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## A Revision of the Australian species of *Lynceus* Müller, 1776 (Crustacea: Branchiopoda: Laevicaudata, Lynceidae)

BRIAN V TIMMS

Honorary Research Associate, Australian Museum, 6-9 College Street, Sydney, NSW, 2000 and Australian Wetlands, Rivers and Landscape Centre, School of Biological, Earth and Environmental Sciences, University of New South Wales, Kensington, NSW, 2052.

E-mail: [brian.timms@unsw.edu.au](mailto:brian.timms@unsw.edu.au)

### Table of contents

Abstract	501
Introduction	502
Materials and methods	502
Results	503
Taxonomy	503
Laevicaudata Linder, 1945	503
Lynceidae Stebbing, 1902	503
<i>Lynceus</i> Müller, 1776	503
<i>Lynceus macleayanus</i> (King, 1855)	503
<i>Lynceus tatei</i> (Brady, 1886)	508
<i>Lynceus argillaphilus</i> <b>sp. nov.</b>	513
<i>Lynceus baylyi</i> <b>sp. nov.</b>	516
<i>L. magdaleanae</i> <b>sp. nov.</b>	521
<i>L. susanneae</i> <b>sp. nov.</b>	524
Discussion	527
Keys to species	530
Acknowledgements	532
References	532

### Abstract

Australia has had two species of *Lynceus*, *L. macleayanus* (King, 1855) and *L. tatei* (Brady, 1886) reported to date, both poorly described and without types, and supposedly both widely distributed. This study establishes neotypes and redescribes each according to modern standards. The present distribution of each is severely restricted by the destruction of temporary aquatic habitats, both in cities and in the country and also misunderstood by the lack of recent collecting in some outlying areas. Detailed study of male first thoracopods, together with an understanding of the form of the head and rostrum, antenna 2 spinal patterns, carapace shape, and the females' lamina abdominalis, most of which are discontinuously variable, has resulted in the delineation of four more species: *L. baylyi* **sp. nov.** in desert rockholes of Western Australia; *L. magdaleanae* **sp. nov.** mainly in deep gnammas of the WA Wheatbelt and Goldfields but also extending into NT, Qld and SA; *L. susanneae* **sp. nov.** of rockholes on the Nullarbor Plain, WA; and *L. argillaphilus* **sp. nov.** of the coastal Pilbara, WA. Identification keys are provided for all six species, both males and females.

**Key words:** thoracopods, variability, identification keys, distribution, ecology, gnammas (rockholes)