Proc. Jap. Soc. syst. Zool., No. 30: 46–52. June 25, 1985.

A New Species of the Genus *Leucothoe* (Amphipoda, Gammaridea, Leucothoidae) from Japan

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Synopsis

ISHIMARU, S. 1985——A new species of the genus *Leucothoe* (Amphipoda, Gammaridea, Leucothoidae) from Japan. *Proc. Jap. Soc. syst. Zool.*, No. 30: 46–52.

A new species of leucothoid amphipod, *Leucothoe nagatai*, is described from Japanese coastal waters. This new species was found in the branchial cavities of two solitary ascidians, *Styela plicata* and *Halocynthia roretzi*. Among several allied species, the new species is most similar to *L. brevidigitata* in the small and narrow incisor of mandible, but differs from it in several important features.

The amphipod family Leucothoidae is known as an inquilinous commensal with ascidians, sponges and bivalves. The type genus *Leucothoe* is cosmopolitan, and involves more than 40 species at present. From Japanese coastal waters three species of the genus have been recorded, that is, *Leucothoe spinicarpa* (ABILDGAARD, 1789) from Ariake Sea (IRIE and NAGATA, 1962), *L. incisa* ROBERTSON, 1892 and *L. alata* J. L. BARNARD, 1959, both from the Seto Inland Sea (NAGATA, 1965).

Recently the author had an opportunity to examine some specimens of a sofar undescribed species of this genus collected at Oshoro and Misaki. The present paper deals with the description of this new species.

The type series is deposited in the Zoological Museum, Faculty of Science, Hokkaido University.

Leucothoe nagatai sp. nov.

(Figs. 1–2)

Leucothoe alata: NAGATA, 1965a, p. 561, figs. 1–3; 1965b, p. 158, figs. 9–10 (not J. L. BARNARD, 1959).

Type series. Holotype: ♂, 9.3 mm, found in branchial cavity of solitary ascidian *Styela plicata*; Misaki, Kanagawa Prefecture (35°09′N, 139°38′E), 6-VIII-1974, K. KONISHI coll.——Allotype: ov ♀, 9.6 mm, found in branchial cavity of solitary ascidian *Halocynthia roretzi*; Oshoro, Hokkaido (43°01′N, 140°49′E), 4-VIII-1983, ISHIMARU coll.——Paratypes: 2 ov ♀♀, 7.4, 11.0 mm and 1♂, 9.3 mm, data same as the holotype.

