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Short Communication

New records of the red-rumped mouse *Juliomys pictipes* (Osgood, 1933) (Rodentia: Sigmodontinae) in coastal Atlantic Forest of Paraná, southern Brazil

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Resumo

Novos registros de *Juliomys pictipes* (Rodentia: Sigmodontinae) na Mata Atlântica costeira do Paraná, sul do Brasil. *Juliomys pictipes* é um pequeno roedor sigmodontíneo endêmico da floresta atlântica. Neste estudo são reportados os primeiros registros para o litoral do Paraná, preenchendo uma lacuna a leste da distribuição da espécie. Destacam-se os registros na face leste da Serra do Mar e em baixas altitudes que confirmam que a cadeia de montanhas não impõe uma barreira na distribuição da espécie.

Palavras-chave: Conservação; Cricetidae; Distribuição; Mata Atlântica; Serra do Mar

Abstract

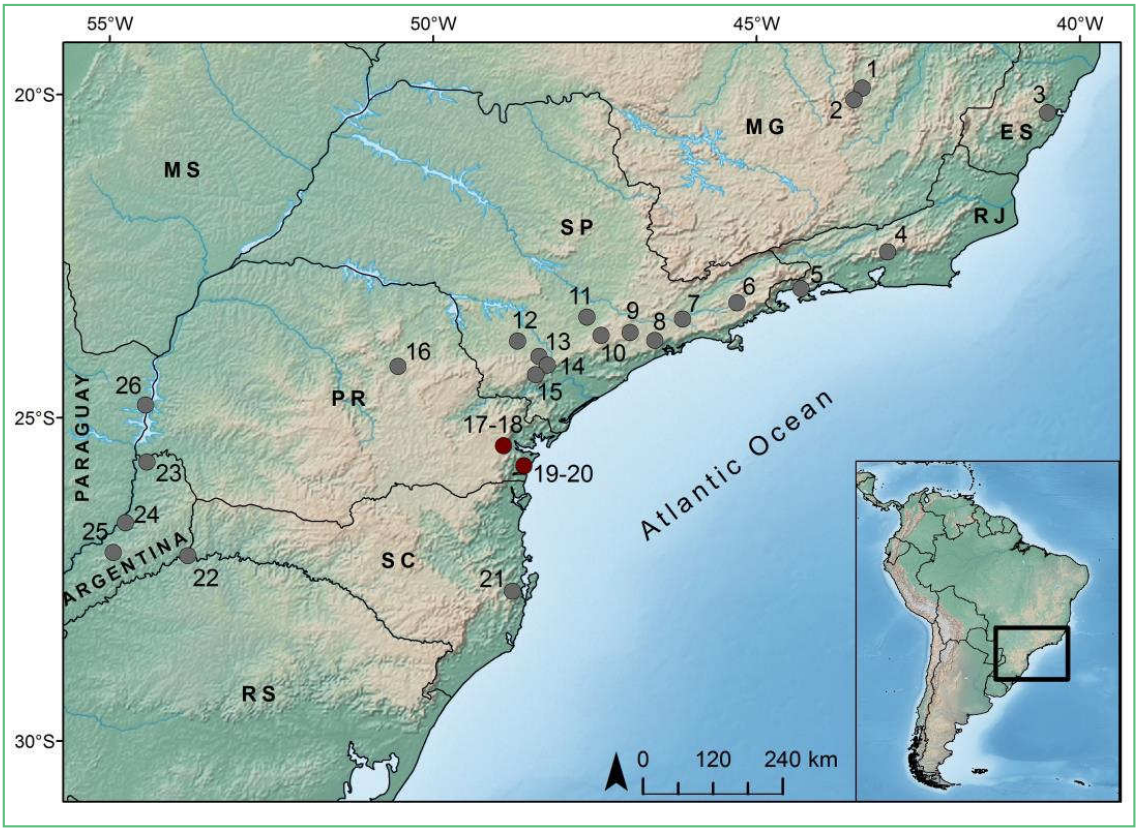
Juliomys pictipes is a Sigmodontinae rodent endemic to the Atlantic Forest. Herein, we report the first records of the species on the coast of the state of Paraná, filling a gap in the species' distribution. Records at low altitudes in the eastern part of the Serra do Mar confirm that the coastal mountains are not a barrier to the species' distribution.

