

Three New Species of the Genus *Iphimedia* from Japan (Crustacea: Amphipoda: Iphimediidae)

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Three new species of the iphimediid amphipod, *Iphimedia declivis*, *I. macrops*, and *I. trigona*, are described from the Pacific coast of Japan. These species can be distinguished from one another by the shapes of pereonites 1, 7, coxa 7, and pereopod 7 basis. A key to the species of the family Iphimediidae in Japan is provided.

Key Words: key, morphology, pereonite, pereopod, pleonite, projection, SCUBA, taxonomy.

Introduction

The family Iphimediidae was established in 1871; however, its definition and comprised genera have been changed many times and confusion about the family had continued for a long time. After J. L. Barnard and Karaman (1991a) included 34 genera in the family, Coleman and J. L. Barnard (1991) revised Iphimediidae and its related families and separated them into eleven families. Lowry and Myers (2017) succeeded Coleman and J. L. Barnard's opinion in general and proposed the superfamily Iphimedioidea composed of eleven families including Sicafoidiidae and Vicmusiidae. The Iphimediidae so far includes 15 genera (Lowry and Myers 2017; Horton et al. 2025).

In Japan, only one species of the Iphimediidae, *Iphimedia mala* (Hirayama, 1983) as *Cypsiphimedia mala*, was formally described from west Kyushu (Hirayama 1983). During my survey on the Japanese Amphipoda, three undescribed species of the family were collected from the Pacific coast. In the present paper, these species are described as new species in detail, and a key to the iphimediid species of Japan is provided.

Materials and Methods

The specimens examined were collected from the coasts of Shizuoka, Ehime and Ōita prefectures using SCUBA diving. They were dissected and their appendages were drawn using a phase-contrast microscope (Nikon Eclipse E600) with an attached drawing tube (Nikon Y-IDT). Body length was measured from the anterodorsal apex of the pereonite 1 to the tip of the telson in a straight line. The type specimens are deposited in the Osaka Museum of Natural History, Japan (OMNH).

Abbreviations used in the figures are: A, antenna; G, gnathopod; L, left; LL, lower lip; M, male; Md, mandible; Mp, maxilliped; Mx, maxilla; P, palp; Pe, pereopod; Pl, pleopod; R, right; T, telson; U, uropod; and UL, upper lip.

Taxonomic Accounts

Family **Iphimediidae** Boeck, 1871
[Japanese name: Katchū-yokoebi-ka]

Iphimedinae Boeck, 1871: 178.

Iphimediidae: Stebbing 1888: 882; Sars 1895: 372.

Acanthonotozomatidae Stebbing, 1906: 210 (in part); K. H. Barnard 1930: 345 (in part); Gurjanova 1951: 496 (in part); J. L. Barnard 1969: 117 (in part).

Iphimediidae: Watling and Thurston 1989: 298; J. L. Barnard and Karaman 1991a: 378 (in part); Coleman and J. L. Barnard 1991: 261; Lowry and Stoddart 2003: 133; Lowry and Myers 2017: 54.

Type genus. *Iphimedia* Rathke, 1843.

Diagnosis [emended from Coleman and J. L. Barnard (1991)]. Body laterally compressed or subglobular, usually with dorsal projections. Rostrum well developed. Antennae elongate, flagella with 5+ articles; accessory flagellum absent or 1-articulate. Mouthparts conically developed. Epistome and upper lip highly variable. Incisor of mandible variable, raker row absent; molar usually absent or reduced; palp 3-articulate. Lower lip usually lacking inner lobes, with or without distinct inner notches. Inner plate of maxilla 1 ordinary or minute, usually medially setose; outer plate oblique, normally spinose or reduced; palp large or small, 1 or 2-articulate. Inner plate of maxilla 2 rarely with facial setae. Palp of maxilliped 3 or 4-articulate, article 2 produced medially in several genera. Coxae 2–4 more or less acumi-

nate, ventral margins fitting normal ventral parabolic curve of anterior coxae; coxae 1 and 4 not shortened, coxa 1 variable, coxa 4 with large posteroventral lobe, coxa 5 shorter than 4. Gnathopods feeble and usually with elongate carpus and propodus, not sexually dimorphic; gnathopod 1 usually chelate, often flagellar; gnathopod 2 chelate or parachelate (J. L. Barnard and Karaman 1991b: 805), usually slightly longer or stouter than gnathopod 1. Bases of pereopods 5–7 often with posterior cusps or projections. Pleonal epimeron 3 usually with 2 large cusps. Urosomites free. Uropods 1–3 biramous. Rami of uropod 3 longer than peduncle, flattened, lanceolate, outer ramus 1-articulate. Telson entire or weakly incised, generally shorter than peduncle of uropod 3.

Included genera [15 genera, after Lowry and Myers (2017)]. *Anchiphimedia* K. H. Barnard, 1930; *Anisophimedia* Karaman, 1980; *Coboldus* Krapp-Schickel, 1974; *Echiniphimedia* K. H. Barnard, 1930; *Gnathiphimedia* K. H. Barnard, 1930; *Iphimedia*; *Iphimediella* Chevreux, 1911; *Labriphimedia* K. H. Barnard, 1931; *Maxilliphimedia* K. H. Barnard, 1930; *Nodotergum* Bellan-Santini, 1972; *Paranchiphimedia* Ruffo, 1949; *Parapanoploea* Nicholls, 1938; *Pariphimedia* Chevreux, 1906; *Pseudiphimediella* Schellenberg, 1931; and *Stegopanoploea* Karaman, 1980.

Genus *Iphimedia* Rathke, 1843

[Japanese name: Katchū-yokoebi-zoku]

Iphimedia Rathke, 1843: 85; J. L. Barnard 1969: 124; Karaman and J. L. Barnard 1979: 110; Karaman 1980: 52; Watling and Holman 1980: 615; Ruffo and Schiecke 1982: 2; J. L. Barnard and Karaman 1991a: 395; Thomas and J. L. Barnard 1991: 469; Coleman 2007: 92.

Microcheles Krøyer, 1846: 58.

Panoploea Thomson, 1880: 2; J. L. Barnard 1969: 126.

Iphimediopsis Della Valle, 1893: 585.

Cypsiphimedia K. H. Barnard, 1955: 87; J. L. Barnard 1969: 123.

Type species. *Iphimedia obesa* Rathke, 1843, fixed by monotypy.

Emended diagnosis. Body without extra surficial cusps. Antenna 1, peduncular article 2 shorter than 1; accessory flagellum absent or 1-articulate. Upper lip scarcely incised or entire. Mandible elongate, incisor narrow, sagittal, toothed or not; lacinia mobilis present on left side or both sides, molar reduced. Lower lip, inner lobes absent. Maxilla 1, palp 2-articulate, article 2 ordinary. Maxilla 2, inner plate without facial row of setae. Maxilliped, inner plate as long as but narrower than outer plate; palp exceeding outer plate, 3-articulate, article 1 extending laterally or distally, article 2 produced along article 3 or expanded mediodistally. Coxae 1–4 progressively longer. Gnathopods diverse, of similar size, carpi and propodi elongate, narrow; gnathopod 1 filiformly chelate, gnathopod 2 usually parachelate but rarely chelate. Telson entire to incised.

Included taxa (54 species). *Iphimedia ambigua* Haswell, 1879; *I. beesleyae* Coleman and Lowry, 2006; *I. brachygnatha* Ruffo and Schiecke, 1979; *I. caledoniana*

Lowry and Myers, 2003; *I. capicola* K. H. Barnard, 1932; *I. carinata* Heller, 1866; *I. compacta* Ledoyer, 1978; *I. damawan* Lowry and Myers, 2003; *I. declivis* sp. nov.; *I. discreta* Stebbing, 1910; *I. eblanae* Spence Bate, 1857; *I. edgari* (Moore, 1981); *I. excisa* (K. H. Barnard, 1932); *I. filmersankeyi* Coleman and Lowry, 2006; *I. garciensis* Myers, 2014; *I. gibba* (K. H. Barnard, 1955); *I. gibbula* Ruffo and Schiecke, 1979; *I. gladiola* K. H. Barnard, 1937; *I. grossimana* Ledoyer, 1972; *I. imparilabia* Watling and Holman, 1980; *I. jugoslavica* Karaman, 1975; *I. kateae* Coleman and Lowry, 2006; *I. lisae* Coleman and Lowry, 2006; *I. macrocystidis* (K. H. Barnard, 1932); *I. macrops* sp. nov.; *I. magellanica* Watling and Holman, 1980; *I. maitrensis* Lowry and Myers, 2003; *I. mala*; *I. minuta* Sars, 1883; *I. mizegwadan* Lowry and Myers, 2003; *I. multidentata* (Schellenberg, 1931); *I. nanshaensis* Ren, 2012; *I. neuweileri* Coleman and Lowry, 2006; *I. nexa* Myers and McGrath in Myers, McGrath, and Costello, 1987; *I. obesa* Rathke, 1843; *I. oetkeri* Coleman and Lowry, 2006; *I. orchestimana* Ruffo, 1959; *I. pacifica* Stebbing, 1883; *I. perplexa* Myers and Costello in Myers, McGrath, and Costello, 1987; *I. phuketensis* Lowry and Myers, 2003; *I. poorei* Coleman and Lowry, 2009; *I. quasimodus* Ruffo and Schiecke, 1979; *I. rachanoi* Lowry and Myers, 2003; *I. rickettsi* (Shoemaker, 1931); *I. schminkei* Coleman, 2009; *I. serratipes* Ruffo and Schiecke, 1979; *I. spatula* Myers and McGrath in Myers, McGrath, and Costello, 1987; *I. spinosa* (Thomson, 1880); *I. stegosaura* (Griffiths, 1975); *I. trigona* sp. nov.; *I. vicina* Ruffo and Schiecke, 1979; *I. warraina* Thomas and J. L. Barnard, 1991; *I. xesta* Thomas and J. L. Barnard, 1991; and *I. zora* Thomas and J. L. Barnard, 1991.

Remarks. The above species list is based mainly on Horton et al. (2025), but *I. stimpsoni* Spence Bate, 1863 is excluded because this species is regarded as a nomen dubium without detailed descriptions and figures (Stimpson 1856; Spence Bate 1863).

Although J. L. Barnard and Karaman (1991a) included the absence of the accessory flagellum as a character of *Iphimedia* in their key, the accessory flagellum is recognized in six species: *I. mala*, *I. orchestimana*, *I. poorei* and three new species in this study (Hirayama 1983; Lyons and Myers 1990; Coleman and Lowry 2009).

In the above *Iphimedia* species there are two distinct forms in the maxilliped palp: (1) article 1 extending distally and article 2 attached at an obtuse angle to article 1 (e.g., *I. obesa* and *I. declivis* sp. nov.), and (2) article 1 extending laterally and article 2 attached at a right or acute angle to article 1 (e.g., *I. eblanae*, *I. macrops* sp. nov. and *I. trigona* sp. nov.). The two forms may suggest a difference in the function of the maxilliped palp and a mixture of two genera within the genus *Iphimedia*. Because there is no information on the maxilliped in twelve *Iphimedia* species, this problem is not discussed anymore.

Iphimedia declivis sp. nov.

[New Japanese name: Utsumuki-katchū-yokoebi]

(Figs 1–5)

Material examined. Holotype: ovigerous female, 4.6 mm (OMNH-Ar-13308), Ōsezaki, Numazu City, Shizuoka Prefecture, 35°01'36"N, 138°47'05"E, 26 m depth, on a rocky reef with soft corals, 26 March 2015, coll. Y. Kawahara. Paratypes: female, 3.4 mm (OMNH-Ar-13309) and 2 males, 3.3 and 3.3 mm (OMNH-Ar-13310, 13311), same data as holotype; female 3.3 mm (OMNH-Ar-13312), Saeki City, Ōita Prefecture, 7–8 m depth, on an experimental board installed on an artificial reef for fish, 4 March 2008, donated by M. Otani.