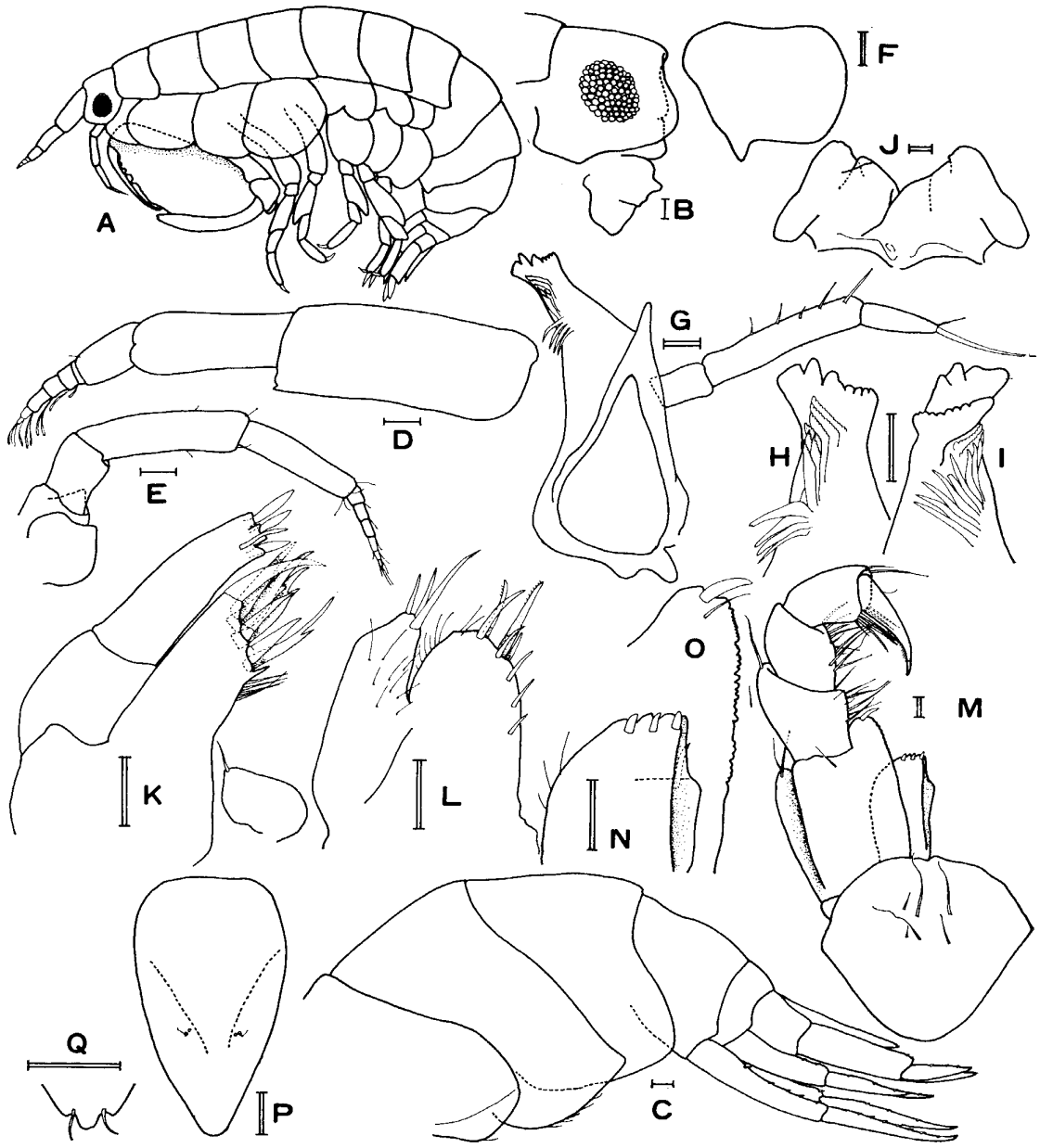

Fig. 1. *Leucothoe nagatai* sp. nov. Male, 9.3 mm (holotype). A, habitus; B, head; C, pleon; D, antenna 1 (R, inn); E, antenna 2 (R, out); F, labrum; G–H, mandible (R, inn); I, mandible (L, inn); J, labium; K–L, maxillae 1–2 (R, vt); M–O, maxilliped (vt); P, telson (ds). Male, 9.3 mm. Q, apex of telson (ds). Bar scales 0.1 mm, double bar scales 0.05 mm.
at, anterior view; inn, inner view; out, outer view; vt, ventral view; ds, dorsal view; R, right part; L, left part.

that of uropod 1, with weakly ridged ventral face; outer dorsal ridge strongly developed, extending into acuminate tooth at distal corner. Inner ramus 65% as long as peduncle; outer ramus 80% as long as inner.

Telson 1.8 times longer than wide, reaching 80% length of peduncle of uropod 3 *in situ*, narrowing distally, with round apex.

Female (allotype). Gnathopod 2 as in Fig. 2O; coxa 2 deeper and less broader than that of male, 1.1 times broader than deep; posterior lobe of article 5 smooth along both inner and outer margins; proximal half of palm (Fig. 2P) finely undulatory, with minute spine on each cusp.

Oostegites issued from coxae 2–5, linear, fringed with many setae along both anterior and posterior margins.

Telson with two apical notches.

Variation. Telson of paratype male (Fig. 1Q) alike allotype's, with two apical notches.

Remarks. LEDOYER (1978) recognized eight species-groups under the genus *Leucothoe*. The present new species belongs to LEDOYER's "Groupe IVa" which has the following characteristics: article 7 of gnathopod 1 short; epimeron 3 with round or quadrangular corner; palm of gnathopod 2 dentate. Among the species of the group IVa, the new species is most allied to *L. brevidigitata* MIERS, 1884 in having similar incisor significantly smaller and narrower than those of the other members of the group. The new species, however, differs from *L. brevidigitata* in the following characteristics: lacinia mobilis is only on left mandible, while on both mandibles is the latter species; the palp article 2 of mandible is as thick as the article 1, while much thicker in the latter; the article 6 of gnathopod 1 is tapering in the former, dilated medially in the latter; accesssory flagellum is absent in the former, present in the latter. Differences are also recognized in the length ratio of the peduncular articles of antennae 1–2, the shape of the inner plate of maxilliped, the length of the nail of maxilliped, setation of the article 2 of gnathopod 1, and the structure of the palm of gnathopod 2.

NAGATA (1965a, b) identified his *Leucothoe* specimens from southern Japan as *L. alata*, though he noticed several differences from the original description of *L. alata*. He did not refer to the structure of incisor, which is the important character to distinguish the present new species from *L. alata*, but his description and figures well agree with the present new species. From *L. alata*, the new species is distinguishable in the following characteristics (corresponding condition of *L. alata* in parenthesis if necessary): accessory flagellum is absent (present);

