new species, Ogasawara Islands.

During faunal surveys of mysids in waters around the Ogasawara Islands by the TR/Vs *Seiyo-maru* and *Shinyo-maru* (Tokyo University of Marine Science and Technology), many species were collected from shallow and deep waters. To date, six species, including two new species, have been reported (Fukuoka and Murano, 2001; Fukuoka *et al.*, 2002): *Meierythrops parvispina* Fukuoka and Murano, 2001; *Nipponomysis brevicauda* Fukuoka and Murano, 2001; *Anisomysis akajimaensis* Murano, 1990; *Anisomysis bifurcata* Tattersall, 1912; *Anisomysis enewetakensis* Murano, 1983; and *Anisomysis pelewensis* Ii, 1964.

This paper provides a taxonomic account of five species in the tribes Leptomysini and Heteromysini from the Ogasawara Islands, including two new species of the genera *Doxomysis* Hansen, 1912 and *Iimysis* Nouvel, 1966.

Materials and Methods

Samples were collected in the vicinity of the Ogasawara Islands (Fig. 1) on 18 and 19 June 1995 during a cruise of the TR/V *Seiyo-maru* and on 18–20 October 1998 during a cruise of the TR/V *Shinyo-maru* from just above the seafloor with a bottom net (mouth opening 80 cm width, 44 cm height; mesh opening 1.0 mm) without an opening-closing device and by a surface tow with a larva net (130 cm diameter). In shallow waters of Chichi-jima Island, Ani-jima Island, and Haha-jima Island (Fig. 1), sampling was also conducted using a hand-net (30 cm diameter; 0.33 mm mesh) by skin or scuba diving on 16–19 June 1995 and with a light-trap on 27 June 2003.

The body length was measured from the tip of the rostrum to the posterior end of the telson excluding spines. The specimens examined are lodged in the National Museum of Nature and Science, Tokyo (NSMT).

Taxonomic Account

Family **Mysidae**

Subfamily **Mysinae**

Tribe **Leptomysini** Hansen, 1910

Doxomysis ishimarui sp. nov.

[New Japanese name: Ishimaru-hoso-ami]

(Figs. 2–4)

Material examined. Holotype: NSMT-Cr 18138, adult male (7.0 mm, dissected), stn OS11,

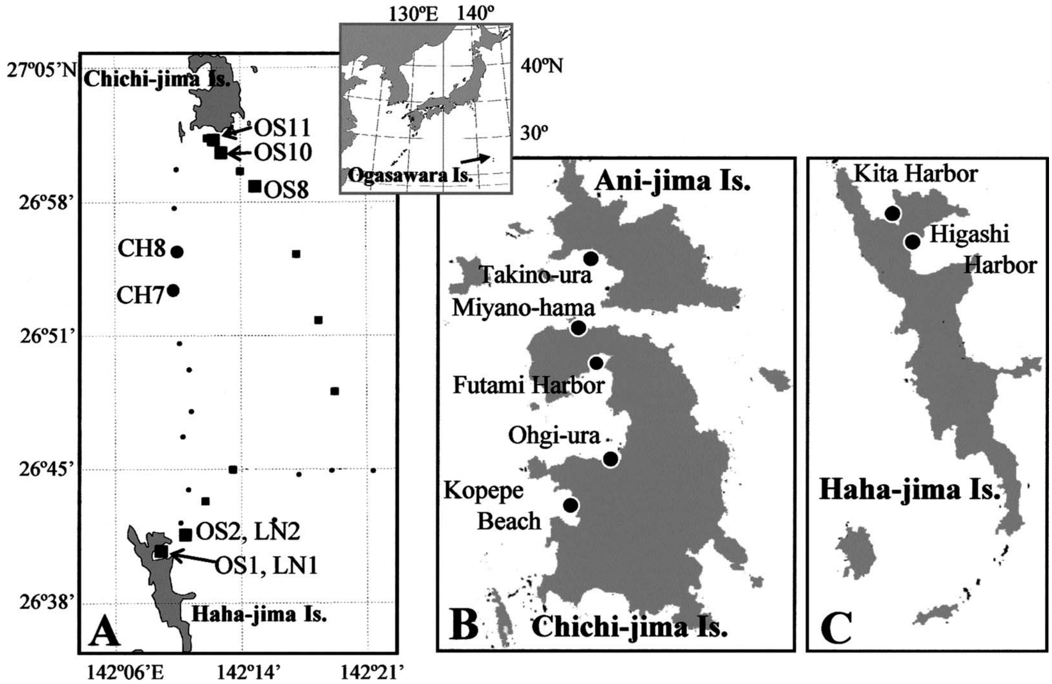

Fig. 1. Maps of sampling location. A, sampling stations between Chichi-jima Island and Haha-jima Island during cruises of TR/Vs *Seiyo-maru* on 18–19 June 1995 and *Shinyo-maru* on 18–20 October 1998; B, sampling stations in Chichi-jima Island and Ani-jima Island; C, sampling stations in Haha-jima Island.

27°01.74′N 142°12.48′E, 95–99 m, bottom net, 06:10, 19 June 1995.

Paratypes: NSMT-Cr 18139, 1 adult male (7.2 mm), 1 young female (5.4 mm), stn OS2, 26°42.02′N 142°10.95′E, 168 m, bottom net, 19:09, 18 June 1995; NSMT-Cr 18140, 1 adult male (6.2 mm), stn OS10, 27°01.17′N 142°13.05′E, 124 m, bottom net, 05:01, 19 June 1995.

Description. Integument smooth.

Carapace short; rostral plate (Fig. 2A, B) triangular with rounded apex extending to base of antennular peduncle, lateral margin of rostrum almost straight or slightly convex, not covering eyestalk; anterolateral corner rounded; posterior margin not emarginate, leaving last 3 thoracic somites exposed.

Eye (Fig. 2A, B) well developed, about 1.1 times as long as broad in dorsal view; cornea occupying more than 1/2 of whole organ; eyestalk hispid.

Antennular peduncle of male (Fig. 2A) more robust than that of female; first segment about 1.8 times as long as broad, armed with 2 long and 3 short plumose setae at outer distal corner; second segment short, 2/3 as long as broad; third segment slightly shorter than first, with developed appendix masculina. In female (Fig. 2B), first segment 2.8 times as long as broad, subequal in length with second and third segments combined; second segment armed with 1 long plumose seta at inner distal corner; third segment armed with 1 plumose seta on middle of inner margin and with several long setae at inner distal corner.

Antennal scale (Fig. 2A–D) long and slender, lanceolate with rounded apex, extending beyond distal end of antennular peduncle by 1/5 of its length in male and by 1/4 in female, with setae on entire margin, 6.3 times as long as broad, with suture near apex; distal segment 1/10 of scale length. Antennal peduncle (Fig. 2C, D) not reaching proximal 1/3 of scale, all segments subequal in length.

