

PARASITIC DIVERSITY IN PIRARUCU *Arapaima gigas* SCHINZ, 1822 (ARAPAIMIDAE) OF FISH FARMS FROM THE AMAPÁ STATE, BRAZIL

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The pirarucu *Arapaima gigas* is a fish of great importance for Amazon aquiculture, due to favorable zootechnical characteristics, besides high quality and palatability of meat and commercial value. This piscivorous fish accepts ration artificial when adequately trained and its air-obligatory breathing facilitate the culture in low oxygen levels. Thus, *A. gigas* is farmed in all North regions, including the State of Amapá, which produced 6.0 tons in 2007. The purpose of this study was to investigate the parasites in pirarucus *A. gigas* of three fish farms from Macapá, State of Amapá, Brazil. One hundred *A. gigas* measuring from 1.02 to 1.59 m and weighing from 9,320 to 31,000 kg were necropsied and analyzed according to methods described in literature for this purpose.

Gills of *A. gigas* were parasitized by *Ichthyophthirius multifiliis* Fouquet, 1876 (Protozoa: Ciliophora), *Dawestrema cycloancistrum* Price & Nowlin, 1967 and *Dawestrema cycloancistrioides* Kritsky, Boeger & Thatcher, 1985 (Monogenoidea: Dactylogyridae), while the intestine had only infection by *Polyacanthorhynchus macrorhynchus* Diesing, 1856 (Acanthocephala: Polyacanthorhynchidae) (Table 1).

The *I. multifiliis* were the dominant parasites, but acanthocephalans and monogenoideans parasites were observed only one fish farm studied. This high infection by *I. multifiliis* was caused by inadequate water quality in ponds, while parasitism by *P. macrorhynchus* can be due to feeding using intermediate hosts, such as crustaceans. However, the infection rates not influenced the relative condition factor of fish. There are differences in infection rates among three fish farms. Length and weight had negative correlation with the monogenoidean intensity and positive correlation with the *I. multifiliis* intensity.

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Table 1. Parasitic indexes in *A.gigas* (N=100) of three fish farms from Macapá, Amapá State, Brazil. P: Prevalence, SD: Standard Deviation, MRD: Mean relative dominance, MI: mean intensity of infection, TNP: total number of parasites.

Parasites	P(%)	MI ± SD	TNP	Abundance	MRD
<i>I. multifiliis</i>	90.0	249,769 ±166,809.2	22,479.216	224,792.2	0.99955
Monogenoidea	54.0	173.9 ± 89.0	9391	93.9	0.00042
<i>P. macrorhynchus</i>	19.0	28.1 ± 32.6	535	53.5	0.00002