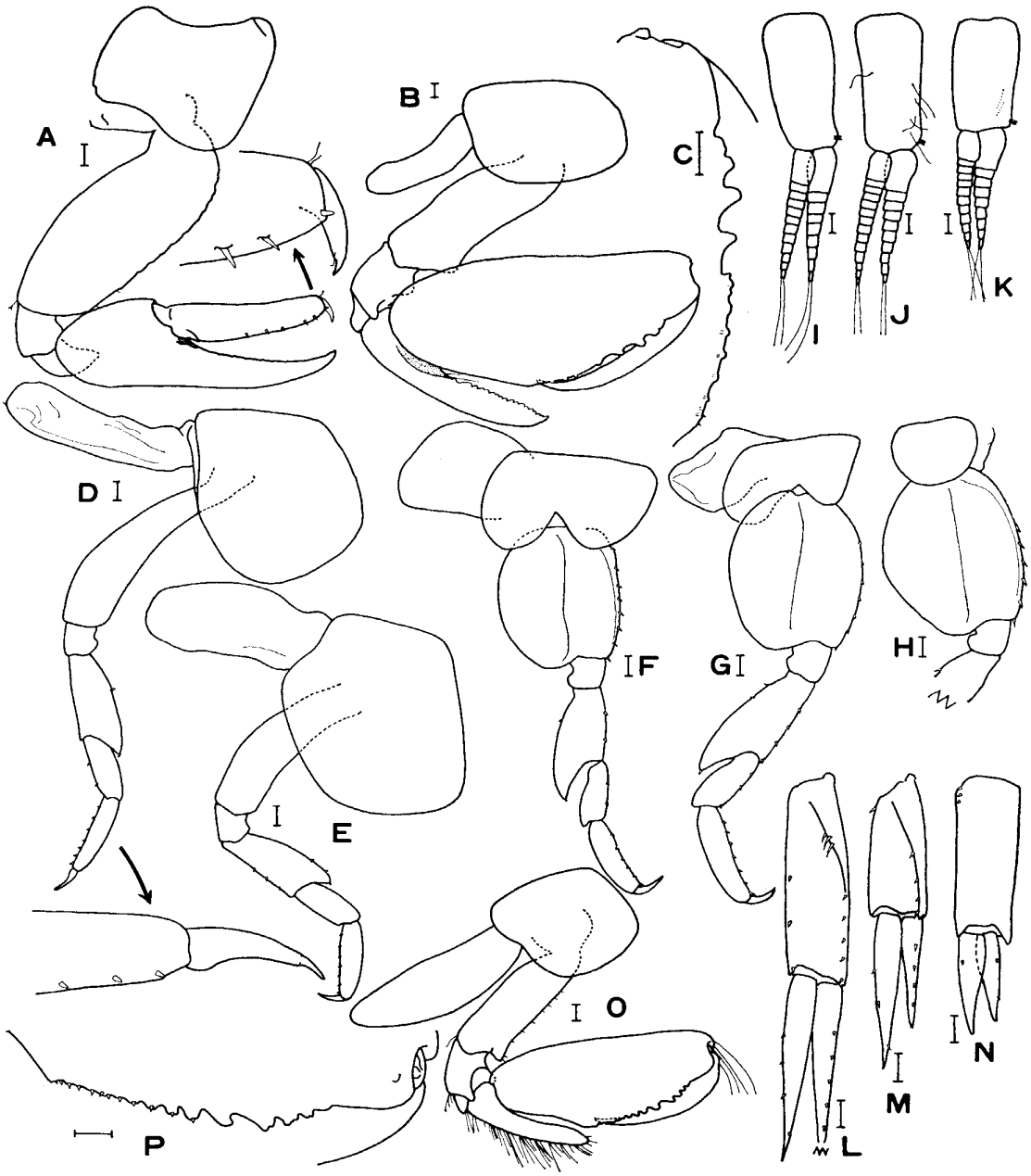

Fig. 2. *Leucothoe nagatai* sp. nov. Male, 9.3 mm (holotype). A–B, gnathopods 1–2 (R, out); C, palm of gnathopod 2; D–H, pereopods 3–7 (R, out); I–K, pleopods 1–3 (R, at); L–N, uropods 1–3 (R, ds). Female, 9.6 mm (allotype). O, gnathopod 2 (R, out); P, palm of gnathopod 2. Bar scales 0.1 mm.

incisor is smaller and narrower; lacinia mobilis is on left mandible only (on both); the setae along the palp article 2 of mandible are much shorter; the palp article 3 of maxilliped is not produced (produced);

the basal article 2 of maxilliped is weakly alate (strongly alate); coxa 2 is broader than deep (as broad as deep); the posterior lobe of gnathopod 2 is not bifid apically (bifid apically); the article 4 of pereopods 5–7 is broader; the inner ramus of uropod 2 is longer than the peduncle and 1.4 times longer than the outer ramus (shorter than the peduncle and 1.2 times longer than the outer ramus); the peduncle of uropod 3 is much longer; both rami of uropod 3 are much shorter.

Acknowledgement

The author is grateful to Prof. Mayumi YAMADA (Hokkaido Univ.) and Dr. Haruo KATAKURA (Hokkaido Univ.) for their kind reading and revision of the manuscript. He is also thankful to Dr. Kooichi KONISHI (Hokkaido Univ.) who put his material from Misaki at the author's disposal.

摘　　要

石丸信一（北海道大学理学部動物学教室）——日本から得られた *Leucothoe* 属（端脚目，ヨコエビ亜目，マルハサミヨコエビ科）の1新種.

日本の沿岸域よりマルハサミヨコエビ科の1新種 *Leucothoe nagatai* を記載した．本種はシロボヤ *Styela plicata* とマボヤ *Halocynthia roretzi* の鰓腔中より見出されたもので，既知の同属種の中でも幅の狭い大顎門歯状部をもつ点で *L. brevidigitata* に類似している.

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