

Discussion

It is believed that neither of the confiscated howlers had been with conspecifics for two-three months prior to introduction. The immediately successful introduction appears to be a result of an age-specific response. The primary author observed similar-aged, yet unfamiliar wild animals interacting, while adults of each group looked on. Eight months old is perhaps an ideal age for introductions. Additionally, these animals were probably juveniles rather than infants upon initial capture judging from their acceptance of a natural diet and the demonstration of appropriate predator responses. As of this writing, additional release candidates have been relocated to the WCCB. Primate surveys in surrounding areas of MBNP are planned.

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ATTEMPTED PREDATION ON A WHITE-FACED SAKI IN THE CENTRAL AMAZON

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During a survey of primates in a 100-ha isolated forest fragment, a crested eagle (*Morphnus guianensis*) attacked a young female white-faced saki (*Pithecia pithecia*). The forest fragment is one of the reserves of the Biological Dynamics of Forest Fragments Project (BDFFP) located about 80 km north of Manaus, Amazonas, Brazil. This area of the central Amazonian basin is upland terra firme moist forest (Bierregard *et al.*, 1992). Six primate species, *Ateles paniscus*, *Alouatta seniculus*, *Cebus apella*, *Chiropotes satanas*, *Pithecia pithecia*, and *Saguinus midas* are in the reserve area, but only groups of *A. seniculus*, *P. pithecia*, and *S. midas* inhabit this 100-ha reserve (pers. obs). Potential avian predators of monkeys observed in the reserve area include *Harpia harpyja*, *M. guianensis*, and *Spizeatus ornatus* (Cohn-Haft *et al.*, 1997).

At 11:07, while conducting a primate survey, about 30 meters from the edge of the reserve, I observed a *P. pithecia* group. I counted three individuals; an adult male, an adult female, and a smaller female. The male was on a large horizontal branch

about 15 m above the ground, looking about while pacing and making a low chuck vocalization. The females were together about 10 m from the male. They appeared agitated and moved closer to the male as I observed. At 11:09 a large raptor flew from the interior of the reserve toward the group. The bird, a crested eagle, swooped down into the tree where the younger female was last seen. There was a loud screaming vocalization by the female and a loud sound of breaking branches. The attack took less than ten seconds. The eagle then flew at midstory toward the edge of the reserve. Immediately after the eagle left, the adult male saki returned to the location of the attack and appeared piloerected. The adult female then moved closer to the male and both left the area silently. I did not observe the eagle with the saki, nor did I find the body of the juvenile female. I did not see the younger female again however on repeated surveys of the group.

This is the first reported observation of an avian attack on *P. pithecia*. Crested eagles prey on a variety of small to medium-sized mammals. At a crested eagle nest in one of the BDFFP reserves, Bierregaard (1984) found the remains of small rodents, marsupials and two kinkajous (*Potos flavus*) whose adult weight is approximately 2.6 kg (Fonseca *et al.*, 1996). Julliot (1994) observed a crested eagle take a six to eight-month old spider monkey in French Guiana. An adult white-faced saki weighs approximately 1.5-2.25 kg (Buchanan *et al.*, 1981). An immature individual, weighing closer to the lower end of the range, could be a likely prey item for a crested eagle.

Buchanan *et al.* (1981) reported that a captive juvenile *P. pithecia* displayed an alarm reaction of freezing without vocalization when exposed to large bird silhouettes and to the overhead movement of large objects. This behavior is in contrast to the agitated behaviors of the sakis observed in this case. The saki group in the reserve was not habituated, so the reaction observed may have been due to the presence of the observer.

Observations of predation and attempted predation on primates are rare. In the neotropics, harpy eagles have been the most common predators observed to take immature and adult howling monkeys (Rettig, 1978; Eason, 1989; Peres, 1990; Sherman, 1991). Peres (1990) reported secondhand but reliable observations of harpy eagle predation on sakis and other primate species in Amazonia. The crested eagle needs to be considered a significant primate predator as well. Information on predation is needed for a more comprehensive examination of the constraints on free-ranging primate sociality. It is also important to note that the isolation of forest fragments, in this case, did not eliminate a large avian predator.

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INFANTICIDE FOLLOWING IMMIGRATION OF A PREGNANT RED HOWLER, *ALOUATTA SENICULUS*

Erwin Palacios

Red howler monkeys are among the several primate species showing male and female transfer (Crockett and Eisenberg, 1987; Glander, 1992; Crockett and Pope, 1993). Nevertheless, this emigration pattern differs from most polygynous primates in that red howler immatures of both sexes emigrate from natal groups (Crockett and Eisenberg, 1987), with females rarely succeeding in entering and breeding in a previously established troop (one that has produced offspring) (Crockett, 1984; Crockett and Pope, 1993). One of the facts preventing female immigration into an established troop is the aggressive attitude adopted by female residents. This is indeed a manifestation of the complex behavior identified