Type locality. Ōsezaki, Numazu City, Shizuoka Prefecture, Japan.

Etymology. From the Latin adjective *declivis* (= leaning downward), referring to the shape of pereonite 1.

Description of female. Based on holotype, ovigerous female, 4.6 mm (OMNH-Ar-13308).

Body (Fig. 1) compressed laterally. Surface smooth, lacking scales (see Lowry and Myers 2003).

Head (Figs 1, 2) small, situated beneath pereonite 1. Rostrum strongly projected. Eyes relatively small, reniform, partially covered with pereonite 1. Antenna 1 short; peduncle without projections, with length ratio of articles 1–3 1:0.6:0.4; accessory flagellum minute, 1-articulate, with 4 setae on tip; primary flagellum with 17 articles, articles 3–13 each bearing 2 aesthetascs. Antenna 2 almost same length as antenna 1; peduncle without projections, with ratio of lengths of articles 3–5 1:2.1:2.45; flagellum with 13 articles. Upper lip narrowed distally, slightly asymmetrical, tip weakly hollowed, bare. Mandible, incisor with 5 and 7 cusps in

left and right, respectively, lacinia mobilis present on both sides, slender, tip dentate in left, acute in right, molar small; length ratio of palp articles 1–3 1:2.7:1.4 in right, article 2 with a thick seta subdistally, article 3 with 1 long and 7–8 short thick setae on inner margin and many fine setae on lateral surface. Lower lip, outer lobes with distinct inner notch and mandibular process, setose distally. Maxilla 1, inner plate narrow, tip with 5 setae; outer plate bearing 13 large robust setae (dentate or smooth) on mediodistal margin, ventral surface covered with fine setae; palp article 2 setose mediodistally. Maxilla 2, outer plate with many long distal setae and lateral minute setae; inner plate bearing many long distal setae. Maxilliped with narrow inner plate bearing apical and dorsomedial long setae; outer plate relatively broad, with 8 mediodistal robust setae; palp article 1 extending distally, article 2 expanded mediodistally, reaching about half length of article 3, distal margin with many setae, article 3 ovoid, heavily setose mediodistally.

Pereon (Figs 1, 3). Pereonite 1 extremely expanded, leaning downward; pereonites 2–6 gradually wider; pereonite 7 wide, posterodorsal margin not projected, posteroventral corner angular. Gnathopod 1 very slender, chelate; coxa narrow, with acute tip; basis long, curved anteriorly; ischium about half length of basis; merus acutely projected distally; carpus–dactylus twisted counter clockwise, carpus and propodus almost same length; propodus with 3 long feather setae and several short setae distally; dactylus bearing a minute curved projection, 2 long feather setae and 2 short setae. Gnathopod 2 longer and wider than gnathopod 1, parachelate; coxa ca. 1.45 times length of coxa 1, posteroventral corner acute; basis slender, almost straight; ischium ca. 0.55 times as long as basis; merus posterodistal corner produced; carpus slender; propodus swollen, shorter than

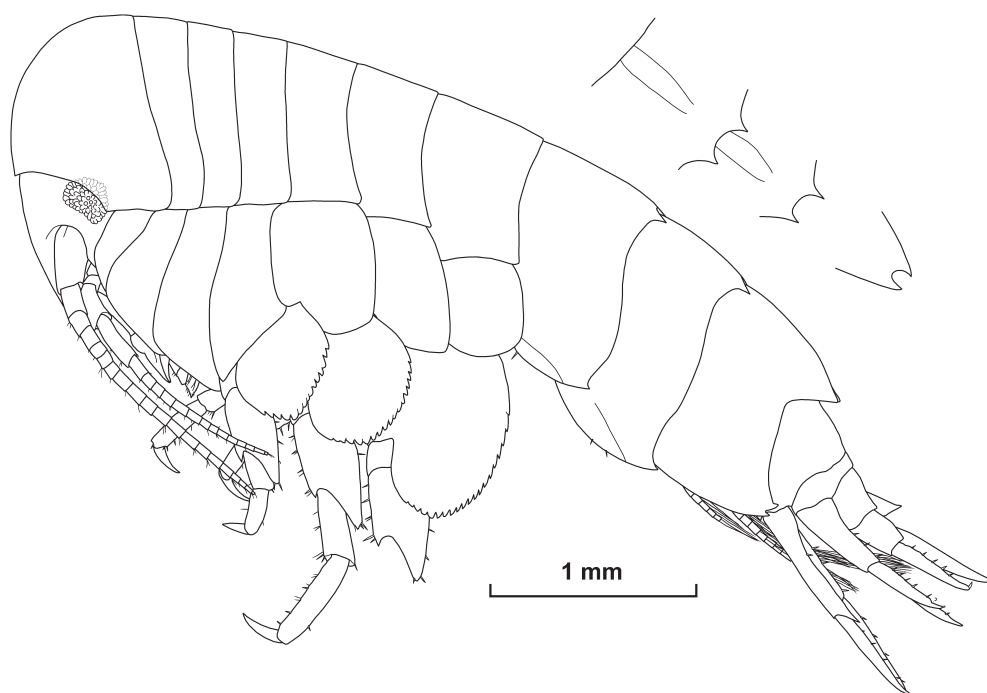


Fig. 1. *Iphimedia declivis* sp. nov. Holotype, ovigerous female, 4.6 mm (OMNH-Ar-13308). Habitus, left lateral view and part of dorsal view.

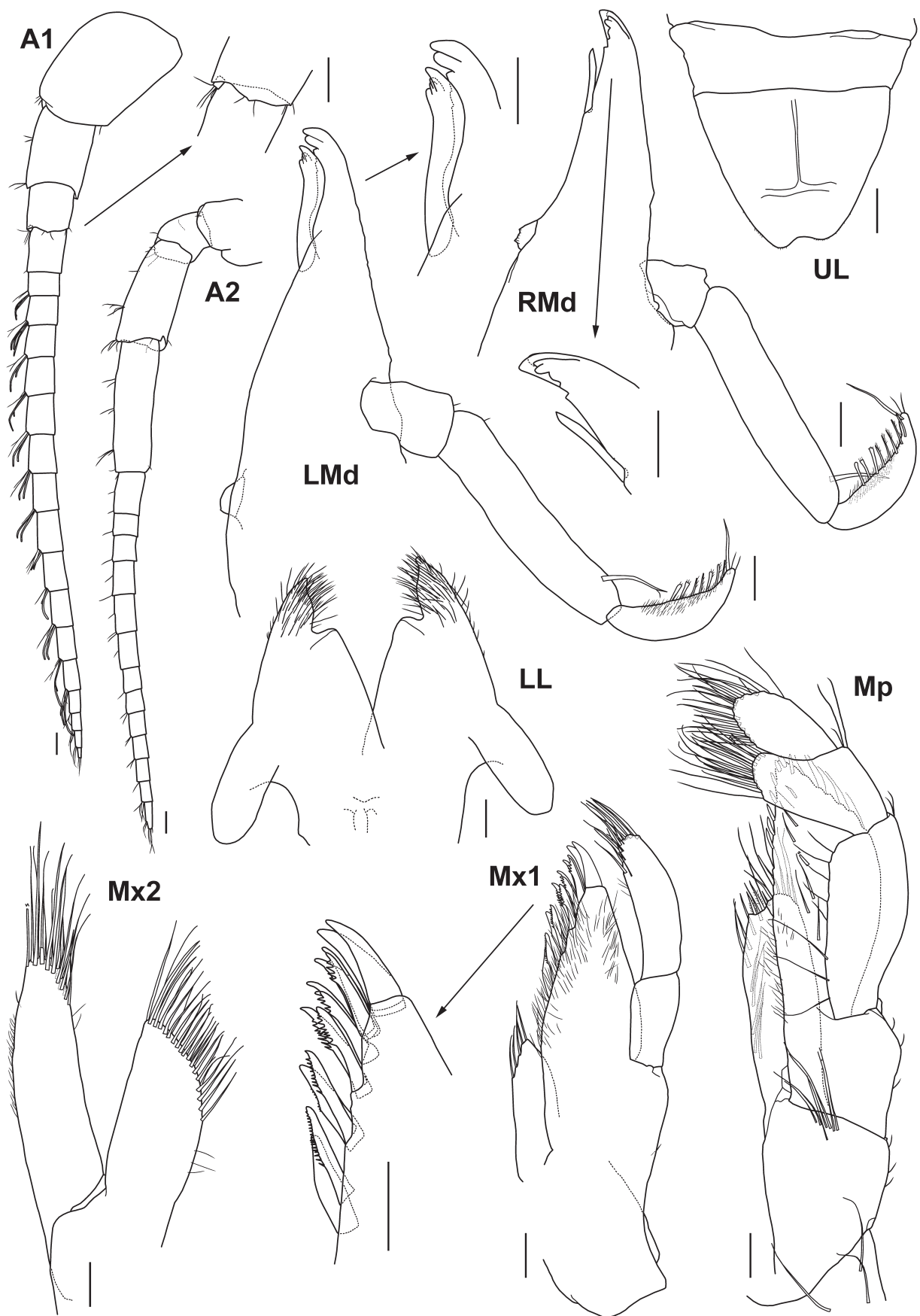


Fig. 2. *Iphimedia declivis* sp. nov. Holotype, ovigerous female, 4.6 mm (OMNH-Ar-13308). Scales: 0.05 mm.

