



The relationship between fruit availability and primate abundance in three habitats on the Yavari River, Peru

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Lago Preto Conservation Concession (LPCC)



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Cacajao calvus ucayalii

Lago Preto is a joint WCS-DICE (World Conservation Society and The Durrell Institute for Conservation and Ecology-University of Kent) study site. The area has recently been made a Conservation Concession, on account of its rich wildlife and unique primate community (13 different species). That includes unique high densities of the IUCN endangered RED UAKARI MONKEY.

The forest at Lago Preto is comprised of three distinct, clearly divided and very typical Amazonian habitats; 'aguajal' swamp forest dominated by *Mauritia flexuosa* palms, high 'terra firme' forests with high floral diversity, and white water flooded forests known as 'varzea'.

The river systems flood 'varzea' and 'aguajal' forests between 6-8 months annually, during those months these forests remain 1-8 meters under water, while 'terra firme' remains high and dry all year round, being only regulated by the rain. The fruit production and the variety of plants and animals therefore are dictated by the species ability to survive, adapt and thrive in these conditions.

The New World primate species are almost exclusively frugivores, they depend mostly on fruit to survive, and during the dry season the abundance of ripe fruit reaches its lowest levels. However UAKARIS and saki monkeys (and to a certain extent Capuchins) have a taste for the seeds of unripe fruit which allows them to survive well during the dry season. And ripe aguaje fruit is also available at times when few other tree species are fruiting.



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Saguinus mystax



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Saimiri sciureus



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Cebus apella



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Callithrix pygmaea



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Alouatta seniculus



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Objectives and Methodology

The aim of this study was to compare the densities and abundances of primates in each of the three habitats at Lago Preto using census information from the study site collected in 2006 and 2007. Additionally densities and abundances in each of the habitats during June and July 2007 were compared with the availability of fruit in these habitats during this period. My research is based on a phenological study in the three habitats at Lago Preto together with a census on primate densities in these habitats. The densities and abundances of fruiting trees were calculated in the main habitats, 'varzea', 'terra firme' and 'aguajal', by measuring the CBH of 2735 trees and the identification of some of the tree species. *In addition to that four walks of 3.5km each were carefully done following trails in the forest to measure the proportion of each habitat CENCUSED by the DISTANCE method. We can estimate habitat availability from the satellite maps.* Densities of the primate species in each habitat were calculated using the DISTANCE/belt transect method.

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Pithecia monachus



Initial Results



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Cebus albifrons



The data will be statistically analysed to confirm or not the following research hypothesis: 'primate abundance is higher in habitats with more fruit availability'. Initial overview of collected data reveals that the UAKARI monkeys have a preference to use the 'aguajal' forests to feed and rest. Funded by The Reinvention Centre for Undergraduate Research at Oxford Brookes University