

A New Species of the Hippolytid Shrimp Genus *Lebbeus* (Crustacea: Decapoda: Caridea) from Lower Bathyal Zone in the Izu Islands, Central Japan

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Abstract A new species of the hippolytid shrimp genus *Lebbeus* White, 1847, *L. lamina*, is described and illustrated on the basis of a heterosexual pair of specimens from off Miyake Island, Izu Islands, central Japan, at depths of 1988–2007 m. It is referred to the species group characterized by the possession of epipods on the third maxilliped to third pereopods, and appears closest to *L. antarcticus* (Hale, 1941), *L. cristatus* Ahyong, 2010, *L. tosaensis* Hanamura and Abe, 2003, and *L. virentova* Nye, Copley, Plouviez and Van Dover, 2012. Differentiating characters between the new species and its four closest relatives are discussed. Thirteen species of *Lebbeus* are now known from the lower bathyal zone, greater than 1500 m, though the new species is the first representative from Japanese waters occurring at such depths.

Key words: *Lebbeus lamina* sp. nov., Miyake Island

Lebbeus White, 1847 is the most species-rich genus in the caridean family Hippolytidae, represented by about 60 species (De Grave and Fransen, 2011; Komai et al., 2012; Nye et al., 2012). The genus is widespread in the world's oceans, including polar seas and tropics, though the geographical range of each species is generally rather limited to a narrow area (e.g., Hayashi, 1992; Komai et al., 2004; 2012). Habitats of species of the genus are diverse, ranging from the intertidal zone to continental slopes at depths greater than 2000 m (e.g., Zarenkov, 1976; Butler, 1980; Hayashi, 1992; Komai et al., 2004; 2012); some species are associated with other invertebrates (Butler, 1980; Hayashi and Okuno, 1997; Minemizu, 2000; Komai, 2001). In addition, several species occur in deep-water hydrothermal vents (e.g., Martin and Haney, 2005; Ahyong, 2009; Komai et al., 2012; Nye et al., 2012). Twenty species are known from Japanese waters, (Hayashi, 1992; Hayashi and Okuno, 1997; Hanamura and Abe, 2003; Komai, 2001; 2011; Komai and Takeda, 2004; Komai et al., 2004; 2012; Komai and Komatsu, 2009), of which nine species are so far restricted to the Japanese Archipelago, possibly suggesting that the area represents a hot spot for diversity of the genus.

During the KT98-14 cruise of the RV *Tansei-maru* of the Ocean Research Institute, University of Tokyo

(currently the Japanese Agency of Marine-Earth Science and Technology) in 1998, some trawling operations were made in the middle to lower bathyal zone at 1700–2000 m deep in the northern Izu Islands, off central Japan, and a small but interesting collection of decapod crustaceans was made. Amongst this material, two specimens representing a species of *Lebbeus* were found. Subsequent detailed examination has shown that these specimens represent an undescribed species, herein described as *L. lamina*. The new species appears closest to *L. antarcticus* (Hale, 1941), *L. cristatus* Ahyong, 2011, *L. tosaensis* Hanamura and Abe, 2003, and *L. virentova* Nye, Copley, Plouviez and Van Dover, 2012. Differentiating characters between the new species and these close relatives are discussed.

The material examined in this study is deposited in the Natural History Museum and Institute, Chiba (CBM). Carapace length (cl) represents specimen size, measured from the posterior margin of the orbit to the midpoint of the posterodorsal margin of the carapace.

Taxonomic Account

Family Hippolytidae
Genus *Lebbeus* White, 1847
Lebbeus lamina sp. nov.

(Figs. 1–4)

Material examined. Holotype: female (cl 9.9 mm), RV *Tansei-maru*, KT98-14 cruise, stn 15, NE of Miyake Island, Izu Islands, Japan, 34°15.61'N, 140°14.81'E, 1988–2007 m, volcanic sand, 1 September 1998, beam trawl, coll. T. Komai, CBM-ZC 6403.

Paratype: male (cl 7.1 mm), same data as holotype, CBM-ZC 11355.

Diagnosis. Rostrum directed forward, reaching or slightly overreaching midlength of first segment of antennular peduncle, about 0.3 times carapace length; dorsal margin armed with 4 small teeth, including 2 on rostrum proper and 2 postrostral teeth, distal half unarmed; ventral margin armed with 1 or 2 small subterminal teeth. Carapace with low postrostral median carina; posteriormost postrostral tooth arising at about 0.2 of carapace length; supraorbital tooth small, located at level of posterior margin of orbit; shallow U-shaped notch present below base of supraorbital tooth; suborbital lobe prominent, triangular; anterolateral margin between antennal and pterygostomial teeth moderately sinuous; small pterygostomial tooth present. First to third abdominal pleura broadly rounded; fourth pleuron with minute posteroventral denticle. Telson with 6 or 7 dorsolateral spines on either side. Corneal width approximately 0.2

of carapace length; ocellus absent. Antennular peduncle slightly falling short of base of distolateral tooth of antennal scale; first segment with 2 or 3 dorsodistal teeth; stylocerite nearly reaching distolateral margin of first peduncular segment. Antennal carpocerite reaching distal 0.2–0.3 of antennal scale. Strap-like epipods present on third maxilliped to third pereopod. First pereopod overreaching distal margin of antennal scale by 0.6 length of chela in female, just reaching in male. Third to fifth pereopods decreasing in length toward posterior. Third pereopod overreaching antennal scale by 0.8 of full length of propodus; dactylus 0.2 times as long as propodus, moderately stout (about 2.9 times longer than deep), armed with 5 accessory spinules on flexor margin, distalmost accessory spinule longer and much wider than others, blade-like; merus with 3 or 4 lateral spines. Appendix masculina distinctly shorter than appendix interna.