Key words: Atlantic Forest; Conservation; Cricetidae; Distribution; Serra do Mar mountains

The red-rumped mouse *Juliomys pictipes* (Osgood, 1933) is a Sigmodontinae rodent endemic to the Atlantic Forest with occurrence in southeastern and southern Brazil, Paraguay and Argentina (PAVAN; LEITE, 2011). *Juliomys pictipes* is the type species of the genus *Juliomys* González, 2000, which was described as monotypic (GONZÁLEZ, 2000) and currently includes two more described species *J. rimofrons* Oliveira & Bonvicino, 2002 and *J. ossitenuis* Costa, Pavan, Leite & Fagundes 2007. Because of this historical gap in the group taxonomy, allied with the fact that *Juliomys* spp. are morphologically similar to other colored small-sized Atlantic Forest Sigmodontinae (PAVAN; LEITE 2011), *Juliomys* spp. have only recently been described in the literature (OLIVEIRA; BONVICINO, 2002; CHEREM et al., 2004; CHEREM, 2005; COSTA et al., 2007; PARDIÑAS et al., 2008; SANCHA et al., 2009). The species' distribution extends from the states of Espírito Santo and Minas Gerais to the coast of Santa Catarina in Brazil, and to the west to Paraguay and Argentina (PAVAN; LEITE, 2011). Most records have been along the coastal Atlantic Forest in the state of São Paulo. Here, we report the first records of *J. pictipes* on the coast of Paraná, filling a gap of approximately 370 km in the species' distribution along the Serra do Mar mountain range.

Juliomys pictipes individuals were captured using Sherman traps at Marumbi State Park (PEPM), in the municipality of Morretes (25°25'S, 48°55'W; altitude: 380-450 m), and using pitfall and tomahawk traps at St. Hilaire-Lange National Park (PNSHL), in the municipalities of Paranaguá (25°36'S, 48°38'W; altitude: 147 m) and Matinhos (25°44'S, 48°33'W; altitude: 36 m) (Figure 1). Vegetation where specimens were collected is submontane Atlantic rainforest.

FIGURE 1: Map of collecting localities of *Juliomys pictipes* in Brazil, Argentina and Paraguay.



Red circles indicate the new localities reported in this study (17. Piraquara, Morro do Canal; 18. Morretes, Parque Estadual Pico do Marumbi; 19. Paranaguá, Parque Nacional St. Hilaire-Lange; 20. Matinhos, Parque Nacional St. Hilaire-Lange). Localities are detailed in Appendix I.

Specimens prepared as skins and skulls are housed in the Mammal Collection of the Zoology Department of the Federal University of Paraná (DZUP). A specimen was also analyzed and identified as *J. pictipes* in the small mammal collection of the Pontifical Catholic University of Paraná (MZPUC), collected at Piraquara, Morro do Canal (MZPUC 1162).

We report four new localities of occurrence of *J. pictipes* in the state of Paraná (Figures 1 and 2). *Juliomys pictipes* specimens (Table 1; Figures 3 and 4) were distinguished from other species of *Juliomys* by their larger size, pelage coloration, and a more robust braincase, with broad interorbital region and deep zygomatic notch (Costa et al., 2007). Most of the previous records of *J. pictipes* occurred to the western portion of the Serra do Mar mountain range, at altitudes above 500 m. The records in the PEPM and PNSHL were to the eastern portion of the mountains and at lower altitudes. Also, the specimen MZPUC 1162 and the ones from PEPM were collected on opposite sides of the same mountain, which confirms that the Serra do Mar mountain range is not a barrier to the species' occurrence. Records in the PNSHL were at altitudes near sea level even lower than altitudes at collection sites to the central parts of the continent in the state of the Rio Grande do Sul and in Paraguay and Argentina.

Sigmodontinae rodents are the most diverse group of mammals in Brazil (PAGLIA et al., 2012), and field surveys have been important for understanding species' distributions (e.g., PASSAMANI et al., 2011). Field surveys in regions with conserved forests such as the coastal Atlantic Forest of the state of Paraná are of particular interest. Species occurrence records, such as those reported here, can help planning efforts to obtain field information for further taxonomic, ecological and conservation studies.

FIGURE 2: Individual of *Juliomys pictipes* at Marumbi State Park, municipality of Morretes, state of Paraná, southern Brazil. Photo: Ricardo A. S. Cerboncini.

TABLE 1: Specimens of *Juliomys pictipes* collected at Marumbi State Park (PEPM) and St. Hilaire-Lange National Park (PNSHL) in the state of Paraná, southern Brazil, with external measurements.

