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Caridina jeani, a replacement name for *Caridina typus* var. *brevirostris* J. Roux, 1911 from Eastern Indonesia (Crustacea: Decapoda: Atyidae)*

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Abstract

Caridina typus var. *brevirostris* Roux is shown to be specifically different from *Caridina typus* H. Milne Edwards, 1837. A new name *Caridina jeani* is thus proposed for the species as the name *Caridina brevirostris* is preoccupied by *C. brevirostris* Stimpson, 1860. The species is re-described and illustrated in detail based on syntypic specimens. It differs markedly from *Caridina typus* by possessing sexual dimorphism on the third and fourth pereiopods. A lectotype is designated.

Key words: Decapoda, Atyidae, *Caridina*, freshwater shrimps, taxonomy, Indonesia

Introduction

As part of an ongoing revision of the freshwater shrimps of the genus *Caridina* H. Milne Edwards, 1837, from South East Asia, syntypes of *Caridina typus* var. *brevirostris* Roux, 1911 were re-examined and compared to *Caridina typus* H. Milne Edwards, 1837. Results show that the morphological difference between both taxa is significant enough to elevate this subspecies to species level. Though the name *Caridina brevirostris* Stimpson, 1860 has been shown to be a junior synonym of *Atyoida pilipes* (Newport, 1847) by Cai *et al.* (2006), it remains a senior homonym of *C. typus* var *brevirostris*. Hence, a new name needs to be proposed for this taxon. The present study reports the result of the morphological re-examination, and the species is re-described in detail under a replacement name. Specimens examined are deposited in Senckenberg Museum, Frankfurt, Germany.

Caridina jeani nom. nov.

(Figs. 1–2)

Caridina typus var. *brevirostris* Roux, 1911: 87. [type locality: Kei Islands, Indonesia; name preoccupied by *Caridina brevirostris* Stimpson, 1860].

Material examined. Lectotype: male, cl 4.3 mm, syntype of *Caridina typus* var. *brevirostris* J. Roux, 1911, SMF 2148, Elat, Kei Islands, Moluccas, Indonesia, coll. A. Merton, 3 June 1908. Paralectotypes: 33 males, cl 3.5-4.6 mm, 9 females, cl 3.2-5.0 mm, 4 ovigerous females, cl 4.3-6.3 mm, 39 juveniles, same data as lectotype.

Description. Rostrum (Figs. 1A, 2A) short, straight, reaching near to or slightly beyond end of basal segment of antennular peduncle; unarmed dorsally, armed ventrally with 1–5 very small teeth; inferior orbital angle of carapace fused with antennal spine; pterygostomial angle broadly subrectangular.

