

Parasites in *Astronotus crassipinnis* (Pisces: Cichlidae) from the Jari River, a tributary of the Amazon River in state of Amapá, Northern Brazil

Gracienhe Gomes Santos^{1,2}, Marcos Sidney Brito Oliveira³, Lígia Rigor Neves^{2,4}, Bianca Barata Gonçalves^{1,2} e Marcos Tavares-Dias²

¹Faculdade de Macapá (FAMA), Macapá, Brasil

²Embrapa Amapá, Estado do Amapá, Macapá, Brasil

³Universidade Federal do Oeste do Pará (UFOPA), Estado do Pará, Santarém, Brasil

⁴Universidade Federal do Amapá, Macapá, Brasil

Astronotus crassipinnis, popularly known as apaiari or Oscar, is a freshwater fish with wide distribution in the system of the Amazon River. From October to November 2014, 35 specimens of *A. crassipinnis* were caught of the Jari River (1° 7'26.21" S; 52° 0'40.59" W) using gill net. After capture, all fish were measured in standard length (17.5 ± 1.1 cm) and total weight (303.5 ± 51.8 g) and submitted to parasitological analysis. Gills and viscera were examined for parasites that were fixed in formalin 5% for 24 hours and conserved alcohol 70%. The prevalence (P), mean intensity (MI), mean abundance (MA) and total number of parasites (TNP) were determined. The dispersion index (ID), *d*-statistic and discrepancy (D) were calculated to show the distribution pattern of the parasite infracommunities. All specimens of *A. crassipinnis* (100%) and 9788 parasites were collected. This fish had the gills parasitized by *Gussevia asota*, *Gussevia astronoti*, *Gussevia rogersi* (P = 97.1%; MI = 213.8, MA = 207.7, TNP = 7268), *Posthodiplostomum* sp. (P = 85.7%, MI = 69.8, MA = 59.8, TNP = 2094), *Dolops longicauda* (P = 5.7%; MI = 1.5, MA = 0.09, TNP = 3), the intestine by *Posthodiplostomum* sp. (P = 14.3%, MI = 6.6, MA = 0.9, TNP = 33), *Contracaecum* sp. (P = 22.9, MI = 2.9, MA = 0.7, TNP = 23) and *Gorytocephalus* sp. (P = 11.4, MI = 1.0, MA = 0.1, TNP = 4). The stomach had *Contracaecum* sp. (P = 5.7%, MI = 2.5, MA = 0.1, TNP = 5), and liver *Contracaecum* sp. (P = 2.9%, MI = 1.0, MA = 0.03, TNP = 1) and mesentery *Contracaecum* sp. (P = 91.4%; MI = 11.1, MA = 10.2, TNP = 356) and *Gorytocephalus* sp. (P = 2.9%; MI = 1.0, MA = 0.03, TNP = 1). *Gussevia asota*, *G. astronoti* and *G. rogersi* were dominant parasites, followed by *Posthodiplostomum* sp. The parasites presented aggregate dispersion, except for infection by *Contracaecum* sp. in the intestine that had was random dispersion. The endoparasites community presented low prevalence and abundance. The presence of endoparasites with a complex life cycle indicates that the diet of *A. crassipinnis* consists mostly of mollusks and microcrustaceans. This fish species is an intermediate or paratenic host for *Posthodiplostomum* sp., *Contracaecum* sp. and *Gorytocephalus* sp., parasites found in larval stage. Finally, the behavior and availability of infective stages, which are intermediate hosts for endoparasites, were factors structuring the communities of endoparasites in this Amazonian cichlid.

Keywords: Aggregation, Amazon, parasites, freshwater fish