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## Cossyphodini (Coleoptera: Tenebrionidae: Pimeliinae) in South Africa, Namibia and adjacent regions: New species and records, key to genera, and Old World species catalogue

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### Abstract

Cossyphodini Wasmann, 1899 (Tenebrionidae: Pimeliinae) from South Africa, Namibia and adjacent regions are revised, and newly collected material is presented. All species are figured, including as much as possible type specimens of African taxa for comparison. New species are described: *Cossyphodes andreaei* sp. n. and *Cossyphodes caecus* sp. n. (both South Africa), *Cossyphodes naukluftensis* sp. n. (Namibia). New synonyms include: *Cossyphodes freudei* Basilewsky, 1957 (*Cossyphodes uhligi* Ferrer, 2004 syn. n.), *Cossyphodes wasmanni* Reichensperger, 1915 (*Cossyphodes brincki* Andreae, 1961 syn. n., *Cossyphodes reichenspergeri* Andreae, 1961 syn. n.). Lectotypes are designated for *Cossyphodes arnoldi* Brauns, 1925 and *Cossyphodes wasmanni* Reichensperger, 1915. The aedeagus is of lesser value for species separation. Keys to the four genera in South Africa and adjacent regions, as well as species of *Cossyphodes* in South Africa are presented. A catalogue of all Cossyphodini from the Old World including full references is added.

**Key words:** Tenebrionidae, Pimeliinae, Cossyphodini, South Africa, Namibia, taxonomy, new species, new synonyms, key to genera, Old World catalogue, myrmecophily

### Introduction

Ant nest beetles of the tenebrionid tribe Cossyphodini Wasmann, 1899 are rarely collected with only few scattered systematic papers on Old World taxa. Basilewsky (1950a, 1950b, 1952, 1957, 1960) described new species of *Cossyphodinus* Wasmann, 1899 and *Cossyphodes* Westwood, 1851 from Central Africa, Angola and Namibia. The South African species were compiled by Andreae (1961), unfortunately some of the given names are not valid (see remarks in catalogue below). Ferrer (1990, 1996, 2006) and Ferrer & Collingwood (1993) treated records from Kenya, Zambia, and Mozambique including new species of *Cossyphodes* and *Cossyphodinus*. Robiche (2005) added a species from Benin. Schawaller (2006) first recorded the tribe from Socotra, and Schawaller et al. (2011) from Arabia and Iran. For the adjacent Indian fauna only two taxa are recorded (Waterhouse 1882, Wasmann 1899), probably both are synonymous.

The structure of the aedeagus was found to be simple and quite uniform throughout the tribe. Thus, taxa were described without considering this character. I also resisted from the risky dissections of single or rare minute type specimens, and present herein figures of the aedeagus of only two newly described species (Figs. 8, 16).

Previously, the cossyphodines were classified either as their own family or as the subfamily Cossyphodinae Wasmann, 1899 of Tenebrionidae (for example Steiner 1980, Schawaller 2006). Matthews et al. (2010) published plausible arguments to consider them downranked as a tribe Cossyphodini Wasmann, 1899 of the tenebrionid subfamily Pimeliinae Latreille, 1802. The unusual features of this group are mostly adaptations to myrmecophilous habits.

In the course of identification work of numerous newly collected specimens of Cossyphodini from South Africa and Namibia in the Ditsong National Museum of Natural History (the former Transvaal Museum) in Pretoria, it became necessary to re-examine and photograph African type material of as much as possible, summarise all references and catalogue Old World taxa.