

# practical fishkeeping

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## Arapaima form continuous population says study

A study of the population genetic structure of the pirarucu (*Arapaima gigas*) in the Amazon basin published in the most recent issue of the Brazilian Journal of Biology has found that genetic exchange among pirarucu populations along the Amazon River drainage is significantly restricted at distances greater than 2,500 km.

Tomas Hrbek, Marcelo Crossa and Izeni Farias analysed 14 variable microsatellite loci and 2,347 base pairs of mitochondrial DNA from 126 individuals sampled in seven localities within the Amazon basin.

Their results suggest that Arapaima forms a continuous population with extensive genetic exchange among localities up to 2,500 km apart.

The implication of their study on the conservation of this species is that for effective conservation of this species, replicate high quality várzea (flooded forest) reserves in the upper, central, and lower Amazon basin should be set aside.

According to the authors, “[t]his conservation strategy would: 1) preserve all of the current genetic diversity of Arapaima; 2) create a set of reserves to supply immigrants for locally depleted populations; 3) preserve core várzea areas in the Amazon basin on which many other species depend.”

Of related interest, Donald Stewart of the State University of New York informed Practical Fishkeeping that he and coworkers recognise multiple species and are working on a revision of Arapaima.

For more information, see the paper: Hrbek, T, M Crossa and IP Farias (2007) Conservation strategies for *Arapaima gigas* (Schinz, 1822) and the Amazonian várzea ecosystem. *Brazilian Journal of Biology* 67, pp. 909–917.

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