



TWO NEW SPECIES OF *PONTELLA* (COPEPODA, CALANOIDA, PONTELLIDAE) FROM BALI AND THE SEMPU ISLANDS, INDONESIA

BY

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ABSTRACT

Two new species of *Pontella* from Indonesian waters are herein described. *Pontella nishidai* n. sp. is distinguishable in the female by the posterior corners of its Pdg5 being pointed, the left side of Ur1 with a dorsolateral semi-circular process, and the form of the P5; in the male by the Ur1 naked, the bifurcated thumb of the chela and the very slender shape of the finger of the right P5. *Pontella gilimanukensis* n. sp. is distinguishable in the female by having a large beak-like process of Ur1, and the asymmetrical CR; in the male by the short posterior corners of Pdg5 and the form of the P5.

RÉSUMÉ

Deux nouvelles espèces de *Pontella* des eaux indonésiennes sont décrites ici. *Pontella nishidai* n. sp. se distingue chez la femelle par les angles postérieurs pointus de son Pdg5, par le bord gauche de l'Ur1 possédant un processus dorso-latéral semi-circulaire, et par la forme de la P5; chez le mâle par l'Ur1 sans processus, par le pouce bifide de la pince, et par la forme très élancée du doigt de la P5 droite. *Pontella gilimanukensis* n. sp. se distingue chez la femelle par un grand processus en forme de bec sur Ur1 et par des CR asymétriques; chez le mâle, par les angles postérieurs du Pdg5 courts et la forme de la P5.

INTRODUCTION

The genus *Pontella* Dana, 1849 currently comprises 64 valid species (Walter & Boxshall, 2019). Most of these species are represented in tropical and subtropical waters of the Indo-Pacific (Fleminger, 1965, 1967; Mulyadi, 2014). Among these, three species (*P. cristata* Krämer, 1896; *P. hanloni* Greenwood, 1979; and *P. novaezealandiae* Farran, 1929) have until now been reported from Australian waters only (Farran, 1936; Dakin & Colefax, 1940; Greenwood, 1979). In Indone-

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sian waters, 16 nominal species of *Pontella* were reported until now (Scott, 1909; Fleminger, 1986; Ohtsuka et al., 1987; Mulyadi, 1997, 2003, 2014). Of these, eight species of *Pontella* have been reported by Scott (1909), i.e., *P. danae* Giesbrecht, 1889, *P. fera* Dana, 1849, *P. princeps* Dana, 1849, *P. securifer* Brady, 1883, *P. denticauda* Scott, 1909, *P. alata* Scott, 1909, *P. cerami* Scott, 1909, and *P. forficula* Scott, 1909. The last three species, which were all described based on a single sex, were collected during the Siboga Expedition (1889-1900). The description of *Pontella alata* was based on four female specimens collected from the north coast of Sulawesi, while the other two, *P. cerami* and *P. forficula*, were described from male specimens from the Banda Sea, Indonesia, and the Sulu Sea, southern Philippines, respectively. Ohtsuka et al. (1987) synonymized *P. cerami* with *P. alata*, and *P. forficula* was synonymized with *Ivellopsis elephas* (Brady, 1883) by Mulyadi (2011). Five species, *P. labuanensis* Mulyadi, 1997, *P. bonei* Mulyadi, 2003, *P. kleini* Mulyadi, 2003, *P. vervoorti* Mulyadi, 2003, and *P. papuaensis* Mulyadi, 2014, were described as new species (Mulyadi, 1997, 2003, 2014). In addition, four species, *P. diagonalis* Wilson, 1950, *P. sewelli* Heinrich, 1987, *P. spinipes* (Giesbrecht, 1889) and *P. surrecta* Wilson, 1950, have been reported, that by then represented new records for the region (Mulyadi, 2002, 2003, 2011, 2014).

More recently, *P. sewelli* Heinrich, 1987 was synonymized with *P. sinica* Chen & Zhang, 1965 by Francis & Nishida (2018). The male of *P. diagonalis* Wilson, 1950 was synonymized with *P. spinipes* (Giesbrecht, 1889) by Francis et al. (2018). As a result of the above actions, 15 species of *Pontella* have currently been confirmed from the waters of Indonesia: *P. alata* (= *P. cerami*), *P. bonei*, *P. danae*, *P. denticauda*, *P. diagonalis* (female), *P. fera*, *P. kleini*, *P. labuanensis*, *P. papuanensis*, *P. princeps*, *P. securifer*, *P. sewelli* (= *P. sinica*), *P. spinipes* (= male of *P. diagonalis*), *P. surrecta*, and *P. vervoorti*.

These 15 species are divided into 6 species groups, based on morphological characters, i.e., the groups of *P. alata*, *P. danae*, *P. fera*, *P. labuanensis*, *P. papuanensis*, and unassigned groups (Fleminger, 1986; Mulyadi, 1997, 2003, 2014). The *Pontella alata* group includes the following species: *P. alata* (= *P. cerami*) and *P. surrecta*. The *Pontella danae* group includes *P. bonei*, *P. danae*, *P. spinipes* (= male of *P. diagonalis*) and *P. vervoorti*. The *Pontella fera* group includes *P. denticauda* and *P. fera*. The *Pontella labuanensis* group includes *P. kleini* and *P. labuanensis*. The *Pontella papuaensis* group at present consists of a single species, *P. papuaensis*. The unassigned group includes *P. diagonalis* (female), *P. princeps*, *P. sinica* (= *P. sewelli*), and *P. securifer*.

