A NEW GENUS AND SPECIES OF PRIMITIVE BOPYRID (ISOPODA, BOPYRIDAE) PARASITIZING HERMIT CRABS (ANOMURA) FROM DEEP WATERS IN THE EASTERN ATLANTIC AND JAPAN

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ABSTRACT

A new genus of primitive bopyrid isopod, Pagurocryptella gen. nov., is erected for Pleurocryptella paguri Bourdon, 1979, the only species of Pleurocryptella previously known from a hermit crab host. Additionally, a new species in this new genus, Pagurocryptella holthuisi sp. nov., is described from a female specimen found parasitizing a Solitariopagurus tuerkayi from Japan. Females of Pagurocryptella differ from those in Pleurocryptella based on the morphology of oostegite I and pleopod counts. Males of Pagurocryptella holthuisi are unknown but males of P. paguri differ dramatically from those in Pleurocryptella based on their distinct body form, maxilliped morphology, antennae segment counts, and pereopod morphology. Discussion is provided on the relationships between this new genus and Pleurocryptella.

RÉSUMÉ

Un nouveau genre d’isopode Bopyridae primitif, Pagurocryptella gen. nov., est érigé pour Pleurocryptella paguri Bourdon, 1979, la seule espèce de Pleurocryptella précédemment connue comme l’hôte d’un bernard l’ermite. En outre, une nouvelle espèce de ce nouveau genre, Pagurocryptella holthuisi sp. nov., est décrite à partir d’un spécimen femelle parasitant un Solitariopagurus tuerkayi du Japon. Les femelles de Pagurocryptella se différencient de celles de Pleurocryptella par la morphologie de l’oostégite I et le nombre de pleopodes. Les mâles de Pagurocryptella holthuisi sont inconnus mais les mâles de P. paguri diffèrent profondément de ceux de Pleurocryptella par la forme différente de leur corps, la morphologie du maxillipède, le nombre de segments des antennes, et la morphologie des péréopodes. Les relations entre le nouveau genre et Pleurocryptella sont discutées.

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INTRODUCTION

The genus *Pleurocryptella* Bonnier, 1900, is considered to be the most primitive of the extant Bopyridae (Shiino, 1965; Bourdon, 1979; Markham, 1986; Boyko & Williams, 2009). Females in this genus possess rudimentary oostegites on the pereomeres VI and VII (lacking in all other bopyrids), males have both lamellar pleopods and uropods (male uropods are only found in a few genera), and females and males have bisegmented maxillipeds palps (palp may be lacking in the female of *Pleurocryptella paguri* Bourdon, 1979, or is missing due to damage in the holotype). To date, 10 species and subspecies have been described in this genus from chirostylid, galatheid and paguroid hosts at a variety of moderate to extreme depths (ca. 55-3200 m) from locations in the Atlantic, Pacific and Indian Oceans (see table I). Examination of a female parasite obtained from a *Solitariopagurus tuerkayi* McLaughlin, 1997 from Japan (ca. 200 m depth) revealed that this specimen represents a new species, congeneric with the only *Pleurocryptella* species reported from a paguroid (*P. paguri*) and of a genus clearly distinct from *Pleurocryptella*. Although the new genus, like *Pleurocryptella*, possesses rudimentary oostegites on pereomeres VI & VII, it differs from all species of *Pleurocryptella* in several other important characters that we consider to be of taxonomic value at the genus level. This new genus, as well as the new species from Japan, is described herein.

Specimens were examined from the following collections: Museum National d’Histoire Naturelle, Paris, France (MNHN) and Natural History Museum and Institute, Chiba, Japan (CBM).

The size of the isopods is given as total length from anterior cephalon to posterior of pleotelson (exclusive of uropods); shield length (SL) is provided as an indicator of specimen size for the hosts.

SYSTEMATICS

Family BOPYRIDAE Rafinesque-Schmaltz, 1815

Subfamily PSEUDIONINAE Codreanu, 1967

*Pagurocryptella* gen. nov.


Diagnosis. — Female: Body compact, with moderate deflection of the pereon, distortion of about 20°. Head about as long as wide, deeply set into