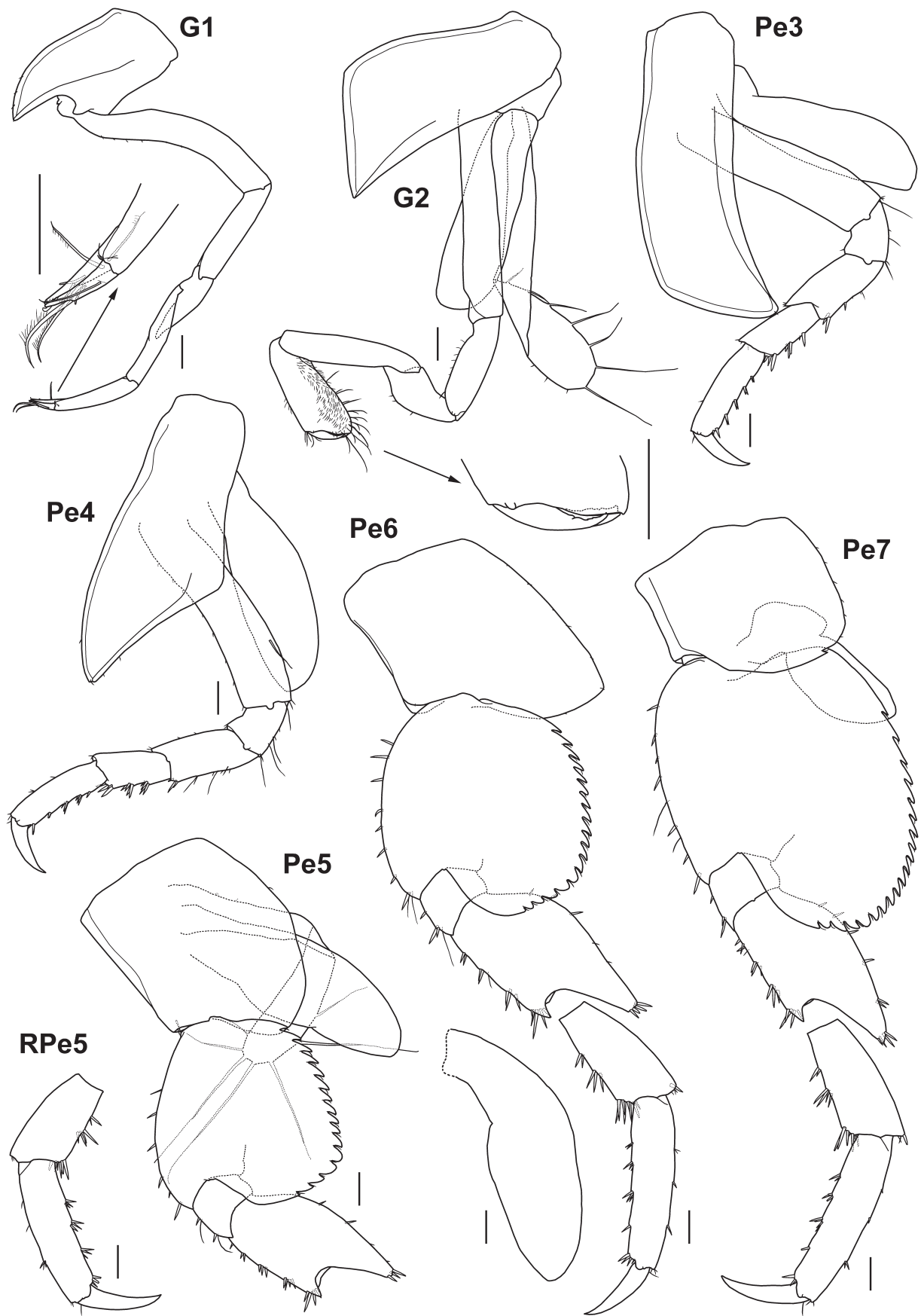


Fig. 3. *Iphimedia declivis* sp. nov. Holotype, ovigerous female, 4.6 mm (OMNH-Ar-13308). Scales: 0.1 mm.

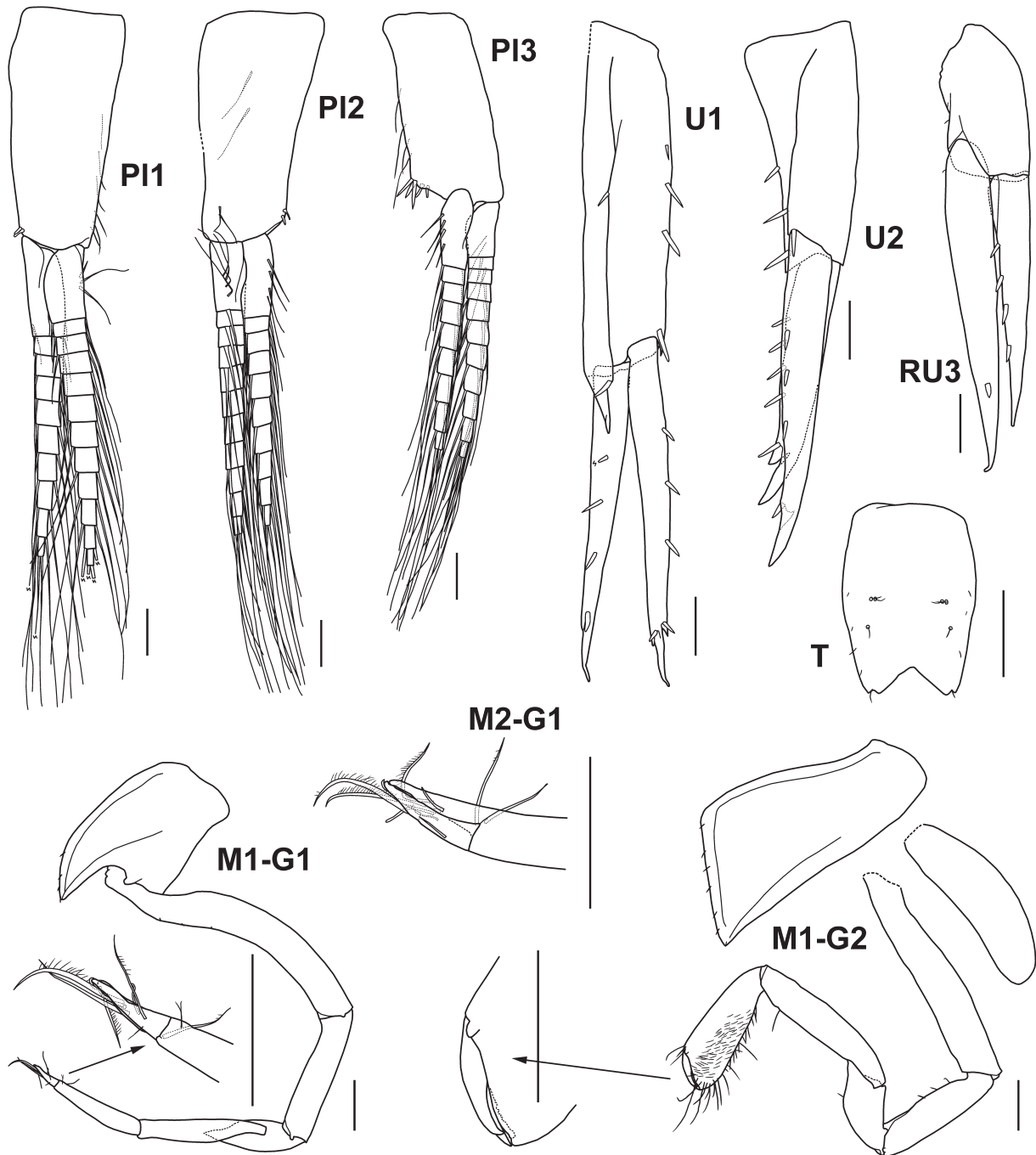


Fig. 4. *Iphimedia declivis* sp. nov. All except for M1 and M2: holotype, ovigerous female, 4.6 mm (OMNH-Ar-13308); M1: paratype, male, 3.3 mm (OMNH-Ar-13310); M2: paratype, male, 3.3 mm (OMNH-Ar-13311). Scales: 0.1 mm.

carpus, posterodistal corner produced, palm smooth, with shallow excavation for receiving dactylus, posterior margin setose, posterolateral surface covered with many fine setae; dactylus short and narrow, tip minutely bifid. Pereopod 3 shorter than gnathopod 2; coxa elongate, ca. 1.2 times length of coxa 2, posteroventral corner bluntly produced; basis narrow, straight; merus with 1 + 2 robust setae posteriorly; carpus posterior margin with 2 + 3 + 3 robust setae; propodus ca. 1.3 times length of carpus, with 5 pairs of robust setae; dactylus slightly curved. Pereopod 4 as long as pereopod 3; coxa elongate, almost same length as coxa 3, anteroventral corner projected, mid-posterior margin bluntly

produced; basis narrow, slightly curved anteriorly, with a seta on posterior margin; merus–dactylus almost same as those of pereopod 3. Pereopod 5 longer than pereopod 4; coxa short, slightly lobate posteroventrally; basis circular, anterior margin with 6 robust setae, posterior margin castellate; ischium anterior margin with 3 robust setae; merus projected posterodistally, anterior margin with 1 + 2 + 3 + 4 robust setae, anterodistal corner with 4 robust setae, posterior margin with 3 robust setae, posterodistal corner bearing 3 robust setae; carpus anterior margin with 2 + 4 + 6 robust setae; propodus ca. 1.4 times length of carpus, anterior margin with 4 sets of 3 robust setae, posterior margin



Fig. 5. *Iphimedia declivis* sp. nov. In situ photograph of a female (size unknown) taken at Ōsezaki in Numazu City (type locality, 26 m depth) on 28 March 2015 by Yui Kawahara.

bearing 2 robust setae. Pereopod 6 longer than pereopod 5; coxa lobate posteroventrally; basis circular, anterior margin with 8 robust setae, posterior margin castellate; ischium anterior margin with 1 + 2 robust setae; merus projected posterodistally, anterior margin with 2 + 2 + 3 robust setae, anterodistal corner with 5 robust setae, posterior margin with 3 robust setae, posterodistal corner bearing 4 robust setae; carpus anterior margin with 2 + 3 + 8 robust setae, posterodistal corner bearing a robust seta; propodus ca. 1.4 times length of carpus, anterior margin with 2 + 3 + 3 + 1 + 4 robust setae, posterior margin bearing 2 robust setae. Pereopod 7 almost same length as pereopod 6; coxa short, not lobate, with a small notch at posteroventral corner, small gill attached on medial surface; basis oval, anterior margin with 7 robust setae, posterior margin castellate; ischium anterior margin with 1 + 2 robust setae; merus projected posterodistally, anterior margin with 3 sets of 3 robust setae, anterodistal corner with 4 robust setae, posterior margin with 1 + 1 + 1 + 1 + 2 robust setae, posterodistal corner bearing 4 robust setae; carpus anterior margin with 2 + 4 + 7 robust setae, posterodistal corner bearing a robust seta; propodus ca. 1.4 times length of carpus, anterior margin with 2 + 3 + 4 + 1 + 2 robust setae, posterior margin bearing 1 + 1 + 2 robust setae.

Pleon (Figs 1, 4). Posterodorsal margins of pleonites each with a pair of acute projections, mid-dorsal surfaces of pleonites 1, 2 each with a shallow hollow. Epimeral plate 1 with posteroventral small projection, lateral ridge and a ventral robust seta; plate 2 with posteroventral small projection, lateral ridge and 2 ventral robust setae; plate 3 with large and small projections on posteroventral corner, lateral ridge and ventral robust seta absent. Pleopods, pleopod 3

shortest; peduncles each with 2 coupling hooks and several setae, peduncle of pleopod 3 also with 3 robust setae mediolaterally; outer rami slightly longer than inner rami, outer rami with 12, 11, 11 articles and inner rami with 10, 10, 9 articles in pleopods 1–3, respectively. Uropod 1 slender; peduncle acutely projected laterodistally and slightly projected mediolaterally, with 1 lateral, 1 laterodistal, 3 medial and 1 mediolateral robust setae; outer ramus shorter than peduncle, tip pointed, lateral margin with subdistal minute notch and 4 robust setae; inner ramus ca. 1.1 times as long as outer ramus, lateral margin with subdistal minute notch and a robust seta, medial margin bearing subdistal minute notch and 4 robust setae. Uropod 2 ca. 0.85 times length of uropod 1; peduncle projected laterodistally, with 3 lateral and 1 medial robust setae; outer ramus longer than peduncle, lateral margin with subdistal notch and 5 robust setae; inner ramus ca. 1.3 times length of outer ramus, lateral margin with subdistal notch and a robust seta, medial margin bearing 3 robust setae. Uropod 3 ca. 0.8 times as long as uropod 2; peduncle without ventral projection and robust setae; outer ramus ca. 1.65 times length of peduncle, with 4 medial robust setae; inner ramus ca. 1.3 times as long as outer ramus, with a dorsal robust seta. Telson small, roundish rectangular, distal margin emarginate, laterodistal corners each with minute notch and a short seta, dorsal surface bearing 2 sets of 2 + 1 sensory setae.

Description of male. Based on paratype, 3.3 mm (OMNH-Ar-13310) and paratype, 3.3 mm (OMNH-Ar-13311). Morphological characters including gnathopods (Fig. 4M1-G1, G2, 4M2-G1) almost similar to female except for oostegites.

Coloration in life. Based on a female, size unknown

(Fig. 5). Body dark maroon, midline of dorsal surface with yellow and orange band, lateral surfaces of pereonites and pleonites lined with white spots, coxae and proximal parts of pereopods scattered with white spots; eyes red.

