

THE TERMITES OF ZAMBIA

By Mike Bingham, January 2018

Odontotermes – the Genus

Family: Termitidae, Subfamily: Macrotermitinae (the Fungus Growing termites)

The genus *Odontotermes* was erected by Nils Holmgren in 1910, with *O. vulgaris* as the generitype. The species was first described by the same author under the name *Termes vulgaris* in 1898, with the type specimen from Natal.

The Macrotermitinae occur throughout mainland sub-Saharan Africa and in tropical and sub-tropical Asia, as far as southern China. *Odontotermes* is by far the largest genus of the fungus-growers. How many species there are can only be estimated as many are yet to be described, while others might have been described and named more than once. Until fuller descriptions are available, including of site preferences, nest structure, aspects of biochemistry, times of emergence of alates, and the DNA fingerprints, little progress in the taxonomy of the genus can be expected.



LEFT: The soldier of *Odontotermes badius*.

Odontotermes in Sub-Saharan Africa

According to the Smithsonian's catalogue of termites of the world (Snyder, 1949) 77 species of *Odontotermes* have been described and named from Sub-Saharan Africa, with a similar number from southern Asia. In spite of (or perhaps because of) this considerable volume of taxonomic work, identification to species in this genus remains notoriously difficult.

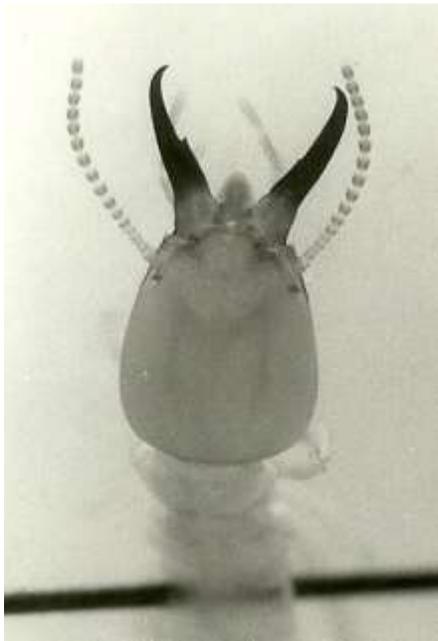
All these descriptions listed in this work date from the period 1898-1926. Harris (1960) added two more species, and amplified the description of another.

References

Harris, W. Victor, 1960. Further records of East African Termites – III. Proc. R. Ent. Soc. Lond. (B) 29. Parts 1-2, Pp 17-21.

Snyder, Thomas E., 1949. Catalog of the termites (Isoptera) of the World. Published by the Smithsonian Institute. 490 pages

Odontotermes – the castes



MB_505 Lusaka, UnZa Soldier



Worker



Alate

In termites the soldiers and workers are sterile males and females, in contrast to the bees, wasps and ants, where the workers are sterile females. Termite soldiers and workers have no eyes; the alates, like most insects, have two kinds of eyes, the large compound eyes, and the single-lens ocelli situated between the compound eyes. Their eyes are needed for just one day; they live the rest of their lives in darkness.

Odontotermes species have a single soldier caste, at least in all the Zambian taxa which have been examined. Sometimes there is variation in the size of soldiers within a colony, but there is no sharp distinction as in *Macrotermes*, *Pseudacanthotermes* and *Ancistrotermes*, where there can be no mistaking the 'major' from the 'minor' soldiers.

For a discussion of soldier polymorphism in African *Odontotermes* see:

Jean-Emile Ruelle (1972). On soldier polymorphism in Ethiopian Macrotermitinae, with special reference to *Odontotermes okahandjae* Fuller (Isoptera: Termitiae). *Journal of the entomological Society of South Africa*, Vol. 35. No. 1, pages 91-96.