NEW RECORD OF THE DEEP WATER \textit{EPIMERIA MORRONEI} WINFIELD, ORTIZ & HENDRICKX (AMPHIPODA, GAMMARIDEA, EPIMERIIDAE) IN THE EAST PACIFIC

BY

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ABSTRACT

New records for the deep-water amphipod \textit{Epimeria morronei} Winfield, Ortiz & Hendrickx, 2012, are presented for the eastern Pacific. Also, new data related to its depth range and environmental conditions are given.

Key words. — \textit{Epimeria}, new record, eastern Pacific

RESUMEN

Se presentan nuevos registros de \textit{Epimeria morronei} Winfield, Ortiz & Hendrickx, 2012, en el Pacífico Este. Se cuenta también con nuevos datos relacionados con su profundidad de residencia y las condiciones ambientales.

Palabras clave. — \textit{Epimeria}, nuevo registro, Pacífico este

INTRODUCTION

The genus \textit{Epimeria} contains 53 species worldwide, one of which was recently described for the eastern Pacific (Winfield et al., 2012; Lörz & Coleman, 2014). This species, \textit{E. morronei} Winfield, Ortiz & Hendrickx, 2012, is currently known only from the type locality and an additional nearby locality in the Gulf of California, Mexico. Within the frame of the TALUD project, additional cruises

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aimed at collecting deep-water invertebrates have been organized off the Pacific coast of Mexico. During two of these cruises additional specimens of *E. morronei* were collected in a wide bathymetric range, providing new records for this species. All the specimens were captured in a benthic sledge (2.35 m wide by 0.95 m high, with an outer collecting net of ca. 5.5 cm (2.25 inch) stretched mesh size and an inner net of ca. 2.0 cm (0.75 inch) stretched mesh) operated from the R/V “El Puma” of the “Universidad Nacional Autónoma de México” (UNAM). Sampling depths were estimated with a digital SIMRAD echo sounder. Epibenthic temperature and oxygen concentration were measured ca. 10 m above bottom level with a Seabird CTD-O2 probe. Oxygen concentrations were also measured with the Winkler method using water samples collected in closing bottles near the bottom. All specimens examined are deposited in the Regional Collection of Marine Invertebrates at the Mazatlán Marine Station, UNAM, in Mazatlán, Mexico (EMU). Abbreviations used are: St., sampling station; TL, total length.

Fig. 1. *Epimeria morronei* Winfield, Ortiz & Hendrickx, 2012 (EMU-10389). A, Male; B, female; C, juvenile extracted from the brood pouch of an ovigerous female specimen (EMU-10389); D, all specimens collected from the same brood pouch. This figure is published in colour in the online edition of this journal, which can be accessed via http://booksandjournals.brillonline.com/content/journals/15685403.
Epimeria morronei Winfield, Ortiz & Hendrickx, 2012
(fig. 1)

Material examined.— TALUD XV. One male (TL 35.2 mm), St. 3 (23°09′55″N 111°20′W), benthic sledge, 1395-1465 m (EMU-9870).

TALUD XVI-B. One ovigerous female (TL 31.5 mm), St. 9 (29°20′54″N 115°51′W), 31 May 2014, benthic sledge, 1848-1860 m depth (EMU-10388). One female (TL 33.7 mm) and three ovigerous females (TL 28.8-33.7 mm), St. 15 (29°40′24″N 116°06′W), 29 May 2014, benthic sledge, 2010-2046 m (EMU-10442). One male (TL 26.5 mm), St. 20 (30°51′16″N 116°42′11″W), 26 May 2014, benthic sledge, 2075-2090 m depth (EMU-10390). One male (TL 25.5 mm) and one female (TL 31.5 mm), St. 21 (30°49′24″N 116°47′48″W), 28 May 2014, benthic sledge, 2018-2093 m depth (EMU-10389).

Colour.— Live photographs (fig. 1A, B) show a body with salmon pink colour and a yellowish ocular plate.

Remarks.— The material examined provides new size (total length) records for this species: male, 35.2 mm; female, 33.7 mm. One female of St. 15 carried 28 little developed embryos (ca. 2.0 mm × 1.5 mm). The two other ovigerous females of the same station were carrying eggs of the same developmental stage but these were not extracted in order not to damage the specimens. The ovigerous female of St. 9 carried 20 juveniles (fig. 1C, D) in the brood pouch, with TL of ca. 7.1 mm total length. The juveniles feature the diagnostic characters of the adults, including the long rostrum, the scythe-shape coxa of 4th pereiopods with a posterior extension fitting into coxa 5, the latter posteriorly produced into a spine-like process, and the long dorsal process on pleonites (fig. 1C).

Ecology.— According to Winfield et al. (2012), E. morronei occurs between 1526 and 1586 m depth, in water with a temperature of 2.7-3.2°C and an oxygen concentration of 0.51-0.88 ml O2/l. The data obtained at the new sampling sites (table I) correspond to a much wider depth range (1395-2093 m), with

<table>
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<th>Cruise</th>
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<th>T (°C)</th>
<th>O₂ (ml/l)</th>
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corresponding environmental values of 2.26-3.02°C and 1.17-1.84 ml O₂/l. Depth and oxygen data indicate that it is distributed below the Oxygen Minimum Zone (see Hendrickx & Serrano, 2010).

Distribution.— The discovery of *E. morronei* off the west coast of Baja California considerably extends the distribution range of this species which is now known from the Central Gulf of California and off the west coast of the Baja California Peninsula (fig. 2).

Fig. 2. Distribution of *Epimeria morronei* Winfield, Ortiz & Hendrickx, 2012, off the Pacific coast of Mexico. (■) type material localities; (●) this study.
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