

Thomas M. Donnelly, DVM, Column Editor

What's your diagnosis:

Parenting in Owl Monkeys (*Aotus spp.*)

The South American primate known as the owl monkey, night monkey, or douroucouli (*Aotus spp.*) belongs to one of only two genera that are susceptible to the same malaria species, *Plasmodium falciparum*, that infects humans¹. Consequently, they are an important animal model of malaria and researchers have used them not only to investigate the pathophysiology of malaria, but also in the development of vaccines designed to produce protective antibodies against *P. falciparum* antigens.

About 250 papers have been published on owl monkeys and malaria research in the past 50 years, and nearly 70% of those papers were published in the past 20 years (*i.e.*, since 1984).

Beginning in the 1950s, owl monkeys were captured in the wild and imported into the United States. However, by the mid-1970s, many countries had introduced rigid regulations or outright bans on the export of primates. In response, federal agencies such as the National Institutes of Health (NIH) and the Food and Drug Administration (FDA), anticipating a long-term need for particular species, expanded breeding colonies at the Regional Primate Research Centers and established new ones at other sites². All species of *Aotus* are on Appendix II of the Convention on International Trade in Endangered Species (CITES), but none are listed as endangered or threatened by the US Department of the Interior (USDI). Some owl monkeys are still imported, but most wild-caught animals actually die before leaving the country of origin³. Consequently, the Regional Primate Research Centers and the US Navy have active owl monkey breeding programs for malaria research⁴.



FIGURE 1. A captive breeding pair of *Aotus* monkeys with an infant.

Breeding and use of owl monkeys in malaria research resulted in the recognition of at least two species groups of *Aotus*, based largely on the work of Hershkovitz⁵. One group is characterized by a primitive gray neck and found mainly in Colombia, and the other group is characterized by a red neck and found mainly in Peru, Brazil, Bolivia, and Paraguay. There are currently ten species of *Aotus* recognized in the two groups⁶.

In the wild, owl monkeys are usually found in family groups of two to five individuals, including an adult pair and their young of up to three reproductive seasons. Fig. 1 shows a captive breeding pair of *Aotus* monkeys with an infant. What about this image is unusual for nonhuman primates, but typical of *Aotus* monkeys? What's your diagnosis?

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