



A new genus of scutigerial centipedes (Chilopoda) from Western Australia, with new characters for morphological phylogenetics of Scutigerialomorpha

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Abstract

The scutigerial centipede *Allothereua incola* Verhoeff, 1925, originally described from the Kimberley region of north-western Australia, is abundantly represented in the Pilbara region of Western Australia. It forms the basis for a new genus, *Pilbarascutigera*, resembling *Thereuopoda* Verhoeff, 1904, and *Thereuopodina* Verhoeff, 1905, in the form of its female gonopods and in having short, triangular spicula on the tergal plates. *Pilbarascutigera* unites with *Thereuopoda* in cladistic analysis of morphological characters based on a pairing of slender, needle-like bristles (Tastborsten *sensu* Verhoeff) and spines on the posterior tergal plates and the arrangement of sensilla on the metarthron of the female gonopod. Scanning electron microscopic documentation of *P. incola* informs on numerous aspects of scutigerialomorph morphology, including the female subanal plates, tergal prominences, and peristomatic structures.

Key words: Scutigerialomorpha, Scutigerialidae, Thereuoneminae, *Pilbarascutigera*, Western Australia, Pilbara, phylogeny

Introduction

Taxonomic study of the scutigerialomorph centipedes of Australia consists of a few papers by European and American zoologists working with small collections, all before 1940 (Lucas 1840; Newport 1844; Koch 1865; Haase 1887; Pocock 1901; Attems 1911; Brölemann 1912; Chamberlin 1920; Verhoeff 1925; Fahlander 1939). The extensive collections built up from surveys by Australian museums since the 1970s have not yet entered the taxonomic literature. Vast tracts of Australia, especially the arid parts of the country, are entirely undocumented with respect to scutigerialomorph diversity.

Against this backdrop, herein we describe a scutigerialomorph species collected in great abundance in surveys since 2000 by the Department of Environment and Conservation (Western Australia), Biota Environmental Sciences, and the Australian Museum in the Pilbara region, northwestern Western Australia (Fig. 1). Previous studies on Australian scutigerialomorphs found that the genera *Parascutigera* Verhoeff, 1904a, and *Allothereua* Verhoeff, 1905, accommodate most of the known species in northern and southern Australia, respectively, although several species were thought to represent monotypic genera endemic to Australia (e.g., *Prionopodella* Verhoeff, 1925; *Prothereua* Verhoeff, 1925; *Pesvarus* Würmli, 1974a). The Pilbara collections are assigned to the geographically closest published species, *Allothereua incola* Verhoeff, 1925, originally documented from the Kimberley region of Western Australia. *Allothereua incola* has always been anomalous in the context of Australian members of *Allothereua* with respect to both its distribution and its morphology. Other species of the genus are found in forests in southern Australia, whereas the types of *A. incola* occur in association with termite mounds in arid northern Australia. The morphological peculiarities of *A. incola*, enhanced by study of new collections from the Pilbara, serve as a basis for recognising a new genus, *Pilbarascutigera*, endemic to northwestern Australia.