Description. Female holotype. Body (Fig. 1) moderately robust for genus; integument moderately firm, surface glabrous.

Rostrum (Fig. 2A–C) nearly straight, directed forward, reaching midlength of first segment of antennular peduncle, 0.3 times carapace length; dorsal margin armed with 4 small teeth, including 2 on rostrum proper and 2 postrostral teeth, distal half unarmed; ventral margin armed with 2 small

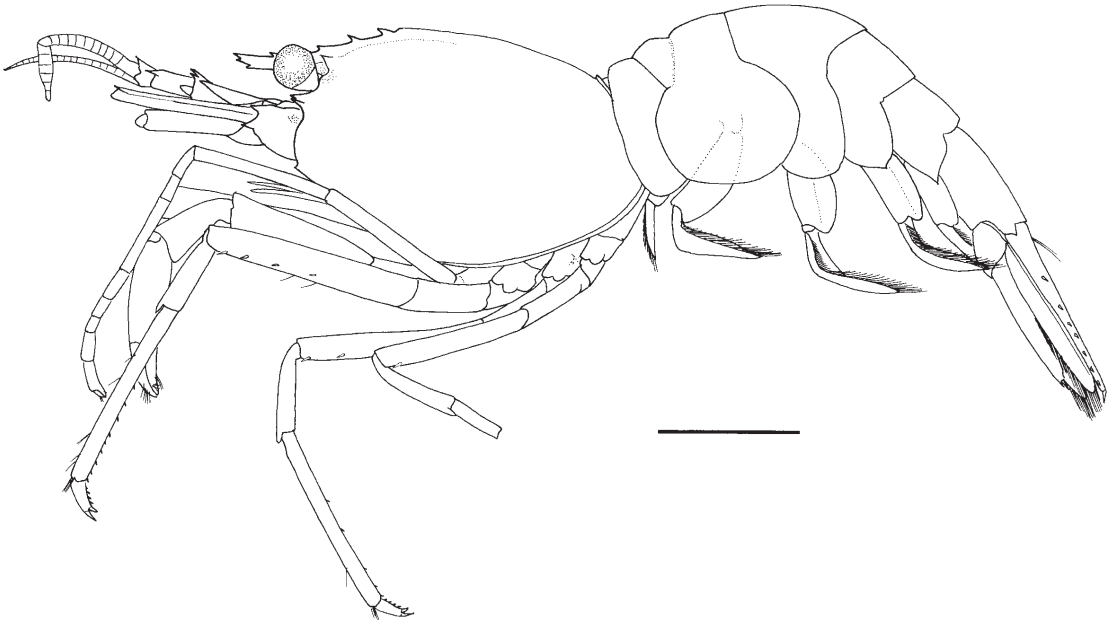


Fig. 1. *Lebbeus lamina* sp. nov., holotype, female (cl 9.9 mm), off Miyake Island, Izu Islands, CBM-ZC 6403, entire animal in lateral view (fifth pereopod damaged). Scale bar: 5 mm.

