Zootaxa 3699 (1): 001–061
www.mapress.com/zootaxa/

Monograph

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

http://dx.doi.org/10.11646/zootaxa.3699.1.1
http://zoobank.org/urn:lsid:zoobank.org:pub:65A19D30-8E7A-4073-B92B-9709F8384752

ZOOTAXA

3699

A revision of the ant genus *Octostruma* Forel 1912 (Hymenoptera, Formicidae)

JOHN T. LONGINO
Department of Biology, University of Utah, Salt Lake City, Utah, 84112, USA. E-mail: jacklongino@gmail.com

Magnolia Press
Auckland, New Zealand

Accepted by C. Rasmussen: 2 Jul. 2013; published: 9 Aug. 2013

JOHN T. LONGINO
A revision of the ant genus *Octostruma* Forel 1912 (Hymenoptera, Formicidae)
(*Zootaxa* 3699)

61 pp.; 30 cm.

9 Aug. 2013

ISBN 978-1-77557-242-8 (paperback)

ISBN 978-1-77557-243-5 (Online edition)

FIRST PUBLISHED IN 2013 BY

Magnolia Press

P.O. Box 41-383

Auckland 1346

New Zealand

e-mail: zootaxa@mapress.com

http://www.mapress.com/zootaxa/

ISSN 1175-5326 (Print edition)

ISSN 1175-5334 (Online edition)

Table of contents

Abstract

The ant genus *Octostruma* is restricted to the Neotropics, where it is an inhabitant of forest leaf litter and soil. The genus is reviewed, with an emphasis on the fauna of the MesoAmerican corridor. A total of 34 species are recognized, of which 19 are described as new. A key to species is provided, and the following new species are described: *O. ascrobicula* Longino, **sp. nov.**, *O. ascrobis* Longino, **sp. nov.**, *O. convallis* Longino, **sp. nov.**, *O. convallisur* Longino, **sp. nov.**, *O. cyrtinotum* Longino, **sp. nov.**, *O. excertirugis* Longino, **sp. nov.**, *O. gymnogon* Longino, **sp. nov.**, *O. gymnosoma* Longino, **sp. nov.**, *O. leptoceps* Longino, **sp. nov.**, *O. limbifrons* Longino, **sp. nov.**, *O. megabalzani* Longino, **sp. nov.**, *O. montanis* Longino, **sp. nov.**, *O. obtusidens* Longino, **sp. nov.**, *O. pexidorsum* Longino, **sp. nov.**, *O. planities* Longino, **sp. nov.**, *O. schusteri* Longino, **sp. nov.**, *O. triquetrilabrum* Longino, **sp. nov.**, *O. triangulabrum* Longino, **sp. nov.**, and *O. trithrix* Longino, **sp. nov.** *Octostruma lutzi* (Wheeler) and *O. amrishi* (Makhan) are removed from synonymy with *O. balzani*

(Emery). Queens are newly associated with workers for *O. amrishi* (Makhan), *O. rugiferoides* Brown & Kempf, and *O. wheeleri* (Mann).

Key words: biodiversity, taxonomy, Myrmicinae, Basicerotini, identification

Introduction

In the tropics the soil, leaf litter, and rotting wood on the forest floor are home to a diverse community of small ants. Although poorly known until recently because of their small size and cryptic ways, these ants are relatively easily sampled with litter sifting and extraction techniques. As quantitative sampling of litter ant communities enters the repertoire of ecologists and conservation biologists (e.g., Colwell *et al.*, 2008; Longino & Colwell, 2011), updating the taxonomy of litter ants is crucial.

Small predaceous ants in the tribes Dacetini and Basicerotini are often abundant and diverse components of tropical litter ant communities. Brown and Kempf (1960) provided a species-level revision of the tribe Basicerotini, but at that time very few specimens were available for study. Recent inventories of litter arthropods in Central America have yielded thousands of separate collections of basicerotines and greatly clarified species boundaries. Colombia and other parts of South America undoubtedly have a much larger basicerotine fauna that remains to be uncovered, and more intensive sampling of the South American litter fauna is sorely needed.

This report revises the strictly New World genus *Octostruma*. Companion works have reviewed New World *Rhopalothrix* (Longino and Boudinot, 2013) and *Eurhopalothrix* (Longino, 2013). Palacio (1997) reviewed the *Octostruma* of Colombia, recording six species for the country, but no comprehensive species-level revision has been carried out since Brown and Kempf (1960). *Octostruma* as construed here is a heterogeneous assemblage, held together solely by the 8-segmented antenna. Baroni Urbani and de Andrade (2007) proposed a synonymization of the tribe Basicerotini with the Dacetini and that all basicerotine genera, including the genus *Octostruma*, be placed in the single genus *Basiceros* Schulz, 1906. There is currently variable acceptance of Baroni Urbani and de Andrade's reclassification. The main purpose of this paper is to describe new species from Central America, not to redefine genus boundaries, and I follow the classification of Brown and Kempf (1960) and Bolton (2003).

Biology

Brown and Kempf (1960) summarized the biology of basicerotines as follows:

> The basicerotines all come from tropical or subtropical areas, and predominantly from mesic habitats, particularly rain forest, where they live primarily in the upper layers of the soil and in the soil cover, including large and small pieces of rotten wood. They are fairly common in soil cover berlesates. Nests have been found in snail shells, and in the peaty masses gathered about epiphytic ferns above the ground level. So far as is known, colonies are small, consisting of one or more dealate—or rarely ergatoid—females, and a few workers. Judging from the structure of the workers and females, one would suppose that they were predaceous on small arthropods...

Besides this summary, the behavior of three basicerotine species has been studied. Wilson (1956) observed a small captive colony of *Eurhopalothrix biroi* (Szabó, 1910), a New Guinea species. Workers moved slowly and captured a variety of small, soft-bodied prey, including spiders, symphylans, entomobryid Collembola, campodeids, and hemipteran nymphs. Wilson and Brown (1984) observed a captive colony of *Eurhopalothrix heliscata* Wilson and Brown, a species from Singapore. The colony contained over 400 workers, multiple alate and dealate queens, several adult males, and brood. Foraging workers acted "rather like miniature ferrets," readily wedging themselves into small crevices. They foraged solitarily, attacking a variety of prey but mostly termites. They used their sharply-toothed mandibles to abruptly snap onto appendages of prey, maintaining purchase and slowly reaching around with the gaster to sting the prey. The strongly sclerotized labrum was also employed to press against the clamped appendage. The behavioral repertoire was limited. There did not appear to be