

Annellida, Hirudinea, Piscicolidae, *Stibarobdella macrothela* (Schmarda, 1861): First report for northeastern Brazil

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ABSTRACT: This is the first report of *Stibarobdella macrothela*, a parasitic marine leech, for Ceará (Northeastern Brazil), the second report for Brazil, and the first report for the genus *Stibarobdella* in Northeastern Brazil. Two specimens separated from the host shark *Carcharhinus* sp. were identified in the invertebrate collection at LIMCe (Laboratório de Invertebrados Marinhos do Ceará, Universidade Federal do Ceará). This record shows that the distribution of the *S. macrothela* is continuous in the Western Atlantic Ocean. Here, a brief description of the morphology and a new distributional map of the species is presented.

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Marine leeches, especially those with parasitic habits, are important components of the ecosystem (Siddal and Burreson 1998; Utevsky and Trontelj 2004; Wunderlich *et al.* 2011). Approximately twenty species of marine leeches, all of which of the family Piscicolidae, feed on blood from sharks and rays and are known to be vectors of elasmobranch hematozoa (Caira and Healy 2004; Utevsky and Trontelj 2004). Most piscicolids are circumglobal in tropical and subtropical oceans (Utevsky and Trontelj 2004). Marine leeches feeding on elasmobranchs have previously been reported for

Southern and Southeastern Brazil by Schlenz (1999), Soto (2000; 2003) and Wunderlich *et al.* (2011). This is the first report of the genus *Stibarobdella* for Northeastern Brazil.

Two specimens isolated from the host were identified in the invertebrate collection at LIMCe (Laboratório de Invertebrados Marinhos do Ceará). The specimens were collected off Paracuru town, a coastal location in Ceará State, Northeastern Brazil (3°25'31" S, 39°1'29" W), at a depth of 40 m on July 13th, 1977. The host elasmobranch from which the specimens were retrieved

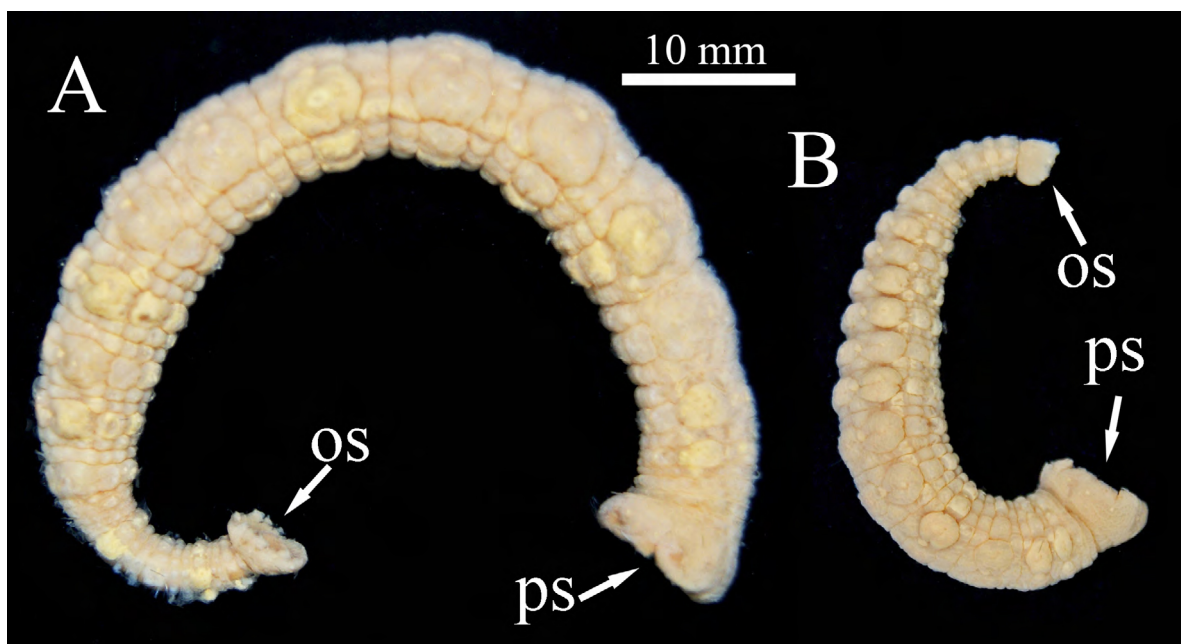


FIGURE 1. Specimens of *Stibarobdella macrothela* (LIMCE-0001-AN-H) from Paracuru, Ceará, Brazil (3°25'31" S, 39°1'29" W). Abbreviations: os – oral sucker and ps – posterior sucker. A – Measurements: 75.0 mm of total body length, 8.0 mm of posterior sucker diameter and 3.5 mm of anterior sucker diameter. B – Respective measurements: 30.0 mm, 4.5 mm and 2.0 mm.

was not found in the collection but was recorded to be of the genus *Carcharhinus*, with no indication of the site of infestation. The two specimens had a total body length of 75.0 and 30.0 mm, a posterior sucker diameter of 8.0 and 4.5 mm and an anterior sucker diameter of 3.5 and 2.0 mm. The voucher specimens were catalogued at LIMCe (Laboratório de Invertebrados Marinhos do Ceará, Universidade Federal do Ceará/UFC) under entry # LIMCE-0001-AN-H.

