PARASITE INFECTION IN BLOOD AND TISSUES OF THREE FISH SPECIES FROM LAKES IN THE EASTERN AMAZON: FIRST CASE REPORT

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Parasitic communities in fish can be used as bioindicators of environmental quality, as they reflect the ecological conditions of aquatic ecosystems. Fish frequently serve as hosts to various parasites, including myxosporeans, which can cause irreversible tissue damage depending on the intensity of infection. This study identified hemoparasites in fish collected from the Açu and Viana lakes in the Eastern Amazon, Maranhão. Four sampling events were conducted (two during the dry season and two during the rainy season), totaling 240 specimens of the species *Hoplias malabaricus, Pygocentrus nattereri,* and *Prochilodus lacustris.* The fish were anesthetized with clove oil, and blood samples were collected via caudal puncture to prepare blood smears, which were subsequently stained with modified Rosenfeld. Tissue samples were fixed in 10% formalin for further histological processing. Three parasites were identified: *Trypanosoma* spp., *Myxobolus* spp., and *Henneguya* spp. During the dry season, *Trypanosoma* spp. exhibited a prevalence of 100% in *H. malabaricus* in Lago Açu and 70% in Lago Viana, whereas in the rainy season, the rates were lower (65% and 55%, respectively). In *P. lacustris*, prevalence was 55% in Lago Açu during the rainy season, increasing to 65% in the dry season. *Myxobolus* spp. showed higher prevalence in *H. malabaricus* in Lago Açu during the dry season (75%) and in *P. nattereri* in Lago Viana, both in the dry (85%) and rainy (48%) seasons. *Henneguya* spp. presented lower prevalence rates, with *H. malabaricus* in Lago Açu showing 50% in the rainy season and 43% in the dry season, while *P. nattereri* in Lago Viana exhibited 32% in the dry season. *P. lacustris* had the lowest prevalence, restricted to Lago Viana (25% in the dry season and 10% in the rainy season). The results indicate seasonal variations in parasite prevalence, highlighting the influence of environmental conditions on infection dynamics and reinforcing the importance of parasitological monitoring as an indicator of environmental quality in the studied lakes.

Keywords: Fish parasites, *Myxobolus*, *Henneguya*

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