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Two new species of *Aphanarthrum* Wollaston (Coleoptera: Curculionidae, Scolytinae) associated with *Euphorbia* in South Africa

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Abstract

Two species of *Aphanarthrum* collected from dead spurges of *Euphorbia* in South Africa are illustrated and described as new to science. They represent the first records from the southern parts of Africa and thus significantly extend the known distribution of the genus. Analyses of the phylogenetic relationships of the species of *Aphanarthrum* and *Coleobothrus* based on molecular and morphological characters yielded a relatively well supported but nevertheless distant sister relationship between the two South African species. Their relationship to other *Aphanarthrum* remains uncertain and revealed deep divergence, indicative of a rather ancient origin. The peripheral distribution of the South African species and the broad availability of suitable host plants throughout the continent suggest that more species remain to be discovered in this region.

Key words: *Aphanarthrum*, *Coleobothrus*, Crypturgini, Cytochrome Oxidase I, Elongation Factor-1α, *Euphorbia*, phylogeny, Scolytinae, South Africa

Introduction

The genus *Aphanarthrum* Wollaston includes about 26 nominal species, all exclusively associated with dead plant tissue of *Euphorbia* spurges (Wood & Bright, 1992). They are mainly distributed on the Macaronesian islands west of the North African coast, with only four of these species extending into West Africa (Israelson, 1972; Jordal & Hewitt, 2004; Jordal, 2006). Another species is seemingly restricted to Uganda and Eritrea, and three additional species are endemic to various regions of India (Menier, 1973; Wood, 1988). The recent discovery of two undescribed species of *Aphanarthrum* in the Cape region of South Africa significantly extends the known distribution of the genus and suggests that our knowledge of *Aphanarthrum* in the southern parts of Africa is fairly incomplete. The two undescribed *Aphanarthrum* were collected from dead branches of *Euphorbia triangularis*, co-occurring indiscriminately with two other species of Scolytinae, *Styracoptinus euphorbiae* (Bright) and *Cyrtogenius africus* Wood, and several other weevil species (Cossoninae, Conoderinae and Curculioninae).

Aphanarthrum is readily recognized by a deeply emarginate eye, 1- or 2-segmented funicle (segment 2 not visible in most species) and the septate, incomplete suture 1 of the antennal club (Wood, 1986). The monophyly of the genus is doubtful, however, and it is most likely paraphyletic with respect to the three nominal species of *Coleobothrus* (see Jordal & Hewitt, 2004). The latter genus was originally erected based on the concave declivity of the elytra and the strongly asymmetrical tegmen of the male genitalia (Menier, 1973), but these characters are overlapping to some degree with the conditions in several species of *Aphanarthrum* in Africa and India (Wood, 1988; Jordal & Hewitt, 2004). A thorough revision of both genera is needed, but this is only meaningful after conducting a geographically broader collection effort throughout the mainland of Africa and India. The description of two new species from South Africa is intended as a contribution towards this aim.

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