Pontella spinipes was described on the basis of female specimens from the Arabian Sea by Giesbrecht (1889). The male of *P. spinipes* was described by Wolfenden (1905) from the Maldivic and Laccadive Islands but Silas & Pillai (1973) assumed it to be *P. diagonalis*. Later, the specimens referred to as male

P. spinipes were described by Sewell (1912), Silas & Pillai (1973), Pillai (1975) and Mulyadi (2011). Meanwhile, *P. diagonalis* Wilson, 1950 was also described on the basis of a female specimen from off Jolo Island, the Philippines, and the males referred to as *P. diagonalis* were described from the Indian Ocean by Silas & Pillai (1973), Pillai (1975) and from Indonesian waters by Mulyadi (2011). Researchers believe that there is no distinction between male and females in either species, but there is no morphological evidence to support this claim. Moreover, their geographic ranges, which overlap in the Indian Ocean, and morphological similarity (Wolfenden, 1905; Silas & Pillai, 1973) aroused Francis et al.'s (2018) suspicion over the proposed female-male matching. The female-male matching means linking female and male of the same species due to the previous descriptions based only on either female or male specimens and/or also the morphological resemblance of co-occurring congeners. Francis et al. (2018) examined the male assumed to be *P. diagonalis* and revealed that as the male of *P. spinipes*. Accordingly, the males described as *P. spinipes* by Sewell (1912), Silas & Pillai (1973), Pillai (1975), and Mulyadi (2011) are considered to belong to another, unknown species.

During a study on the planktonic copepods from the Indonesian seas, two new species of the genus *Pontella* were recently identified in a plankton sample from Gilimanuk Bay, Bali Island, and from Sempu Island, East Java, Indonesia. These are, respectively, the 65th and 66th species known for the genus *Pontella*, and share morphological characters with two previously known *Pontella* spp. from Indonesian waters, *P. kleini* and *P. papuaensis*.

This paper, therefore, deals with descriptions and illustrations of the females and males of these two new species of *Pontella*, collected from the two localities just mentioned. The text further aims at clarifying some synonymy, and discusses the distribution of those species of the genus here reported upon, in Indonesian waters, in adjacent waters, as well as throughout the world's oceans.

MATERIAL AND METHODS

Plankton samples were collected from Gilimanuk Bay, Bali Island (08°11'05"N 114°33'00"E), Indonesia, by surface tows in the daytime with a conical plankton net (mesh size 0.33 mm, mouth diameter 45 cm) on 17 July 2009. Some other plankton samples were provided from the collections of the Research Center for Biology, Indonesian Institute of Sciences (LIPI), earlier collected at Sempu Island, southeastern East Java, Indonesia (08°27'24"S 112°40'45"E) on 26 June 2010. These samples were also collected by surface tows with a conical plankton net. Samples were fixed and preserved in 2% formaldehyde/seawater. Specimens of

Pontella were sorted from the original samples, stained with methylene blue, dissected with needles in 10% glycerol/distilled water, and the body and appendages were observed under a compound microscope equipped with a drawing tube.

The morphological terminology follows Huys & Boxshall (1991). The prosome length was measured from the anterior apex to the mid-posterior end of the prosome, and the urosome length from the mid-anterior end of the urosome to the posterior end of the caudal rami; all measurements were made with a calibrated ocular micrometer.

Abbreviations used in the text to describe morphological features are: A1, antennule; A2, antenna; Pdg1-Pdg5, pedigerous somites 1-5; P1-P5, swimming legs 1-5; Ur1-Ur5 urosomal somites 1-5; CR, caudal ramus/i; CO, coxa; BA, basis; Re1-Re3, exopodal segments 1-3; Ri1-Ri3, endopodal segments 1-3; Se, outer spine; Si, inner spine; St, terminal spine. Articulating segments of the antennule are designated by Arabic numerals, ancestral segments by Roman numerals. One seta and one aesthetasc on a segment of the A1 are designated as 1s + 1ae.

All type-specimens are formalin-preserved and deposited in the Museum Zoologicum Bogoriense (MZB), Research Center for Biology, Indonesian Institute of Sciences (LIPI), Cibinong, Indonesia.

DESCRIPTIONS

Family PONTELLIDAE DANA, 1853

Genus *Pontella* Dana, 1846

***Pontella nishidai* n. sp.** (figs. 1-4)

Material examined. — Holotype, female (4.10 mm) (MZB Cru. Cop. 130), paratypes 4 females (4.10-4.15 mm) and 4 males (4.00-4.10 mm) (MZB Cru. Cop. 131), all collected from Sempu Island, East Java (08°27'24''S 112°40'45''E) by surface tow of 0.33 mm mesh conical plankton net at daytime on 26 June 2010.

Female. — Body (fig. 1a) robust, relative length of prosome to urosome 4.9:1. Cephalosome separated from Pdg1; Pdg4 and Pdg5 fully fused; posterior corners of prosome produced into asymmetrical, acuminate processes, with globular base in dorsal view, left process slightly longer and wider than right (fig. 1a). Cephalosome bluntly triangular and with a pair of lateral hooks and a pair of small lenses located anteriorly. Rostrum bifurcate, symmetrical, thickened basally and tapering distally, directed ventrally, without lens, basal portion extended ventrally, roughly to level of ventral eye, and divided distally into two short spiniform processes.

