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## *Proszynellus*—a new jumping spider genus from Australia (Araneae: Salticidae)

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### Abstract

The new genus *Proszynellus* is described from Western Australia to include three new species: *P. nasalis* (♂♀), *P. wandae* (♂♀) and *P. occidentalis* (♂), the first being designated the generic type. Diagnosis, descriptions, illustrations and distributional maps for all species are provided. Based on morphological characters, especially male palp and vulva, the genus is tentatively placed in Heliophaninae, being possibly close to *Menemerus* Simon.

**Key words:** new genus, new species, taxonomy, Western Australia

### Introduction

As the result of large biodiversity surveys conducted over the last three decades, knowledge on the taxonomy and distribution of the Australian salticid fauna has been enriched enormously. Including the taxa described by pioneers (e.g. C.L. Koch, Karsch, L. Koch, Keyserling, Thorell, Simon) and present researchers, about 90 genera and 400 species have been described and/or recorded from the island (World Spider Catalog 2015). Of these, twelve new genera and over one hundred new species have been described by Żabka alone (e.g. Żabka 2006). The lists, however, are far from complete, as vast tropical and inland areas, especially in Western Australia and Northern Territory, are still poorly studied (see predictions by Richardson *et al.* 2006).

The new genus *Proszynellus* comprises three new Western Australian species. However, judging from our experience with other taxa, it is justified to expect either greater diversity or wider distribution.

### Material and methods

The material for this study comes from the Western Australian Museum, Perth (WAMP) and the types are deposited in that collection. The drawings were made using a grid system. The dissected epigynes were digested in 10% KOH, rinsed in distilled water and observed in a drop of lactic acid with transmitted light under a compound microscope. Dimensions (in mm) were made with MultiScan software. Photographs were taken with a Nikon D5200 camera and a Nikon SMZ1000 stereomicroscope, and digitally processed with ZoomBrowser and HeliconFocus software. The predicted distributional map was generated based on species' bioclimatic envelope, using the boxcar version of BioClim (Richardson *et al.* 2006) available in BioLink (version 2.0; Shattuck & Fitzsimmons 2002).

Abbreviations used throughout the text are: AEW: anterior eyes width, ag: accessory gland, AL: abdomen length, AME: anterior median eyes, AW: abdomen width, cd: copulatory duct, cf: cymbial flange, CH: cephalothorax height, CL: cephalothorax length, cl: caudal lobe, ClyPH: clypeus height, co: copulatory opening, CW: cephalothorax width, DAM: anterior median eyes diameter, dch: distal chamber, e: embolus, EFL: eye field length, ep: endite protuberance, fb: femoral bump, L: leg, pch: proximal chamber, PEW: posterior eye width, PLE: posterior lateral eyes, pp: *pars pendula*, rta: retrolateral tibial apophysis, s: spermatheca, tl: posterior tegular lobe.

## References

- Andreeva, E.M., Heciak, S. & Proszynski, J. (1984) Remarks on *Icius* and *Pseudicius* (Araneae, Salticidae) mainly Central Asian. *Annales Zoologici*, 37, 349–376.
- Davies, T.V. & Żabka, M. (1989) Illustrated keys to the genera of jumping spiders (Araneae: Salticidae) in Australia. *Memoirs of the Queensland Museum*, 27, 189–266.
- Maddison, W.P., Bodner, M.R. & Needham, K.M. (2008) Salticid spider phylogeny revisited, with the discovery of a large Australasian clade (Araneae: Salticidae). *Zootaxa*, 1893, 49–64.
- Maddison, W.P., Li, D., Bodner, M., Zhang, J., Xu, X., Li, Q. & Li, F. (2014) The deep phylogeny of jumping spiders (Araneae, Salticidae). *ZooKeys*, 440, 57–87.  
<http://dx.doi.org/10.3897/zookeys.440.7891>
- Richardson, B.J., Żabka, M., Gray, M.R. & Milledge, G. (2006) Distributional patterns of jumping spiders (Araneae: Salticidae) in Australia. *Journal of Biogeography*, 33, 707–719.  
<http://dx.doi.org/10.1111/j.1365-2699.2005.01405.x>
- Shattuck, S. & Fitzsimmons, N. (2002) BioLink, The Biodiversity Information Management System (software and documentation). CSIRO Publishing, Collingwood, Australia.
- Simon, E. (1901–1903) *Histoire naturelle des Araignées. Vol. 2*. Paris, 700 pp. [pp. 381–1080]
- Wesołowska, W. (1986) A revision of the genus *Heliophanus* C.L. Koch, 1833 (Aranei, Salticidae). *Annales Zoologici*, 40, 1–254.
- Wesołowska, W. (1999) A revision of the spider genus *Menemerus* in Africa (Araneae: Salticidae). *Genus*, 10, 251–353.
- World Spider Catalog (2015) *World Spider Catalog*. Natural History Museum Bern. Version 16. Available from: <http://wsc.nmbe.ch> (Access 27 Feb. 2015)
- Zhang, J. & Maddison, W.P. (2013) Molecular phylogeny, divergence times and biogeography of spiders of the subfamily Euophryinae (Araneae: Salticidae). *Molecular Phylogenetics and Evolution*, 68, 81–92.  
<http://dx.doi.org/10.1016/j.ympev.2013.03.017>
- Żabka, M. (1985) Systematic and zoogeographic study on the family Salticidae (Araneae) from Viet-Nam. *Annales Zoologici*, 39, 197–485.
- Żabka, M. (1991) Salticidae (Arachnida: Araneae) of Oriental, Australian and Pacific Regions, VI. *Mopsolodes*, *Abracadabrella* and *Pseudosynagelides* - new genera from Australia. *Memoirs of the Queensland Museum*, 30, 621–644.
- Żabka, M. (1992) Salticidae (Arachnida: Araneae) of Oriental, Australian and Pacific Regions, VII. *Grayemulla* and *Paraplatoides* - new genera from Australia. *Records of the Australian Museum*, 44, 167–183.  
<http://dx.doi.org/10.3853/j.0067-1975.44.1992.31>
- Żabka, M. (2006) Jumping spiders (Araneae, Salticidae) taxonomy and biogeography in Australia: current state and future prospects. *Australasian Arachnology*, 76, 4–11.