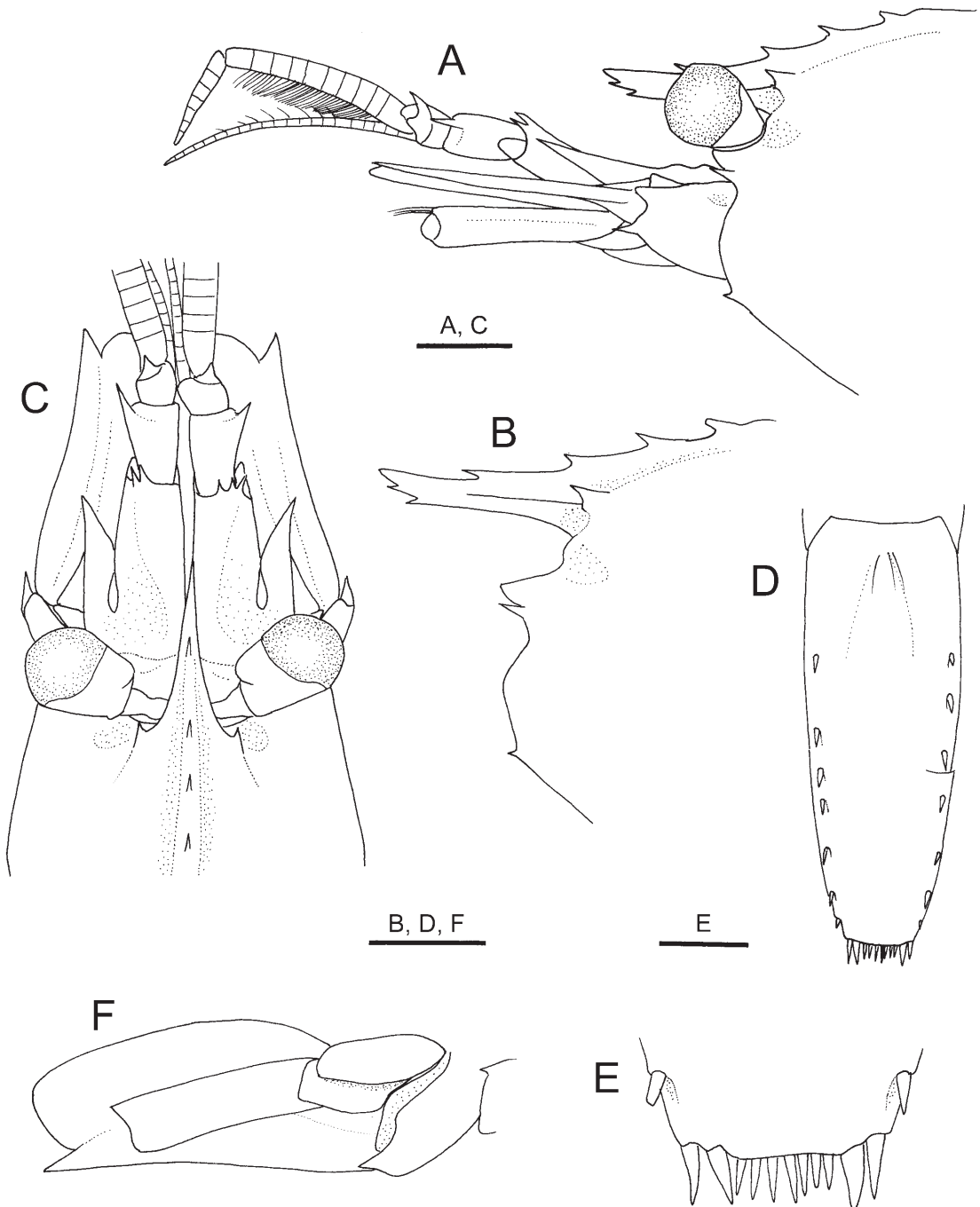


Fig. 2. *Lebbeus lamina* sp. nov., holotype, female (cl 9.9 mm), off Miyake Island, Izu Islands, CBM-ZC 6403. A, anterior part of carapace and cephalic appendages, lateral view; B, anterior part of carapace, lateral view; C, anterior part of carapace and cephalic appendages, dorsal view (antennular flagella omitted); D, telson, dorsal view (right lateral margin partially damaged); E, posterior margin of telson, dorsal view (setae omitted); F, right antenna, ventral view (setae omitted; flagellum missing). Scale bars: 2 mm for A–D, F; 1 mm for E.

