

Coralliocaris taiwanensis Fujino & Miyake, 1972 (Crustacea, Decapoda, Natantia, Palaemonidae), a Pontoniine Shrimp Associated with Coral, as a Senior Synonym of *C. pavonae* Bruce, 1972

Masako Mitsuhashi¹ and Masatsune Takeda²

¹Department of Biological Sciences, Graduate School of Science, The University of Tokyo, 7–3–1 Hongo, Bunkyo-ku, Tokyo, 113–0033 Japan (Corresponding address: Department of Zoology, National Science Museum, 3–23–1 Hyakunincho, Shinjuku-ku, Tokyo, 169–0073 Japan)

²Department of Zoology, National Science Museum, 3–23–1 Hyakunincho, Shinjuku-ku, Tokyo, 169–0073 Japan, and Department of Biological Sciences, Graduate School of Science, The University of Tokyo, 7–3–1 Hongo, Bunkyo-ku, Tokyo, 113–0033 Japan

Abstract *Coralliocaris taiwanensis* Fujino & Miyake, 1972, a pontoniine shrimp associated with living coral, has been treated as a junior synonym of *C. pavonae* Bruce, 1972. However, on the basis of the date of publication, it is clear that *C. taiwanensis* should have priority over *C. pavonae*. The species is redescribed as a first record of occurrence in Japanese waters, with some line drawings and a color photograph in life.

Key words: Crustacea, Pontoniinae, synonymy, *Coralliocaris taiwanensis*, *Coralliocaris pavonae*.

During a field survey at coral reefs around Ishigaki-jima Island in the southern Ryukyu Islands, some interesting pontoniine shrimps referable to the genus *Coralliocaris* were collected from scleractinian corals. This genus is represented by eight Indo-West Pacific species (Chace & Bruce, 1993). They are associated with branching corals of the genera *Acropora*, *Pocillopora* and *Stylophora*, except for *C. pavonae* Bruce, 1972, which is associated with laminar coral of the genus *Pavona* (Bruce, 1972 b). The new materials were identified with *C. pavonae*, but consultation of the literature concerned revealed that *C. pavonae* has to be treated as a junior synonym of *C. taiwanensis* Fujino & Miyake, 1972, on the rule of priority as discussed below. In this note, we record the range extension northwards to the southern Ryukyu Islands and give a supplementary description based on the new materials.

The specimens are preserved in 75% ethanol and deposited in the National Science Museum, Tokyo (NSMT). Carapace length is referred to the postorbital carapace length and abbreviated to CL.

Genus *Coralliocaris* Stimpson, 1860
Coralliocaris taiwanensis Fujino & Miyake, 1972

[New Japanese name: Taiwan-moshioebi]

(Figs. 1–3)

Coralliocaris taiwanensis Fujino & Miyake, 1972, p. 92, figs. 1–3.

Coralliocaris pavonae Bruce, 1972 a, p. 77, figs. 8–11.

Material examined. Urasoko Bay (24°27'N, 124°13'E), Ishigaki-jima I., Ryukyu Is., coral reef, 2 m depth, from *Pavona* sp., coll. by M. Mitsuhashi.—1 ovig. ♀ (NSMT-Cr 12121, 2.30 mm CL), May 27, 1997; 1 ovig. ♀ (NSMT-Cr 12122, 2.62 mm CL), May 28, 1997; 1 ♂ (NSMT-Cr 12123, 1.77 mm CL), May 28, 1997; 1 ovig. ♀, 1 ♂ (NSMT-Cr 12124, 2.69, 2.06 mm CL), May 30, 1997; 1 ovig. ♀, 1 ♂ (damaged) (NSMT-Cr 12125, 2.67, 1.79 mm CL), May 30, 1997.