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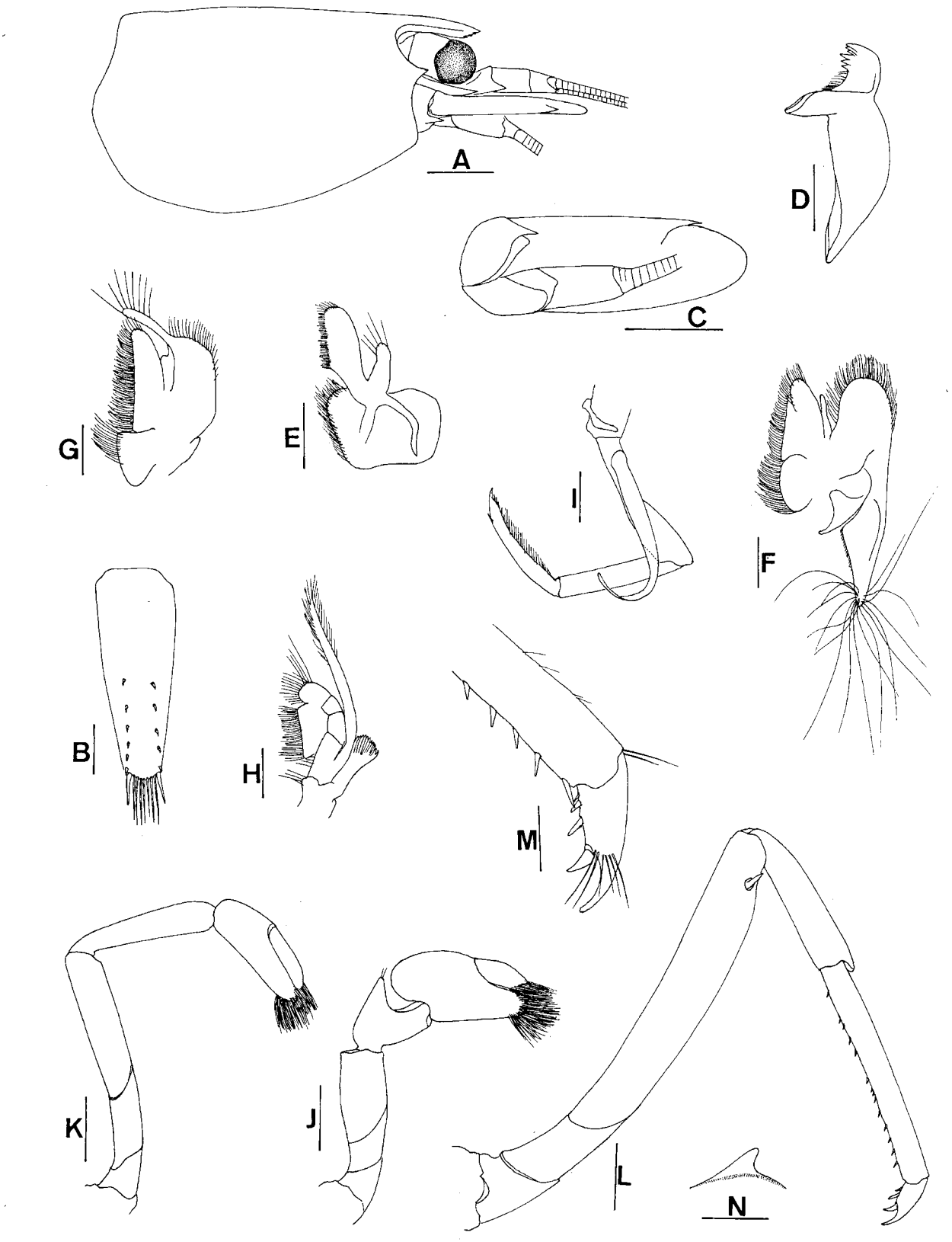

FIGURE 1. *Caridina jeani* nom. nov.: A, cephalothorax; B, telson; C, scaphocerite; D, mandible; E, maxillula; F, maxilla; G, first maxilliped; H, second maxilliped; I, third maxilliped; J, first pereiopod; K, second pereiopod; L, third pereiopod; M, dactylus of third pereiopod; N, preanal carina. Scales: A, C = 1mm; B, D–L, N = 0.5 mm; M = 0.2 mm (A male lectotype, cl 4.3 mm; B–N, female, cl 5.3 mm).