Remarks. This new species (also in the following two new species) can be identified as the genus *Iphimedia* based on the mandible without raker row, the lower lip lacking inner lobes, the maxilla 1 with ordinary 2-articulate palp, the maxilliped with 3-articulate palp, article 2 of which is produced, the chelate gnathopod 1 and others (J. L. Barnard and Karaman 1991a).

Iphimedia declivis sp. nov. has a large pereonite 1 leaning downward. In the *Iphimedia* species, such a pereonite 1 is shared with only 4 species: *I. edgari* from Australia, *I. gibba* from South Africa, *I. warraina* from Australia, and *I. xesta* from Papua New Guinea (K. H. Barnard 1955; Watling and Holman 1980; Moore 1981; Thomas and J. L. Barnard 1991). This new species differs from *I. edgari*, *I. gibba* and *I. warraina* in the presence of posterodorsal projections on the pleonites 1–3. This species closely resembles *I. xesta* especially in the posterodorsal projections, but can be clearly distinguished by the presence of an accessory flagellum and a small projection at the posteroventral corner of epimeral plate 1, and the shapes of coxae 3, 4.

Habitat. 7–26 m depth, on a rocky reef and an artificial reef for fish.

Distribution. Japan: Shizuoka and Ōita prefectures.

***Iphimedia macrops* sp. nov.**

[New Japanese name: Ōme-katchū-yokoebi]
(Figs 6–10)

Material examined. Holotype: male, 3.3 mm (OMNH-

Ar-13313), north of Kashima Island in Ainan Town, Ehime Prefecture, 32°56'51"N, 132°26'57"E, 20–25 m depth, on rocks, 27 May 2024, coll. S. Hamada and M. Kumagai. Paratype: 1 male (damaged), ca. 2.0 mm (OMNH-Ar-13314), same data as holotype.

Type locality. Kashima Island in Ainan Town, Ehime Prefecture, Japan.

Etymology. A compound noun in apposition from the Ancient Greek *μακρος* (= large) + *ωψ* (= eye), referring to the size of eyes.

Description of male. Based on holotype, male, 3.3 mm (OMNH-Ar-13313).

Body (Fig. 6) compressed laterally. Surface with many triangular scales and feeble setae (see Fig. 8).

Head (Figs 6, 7) small, situated obliquely beneath pereonite 1. Rostrum strongly projected. Eyes very large, reniform. Antenna 1 short; peduncle with length ratio of articles 1–3 1:0.65:0.3, article 1 with anterodistal projection medially, article 2 projected antero- and posterodistally, with several robust setae; accessory flagellum minute, 1-articulate, globular, with 4 setae on tip; primary flagellum with 12 articles, articles 2–11 each bearing a few aesthetascs. Antenna 2 shorter than antenna 1; peduncle with ratio of lengths of articles 3–5 1:1.9:1.65, article 2 acutely produced anterodistally, article 3 with 3 robust setae, article 4 with antero- and posterodistal projections, with several robust setae, article 5 bearing 2+2+1 anterior robust setae; flagellum with 12 articles. Upper lip ovate, slightly asymmetrical, tip barely hollowed, with sparse minute setae. Mandible, incisor with a few obscure cusps; lacinia mobilis present on left side, thick, tip slightly bifid; molar indistinct; length ratio of palp articles 1–3 1:2.05:1.45 in right, article 2 with 2 thick setae subdistally, article 3 in right with 2 long and 9 medium thick

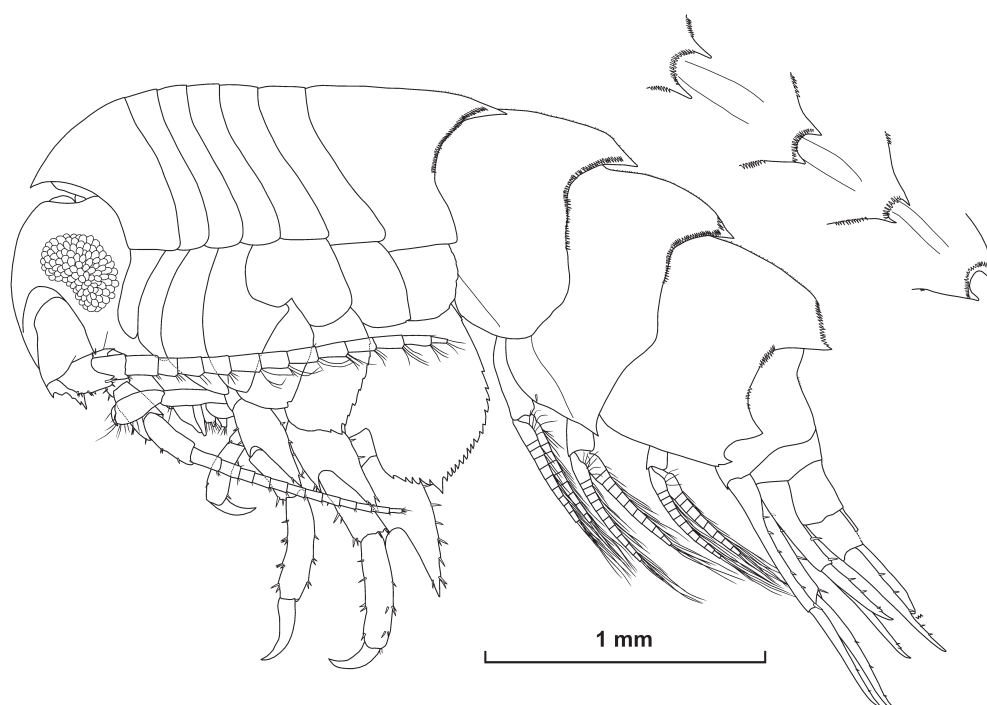


Fig. 6. *Iphimedia macrops* sp. nov. Holotype, male, 3.3 mm (OMNH-Ar-13313). Habitus, left lateral view and part of dorsal view.

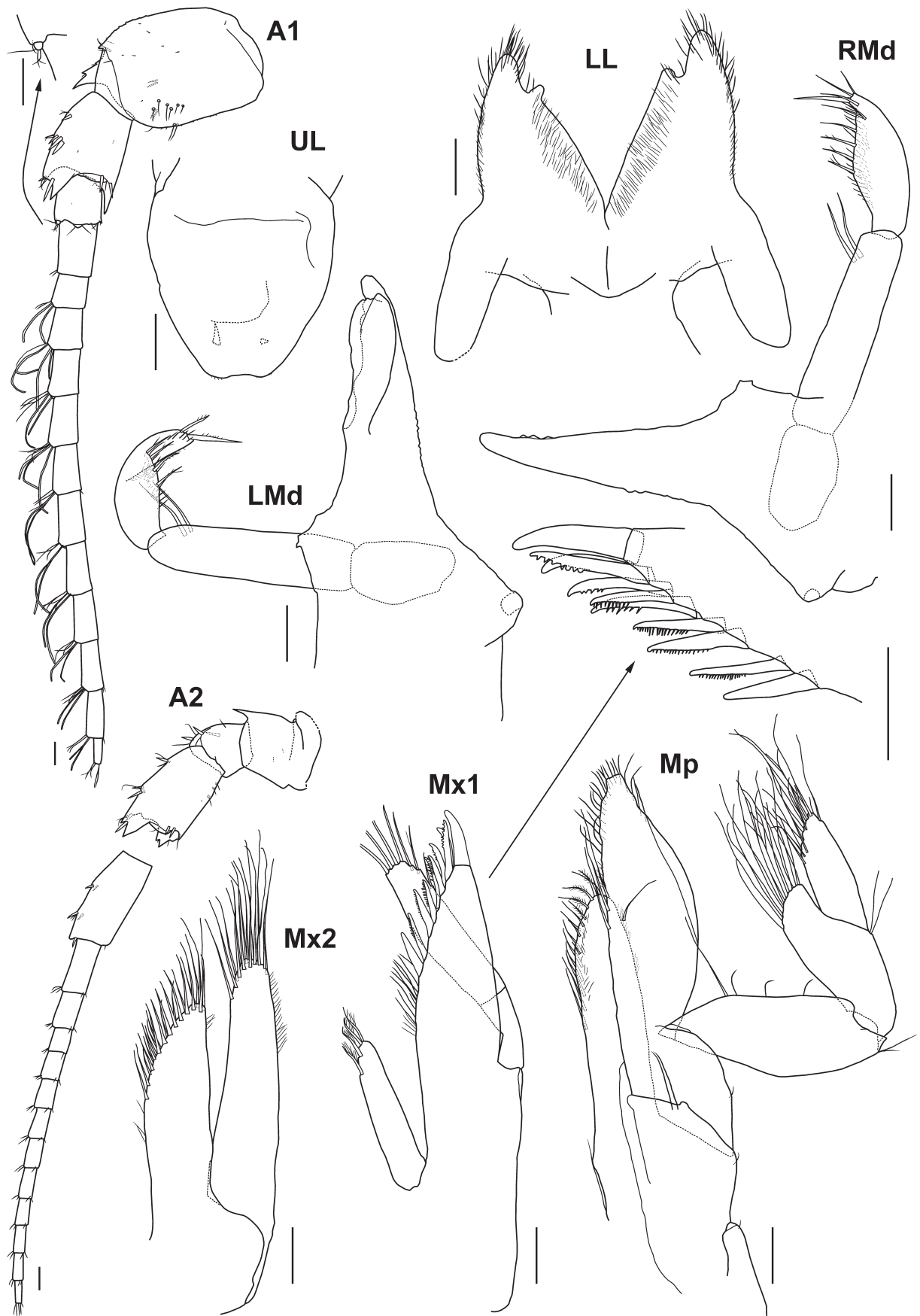


Fig. 7. *Iphimedia macrops* sp. nov. Holotype, male, 3.3 mm (OMNH-Ar-13313). Scales: 0.05 mm.