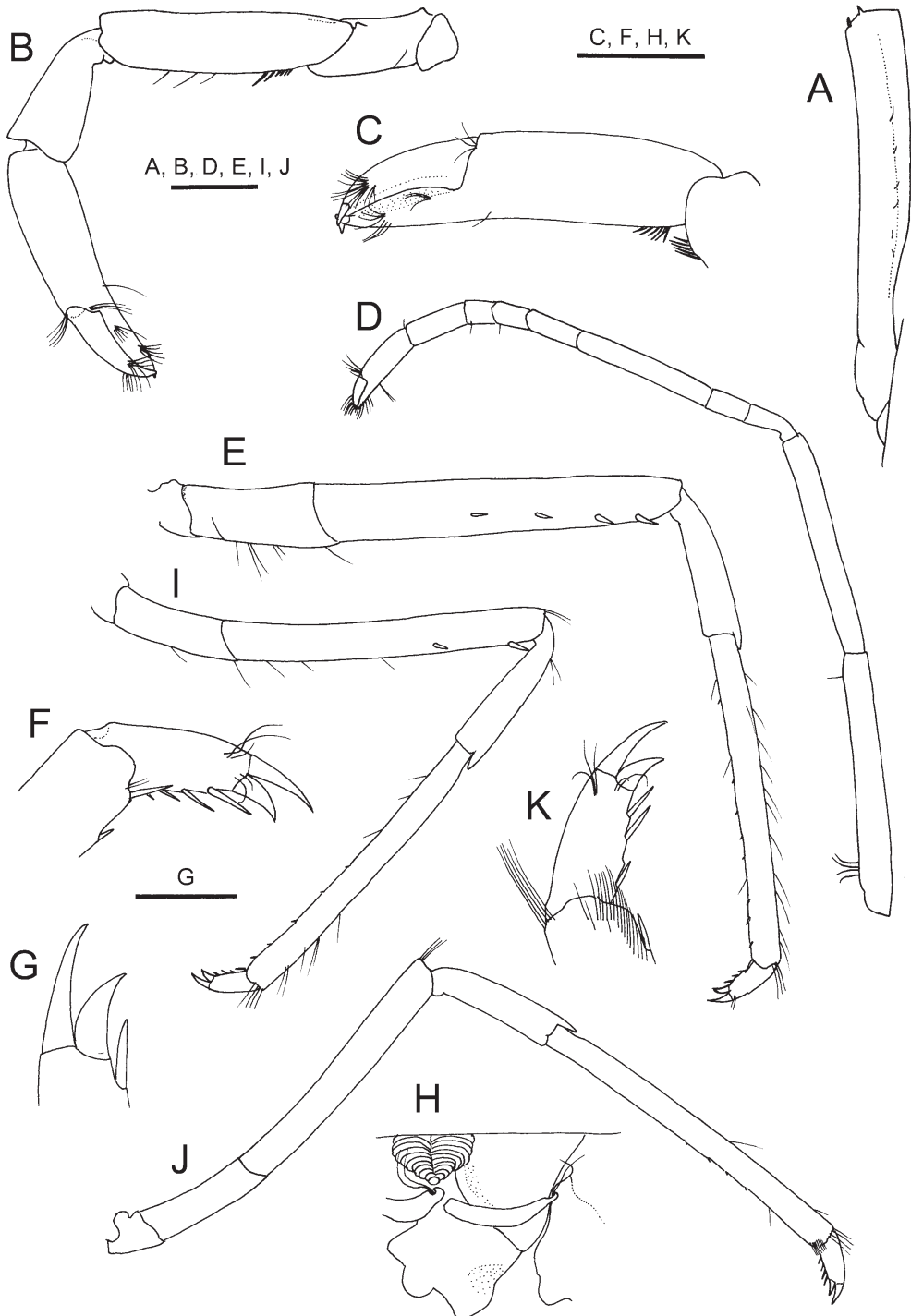


Fig. 3. *Lebbeus lamina* sp. nov., holotype, female (cl 9.9 mm), off Miyake Island, Izu Islands, CBM-ZC 6403. A, antepenultimate segment of left third maxilliped (distal two segments missing), lateral view; B, left first pereopod, lateral view; C, same, chela, flexor view; D, left second pereopod, lateral view; E, right third pereopod, lateral view; F, same, dactylus and distal part of propodus, lateral view; G, same, close up of distal part of dactylus; H, coxa of left third pereopod, lateral view; I, right fourth pereopod, lateral view; J, right fifth pereopod, lateral view; K, same, dactylus and distal part of propodus, lateral view. Scale bars: 2 mm for A–C, D, E, I, J; 1 mm for F, H, K; 0.5 mm for G.

subterminal teeth, ventral lamina hardly developed. Carapace (Figs. 1, 2A–C) with low postrostral median carina (extending to midlength of carapace); posteriormost postrostral tooth arising at about 0.2 of carapace length; dorsal margin in lateral view gently convex; supraorbital tooth small, slightly ascending, located at level of posterior margin of orbit, not reaching tip of antennal tooth; orbital margin with slight convexity posteriorly, base of eyestalk located between this convexity and suborbital lobe; shallow notch present below base of supraorbital tooth; suborbital lobe prominent, triangular, reaching as far as antennal tooth; anterolateral margin between antennal and pterygostomial teeth moderately sinuous with relatively shallow concavity below antennal tooth; pterygostomial tooth small.

Abdomen (Fig. 1) dorsally rounded. Second somite with shallow transverse groove on tergum. Pleura of anterior three somites broadly rounded; fourth pleuron with minute posteroventral denticle; fifth pleuron with moderately strong posteroventral tooth. Sixth somite about 1.8 times longer than fifth somite and 1.8 times longer than high, bearing tiny posteroventral tooth (broken in left side); posterolateral process terminating in small tooth. Telson (Fig. 2D) 1.6 times longer than sixth somite, 3.2 times longer than greatest width, slightly tapering to subtruncate posterior margin, bearing 7 pairs of dorsolateral spines; posterior margin with 2 pairs of slightly unequal lateral spines and 6 spinules (Fig. 2E).

Eye (Fig. 2A, C) subpyriform with eyestalk narrowing proximally; cornea slightly wider than eyestalk, its maximum width approximately 0.2 of carapace length; ocellus absent.

Antennular peduncle (Fig. 2A, C) slightly falling short of base of distolateral tooth of antennal scale. First segment distinctly longer than distal two segments combined, reaching midlength of antennal scale, dorsodistal margin armed with 2 (left) or 3 (left) acute teeth; stylocerite slightly falling short of distolateral margin of first peduncular segment, acuminate, mesial margin sinuous. Second segment about 0.4 length of first segment, with 1 strong dorsolateral distal tooth. Third segment less than half as long as second segment, bearing 1 small dorsodistal tooth. Lateral flagellum with thickened aesthetasc-bearing portion about half length of carapace.

Antenna (Fig. 2A, C, F) with basicerite bearing a moderately small ventrolateral tooth; carpocerite reaching distal 0.2 of antennal scale. Antennal scale 0.5 times as long as carapace and 2.4 times longer than wide; lateral margin slightly sinuous; distolateral tooth

reaching rounded distal margin of lamella.

Mouthparts without distinctive features. Third maxilliped (Fig. 3A) with distal two segments missing. Antepenultimate segment with distal margin damaged, but 1 spinule at ventrolateral distal angle apparent; lateral surface with row of spiniform setae on blunt ridge adjacent to dorsal margin.

Strap-like, terminally hooked epipods present on third maxilliped to third pereopod, corresponding setobranchs present on first to fourth pereopod (cf. Fig. 3H).

