stationary on branches, while others foraged for invertebrates. Most were vigilant and scanned the area frequently, giving alarm calls. After several minutes had passed, the capuchins traveled in the opposite direction to that of the tayra, and resumed their typical activity of foraging and traveling. The howlers remained in the area.

Three other incidents involving predator detection and response by capuchins were observed during 280 observation hours. All involved only *Cebus* - no defensive interactions among species were observed.

As reported previously (Boinski, 1988; Chapman, 1986) and supported by the present observation, adult male *C. capucinus* play an active role in group defense. Although the study troop contained two adult males, only one was observed to directly defend the group and approach the predator. A second adult male directed vocalizations and threats from a distance of approximately 3 m. Female white-faced capuchins generally do not become involved in group defense situations (Fedigan, 1993). In the present observation, an adult female carrying an infant was present, vocalizing and directing threats to the tayra. She remained 3-5 m away from the tayra throughout.

This observation illustrates the differing strategies employed by howlers and capuchins when confronting a potential predator. Whereas *Cebus* responses (particularly the adult male's) were active and directed towards the predator, the howlers remained high in emergent trees, vocalizing loudly. Julliot (1994) reported similar behavior by howlers in response to a crested eagle (*Morphnus guianensis*).

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References


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**ON THE OCCURRENCE OF PARASITES IN FREE-RANGING CALLITRICHIDS**

From April 1994 to February 1995, 46 individuals of three species of callitrichids (25 black-chinned emperor tamarins, *Saguinus imperator imperator*, 19 saddleback tamarins, *Saguinus fuscicollis weddelli*, and two pygmy marmosets, *Cebuella pygmaea*) were captured in a so-called "Saguinus trap" (Encarnación et al., 1990). The study site, the Zoobotanical Park of the Federal University of Acre (9°56'30" - 9°57'19"S, 67°52'08" - 67°53'00"W, 155 m above sea level, area 100 ha), Rio Branco, Acre, Brazil, is characterized by the presence of secondary forests in different successional stages (Calegaro-Marques and Bicca-Marques, 1994). Fecal samples were collected whenever available in order to analyze the presence of ova from gastrointestinal parasites using the Willis method (Matos and Matos, 1981).

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![Figure 1. (a) Ancylostoma (320x) and (b) Trichuris (128x) ova found in Saguinus fuscicollis weddelli fecal samples.](image-url)
Fourteen samples were examined and three nematode genera were found: Ancylostoma (Fig. 1a) and Trichostrongylus, Strongyloidea, and Trichuris (Fig. 1b), Trichuridea (Table 1). Three S. f. weddelli infested with Ancylostoma sp. presented yellow cutaneous papules of about 2-4 mm in diameter in the abdominal region, which may be related to a similar infection in cats and dogs (Freitas, 1977). These papules were found in just one S. i. imperator, but no fecal sample was examined for this individual. Another S. i. imperator naturally eliminated an adult male acanthocephalan parasite: Prosthenorchis (Fig. 2), Gigantorhynchidea.

Infection with these parasites can be oral (all genera) or through the skin during lactation and pregnancy in the case of Ancylostoma (Freitas, 1977). The higher infection of Ancylostoma in S. f. weddelli when compared to S. i. imperator may be related to the species' behavior. S. f. weddelli at the study site use mainly the lower strata of the forest, from 0 to 10 m (Azevedo et al., 1994), often going to the ground. On the ground it may be more vulnerable to infectious larvae that actively penetrate through the skin. The occurrence of the parasitic nematodes in this callitrichid community may be related to the relatively intense use of the Park by humans in at least some of the areas. Natural infection of callitrichids by acanthocephalans seems to occur through ingestion of insect prey, the probable intermediate hosts (Hershkovitz, 1977).

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