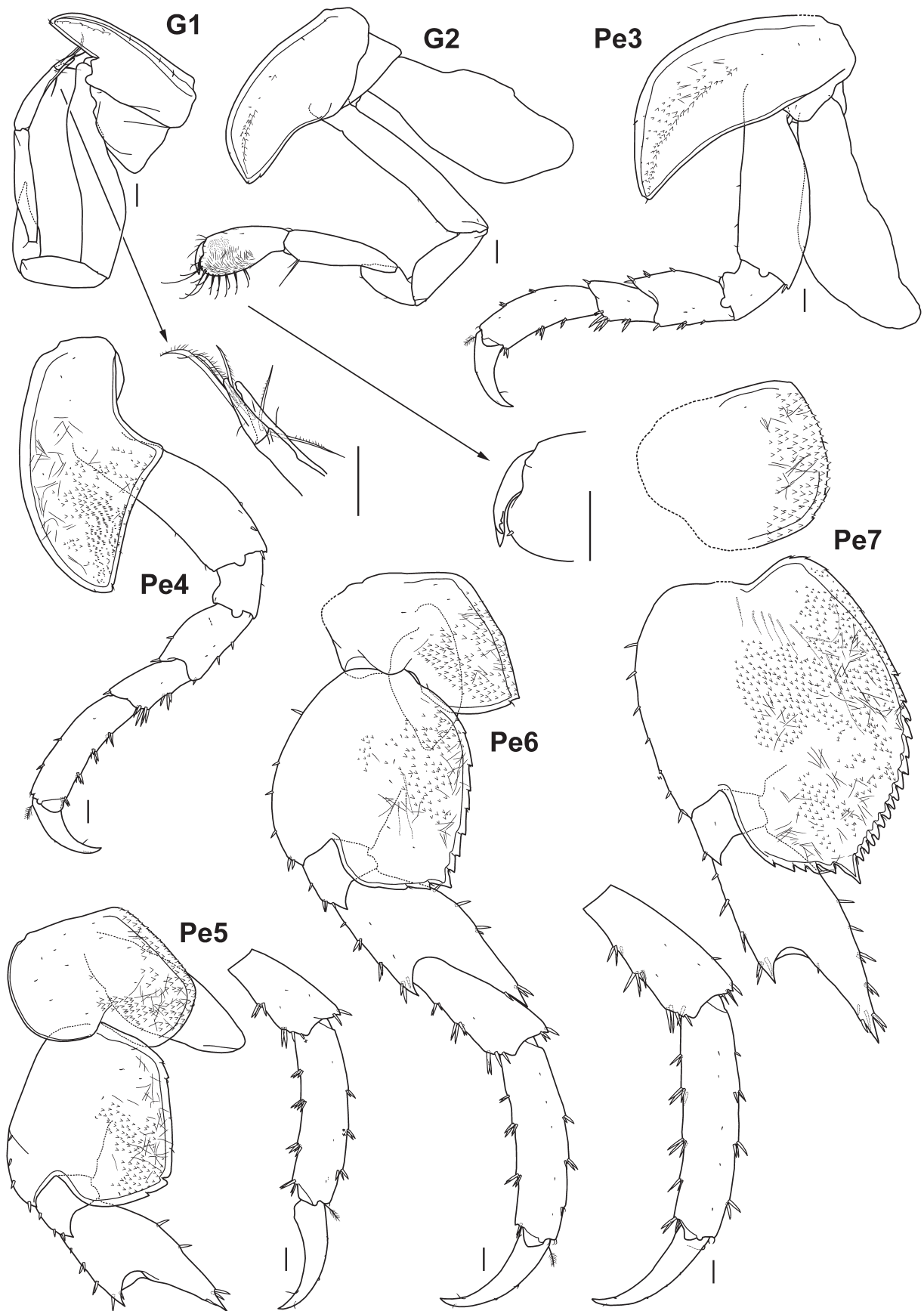


Fig. 8. *Iphimedia macrops* sp. nov. Holotype, male, 3.3 mm (OMNH-Ar-13313). Scales: 0.05 mm.

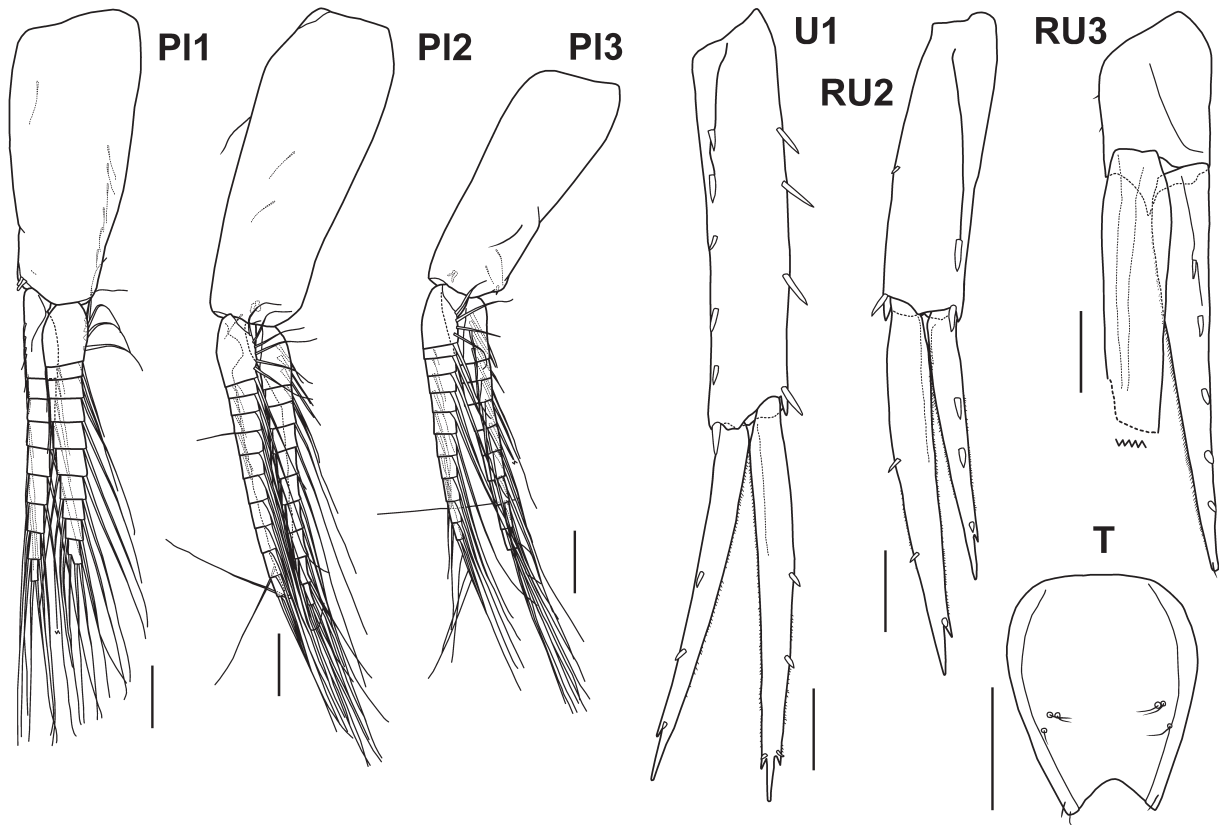


Fig. 9. *Iphimedia macrops* sp. nov. Holotype, male, 3.3 mm (OMNH-Ar-13313). Scales: 0.1 mm.



Fig. 10. *Iphimedia macrops* sp. nov. In situ photograph of an individual (sex and size unknown) taken at Kashima Island in Ainan Town (type locality, 20–25 m depth) by Sonoko Hamada on 27 May 2024.

setae and many short setae on inner margin, lateral surface bearing many fine setae. Lower lip, outer lobes with distinct inner notch and mandibular process, setose laterodistally

and mediodistally. Maxilla 1, inner plate narrow, tip with 4 plumose setae; outer plate bearing 10 large robust setae (8 dentate and 2 smooth) on mediodistal margin; palp article

2 with 6 slender setae distally. Maxilla 2, outer plate with many long distal setae and lateral minute setae; inner plate bearing many long distal setae. Maxilliped with inner plate bearing apical plumose setae and dorsomedial setae; outer plate with many setae mediolaterally; palp article 1 extending laterally, article 2 expanded distally, reaching about half length of article 3, distal margin with many long setae, article 3 oblong, setose mediolaterally.

Pereon (Figs 6, 8). Pereonite 1 wide, anterior margin facing obliquely downward; pereonites 2–6 narrow; pereonite 7 wide, posterodorsal margin with a pair of acute projections, posteroventral corner not projected, angular, posterolateral and posterodorsal margins bearing dense pectinate, minute spines. Gnathopod 1 slender, chelate; coxa relatively long, ventral margin pointed; basis long, slightly curved anteriorly, anterior and posterior margins bare; ischium about 0.4 times length of basis; merus acutely projected distally; propodus about 0.8 times as long as carpus, with 3 long feather setae and 4 short setae distally; dactylus very short, bearing 2 long feather setae and 2 short setae. Gnathopod 2 slightly longer than gnathopod 1, parachelate; coxa ca. 1.25 times length of coxa 1, posteroventral corner bluntly produced; basis slender, straight; ischium about half length of basis; merus posterodistal corner slightly produced; carpus slender, posterior margin with 2 setae subdistally; propodus pyriform, ca. 0.8 times as long as carpus, posterodistal corner roundly produced, with a minute robust seta, palm smooth, posterior margin with 8 pairs of thick setae, posterolateral and anteromedial surfaces covered with many fine setae; dactylus short and narrow, tip minutely bifid. Pereopod 3 stouter than gnathopod 2; coxa elongate, ca. 1.3 times length of coxa 2, posteroventral corner acutely produced; basis slightly swollen distally, laterodistal margin with a semicircular lobe, anterior margin with 3 short setae, posterodistal corner bearing robust seta; ischium laterodistal margin with a semicircular lobe; merus projected anterodistally, with 1 + 2 anterior, 2 anterodistal, 1 + 3 posterior and 1 posterodistal robust setae; carpus short, anterodistal corner produced, with a robust seta, posterior margin with 3 robust setae, posterodistal corner bearing 3 lateral and 3 medial robust setae; propodus ca. 1.8 times length of carpus, with 2 + 2 anterior, 2 + 3 posterior and 3 posterodistal robust setae; dactylus strongly curved. Pereopod 4 a little longer than pereopod 3; coxa almost same length as coxa 3, relatively broad, ventral corner bluntly projected, mid-posterior margin triangularly produced; basis slightly swollen distally, laterodistal margin with a semicircular lobe, anterior margin with 2 short setae, posterior margin bearing a robust seta and 2 short setae, posterodistal corner with a robust seta; ischium–dactylus almost same as those of pereonite 3. Pereopod 5 longer than pereopod 4; coxa short, bilobed, posteroventral corner rounded; basis ca. 1.1 times longer than wide, broadened distally, anterodistal corner projected, anterior margin with 4 robust setae, posteroproximal and posterodistal margins each with 2 small notches; ischium anterodistal corner acutely produced, anterior margin with 3 robust setae; merus projected posterodistally, anterodistal and posterodistal corners pointed, anterior

margin with 1 + 2 + 2 robust setae, anterodistal corner with 2 medial robust setae, posterior margin with 1 + 1 robust setae, posterodistal corner with 2 robust setae, anterior margin of posterodistal lobe bearing a robust seta; carpus short, anterior margin with 3 robust setae, anterodistal and posterodistal corners bearing 4 and 2 robust setae, respectively; propodus ca. 1.65 times length of carpus, with 3 + 4 + 4 anterior, 4 anterodistal and 2 + 3 + 3 posterior robust setae. Pereopod 6 longer than pereopod 5; coxa short, lobate, anterior margin almost straight, posteroventral corner angular, with a small notch; basis wide, anterior margin rounded, with 1 + 1 + 1 + 1 + 3 robust setae, posterior–posterodistal margin serrated, posterodistal corner weakly projected, medial surface bearing 3 plumose setae; ischium anterodistal corner acutely produced, anterior margin with 1 + 2 + 1 robust setae; merus projected posterodistally, anterodistal and posterodistal corners pointed, anterior margin with 1 + 3 + 3 robust setae, anterodistal corner with 1 lateral and 2 medial robust setae, posterior margin with 1 + 1 + 2 robust setae, posterodistal corner with 2 robust setae, anterior margin of posterodistal lobe bearing a robust seta; carpus short, anterior margin with 3 + 4 robust setae, anterodistal and posterodistal corners bearing 4 and 3 robust setae, respectively; propodus ca. 1.4 times length of carpus, with 2 + 4 + 4 anterior, 4 anterodistal and 2 + 3 + 1 posterior robust setae. Pereopod 7 much longer than pereopod 6; coxa short, not lobate, posteroventral corner rounded, gill absent (or lost); basis expanded, longer than wide, anterior margin with 7 robust setae, posterior to distal margins serrated, with a distinct projection mid-distally, medial surface bearing 7 plumose setae; ischium anterodistal corner acutely projected, anterior margin with 2 robust setae; merus projected posterodistally, anterodistal and posterodistal corners pointed, anterior margin with 1 + 2 + 3 robust setae, anterodistal corner with 3 robust setae, posterior margin with 1 + 1 + 1 + 2 + 2 robust setae, posterodistal corner with 3 robust setae, anterior margin of posterodistal lobe bearing 3 robust setae; carpus short, anterior margin with 4 + 5 robust setae, anterodistal corner with 5 robust setae, posterior margin and posterodistal corner bearing 1 and 4 robust setae, respectively; propodus ca. 1.55 times length of carpus, with 2 + 4 + 4 + 2 anterior, 5 anterodistal and 1 + 3 + 3 + 2 posterior robust setae.

