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## NEW OCCURRENCE RECORDS AND EASTERN EXTENSION TO THE RANGE OF *CALLICEBUS CINERASCENS* (PRIMATES, PITHECIIDAE)

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### Introduction

Spix (1823) first described the ashy black titi monkey (*Callicebus cinerascens*) from a male specimen assumed to have been collected along the Rio Iça near the border with Peru, in the state of Amazonas, Brazil. Van Roosmalen and colleagues (2002) questioned the origin of this specimen, maintaining that as all subsequent records were for the right bank of the Rio Madeira (Rylands, 1982; Hershkovitz, 1990; van Roosmalen *et al.*, 2002), the type locality must be incorrect. During his taxonomic revision of the genus *Callicebus*, Hershkovitz (1990) added three valid localities for *C. cinerascens*, one on the right bank of the Rio Aripuanã, and two on the right bank of the Rio Roosevelt. Rylands (1982) observed the species along the

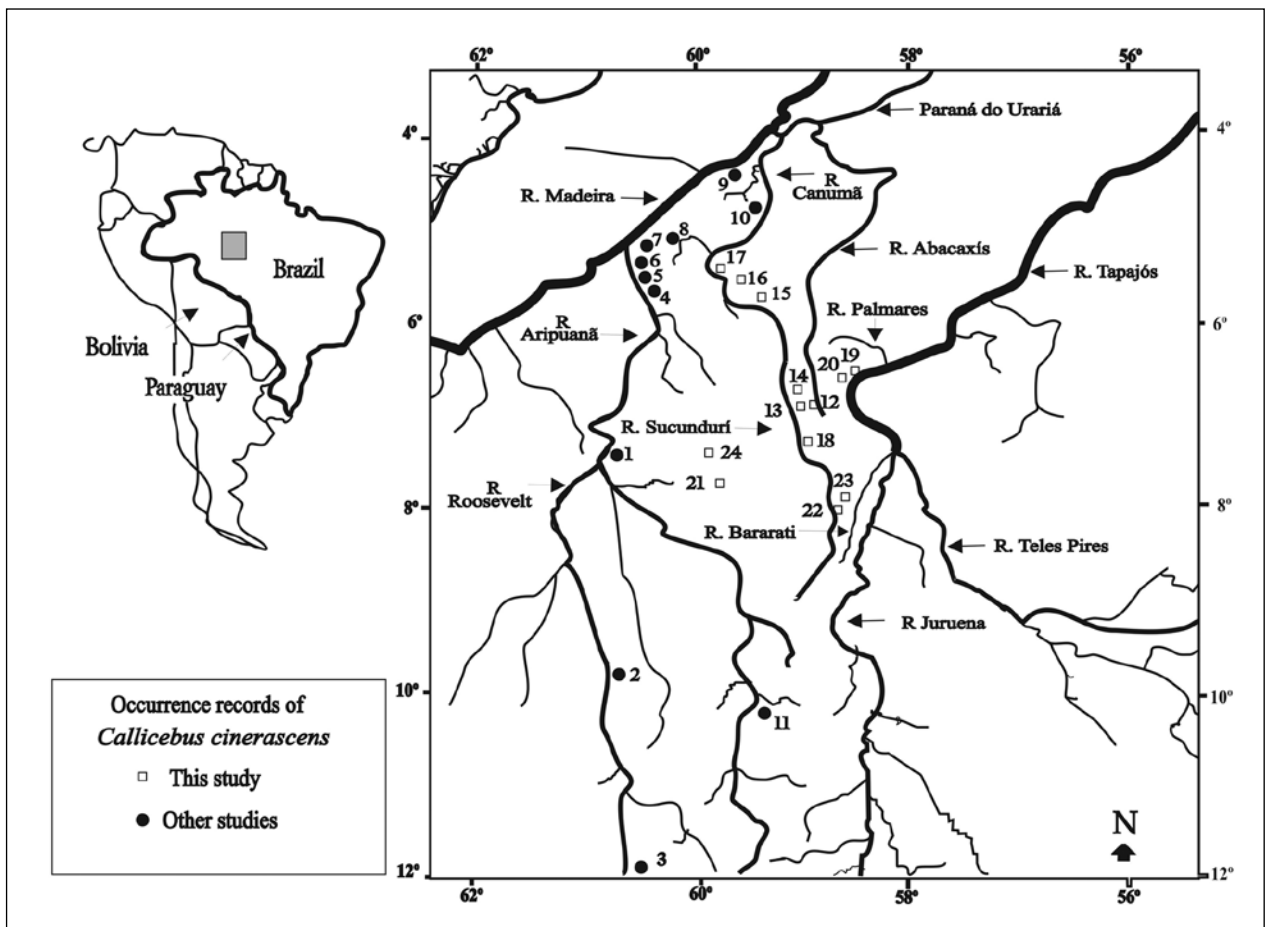
right bank of the Rio Aripuanã, and van Roosmalen *et al.* (2002) included new records from the right banks of the Rios Aripuanã and Madeira and the left banks of the Rios Arara and Canumã.