Our specimens matched descriptions of *S. macrothela* by Llewellyn (1966), Sawyer *et al.* (1975) and Furiness *et al.* (2007) with regard to the characteristics that differentiate the species within the genus *Stibarobdella*: (1) a distinct pattern of tubercles, and (2) a relaxed posterior sucker two or three times the size of the oral sucker (Figure 1). Due to damage to the anterior sucker, the presence of trumpet-shaped eyes could not be confirmed for our specimens.

The genus *Stibarobdella* has previously been described for Southern and Southeastern Brazil (Soto 2003; Wunderlich *et al.* 2011). Furthermore the first report of the species *S. macrothela* in Brazil was published by Soto (2000) for the Southern region. This species was first registered in Jamaica, but is now known to be circumglobal in tropical and subtropical oceans (Llewellyn 1966; Sawyer *et al.* 1975; Williams 1982; Furiness *et al.* 2007). Nevertheless this is the first report of the species for Northeastern Brazil (Figure 2).

The known distribution of *S. macrothela* in tropical and subtropical oceans worldwide coincides with that of its elasmobranch hosts, especially sharks of the genus *Carcharhinus* (Llewellyn 1966; Nelson 2006; Furiness *et al.* 2007; Bonfil *et al.* 2009). It may be noted that 10 species of *Carcharhinus* occur along the coast of Ceará: *Carcharhinus falciformis*, *C. leucas*, *C. limbatus*, *C. longimanus*, *C. obscurus*, *C. perezi*, *C. plumbeus*, *C. porosus* and *C. signatus* (Jucá-Queiroz *et al.* 2008). These shark species likely serve as hosts for *S. macrothela*.

Lastly, the present report fills the gap in the distribution of *Stibarobdella macrothela* between the Caribbean Sea and Southern Brazil, indicating, as expected, that the distribution of the species is continuous in the Western Atlantic Ocean.

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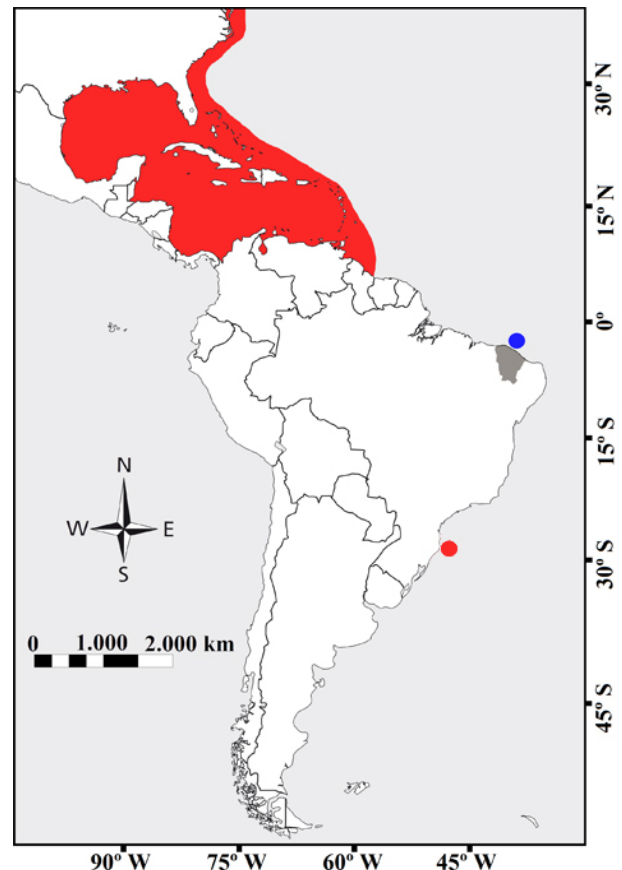


FIGURE 2. Distribution map of *Stibarobdella macrothela* in the Western Atlantic Ocean. Red: Previous records. Distribution in the Northern Hemisphere according to Llewellyn (1966), Sawyer *et al.* (1975), Williams (1982) and Furiness *et al.* (2007), and a single report from the Southern Hemisphere by Soto (2000). Blue: The two specimens reported here were collected off Paracuru, a coastal location in Ceará, Northeastern Brazil (3°25'31" S, 39°1'29" W).

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