



Comparative morphology and species-groups of the oribatid mite genus *Scapheremaeus* (Acari: Oribatida: Cymbaeremaeidae), with new species from South Australia

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Abstract

The morphology of the genus *Scapheremaeus* Berlese, 1910 is reviewed and characters of taxonomic utility delineated. Based on the morphological review, some 13 species-groups are outlined based on major morphotypes. There are two main categories: i) species that have a complete circumdorsal scissure with plicate microsculpture on the circumnotogastral plate and strongly contrasting microsculpture (foveolae, ridges or tubercles) on the centrodorsal plate (*plicate* species-groups), and ii) species with the circumdorsal scissure complete, incomplete or absent but with little or no contrast in microsculpture between the central and lateral regions: typically both regions foveolate or reticulate (*non-plicate* species-groups). A catalogue of world species of *Scapheremaeus* is provided.

Scapheremaeus petrophagus (Banks, 1906) is not a *Scapheremaeus* but belongs to an undetermined genus in the Ameronothroidea. *Cymbaeremaeus cyclops* Oudemans, 1915 is recombined to *Scapheremaeus*.

Five new species are described (*S. angusi* sp. nov., *S. cheloniella* sp. nov., *S. ewani* sp. nov., *S. lambieae* sp. nov., and *S. pulleni* sp. nov.) from soil and litter habitats in semi-arid Mallee eucalypt vegetation at Bookmark Biosphere Reserve, South Australia. These are the first members of the genus *Scapheremaeus* to be described from Australia, though undescribed species have been recorded previously. All the new species are morphologically closely-related and belong to a single species-group: Carinatus.

Key words: mite, taxonomy, morphology, Oribatida, systematics