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New records and distribution for the Neotropical ant genus *Ochetomyrmex* Mayr (Hymenoptera: Formicidae)

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Abstract

New records and known distribution from species of the genus *Ochetomyrmex* (Mayr) in the Neotropics are presented, emphasizing the first occurrence of *Ochetomyrmex neopolitus* (Fernández) in the Mato Grosso Pantanal region, a sub-region of Cáceres, Brazil.

Keywords

Biogeography, distribution, Pantanal.

Introduction

Recently reclassified in the Myrmicinae tribe Attini (Ward et al., 2014), the Neotropical ant genus *Ochetomyrmex* Mayr, 1878 (Formicidae, Ward et al., 2014) includes two valid species: *O. semipolitus* Mayr, 1878 and *O. neopolitus* Fernández, 2003 restricted to the Neotropical region. Both species are comparatively small, monomorphic and cryptobiotic, found nesting in the leaf litter of tropical lowland forests east of the Andes (Fernández, 2003). Limited information is available about where they are found, as little is known about *Ochetomyrmex* biology.

This study presents an update to known distribution of *Ochetomyrmex*, adding recent information available from several sources (AntWeb, 2014; Baccaro et al., 2010, 2012; Boscardin et al., 2012; Delabie et al., 2009; Groc et al., 2009, 2013; Miranda et al., 2012, 2013; Santos et al., 2008; Souza et al., 2012; Vittar, 2008; Wild, 2007; Wilkie et al., 2007, 2009). Unpublished records from the Collection of Formicidae Cocoa Research Center (CPDC) and samples collected in Pantanal of Mato Grosso state of Brazil were added.

Ochetomyrmex Mayr, 1887: **New records (CPDC Collection):**

***Ochetomyrmex neopolitus* Fernández, 2003 - BRAZIL:**
Acre, Porto Walter, #12670, #12764, #13202, 08°15'31"S 72°46'37"W, 05.xi-17.iv.1997, J. Caldwell; **Amazonas, Manaus,** #4832, Rs1301, 14.xii.1993, A.B. Casimiro; **Manaus,** #4642, BR 174 Km 72, iii.1990, H.L. Vasconcelos; **Manaus,** #72i, Faz. Porto Alegre BR 174, 20.vi.1996, H.L. Vasconcelos; **Rio Jaú,** #F-40i, 01°57'S 61°49'W, 17.vii.1996, H.L. Vasconcelos & J.M. Vilhena; **Bahia, Arataca,** Mata A47, 15°16'49"S 39°23'31"W, 25.v.1999, J.R.M. dos Santos; **Arataca,** Mata A48, 15°15'54"S 39°16'00.6"W, 23.v.1999, J.R.M. dos Santos; **Boa Nova,** João-Mata, 13.viii.2003, J.R.M. dos Santos & J.C. do Carmo; **Canavieiras,** 15°39'S 38°58' W, 07.xi.1997, J.R.M. dos Santos; **Ibicaraí,** Km 41, 14°53'75"S 39°29'01"W, 21.xi.1998, J.R.M. dos Santos; **Igrapiúna,** Reserva da Michelin, #5704, v-ix.2012, S.L.S. Varjão; **Itambé,** Leôncio-Mata, 14°38'87"S 40°20'23"W, 08.viii.2003, J.R.M. dos Santos; **Itororó,** C área, 14°57'31"S 40°02'33"W, 08.viii.2000, J.R.M. dos Santos; **Pará: Goianésia,** Faz. Rio Capim, v-vi.2003, A.M. Elizabeth;



