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COMUNICATION

Foraging over army ants by *Callithrix aurita* (Primates: Callitrichidae): Seasonal occurence?

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Despite their remarkably efficient use of gum resources, marmosets (genus *Callithrix*) also consume invertebrates and small vertebrates (Stevenson and Rylands 1988, Rylands and Faria 1993). Considering the spatially unpredictable distribution of small prey and the high energetic cost of foraging, marmosets should greatly benefit from concentrations of edible animals. For example, Rylands *et al.* (1989) reported groups of *C. humeralifer*, *C. kuhli*, *C. flaviceps* and *C. geoffroyi* taking small prey flushed by army ants *Labidus praedator* and *Eciton burchelli* (Ecitoninae, Formicidae).

A group of four buffy-tufted-ear marmosets (*C. aurita*) was observed following *Labidus* sp. ants during a 12-month (October/1994 to September/1995) feeding ecology study in a 17-ha semideciduous forest fragment in southern Minas Gerais, Brazil (21° 23'S, 46° 15'W). Here, I describe the ant-following foraging behavior and relate its seasonal occurence to periods of decreased prey availability.

Two seasonal periods were defined according to the 1994/1995 rainfall regime: wet season (November/94 to April/95) and dry season (October/94 and May to September/95). Daily activities were recorded with scan sampling method at five-minute intervals (Altmann 1974), totalling 165 and 141 observation hr, respectively, in the wet and dry season. Foraging success indexes (number of predation records/number of foraging records x 100), after Ferrari *et al.* (1996), were calculated for each season. Differences were tested by an ANOVA after transformation of the proportions into archsine of their square root (Fowler and Cohen 1990). Monthly abundance of invertebrate prey was evaluated by netting and pit-fall traps. Five-mm and longer body-sized invertebrates were identified to class or order according to Boror and Delong (1988). Associations between number of captured individuals (total invertebrates and invertebrate prey) and monthly accumulated rainfall were tested by Pearson correlation index.

Marmosets followed *Labidus* sp. on eight of 29 foraging swarms, all in June, July or

August. Each event lasted from 40 to 65 min and ended up suddenly, without shrinking or disappearance of the swarm. Individuals took up positions about 0.5 - 1.0 m above ground and occasionally descended to catch disturbed arthropods. Spiders and unidentified invertebrates were eaten.

Number of invertebrate prey (caterpillars, katydids, homopterans and snails) collected monthly was significantly correlated to rainfall ($r = 0.69$; $p = 0.01$) as were total invertebrates ($r = 0.63$; $p = 0.03$). Temporal scarcity in prey availability resulted in lower foraging success index of the study group during the dry season (13.5%) relative to the wet season (17.5%). This difference was not significant ($F = 0.88$; $p = 0.36$; $n = 18$). Higher frequency of foraging in bromeliads by a group of *C. aurita* during the dry season was observed by Ferrari *et al.* (1996) in a more humid coastal forest. I did not observe marmosets foraging in the quite few existing bromeliads. Foraging over swarms may be an attempt to compensate the reduction in prey availability.

Unlike *Eciton burchelli*, *Labidus praedator* does not forage intensively during the dry season (Willis and Oniki 1992). No *E. burchelli* swarm was observed in the study site and, based on the distribution range of *L. praedator* (see Gotwald 1995), I assume this as the involved species. The absence of ant-following behavior by marmosets during the rainy season is probably due to higher numbers of preferred prey in foliage during the wet months, which may represent a more attractive resource. Associations between army ants and *C. aurita* had not been registered up to date. Yet, the temporal trend found here may be site-specific and further field investigations elsewhere are demanding.

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