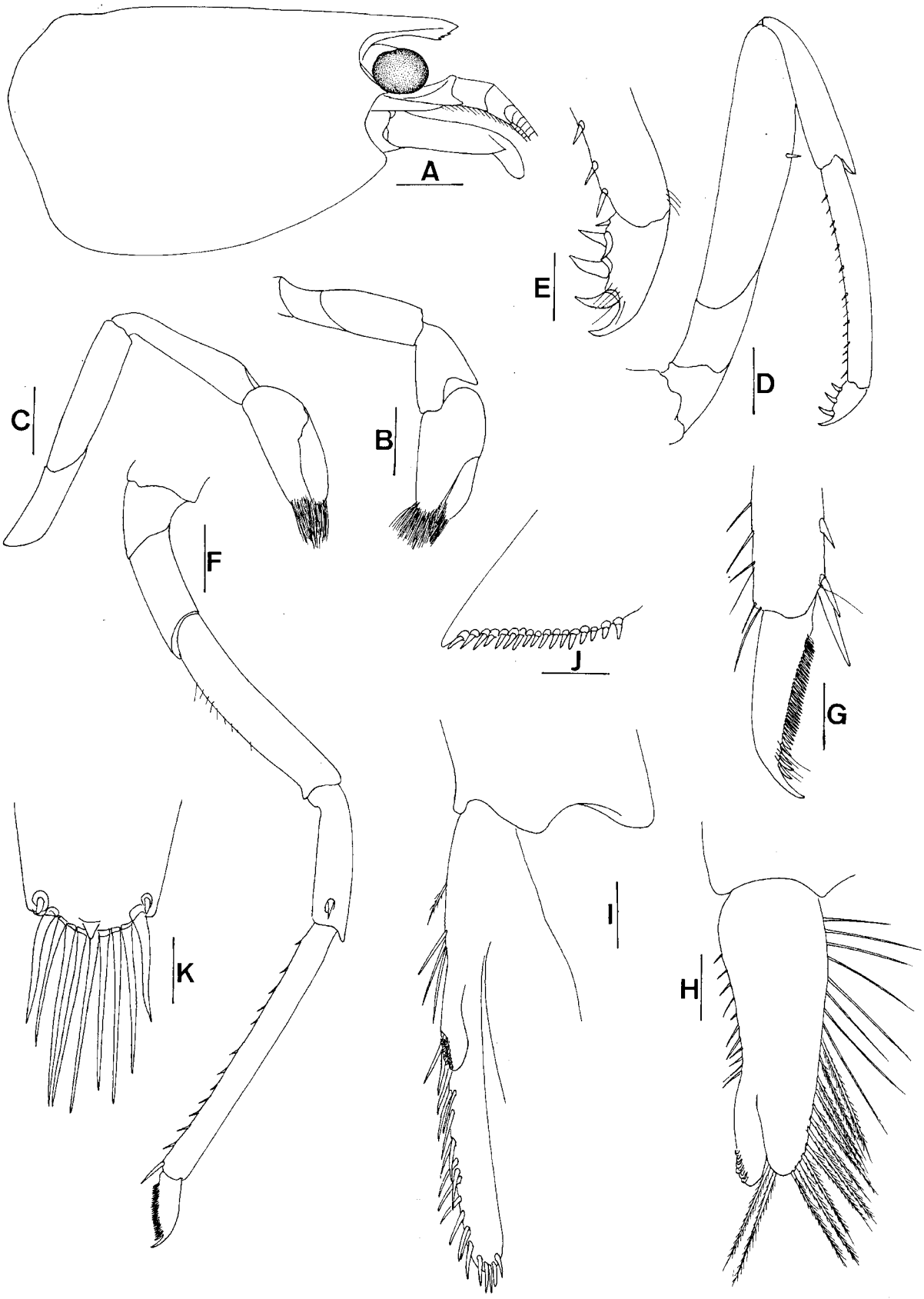

FIGURE 2. *Caridina jeani* nom. nov.: A, cephalothorax; B, first pereiopod; C, second pereiopod; D, third pereiopod; E, dactylus of third pereiopod; F, fifth pereiopod; G, dactylus of fifth pereiopod; H, endopod of male first pereiopod; I, appendix masculina and appendix interna of male second pleopod; J, diaeresis; K, distal portion of telson. Scales: A = 1mm; B–D, F = 0.5mm; G–J = 0.2mm (A, F, G, female, cl 5.2 mm; B–D, male, cl 4.5 mm).

Sixth abdominal somite 0.40 times as long as carapace, 1.2 times as long as fifth somite, shorter than telson. Telson (Figs. 1B, 2K) 2.7 times as long as wide, terminating in a median projection; five pairs of dorsal spinules, one pair of dorsolateral spines near distal end, one pair of spine and three to four pairs of spiniform setae on distal margin; lateral spine distinctly shorter than intermediate pairs of setae, distal margin broadly rounded. Preanal carina (Fig. 1N) high, without spine.

