ACTA
Biomedica Brasiliensia

ISSN: 2236-0867

OCCURRENCE OF *Henneguya* sp. (THÉLOHAN, 1892) IN THE BLOOD OF *Astyanax fasciatus* (CUVIER, 1819) IN A STREAM OF THE MURIAÉ RIVER BASIN IN ITAPERUNA, RJ

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RESUMO

Esse estudo reporta a presença de *Henneguya* sp. no sangue de *Astyanax fasciatus* de ambiente natural, em um córrego da sub-bacia do rio Muriaé, pertencente a bacia do rio do Paraíba do Sul de Itaperuna, estado do Rio de Janeiro, Brasil. Oito coletas foram realizadas em outubro de 2009 e setembro de 2010, com 45 dias de intervalo, em cada coleta foram capturados dez espécimes de *Astyanax fasciatus* dando um total de 80 lâminas de sangue. Esse estudo relata a presença de *Henneguya* sp. em duas espécimes coletadas em novembro de 2009. Essa baixa incidência de parasitas ocorreu porque o gênero *Henneguya* já foi registrado em vários órgãos de espécies do gênero *Astyanax*. Embora os filamentos branquiais sejam de locais com maior tropismo e alta prevalência, não foram encontrados registros na literatura de parasitas com esse gênero no sangue de peixes.

Palavras chave: Myxosporea, Characidae, Lambari, parasitas, sangue.

ABSTRACT

This study reports the presence of *Henneguya* sp. in the blood of *Astyanax fasciatus* of natural enviroment, in a stream of the Muriaé River sub-basin, that belongs to the basin of the Paraíba do Sul River from Itaperuna, Rio de Janeiro Estate, Brazil. Eight colects were perfomed between october 2009 and september 2010 with 45 days of interval, in each colect were captured ten specimen of *Astyanax fasciatus* giving a total of 80 slides of blood. This study reports the presence of *Henneguya* sp. in two specimens collected in november 2009. The low incidence of parasites ocurred because the genus *Henneguya* has already been registered in various organs of species of genus *Astyanax*, though the gill filaments are the sites with the highest tropism, so has the highest prevalence, but there is no register in the literature of parasites from this genus in the blood of fishes.

Keywords: Myxosporea, Characidae, Lambari, parasites, blood.

1 – Introduction

Among myxosporeans, the genus *Henneguya* Thélohan, 1892 is the most abundant in South America, with 29 known species. The importance of this genus as a pathogen of freshwater fish has been described by several authors (Dyková e Lom 1978, Kalavati e Narasimhamurti 1985, Lom e Dyková 1995, Martins e Souza 1997, Martins et al. 1999a). Among freshwater fish,

ISSN: 2236-0867

the genus *Astyanax* (Baird e Girard, 1854) is frequently related to myxosporeans, with ten species of *Henneguya* commented or described so far (Cordeiro et al. 1983, Gióia et al. 1986, Gióia e Cordeiro 1987, Barassa et al. 2003, Vita et al. 2003). The hosts of the genus *Astyanax* (Baird e Girard, 1854) contains approximately 100 species and subspecies that are widely distributed throughout South and Central America (Garutti e Britski 1997). These small size fish, popularly known as lambari in Brazil, occupy a fundamental position in the food chain of aquatic ecosystems, where they serve as food for several predators (Esteves 1996) tornando-se um hospedeiro intermediário para diversos predadoers There are no records of scientific studies about occurrence of *Henneguya* sp. in the blood of fishes. The objective of this study was report the occurrence of *Hemmeguya sp.* In blood of *Astyanax fasciatus*.

2 – Material and Methods

This study were performed in Itaperuna in the Northwest of the Rio de Janeiro state, in a stream located in the left margin of the Muriaé River, that belongs to the basin of the Paraíba do Sul River. To the colects of the specimens were used ten fishing nets of 10m of length and 1,5m of heigth, with meshes of 30mm of opposites knots. To the blood colect were perfomed the intra heart puncture using 5ml syringe.

3 - Results and Discussions

Eight colects were perfomed between october 2009 and september 2010 with 45 days of interval, in each colect were captured ten specimen of *Astyanax fasciatus* giving a total of 80 slides of blood. This study reports the presence of *Henneguya* sp. in two specimens collected in november 2009. The spores found have eloganted spindle-shape with bifurcated caudal appendages. Two polar capsules were observed on the anterior extremity. The present description confirms that the parasite found belongs to the genus *Henneguya*. Myxozoan parasites are normally present in wild and captive fish. They do not cause any problem to their hosts when there is equilibrium between fish and environment. When any kind of stress to the host occurs, such as handling, poor water quality or overpopulation the parasites appear and several kinds of diseases arise (LOM and NOBLE, 1984). According Eiras (2002), the genus *Henneguya* has already been registered in various organs of lambari, though the gill filaments are the sites with the highest tropism, so has the highest prevalence, but there is no register in the literature of parasites from this genus in the blood of fishes, what permits comprehend the low incidence of parasites in this study.

ISSN: 2236-0867

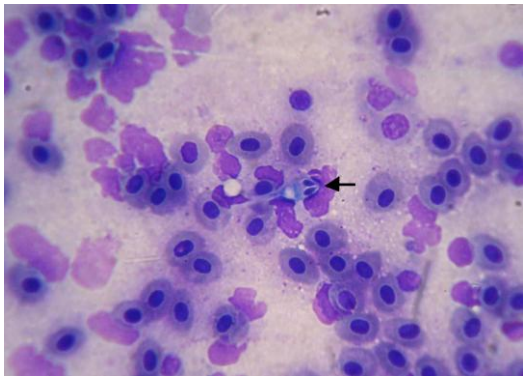

Figure 1: Presence of *Henneguya sp*. in blood cells of specimen *Astyanax fasciatus*.

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