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Additional record of *Rayllianassa amboinensis* (de Man, 1888) from Japan, and description of a new species from Okinawa Island, Ryukyu Islands (Crustacea: Decapoda: Axiidea: Callianassidae)

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Abstract

Two species referred to the callianassid ghost shrimp genus *Rayllianassa* Komai & Tachikawa, 2008 are reported here-with. Additional locality records from Japan are provided for *R. amboinensis* (de Man, 1888), and the synonymy of *Callianassa ngochoae* Sakai, 1999 with *R. amboinensis* is discussed. It is shown that *R. amboinensis* is associated with sponges or alcyonacean soft corals, representing unusual habitats for callianassids. *Rayllianassa rudisulcus* n. sp. is described on the basis of a single ovigerous female from shallow soft sediment in Ohura Bay, Okinawa Island, Ryukyu Islands. The new species is distinguished from *R. amboinensis* by the absence of a dorsal oval on the carapace, the antennal peduncle being longer than the antennular peduncle, and the different shape of the third maxilliped. The status of *Rayllianassa* is also briefly discussed.

Key words: *Rayllianassa*, *amboinensis*, Ohura Bay, *rudisulcus*

Introduction

Callianassid ghost shrimps are common components of burrowing infauna in intertidal to sublittoral sediments in tropical to temperate waters in the world. Recent studies have described many new species from the Indo-West Pacific, particularly from the sublittoral zone down to 200 m (e.g., Sakai 2002, 2004, 2005, 2010; Sakai & Turkey 2012; Dworschak 2003, 2005, 2006, 2011; Poore 2008; Marin 2013). However, in spite of the expected high diversity of this family in waters around the Ryukyu Islands, Japan, the inventory of burrowing decapods is far from complete because of technical difficulty of sampling. In the area, operation of dredges or trawls in coastal areas is generally difficult because of the well-developed coral reefs.

The present study reports on two callianassid species referred to *Rayllianassa* Komai & Tachikawa, 2008, a genus hitherto monotypic. The first, *Rayllianassa amboinensis* (de Man, 1888), known widely in the Indo-West Pacific, is newly recorded from Okinawa to Kii Peninsula, Japan, extending the known geographical range to north. The species was found to inhabit burrows in sponges or alcyonacean soft corals, representing unusual habitats for the family (cf. Dworschak *et al.* 2012). The second, *Rayllianassa rudisulcus* n. sp., is described on the basis of a single ovigerous female from shallow soft sediments in Ohura Bay, Okinawa Island. Differentiating characters between *R. rudisulcus* n. sp. and *R. amboinensis* are discussed. The status of the genus *Rayllianassa* is also briefly discussed.

Material and methods

Specimens examined in this study are deposited in the collections of the Natural History Museum and Institute,

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Note added to proof

After the revised manuscript was submitted, we came across two recently published papers by Dr. K. Sakai and his colleagues, mentioning *Rayllianassa amboinensis* (i.e., Sakai & Türkay 2014; Sakai et al. 2014). With regard to the type species of *Rayllianassa*, Sakai & Türkay (2014) repeated the same mistake as Sakai (2011: 381), as pointed out in the present article. Sakai et al. (2014: 491, Table 1) listed “*Notiix amboinensis*” and “*Notiix ngochoae*” from the Red Sea, but this action is not consistent with that of Sakai (2011), in which previous references to *Rayllianassa amboinensis* (see the synonymy) were all referred to “*Notiix ngochoae*” except for de Man (1888), Zehntner (1894) and Borradaile (1903). The authors do not give any comments on the change of the identification. Furthermore, the authors wrongly attributed the authorship of “*Notiix ngochoae*” to “(Dworschak, 2005)”; the type locality of the taxon is also wrongly cited as “Aqaba, Red Sea”, instead of New Caledonia.