Zootaxa 2280: 1–26 (2009)
www.mapress.com/zootaxa/

Article

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

Revision of the Neotropical termite genus *Orthognathotermes* Holmgren (Isoptera: Termitidae: Termitinae)

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Abstract

This is a taxonomic revision of the Neotropical genus *Orthognathotermes* Holmgren, 1910 (Termitidae, Termitinae), previously with nine species: *O. aduncus*, *O. brevipilosus*, *O. gibberorum*, *O. heberi*, *O. humilis*, *O. insignis*, *O. macrocephalus*, *O. orthognathus* and *O. wheeleri*. We redescribe these species and describe six new species: *O. longilamina* **sp. nov.**, *O. mirim* **sp. nov.**, *O. okeyma* **sp. nov.**, *O. pilosus* **sp. nov.**, *O. tubesauassu* **sp. nov.**, and *O. uncimandibularis* **sp. nov.**, based on soldiers and, when possible, imago castes along with the first description of imagos of *O. wheeleri* and *O. heberi*. We present a key for soldier identification and distribution maps for all species.

Key words: Isoptera, Termitidae, Termitinae, *Orthognathotermes*, taxonomy, neotropical region

Introduction

The genus *Orthognathotermes* was erected by Holmgren (1910), including only *O. macrocephalus* (Holmgren, 1906), which was previously described in *Mirotermes*. A description of the genus was published two years later by the same author (Holmgren, 1912), including new illustrations of soldier and worker mandibles. *Termes* (*Eutermes*) *orthognathus* (Silvestri, 1903) was also transferred to *Orthognathotermes.* The history of all names can be followed under the synonymic list below each species.

The phylogenetic position of *Orthognathotermes* is uncertain. *Orthognathotermes* had never been included in any phylogenetic analysis before Inward *et al.* (2007), where it appears closely related to two Oriental genera (*Prohamitermes* and *Globitermes*). In fact, the mandibles of *Orthognathotermes* soldiers have little similarity with the other snapping mandible termites, the rod-like "*Termes*-group" and the strong asymmetrical "C*apritermes*-group", or with any other Neotropical genus.

Even analysis of the gut characters does not contribute to the clarification of this question. The P3 without cuticular differentiations, the shape of mesenteric tongue, and the Malpighian tubules attachment in two pairs with a united base are probably plesiomorphies. These are present in some nonrelated Termitidae genera, although the combination of all these features do not match exactly with any of the groups proposed by Noirot (2001), or any similar genus in Inward *et al.* (2007). The P2 armature (asymmetrical cushions with spines) resembles many other species of Termitinae, but the bulbous finger-like projections (see below) are unique to this genus. It is possibly present in *Dentispicotermes*, (see Mathews, 1977, plate 27), but this needs to be confirmed, as his figure is not clear enough.

Here w*e* describe and illustrate six new species of *Orthognathotermes*, along with the imagos of *O. wheeleri* and *O. heberi*, for the first time. We present an illustrated key based on the soldier caste and distribution maps of all species.

Accepted by R. Constantino: 10 Oct. 2009; published: 3 Nov. 2009