First pereopod (Fig. 3B, C) moderately stout, overreaching distal margin of antennal scale by 0.6 length of chela; dactylus about 0.7 times as long as palm, terminating in 2 darkly pigmented corneous claws; fixed finger terminating in single corneous claw. Second pereopod (Fig. 3D) overreaching antennal scale by about 0.7 length of carpus; carpus divided into 7 articles, third article longest. Third to fifth pereopods relatively long and slender, similar in shape but distinctly decreasing in length toward posterior (Fig. 1). Third pereopod (Fig. 3E) overreaching antennal scale by full length of propodus; dactylus (Fig. 3F) about 0.2 times as long as propodus, moderately stout (about 2.9 times longer than wide), terminating in acute, pigmented unguis, armed with 5 accessory spinules on flexor margin, distalmost accessory spinule longer and much wider than others, blade-like with strongly convex upper margin, making tip of dactylus appearing biunguiculate (Fig. 3G); carpus about half length of propodus; merus armed with 4 lateral spines in distal two-thirds. Fourth pereopod (Fig. 3I) overreaching antennal scale by half-length of propodus; merus with 2 lateral spines. Fifth pereopod (Fig. 3J, K) reaching distal margin of antennal scale by tip of propodus; merus unarmed.

Pleopods and uropods without distinctive features.

Male paratype. Body more slender than in female. Rostrum (Fig. 4A, B) reaching distal 0.4 of first segment of antennular peduncle; dorsal margin armed with 4 small teeth, including 2 postrostral, posteriormost tooth arising at 0.15 of carapace length; ventral margin with 1 subterminal tooth. Telson with 6 (left) or 7 (right) dorsolateral spines. Outer antennular flagellum with thickened aesthetasc-bearing portion about 0.8 length of carapace; inner flagellum distinctly longer than carapace (Fig. 4A). Third maxilliped (Fig. 4C) overreaching antennal scale by half-length of ultimate segment; ultimate segment with spines restricted to distal 0.2. First pereopod slightly falling short of distal margin of antennal scale. Second pereopod overreaching antennal scale by 0.3 length of

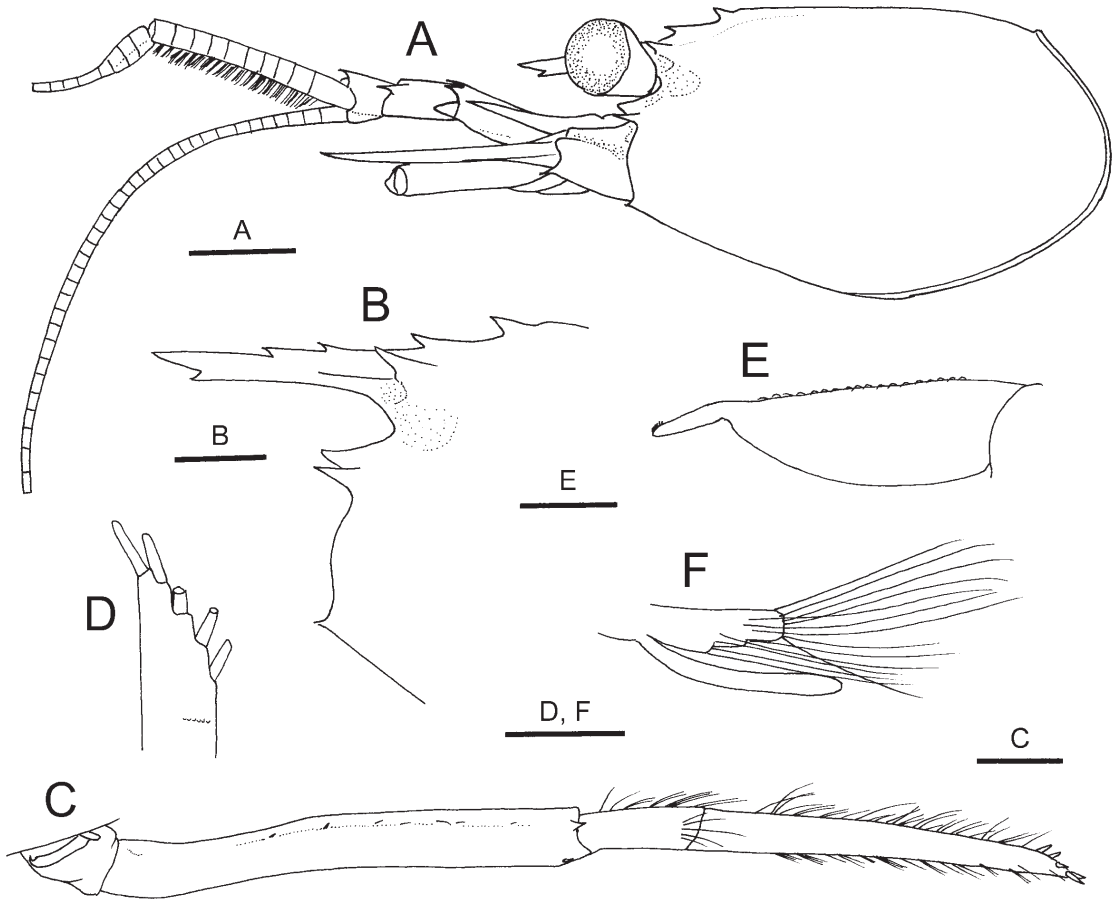


Fig. 4. *Lebbeus lamina* sp. nov., paratype, male (cl 7.1 mm), off Miyake Island, Izu Islands, CBM-ZC 11355. A, carapace and cephalic appendages, lateral view; B, anterior part of carapace, lateral view; C, right third maxilliped, lateral view; D, same, distal part of ultimate segment, mesial view; E, endopod of left first pleopod, dorsal view; E, appendices interna and masculina of left second pleopod, mesial view. Scale bars: 2 mm for A; 1 mm for B, C; 0.5 mm for D–F.

