

A New Species of Australian Funnel-web Spider (Mygalomorphae, Atracidae, *Hadronyche*) Redefines the Family Atracidae

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ABSTRACT. We describe a new and unusual species of funnel-web spider from the far south coast of New South Wales. *Hadronyche nadgee* sp. nov. has only a single row of cheliceral teeth, a condition unique among known atracids. All *Atrax*, *Illawarra*, and *Hadronyche* species described to date have teeth on both sides of the cheliceral groove. Moreover, a retromarginal row of large teeth has been one of the diagnostic features of the Atracidae. *Hadronyche nadgee* sp. nov. has only a promarginal row. We therefore amend the diagnosis of the family to accommodate this new species, which in all other ways meets the criteria for *Hadronyche* (Atracidae).

Introduction

Funnel-web spiders are an iconic Australian taxon. Their fame and notoriety can be attributed to a single species, the Sydney funnel-web spider (*Atrax robustus* O. P.-Cambridge, 1877), which has been responsible for many serious envenomations, including numerous deaths prior to the development of an antivenom in 1980 (Nicholson *et al.*, 2006).

In his major revision of funnel-web spiders, Gray (2010) placed this group in a subfamily Atracinae of the family Hexathelidae. Gray recognized three genera—*Atrax* O. P.-Cambridge, 1877; *Hadronyche* L. Koch, 1873; *Illawarra* Gray, 2010—across the 35 atracine species and defined diagnostic characters separating them from their sister group, the Hexathelinae. More recently, a molecular study of all described hexathelid genera and a sample of related mygalomorphs elevated the atracid spiders to family level (Hedin *et al.*, 2018). The remaining hexathelids were

split into several families—Hexathelidae, Porrhothelidae and Macrothelidae. This molecular analysis placed the Actinopodidae, mouse spiders, as the sister group of the Atracidae.

Gray (2010) speculated that there are likely to be many undescribed atracid species. However, since his revision no new species have been published.

We describe here a new funnel-web spider from the far south coast of New South Wales. The species shares a number of morphological characters with some members of the *Hadronyche* species group *lamingtonensis* Gray, 2010. However, it displays several features that distinguish it from those species and indeed all other atracid spiders, prompting a redefinition of the diagnosis for Atracidae.

Only roaming males of this species have been found to date and these were encountered on rainy nights in late Autumn to mid Winter. This habit, together with the relatively small size of the spider, may account for it remaining undiscovered until now.

Keywords: Funnel-web spider; Mygalomorphae; Atracidae; *Hadronyche*; taxonomy; new species

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