Marituba, CEPLAC, 01°22'S 48°20'W, 21-22.x.2004, J.R.M. dos Santos; *Oriximiná*, Porto Trombetas, #4552, 01.viii.1992, J. Majer; *Oriximiná*, Porto Trombetas, Platô Bacaba, #5426, 03.viii.2004; J.C. Santos; *Oriximiná*, FLONA de Saracá-Taquera Platô Bacaba, #5542, 09-10.x.2007, J.C. Santos; *Paragominas*, Faz. Rio Capim Empresa Cikel, 03°33'S 48°38'W, vii-viii.2002, A.M. Elizabeth; *Tailândia*, Faz. Santa Marta Empresa Juruá, 30°01'S 49°16'W, 10-28.v.2002, A.M. Elizabeth; *Tailândia*, Faz. Santa Marta, 13.v-08.viii.2003, A.M. Elizabeth; **Rondônia**: *Parque Estadual Guajará Mirim*, #5248B, 17.ii.1998, J.R.M. dos Santos; **ECUADOR**: *Cuyabeno*, #10441, #10427, 12.x-05.xi.1994, J.P. Caldwell; **FRENCH GUIANA**: *Maripasoula*, vi.2000, S. Durou, J. Delabie, A. Dejean & M. Gibernau; *Maripasoula*, vii.2001, A. & A. Dejean; *Petit Saut*, Winkler, 04°59'N 03°08'W, vii.2000, S. Durou & A. Dejean; *Petit Saut*, v.2003, J. Orivel & J. Le Breton; *Petit Saut*, Forêt de Basse-Vie, 04.vii.1999, S. Durou; *Petit Saut*, Forêt de Basse-Vie, vi-vii.2000, S. Durou, J. Delabie, A. Dejean & M. Gibernau; *Petit Saut*, Montagne Plomb, 25.vi.2000, S. Durou, J. Delabie, A. Dejean & M. Gibernau.

***Ochetomyrmex semipolitus* Mayr 1878: BRAZIL:** **Minas Gerais**, *Bom Despacho*, #5301, vi-ix.2000, L.S. Ramos & C.G. Marinho; *Paraopeba*, cerrado, iii.2001, C.R. Ribas; *Santana do Riacho*, 19.ii.2001, S.M. Soares; **FRENCH GUIANA:** *Haut-Itany*, ix.1994, R. Garrouste.

Here we provide the first record of *O. neopolitus* in the Pantanal of Brazilian state of Mato Grosso. During a survey for epigeic ants assemblages using traps (see Bestelmeyer et al., 2000 see Bestelmeyer et al., 2000 and Adis, 2002), at the Baía de Pedra ranch, Cáceres, Mato Grosso (16°28'49"S 58°08'25"W), 195 individuals were collected. Of those, 99 in deciduous seasonal forest, 52 in a relatively closed savanna, 31 in an open savanna, and the remaining in open areas. All specimens are deposited in the Reference Collection of the Laboratório de Ecologia e Taxonomia de Artrópodes (LETA) of the Biosciences Institute of the Federal University of Mato Grosso (UFMT) and the CPDC Collection, under reference number #5574.

The occurrence of *O. neopolitus* in the Pantanal of Mato Grosso is possibly a consequence of Amazonian vegetation in the floristic composition of the study area, as the vegetation here is strongly influenced by adjacent phytogeographic areas, including the Amazon and Chaco biomes (Adámoli, 1982; Silva et al., 2000; Alho & Gonçalves, 2005; Junk et al., 2006). Although other studies were carried out in this biome (e.g. Marques et al., 2010, 2011; Silva et al., 2013, Corrêa et al., 2006), this species has not yet been documented in other regions of the Pantanal.

The genus *Ochetomyrmex* is endemic to South America and it is rarely collected at east of the Andes, between 6° N and 30° S (Fernández, 2003). *O. neopolitus* occurs in Guiana, Suriname, French Guiana, Brazil (Acre, Pará, Amazonas, Mato Grosso, Tocantins, and Bahia), Bolivia, Peru, Ecuador and Colombia. On the other hand, *O. semipolitus* seems to

be more common in the Amazon and Cerrado and is not found in the Atlantic Forest of southeastern Brazil. It is found in Guyana, Suriname, French Guiana and Brazil (Acre, Amazonas, Rondônia, Mato Grosso, Goiás, Minas Gerais, Pará, Rio Grande do Sul, and Roraima), Argentina, Peru, Bolivia, Ecuador and Colombia. The transition between the forest fragment and riparian, and terra firma forests appears as a gradient of occurrence for several ant species, particularly *Odontomachus* spp., *Pachycondyla* spp., *Camponotus rapax*, and *Ochetomyrmex semipolitus*. Finally, the habitat quality of the pristine, terra firma forest was mostly marked by the diversity of the genus *Pheidole*, and the occurrence of other species such as *O. semipolitus* (Delabie et al., 2009).

The distribution of *Ochetomyrmex* in Brazil and in the Neotropics is possibly underestimated in the literature, because their morphology is rather close to *Pheidole*, frequently provoking taxonomical confusion between genera.



Fig 1. Distribution of *Ochetomyrmex neopolitus* and *Ochetomyrmex semipolitus* in the Neotropics, based on information from literature, new records from the collection of Formicidae Cocoa Research Center (CPDC), and samples collected in Pantanal of Mato Grosso.

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