Eyes well developed, reaching to 0.8 times length of basal segment of antennular peduncle. Antennular peduncle stout, 0.53–0.58 times as long as carapace; basal segment of antennular peduncle longer than second and third segment of antennular peduncle combined, anterolateral angle 0.3 times as long as length of second segment; second segment longer than third one. Stylocerite 0.8 times length of basal segment of antennular peduncle. Scaphocerite (Fig. 1C) 2.7 times as long as wide.

Incisor process of mandible (Fig. 1D) ending in irregular teeth, molar process truncated. Lower lacinia of maxillula (Fig. 1E) broadly rounded, subtriangular, upper lacinia elongate, with a number of distinct teeth on inner margin, palp slender. Upper endites of maxilla (Fig. 1F) subdivided, palp short, scaphognathite tapering posteriorly with numerous long, curved setae at posterior end. Palp of first maxilliped (Fig. 1G) ending in finger-like projection. Second maxilliped (Fig. 1H) typical for genus, arthrobranch well developed. Third maxilliped (Fig. 1I) reaching to end of antennular peduncle, with ultimate segment shorter than penultimate segment.

Epipods on first four pereiopods. First pereiopod (Figs. 1J, 2B) stout, reaching to end of second segment of antennular peduncle, merus 1.8–2.2 times as long as broad, slightly longer than carpus; carpus strongly excavated anteriorly, shorter than chela, as long as high; chela 2.0 times as long as broad; fingers shorter or as long as palm. Second pereiopod (Figs. 1K, 2C) reaching end of scaphocerite, as long as carpus, 4.0 times as long as broad; carpus 1.1 times as long as chela, 4.1 times as long as high; chela 2.1–2.5 times as long as broad; fingers 1.3-1.4 times as long as palm. Third pereiopod sexually dimorphic, that of male (Figs. 2D–E) stouter, reaching beyond end of scaphocerite by entire dactylus, merus 4.0 times as long as wide, propodus 8.4 times as long as wide, 3.7 times as long as dactylus; dactylus ending in one claw; very stout, 1.6 times as long as wide (spines included), with four accessory spines on flexor margin; that of female (Figs. 1M–N) slender, reaching beyond end of scaphocerite by 0.3 length of propodus, merus 5.9 times as long as wide, propodus 8.0 times as long as wide, 4.2 times as long as dactylus, dactylus ending in one claw, 2.6 times as long as wide (spines included). Fourth pereiopod similar to third one in form, with sexual dimorphism, but smaller in size. Fifth pereiopod (Figs. 2F–G) reaching to end of antennular peduncle, propodus 10.5 times as long as broad, with a large spine at anterior end; 3.9 times as long as dactylus; dactylus ending in an elongated claw, 2.7–3.2 times as long as wide, with 41–49 spinules on flexor margin.

Endopod of male first pleopod (Fig. 2H) sub-triangular, 2.8 times as long as wide, reaching to 0.6 length of endopod, appendix interna reaching slightly beyond distal end of endopod. Appendix masculina of male second pleopod (Fig. 2I) elongated, reaching to 0.8 length of endopod.

Uropodal diaeresis (Fig. 2J) with 17–19 spinules. Eggs 0.46–0.50 × 0.26–0.29 mm in diameter.

Etymology. The new species is named after Jean Roux, who contributed a great deal to our knowledge of atyid shrimp taxonomy, and who originally described the taxon as a variety of *C. typus*.

Remarks. The species differs markedly from *Caridina typus* by possessing sexual dimorphism on the third and fourth pereiopods, a sufficient difference to warrant full species status. Surprisingly, *Caridina typus* var. *brevirostris* was not discussed in Bouvier's (1925) monograph of Atyidae, where he recognized three forms of *Caridina typus*: forme *typica*, forme *acuminata* and forme *caledonica*. As mentioned in the introduction, the name *C. brevirostris* is preoccupied by *Caridina brevirostris* Stimpson, 1860, which is a junior synonym of *Atyoida pilipes* (Newport, 1847) (see Cai *et al.* 2006).

Distribution. The species has to date only been reported from the Kei Islands, Eastern Indonesia.

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