



A new genus and five new species of Astieae (Araneae: Salticidae) from Australia, with remarks on distribution

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Abstract

Parahelpis, a new genus of Astieae, is described for *Helpis abnormis* (Żabka, 2002) and *Parahelpis smithae* **spec. nov.**, the former being designated the type species. *Adoxotoma embolica* **spec. nov.**, *A. nitida* **spec. nov.**, *A. sexmaculata* **spec. nov.**, and *Helpis longipalpis* **spec. nov.** are described. *Astia nodosa* L. Koch, 1879 is transferred to *Adoxotoma*. Diagnoses and lists of species for *Adoxotoma* and *Helpis* are provided and remarks on their distribution are given.

Key words: Australia, New Guinea, New Zealand, phylogeny, biogeography

Introduction

Over the last decade morphology-based salticid taxonomy has been refined with molecular data (Hedin & Maddison 2001; Maddison & Hedin 2003; Maddison *et al.* 2007, 2008). This has put a new light, not only on taxonomy, but also on the biogeographical history of taxa and faunas. The new approach has included information on a number of Australian/Australasian clades, the Astioida being one of them. Unexpectedly, it comprises genera such as *Sandalodes* Keyserling, *Opisthoncus* L. Koch, *Simaetha* Thorell, *Neon* Simon, *Myrmarachne* MacLeay and many others, previously classified in other subfamilies (Maddison *et al.* 2008).

The Astieae clade itself is less controversial and its generic composition proposed by Wanless (1988) has largely been confirmed by the molecular results. Three genera of Astieae: *Adoxotoma*, *Helpis* and *Parahelpis* **gen. nov.** are treated here, the others will be included in separate papers (Żabka *et al.* in prep.).

Material and methods

The material comes from the collections of the Australian Museum, Sydney (AMS) and the Western Australian Museum, Perth (WAMP). Methods of specimen examination are as described earlier (Żabka 1991a). The photographs were taken using a Canon A620 camera and Nikon 800 stereomicroscope and processed with ZoomBrowser and HeliconFocus software.

The maps of actual and predicted distributions for *Adoxotoma* and *Helpis* were generated on the basis of their bioclimatic envelope, using the boxcar version of BIOCLIM (Richardson *et al.* 2006) available in BioLink (Shattuck & Fitzsimmons 2000).

Abbreviations used: AEW = anterior eyes width, ag = accessory gland, AL = abdomen length, AW = abdomen width, cf = cymbial flange, CH = cephalothorax height, CL = cephalothorax length, co = copulatory opening, CW = cephalothorax width, e = embolus, EFL = eye field length, id = insemination duct, LI–IV: legs lengths (femur-tarsus), p = protuberance, PEW = posterior eyes width, ps = prolateral spur, rta = retrolateral tibial apophysis, s = spermatheca, tl = tegular lobe.