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***Labrorostratus caribensis*, a new oeonid polychaete from the Grand Caribbean living in the body cavity of a nereidid, with emendation of the genus**

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Abstract

Endoparasitic relationships among polychaetes are uncommon and mostly restricted to about 20 species of the family Oeonidae. We herein describe *Labrorostratus caribensis*, a new oeonid species living in the body cavity of a nereidid polychaete in Chinchorro Bank (Mexican Caribbean). This is the first report of a parasitic relationship between oeonids and nereidids in the Grand Caribbean region. The new species is diagnosed by the jaw apparatus reduced to only maxillary carriers fused, one simple modified ventral chaeta from midbody and lack of acicular spines. The generic diagnosis is emended to include species without maxillary plates. A synopsis of parasitism among polychaetes worldwide is presented.

Key words: Parasitism, Annelida, coralline environments, Mexican Caribbean

Introduction

Although most polychaetes are free-living organisms, more than 370 symbiotic species, either obligatory or facultative, are known to date (Martin & Britayev 1998; Britayev & Antokhina 2012). Endoparasitic relationships occur almost exclusively in about 20 species of the family Oeonidae (Dean 1992). With the exception of *Oligognathus benelliae* Spengel, 1882 found in the body cavity of the echiuroid *Bonellia viridis* Rolando, 1821, and *Pholadiphila turnerae* Dean, 1992, living in the mantle cavity of bivalves, all the other parasitic oeonids were recorded within the body cavity of other polychaetes (Dean 1992; Hernández-Alcántara & Solís-Weiss 1998; Steiner & Amaral 2009).

The family Oeonidae includes 12 genera (*Arabella*, *Biborin*, *Drilogmathus*, *Drilonereis*, *Haematocleptes*, *Halla*, *Labrorostratus*, *Notocirrus*, *Oenone*, *Oligognathus*, *Pholadiphila* and *Tainokia*.) and about one hundred species (Orensanz 1990; Glasby *et al.* 2000; Steiner & Amaral 2009). Some genera, such as *Arabella*, *Drilonereis*, *Labrorostratus* and *Notocirrus* include both free-living and parasitic species, while all known species of *Drilogmathus*, *Haematocleptes*, *Oligognathus* and *Pholadiphila* are exclusively parasites (Steiner & Amaral 2009).

Parasitic relationships among polychaetes are poorly known in the Grand Caribbean region. From the 1,205 species belonging to 59 families in the Caribbean Sea (Dean 2012), and 854 species from 61 families recorded in the Gulf of Mexico (Fauchald *et al.* 2009), only two parasitic species are known: *Drilonereis benedicti* Pettibone, 1957, an endoparasite of the onuphid *Americonuphis magna* (Andrews, 1891), and *Labrorostratus luteus* Uebelacker, 1978, found inside *Syllis spongicola* Grube, 1855. Some species of the syllid *Haplosyllis*, found in association with sponges in Caribbean waters, are more likely mutualists (Lattig & Martin 2011).

In this study, we describe a new species of a parasitic oeonid living in the body cavity of a nereidid from Chinchorro Bank (Mexican Caribbean). We describe and compare our finding with previously reported parasite relationships involving oeonids with reduced maxillae. We emend the generic diagnosis to include species with reduced or missing maxillae, and we also provide a synopsis of parasitism among polychaetes worldwide.