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Ctenophores from the Oaxaca coast, including a checklist of species from the Pacific coast of Mexico

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Abstract

Ctenophores are poorly known in the tropical eastern Pacific, including the southern coast of Mexico. Previous records of ctenophores along the Pacific coast have been provided mainly from northern waters. For the coast of Oaxaca state, their occurrence has only been mentioned before at phylum level. In this paper, we provide the first three records of ctenophores for the Oaxacan coast, which represent new records of *Beroe forskalii* and *Bolinopsis vitrea* as well as the first record of *Ocyropsis maculata* in the tropical eastern Pacific. Descriptions of these three species, as well as a checklist of the ctenophores from the west coast of Mexico are provided.

Key words: *Beroe*, *Bolinopsis*, *Ocyropsis*, Ctenophora, gelatinous zooplankton, tropical eastern Pacific

Resumen

Los ctenóforos son un phylum poco estudiado en el Pacífico oriental tropical, incluyendo el Pacífico sur de México. Los estudios donde se han registrado ctenóforos en el Pacífico mexicano se concentran en el golfo de California, mientras que en el estado de Oaxaca su presencia sólo se ha mencionado a nivel de phylum. Con éste trabajo se proporcionan los tres primeros registros de ctenóforos para Oaxaca, que representan para el Pacífico oriental tropical nuevos registros de *Beroe forskalii* y *Bolinopsis vitrea*, y el primer registro de *Ocyropsis maculata*. Se proporciona un listado faunístico de los ctenóforos registrados en el Pacífico mexicano hasta éste trabajo.

Introduction

Ctenophora is one of the lesser-known invertebrate phyla in Mexico (Martínez-Meyer *et al.* 2014). The only previous survey of ctenophores in the tropical eastern Pacific was conducted by Bigelow (1912), in which the first records from localities along the Mexican Pacific were included, from the Gulf of California in the north to Acapulco in the south, as well as an oceanic record from Mexican territorial waters. A few specific studies on ctenophores have been made since then (Signoret de Brailovsky 1975; Gómez-Aguirre 1976; Stretch 1982), and although studies of other taxa have included ctenophores (Álvarez-León 1980; Álvarez-León & Wedler 1982; Gómez-Aguirre 1991; Gasca & Haddock 2004), the ctenophore diversity of the Mexican Pacific is still poorly known. Faunistic checklists from the Mexican Pacific have recognized five species, four from the Gulf of California (Hendrickx *et al.* 2005; Brusca *et al.* 2005; Brusca & Hendrickx 2008), and a single species from Guadalupe Island, in the northeastern Pacific (SEMARNAT 2013). This is a low number of species when compared with the ctenophore diversity of the Pacific coast of the United States (Mills & Haddock 2007). For the coast of Oaxaca state, their occurrence has been previously mentioned only at the level of phylum (Pantaleón-López *et al.* 2005), without any specific records (Bastida-Zavala *et al.* 2013). The purpose of this work is to summarize the state of knowledge of ctenophore diversity on the coast of Oaxaca state as well as along the entire Pacific coast of Mexico.

TABLE 3. Morphometry of *Beroe forskalii*, based on the specimen shown in Fig. 4A.

Total length of the body	50.2 mm
Maximum width of the body	22.2 mm
Length of the subtentacular ctene rows	37.1 mm
Length of the substomodeal ctene rows	38.2 mm
Maximum width between substomodeal and subtentacular ctene rows	up to 5.2 mm
Maximum width between subtentacular ctene rows	up to 7.6 mm
Width of the mouth	17.5 mm
Number of ctene plates in subtentacular ctene rows	97–107
Number of ctene plates in substomodeal ctene rows	92–105
Length of the polar field	2785 µm
Length of the papillae	up to 823 µm
Diameter of the meridional canals	up to 950 µm
Diameter of the diverticulae	up to 253 µm
Diameter of the paragastric canals	up to 654 µm
Diameter of the adradial canal	up to 591 µm
Diameter of the radial canal	up to 443 µm
Width of the ctene plates	190–1160 µm
Distance between ctene plates	169–401 µm
Diameter of the statocyst	189 µm

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