Labrum (Fig. 2E) without spine on anterior

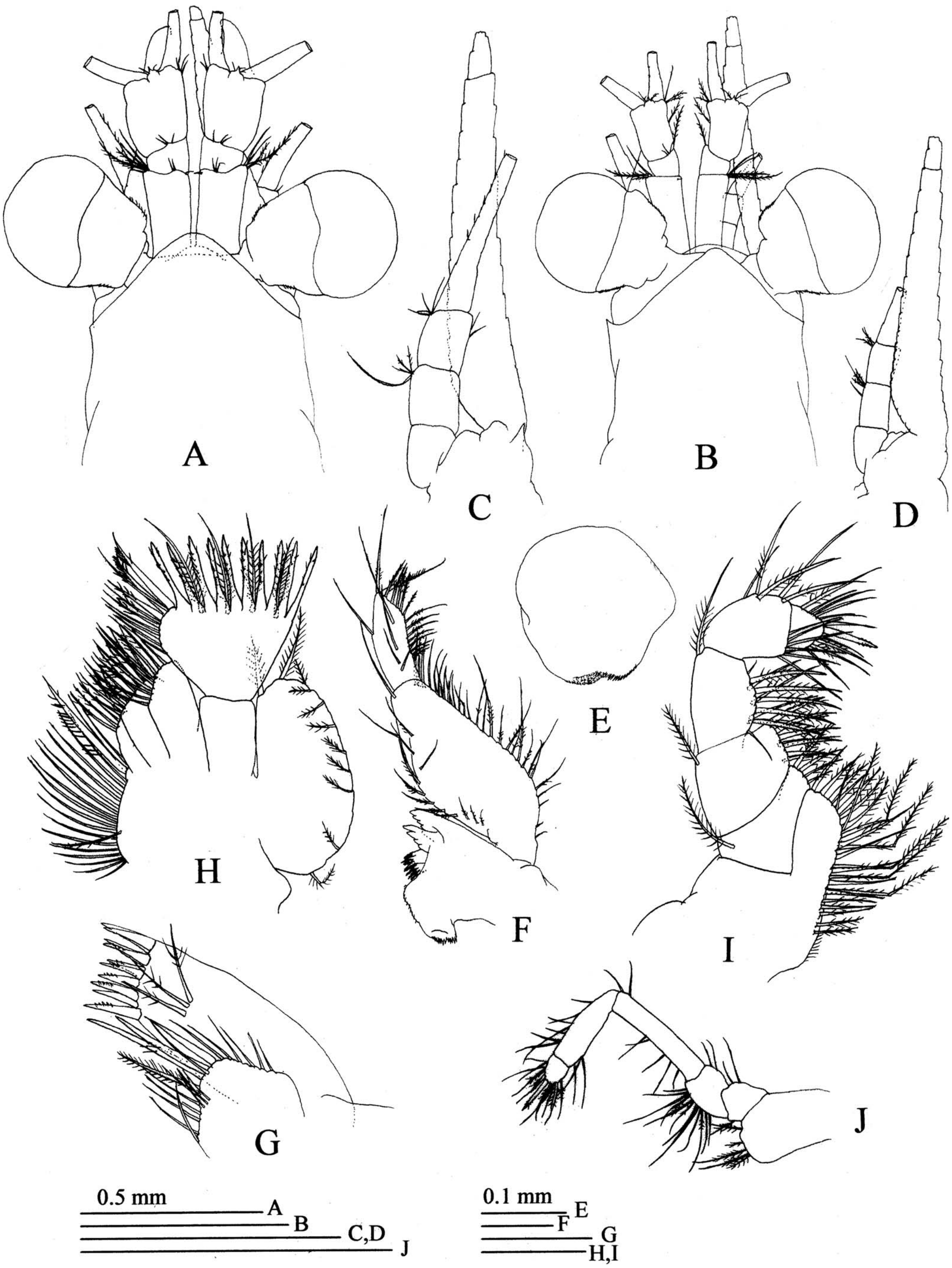

Fig. 2. *Doxomysis ishimarui* sp. nov. A, C, F, G–I, holotype (adult male, 7.0 mm), NSMT-Cr 18138; B, D, E, J, paratype (young female, 5.4 mm), NSMT-Cr 18139. A, B, anterior part of body, dorsal view; C, D, left antenna, ventral view; E, labrum, ventral view; F, left mandible, posterior view; G, left maxillule, posterior view; H, left maxilla, posterior view; I, endopod of left first thoracopod, anterior view; J, endopod of left second thoracopod, posterior view.

margin.

Mandibular palp (Fig. 2F) with second segment 2.2 times as long as broad, armed with numerous setae on inner and outer margins; third segment almost 1/2 length of second and 2.7 times as long as broad. Outer lobe of maxillule (Fig. 2G) armed with about 10 spines on distal margin and 3 setae near distal margin of posterior surface; inner lobe armed with 3 robust spiniform setae on distal margin and several setae on margins. Second segment of endopod of maxilla (Fig. 2H) 1.4 times as wide as long, armed with 10 strong and blunt spines and 4 setae on distal margin, spines sparsely setulose on margins; exopod (Fig. 2H) about twice as long as broad.

Endopods of first and second thoracopods (Fig. 2I, J) short and robust. Endopods of third to eighth thoracopods (Fig. 3A–D) slender; carpopropodus subequal in length to merus, divided into 3 subsegments, proximal 2 subsegments separated by oblique articulation and distal 2 subsegments separated by nearly transverse articulation. Exopods (Fig. 3B, D) with flagellum 8-segmented in first and eighth thoracopods, 9-segmented in second to seventh; basal plates with tiny spine at outer distal corner.

Penis (Fig. 3E) 2.1 times as long as broad in lateral view, armed with 9 mesially directed setae on distal margin and 5 setae on distal 1/3 of anterior margin.

Marsupium composed of 2 pairs of brood lamellae.

First to fifth abdominal somites subequal in length; sixth somite 1.5 times as long as fifth somite.

Pleopods of male well developed, biramous. First pleopod (Fig. 3F) with endopod reduced to unsegmented lobe, exopod 7-segmented. Second, third and fifth pleopods (Fig. 3G, H, L) with 6-segmented endopod and 7-segmented exopod. Fourth pleopodal endopod (Fig. 3I) 6-segmented. Fourth pleopodal exopod (Fig. 3I–K) modified, 8-segmented, about 1.3 times longer than endopod; sixth segment armed with long and robust seta extending to tip of terminal long seta and being spinous on distal 1/2; seventh segment armed with long, strong, setulose seta, which is 2.3 times longer than own segment; terminal segment short, 1/3 of preceding one, armed with 2 unequal, naked setae, longer seta twice as long as terminal segment proper, shorter seta 2/5 of long seta in length. Pseudobranchial lobe of all pleopods rectangular (Fig. 3F–I, L).

Pleopods of female reduced in unsegmented single lobe.

Endopod of uropod (Fig. 4A–C) 1.4 times as long as telson, armed with 47–55 spines on inner ventral margin from statocyst region to near tip, these spines arranged alternately with 1 larger and 1–4 smaller ones. Exopod of uropod (Fig. 4B, C) 1.9 times as long as telson, 1.4 times longer than endopod.

Telson (Fig. 4B–D) with apical cleft, 1.1 times longer than sixth abdominal somite, 1.7 times as long as maximum breadth at base; lateral margin concave in proximal 1/2, almost straight or slightly convex in distal 1/2, armed with large spine at base and 16–18 spines gradually increasing in size posteriorly; apical lobe armed with 4 large spines on apex, outer 2 spines about 1.3 times as long as inner ones, inner 2 spines slightly flattened on distal 1/2; apical cleft occupying 1/3 of telson length, armed on entire length of each side with 15–20 teeth and at anterior end with pair of plumose setae extending beyond apical spines.

