



A taxonomic revision of the Neotropical myrmicine ant genus *Lachnomyrmex* Wheeler (Hymenoptera: Formicidae)

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Abstract

The Neotropical ant genus *Lachnomyrmex* Wheeler, 1910 is revised for the first time. A revised generic description is provided for workers and gynes; males remain unknown. Morphological patterns combined with geographical data led to the recognition of 16 species, of which 10 are here described as new: *L. amazonicus* sp. n., *L. fernandesi* sp. n., *L. grandis* Fernández & Baena, *L. haskinsi* Smith, *L. lattkei* sp. n., *L. longinodus* Fernández & Baena, *L. longinoi* sp. n., *L. mackayi* sp. n., *L. nordestinus* sp. n., *L. pilosus* Weber, *L. laticeps* sp. n., *L. platynodus* sp. n., *L. plaumanni* Borgmeier, *L. regularis* sp. n., *L. scrobiculatus* Wheeler, and *L. victori* sp. n. The gynes of *L. grandis*, *L. haskinsi*, and *L. pilosus* are described for the first time. Illustrated identification keys for workers, distribution maps, and high resolution illustrations are supplied for all species. Some *Lachnomyrmex* species are relatively common in the leaf-litter of submontane wet forests in Central and South America; others remain known by very few individuals. The relatively small and apparently monogynic *Lachnomyrmex* colonies inhabit small nests in the ground, among rotten leaves and inside fallen logs. Workers generally forage alone on the ground or within the leaf litter, but have been recorded also on tree trunks, and apparently do not recruit nestmates.

Key words: *Lordomyrma* genus-group, Stenammini, Myrmicinae, taxonomy, Neotropics

Introduction

The exclusively Neotropical myrmicine genus *Lachnomyrmex* Wheeler is a group of relatively small, monomorphic ants. The genus is restricted to the mainland (and Trinidad) from southern Mexico to northern Argentina. The taxonomic history of *Lachnomyrmex* is relatively short. The genus was described by Wheeler (1910) to accommodate a single species, *L. scrobiculatus*, from Guatemala. Emery (1914) placed *Lachnomyrmex* in the Leptothoracini and the genus was later transferred to Myrmicini by Kusnezov (1964), while Hölldobler & Wilson (1990) transferred it to Pheidolini. Finally, Bolton (1994) reestablished the Stenammini (earlier considered as a subtribe of Myrmicini) where he placed *Lachnomyrmex*, and he followed the same arrangement in subsequent classifications of Formicidae (Bolton 2003; Bolton *et al.* 2006). The last contribution on *Lachnomyrmex* taxonomy was made by Fernández and Baena (1997), who described two species and provided an identification key for the known species. Six available names have accumulated in the taxonomic literature hitherto. However, several species awaited formal description in museum collections, as expected for such a widespread Neotropical ant genus which has never been taxonomically reviewed.

Lachnomyrmex is one of the Neotropical representatives of an informal group of genera within Stenammini, along with the apparently closely related Indo-Australian *Lordomyrma* Emery and the African *Cyphoidris* Weber. This grouping of genera was first suggested by Bolton (1981) and is recognizable by the raised bicarinate midclypeus; distinct antennal scrobes and clubs; and integument variably rugose.

Lachnomyrmex are most often encountered in the leaf litter of submontane wet forests. Despite our poor knowledge of the biology of the cryptobiotic *Lachnomyrmex* species, field observations allied to information recorded in museum specimen labels provide a first glimpse of the natural history of the genus. Nests are found in the ground, among rotten leaves, and inside fallen logs. Workers generally forage alone on the ground or in the low vegetation; apparently they do not recruit nestmates or form pheromone trails. The recent increase in sampling effort of leaf litter ants in Neotropical wet forests has revealed new and interesting records of *Lachnomyrmex*, including several new species and extending considerably the ranges of the previously known ones. The present paper attempts a first synthesis of the taxonomy, geographical distribution, and natural history of this inconspicuous, but nonetheless fairly frequent ant group.