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HYBRIDIZATION BETWEEN *CALLITHRIX GEOFFROYI* AND *C. PENICILLATA* IN SOUTHEASTERN MINAS GERAIS, BRAZIL

Callithrix geoffroyi occurs in the south of the state of Bahia, almost the entire state of Espírito Santo, and east of the Serra do Espinhaço in the state of Minas Gerais (Vivo, 1991). Rylands *et al.* (1995), using the Mace-Lande system (see IUCN 1994 for further explanations), recently considered this species threatened in the category "Vulnerable". Another species occurring in Minas Gerais is *Callithrix penicillata*, which is known to hybridize with *C. geoffroyi*. *C. penicillata* has a very wide geographical distribution, occurring in the states of Bahia, Minas Gerais, Goiás, and adjacent areas of Maranhão and São Paulo (De Vivo, 1991). These two species occur in contact in southeastern Minas Gerais, and hybrids were reported at the Peti Development and Environmental Research Reserve (Rylands and Costa, 1988) and the Serra da Piedade (I. B. Santos and C. M. C. Valle, pers. comm.). Here, we report on hybridization between these two species at new localities, with information on group composition, and suggest some possible reasons for this phenomenon.

These observations were made during a faunal survey at the Guilman-Amorim Private Reserve. A hydroelectric dam, under the supervision of Ecodinâmica Ltd., will be established in this area. Belgo Mineira S.A., one of the most important steel companies in Brazil, is the owner of this land, composed of small fragments and areas of gallery forest isolated by an extensive *Eucalyptus* plantation.

During February and April 1996, we conducted a survey in this area using "play back" recordings of marmoset vocalizations. We identified five groups of marmosets along the Córrego Machado, one of the tributaries of the Rio Piracicaba, in the municipality of Antônio Dias (Figure 1). In three of these five groups we observed at least one hybrid (an individual with characteristics of the two species). The pelage characteristics of these individuals are similar to *C. geoffroyi*, although they have a conspicuous white spot on the median forehead, and the rest of the face is grayish-white. Other members of the groups showed pelage characteristics of *C. geoffroyi* individuals following the description of Hershkovitz (1997) and De Vivo (1991).

These groups were found in gallery forests and forest fragments, dense in lianas, characteristic of secondary vegetation. The members of the groups were eating gums of angico (*Anadenanthera peregrina*), arranha-gato (*Acacia paniculata*), ingá (*Inga* sp.), Jacaré (*Piptadenia gonoacantha*) and an unidentified species of Sapindaceae; all abundant at the site.

The original distribution of these species might be limited by the Serra do Espinhaço. Nevertheless, in the south, *C. penicillata* seems to be entering the areas along the Rio Piracicaba and its tributaries, where it meets *C.*

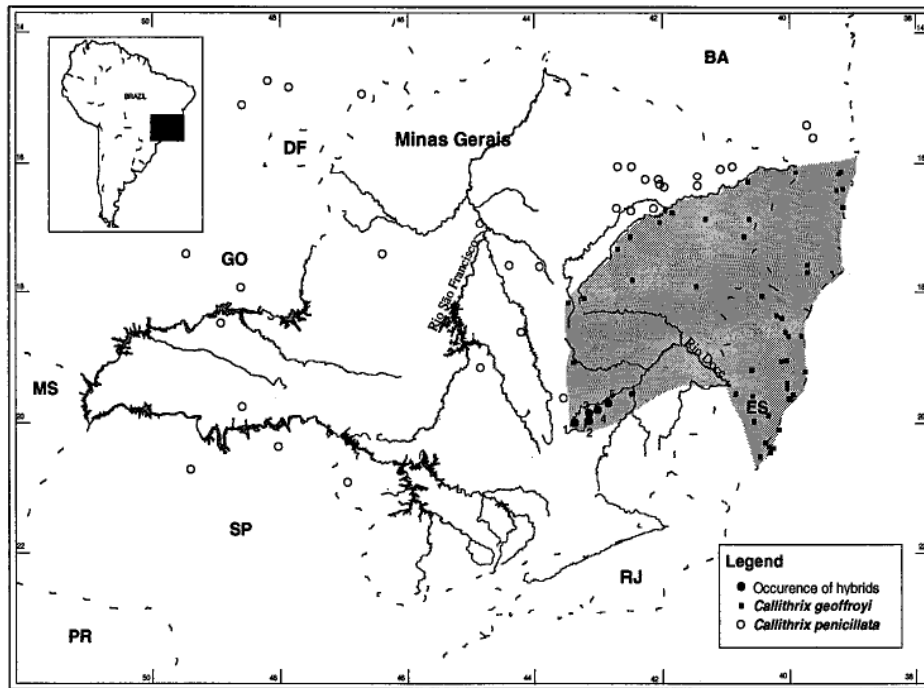


Figure 1. Geographical distribution of *C. geoffroyi* and *C. penicillata* and localities where hybrids were observed (black circles).

geoffroyi, resulting in hybrids. This area was devastated early in this century (see Fonseca, 1985), and the hybridization of these two species is probably a consequence of habitat destruction. According to Coimbra-Filho *et al.* (1993), natural cases of hybridization between *Callithrix* species are sporadic but hybrid zones are to be expected at the limits of the Atlantic forest (domain of *C. geoffroyi*) and the Cerrado (domain of *C. penicillata*) in southeastern Minas Gerais. The Serra da Piedade and the municipality of Santa Bárbara, where hybrids between these two species have been recorded, are also characterized by habitat disturbance (widespread forest cutting). More surveys are required in the contact zones between these species (transition between Atlantic forest and Cerrado) in order to establish their extent, and the possibility that the reason for the occurrence of hybrids lies in the range expansion of *C. penicillata* resulting from forest destruction.

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Marcelo Passamani, Departamento de Ecologia e Recursos Naturais, CEG, Universidade Federal do Espírito Santo, Avenida Fernando Ferrari s/n., 29055-090, Vitória, Espírito Santo, **Ludmilla M. S. Aguiar**, **Ricardo B. Machado**, Departamento de Ecologia, Caixa Postal 04355, Universidade de Brasília, Asa Norte, 70919-970 Brasília, D. F., and **E. Figueiredo**, Ecodinâmica Consultores

Associados. Rua Monte Sião 167, 30240-050 Belo Horizonte, Minas Gerais, Brazil.

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