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Research Article

Social monogamy in wild owl monkeys (*Aotus azarae*) of Argentina: the potential influences of resource distribution and ranging patterns

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Abstract

Using published and new data from a population of monogamous owl monkeys in the Argentinean Chaco, I examine the hypothesis that social monogamy is a default social system imposed upon males because the spatial and/or temporal distribution of resources and females makes it difficult for a single male to defend access to more than one mate. First, I examine a set of predictions on ranging patterns, use of space, and population density. This first section is followed by a second one considering predictions related to the abundance and distribution of food. Finally, I conclude with a section attempting to link the ranging and ecological data to demographic and life-history parameters as proxies for reproductive success. In support of the hypothesis, owl monkey species do live at densities (7–64 ind/km^2) that are predicted for monogamous species, but groups occupy home ranges and core areas that vary substantially in size, with pronounced overlap of home ranges, but not of core areas. There are strong indications that the availability of food sources in the core areas during the dry season may be of substantial importance for regulating social monogamy in owl monkeys. Finally, none of the proxies for the success of groups were strongly related to the size of the home range or core area. The results I present do not support conclusively any single explanation for the evolution of social monogamy in owl monkeys, but they help us to better understand how it may function. Moreover, the absence of conclusive answers linking ranging, ecology, and reproductive success with the evolution of social monogamy in primates, offer renewed motivation for continuing to explore the evolution of monogamy in owl monkeys. Am. J. Primatol. 78:355–371, 2016. © 2015 Wiley Periodicals, Inc.

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