Remarks. The genus *Doxomysis* comprises 17 species and is distributed throughout the Indo-Pacific Ocean (Talbot, 1997; Wooldridge and Mees, 2000; Panampunnayil, 2002). *Doxomysis ishimarui* sp. nov. is characterized as follows: eyes normally developed; labrum lacks frontal spiniform process; carpopropodi of the endopods of the third to eighth thoracopods divided into three subsegments; exopod of the fourth pleopod of the male with two unequal setae at the tip; uropodal endopod armed with more than 40 spines on the inner margin; and telson armed with spines along the entire length of the lateral margin. The new species is most similar to *D. longiura* Pillai, 1963, but differs in having the following characters (cf. Pillai, 1963): the body

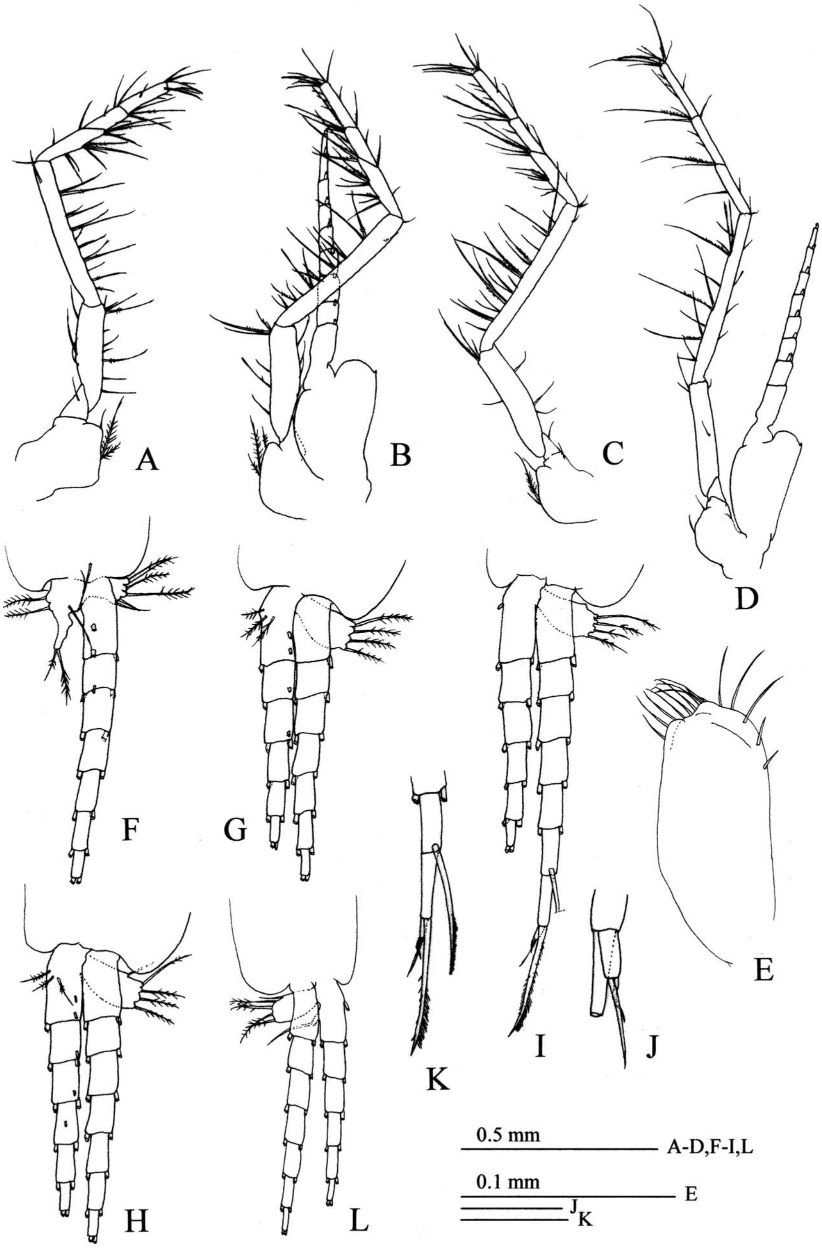

Fig. 3. *Doxomysis ishimarui* sp. nov. A–J, holotype (adult male, 7.0 mm), NSMT-Cr 18138; K, L, paratype (adult male, 7.2 mm), NSMT-Cr 18139. A, endopod of right fourth thoracopod, lateral view; B, right fifth thoracopod, mesial view; C, endopod of left seventh thoracopod, lateral view; D, endopod of left eighth thoracpod, lateral view; E, left penis, lateral view; F, left first pleopod, anterior view; G, left second pleopod, anterior view; H, left third pleopod, anterior view; I, left fourth pleopod, anterior view; J, ultimate segment of exopod of fourth pleopod, posterior view; K, distal two segments of exopod of fourth pleopod, anterior view; L, left fifth pleopod, posterior view.

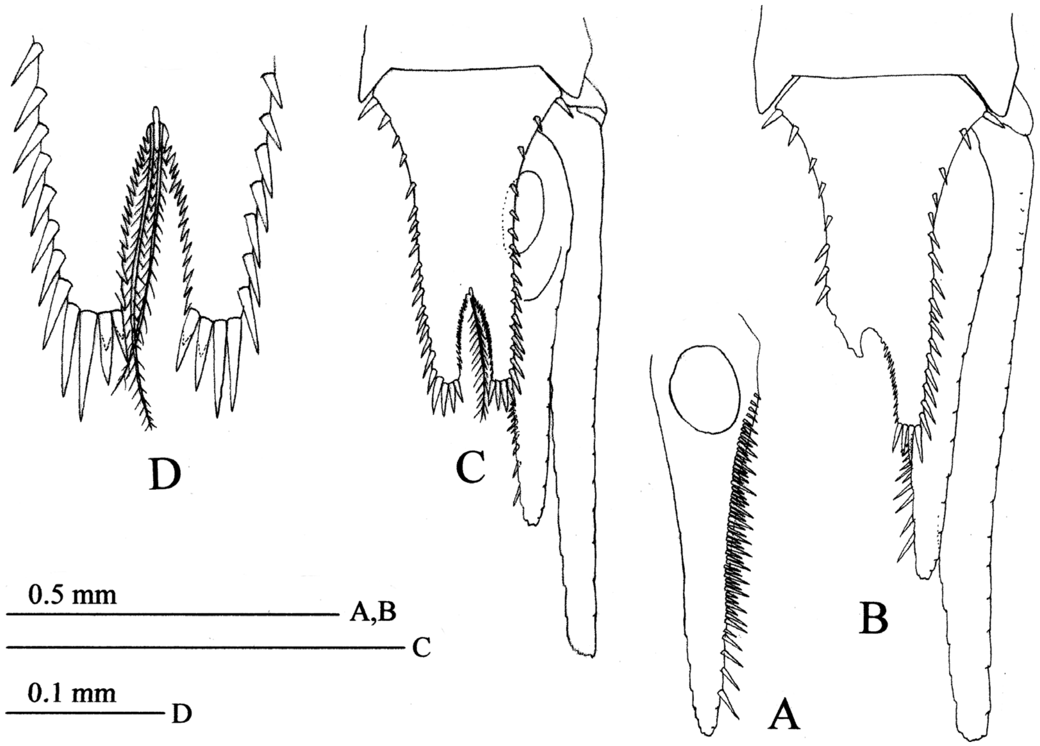

Fig. 4. *Doxomysis ishimarui* sp. nov. A, B, holotype (adult male, 7.0 mm), NSMT-Cr 18138; C, paratype (young female, 5.4 mm), NSMT-Cr 18139; D, paratype (adult male, 7.2 mm), NSMT-Cr 18140. A, uropodal endopod, ventral view; B, C, uropod and telson, dorsal view; D, apical part of telson, dorsal view.

surface is smooth in *D. ishimarui*, but hispid in *D. longiura*; the distal segment of the endopod of the maxilla is 1.4 times wider than long in *D. ishimarui*, but twice wider than long in *D. longiura*; and the spines on the inner margin of the uropodal endopod are not flattened in *D. ishimarui*, whereas those on the distal half of the margin are flattened in *D. longiura*.