Description. Body strongly depressed. Carapace smooth, with antennal spine; hepatic spine absent (Fig. 2 A). Rostrum slender, reaching distal end of second segment of antennular peduncle (Fig. 2 B); upper margin armed with 3 to 5 teeth, lower margin with 1 or 2 teeth and sparse pulmose setae (Fig. 2 A). Cornea oval. Terminal spine of basal segment of antennular peduncle almost reaching end of second segment. Opening of antennal gland half as long as second segment of antennal peduncle

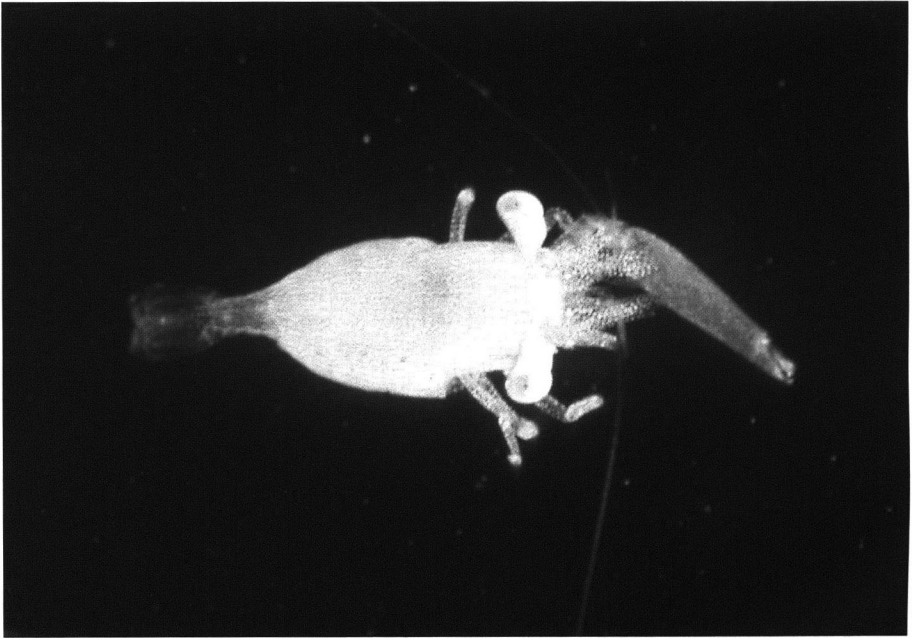


Fig. 1. *Coralliocaris taiwanensis* Fujino & Miyake, ovigerous female (NSMT-Cr 12122). Right 2nd pereopod missing.