Urosome (fig. 1a, b) composed of two somites, genital compound somite elongated, asymmetrical, left side with semi-circular process antero-dorsally, right side with knob-like process antero-laterally; anal somite asymmetrical, right margin longer than left, exceedingly short, only 0.16× length of genital compound



Fig. 1. *Pontella nishidai* n. sp. Female holotype: a, whole animal, dorsal view; b, urosome, lateral view; c, rostrum, frontal view; d, antennules; e, P5.

somite, and without any processes; CR separated from anal somite, asymmetrical, right ramus slightly longer than left, inner margin of each ramus fringed with fine hairs, each ramus with seta I rudimentary and naked, setae II-VI plumose and directed posteriorly and without proximal thickening (fig. 1a, b).

Antennule (fig. 1d) symmetrical, 25-segmented, extending beyond Pdg4; posterior margin of segments 2-12 fringed with fine hairs; ancestral segments III to V and VIII to IX incompletely fused, segments XXVII to XXVIII completely fused. Fusion pattern and setal formula as follows: (I)-2 + ae; (II)-1sp; (III-V)-4 + ae; (VI)-2 + ae; (VII)-2 + ae; (VIII-IX)-4 + ae; (X)-2 + ae; (XI)-2 + ae; (XII)-2 + ae; (XIII)-2 + ae; (XIV)-2 + ae; (XV)-2 + ae; (XVI)-2 + ae; (XVII)-1 + sp + ae; (XVIII)-2 + 1; (XIX)-1 + sp + ae; (XX)-2 + ae; (XXI)-2 + ae; (XXII)-1; (XXIII)-1; (XXIV)-1 + sp; (XXIV)-1 + sp; (XXV)-1 + sp + ae; (XXVI)-1s + 1s + 1ae; (XXVII-XXVIII)-6 + ae.

Antennae (fig. 2a) biramous, with coxa having plumose seta proximally, basis with 2 anterodistal setae; Ri 2-segmented, proximal segment completely fused with basis, much elongated, bearing 2 setae of unequal length distally, apical segment lamellar, produced into proximal and terminal lobes, former with 6 long and 3 minute setae, latter with setula, 6 setae, and proximal fine spinules; Re 5-segmented, 2nd segment cylindrical, with seta at 1/6 of its length, medial seta, and 3 distal setae; terminal segment globular, equipped with 2 setulae and one seta.

Mandibular blade (fig. 2c) heavily chitinized, bearing 7 teeth and spinulose seta on cutting edge; both 3rd and 4th dorsalmost teeth bicuspidate; “dagger like” spines (Turner, 1978) present at base of teeth 3-7. Mandibular palpus (fig. 2b) with 2-segmented Ri and 5-segmented Re; basis bearing 3 inner marginal setae.

Maxillula (fig. 2d) with gnathobase having 16 stout setae, minute spinules and fine hairs near base of stout setae; 2nd inner lobe with 3 setae of unequal length; 3rd inner lobe with 1 long and 3 short setae of sub-equal length; 1st outer lobe equipped with 9 setae; 2nd outer lobe rudimentary with single seta; base with long hairs on inner basal half, 4 medial setae, 4 sub-apical setae, and 5 apical setae; Ri completely fused with basis; Re with 10 setae and small setula.

Maxilla (fig. 2e) with 6 inner lobes on basal segment; lobes 4-6 carrying 2, 1 and 1 strong setae, respectively, each with row of setulae arranged at right angles to its inner margin and distal end serrated; Ri of 3 segments, 1st segment with only single strong seta, 2nd with setula and strong seta, 3rd segment with 3 strong setae, one of which being serrate along inner margin.

Maxilliped (fig. 2f) uniramous, reduced in size; praecoxa and coxa completely fused, with 3 groups of setae, consisting of 2, 3 and 3 setae, respectively, distal part produced distally covering basal part of basis; anterior margin of basis fringed with row of small teeth and small setula subdistally and 2 plumose setae distally; endopod 5-segmented, with setal formula 2, 1, 1, 1, 3.