Doxomysis ishimarui is readily distinguishable from *D. rinkaiensis* Valbonesi and Murano, 1980, which was heretofore the only known *Doxomysis* species from Japanese waters, by the following characters (cf. Valbonesi and Murano, 1980): (1) the rostrum of *D. ishimarui* is triangular with a rounded apex and straight or slightly concave lateral margins, whereas that of *D. rinkaiensis* is triangular with a pointed apex and concave lateral margins; (2) the tip of the exopod of the fourth male pleopod is armed with two unequal setae in *D. ishimarui*, as opposed to a single seta in *D. rinkaiensis*.

Etymology. The species is named in honor of Professor Takashi Ishimaru, who was the director of the cruises to the Ogasawara Islands.

Iimysis ogasawaraensis sp. nov.

[New Japanese name: Ogasawara-namima-ami]

(Figs. 5–6)

Material examined. Holotype: NSMT-Cr 18141, adult male (6.0 mm, dissected), Miyanohama, Chichi-jima Island, 2.5 m, sand, light trap, 27 June 2003, collected by K. Fukuoka.

Paratypes: NSMT-Cr 18142, 1 adult female (6.3 mm, dissected), same data as holotype; NSMT-Cr 18143, 10 adult males (5.5–6.4 mm), 10 adult females (5.6–6.4 mm), same data as holotype.

Other material. NSMT-Cr 18144, 2 juveniles (2.8, 3.4 mm), Futami Harbor, Chichi-jima Island, pier, surface, hand-net towing under electric light at night, 16 June 1995, collected by K. Fukuoka; NSMT-Cr 18145, 14 adult males (4.3–5.4 mm), 47 adult females (5.1–6.5 mm), 3 immature females (4.3–4.8 mm), stn LN1, Higashi Harbor, Haha-jima Island, surface, larva net, 18 June 1995; NSMT-Cr 18146, 1 adult male (5.2 mm), stn LN2, 26°41.51′N 142°10.08′E, surface, larva net, 18:45, 18 June 1995; NSMT-Cr 18147, 60 adult males (4.2–6.0 mm), 165 adult females (4.8–6.3 mm), 4 immature females (4.2–4.5 mm), stn OS1, 26°41.24′N 142°09.47′E, 66 m, bottom net, 18:37, 18 June 1995; NSMT-Cr 18148, 5 adult males (4.8–5.3 mm), 12 adult females (4.7–5.8 mm), stn OS2, 26°42.02′N 142°10.95′E, 168 m, bottom net, 19:09, 18 June 1995; NSMT-Cr 18150, 3 immature males (3.6–4.0 mm), 2 adult females (4.6, 4.6 mm), 4 immature females (3.8–4.0 mm), abundant juveniles (1.8–3.4 mm), Takinoura, Ani-jima Island, 15 m, rock and coral, hand-net by scuba diving, 20 June 1995, collected by T. Ishimaru; NSMT-Cr 18151, 19 adult males (5.4–6.0 mm), 36 adult females (5.4–6.2 mm), Miyano-hama, Chichi-jima Island, 2.5 m, sand, light trap, 27 June 2003, collected by K. Fukuoka.

Description. Integument smooth.

Rostral plate (Fig. 5A, B) short triangular, reaching or slightly beyond base of antennular peduncle, with obtuse apex and slightly concave lateral margins. Anterolateral corner of carapace rounded. Posterior margin of carapace not emarginate, leaving last 3 thoracic somites uncovered.

Eyes (Fig. 5A, B) 1.5–1.6 times as long as broad in dorsal view; cornea occupying 2/5 of eye; eyestalks narrower than cornea.

Antennular peduncle of male (Fig. 5A) more robust than that of female, first segment 1.6 times as long as broad, third segment as long as first, with well-developed appendix masculina; in female (Fig. 5B), first segment 2.8 times as long as broad, third segment slightly shorter than first.

Antennal scale (Fig. 5A–C) long, narrowly lanceolate with rounded apex, extending beyond distal end of antennular peduncle, 8 times as long as broad in male, 8.8 times as long as broad in female, setose on all margins, with subapical suture. Antennal peduncle (Fig. 5C) extending to distal 2/5 of scale. Antennal sympod (Fig. 5C) with spiniform process at outer distal angle.

Labrum (Fig. 5D) with long, acute spiniform process on anterior margin.

Mandibular palp (Fig. 5E) with second segment slightly expanded in middle part, armed sparsely with setae on inner margin; third segment 3/5 of second segment in length. Outer lobe of maxillule (Fig. 5F) armed with about 10 spines on distal margin and 3 setae near apex on posterior surface. Second segment of endopod of maxilla (Fig. 5G) 1.3 times as long as broad, armed with 6–10 spines on distal margin; exopod extending slightly beyond base of second segment of endopod, armed with plumose setae on outer and apical margins.

Endopods of first and second thoracopods (Fig. 5H, I) short, robust. Endopods of third to eighth thoracopods (Figs. 5J, K, 6A, B) slender; carpopropodus divided into 3 subsegments by articulations running transversely, proximal subsegment as long as succeeding 2 subsegments combined in third to seventh thoracopods and as long as distal subsegment in eighth, middle subsegment slightly shorter than distal subsegment. Exopods (Fig. 5H) with flagellum 8-segmented in first and eighth thoracopods and 9-segmented in second to seventh; outer distal corner of basal plate with acute tiny process in first to third thoracopods and rounded in fourth to eighth.

Penis (Fig. 6C) expanded posteriorly, bilobed distally, armed with 12 mesially curved setae on distal margin of outer lobe.

Female with rudimentary oostegite on sixth thoracopod and developed oostegite on seventh and eighth thoracopods.

Abdominal somites gradually decreasing in length from first to fourth; fifth somite 1.2–1.3 times as long as fourth; sixth somite longest, 1.7 times longer than fifth.

All pleopods of male developed, biramous. First pleopod (Fig. 6D) with endopod reduced to unsegmented lobe, exopod 7-segmented. Second, third and fifth pleopods (Fig. 6E, H) with 6-seg-

