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A review of the Central American and Caribbean species of the ant genus *Eurhopalothrix* Brown and Kempf, 1961 (Hymenoptera, Formicidae), with a key to New World species

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Abstract

The ant genus *Eurhopalothrix* occurs throughout the Neotropics and Australasian tropics, where it is an inhabitant of forest leaf litter and soil. The New World species are reviewed, with an emphasis on the fauna of the MesoAmerican corridor and the Caribbean. Previously unappreciated characters of mandibular dentition and labrum shape vary dramatically among species and species groups. A total of 28 New World species are recognized, of which 14 are described as new. A key to workers of all New World species is provided. *Eurhopalothrix procera* is reported for the first time in the New World. The following new species are described: *E. cimú* Longino, **sp. nov.**, *E. circumcapillum* Longino, **sp. nov.**, *E. guadeloupensis* Longino, **sp. nov.**, *E. hunhau* Longino, **sp. nov.**, *E. mabuya* Longino, **sp. nov.**, *E. machaquila* Longino, **sp. nov.**, *E. megalops* Longino, **sp. nov.**, *E. ortizae* Longino, **sp. nov.**, *E. oscillum* Longino, **sp. nov.**, *E. semicapillum* Longino, **sp. nov.**, *E. sepultura* Longino, **sp. nov.**, *E. vulcan* Longino, **sp. nov.**, *E. xibalba* Longino, **sp. nov.**, and *E. zipacna* Longino, **sp. nov.** *Eurhopalothrix schmidti* (Menozzi) is removed from synonymy with *E. gravis* (Mann).

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

Introduction

This contribution further develops knowledge of the Basicerotini of the New World, with emphasis on the fauna of the Central American corridor and the Caribbean. Previous work focused on *Rhopalothrix* (Longino and Boudinot, 2013) and *Octostruma* (Longino, in press). As previously, the purpose is to establish a workable species-level taxonomy for the northern Neotropics. The group is ripe for phylogenetic analysis and reconsideration of generic boundaries, but no phylogenetic hypotheses are proposed here. Recognizing the artificiality of current genus boundaries, Baroni Urbani and de Andrade (2007) proposed synonymy of all basicerotine genera in the single genus *Basiceros*. Ultimately it will be most useful to reserve the genus rank to recognize multiple clades within the Basicerotini. In the interests of long-term nomenclatural stability, I retain the earlier classification pending the development of a well-supported phylogeny.

Eurhopalothrix are characterized as basicerotines with 7-segmented antennae and triangular mandibles (Brown and Kempf, 1960; Bolton, 2003). They occur disjunctly in the Indo-Australian tropics and the Neotropics. Species-level diversification appears to be similar in the two regions, with relatively uniform habitus and parallel variation in the distribution and abundance of specialized setae (Taylor, 1990). Following Brown and Kempf's erection of the genus, Kempf (1962, 1967, 1968), Snelling (1968), and Ketterl *et al.* (2004) described additional Neotropical species, and Ketterl *et al.* provided a new key to Neotropical species. Indo-Australian species have been treated by Taylor (1968, 1970, 1990) and Mezger and Pfeiffer (2010).

Eurhopalothrix specimens are encountered almost exclusively in samples from mass extraction techniques that recover small arthropods in sifted litter, rotten wood, and soil. Densities, at least in the northern Neotropics, are usually low, with workers occurring in < 10% of quantitative samples of 1 m² litter plots, but occasionally may reach densities as high as 40% of samples. Live colonies of Old World *Eurhopalothrix* were observed by Wilson (1956) and Wilson and Brown (1984), and a Costa Rican colony of *Basieros manni* was observed by Wilson and Hölldobler (1986) (reviewed in Longino, in press). All basicerotines, including *Eurhopalothrix*, are thought to be predators in tropical leaf litter, relying on stealth or sit-and-wait techniques. Sampled specimens are often coated with a thin layer of clay, especially on the face, which is thought to function as camouflage, enhancing crypsis (Hölldobler & Wilson, 1986). Highly specialized spatulate setae may be instrumental in acquisition and adherence of the clay layer (Hölldobler & Wilson, 1986).

The current work recognizes multiple cryptic species, mostly in the mountain ranges of both core Central America (Isthmus of Tehuantepec to Nicaraguan lowlands) and Costa Rica. Full descriptions and redescriptions are given for species from Central America and the Caribbean (except for *E. aphaerogonia*, for which no material was examined, and the potential adventive *E. procera*). No new species from South America are described. Previously described South American species are covered in the key, but they are covered in less detail in the species accounts. It is expected that many more South American species will be discovered when similarly extensive sampling is carried out, especially in the Andes.