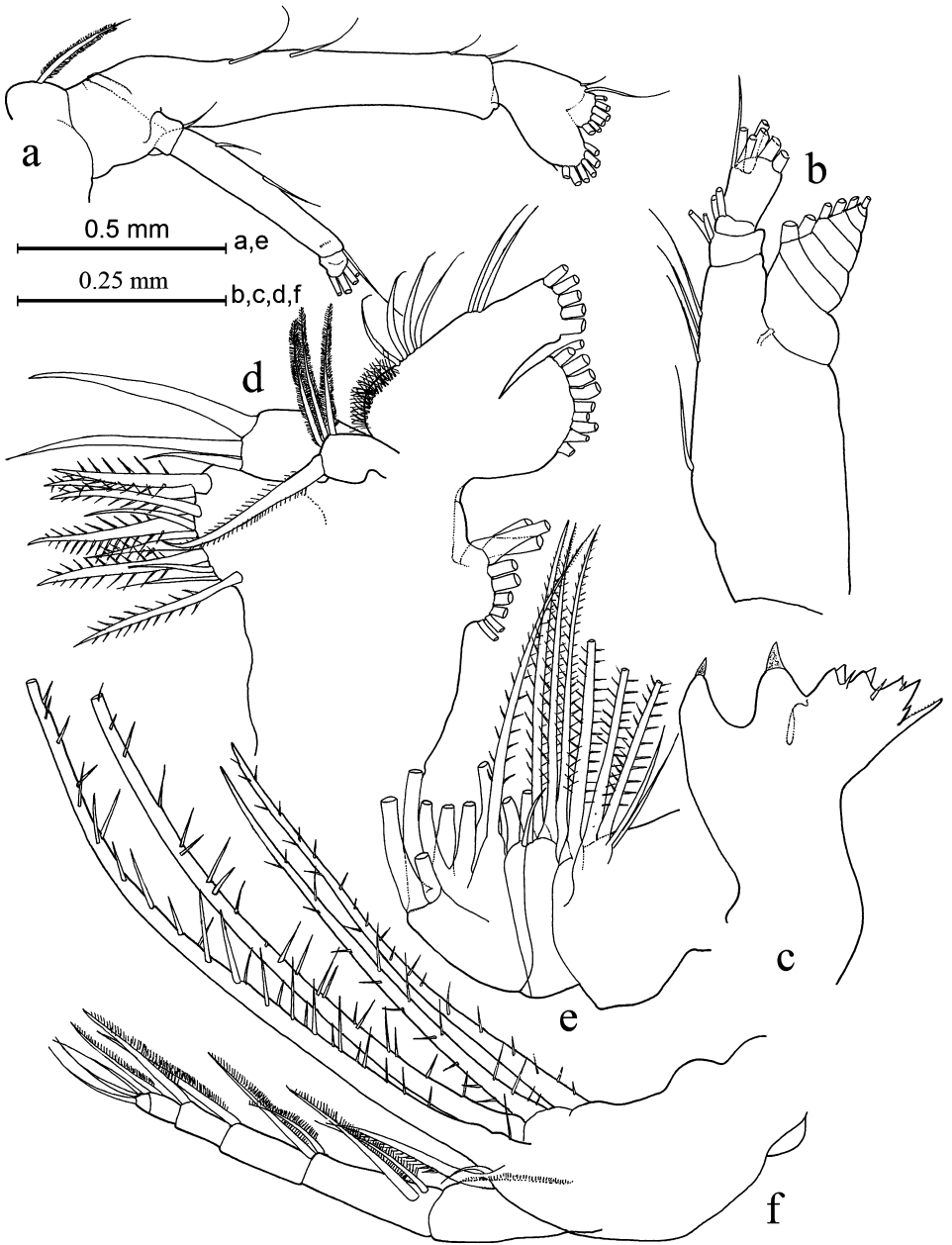


Fig. 2. *Pontella nishidai* n. sp. Female holotype: a, antenna; b, mandible; c, mandibular blade; d, maxillula; e, maxilla; f, maxilliped.

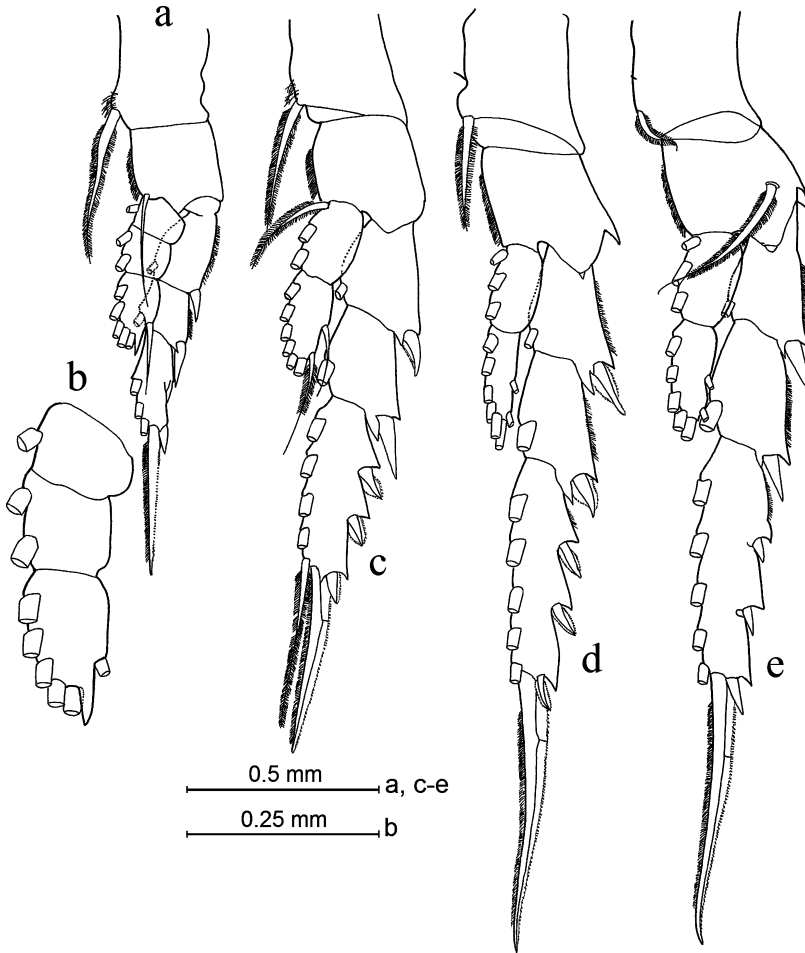


Fig. 3. *Pontella nishidai* n. sp. Female holotype: a, P1; b, endopod of P1; c-e, P2-P4.

