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***Caridina simoni* Bouvier, 1904 (Crustacea: Decapoda: Caridea: Atyoidea: Atyidae) and the synonymy by Johnson, 1963**

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Table of contents

Abstract	301
Introduction	302
Taxonomy	303
Infraorder Caridea Dana, 1852	303
Superfamily Atyoidea de Haan, 1849	303
Family Atyidae de Haan, 1849	303
Genus <i>Caridina</i> H. Milne Edwards, 1837	303
<i>Caridina simoni</i> Bouvier, 1904	303
<i>Caridina brachydactyla</i> De Man, 1908	308
<i>Caridina gracilipes</i> De Man, 1892	310
<i>Caridina peninsularis</i> Kemp, 1918	315
<i>Caridina meridionalis</i> J. Roux, 1926	321
<i>Caridina coulaborensis</i> sp. nov.	324
<i>Caridina fritzi</i> sp. nov.	326
<i>Caridina solamulieres</i> sp. nov.	329
<i>Caridina novaecaledoniae</i> J. Roux, 1926.	331
<i>Caridina riverstoni</i> sp. nov.	333
Acknowledgements	336
References	336

Abstract

Johnson (1963) attempted to review the ‘*Caridina nilotica* complex’ established by Bouvier (1925) and as a result considered several distinct freshwater shrimp species from Indo-West Pacific region as junior synonyms of *C. simoni* Bouvier, 1904. However, Tiwari and Pillai (1971) indicated the need to clarify the taxonomical status of the many synonyms created by Johnson (1963). Therefore, type and non-type specimens were examined for the present study including *C. simoni* Bouvier, 1904, *C. gracilipes* De Man, 1908, *C. peninsularis* Kemp, 1918, *C. mccullochi* J. Roux, 1926, *C. meridionalis* J. Roux, 1926 and *C. novaecaledoniae* J. Roux, 1926. These species were re-described, illustrated and their taxonomic status confirmed. The type series of *C. mccullochi* and *C. meridionalis* was found to comprise a number of already described *Caridina* species. In addition, three undescribed species were discovered in a series of specimens identified as *C. meridionalis* and one in material assigned to *C. mccullochi*.

Key words: Crustacea, Atyidae, *Caridina*, *C. simoni*, *C. brachydactyla*, *C. gracilipes*, *C. peninsularis*, *C. meridionalis*, *C. novaecaledoniae*, *C. mccullochi*, redescriptions, 4 new *Caridina* species, Johnson 1963, synonymies

Honolulu, on 1st September 1925. Allan was an ardent field naturalist and carried out work along the whole east coast of Australia which included collecting the material named for him here. The authors of the present study regret having to synonymise *Caridina mccullochi* named for Allan by Jean Roux.

Distribution. Known only from the type locality.

Type locality. Port Macquarie, New South Wales, Australia.

Remarks. Roux (1926b) described *C. mccullochi* from three localities in New South Wales, Australia namely Pallal, Horton River, near Bingara, North Yanco, Narrandera and a freshwater stream at Port Macquarie, and was aware of the morphological variation between the samples. The specimens described from Pallal, Horton River, near Bingara are labelled as the types of *C. mccullochi* and this material is now considered to be a junior synonym of *C. peninsularis*.

Jean Roux (1926b) states “I include in this species (*C. mccullochi*) three young specimens from Port Macquarie, which are badly preserved. The rostral formula is nearly the same as in the preceding specimens whilst the number of teeth is smaller. There are 12–15 teeth on the upper border of the rostrum, the two proximal of which are situated on the cephalothorax; the intervals between 2 or 3 proximal ones are a little greater than the others. The rostrum reaches in front the $\frac{1}{3}$ or the $\frac{1}{2}$ of the last segment of the antennular peduncle.”

The present study examined the male and 2 female specimens (16–23 mm in size) from Port Macquarie. They exhibit the following characters; the endopod of the first pleopod of female is 0.6 long as the exopod, and that of male with a well developed appendix masculina on the second pleopod. These characters suggest that the Port Macquarie specimens are mature and not, as considered by J. Roux (1926b) to be ‘young’. They are here regarded as an undescribed species.

Caridina riverstoni **sp. nov.** has a shorter rostrum that reaches the end of the antennular peduncle or shorter, equal to the second segment of the antennular peduncle, have lesser number of teeth 13–17 (not 12–15 as indicated by J. Roux) on dorsal margin that are not compact proximally and the distal teeth more spaced. 2–4 teeth of the ventral margin leaving the distal ventral margin unarmed. The unique morphology of the rostrum differentiates the specimens of Port Macquarie. Also, as rightly pointed out by J. Roux (1926b), the spines on the dactylus of the fifth pereopod are fewer in the specimens from Port Macquarie being 30–35. In two specimens, a male and female from Port Macquarie, the posterior margin of the telson is rounded with the median pair of intermediate spines being shortest. However, the other female specimen has three intermediate spines of which the median one is slightly shorter. Examining more specimens might confirm this difference. The spaced placement of teeth initially and more spaced at the distal end of the dorsal margin differentiate this species from other known species where the proximal teeth are compact and distal teeth are spaced namely *C. meridionalis* Roux (1926a) and *C. indistincta* Calman (1926).

Caridina riverstoni **sp. nov.** differs from *C. simoni* in having a shorter rostrum with sparsely placed teeth on the dorsal margin (vs. longer rostrum with teeth on the proximal dorsal margin in *C. simoni*), having 2–4 teeth on the ventral margin (vs. 5–14 teeth in *C. simoni*), the inner pair of intermediate spines on the posterior margin of telson are shortest (vs. intermediate spines of equal length or the median pair fractionally longer in *C. simoni*).

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