

Reinstatement of *Paragrandidierella* (Crustacea: Amphipoda: Aoridae) from Japan, with the Description of a New Species

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Paragrandidierella (Crustacea: Amphipoda: Aoridae) is reinstated for three species from Japan, *P. minima* Ariyama, 2002, *P. unidentata* (Ren, 2006), and *P. urauchiensis* sp. nov. Eight morphological features distinguish these species from species of the genus *Grandidierella*, with which *Paragrandidierella* was synonymized. *Paragrandidierella urauchiensis* sp. nov. was collected from a tidal flat at the mouth of the Urauchi River, Iriomote Island, Okinawa Prefecture. This new species has long antennae and a long, acute tooth on the posterodistal corner of the gnathopod 1 carpus in males. *Paragrandidierella unidentata* was collected from a tidal flat at the mouth of the Waka River, Wakayama Prefecture, as the first record of this species in Japan. It is characterized by a short antenna 2 and a short tooth on the posterodistal corner of the gnathopod 1 carpus in males. The morphology of the antennae, the detailed structure of the mouthparts, and the change in shape with growth of *P. minima*, the type species of the genus, are also described. A key to the species of the genus is provided.

Key Words: non-synonymous genus, *Paragrandidierella*, new species, Aoridae, Amphipoda, Crustacea, Japan, key.

Introduction

The amphipod genus *Paragrandidierella* was established by Ariyama (2002) with *P. minima* Ariyama, 2002 as its type species, characterized by a carpochele male gnathopod 1, reduced uropods, a uniramous uropod 3, and a short telson with a pair of dorsal swellings. Afterwards, Ren (2006) recorded *P. minima* from China, but synonymized this genus with *Grandidierella* Coutière, 1904 for the reason that they are difficult to distinguish morphologically. Recently, Jung and Yoon (2013) recorded *P. minima* also from Korea and they stated that *Paragrandidierella* is surely separated from *Grandidierella* because of some distinct differences.

During a survey of the amphipod fauna in Japan, three species referable to *Paragrandidierella* were obtained. Close examination has revealed that they possess in common several morphological features that species of *Grandidierella* species do not share. Based on the features, *Paragrandidierella* is removed from the synonym of *Grandidierella* and reinstated as a valid genus. One of the three species is undescribed species and one is new to Japan; both are described here in detail. As for *P. minima*, the morphology of antenna 1, the detail structure of the mouthparts, and the change in shape with growth, which were not described by Ariyama (2002), are described herein. In addition, a key to the species is provided. Body length was measured from the apex of the rostrum along the dorsal margin to the distal end of the telson. The material examined is deposited in the Osaka Museum of Natural History (OMNH), Osaka, Japan.

Paragrandidierella Ariyama, 2002

[Japanese name: Himedorosokoebi-zoku]

Paragrandidierella Ariyama, 2002: 155.

Grandidierella: Ren 2006: 368 (in part).

Emended diagnosis. Body subcylindrical, somewhat compressed dorsoventrally, smooth. Rostrum indistinct. All pereon segments lacking ventral process. Urosomites free, short. Antenna 1 slender, peduncular article 3 much shorter than article 1, accessory flagellum vestigial; antenna 2 peduncle rather stout. Upper lip entire. Mandibular palp slender, articles 2 and 3 longer than article 1, article 3 rec-tolinear; incisor small, with 3–4 cusps, lacinia mobilis with 2–3 cusps, accessory blades 4 in left mandible, 5 in right. Lower lip with long mandibular process; apical margin of inner lobe with minute projection. Inner plate of maxilla 1 indistinct; outer plate pointed apically, with 3 stout robust setae and 5–7 normal setae distally; palp 2-articulate, slender, curved medially, with 3 short setae at tip. Inner plate of maxilla 2 elongate-triangular, margin with row of setae; apical margin of outer plate truncate, bearing many setae. Inner plate of maxilliped lacking distal robust setae; outer plate broad, exceeding apex of palp article 2, with 6 marginal robust setae; palp consisting of 4 articles, article 3 bearing robust seta dorsodistally, article 4 with claw. Coxae small, almost disjunct, coxa 5 widest; coxal gills present on pereopods 2–6; oostegites of female narrow, present on pereopods 2–5. Male gnathopod 1 enlarged, carpochele; basis wide, ischium short, merus triangular, carpus broad, with tooth on posterodistal corner, propodus smaller than carpus. Fe-