P1-P4 (fig. 3a-e) biramous, with 1-segmented coxa and basis, basis with 1 plumose seta on inner side; Re 3-segmented, Ri 3-segmented in P1 and 2-segmented in P2-P4. Number of setae and spines on P1-P4 as follows:

	Coxa	Basis	Exopodal segments	Endopodal segments
P1	0-1	0-0	I-1; I-1; II,I,4	0-1; 0-2; 1,2,3
P2	0-1	0-0	I-1; I-1; III,I,5	0-3; 2,2,4
P3	0-1	0-0	I-1; I-1; III,I,5	0-3; 2,2,4
P4	0-1	1-0	I-1; I-1; III,I,5	0-3; 2,2,3

P5 (fig. 1e) asymmetrical, left leg slightly longer than right; intercoxal sclerite and coxa completely fused; basis with plumose seta on inner margin; Re horn-shaped, more than twice as long as Ri, with 3 processes along outer margin, tapering to distal point. Ri bifurcated at apex.

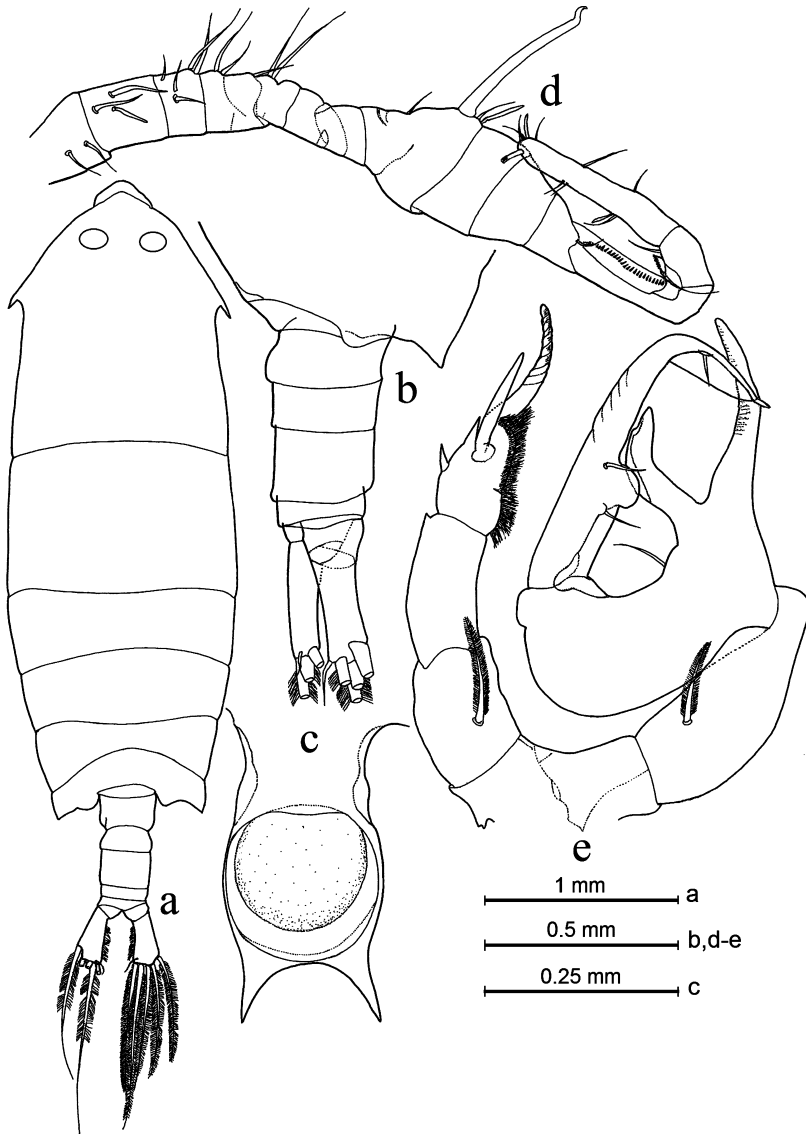


Fig. 4. *Pontella nishidai* n. sp. Male paratype: a, whole animal, dorsal view; b, Pdg5 and urosome, lateral view; c, rostrum, frontal view; d, right A1; e, P5.

Male. — Body (fig. 4a) more compact than in female. Cephalosome and Pdg1 separated; Pdg4 and Pdg5 fully divided; posterior corners of prosome produced into asymmetrical, short and pointed processes, with globular base in dorsal view, reaching middle length of genital somite. Pair of cephalic hooks present as in female. Dorsal eye lenses larger than those of female. Rostrum (fig. 4c) bulbous

with bifurcated, short conical projections, with 2 well-developed lenses, which are absent in female.

Urosome (fig. 4a) composed of 5 somites; genital somite somewhat asymmetrical, right side more swollen than left; Ur3 longer than following 2 somites combined; caudal rami symmetrical, rather elongated, inner margin of each ramus fringed with fine hairs, each ramus with seta I rudimentary and naked, setae II-VI plumose and directed posteriorly, setae IV and V without proximal thickening.