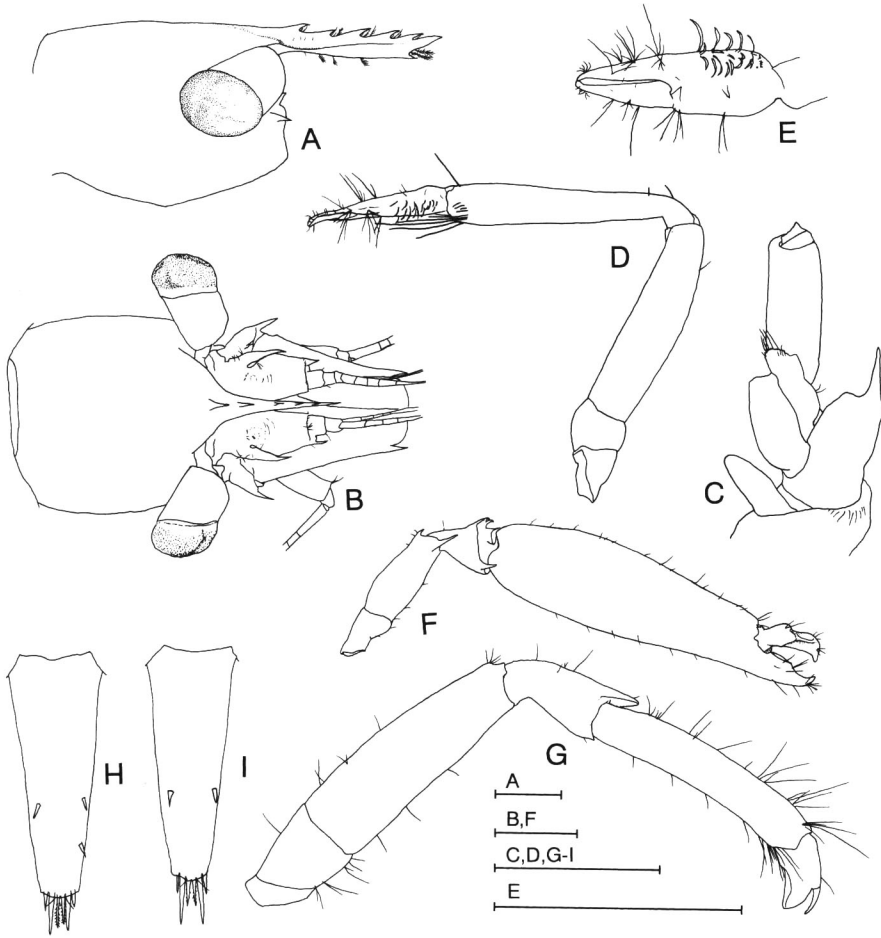


Fig. 2. *Coralliocaris taiwanensis* Fujino & Miyake, ovigerous females. A–H, (NSMT-Cr 12125); I (NSMT-Cr 12124). — A, Carapace and rostrum in lateral view; B, anterior part of body in dorsal view; C, basal part of antenna in ventral view; D, right 1st pereopod in dorsal view; E, chela of right 1st pereopod in inner lateral view; F, right 2nd pereopod in lateral view; G, right 3rd pereopod in lateral view; H and I, telson in dorsal view. Scales: 1 mm.

(Fig. 2 C).

Mandible without palp (Fig. 3 A); tip of incisor process with 7 or 8 small teeth (Fig. 3 B); molar process split into two parts distally with marginal setae; at its tip, with marginal setae distally. Palp of maxillula tipped with curved or straight spine (Fig. 3 C). Maxilla with broad scaphocerite fringed with fine pulmose seta in line (Fig. 3 D). First maxilliped with bilobed epipod (Fig. 3 E). Second maxilliped with oblong epipod (Fig. 3 F). Third maxilliped with epipod and arthrobranch.

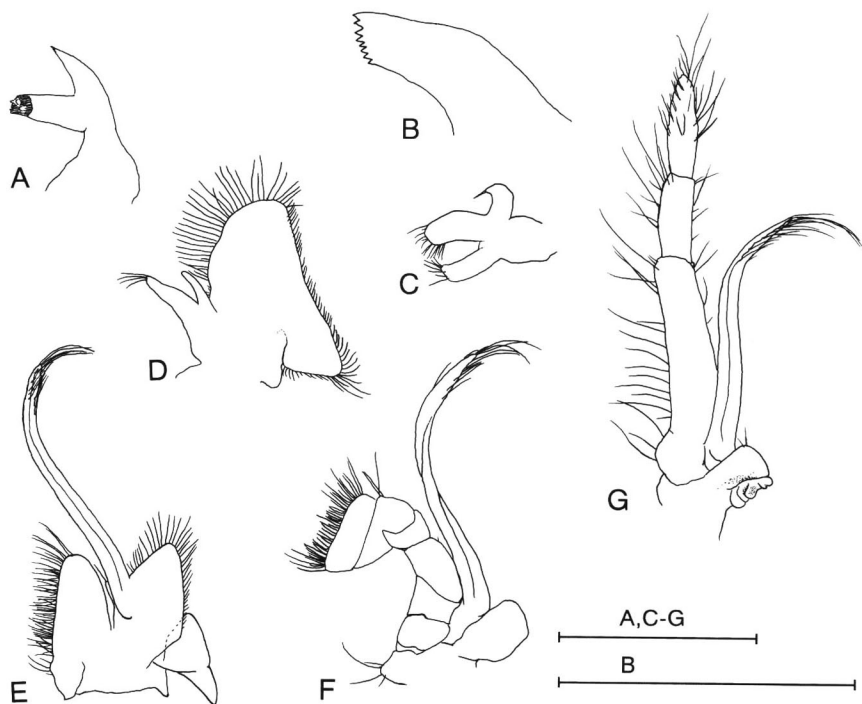


Fig. 3. *Coralliocaris taiwanensis* Fujino & Miyake, ovigerous female (NSMT-Cr 12125). — A, Left mandible; B, distal part of incisor process of left mandible; C, left maxillula; D, left maxilla; E, left 1st maxilliped; F, left 2nd maxilliped; G, left 3rd maxilliped. Scales: 1 mm for A, C–G, 0.5 mm for B.