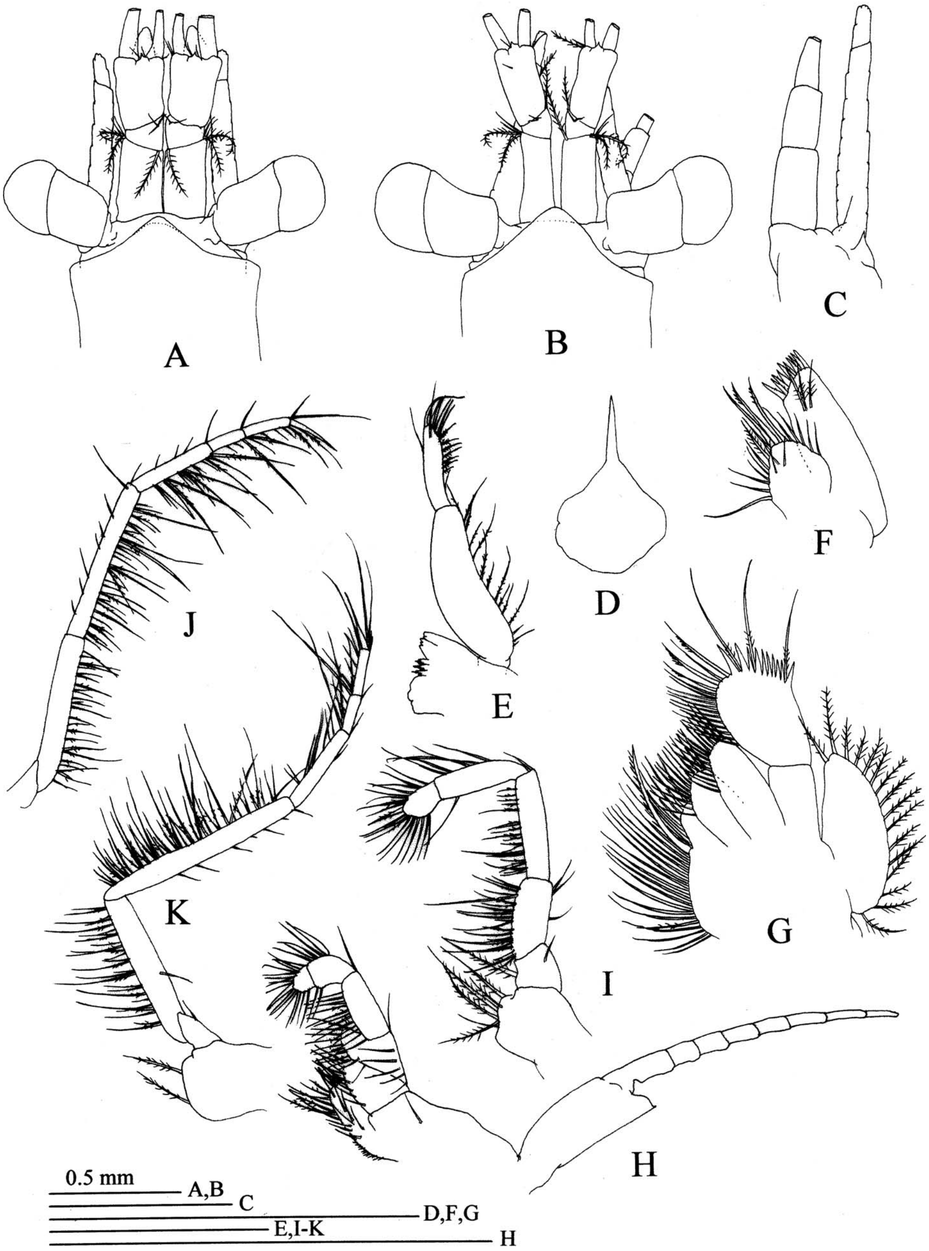

Fig. 5. *Iimysis ogasawaraensis* sp. nov. A, C, E, K, holotype (adult male, 6.0 mm), NSMT-Cr 18141; B, D, F–I, paratype (adult female, 6.3 mm), NSMT-Cr 18142; J, paratype (adult male, 5.5 mm), NSMT-Cr 18143. A, B, anterior part of body, dorsal view; C, left antenna, ventral view; D, labrum, ventral view; E, left mandible, posterior view; F, left maxillule, posterior view; G, left maxilla, posterior view; H, left first thoracopod, posterior view; I, endopod of left second thoracopod, posterior view; J, endopod of left third thoracopod, anterior view; K, endopod of left fifth thoracopod, posterior view.

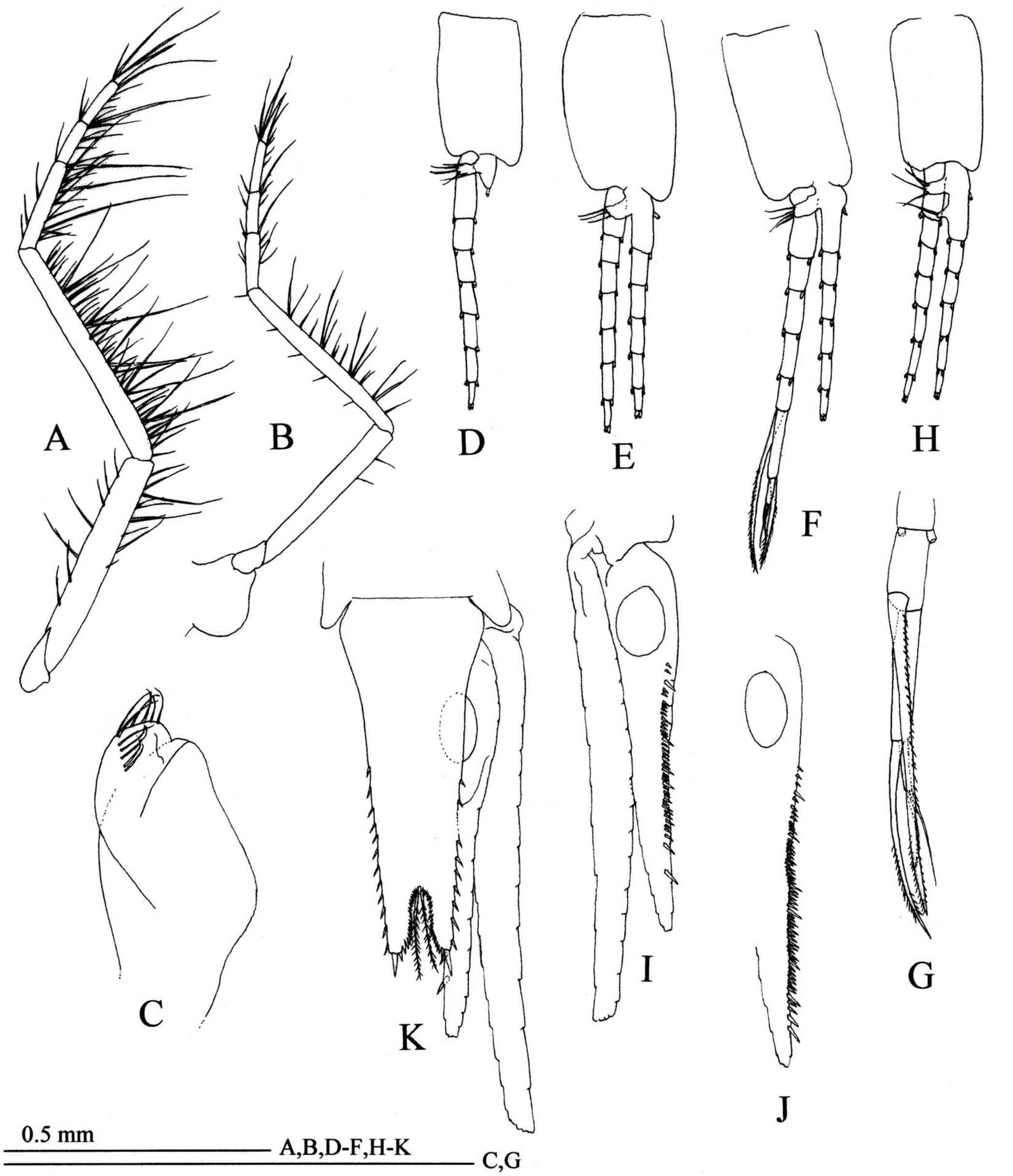

Fig. 6. *Iimysis ogasawaraensis* sp. nov. A, J, paratype (adult female, 6.3 mm), NSMT-Cr 18142; B, D, paratype (adult male, 5.5 mm), NSMT-Cr 18143; C, E–I, K, holotype (adult male, 6.0 mm), NSMT-Cr 18141. A, endopod of left seventh thoracopod, anterior view; B, endopod of left eighth thoracopod, anterior view; C, left penis, posterior view; D, left first pleopod, posterior view; E, left second pleopod, posterior view; F, left fourth pleopod, posterior view; G, distal three segments of exopod of left fourth pleopod, anterior view; H, left fifth pleopod, posterior view; I, uropod, ventral view; J, uropodal endopod, ventral view; K, uropod and telson, dorsal view.

mented endopod and 7-segmented exopod slightly longer than endopod. Fourth pleopodal endopod (Fig. 6F) 6-segmented, extending to base of penultimate segment of exopod. Fourth pleopodal exopod (Fig. 6F, G) 1.4 times as long as endopod, 7-segmented; antepenultimate segment with long, strong, spiniform seta, which is slightly curved inwardly and extending beyond tip of terminal setae; penultimate segment long, twice as long as preceding one, armed with long, spiniform seta; ultimate segment short, 2/5 of penultimate segment in length, armed with 2 unequal setae on distal end. Pseudobranchial lobe of all pleopods rectangular (Fig. 6D–F, H).

