

Structure and composition of aquatic bird community at Piagaçu-Purus Reserve in the Brazilian Amazon forest.

Authors: Renato Cintra*, Alyson Melo and Thais Kasecker

*INPA – Ecologia Cp. 478, CEP 69011-970, Manaus, Am

GENERAL DESCRIPTIVE RESULTS- We described and analyzed the bird community structure and composition of the lacustrine water bodies of the seasonally flooded wetlands of the Piagaçu-Purus Reserve, Amazonas, Brazil. Bird surveys were conducted during four days in the dry season (October 2004). Bird species were recorded in twenty 5 km transects distributed in four water body types (River, Igarapé, Paranã and lake) aboard a speedboat under constant speed of 20 km/h and running about 15-20 m from the water body margins. We recorded 1459 individuals of 40 aquatic bird species along the margins of aquatic environments (including raptors, jacanas, rails, cormorants, egrets, terns, herons, grebes, ducks, migrant shorebirds, hoatzins and kingfishers). Of these 17 were mainly piscivorous. The aquatic bird communities of Piagaçu-Purus Reserve comprise a few abundant species and a higher number of rare species. Five aquatic bird species (*Phalacrocorax brasilianus*, *Phaetusa simplex*, *Ardea alba*, *Anhinga anhinga* and *Ardea cocoi*) accounted for (755 individuals) or 51.7% of all the birds recorded. The most used microhabitats were forest border along the aquatic environments. We recorded 8 migrant shorebirds species which represents one third of the species yearly visiting the entire country of Brazil. One of them (*Charadrius semipalmatus*) was for the first time recorded in the interior of the country. The structure of both aquatic and exclusively piscivorous birds were typical of tropical communities with few abundant and lots of rare species. This indicates that the local community is still pristine. Almost all the 40 aquatic birds at Piagaçu-Purus are widely distributed through the Amazon region, and they represent about one-quarter of the total number of aquatic bird species of South America.

Multivariate analysis results. To avoid pseudoreplication only data from nine 5 km transects were used in the multivariate analysis. Matrices of aquatic bird species by water body were subjected to multivariate analysis using the multidimensional scaling ordination technique (MDS). For the qualitative data (species presence/absence), and the composition of the entire community of aquatic birds were very different among the four lacustrine water bodies types. For the quantitative data (species abundance), the aquatic bird community of Paranã Prainha, Igarapé Ayapuá and lake Marajá were more similar between them than among them and the rest of water body types. On the second dimension (MDS2) of the ordination of the qualitative bird community composition of Paranã Prainha, Paranã Ayapuá, Lake Ayapuá and Lake Fortaleza (which are all white water bodies) were more similar between them than among them and the other water bodies. Within the piscivorous bird species, the quantitative community composition of the Paranã Prainha and lake Marajá were very different from the water bodies. The qualitative bird community composition was clearly separated in two groups with Igarapé Ayapuá and lake Marajá being more similar between them than to the rest of water bodies. The results suggest, at least for qualitative composition of the aquatic bird community, that water body water type (white and black) seems to be one of the determinants of aquatic bird community composition in Amazonian seasonally flooded wetlands.