First pereopod reaching tip of scaphocerite on extension; carpus with cluster of long simple setae at its upper distal end (Fig. 2 C); palm with 6 transverse rows of plumose setae (Fig. 2 E). Second pereopods subequal in size; movable finger 1/4 as long as palm; carpus with a long strong spine at inner distal margin, 3 spines on outer distal margin (Fig. 2 F). Dactyli of last 3 pereopods each bearing a slender, long, weakly curved claw on its dorsal margin; distal end of each propodus with cluster of simple setae ventrally (Fig. 2 G). Outer margin of uropodal exopod with 2 spines on distolateral margin.

Abdominal segments smooth. Telson slender, with a pair of dorsolateral spines at posterior 2/5 (Fig. 2 I); terminal margin with 3 pairs of spines; median pair covered with fine setae, slightly longer than lateral, much shorter than intermediate; simple fine seta between bases of median and intermediate spines (Fig. 2 H, I).

Longer axis of ova 0.4–0.5 mm in early developmental stage and 0.5–0.7 mm in eyed period.

Coloration (Fig. 1). Body bright yellow, bearing longitudinal orange striae

composed of white, orange and brown chromatophores. Scaphocerite and ambulatory pereopods with scattered same chromatophores. Second pereopods greenish. Telson and uropod almost transparent. Male slightly lighter than female.

Remarks. The specimens at hand agree well with the original description of *Coralliocaris taiwanensis* Fujino & Miyake in all respects. We directly compared them with the type specimens which are deposited in the Kitakyushu Museum and Institute of Natural History. On the other hand, we found no discrepancies between the specimens at hand and the original description of *C. pavonae* Bruce.

Fujino and Miyake (1972) described *C. taiwanensis* in a paper published in no. 9 of vol. 3 of the *Ohmu*, the Occasional Papers of Zoological Laboratory, Faculty of Agriculture, Kyushu University, on 29 February. At present, no written certificate is available, but it is certain that nos. 6–9 of vol. 3 came off the press on that day and distributed promptly to the domestic and foreign universities and institutes, and also to the researchers concerned.

Coralliocaris pavonae was described by Bruce (1972 a) in a paper published in no. 2 of vol. 26 of the *Pacific Science*, which was dated January. However, its actual date of issue was 2 March, as recorded on the contents page of the next number. Almost 20 years later, Chace and Bruce (1993) recorded *C. pavonae* in their list and, reduced *C. taiwanensis* to its junior synonym without any comments. There is no problem as for their identity, but *C. taiwanensis* should be used as a senior synonym of *C. pavonae* following the rule of priority in the International Code of Zoological Nomenclature.

There are some variations in the armature of telson. Typically, the telson is armed with a pair of dorsolateral spines as mentioned above. However, in the para-type (ZLKU No. 9269) of *C. taiwanensis* and one ovigerous female at hand (NSMT-Cr 12124), the telson is armed with one excess spine at halfway between the terminal margin and the left dorsolateral spine (Fig. 2 H). Bruce (1972 a) also reported that one ovigerous female is armed with 2 pairs of spines on its telson. There is also a minor variation in the shape of the palp of maxillula. Fujino and Miyake (1972) and Bruce (1972 a) noted that the palp of maxillula was tipped with a curved spine, but the spine is straight in one ovigerous female at hand (NSMT-Cr 12125, Fig. 3 C).

Distribution. *Coralliocaris taiwanensis* and *C. pavonae* were reported from northern Taiwan and Fiji, respectively. The geographical range is now extended to the southern Ryukyu Islands.

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