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Status changes, new synonymies, key and descriptions of seven new species in the subgenus *Scarabaeus* (*Scarabaeolus*) Balthasar 1965 (Coleoptera: Scarabaeidae: Scarabaeinae)

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Abstract

Distribution of the subgenus *Scarabaeus* (*Scarabaeolus*) Balthasar 1965 (tribe Scarabaeini) is centred on southern and south central Africa with only three out of 27 species recorded from West and northeast Africa. After taxonomic corrections and descriptions of seven new southern African species this somewhat controversial subgenus now comprises 33 valid species of which one is flightless. In this paper, *Scarabaeus* (*Scarabaeolus*) *vansoni* Ferreira 1958 **syn. nov.** is synonymized with *Scarabaeus* (*Scarabaeolus*) *lucidulus* (Boheman 1860) and *Scarabaeus* (*Scarabaeolus*) *xavieri* Ferreira 1968 **syn. nov.** is synonymized with *Scarabaeus* (*Scarabaeolus*) *andreaei* zur Strassen 1963. *Scarabaeus* (*Scarabaeolus*) *reichei* Waterhouse 1890 **stat. rev.** is removed from synonymy with *Scarabaeus* (*Scarabaeolus*) *canaliculatus* Fairmaire, 1888 and reinstated as a valid species. Distribution maps for *S. (S.) reichei*, *S. (S.) canaliculatus* and a third close relative, *Scarabaeus* (*Scarabaeolus*) *fritschi* Harold 1868 are provided. The seven new species comprise: *Scarabaeus* (*Scarabaeolus*) *soutpansbergensis* Deschodt and Davis **spec. nov.**, *Scarabaeus* (*Scarabaeolus*) *megaparvulus* Davis and Deschodt **spec. nov.**, *Scarabaeus* (*Scarabaeolus*) *niemandi* Deschodt and Davis **spec. nov.**, *Scarabaeus* (*Scarabaeolus*) *carniphilus* Davis and Deschodt **spec. nov.**, *Scarabaeus* (*Scarabaeolus*) *ermienae* Deschodt and Davis **spec. nov.**, *Scarabaeus* (*Scarabaeolus*) *planipennis* Davis and Deschodt **spec. nov.** and *Scarabaeus* (*Scarabaeolus*) *nitidus* Davis and Deschodt **spec. nov.** A key is provided for all the known winged species together with notes on some of the previously described species.

Key words: Botswana, South Africa, Mozambique, Zambia, Scarabaeidae, new species, synonymies, status revised, key

Introduction

The status of genera and subgenera within the tribe, Scarabaeini, has a long and confused history that continues to the present day (Zidek & Pokorný 2004, Forgie *et al.* 2006). At the current time, the composition of the tribe depends on which authority one follows. Here, our classification follows that of Forgie *et al.* (2006) who divided the Afrotropical members of the tribe into three genera (*Pachylomera* Griffith & Pidgeon 1831, *Pachysoma* Macleay 1821 and *Scarabaeus* L. 1758) and four subgenera of *Scarabaeus* (*Scarabaeus* (*Kheper*) Janssens 1940, *Scarabaeus* (*Sceliages*) Westwood 1837, *Scarabaeus* (*Scarabaeus*) L. 1758 and *Scarabaeus* (*Scarabaeolus*) Balthasar 1965).

Even with this structure, we accept that classification of the tribe remains controversial and may require further revision. Recently *Pachysoma* was reduced to subgeneric status within *Scarabaeus* by Harrison *et al.* (2003), listed under *Scarabaeus* by Zidek & Pokorný (2004), but subsequently revalidated (Forgie *et al.* 2006). Other recent reductions of long-established Afrotropical genera (*Kheper*, *Sceliages*) to subgeneric status within *Scarabaeus*, (Forgie *et al.* 2005) may, like *Pachysoma*, also deserve review and revalidation as full genera on morphological, molecular and behavioral grounds. This applies particularly to *Sceliages*, which shows modification of the clypeal margin associated with the specialized use of millipede gut contents for breeding (Forgie *et al.* 2002).

In the case of the earlier division of *Scarabaeus s. str.* into two subgenera Balthasar (1965) the separation was based, primarily, on the presence of a vestigial second mesotibial spur in *Scarabaeus* (*Scarabaeolus*) and its

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