In their taxonomic revision of the genus *Callicebus*, van Roosmalen *et al.* (2002) predicted that *C. cinerascens* would only extend as far east as the left bank of the Rio Sucundurí. They indicated that possibly *C. hoffmannsi*, or another yet-to-be-described species of titi monkey, would occupy the Rio Canumã interfluvium delineated by its tributaries, the Rios Sucundurí and Abacaxis. Hershkovitz (1963, 1988, 1990; in Silva Jr. and Noronha, 2000) suggested that *C. hoffmannsi* extends south of the Rio Paraná do Urariá and along the right bank of the Rio Canumã. These range predictions have yet to be tested, and the exact range of

this genus in the interfluvium between the Rios Madeira and Tapajós remains unknown (Silva Jr. and Noronha, 2000). The objective of this study is to refine the range map for the ashy black titi monkey, based on the literature and new occurrence records from field surveys.

## Materials and Methods

Occurrence data in the present study are based on a literature review and two field excursions. During the first expedition, between January and May of 2001, we surveyed the interfluvium between the Rios Madeira and Tapajós, specifically the region of the Rios Maués, Abacaxis and Sucundurí. In the second, in June and July of 2006, we surveyed the interfluvium between the Rios Aripuanã and Juruena. This second excursion formed part of the Juruena–Apuí Expedition. During



**Figure 1.** Geographic range of *Callicebus cinerascens*, based on Hershkovitz (1990), Rylands (1982), van Roosmalen *et al.* (2002) and this study: (1) Prainha, right bank of the Rio Aripuanã, Amazonas; (2) São João and (3) Otoho, right bank of the Rio Roosevelt, Mato Grosso; records for the species from the following locations on the right bank of the Rio Aripuanã, Amazonas: (4) Cipotuba (05°48'23"S, 60°12'76"W), east bank of Lago Cipotuba; (5) Prainha (05°45'S, 60°12'W), Igarapé Prainha; (6) São João (05°28'S, 60°22'W), Igarapé Terra Preta; and along the right bank of the Rio Madeira, Amazonas; (7) around the town of Novo Aripuanã (05°07'08"S, 60°22'45"W); (8) left bank of the Rio Arara (05°12'S, 60°04'W), 40 km east of Novo Aripuanã; (9) around the town of Borba (04°22'S, 59°35'W); (10) left bank of the Rio Canumã; (11) Humboldt Pioneer Nucleus (10°10'S, 59°27'W), on the right bank of the Rio Aripuanã, Mato Grosso; right bank of the Rio Sucundurí, Amazonas; (12) BR230 (06°46'S, 59°00'W); (13) Vila de Sucundurí (06°48'S, 59°04'W); (14) 06°42'S, 59°03'W; (15) 05°44'S 59°22'W; (16) 05°30'S, 59°28'W; (17) 05°25'S, 59°41'W; (18) source of Igarapé Surubim (06°53'S, 59°03'W); left bank of the Rio Sucundurí, Amazonas; (19) left bank of the Rio Tapajós (06°34'S, 58°24'W); (20) left bank of the Rio Tapajós (06°34'S, 58°35'W); (21) Vicinal do Coruja (07°38'S, 59°49'W), Floresta Nacional do Jatuarana; (22) Serra do Sucundurí (08°50'S, 59°08'W), Floresta Estadual do Sucundurí; (23) right bank of the Rio Bararati (08°21'S, 58°37'W), Parque Estadual do Sucundurí; and (24) right bank of the Rio Juma (06°42'S, 59°35'W).