All pleopods of female reduced to unsegmented single lobe, gradually increasing in length from first to fifth pleopods; fifth pleopod 2.5 times as long as first and 1.4 times as long as fourth.

Uropodal endopod (Fig. 6I–K) extending beyond tip of telson by 1/5 of its length, armed with 40–55 unequal spines on inner ventral margin from statocyst region to distal 1/10–1/7. Uropodal exopod (Fig. 6I, K) 1.2–1.3 times as long as endopod.

Telson (Fig. 6K) almost as long as sixth abdominal somite, 2.4–2.6 times as long as maximum breadth at base, apically cleft; lateral margin slightly concave on proximal 1/3, armed with 8–13 subequal spines on posterior 1/2–3/5; apical lobe armed on distal end with large spine being twice as long as spines on lateral margins; apical cleft 1/6–1/5 of telson length, armed with 22–28 teeth on entire length of each side and pair of long plumose setae at anterior end.

Remarks. The genus *Iimysis* was heretofore represented by two species: *I. orientalis* (Ii, 1937) from Japan (Ii, 1937) and the South China Sea (Liu and Wang, 2000), and *I. atlantica* (Nouvel, 1942) from the Bay of Biscay (Nouvel, 1942; 1943). These two species are distinguished by the setal arrangement of the antennal scale, shape of the thoracopodal endopods, number of spines of the uropodal endopod and telson, and the arrangement of spines of the telson (Nouvel, 1942).

Iimysis ogasawaraensis sp. nov. is allied to *I. atlantica* based on the characters of the uropodal endopod and the telson. However, *I. ogasawaraensis* differs from *I. atlantica* in the following characters (cf. Nouvel, 1942; 1943): the eyestalk is narrower than the cornea in *I. ogasawaraensis*, but slightly wider than the cornea in *I. atlantica*; the antennal scale is armed with setae along the entire length of the outer margin in *I. ogasawaraensis*, whereas no setae are present on the proximal third of the margin in *I. atlantica*; and the carpopropodi of the endopods of the thoracopods and uropods are more slender in *I. ogasawaraensis* than in *I. atlantica*.

Iimysis ogasawaraensis is distinguished from *I. orientalis* by the armature of the uropodal endopod and telson. The uropodal endopod is armed with 42 to 53 spines on the inner margin in *I. ogasawaraensis*, as opposed to 70 spines in *I. orientalis* (Ii, 1937). The lateral margin of the telson is armed with 8 to 13 spines on the posterior half to three-fifths in *I. ogasawaraensis*, but armed with 20 spines on the posterior two-thirds and a spine near the base distinctly separated from the remaining spines in *I. orientalis* (Ii, 1937).

Etymology. The species name is derived from the type locality, Ogasawara Islands.

Australomysis hispida Fukuoka and Murano, 1994

[New Japanese name: Samehada-minami-hoso-ami]

(Fig. 7)

Australomysis hispida Fukuoka and Murano, 1994: 18, figs. 1–3; Bravo, 1994: 9, figs. 6–11.

Material examined. NSMT-Cr 18136, 5 adult males (5.2–6.6 mm), 1 immature male (4.4 mm), 9 adult females (5.6–8.8 mm), 2 immature females (4.0, 5.1 mm), 2 juveniles (3.2, 3.6 mm), Higashi Harbor, Haha-jima Island, 1–5 m, rock and coral, hand-net by skin diving, 18 June 1995, collected by K. Fukuoka; NSMT-Cr 18137, 34 adult males (4.8–6.6 mm), 26 immature males (3.6–4.6 mm), 12 adult females (5.6–8.0 mm), 37 immature females (4.0–5.2 mm), 32 juveniles

