



The shield-backed trapdoor spiders of the *Idiosoma nigrum*-group are an iconic and threatened component of the Australian mygalomorph spider fauna. Renowned for their unusual phragmotic morphology and biology, they are of long-standing conservation significance, and *I. nigrum* remains the only spider in Australia to be afforded threatened species status under both State and Commonwealth legislation. Only two shield-backed trapdoor spiders were previously described, although in the last few decades it became apparent that the *nigrum*-group included more than just two species. Unfortunately, the identifications of many of these taxa were for a long time conflated, and *I. nigrum* was formally assessed under the Australian Commonwealth's *Environmental Protection and Biodiversity Conservation Act 1999* as what is now known to be five separate species. Revised assessment in 2017 under the *Western Australian Wildlife Conservation Act 1950* clarified these taxonomic issues for the purposes of conservation legislation, with the result that *I. nigrum* was upgraded from Vulnerable to Endangered. However, the broader taxonomic problems have long persisted, with land managers, environmental consultants, ecologists, resources staff and the general public in need of an updated, publicly accessible taxonomy to reflect the actual diversity, distribution and morphological complexity of this charismatic group of spiders.

In this monograph, we fully revise the Australian shield-backed trapdoor spiders, integrating morphology with complementary molecular data for seven genes. In total, 15 new species of *Idiosoma* are here described, taking the total number of species in the *nigrum*-group to 17. By applying International Union for the Conservation of Nature (IUCN) criteria, we further assess the conservation status of all species, and summarise the biology and phenology of taxa where known.

**CONSERVATION SYSTEMATICS
OF THE SHIELD-BACKED TRAPDOOR
SPIDERS OF THE *NIGRUM*-GROUP
(MYGALOMORPHAE, IDIOPIDAE, *IDIOSOMA*):
INTEGRATIVE TAXONOMY REVEALS
A DIVERSE AND THREATENED FAUNA
FROM SOUTH-WESTERN AUSTRALIA**

BY

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Idiosoma arenaceum Rix & Harvey, sp. n.

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