



A new genus of scolopendrid centipede (Chilopoda: Scolopendromorpha: Scolopendrini) from the central Australian deserts

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Abstract

The first new species of Scolopendridae discovered in Australia since L.E. Koch's comprehensive revision in the 1980s is named as a new monotypic genus of the Tribe Scolopendrini, *Kanparka leki* **n. gen. n. sp.** Its distribution includes the Gibson and Little Sandy Deserts in Western Australia and the western part of the Tanami Desert in the Northern Territory. The new genus is especially distinguished from other scolopendrids by the spinulation of its robust ultimate legs, particularly the presence of spines on the femur and tibia in addition to the predominantly irregularly scattered spines on the prefemur. Cladistic analysis based on morphological characters resolves *Kanparka* in a clade with *Scolopendra*, *Arthrorhabdus*, *Akymnopellis* and *Hemiscolopendra*, within which *Scolopendra* is non-monophyletic.

Key words: Centipedes, Scolopendridae, Western Australia, Northern Territory, taxonomy, phylogeny

Introduction

The scolopendrid centipedes of Australia were revised in a series of studies by L.E. Koch that drew upon Australian museum collections amassed during survey programs in the 1960s through early 1980s, as well as historical material. Taxonomic treatments of *Scolopendra* Linnaeus, 1758 (Koch 1982, 1983a) *Cormocephalus* Newport, 1844 (Koch 1983b), *Ethmostigmus* Pocock, 1898 (Koch 1983c), *Asanada* Meinert, 1886 (Koch 1983d), *Arthrorhabdus* Pocock, 1891 (Koch 1984) and *Rhysida* Wood, 1862 (Koch 1985a) revised the species named in the 19th and early 20th century literature and also documented 14 new species, particularly from the comparatively understudied northern and western parts of Australia. One new species from the southwest of Western Australia formed the basis for a new monotypic genus, *Notiasemus* Koch 1985b. More recent documentation of its gut anatomy and its preoral chamber underscored its distinctiveness (Edgecombe & Koch 2009), showing that while the scolopendrids of Australia can mostly be assigned to widespread genera, at least one genus is endemic. The only scolopendrid genus known to be present in Australia but not revised was *Otostigmus* Porat, 1876. No new species of Scolopendridae have been described in the intervening years, but recent collections in the central deserts have unearthed a morphologically distinctive new species that is the subject of this study.

Compared to the rest of Australia, the central desert regions are remarkably under-surveyed; even the remote Kimberley region in north-west Western Australia has received more coverage. The tyranny of distance plays a large part in this lack of surveying, but other issues include logistics, climate unpredictability, and the intricacies of negotiating with the traditional owners of these areas (much of which has been set aside as Aboriginal Reserves). How & Cowan (2006) highlighted this oversight in their efforts to map vertebrate biodiversity on a continental scale within Western Australia.

As a response to this apparent gap, the Western Australian Museum, South Australian Museum, and South Australian Herbarium, in co-operation with the Western Australian Department of Environment & Conservation, organized a survey to the central ranges (Walter James and Morgan Ranges) in the Gibson Desert on the western