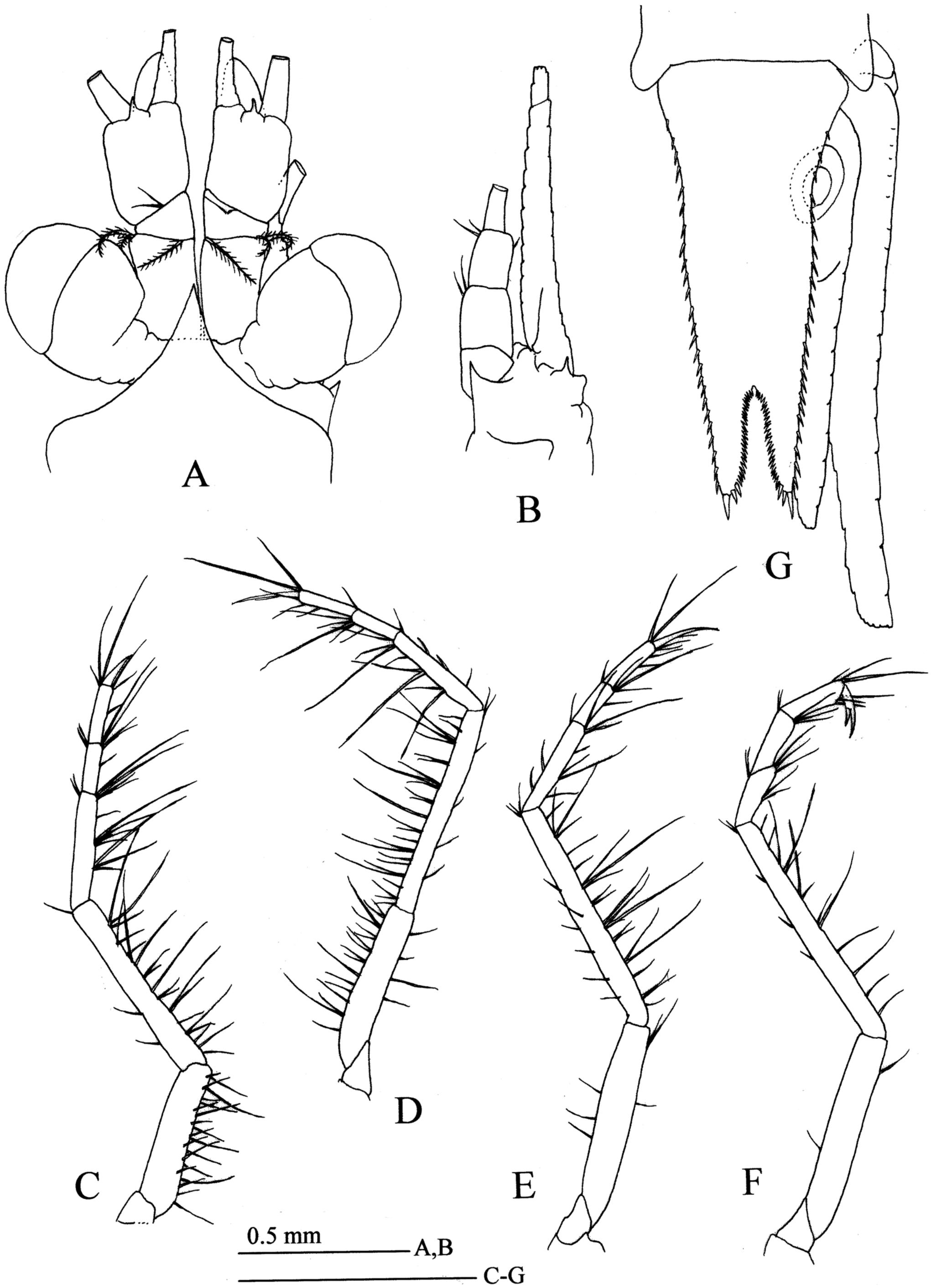

Fig. 7. *Australomysis hispida* Fukuoka and Murano, 1994. Adult male (6.6 mm), NSMT-Cr 18136. A, anterior part of body, dorsal view; B, left antenna, ventral view; C, endopod of left third thoracopod, mesial view; D, endopod of right fourth thoracopod, mesial view; E, endopod of left seventh thoracopod, mesial view; F, endopod of left eighth thoracopod, mesial view; G, uropod and telson, dorsal view.

(1.8–3.8 mm), Kopepe Beach, Chichi-jima Island, 1–2 m, rock and coral, hand-net by skin diving, 19 June 1995, collected by K. Fukuoka.

Distribution. Pacific side of central Japan: Kanagawa and Chiba Prefectures (Fukuoka and Murano, 1994), and Nii-jima Island of the Izu Islands (Bravo, 1994). It is revealed that this species is distributed in the Izu-Ogasawara Archipelago.

This species was collected from waters shallower than 5 m (Fukuoka and Murano, 1994). In the Ogasawara Islands, this species forms swarms just above the bottom and around rocks or corals in waters shallower than 5 m.

Remarks. Fukuoka and Murano (1994) did not provide a description and illustration of the endopods of the third to seventh thoracopods because they were missing in their specimens. This is first description of these characters for this species. The carpopropodi of these thoracopods differ in shape from that of the eighth thoracopod. In the eighth thoracopod, the proximal and middle subsegments of the carpopropodus are short and divided by an oblique articulation (Fig. 7F); however, in the third to seventh thoracopods, these subsegments are long and divided by a transverse articulation (Fig. 7C–E). The dactylus is also different: that of the eighth thoracopod is armed with a spine in the middle of the inner margin (Fig. 7F), whereas those of the third to seventh thoracopods do not have such spines (Fig. 7C–E).

Variation in the length of the rostrum was reported by Fukuoka and Murano (1994). The apex of the rostrum in the present specimens extends to the middle of the first segment of the antennular peduncle (Fig. 7A).

Neobathymysis japonica Bravo and Murano, 1996

[New Japanese name: Nihon-kenashi-hoso-ami]

(Fig. 8)

Neobathymysis japonica Bravo and Murano, 1996b: 502, figs. 1, 2.

Material examined. NSMT-Cr 18152, 1 immature female (damaged, 8 mm from the tip of the rostrum to the posterior end of the sixth abdominal somite), stn OS8, 26°59.42′N 142°15.02′E,

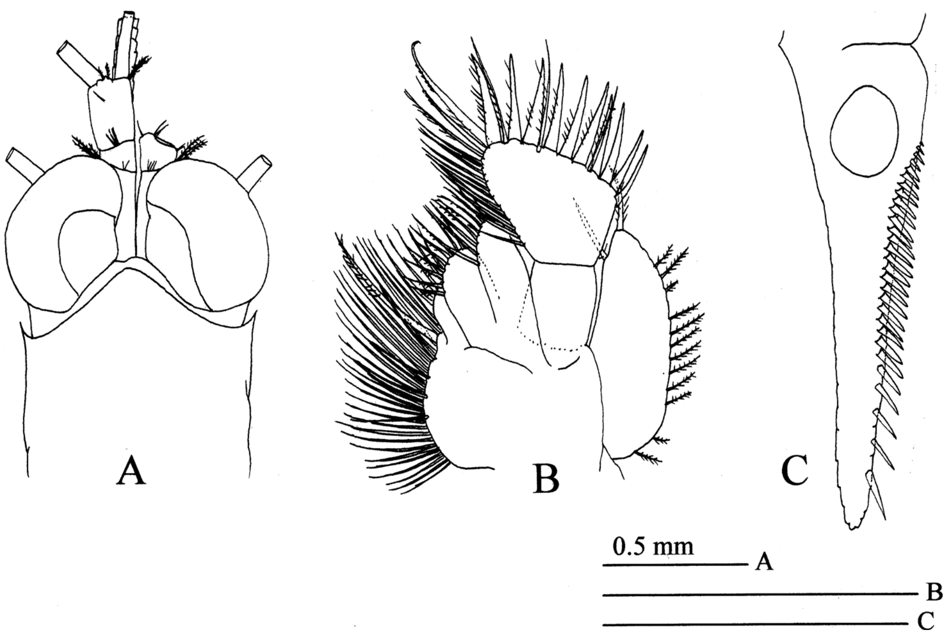

Fig. 8. *Neobathymysis japonica* Bravo and Murano, 1996. Immature female, NSMT-Cr 18152. A, anterior part of body, dorsal view; B, left maxilla, posterior view; C, uropodal endopod, ventral view.

357–481 m, bottom net, 03:31, 19 June 1995.

Distribution. Pacific side of central Japan (Tateyama Bay and Suruga Bay) and the East China Sea (Bravo and Murano, 1996b). This is the first record from the Ogasawara Islands.

Remarks. The present specimen agrees well with the original description.

Tribe **Heteromysini** Hansen, 1910

Pseudomysidetes japonicus Bravo and Murano, 1996

[New Japanese name: Nihon-kazari-ago-ami]

(Fig. 9)

Pseudomysidetes japonicus Bravo and Murano, 1996a: 477, figs. 1, 2.

Material examined. NSMT-Cr 18153, 1 immature male (8.8 mm), 1 juvenile (5.6 mm), stn OS8, 26°59.42′N 142°15.02′E, 357–481 m, bottom net, 03:31, 19 June 1995; NSMT-Cr 18154, 1 adult female (12.0 mm, dissected), same data as NSMT-Cr 18153; NSMT-Cr 18155, 1 adult male (9.1 mm), 1 juvenile (6.3 mm), stn CH7, 26°54.30′N 142°10.28′E, 201–225 m, bottom net, 02:18, 20 October 1998; NSMT-Cr 18156, 1 adult male (damaged), 1 immature female (6.8 mm), stn CH8, 26°56.21′N 142°10.41′E, 184–190 m, bottom net, 03:13, 20 October 1998.

Distribution. Boso Peninsula and Suruga Bay, both located on the Pacific side of central Japan (Bravo and Murano, 1996a). The present material represents the first record of the species from the Ogasawara Islands and slightly extends the bathymetric range of this species from 55–120 m (Bravo and Murano, 1996a) to 184–481 m.

Remarks. The specimens from the Ogasawara Islands agree with the original description of *Pseudomysidetes japonicus* except for the number of spines on the uropodal endopod. The uropodal endopod of the Ogasawara specimens is armed with a single spine located on the distal third to two-fifths (Fig. 9C) as opposed to two spines on the middle part in the original description. This difference is probably a local variation.