carpus. Third pereopod overreaching antennal scale by 0.8 length of propodus; merus with 3 lateral spines. Fourth pereopod overreaching antennal scale by half-length of propodus. Fifth pereopod missing. Endopod of first pleopod (Fig. 4E) with terminally located appendix interna, slightly constricted at base; mesial margin with row of curved spinule-like setae. Second pleopod with appendix masculina distinctly shorter than appendix interna, stout, truncate terminally, bearing numerous stiff setae (more than 15) on distal end to distal half of mesial surface (Fig. 4F).

Coloration in life. Not known.

Distribution. Known only from the type locality, northeast of Miyake Island, Izu Islands; 1988–2007 m.

Remarks. Like other congeneric species, the new species exhibits sexual variation. For example, the body is more slender in the male; the antennular

flagella are much more elongate in the male, of them the outer flagellum bears longer and more numerous aesthetascs in the male; the first and second pereopods are relatively shorter in the male.

Lebbeus lamina sp. nov. belongs to the species group characterized by the possession of strap-like epipods on the third maxilliped to the third pereopod (cf. Hayashi, 1992; Komai *et al.*, 2004). It appears closest to *L. antarcticus* from Antarctica, *L. cristatus* from New Zealand, *L. tosaensis* from Japan, and *L. virentova* from the Caribbean Sea. Shared characters include: rostrum falling short of distal margin of first segment of antennular peduncle, with five or fewer dorsal teeth and usually with one or more ventral teeth; carapace with notch inferior to base of supraorbital tooth and sinuous anterolateral margin; and first segment of antennular peduncle with two or more

dorsodistal teeth (Komai *et al.*, 1996; 2012; Ahyong, 2010). Differentiating characters between the new species and the other four species are as follows:

(1) The notch inferior to the supraorbital tooth on the carapace is shallow and U-shaped in *Lebbeus lamina* (cf. Figs. 2A, 4A), whereas it is deep and V-shaped in *L. antarcticus* (cf. Komai *et al.*, 1996: Fig. 8A), *L. cristatus* (cf. Ahyong, 2010: Fig. 1c), *L. tosaensis* (cf. Hanamura and Abe, 2003: Fig. 1; Komai and Takeda, 2004: Fig. 4B) and *L. virentova* (cf. Nye *et al.*, 2012: Fig. 2B);

(2) The dorsolateral spines on the telson number 6–7 in *L. lamina*, and 3–5 in *L. antarcticus*, 4 in *L. cristatus*, 4–5 in *L. tosaensis* and 4–6 in *L. virentova*;

(3) The stylocerite nearly reaches the distal margin of the first segment of the antennular peduncle in *L. lamina* (Fig. 2A, C), *L. cristata* (cf. Ahyong, 2010: Fig. 1D), *L. tosaensis* (cf. Hanamura and Abe, 2003: Fig. 2D) and *L. virentova* (cf. Nye *et al.*, 2012: Fig. 2A), rather than distinctly falling short of it in *L. antarcticus* (cf. Ward, 1985: 58, fig. 1c; Komai *et al.*, 1996: Fig. 8A, B);

(4) The antennal carpopocerite reaches to the distal 0.2–0.3 of the antennal scale in *L. lamina* (Fig. 2F) and *L. tosaensis* (cf. Hanamura and Abe, 2003: Fig. 2e), whereas it reaches or slightly overreaches the midlength of the antennal scale in *L. antarcticus* (cf. Ward, 1985: 58; Komai *et al.*, 1996: Fig. 8A), *L. cristata* (cf. Ahyong, 2010: Fig. 1F) and *L. virentova* (cf. Nye *et al.*, 2012: Fig. 2F);

(5) The female first pereopod distinctly overreaches the distal margin of the antennal scale in *L. lamina* (Fig. 1) and *L. antarcticus*, rather than only reaching it in *L. cristatus* (cf. Ahyong, 2010: 345) and *L. virentova* (cf. Nye *et al.*, 2012) or falling short of it in *L. tosaensis* (cf. Hanamura and Abe, 2003: 20; Komai and Takeda, 2004: 84);

(6) Meral spines on the third pereopod are three or more in *L. lamina*, *L. antarcticus*, *L. tosaensis* and *L. virentova* (cf. Komai *et al.*, 1996; Hanamura and Abe, 2003; Komai and Takeda, 2004; Nye *et al.*, 2012), but only two in *L. cristata* (cf. Ahyong, 2010);