Specimen	Location	Date	Sex	W	HB	Tail	HF	Ear
DZUP 393	PEPM	11/VI/2011	Female	22	86	112	19	15
DZUP 394	PEPM	10/VI/2011	Male	29	90	99	18	15
DZUP 395	PEPM	25/V/2011	Male	24	90	109	19	15
DZUP 493	PEPM	19/VII/2011	Female	16	80	98	18	13
DZUP 498	PEPM	11/VI/2011	Female	27	90	108	20	18
DZUP 499	PEPM	16/VII/2011	Male	21	84	99	19	14
DZUP 502	PEPM	28/V/2011	Female	14	80	96	18	15
DZUP 592	PNSHL	26/X/2012	*	14	91	102	19	14
DZUP 593	PNSHL	15/XII/2012	*	16	70	99	18	14

W – weight in g; HB – head and body length in mm; Tail – tail length in mm; HF – hind foot length without claw in mm; Ear – ear length in mm. *Information not available.

FIGURE 3: Dorsal (A) and ventral (B) views of specimens DZUP 393, 394, 395 and 592, from left to right, of *Juliomys pictipes* of Atlantic Forest in the state of Paraná, southern Brazil.

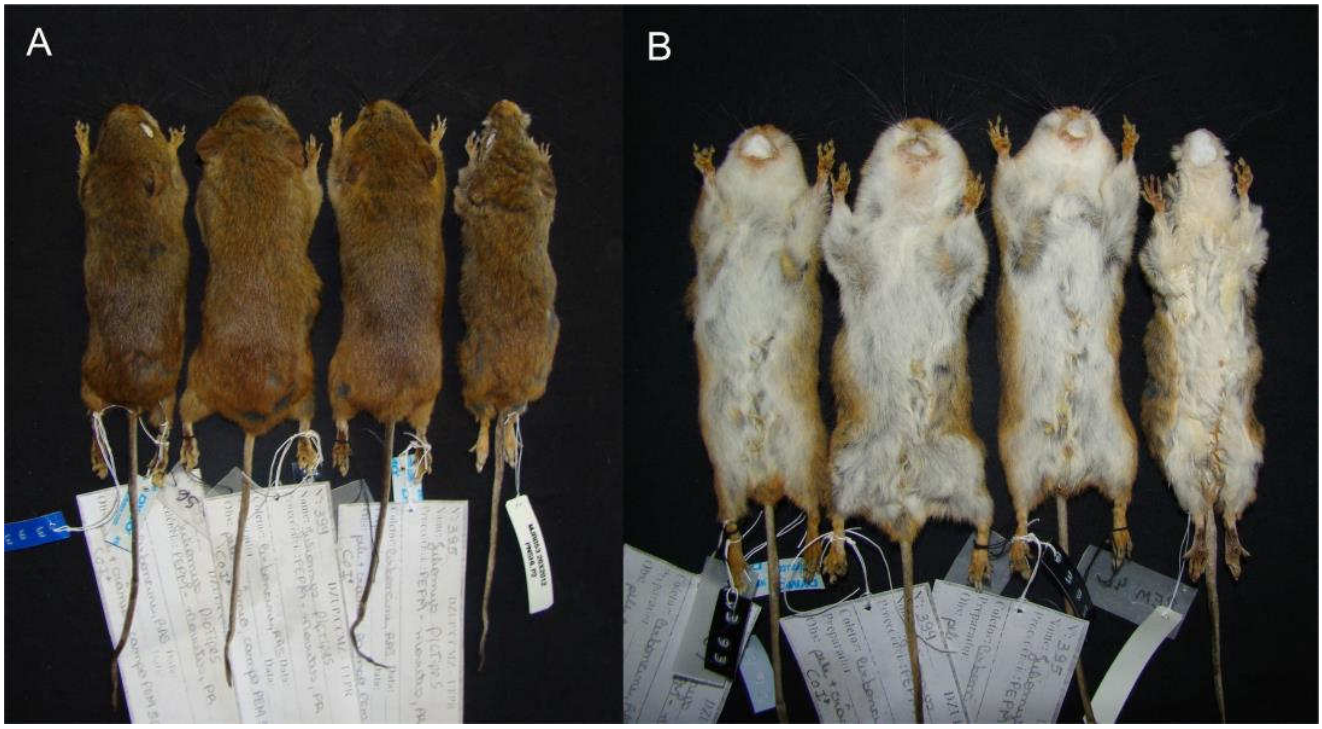
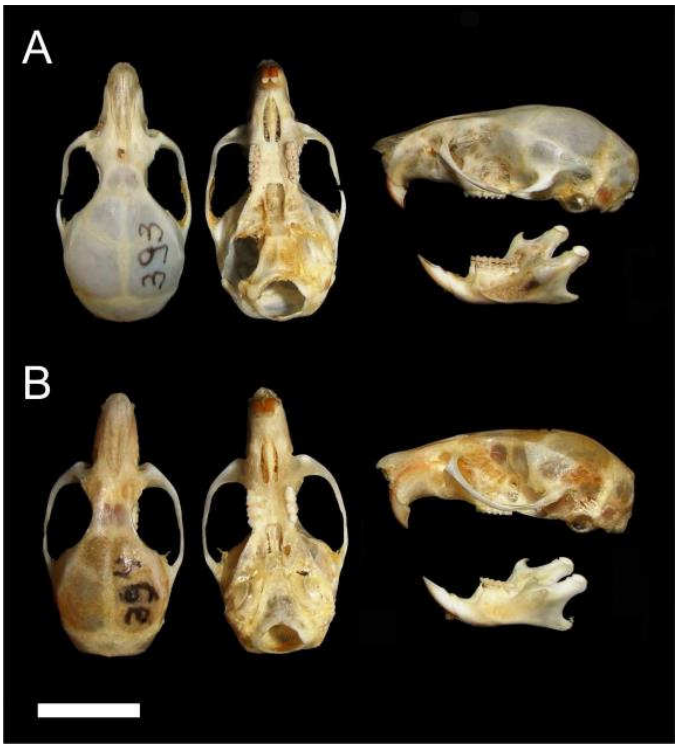


