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ON THE OCCURRENCE OF THE OWL MONKEY (*AOTUS AZARAI*) IN CERRO LEON, CHACO, PARAGUAY

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The owl monkey, *Aotus azarai*, has been described from various parts of northern Argentina and Paraguay (see Stallings, 1984, 1985; Fernandez-Duque *et al.*, 2001). One of the earliest reports is found in Kerr (1950), in a description of a pioneering exploration of the Chaco from 1889 to 1891 along the Río Pilcomayo. The most recent review detailing this primate's distribution in northern Argentina and Paraguay is provided by Neris *et al.* (2002). In the northern Paraguayan Chaco, they describe low canopy scrub forest and high canopy forest as suitable *Aotus* habitat. They describe its activities in Paraguay as mainly crepuscular, although sometimes active on cloudy or overcast days.

During fieldwork on the Chacoan peccary, *Catagonus wagneri*, in the Chaco Central in the austral spring of 2003, an opportunity presented itself to investigate two

locations in the extreme north and west of the country. One of these was the Defensores del Chaco National Park and its unusual land formation, Cerro Leon. These are the only places one may find rocks of any type in the entire Chaco region. The observation reported here provides an additional location for *Aotus azarai* in Paraguay, verifying that it is capable of survival and reproduction in a xerophytic habitat.

Defensores del Chaco and Cerro Leon are located from 19°45' to 20°45'S, and 59°30' to 61°10'W in the Department of Alto Paraguay and a small portion of Boquerón. Average annual rainfall is from 500 to 800 mm, and temperature ranges from 0–42°C. The park has a xerophytic fauna and flora, locally referred to as *seca*—literally dried up, arid and barren. At the time of our visit the region had been suffering from an extended period of extreme drought.

While visiting Cerro Leon during late October of 2003, we observed an adult pair of *Aotus azarai* with a very young infant in a candelabra tree cactus (*Cereus* sp.), near a foot trail leading to the summit of the highest ridge. The day was cloudless, with bright sun and an ambient temperature of about 40°C. The adults were alert but not obviously alarmed; the infant was clinging to an adult's neck and upper back. It was movement by the adults that clued us to their presence. There were no vocalizations, and we saw no aggressive behavior, such as the typical rapid and jerky movement of the head and upper body. We observed the pair and their offspring closely for more than twenty minutes, after which time—and perhaps in response to our attempts to take photographs—the trio moved rapidly out of the tree cactus, into the adjacent shrubby vegetation and out of sight. Given the steepness of the hillside and the density of the thorny vegetation, it was not possible to follow them.

The environment in which this family group of *Aotus* was found is a stunted, thorny, dry forest region with no large trees or emergent vegetation, except for occasional Palo Borracho trees (*Chorisia insignis*) in the infrequent and somewhat more humid lowland areas. The “soil” at Cerro Leon is largely broken rocks of various sizes, making human movement and climbing noisy and extremely difficult. The large amount of rock present at this site is uncharacteristic of the Chaco—a flat, plain-like habitat that is without stone or rocks of any type. All stone and rock used there for road building or construction is either imported or brought from the eastern and southern part of the country. *Chaqueños* tell the folk story of the Chaco being a great inland sea whose bottom was devoid of rock or stone. Plant growth is precarious; rainfall is limited and subject to rapid runoff, and there is little natural shade. Overall the vegetation rarely exceeds 3 m, with the exception of the occasional tree cactus (*Cereus* sp.) or Palo Borracho tree.

Given these circumstances, we were unable to determine whether or not these owl monkeys were demonstrating

cathemeral activity. However, given the nature of the habitat, and the obviously restricted food resources, one could logically conclude that such activity was likely in order to ensure survival. A careful survey of the habitat revealed a number of small tree holes, cactus tangles, and other suitable retreats of sufficient size to accommodate an adult *Aotus* or a small family group. Those which we investigated did not contain any owl monkeys or other mammals, nor did they show any signs of recent use, such as food remnants, waste, hair, or rub marks.

This is the furthest north that we have observed *Aotus* in the Chaco, although Handen *et al.* (1994) documented the presence of owl monkeys in a location identified as Area II in the northernmost department, the Chaco. Multiple observations of a pair with and without offspring between 1989 and 1997 have been made in a farming area outside of the Mennonite colony of Neuland in the Chaco Central (D. Meritt Jr., unpublished observation: it is unclear if they were of the same pair, their offspring or unrelated animals). The habitat is considerably different in that location, as are the potential food resources. Neuland is part of the Mennonite colony located near Philadelphia in the Chaco Central. It is typical Chaco, without rocks and with dense thorny shrubs and an abundance of trees. The region is several hundred kilometers south and west of Defensores del Chaco and Cerro Leon, and considerably wetter.