(7) The dactyli of the third to fifth pereopods are relatively more slender in *L. cristatus* and *L. tosaensis* than in *L. lamina* and *L. antarcticus* [length/width ratio 4.8 in *L. cristatus* (cf. Ahyong, 2010: Fig. 2F) and 4.4–5.5 in *L. tosaensis* (cf. Komai and Takeda, 2004) versus 2.9 in *L. lamina*, 3.9 in *L. antarcticus* (cf. Komai *et al.*, 1996: Fig. 8H) and 3.1 in *L. virentova* (cf. Nye *et al.*, 2012: Fig. 4I)]; and

(8) The distalmost accessory spinule on the dactyl is blade-like with a convex upper margin in *L. lamina*, *L.*

antarcticus (cf. Komai *et al.*, 1996: Fig. 8H) and *L. virentova* (cf. Nye *et al.*, 2012: Fig. 4I), though it is slender and spiniform in *L. cristatus* (cf. Ahyong, 2010: Fig. 2F) and *L. tosaensis* (Hanamura and Abe, 2003: Fig. 3c–e).

Although the genus occurs from the intertidal to the upper bathyal zone in general, the following 13 species, including the present new species, extend down to or are restricted to depths greater than 1500 m: *L. bidentatus* Zarenkov, 1976 (off Calao, Peru, 1680 m; Zarenkov, 1976); *L. carinatus* Zarenkov, 1976 (off Peru, 1680–1860 m; Zarenkov, 1976); *L. curvirostris* Zarenkov, 1976 (off Peru, 1680–1860 m; Zarenkov, 1976); *L. formosus* Chang, Komai and Chan, 2010 (Taiwan, 635–1982 m; Chang *et al.*, 2010); *L. lamina* sp. nov. (Japan; 1988–2007 m; this study); *L. laurentae* Wicksten, 2010 (East Pacific Rise 13°N, 2618–2640 m; Komai *et al.*, 2012); *L. manus* Komai and Collins, 2009 (Manus Basin, 1575 m; Komai and Collins, 2009); *L. vicina montereyensis* Wicksten and Méndez, 1982 (954–2086 m; Wicksten and Méndez, 1982); *L. pacmanus* (Manus Basin, 1662 m; Komai *et al.*, 2012); *L. profundus* (Rathbun, 1906) (Hawaii, 1340–1800 m; Rathbun, 1906); *L. thermophilus* Komai, Tsuchida and Segonzac, 2012 (Manus and Lau basins, 1512–1842 m; Komai *et al.*, 2012); *L. virentova* Nye, Copley, Plouviez and Van Dover, 2012 (Mid-Cayman Spreading Centre, Caribbean, 2294 m; Nye *et al.*, 2012) and *L. washingtonianus* (British Columbia to California, 820–1808 m; Butler, 1980). Of these 13 species, five (*L. laurentae*, *L. manus*, *L. pacmanus*, *L. thermophilus* and *L. virentova*) are associated with hydrothermal vents, though it is still unclear if they are really vent-endemic. It is remarkable that all of the 13 species are distributed in a relatively narrow latitudinal area between 35°N and 20°S. The present new species represents one of the deepest records among the non-vent associated congeners, with only *L. vicina montereyensis* known from slightly deeper water (2086 m).

Etymology. From the Latin *lamina* (= blade), in reference to the blade-like distalmost accessory spinule on the flexor margins of the dactyli of third to fifth pereopods. Used as a noun in apposition.

