



Fishes of the family Sternoptychidae (Stomiiformes) collected on the Brazilian continental slope between 11° and 23°S

ADRIANO T. LIMA¹, PAULO A. S. COSTA², ADRIANA C. BRAGA²,
GUSTAVO W. A. NUNAN³ & MICHAEL M. MINCARONE⁴

¹Companhia Docas de São Sebastião, Av. Dr. Altino Arantes, 410, São Sebastião, SP, 11600-000, Brazil.

E-mail: adrianotl@terra.com.br

²Departamento de Ecologia e Recursos Marinhos, Universidade Federal do Estado do Rio de Janeiro, Av. Pasteur 458, ECB, sala 410, Rio de Janeiro, RJ, 22290-240, Brazil. E-mail: paulocosta.unirio@gmail.com; acbragaz@hotmail.com

³Departamento de Vertebrados, Museu Nacional / UFRJ, Quinta da Boa Vista, Rio de Janeiro, RJ, 20940-040, Brazil.

E-mail: gwanunan@acd.ufrj.br

⁴Grupo de Sistemática e Biologia Evolutiva, Núcleo em Ecologia e Desenvolvimento Sócio-Ambiental, Universidade Federal do Rio de Janeiro, Caixa Postal 119331, Macaé, RJ, 27910-970, Brazil. E-mail: mincarone@gmail.com

Abstract

Recent pelagic and benthic trawling activities over the Brazilian continental slope between 11° and 23°S captured nine species representing five genera of the stomiiform family Sternoptychidae. Among these, three species are new records for Brazilian waters: *Sternoptyx pseudodiaphana*, *Argyripnus atlanticus*, and *Polyipnus* sp. The known distributions of *Argyropelecus aculeatus* and *Maurollicus stehmanni* along the Brazilian coast are extended northward to 13°S and 16°S, respectively, while that of *Sternoptyx diaphana* is extended southward to 13°S. *Argyropelecus hemigygnus*, *Argyropelecus sladeni*, and *Sternoptyx pseudobscura* were rarely caught (n=2–16). A key to the western South Atlantic species of Sternoptychidae is provided.

Key words: Western South Atlantic, Brazil, Sternoptychidae, identification key

Introduction

The family Sternoptychidae is a group of small fishes (typically less than 100 mm standard length, SL), with bright, silvery lateral pigmentation, large eyes, numerous lateral and ventral photophores, and a highly variable intergeneric body morphology (Nelson 2006). Specimens have been captured from small numbers to large concentrations at tropical and temperate oceanic waters in all three major oceans. Adults inhabit mesopelagic depths between 200 and 1000 m. Some species undergo daily vertical migrations, and a few species of the genera *Argyripnus*, *Polyipnus* and *Sonoda* are considered bathypelagic, associated with submarine banks and oceanic islands (Baird 1971; Quéro *et al.* 1990; Harold 1994). The family consists of approximately 70 valid species in 10 genera within two subfamilies, Maurolicinae and Sternoptychinae (Weitzman 1974). Among these, at least 24 species occur in the Atlantic, and 12 have been reported in Brazilian waters (Baird 1971; Figueiredo *et al.* 2002; Parin & Kobylansky 1996; present study).

Regional biogeographical accounts of the Atlantic Sternoptychidae published in the last decades include the western North Atlantic (Grey 1964; Schultz 1964; Harold *et al.* 2002), western Central Atlantic (Uyeno & Aizawa 1983; McEachran & Feckhelm 1998; Harold 2003), western South Atlantic and Southern Ocean (Inada 1986; Nakamura 1986; Gon 1990; Figueroa *et al.* 1998), eastern North Atlantic and Mediterranean (Badcock 1984; Mercader *et al.* 2001), eastern Central Atlantic (Quéro *et al.* 1990), and eastern South Atlantic (Baird 1986; Lloris 1986; Weitzman 1986).

Because of a reduced number of deep-sea scientific expeditions and a consequent scarcity of specimens deposited in zoological collections, the diversity of Brazilian sternoptychids (and other groups of deep-sea