All other appendages, except for right A1 and P5, similar in structure to those of female. Right antennule (fig. 4d) geniculate, left one resembling that of female, indistinctly 12-segmented; segments II-IV, XXI-XXIII, XXIV-XXVI, XXVII-XXVIII completely fused; segments V-IX, X-XIV, XV-XVI incompletely fused. Fusion pattern and setal formula as follows: I, 3 + ae; II-IV, 4 + ae; V-IX, 10 + 3ae; X-XIV, 10 + 3ae; XV-XVI, 4 + 2ae; XVII, 2 + ae; XVIII, 2 + ae; XIX, 1 + ae; XX, 1 + p (process); XXI-XXIII, 2 + 3p + ae; XXIV-XXVI, 6 + ae; XXVII-XXVIII, 4 + ae. Fused segment XV-XVI with very strong hooked spine, segment XX with toothed ridge provided with serrated denticles; compound segments XXI-XXIII provided with falcate process distally and 2 toothed plates, proximal plate with acuminate teeth and distal one with lamelliform teeth.

P5 (fig. 4e) uniramous, asymmetrical; basis with plumose seta on inner margin; right leg, Re1 (chela) more or less rectangular, with bilobed thumb-like processes at proximal end of outer margin, both processes unequal, proximal one stout and long and slightly curved inwards medially, widened basally, inner thumb stout and curved outwards medially; outer margin distal to thumb concave, with 1 minute seta at 0.4 length of chela from outer margin. Re2 (finger) elongated, turned outwards about 180° distally and ending in spatulate structure with 1 small spine at apex, outer margin with 3 setae, 2 situated near base of finger and another one near distal end, and 1 large knob-like process at 0.25 proximal along length of finger. Left leg, Re1 with small spine at distal end of outer margin; Re2 bulb-shaped, outer margin armed with 1 short, pointed spine medially, apex with 1 short spine-like process, 1 long round-tipped process, and 1 long flagellar process, inner margin of Re2 hirsute.

Remarks. — The present new species belongs to the *P. labuanensis* group of Mulyadi (1997), at present consisting of three species, *P. labuanensis* Mulyadi, 1997, *P. kleini* Mulyadi, 2003 and *P. nishidai* n. sp. Characteristics of this group, with some emendations, as follows: (1) the posterior corners of the prosome of both sexes protruded posteriorly into a pointed tip; (2) the female rostral lens absent; (3) the female urosome is slightly or distinctly asymmetrical, about 0.25 as long as prosome, 2-segmented, and with processes; (4) the caudal rami of the female are slightly or remarkably asymmetrical; (5) the exopods of the female fifth

legs are asymmetrical, each bearing 2-3 lateral processes; (6) the endopods of the female fifth legs are bifid distally; (7) the rostrum of the male with large, double-convex lens; (8) the thumb of the right leg 5 of the male with 2 subequal digitiform processes; (9) the finger of the right leg 5 of the male is slender; (10) the terminal segment of the left leg 5 of the male bears 1 spiral-form process besides 2 robust spines at its apex.

The female resembles that of *P. kleini* in having the elongated Ur1, the P5 horn-shaped with 3 Se, the rostrum without lens, and the asymmetrical caudal rami. The most conspicuous difference is in the morphology of the urosome. In the female of *P. nishidai* (1) the Ur1 without a beak-like posterodorsal process (vs. the Ur1 with a beak-like posterodorsal process reaching 0.15 length of right CR), (2) the Re's of P5 of *P. nishidai* almost symmetrical, each with 3 Se (vs. the Re's of P5 extremely asymmetrical, left Re longer than right with bifurcated apex and 3 Se, right Re with 2 Se). The male of *P. nishidai* is easily distinguished from other species of *Pontella* by the presence of the stout bilobed thumb on Re1 and the knob-like process on Re2 of the right P5.

Etymology. — The species is named in honour of the Professor Emeritus Shuhei Nishida, Tokyo University, Japan. The specific name thus is a noun in the genitive singular.

***Pontella gilimanukensis* n. sp. (figs. 5-6)**

Not female *Pontella spinipes* — Mulyadi, 2011: 1523, fig. 6.

Not male *Pontella spinipes* — Sewell, 1912: 373-374, pl. 24 figs. 1-4; Silas & Pillai, 1973: 826-827, figs. 21c, d, k, 22b; Pillai, 1975: 133-134, fig. 2a, b; Mulyadi, 2011: 1523-1525, fig. 7.

Material examined. — Holotype, female (3.98 mm) (MZB Cru. Cop. 132), paratypes 9 females (3.95-3.98 mm) and 5 males (3.10-3.12 mm) (MZB Cru. Cop. 133), all collected from Gilimanuk Bay, Bali Strait (08°11'05"N 114°33'00"E), Indonesia, by surface tows of a conical plankton net (mesh size 0.33 mm, mouth diameter 45 cm) at daytime on 17 July 2009.

Female. — Body (fig. 5a) robust. Prosome stout, about 4.6 times as long as urosome. Cephalosome and Pdg1 fully fused; Pdg4 and Pdg5 completely separated; posterior corners of prosome produced into asymmetrical acuminate processes, with globular base, in dorsal view, left process longer and wider than right, reaching to posterior end of Ur1 (fig. 5a). Cephalosome bluntly triangular and with a pair of small lenses located anteriorly, a pair of lateral hooks, and 3 blue, rounded pigmented blotches mid-dorsally. Rostrum bifurcate, symmetrical, thickened basally and tapering distally, directed ventrally, with lens, basal portion extended ventrally, roughly to level of ventral eye and divided distally into two short spiniform processes.