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References

- Ahyong, S. T. 2009. New species and new records of hydrothermal vent shrimps from New Zealand (Caridea: Alvinocarididae, Hippolytidae). *Crustaceana* 82: 775–794.
- Ahyong, S. T. 2010. New species and new records of Caridea (Hippolytidae: Pasiphaeidae) from New Zealand. *Zootaxa* (2372): 341–357.
- Butler, T. H. 1980. Shrimps of the Pacific coast of Canada. *Can. Bull. Fish. Aquat. Sci.* 202: i–ix, 1–280.
- Chang, S.-C., T. Komai and T.-Y. Chan. 2010. First record of the hippolytid shrimp genus *Lebbeus* White, 1847 (Decapoda: Caridea) from Taiwan, with the descriptions of three new species. *J. Crust. Biol.* 30: 727–744.
- De Grave, S. & C. H. J. M. Fransen. 2011. Carideorum catalogus: the recent species of the dendrobranchiate, stenopodidean, procarididean and caridean shrimps. *Zool. Meded.* 85: 195–588.
- Hanamura, Y. and Y. Abe. 2003. *Lebbeus tosaensis*, a new hippolytid shrimp (Decapoda, Caridea, Hippolytidae) from southwestern Japan. *Biogeography* (5): 17–24.
- Hayashi, K. 1992. Studies on the hippolytid shrimps from Japan – VIII. The genus *Lebbeus* White. *J. Shimonoseki Univ.* 40: 107–138.
- Hayashi, K. and J. Okuno. 1997. Two associated hippolytids, *Lebbeus comanthi* sp. nov. and *Lebbeus balssi* Hayashi (Decapoda, Caridea, Hippolytidae) from Japan. *J. Natn. Fish. Univ.* 46: 47–56.
- Komai, T. 2001. *Lebbeus spongiaris*, a new species of deep-water shrimp (Crustacea: Decapoda: Caridea: Hippolytidae) from Izu Islands, Japan. *Nat. Hist. Res.* 6: 57–65.
- Komai, T. 2011. Deep-sea shrimps and lobsters (Crustacea: Decapoda: Dendrobranchiata and Pleocyemata) from the Sagami Sea and Izu Islands, central Japan. *Mem. Natn. Mus. Nat. Sci.* 47: 279–337.
- Komai, T. and P. Collins. 2009. Two species of caridean shrimps (Decapoda: Hippolytidae and Nematocarcinidae) newly recorded from hydrothermal vents on the Manus Basin, southwestern Pacific. *Crust. Res.* (38): 28–41.
- Komai, T., K. Hayashi and H. Kohtsuka. 2004. Two new species of the shrimp genus *Lebbeus* White from the Sea of Japan, with redescription of *Lebbeus kubo* Hayashi (Decapoda: Caridea: Hippolytidae). *Crust. Res.* (33): 103–125.
- Komai, T. and H. Komatsu. 2009. Deep-sea shrimps and lobsters (Crustacea: Decapoda: Penaeidea, Caridea, Polychelidea) from northern Japan, collected during the Project “Research on Deep-sea Fauna and Pollutants off Pacific Coast of Northern Honshu, Japan, 2005–2008.” *Natn. Mus. Nat. Sci. Monogr.* (39): 495–580.
- Komai, T. and M. Takeda. 2004. A new species of the hippolytid shrimp genus *Lebbeus* White, 1847 from Sagami-nada Sea, central Japan, and further records of two little-known species (Crustacea: Decapoda: Caridea). *Bull. Natn. Sci. Mus., Tokyo, Ser. A* 30: 77–86.
- Komai, T., I. Takeuchi and M. Takeda. 1996. Deep-sea shrimps (Crustacea: Decapoda: Caridea) from the Antarctic Sea collected during the JARE 35 Cruise. *Proc. Natn. Inst. Polar Res., Symp. Polar Biol.* (9): 179–206.
- Komai, T., S. Tsuchida and M. Segonzac. 2012. Records of species of the hippolytid genus *Lebbeus* White, 1847 (Crustacea: Decapoda: Caridea) from hydrothermal vents in the Pacific Ocean, with descriptions of three new species. *Zootaxa* (3241): 35–63.
- Martin, J. W. and T. Haney. 2005. Decapod crustaceans from hydrothermal vents and cold seeps: a review through 2005. *Zool. J. Linn. Soc.* 145: 445–522.
- Minemizu, R. 2000. [Marine Decapod and Stomatopod Crustaceans mainly from Japan]. 344 pp. Bun’ichi Sogo Publishing Co., Tokyo. (In Japanese)
- Nye, V., J. Copley, S. Plouviez and C. L. Van Dover. 2012. A new species of *Lebbeus* (Crustacea: Decapoda: Caridea: Hippolytidae) from the Von Damm Vent Field, Caribbean Sea. *J. Mar. Biol. Ass. U. K.*, FirstView Article: 1–11. Available on CJO2012 doi:10.1017/S0025315412000884.
- Rathbun, M. J. 1906. The Brachyura and Macrura of Hawaiian islands. *Bull. U. S. Fish Comm.* (23): 827–930, pls. 1–24.
- White, A. 1847. List of the specimens of Crustacea in the collection of the British Museum. viii + 143 pp. British Museum, London.
- Ward, P. 1985. New records of *Lebbeus antarcticus* (Hale) (Crustacea: Decapoda) from the Antarctic Peninsula. *Br. Antarct. Surv. Bull.* (69): 57–63.
- Wicksten, M. K. 2010. *Lebbeus laurentae*: a replacement name for *Lebbeus carinatus* de Saint Laurent, 1984 (Decapoda: Caridea: Hippolytidae) and a redescription of the species. *Proc. Biol. Soc. Wash.* 123: 196–203.
- Wicksten, M. K. and M. G. Méndez. 1982. New

records and new species of the genus *Lebbeus* (Caridea: Hippolytidae) in the eastern Pacific Ocean. Bull. South. Calif. Acad. Sci. 81: 106–120.

Zarenkov, N.A. (1976) On the fauna of decapods of the waters adjacent to South America. Biol. Mor. 5: 8–18. (In Russian)

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伊豆諸島海域の深海帯から採集されたイバラモエビ属 (甲殻亜門: 十脚目: コエビ下目: モエビ科) の 1 新種

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伊豆諸島三宅島沖の深海帯 (水深1988 ~ 2007 m) より採集された2個体 (雌雄それぞれ1個体) の標本に基づき、モエビ科イバラモエビ属 *Lebbeus* White, 1847の新種 *L. lamina* sp. nov. (新称: シンエンイバラモエビ) を記載した。本新種は第1 ~ 第3胸脚に副肢を保有する種群に属し、形態的には *L. antarcticus* (Hale, 1941), *L. cristatus* Ahyong, 2010, *L. tosaensis* Hanamura and Abe, 2003, および *L. virentova* Nye, Copley, Plouviez and Van Dover, 2012に類似する。本新種とこれら近縁種は、尾節の背側棘の数、第1触角柄部第1節の styloceriteの長さ、第2触角第5柄節の長さ、雌第1胸脚の長さ、第3胸脚指節の形状などの諸形質により識別される。本属既知種約60種のうち、13種が水深1500 m以深の水深帯より記録されているが、本邦水域においては本新種が初めての記録となる。