Pleon (Figs 6, 9). Posterodorsal margins of pleonites each with a pair of acute projections, mid-dorsal surfaces each with a shallow hollow, posterolateral and posterodorsal margins bearing dense pectinate, minute spines. Epimeral plate 1 with lateral ridge, posterolateral and posteroventral margins without distinct projection; plate 2 with posterolateral rounded swelling, small posteroventral projection, lateral ridge and a ventral robust seta; plate 3 bearing large posterolateral projection and small posteroventral projection with a minute notch. Pleopods, pleopod 3 shortest; peduncles each with 2 coupling hooks and several setae, peduncle of pleopod 3 also with a small robust seta distally; outer rami slightly shorter than inner rami, outer rami with 10, 11, 11 articles and inner rami with 9, 10, 9 articles in pleopods 1–3, respectively. Uropod 1 slender; peduncle long, pro-

jected mediodistally, with 5 lateral, 1 laterodistal, 3 medial and 1 mediodistal robust setae; outer ramus ca. 0.9 times of peduncle, tip pointed, lateral margin with subdistal minute notch and 3 robust setae; inner ramus ca. 1.1 times as long as outer ramus, tip pointed, lateral margin with subdistal minute notch and a robust seta, medial margin bearing subdistal minute notch and 3 robust setae. Uropod 2 ca. 0.85 times length of uropod 1; peduncle projected laterodistally and mediodistally, with 1 lateral, 1 laterodistal, 1 medial and 1 mediodistal robust setae; outer ramus ca. 0.9 times longer than peduncle, tip pointed, lateral margin with subdistal minute notch and 3 robust setae; inner ramus ca. 1.4 times length of outer ramus, tip pointed, lateral margin with subdistal minute notch and a robust seta, medial margin bearing 2 robust setae. Uropod 3 wider than uropods 1, 2; peduncle triangularly projected ventrodistally, without robust setae; outer ramus ca. 2.5 times length of peduncle excluding ventral projection, with 5 lateral robust setae; inner ramus broad, distal part damaged, ventral surface bearing long groove for receiving outer ramus. Telson small, roundish trapezoidal, distal margin emarginate, laterodistal corners with 1–2 minute setae, dorsal surface bearing 2 sets of 2 + 1 sensory setae.

Female. Unknown.

Coloration in life. Based on an individual, sex and size unknown (Fig. 10). Whole body orange except for translucent antennae and whitish eyes.

Remarks. *Iphimedia macrops* sp. nov. is characterized by the large eyes, the posterodistal projection on the pereopod 6 basis, and the distal projection on the pereopod 7 basis. It is difficult to compare the size of eyes among *Iphimedia* species; however, nine species share such projections: *I. brachygnatha* from the Mediterranean Sea, *I. mala* from Japan, *I. minuta* from the northeast Atlantic Ocean, the Mediterranean Sea and China, *I. nexa* from Ireland and Atlantic France, *I. orchestimana* from the Red Sea, *I. pacifica* from the Southern Ocean, *I. perplexa* from Ireland and Scotland, *I. serratipes* from the Mediterranean Sea, and *I. vicina* from the Mediterranean Sea (Stebbing 1888; Sars 1895; Ruffo 1959; Ruffo and Schiecke 1982; Hirayama 1983; Myers et al. 1987; Lyons and Myers 1990; Coleman 2007; Ren 2012). Although this new species has 2 small notches on the posterodistal margin of the pereopod 5 basis, *I. orchestimana* and *I. serratipes* have 1–2 small notches, *I. pacifica* has a distinct projection, and the other six species have no notch or projection on the posterodistal margin of the pereopod 5 basis; therefore, the latter seven species are apparently different from *I. macrops*. *Iphimedia orchestimana* is the most similar species to *I. macrops* especially in the pyriform propodus of the gnathopod 2. However, this new species can be distinguished from *I. orchestimana* by the following characters (features of *I. orchestimana* in parentheses): (1) rounded posterodistal corner of coxa 7 (angular); (2) dense serration on posterodistal margin of pereopod 7 basis (sparse serration); and (3) roundish trapezoidal telson (rectangular). *Iphimedia macrops* also resembles *I. serratipes*, but differs from *I. serratipes* in the rounded posterodistal corners of the pereopod 5, 7 bases (both with a small pro-

jection in *I. serratipes*). In addition, Hirayama (1983: 94) described the pereopods 5, 6 of *I. mala* based on the holotype and paratype, but the shapes of the paratype are different from those of the holotype and similar to those of *I. macrops*. This fact suggests a possibility of a mixture of two species in *I. mala*. Because there is no other information on the paratype, its conspecificity with this new species is unclear.

Habitat. 20–25 m depth, on rocks.

Distribution. Japan: Ehime Prefecture.

Iphimedia trigona sp. nov.

[New Japanese name: Sankaku-katchū-yokoebi]

(Figs 11–15)

Material examined. Holotype: ovigerous female, 3.9 mm (OMNH-Ar-13315), south of Kashima Island in Ainan Town, Ehime Prefecture, 32°56'33"N, 132°27'12"E, 20 m depth, on bryozoans, 27 May 2024, coll. S. Hamada and M. Kumagai. Paratypes: 4 females, 3.7, 3.5, 3.0, 2.7 mm (OMNH-Ar-13316–13319), same data as holotype.

Type locality. Kashima Island in Ainan Town, Ehime Prefecture, Japan.

Etymology. From the Latin adjective *trigonus* (= triangular), referring to the shape of the posteroventral projection of pereonite 7.

Description of female. Based on holotype, ovigerous female, 3.9 mm (OMNH-Ar-13315), paratype female 3.5 mm (OMNH-Ar-13317) only for antenna 2 peduncle, and paratype female 3.7 mm (OMNH-Ar-13316) only for mandibular palp and uropod 3.

Body (Fig. 11) subglobular. Surface with many minute scales (see Fig. 14–Pe7).

Head (Figs 11, 12) small, situated obliquely beneath pereonite 1. Rostrum strongly projected. Eyes relatively small, oval. Antenna 1 short; peduncle with length ratio of articles 1–3 1:0.55:0.35, article 1 with 2 anterodistal projections, article 2 projected anterodistally; accessory flagellum minute, 1-articulate, globular, with 3 setae on tip; primary flagellum with 12 articles, articles 2–8, 10, 11 each bearing an aesthetasc. Antenna 2 almost same length as antenna 1; peduncle with ratio of lengths of articles 3–5 1:2.2:2.3, article 3 acutely produced anterodistally, article 4 bluntly produced anterodistally; flagellum with 12 articles. Upper lip trapezoidal, slightly asymmetrical, tip rounded, with sparse short setae. Mandible, incisor with several obscure cusps, proximal boundary distinct; lacinia mobilis present on left side, slender, tip slightly bifid; molar indistinct; length ratio of palp articles 1–3 1:2.2:0.95 in left, article 2 with 3 thick setae subdistally, article 3 with 2 long thick setae and 5 medium and 12 short setae on inner margin, lateral surface bearing many fine setae. Lower lip, outer lobes with distinct inner notch and mandibular process, setose laterodistally and mediodistally. Maxilla 1, inner plate narrow, tip with 3 (1 lost) setae; outer plate bearing 11 large robust setae (dentate or smooth) on mediodistal margin, medial margin and ventral surface covered with fine setae; palp article 2 with 4 mediodistal setae and 2 thick and 3 slender distal setae.

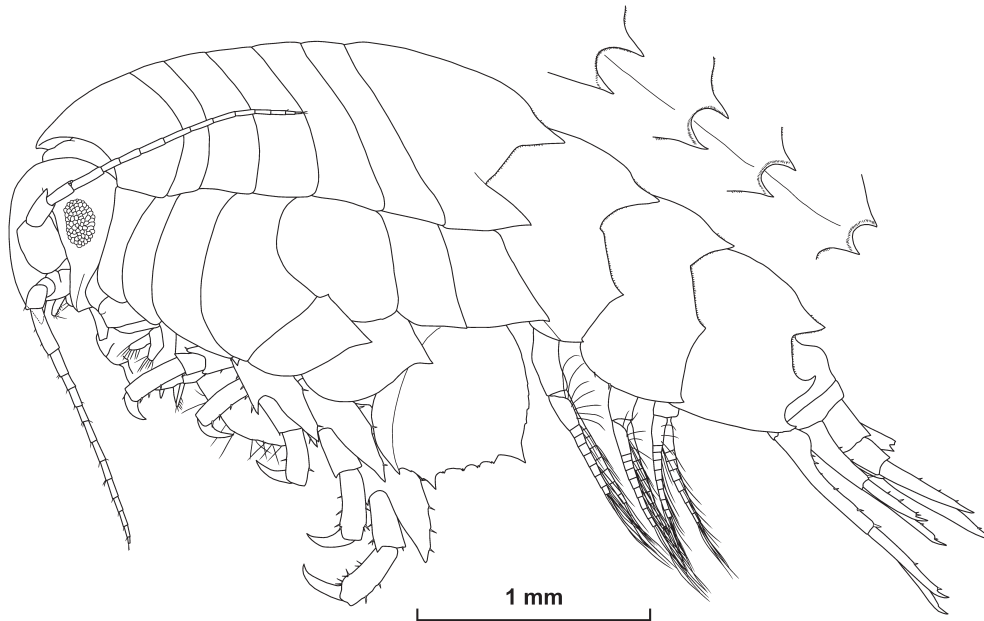


Fig. 11. *Iphimedia trigona* sp. nov. Holotype, ovigerous female, 3.9 mm (OMNH-Ar-13315). Habitus, left lateral view and part of dorsal view.

Maxilla 2, outer plate with many long distal setae and lateral minute setae; inner plate bearing many long distal setae. Maxilliped with inner plate bearing apical and dorsomedial setae; outer plate relatively broad, with many thick setae; palp article 1 extending laterally, article 2 expanded distally, reaching about 3/4 length of article 3, distal margin setose, article 3 oblong, setose mediolaterally.

