## Movement patterns and habitat utilization of released giant amazon fish *Arapaima gigas* monitored by radio-telemetry in the Imiría lagoon, Peru

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Pirarucu, *Arapaima gigas*, is an air-breathing giant fish of Amazonian rivers and the largest scaled freshwater fish in the neotropics (more than 3,5 m and 250 kg). As Pirarucu has been over-exploited for decades, now the species is seriously depleted over much of its range and is listed in CITES Appendix II as an endangered species. Despite its tremendous economic and cultural importance its biology remains poorly studied in its natural habitat. Pirarucu was introduced into lagoons or ponds for aquaculture purposes in many areas as a solution to face the decline of wild populations and it was hoped that it would adapt to pond culture and benefit the local people. More recently attempts have been made to restock Pirarucu in its natural environment and we describe here the results obtained in Lake Imiria, Peru were 500 "cage-cultured" Pirarucus were introduced. Using radio-telemetry we monitored, survival, adaptation and behavior of externally tagged cage-raised (18 individuals) and wild Pirarucus (8 individuals) captured in the lake, focusing our observations on individual behavior, habitat preference and habitat area determination. Although home range estimates were variable (1050 to 311 288 $m^2$), they were similar between "wild" and "cage-cultured" fishes and all Pirarucus stayed close to the shoreline during the one-year survey period. The average home range size determined by Frequency Kernel Utilization ($FKUD_{50\%}$) was relatively small 83 677,1 ± 122 976,4 $m^2$ and 53 783,9 ± 64 277,3 $m^2$ for wild and cage cultured fishes respectively, indicating a great territoriality of this species despite its great size.

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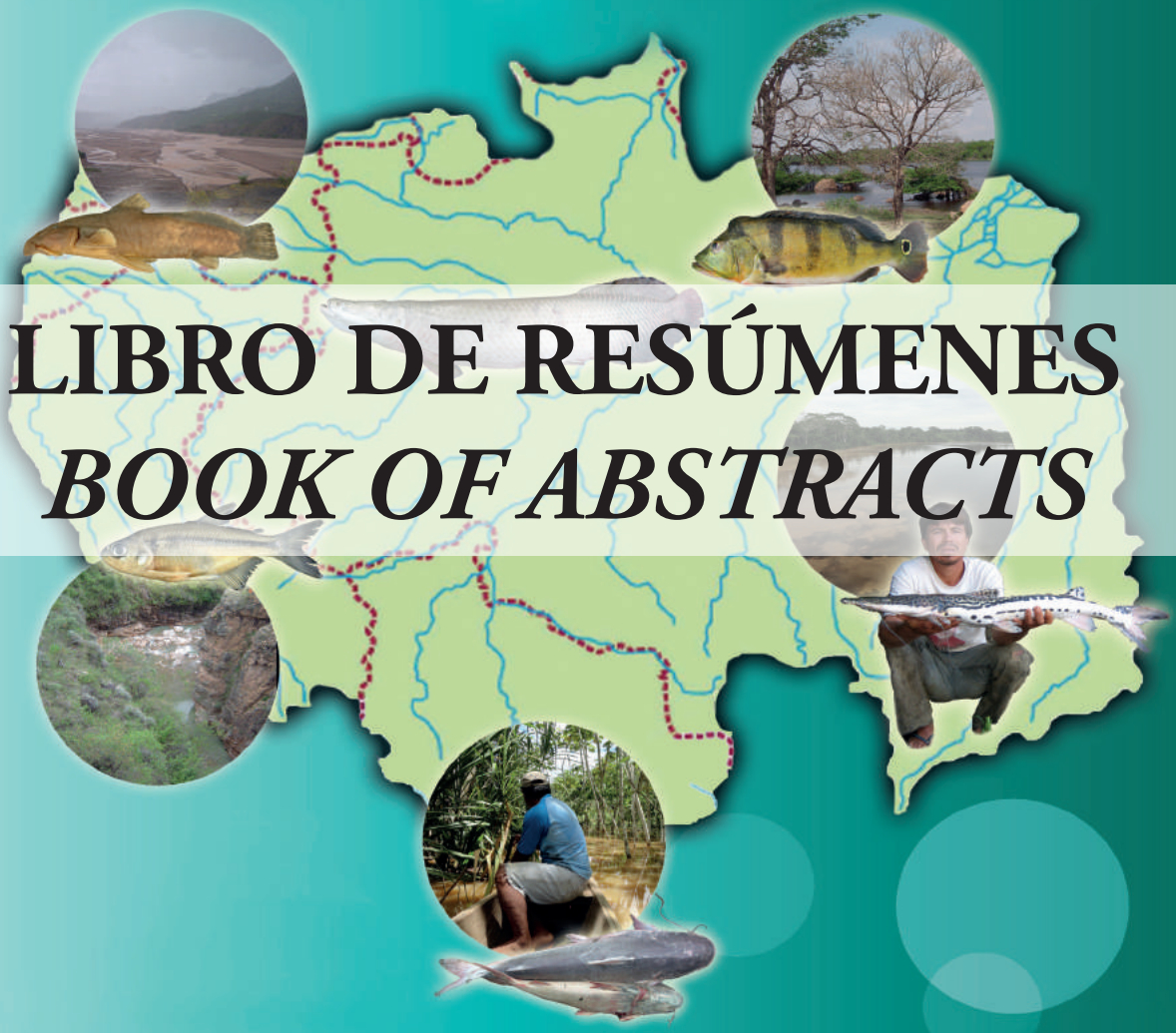

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