Metamicrocotyla macracantha (ALEXANDER, 1954) (POLYOPISTHOCOTYLA: MICROCOTYLIDAE) OF *Mugil liza* VALENCIENNES, 1836 (OSTEICHTHYES: MUGILIDAE) IN TWO LAGOONS ENVIRONMENTS FROM RIO DE JANEIRO STATE, BRAZIL

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Abstract

The state of Rio de Janeiro has artisanal fishing as a very important subsistence activity. *Mugil liza* is one of the most common fish, popularly known as mullet. The Maricá lagoon is the largest in the Maricá-Guarapina lagoon system. The Jacarepaguá lagoon system is formed by rivers that originate on the slopes of the Maciço da Tijuca and Pedra Branca, and which flow to the sea along the coastal plain until they flow into the region's lagoons. The present work aimed to compare the occurrence of *Metamicrocotyla macracantha* in these two environments. A total of 44 specimens of *M. liza* were collected from Maricá lagoon and 11 from Jacarepaguá lagoon. The fish were purchased from artisanal fishermen, transported to the Laboratório de Biologia e Ecologia de Parasitos at ICBS/UFRRJ, where they were necropsied. Of the 44 mullets analyzed in Maricá lagoon, eight (24%) were infested by *M. macracantha* with mean intensity of 1.8 and mean abundance of 0.34. Four out of 11 mullets from Jacarepaguá lagoon were infested (36%), with mean intensity of 3.7 and mean abundance of 1.3. Although only 11 fish were collected in Jacarepaguá lagoon, the parasitic parameters of *M. macracantha* were higher from that location. Exposure to contaminants can directly or indirectly impact infestation intensities. The indirect impact would be linked to the effect of pollution on the host's immune system, which could increase infestation and the production of mucus, which serves as food for polyopisthocotylans. In March 2024, the Jacarepaguá lagoon presented a poor to very poor IQA (Water Quality Index), while the Maricá lagoon presented a medium IQA, which may have favoured the greater infestation of mullets from the Jacarepaguá lagoon. The study of the parasitic fauna of economically important fish, such as mullet, is pivotal because ectoparasites can directly affect the development of these animals and polyopisthocotylans ones can be used as bioindicators of environmental quality.

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