FIGURE 4: Dorsal, ventral and lateral views of skulls and lateral view of mandibles of specimens of *Juliomys pictipes* of the state of Paraná, southern Brazil. (A) DZUP 393, (B) DZUP 394. Scale bar = 10 mm.



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Appendix I

Localities of occurrence of *Juliomys pictipes* shown in map in Figure 1 □data in parentheses are latitude, longitude and altitude. Brazil: Minas Gerais: 1. Santa Bárbara, Unidade Ambiental de Peti (-19.9, -43.37, 630-806); 2. Santa Bárbara, RPPN do Caraça (-20.08, -43.50, 1300). Espírito Santo: 3. Cariacica, Reserva Biológica Duas Bocas (-20.28, -40.51, 550). Rio de Janeiro: 4. Teresópolis, Fazenda Boa Fé (-22.43, -42.98, 902); 5. Angra dos Reis, Mata do Mamede (-23, -44.32, NA). São Paulo: 6. São Luís do Paraitinga (-23.22, -45.31, 900); 7. Sorocaba, Floresta Nacional de Ipanema (-23.44, -47.63, 701); 8. Mogi das Cruzes, Parque Nacional Municipal da Serra do Itapety (-23.47, -46.15, 807-1141); 9. Cotia, Reserva Florestal do Morro Grande (-23.68, -46.96, 800-1000); 10. Piedade (-23.72, -47.41, 800-1000); 11 São Bernardo do Campo, Riacho Grande (-23.80, -46.58, 777); 12. Buri (-23.81, -48.70, 666); 13. Ribeirão Grande, several localities □ see Pavan and Leite (2011) for detailed information (-24.05, -48.37, 800-1000); 14. Capão Bonito, Fazenda Sakamoto (-24.18, -48.24, 800-1000); 15. Capão Bonito, Fazenda Intervales (-24.33, -48.42, 700). Paraná: 16. Telêmaco Borba, Fazenda Monte Alegre (-24.2, -50.55, 885); 17. Piraquara, Morro do Canal (ca. -25.5, -49, NA); 18. Morretes, Parque Estadual Pico do Marumbi (-25.43, -48.92, 380-450); 19. Paranaguá, Parque Nacional de St. Hilaire-Lange, Rio Miranda/Santa Cruz (-25.61, -48.64, 147); 20. Matinhos, Parque Nacional de St. Hilaire-Lange, Salto do Tigre (-25.74, -48.60, 36). Santa Catarina: 21. Santo Amaro da Imperatriz (-24.20, -50.55, 885). Rio Grande do Sul: 22. Derrubadas, Parque Estadual do Turvo (-27.13, -53.80, 100-400). Argentina: Misiones: 23. Iguazú, Parque Nacional Iguazú (-25.68, -54.43, 200); 24. Montecarlo, Puerto Caraguatay (-26.62, -54.76, 192); 25. Cainguas (-27.08, -54.95, 200). Paraguay: 26. Hernandarias, Refugio Biológico Limoy (-24.80, -54.45, 270).