



A catalogue of the ants of Paraguay (Hymenoptera: Formicidae)

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Abstract

The ant communities of the Paraná River drainage in South America have spawned several major invasive species and a number of cosmopolitan tramp species, including the fire ant *Solenopsis invicta* Buren and the Argentine ant *Linepithema humile* (Mayr). Paraguay sits at the center of the Paraná drainage but hosts one of the most poorly-documented ant faunas in the Neotropics, imposing a taxonomic impediment to ant studies in the region. In order to establish a baseline of knowledge about Paraguay's myrmecofauna, I surveyed nineteen entomological collections and the published literature for records of Paraguayan ants. The resulting catalogue lists 541 ant species, 423 of which could be associated with available names. The Chao-2 estimate of species richness, calculated from the incidence of uniques and doubletons, estimates that the total ant species richness for Paraguay is 698 +/- 35, suggesting that the catalogue is about 80% complete and more than 100 species remain to be discovered. The Paraguayan ant fauna is characterized by many typical Neotropical elements but shows low endemism, an elevated diversity of attine ants, and only six non-native species. No new taxa are described here, but 40 taxonomic changes are introduced to clean antiquated trinomials from the fauna. The history of Paraguayan myrmecology is discussed, and a reference list is provided for species-level identifications.

Key words: biodiversity, taxonomy, invasive species, neotropics

Introduction

The landlocked South American country of Paraguay encompasses, in part, the native ranges of several of the most damaging invasive ant species. These species include the fire ant *Solenopsis invicta* Buren (Mescher *et al.* 2003), the little fire ant *Wasmannia auropunctata* (Roger) (Wetterer and Porter 2003), and the Argentine ant *Linepithema humile* (Mayr) (Wild 2004). In spite of the relevance of the region's fauna to the emerging field of invasion biology, the ants of Paraguay are among the most poorly known in the Neotropics (Fernández