Pereon (Figs 11, 13, 14). Pereonite 1 wide, anterior margin facing obliquely downward; pereonites 2–6 narrow; pereonite 7 wide, posterodorsal margin with a pair of acute projections, posteroventral corner bearing strong triangular projection, posterolateral and posterodorsal margins lined with minute spines. Gnathopod 1 slender, chelate; coxa relatively long, ventral margin rounded; basis long, strongly curved anteriorly, posteroproximal margin with a bundle of setae; ischium about 1/3 length of basis; merus projected distally; propodus about 3/4 as long as carpus, with 5 long feather setae distally; dactylus very short, bearing 2 long feather setae and 3 short setae. Gnathopod 2 slightly longer than gnathopod 1, parachelate; coxa ca. 1.15 times length of coxa 1, posteroventral corner bluntly produced; basis slender, slightly curved posteriorly; ischium ca. 0.45 times as long as basis; merus posterodistal corner produced; carpus slender, posterior margin with a robust seta subdistally; propodus weakly swollen, ca. 0.7 times as long as carpus, posterodistal corner produced, with a robust seta, palm smooth, posterior margin with 7 pairs of thick setae, posterolateral surface covered with many fine setae; dactylus short and narrow, tip minutely bifid. Pereopod 3 stouter than gnathopod 2; coxa elongate, ca. 1.25 times length of coxa 2, posteroventral corner acutely produced; basis straight, posterior margin slightly swollen distally, laterodistal margin with a semicircular lobe, anterior margin with 1 slender and 3 robust setae, posterodistal corner bearing a robust seta; ischium laterodistal margin bearing a semicir-

cular lobe, posterodistal corner pointed; merus projected anterodistally, with 1 anterior, 1 anterodistal and 2 posterior robust setae; carpus short, anterodistal corner produced, posterodistal corner with 2 lateral and 2 medial robust setae; propodus about twice length of carpus, with 1 anterior, 2+2 posterior and 4 posterodistal robust setae; dactylus strongly curved. Pereopod 4 slightly longer than pereopod 3; coxa broad, almost same length as coxa 3, bluntly produced ventrally and triangularly produced mid-posteriorly; basis straight, posterior margin slightly swollen distally, laterodistal margin with a semicircular lobe, anterior margin lacking robust setae, posterodistal corner with a robust seta; ischium–dactylus almost same as those of pereonite 3. Pereopod 5 longer than pereopod 4; coxa short, lobate, posteroventral corner rounded; basis wide, distinctly projected posteroproximally, anterodistal corner deflexed, posterodistal margin rounded, anterior margin with 1 proximal and 2 distal robust setae; ischium anterodistal corner acutely produced, anterior margin with 2 robust setae; merus projected posterodistally, anterodistal and posterodistal corners pointed, anterior margin with 3 robust setae, anterodistal corner with 2 medial robust setae, posterior margin with 1+1+2 robust setae; carpus short, anterodistal corner slightly projected, anterior margin with 2 robust setae; propodus ca. 1.7 times length of carpus, with 2+2 anterior, 2 anterodistal and 1 posterior robust setae. Pereopod 6 longer than pereopod 5; coxa short, lobate, anterior margin almost straight, posteroventral corner acutely projected; basis wide, distinctly projected posteroproximally, anterodistal corner deflexed, posterior margin with 3 minute notches, posterodistal margin rounded, anterior margin with 7 robust setae, medial surface bearing many plumose setae anterodistally and mid-distally; ischium anterodistal corner acutely produced, anterior margin with 2 robust setae and 2 medial plumose setae; merus projected posterodistally, anterodistal

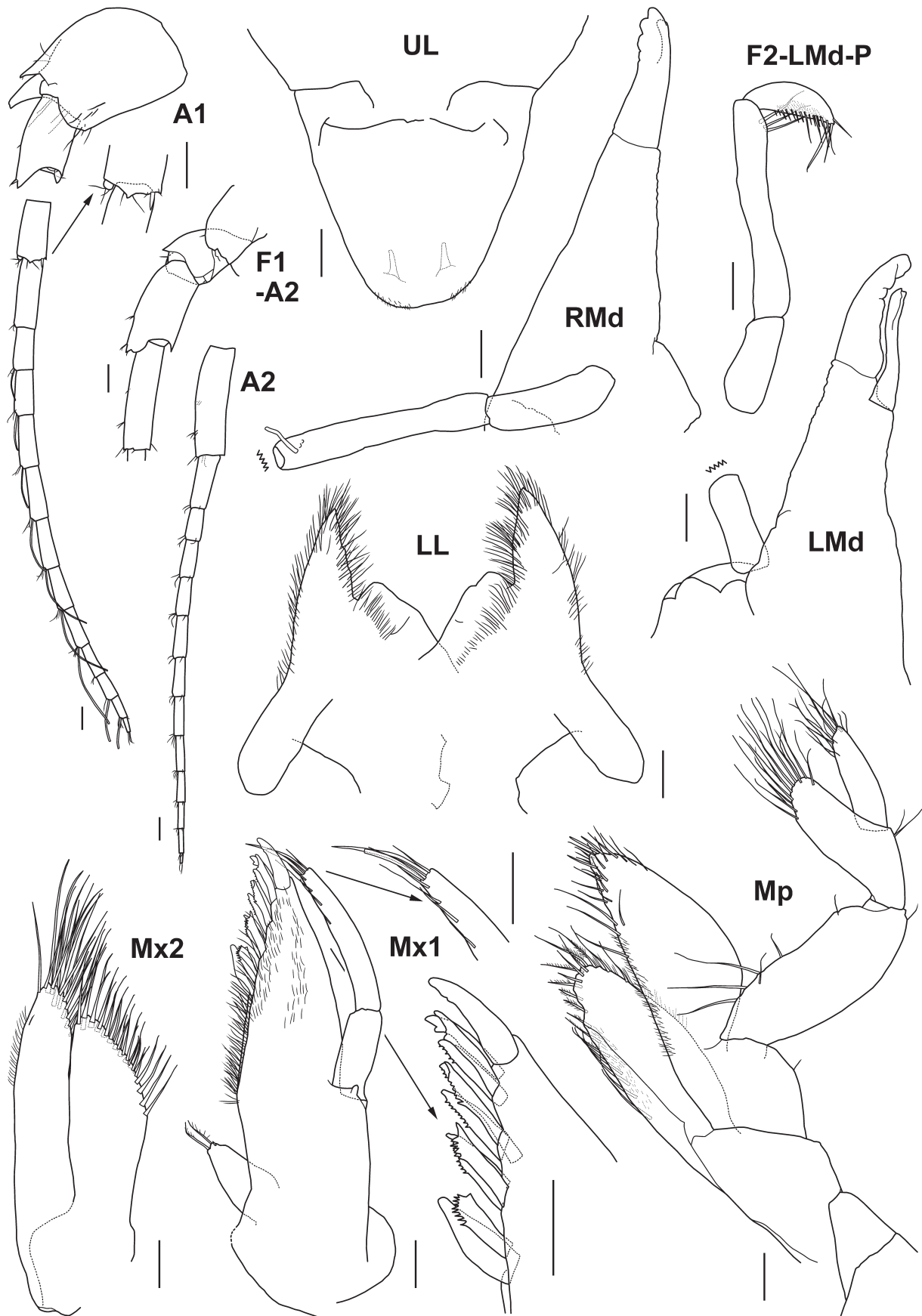


Fig. 12. *Iphimedia trigona* sp. nov. All except for F1 and F2: holotype, ovigerous female, 3.9 mm (OMNH-Ar-13315); F1: paratype, female, 3.5 mm (OMNH-Ar-13317); F2: paratype, female, 3.7 mm (OMNH-Ar-13316). Scales: 0.05 mm.

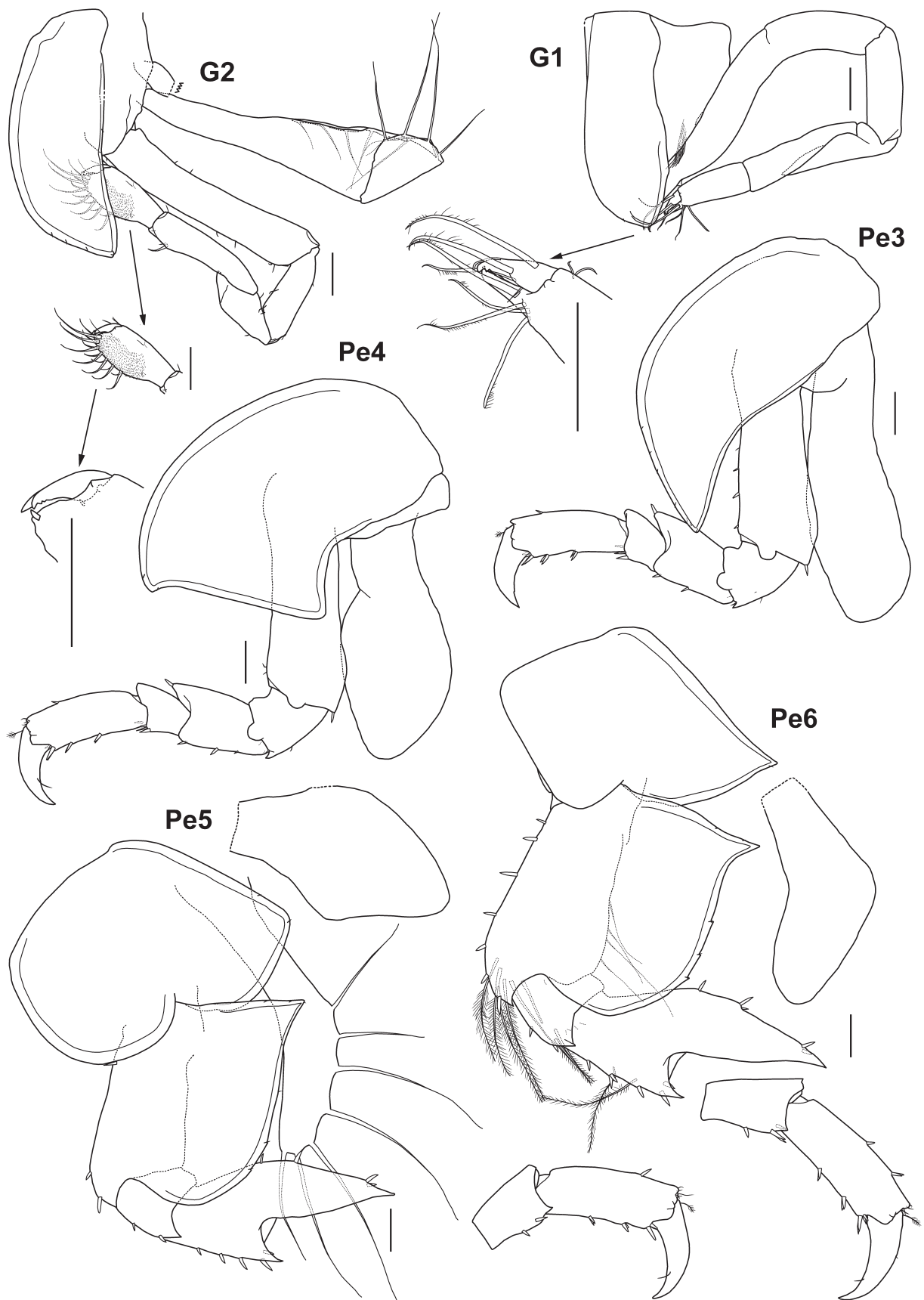


Fig. 13. *Iphimedia trigona* sp. nov. Holotype, ovigerous female, 3.9 mm (OMNH-Ar-13315). Scales: 0.1 mm.

