



## The ant genus *Stenamma* Westwood (Hymenoptera: Formicidae) redefined, with a description of a new genus *Propodilobus*

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### Abstract

The myrmicine ant genus *Stenamma* Westwood is redefined and a new diagnosis of the worker caste is presented. Justified by both morphology and molecular data, two species are removed from *Stenamma* and transferred to the genus *Lordomyrma* Emery: *L. bhutanensis* (Baroni Urbani) **comb. n.** and *L. sinensis* (Ma, Xu, Makio & DuBois) **comb. n.** Based on compelling differences in morphology, a third species originally described in *Stenamma* is transferred to the genus *Propodilobus* **gen. n.**: *P. pingorum* (DuBois) **comb. n.** Molecular results also indicate that *Stenamma*, as newly defined here, is a monophyletic genus that forms a clade with *Aphaenogaster* Mayr and *Messor* Forel. Additional notes on the diversity and distributions of *Stenamma*, *Lordomyrma*, and *Propodilobus* are provided.

**Key words:** ant taxonomy, molecular phylogenetics, Myrmicinae, *Stenamma*, *Lordomyrma*, *Propodilobus*

### Introduction

*Stenamma* Westwood (1839) comprises an unfamiliar genus of cryptic, cold-adapted myrmicine ants that occur throughout most of the northern hemisphere. Although rarely encountered by the casual observer, *Stenamma* is frequently collected in extracts of sifted leaf litter. Many species are represented by only a few samples and not much is known about their natural history. Despite this paucity of information, taxonomists have described over forty species and produced several significant regional revisions: Smith (1957) and Snelling (1973) revised the species of the Nearctic region; Smith (1962) reviewed the species known from the Neotropics; Arnol'di (1975) revised the species of the former USSR; and DuBois (1998) revised the species of the Palearctic and Oriental regions. DuBois (1998) also included the most thorough diagnosis of the genus to date. Each treatment has contributed greatly to a regional understanding of the genus, yet a more comprehensive, global survey is lacking.

One of the greatest challenges to adequately diagnosing *Stenamma* has been insufficient knowledge about the Neotropical fauna. New survey efforts and a greater appreciation for leaf litter sampling have increased the number of *Stenamma* specimens from this region substantially, and it is now apparent that the genus has undergone an extensive radiation in Mesoamerica, rivaling the Holarctic in diversity of species, morphology, and behavior (pers. obs.). A thorough, species-level revision of the Neotropical taxa is currently in progress. To organize this revision around natural groupings, I am constructing a broad-scale molecular phylogeny of the genus. This effort is intended to clarify the definition of the genus and to elucidate how species from different biogeographic regions are related to one another. Here I present initial findings from this work.

*Stenamma* specimens from most of the currently recognized species groups were reviewed, including all of the described and many undescribed Neotropical species. What results from this analysis is a new diagnosis of the *Stenamma* worker caste along with the removal of several species from the genus. I transfer *Stenamma bhutanense* Baroni Urbani and *S. sinensis* Ma, Xu, Makio & DuBois to the genus *Lordomyrma* Emery and move *S. pingorum* DuBois to the newly described genus *Propodilobus*. Justification for these transfers based