Redford and Eisenberg (1992) report the presence of infant *Aotus* in the Paraguayan Chaco in August, September, and October. This corresponds with the present observation and those mentioned above in Neuland (D. Meritt Jr., unpublished). A number of authors have previously reported the presence of *Aotus* in large tree cacti, including Rathbun and Gache (1980), Stallings (1984, 1985), Stallings and Mittermeier (1983) and Stallings *et al.* (1989).

At the time of year when this observation was made, there were no fruits or seeds present in or on the vegetation and no flowers to be seen. There were a number of small lizards and infrequent small birds, but no large flying insects. A search for *Aotus* droppings to try to determine possible food sources was unsuccessful.

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THE USE OF CAMERA-TRAPS IN A SURVEY OF THE BUFF-HEADED CAPUCHIN MONKEY, *CEBUS XANTHOSTERNOS*

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Introduction

The buff-headed or yellow-breasted capuchin monkey (*Cebus xanthosternos*) is endemic to a restricted region of the Atlantic Forest of eastern Brazil, one of the richest and most threatened ecosystems in the world (SOS Mata Atlântica *et al.*, 1998; Myers *et al.*, 2000). Due mostly to habitat destruction and hunting, this once-abundant species is rapidly declining in number, and is one of the 25 most endangered primates in the world (Mittermeier and Konstant, 2000; Konstant *et al.*, 2002; Mittermeier *et al.*, in prep.). In 2002 we began a survey of the remaining yellow-breasted capuchin monkey populations throughout its original distribution, in order to establish the conservation status of the species and to identify the threats to its survival.

Keywords Aotus, behavior, dispersal, owl monkey, primate, socioendocrinology Subject Categories Biological and Physical Anthropology | Biology. This dissertation is available at ScholarlyCommons: <https://repository.upenn.edu/edissertations/2238>. Leaving home: demographic, endocrine, and behavioral correlates of dispersal in monogamous owl monkeys (*Aotus azarae*) of Argentina. I am also indebted to the many field assistants and other members of the Owl Monkey Project, past and present, who helped collect fecal samples and/or behavioral data utilized by my project, in particular, Ria Boner, Sofia Carrera, Benjamin Finkel, Alba Garcia de la Chica, Dr. Maren Huck, Katherine Morucci, Avery Twitchell-Heyne, Carolina Urbina Malo, and Silvy van Kuijk. Between 2000 and 2009, we captured, recaptured, and radio-collared 146 owl monkeys (*Aotus azarae*) to study the behavior, demography, and genetics of the species. To evaluate the potential long-term costs of the collaring procedures on the population, we compared the demographic composition of groups ($n = 20$) in our core study area with those of undisturbed groups ($n = 20$) in a control area within the same forest. Groups in both areas ranged in size between 2 and 5 individuals. Surprisingly, group size tended to be larger among the study groups owing to more infants and juveniles in those groups. The Owl Monkey Project of Argentina is an international research program that studies Azara's owl monkey (*Aotus azarae*), a socially monogamous primate, to better understand the evolution of pair-bonding, monogamy, and paternal care. The project is using genetic and demographic data from owl monkeys to assess patterns of relatedness and natal dispersal and to evaluate how the competition between solitary floaters and pair-bonded adults influences infant development and survival, pair-bond formation and stability, and mating patterns in a pair-bonded primate society. Photo credit: Emilio White, Azara's night monkey (*Aotus azarae*), also known as the southern night monkey, is a night monkey species from South America. It is found in Argentina, Bolivia, Brazil, Peru and Paraguay. The species is monogamous, with the males providing a large amount of parental care. It is named after Spanish naturalist Félix de Azara. Although primarily nocturnal, some populations of Azara's night monkey are unique among night monkeys in being active both day and night. The species is listed as Least Concern on Dry Season Resources and Their Relationship with Owl Monkey (*Aotus azarae*) Feeding Behavior, Demography, and Life History. Eduardo Fernandez-Duque. 1,2,3 & Variaciones estacionales en la actividad y dieta de *Aotus azarae* y *Alouatta caraya* en Formosa, Argentina. Boletín Primatológico Latinoamericano, 3, 11-30. Google Scholar. Natal dispersal in monogamous owl monkeys (*Aotus azarae*) of the Argentinean Chaco. Behaviour, 146, 583-606. Article Google Scholar. Fernandez-Duque, E., Burke, K., Schoenrock, K., Wolovich, C., & Valeggia, C. (2011). Hormonal monitoring of reproductive status in wild monogamous female owl monkeys (*Aotus azarae*) of the Argentine Chaco. Folia Primatologica, 82, 142-153. Article Google Scholar.