
Intra specific genetic variability of the dourada - *Brachyplatystoma rousseauxii* Castelnau 1855 (Pimelodidae – Siluriformes) in the Estuary-Amazonas-Solimoes System

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Abstract

The dourada (*Brachyplatystoma rousseauxii*) is among the two most important catfish species in the Amazon, being captured by both artisanal and commercial fishing fleets from Iquitos (Peru) to the estuary of the Amazonas river, in Belém. Studies by several authors suggest that the species has differentiated areas for feeding/growth and reproduction, and that, in the Amazon, it is composed by a single population that seasonally migrates from the feeding and growing areas to the areas of reproduction. The main objectives of this study were: to estimate the genetic variability among and between individuals of *B. rousseauxii* collected in three points along the Estuary-Amazonas-Solimões axis (EAS) and to verify if the variability found was correlated with geographic distribution. A fragment of 1037 bp corresponding to the D-loop of the mtDNA was sequenced for 15 individuals in three locations: Belém, Manaus and Letícia. The sequences were utilized in four types of analyzes: phylogenetic (parsimony, maximum likelihood and distance), DNA polymorphism, AMOVA and Nested Clade Analyses. It was possible to identify 31 haplotypes and 27 singletons among the 45 *B. rousseauxii* individuals sequenced. The larger genetic variability was found in Belém and the smaller in Letícia, but there was no correlation between the genetic variability and geographic distribution, suggesting that *B. rousseauxii* enclose a single migrating population in the EAS axis. However, as an explanation for the significantly larger degree of genetic variability found in Belém, one cannot discard the hypothesis that different subpopulations of *B. rousseauxii* may segregate geographically and genetically in the basins of the

different affluents of the EAS system, during the migration for reproduction.

Key-words: *Brachyplatystoma rousseauxii*, control region, DNA sequencing, philogeography

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