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A taxonomic revision of the seed-harvester ant genus *Pogonomyrmex* (Hymenoptera: Formicidae) on Hispaniola

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Abstract

We revise species of seed-harvester ants in the genus *Pogonomyrmex* (subfamily Myrmicinae) that occur on the Caribbean island of Hispaniola. Three species are recognized: *P. aterrimus* Wheeler (new status), *P. saucius* Wheeler and Mann, and *P. schmitti* Forel. *Pogonomyrmex schmitti sublaevigatus* Wheeler (= *schmitti*) and *P. schmitti darlingtoni* Wheeler (= *aterrimus*) are synonymized. We also describe the queen of *P. aterrimus* and *P. saucius*, and provide information on biology, distribution maps, and a key to workers and queens.

Key words: disjunction, Dominican Republic, Greater Antilles, Haiti, myrmicinae, Pogonomyrmecini

Introduction

The seed harvester ant genus *Pogonomyrmex* is a moderate-sized New World group that currently consists of 68 described species that occur as three disjunct faunal groups, one in North America, one in South America, and one on the Caribbean island of Hispaniola (containing Haiti and Dominican Republic) (Bolton 2014); no species are common to any two areas. North American species of *Pogonomyrmex* were the focus of a revision by Cole (1968), which set the stage for numerous studies of ecology, biogeography, territoriality, mating behavior, communication, caste determination, and foraging behavior that have greatly facilitated our understanding of ant biology (Anderson *et al.* 2006; Gadau *et al.* 2003; Gordon & Kulig 1996; Hölldobler 1976a, 1976b; Johnson 2000, 2001, 2002, 2006; Taber 1998). As a result, the taxonomy of North American species is stable with 32 described species (Bolton 2014).

In comparison, the taxonomy and biology are poorly known for *Pogonomyrmex* in Hispaniola and South America. South American species were last revised by Kusnezov (1951), with five species having been described since his revision (Cuezzo & Claver 2009; Fernández & Palacio 1998; Lattke 1991, 2006). Likewise, the *Pogonomyrmex* of Hispaniola have not been reviewed since treatments by Wheeler & Mann (1914) and Wheeler (1936). These authors divided the *Pogonomyrmex* of Hispaniola into two species and three infraspecific taxa: *P. saucius* Wheeler and Mann, *P. schmitti schmitti* Forel, *P. schmitti aterrimus* Wheeler, *P. schmitti darlingtoni* Wheeler, and *P. schmitti sublaevigatus* Wheeler and Mann. These matters have stood until recent trips to Hispaniola by several collectors made available enough new *Pogonomyrmex* specimens to facilitate re-examination of the genus.

Methods

Measurements and indices. Morphological characters were photographed using a Spot Insight QE camera attached to a Leica MZ 125 microscope. Images were then projected onto a computer monitor, and characters were measured using ImageJ (available at <http://rsb.info.nih.gov/nih-image/>). Measurements were calibrated using