these surveys, we identified the ashy black titi monkey using both the diagnostic characters defined by Hershkovitz (1990) and material from the collection at the National Institute of Amazonian Research (INPA 4085).

## Results and Discussion

During both trips we observed *C. cinerascens* repeatedly along the banks of the Rios Sucundurí and Abacaxis, close to the left bank of the Rio Tapajós and the right bank of the Rio Bararati (Fig. 1). All observations were in made in *terra firme*, *campinarana* or secondary forests. Individuals were frequently observed in relatively open areas of young secondary growth, which may indicate a degree of flexibility in habitat use by this species. These new occurrence records extend the eastern limit of *C. cinerascens*' range beyond that proposed by van Roosmalen and colleagues (2002). We now predict that this species' range should extend north to the Rio Paraná do Urariá, east to the left bank of the Rio Abacaxis and the left bank of the upper Rio Tapajós, west as far as the right bank of the Rio Madeira, and south to the corridor formed between the Rios Aripuanã-Roosevelt and Tapajós-Juruena, in the states of Amazonas and Mato Grosso. The most southerly record is Otoho on the right bank of the Rio Roosevelt in Mato Grosso (Fig. 1).

During this study we found no overlap between the range of *C. cinerascens* range and that of any other species of *Callicebus*, suggesting that this species is parapatric with its sister taxa, *C. hoffmannsi*, *C. baptista* and *C. bernhardi*. While interviewing a resident of a community on the left bank of the Rio Tapajós (06°34'S, 58°28'W), near the Rio Palmares in the municipality of Maués, Amazonas State, we discovered that a gray titi monkey with light spots on its throat occurs in the area. It is possible that this is *C. hoffmannsi* (van Roosmalen *et al.*, 2002) and that the Rio Palmares represents the eastern limit for *C. cinerascens* and serves as a point of contact between the two species. In addition to improving the precision of *C. cinerascens*' range, this study also enabled us to determine in which protected areas it occurs. In the state of Amazonas, *C. cinerascens* is present in the Floresta Nacional do Jatuarana (837,100 ha), the Parque Nacional do Juruena (2,002,565 ha), the Floresta Estadual do Sucundurí (492,905 ha), and the Parque Estadual do Sucundurí (808,312 ha). Its range also encompasses the Floresta Estadual de Apuí (185,946 ha), the Reserva de Desenvolvimento Sustentável Bararati (113,606 ha), the Parque Estadual do Guariba (72,296 ha), the Reserva Extrativista do Guariba (150,465 ha), the Floresta Estadual do Aripuanã (336,040 ha), the Reserva de Desenvolvimento Sustentável do Juma (589,611 ha), the Parque dos Campos Amazônicos (873,570 ha), the Floresta Estadual de Manicoré (83,381 ha) and the Reserva de Desenvolvimento Sustentável Aripuanã (224,291 ha). In Mato Grosso, it is expected to occur in the Reserva Extrativista Guariba Roosevelt (57,630 ha), the Estação Ecológica do Rio Roosevelt (27,860 ha), and the Parque Estadual Igarapés do Juruena (227,800 ha).

## Acknowledgements

We thank the Fundação O Boticário de Proteção à Natureza for supporting the fieldwork undertaken in the lower Madeira–Tapajós interfluvium. The Juruena–Apuí Expedition sponsors (World Wildlife Fund Brazil, the Instituto Brasileiro de Meio Ambiente e Recursos Naturais Renováveis and the Secretaria de Estado de Meio Ambiente e Desenvolvimento Sustentável do Amazonas) supported fieldwork in the upper Aripuanã–Juruena interfluvium.

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