The genus *Pseudomysidetes* Tattersall, 1936, includes three species other than *P. japonicus*: *P. cochinensis* Panampunnayil, 1977 from India (Panampunnayil, 1977); *P. nudus* Fukuoka and

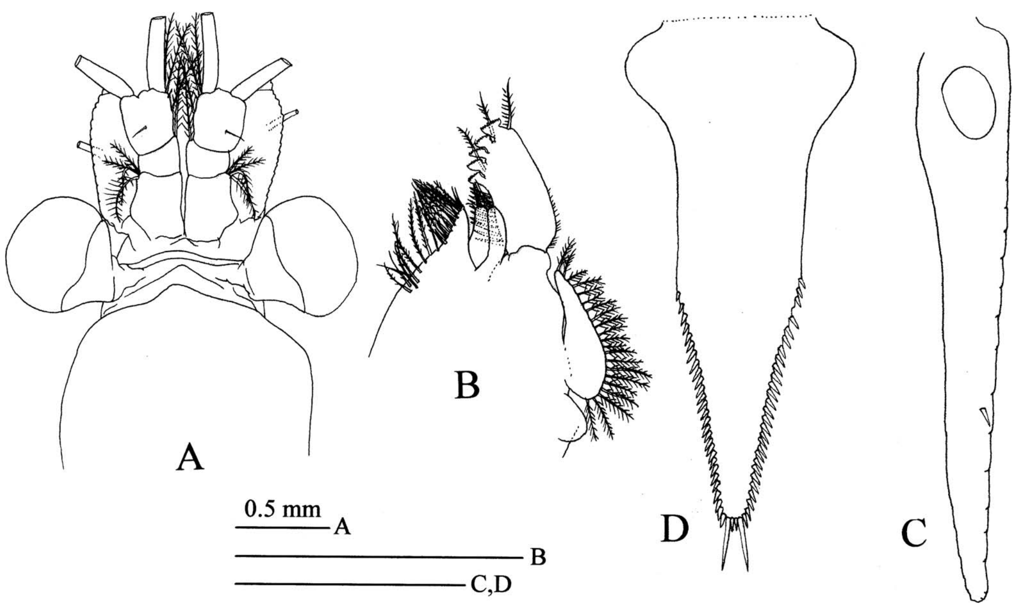

Fig. 9. *Pseudomysidetes japonicus* Bravo and Murano, 1996. Adult female (12.0 mm), NSMT-Cr 18154. A, anterior part of body, dorsal view; B, left maxilla, posterior view; C, uropodal endopod, ventral view; D, telson, dorsal view.

Murano, 2002, from the southeastern Andaman Sea (Fukuoka and Murano, 2002); and *P. russelli* Tattersall, 1936, from the Great Barrier Reef, Australia (Tattersall, 1936). *Pseudomysidetes japonicus* is readily distinguished from *P. cochinensis* and *P. russelli* by the absence of a spiniform process at the outer-distal angle on the second segment of the endopod of the maxilla (Fig. 9B). It is distinguished from *P. nudus* by the number of subsegments of the carpopropodus of the third thoracopodal endopod (five in *P. japonicus* and four in *P. nudus*) and the presence of one or two spines on the uropodal endopod in *P. japonicus* (none in *P. nudus*).

Acknowledgments

I thank Professor T. Ishimaru, members of the Plankton Laboratory, and the captain and crew of TR/Vs *Seiyo-maru* and *Shinyo-maru* of Tokyo University of Fisheries (present name, Tokyo University of Marine Science and Technology) for their cooperation in collecting materials. Thanks are also due to Dr. M. Murano for reviewing the manuscript.

References

Bravo, M. R. 1994. Taxonomic study on the tribe Leptomysini (Crustacea, Mysidacea) in Japanese waters. 101 pp. Unpublished master thesis, Tokyo University of Fisheries, Tokyo.

Bravo, M. R. and M. Murano. 1996a. A new species of the genus *Pseudomysidetes* (Mysidacea) from Japan and relocation of the genus to the Heteromysini. *Crustaceana*, **69**: 476–484.

Bravo, M. R. and M. Murano. 1996b. Description of *Neobathymysis japonica*, a new genus and species, and revision of the genus *Bathymysis* with a new species from Japan (Crustacea: Mysidacea: Mysidae). *Proceedings of the Biological Society of Washington*, **109**: 501–511.

Fukuoka, K., Y. Hanamura and M. Murano. 2002. Supplementary information on the taxonomy and distribution of six species of *Anisomysis* (Crustacea: Mysidacea: Mysidae). *Plankton Biology and Ecology*, **49**: 38–43.

Fukuoka, K. and M. Murano. 1994. A new species of the genus *Australomysis* (Crustacea, Mysidacea) from Japan. *Proceedings of the Japanese Society of Systematic Zoology*, (51): 18–24.

Fukuoka, K. and M. Murano. 2001. Two new species of Mysidacea (Crustacea) from adjacent waters of the Ogasawara Islands, southern Japan. *Bulletin of the National Science Museum, Tokyo*, Ser. A, **27**: 259–269.

Fukuoka, K. and M. Murano. 2002. Mysidacea (Crustacea) from the southeastern Andaman Sea with descriptions of six new species. *Phuket Marine Biological Center Special Publication*, (23): 53–108.

Ii, N. 1937. Studies on Japanese Mysidacea. III. Descriptions of four new species belonging to tribes, Leptomysini and Erythropini. *Japanese Journal of Zoology*, **7**: 191–209.

Liu, R. and S. Wang. 2000. *Fauna Sinica, Order Mysidacea.* 326 pp. Science Press, Beijing. (In Chinese with English abstract.)

Nouvel, H. 1942. Diagnoses préliminaires de Mysidacés nouveaux provenant des Campagnes du Prince Albert I^er^ de Monaco. *Bulletin de l'Institut Océanographique*, (831): 1–12.

Nouvel, H. 1943. Mysidacés provenant des campagnes du Prince Albert I^er^ de Monaco. *Résultats des Campagnes Scientifiques, accomplies sur son yacht, par Albert I^er^, Prince Souverain de Monaco*, **105**: 1–128.

Panampunnayil, S. U. 1977. Three new species of Mysidacea from Kerala coast. *Proceedings of the Symposium on Warm Water Zooplankton, Special Publication, UNESCO/NIO*, 28–35.

Panampunnayil, S. U. 2002. The Mysidacea of the Andaman Sea. *Journal of Plankton Research*, **24**: 371–390.

Pillai, N. K. 1963. On a new mysid from the inshore waters of the Kerala coast. *Journal of Marine Biological Association of India*, **5**: 258–262.

Talbot, M. S. 1997. *Doxomysis acanthina*, a new leptomysinid (Crustacea: Mysidacea) from the northern Great Barrier Reef, Australia, with extensions to the known distributions of *D. australiensis* W. M. Tattersall, 1940 and *D. spinata* Murano, 1990, and a key to the genus *Doxomysis*. *Proceedings of the Biological Society of Washington*, **110**: 426–438.

Tattersall, W. M. 1936. Mysidacea and Euphausiacea. *Great Barrier Reef Expedition 1928–29*, *Scientific Reports*, **4**: 143–176.

Valbonesi, A. and M. Murano. 1980. Mysidae of shallow waster in Tanabe Bay. *Publications of the Seto Marine Biological Laboratory*, **25**: 211–226.

Wooldridge, T. and J. Mees. 2000. *Doxomysis algoaensis*, a new mysid species (Crustacea: Mysidacea) from Algoa Bay (South Africa). *Hydrobiologia*, **421**: 61–68.

Manuscript received 1 May 2008; revised 29 July 2008; accepted 15 October 2008

Associate editor: T. Komai