Urosome (fig. 5a-b) composed of 2 somites, asymmetrical, genital compound somite bulged on its right lateral margin and dorsally extending backwards

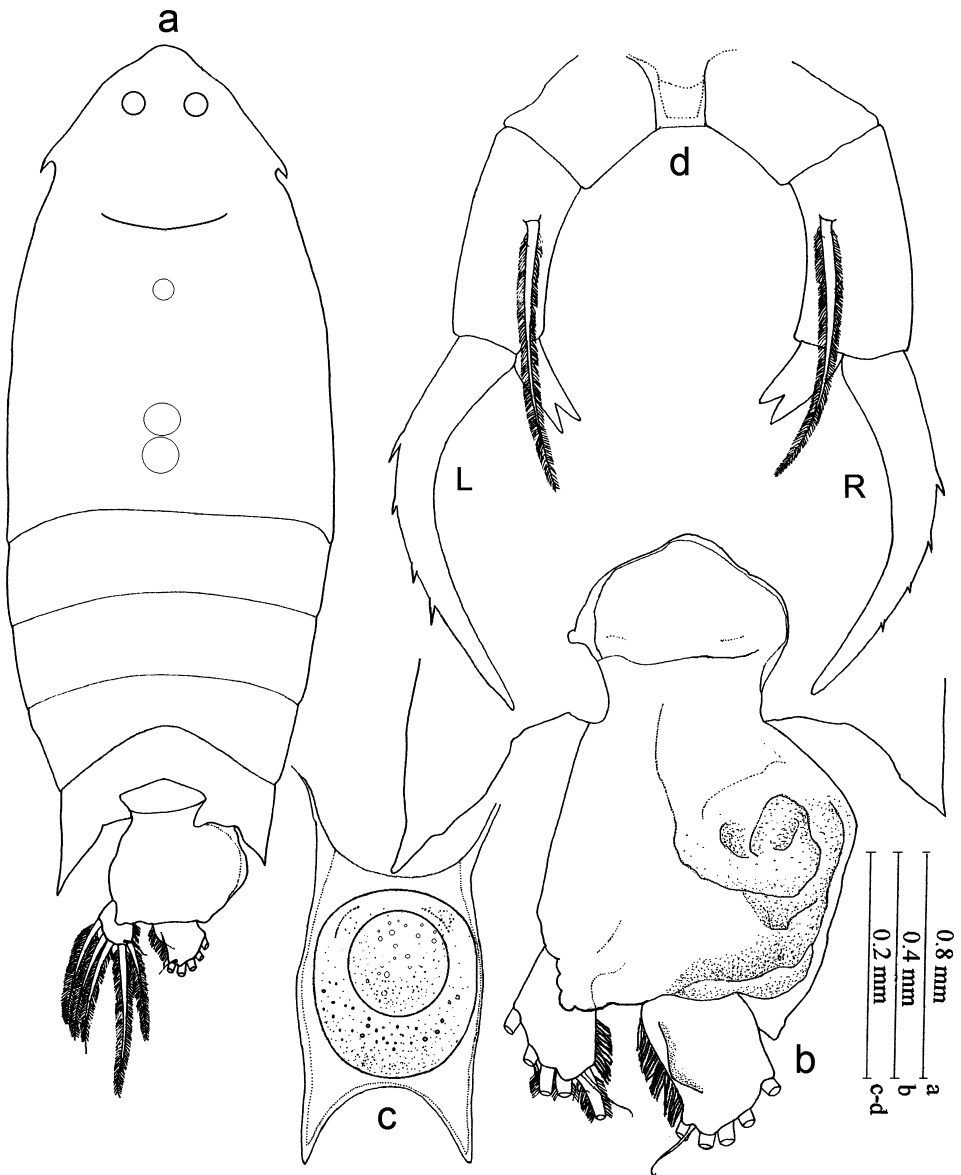


Fig. 5. *Pontella gilimanukensis* n. sp. Female holotype: a, whole animal, dorsal view; b, Pdg5 and urosome, dorsal view; c, rostrum, frontal view; d, P5.

covering CR, thus covering anal somite completely; CR asymmetrical, right ramus distinctly larger and broader than left, inner margin of each ramus fringed with fine hairs, each ramus with seta I rudimentary and naked, setae II-VI plumose and directed posteriorly, setae IV and V without proximal thickening.

