



XIII Congresso de ECOLOGIA

III International Symposium of Ecology and Evolution

Múltiplas ecologias: evolução e diversidade

08 a 12 de outubro de 2017 • UFV - VIÇOSA | MG

MORPHOLOGICAL DIFFERENTIATION OF *Hoplias malabaricus* (Bloch, 1794) (Teleostei, Erythrinidae) WITHIN THE LA PLATA RIVER BASIN

Nicole Ibagón^{1*}, Iara Valle¹, Bárbara Shalaguti¹, Jorge Dergam², Karla Yotoko¹

1. Departamento de Biologia Geral, Universidade Federal de Viçosa, Viçosa, 36570-900, Brasil.

2. Departamento de Biologia Animal, Universidade Federal de Viçosa, Viçosa, 36570-900, Brasil

*e-mail: nicoleibagon@gmail.com

Tema/Meio de apresentação: Evolução/Oral

Hoplias malabaricus (Bloch, 1794) is a species complex (=paraspecies) that shows the widest distribution in the Neotropical region, from Northern Argentina to Panama. A species complex is composed of populations that have not responded morphologically to vicariant and/or geodispersal process. Since 1980, cytogenetic and molecular biology data unveiled the hidden diversity within this paraspecies. The La Plata River Basin is the second largest in South America and it is composed of three sub-basins: Paraná, Paraguay, and Uruguay. Geometric morphometrics has been considered an efficient tool to search for species boundaries. Our aim is to explore the morphological variation from the cephalic skeleton of *H. malabaricus* using geometric morphometrics at the La Plata River Basin. The cephalic regions is not affected by formalin fixation. We photographed samples from several ichthyological collections. We selected 13 landmarks, using tpsDIG 2.29 software. We used MorphoJ 1.06 to performed Procrustes fit, Principal Component Analysis (PCA) and Canonical Variate Analysis (CVA). The PCA approach does not allow the detection of morphological differences among populations. On the other hand, the CVA successfully separated Paraná, Paraguay, and Uruguay river basins. CVA shape changes show differences in the supra-pre-opercular bone and eye width among the three populations. Those structures could diagnose individual species within the *H. malabaricus* complex. Future perspectives include comparing geometric morphometrics with molecular and cytogenetic characters and extending morphological variation to the whole geographical distribution range of this paraspecies.