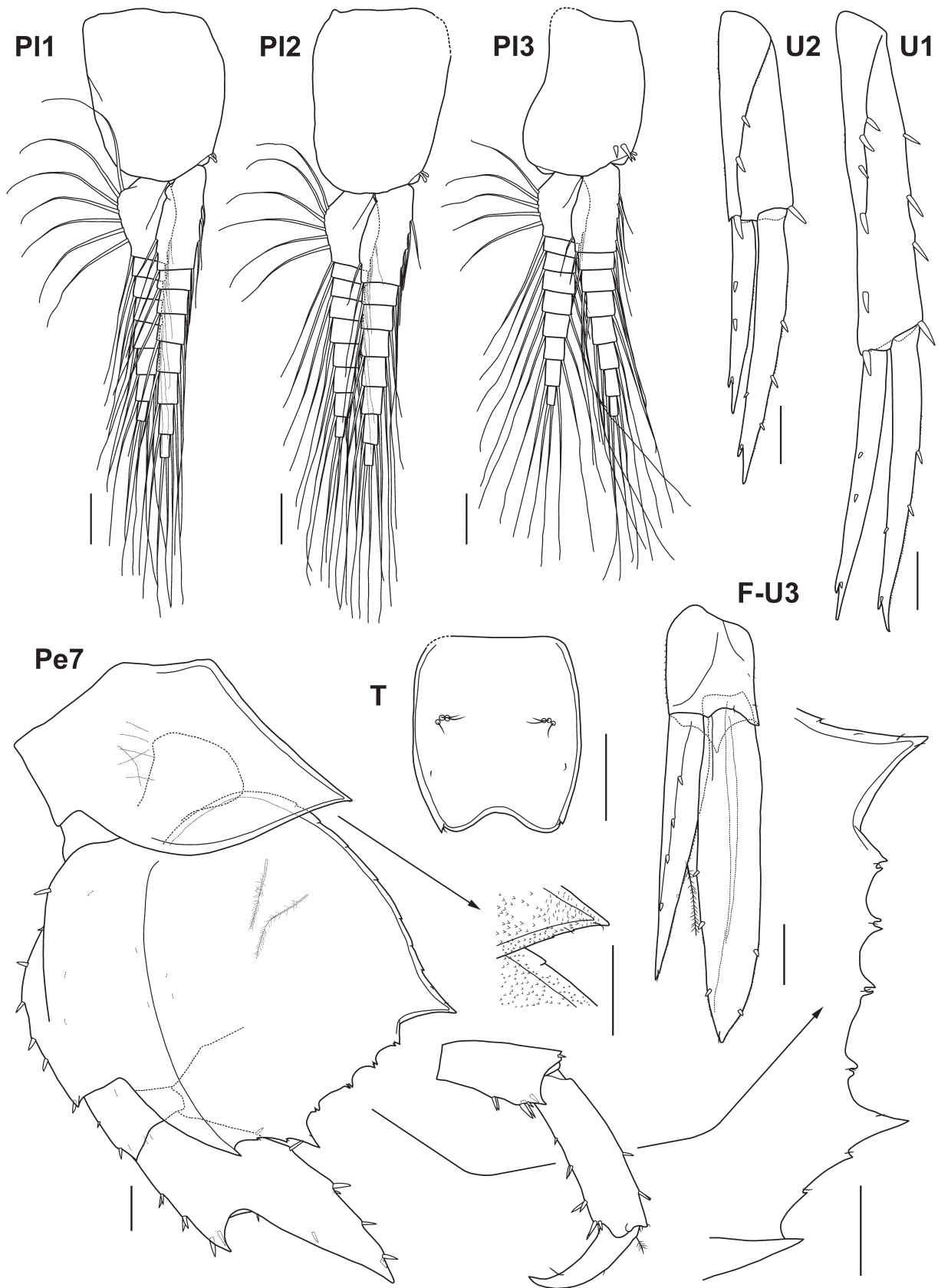


Fig. 14. *Iphimedia trigona* sp. nov. All but F: holotype, ovigerous female, 3.9 mm (OMNH-Ar-13315); F: paratype, female, 3.7 mm (OMNH-Ar-13316). Scales: 0.1 mm.

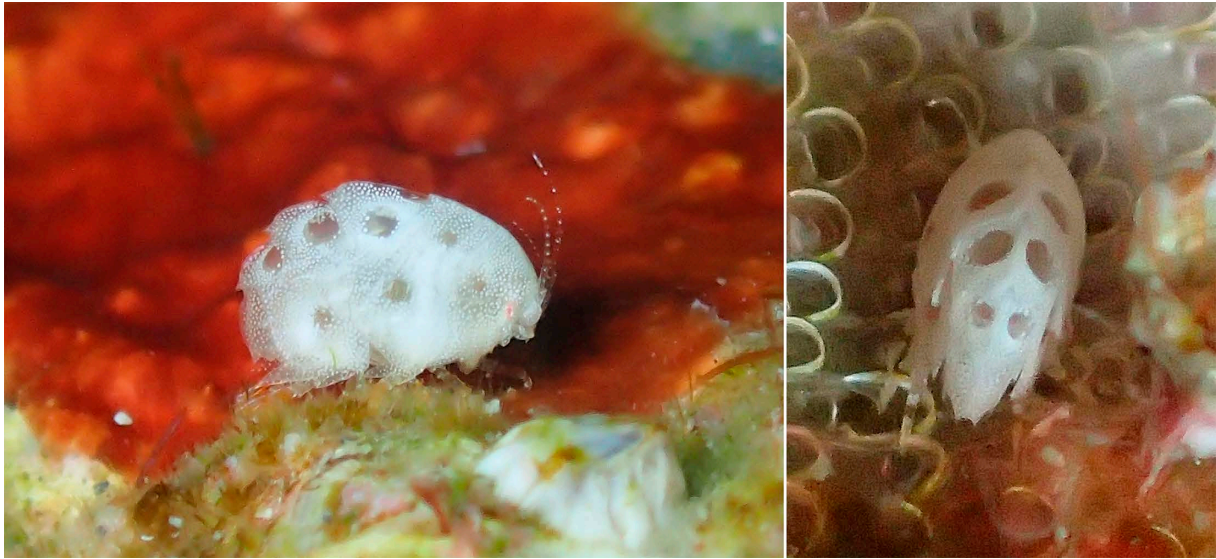


Fig. 15. *Iphimedia trigona* sp. nov. In situ photographs of females (size unknown) taken at Kashima Island in Ainan Town (type locality, 20 m depth) by Sonoko Hamada. Left: lateral view on 27 May 2024; right: dorsal view on 28 May 2024.

and posterodistal corners pointed, anterior margin with 1 + 2 + 1 robust setae and 2 medial plumose setae, anterodistal corner with 2 medial robust setae, posterior margin with 1 + 2 + 2 robust setae; carpus short, anterodistal corner slightly projected, anterior margin with 1 + 3 robust setae; propodus ca. 1.6 times length of carpus, with 2 + 2 anterior, 2 anterodistal and 2 posterior robust setae. Pereopod 7 longer than pereopod 6; coxa short, not lobate, anterior margin almost straight, posteroventral corner acutely projected, medial surface with gill and several short setae; basis wider than long, lateral surface with 2 ridges, anterior margin with 6 robust setae, anterodistal corner bearing a robust seta, posterior margin with 6 minute notches, posterodistal margin with 7 projections (1 small, 1 medium, 4 small furcate, and 1 large projections from anterior to posterior) and 2 minute notches, medial surface with 2 plumose setae; ischium anterodistal corner slightly produced, anterior margin with 2 robust setae; merus projected posterodistally, anterodistal and posterodistal corners pointed, anterior margin with 2 + 2 robust setae, anterodistal corner with 2 medial robust setae, posterior margin with 1 + 1 + 2 + 1 + 2 robust setae, anterior margin of posterodistal lobe bearing 2 small robust setae; carpus short, anterodistal corner slightly projected, anterior margin with 2 + 4 robust setae, posterodistal corner bearing a robust seta; propodus ca. 1.5 times length of carpus, with 1 + 2 + 2 anterior, 4 anterodistal and 1 + 2 posterior robust setae.

Pleon (Figs 11, 14). Posterodorsal margins of pleonites each with a pair of acute projections, dorsal midlines of pleonites each with ridge, posterolateral and posterodorsal margins lined with minute spines. Epimeral plate 1 with large posterolateral and small posteroventral projections and lateral ridge; plate 2 with small posterolateral and posteroventral projections and 2 ventral robust setae; plate 3 bearing large upward posterolateral projection and medium posteroventral projection. Pleopods, pleopod 3 shortest; peduncles each with 2 coupling hooks, peduncle of pleo-

pod 3 also with 2 robust setae mediodistally; outer rami shorter than inner rami, outer rami with 8, 9, 9 articles in pleopods 1–3, respectively, inner rami with 8 articles. Uropod 1 slender; peduncle long, with 5 lateral, 1 laterodistal, 3 medial and 1 mediodistal robust setae; outer ramus ca. 0.8 times longer than peduncle, tip pointed, lateral margin with subdistal minute notch and 3 robust setae; inner ramus ca. 1.1 times as long as outer ramus, tip pointed, lateral margin with subdistal minute notch and 2 robust setae, medial margin bearing 2 robust setae. Uropod 2 about 3/4 length of uropod 1; peduncle with 2 lateral, 1 laterodistal and 1 mediodistal robust setae; outer ramus ca. 0.95 times longer than peduncle, tip pointed, lateral margin with subdistal minute notch and 3 robust setae; inner ramus ca. 1.45 times length of outer ramus, tip pointed, lateral margin with subdistal minute notch and 2 robust setae, medial margin bearing 3 robust setae. Uropod 3 slightly shorter than uropod 2; peduncle without robust setae, ventrodorsal margin triangularly projected; outer ramus ca. 2.5 times length of peduncle excluding ventral projection, with 4 lateral robust setae and 2 (1 lost) medial plumose setae; inner ramus ca. 1.65 times as long as outer ramus, wide, with 3 lateral and 2 medial robust setae, ventral surface bearing long groove for receiving outer ramus. Telson small, rectangular, distal margin emarginate, laterodistal corners each with minute notch and a short seta, dorsal surface bearing 2 sets of 2 + 1 sensory setae.

Variation. Posteroventral margin of pereopod 7 basis with 6 projections (1 small, 1 medium, 3 small furcate, and 1 large projections from anterior to posterior) in paratype females, 2.8–3.5 mm (OMNH-Ar-13317–13319).

Male. Unknown.

Coloration in life. Based on females, size unknown (Fig. 15). Body snow-white, with 3 rounded translucent marks and 4 indistinct translucent marks in lateral view; eyes pink. The rounded marks are clearly visible in dorsal view.

Remarks. *Iphimedia trigona* sp. nov. has the bases of pereopods 5, 6 each with a distinct projection posteroproximally and lacking posteroventral projection. Five *Iphimedia* species have such bases: *I. compacta* from Mauritius, *I. jugoslavica* from the Adriatic Sea, *I. mizegwadan* from Papua New Guinea, *I. nanshaensis* from Nansha Islands, and *I. rachanoi* from Thailand (Karaman 1975; Ledoyer 1978; Lowry and Myers 2003; Ren 2012). However, this new species can be clearly distinguished from these species by the triangular projection at the posteroventral corner of the pereonite 7 and the arrangement of projections on the posteroventral margin of the pereopod 7 basis. This new species has 6–7 projections on the posteroventral margin, whereas the other species have 1–5 projections. Moreover, *I. trigona* is different from *I. compacta* and *I. nanshaensis* in the rounded ventral margin of the coxa 1 (acute in *I. compacta* and *I. nanshaensis*), from *I. jugoslavica* in the rounded posteroventral corner of the pereonite 6 (acutely produced in *I. jugoslavica*), and from *I. mizegwadan* and *I. rachanoi* in the strongly projected posteroventral corner of the coxa 7 (angular in *I. mizegwadan* and *I. rachanoi*).

Habitat. 20 m depth, on bryozoans.

Distribution. Japan: Ehime Prefecture.

Key to the Species of the Family Iphimediidae in Japan

1. Pereonite 1 extremely expanded, leaning downward; posterodorsal margin of pereonite 7 lacking projections *Iphimedia declivis* sp. nov.
- Pereonite 1 not extremely expanded, facing obliquely downward; posterodorsal margin of pereonite 7 with a pair of acute projections 2
2. Posteroventral corner of pereonite 7 triangularly projected, posteroventral corner of coxa 7 acutely projected *Iphimedia trigona* sp. nov.
- Posteroventral corner of pereonite 7 angular, posteroventral corner of coxa 7 rounded 3
3. Eyes large, pereopod 5 basis slightly longer than wide, pereopod 7 basis with large projection mid-distally *Iphimedia macrops* sp. nov.
- Eyes small, pereopod 5 basis apparently longer than wide, pereopod 7 basis with very small projection mid-distally *Iphimedia mala* (Hirayama, 1983)

Data Availability Statement

All data supporting the findings of this study are included in the published article.

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Author Contributions

Hiroyuki Ariyama: Conceptualization; Resources; Formal Analysis; Investigation; Visualization; Writing – original draft; Writing – review & editing.

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Declarations

Competing interests. The author declares no conflict of interest.

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