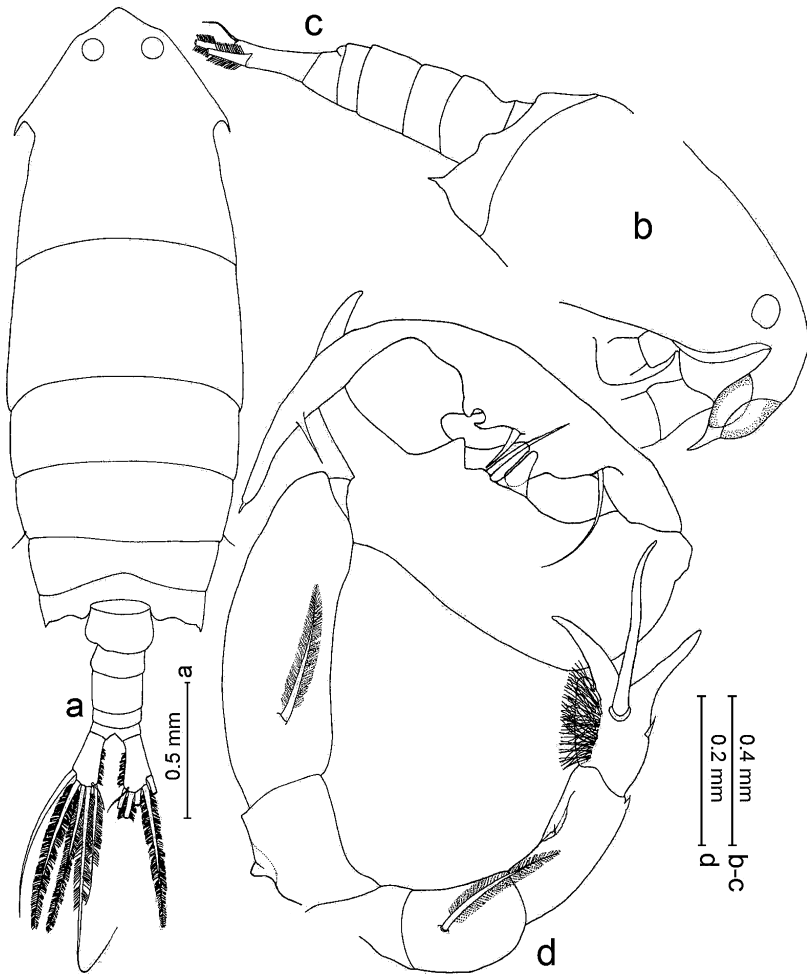


Fig. 6. *Pontella gilimanukensis* n. sp. Male paratype: a, whole animal, dorsal view; b, cephalon, lateral view; c, Pdg5 and urosome, lateral view; d, P5.

Antennule to maxilliped and first to fourth swimming legs similar to those of other species of the genus, without any specialization. P5 (fig. 5d) smoothly curved inwards, almost symmetrical, intercoxal sclerite and coxa completely fused, basis with plumose seta near base of posterior surface. Exopod horn-shaped, with 4 minute processes along outer margin, tapering to distal point. Endopod short, about $0.35 \times$ length of Re, and bifurcated at apex.

Male. — Body (fig. 6a) more compact than in female, dorsal, ventral and rostral lenses well developed. Cephalosome and Pdg1 fully separated; Pdg4 and Pdg5 fully separated, posterior corners of Pdg5 produced into asymmetrical, short acuminate processes, with inner flanges well-developed. Cephalosome with a

pair of small dorsal eye lenses, rostrum with asymmetrical short rami bearing large double convex lens (fig. 6b). Urosome composed of 5 somites, genital somite slightly asymmetrical, left side weakly produced; CR almost symmetrical, rather elongated, fringed with fine hairs on inner margin, each ramus with seta I rudimentary and naked, setae II-VI plumose and directed posteriorly, setae IV and V without proximal thickening.

P5 asymmetrical, basis with 1 plumose seta proximally; right leg, Re1 (chela) with a slender and elongated thumb, curved inwards medially, with 1 short spine-like process on proximal corner externally; concave surface with a triangular process proximally, 1 seta on third of length from proximal margin and 1 stout digitiform process medially. Re2 (claw) elongate, curved inwards, with 2 large rounded processes and 3 setae on its inner margin, and 1 terminal spine. Left leg, Re1 with small distolateral spine; Re2 short, ending in 2 subequal spine-like processes and 1 long flagelliform process, and 1 small outer spine, inner margin hirsute (fig. 6d).

Etymology. — The specific name is a geographical adjective, agreeing in gender with the (feminine) generic name, derived from the type-locality, Gilimanuk Bay.

Remarks. — *Pontella gilimanukensis* n. sp. is more similar to the *P. danae* group than to the other five groups in having the female rostrum with lens (vs. without lens in *labuanensis*), the female genital opening without any operculum, the exopods of the female fifth legs are almost symmetrical with small outer marginal spines (vs. virtually naked in *labuanensis*), and the Re almost symmetrical (vs. asymmetrical in *labuanensis*); and the male rostrum with double convex lens, the right P5 slender and with elongated thumb. Yet, it can not be included in this group, because the female genital compound somite is very large, with many posterodorsal processes, and the male right P5 has the inner margin of the chela with a slender and elongated thumb, curved inwards, with 1 short spine-like process on the proximal corner externally; and a concave surface with 1 seta on one third of length from proximal margin and 1 stout digitiform process medially.

The present species differs from the five known *Pontella* species groups (*alata*, *danae*, *fera*, *labuanensis*, and *papuanensis* group) in having (1) the genital compound somite with a large wing-like projection on the dorsal surface (vs. with a small wing-like projection), (2) the posterior corners of Pdg5 produced into asymmetrical acuminate lobes reaching to 2/3 the length of Ur1, (3) the CR extremely asymmetrical, right ramus much larger and wider than left and separated from anal somite). The male of the present species is distinguished from *P. alata* (= *P. cerami*) in having (1) the thumb of the chela of the right P5 bifurcated, (2) the concave margin of the chela of the right P5 without any processes (vs. chela of right P5 long and slender).

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