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Megasoma gyas rumbucheri Fischer, 1968 (Coleoptera: Scarabaeidae: Dynastinae): first record from a Conservation Unit in Brazil

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Abstract

Santos WE, Alves ACF, Farias RCAP, Creão-Duarte AJ. 2013. *Megasoma gyas rumbucheri* Fischer, 1968 (Coleoptera: Scarabaeidae: Dynastinae): first record from a Conservation Unit in Brazil. Entomotropica 28(3): 233-235.

A single male of *Megasoma gyas rumbucheri* Fischer, 1968, an endangered subspecies, was collected during a study of insect fauna in a protected area of Caatinga, State of Paraíba, Brazil, being the first record of the subspecies collected in a Conservation Unit and the most recent record of the subspecies in latitudes above the River São Francisco.

Additional key words: Beetle, Caatinga, new report.

Resumo

Santos WE, Alves ACF, Farias RCAP, Creão-Duarte AJ. 2013. *Megasoma gyas rumbucheri* Fischer, 1968 (Coleoptera: Scarabaeidae: Dynastinae): primeiro registro em uma Unidade de Conservação no Brasil. Entomotropica 28(3): 233-235.

Um macho de *Megasoma gyas rumbucheri* Fischer, 1968, uma subespécie ameaçada de extinção, foi coletado durante um estudo da fauna de insetos em uma área protegida de Caatinga, Paraíba, Brasil, sendo o primeiro registro da subespécie coletada em uma Unidade de Conservação e o registro mais recente da subespécie em latitudes acima do rio São Francisco.

Palavras chave adicionais: Besouro, Caatinga, novo registro.

Introduction

Megasoma Kirby, 1825 is a genus of Dynastinae (Coleoptera: Scarabaeidae) with geographical distribution ranging from the southwestern United States to northern Argentina. Sixteen species and six subspecies can be recognized by distinct morphological characters and precise geographic and ecological distributions (Morón 2005, Ratcliffe and Morón 2005). Amongst these, seven are known in Brazil: *Megasoma actaeon* (Linnaeus, 1758), *Megasoma anubis* Chevrolat, 1836, *Megasoma gyas* (Herbst, 1775), *Megasoma gyas porioni* Nagai, 2003, *Megasoma gyas rumbucheri* Fischer, 1968, *Megasoma janus* Felsche, 1906 and *Megasoma janus fujitai* Nagai,

2003 (Morón 2005, Abadie et al. 2008). *M. g. rumbucheri* (Figure 1) differs from other species by the more densely pubescent elytra, narrow and elongated pronotal horn of males, as *M. gyas*, and short and strong frontal horn with a deeply bifurcated apex, as *M. anubis* (Endrödi 1985, Grossi et al. 2008).

Material and Methods

In october 2010 (dry season) and february 2011 (rainy season), an entomological study was carried out at Private Reserve for the Environmental Inheritance of Fazenda Almas (RPPN-Fazenda Almas), São José dos Cordeiros, State of Paraíba, Brazil (lat 07° 28' 19" S, long 36° 53' 40" W). The reserve encompasses an area of 3 505 ha, varying from 600 m to 720 m. The vegetation varies from open to dense arboreal Caatinga, a seasonally dry tropical forest endemic to Brazil, with a strong deciduous characteristic during dry season. The soil is sandy and arid and the topography is irregular, with inselbergs and rocky outcrops (Vasconcellos et al. 2010).

Results and Discussion

During the rainy season, on the night of february 25, 2011, a single male of *M. g. rumbucheri* attracted by the lights of the support house was collected manually. The local meteorological conditions indicated no rainfall, relative humidity of 75.8 % and a temperature of 24.6 ℃. The specimen was identified based on the study of Endrödi (1985) and additional notes and photos of the guide of Abadie et al. (2008). The specimen was incorporated into the Coleção Entomológica do Departamento de Sistemática e Ecologia at Universidade Federal da Paraíba (DSEC/UFPB 22613).

The presence of this subspecies at RPPN-Fazenda Almas represents the first record from a Conservation Unit and the most recent record of the subspecies in latitudes above the River São Francisco (Figure 2). In the States of Ceará,

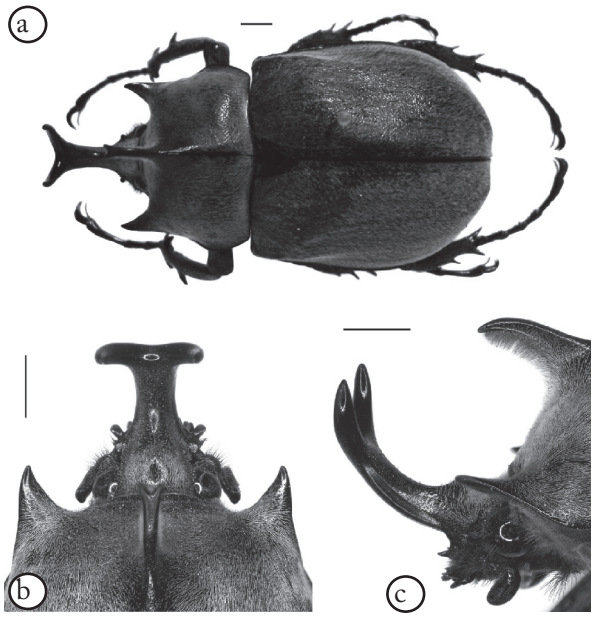

Figure 1. *Megasoma gyas rumbucheri*, male specimen collected at Private Reserve for the Environmental Inheritance of Fazenda Almas, State of Paraíba, Brazil. a: dorsal view, detail of horns; b: dorsal view; c: lateral view. Scales = 0.5 cm.

Figure 2. Distribution map of *Megasoma gyas rumbucheri* and new record from Private Reserve for the Environmental Inheritance of Fazenda Almas, State of Paraíba, Brazil. Modified from Grossi et al. (2008).

Rio Grande do Norte, Paraíba and Pernambuco, *M. g. rumbucheri* had only historical records, the most recent being from 1972 in Petrolina, Pernambuco. The most current occurrence for the subspecies was restricted to North of State of Minas Gerais, Southwest and West of State of Bahia (Grossi et al. 2008).

With this record, the number of locations where *M. g. rumbucheri* is currently present increases to seven. The occurrence of the subspecies in a Conservation Unit significantly increases its chances of conservation. As observed for other species of *Megasoma* recorded in a Conservation Unit of Atlantic Forest (Antunes et al. 2007a, 2007b). *M. g. rumbucheri* is a historically rare and endangered subspecies, endemic to Brazil, due to historical and current fragmentation and reduction of its habitat by agricultural expansion in areas of arboreal Caatinga (Grossi et al. 2008). The immature stages, biology and life cycle of species of *Megasoma* are poorly known, but Dynastinae larvae develop in large decaying tree trunks on the ground (Morón and Ratcliffe 2005). The reduction of this kind of microhabitat due to deforestation is the main threat to these beetles. Thus, the effort for habitat conservation is the main guarantee for the preservation of this subspecies and biodiversity of Caatinga as well.

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