Revisions of Australian ground-hunting spiders: IV. The spider subfamily Diaprograptinae subfam. nov. (Araneomorphae: Miturgidae)

ROBERT J. RAVEN
Queensland Museum, PO Box 3300, South Brisbane, Queensland 4101, Australia. E-mail: Robert.Raven@qm.qld.gov.au

Table of contents

Abstract ...................................................................................................................... ......................................................... 2
Materials and methods ......................................................................................... .................................................. 3
Taxonomy .................................................................................................................. ........................................... 3
Family Miturgidae Simon, 1886 ................................................................................. .................................................. 3
Key to the subfamilies of the Miturgidae .................................................................. .................................................. 4
Subfamily Miturginae Simon, 1886 ......................................................................... .................................................. 4
Subfamily Diaprograptinae subfam. nov. .................................................................. .................................................. 4
Key to genera of Diaprograptinae .............................................................................. .................................................. 5
Diaprograpta Simon, 1909 .......................................................................................... .................................................. 6
   Diaprograpta striola Simon, 1909 ........................................................................... .................................................. 6
   Diaprograpta abrahamsae sp. nov. ........................................................................... .................................................. 8
   Diaprograpta alfredgodfreyi sp. nov. ....................................................................... .................................................. 10
   Diaprograpta hirsti sp. nov. .................................................................................... .................................................. 12
   Diaprograpta peterandrewsi sp. nov. ....................................................................... .................................................. 13
Eupograpta gen. nov. .................................................................................................. .................................................. 16
   Eupograpta kottae sp. nov. .................................................................................... .................................................. 17
   Eupograpta anhat sp. nov. ..................................................................................... .................................................. 20
Mitzoruga gen. nov. .................................................................................................. .................................................. 21
   Key to the species of Mitzoruga ........................................................................... .................................................. 22
   Mitzoruga elapines sp. nov. .................................................................................... .................................................. 23
   Mitzoruga insularis sp. nov. ................................................................................... .................................................. 26
   Mitzoruga marmorea (Hogg, 1896), comb. nov. .................................................... .................................................. 29
Nuliodon gen. nov. .................................................................................................. .................................................. 31
   Nuliodon fishburni sp. nov. ................................................................................... .................................................. 32
Acknowledgements ................................................................................................. .................................................. 39
References ................................................................................................................ .................................................. 39
Abstract

The newly recognised Diaprograptinae includes the Australian Diaprograpta Simon, 1909, Eupograpta gen. nov., Mituliodon Raven & Stumkat, 2003, Mitzoruga gen. nov., Nuliodon gen. nov., and the New Zealand Zealoctenus Forster & Wilton, 1973. All genera are unique in the Miturgidae s. strict. in the possession of claw tufts, and more equivocally, in the apical segment of the posterior lateral spinnerets, which in Diaprograptinae is not as strongly elongated as in Miturga. Diaprograpta includes the type species, D. striola Simon, 1909 from Western Australia, D. hirsti sp. nov. from South Australia, D. alfredgodfreyi sp. nov. from Victoria, D. peterandrewsi sp. nov. from western Queensland and D. abrahamsae sp. nov. from southeast Queensland. Eupograpta includes E. kottae sp. nov., sympatric with Diaprograpta striola and E. anhat sp. nov., from western Queensland. Mitzoruga gen. nov. is described to accommodate Uliodon marmoreus (Hogg, 1896), M. insularis sp. nov., and M. elapines sp. nov., from xeric regions of Australia. The genus presents a character combination which challenges the boundary between the Miturgidae Simon, 1886 and Zoridae F. O. P.-Cambridge, 1893. Nuliodon gen. nov. includes only N. fishburni sp. nov. from eastern Australia.

Key words: Zoridae, taxonomy, Australia, biodiversity, biogeography, distribution

Introduction

The Miturgidae Simon, 1886 are small to quite large, fast-moving, ground-hunting spiders that occur for the length and breadth of Australia. They are also reported from Africa, the Middle East and southern USA, Mexico to Argentina. The family has diversified strongly in Australia in xeric areas with the widespread, striped spiders of the genus Miturga Thorell, 1870 often the most conspicuous. Hence, they commonly feature in invertebrate pitfall trap surveys.

Our understanding of the relationships of the Miturgidae and, hence, the included genera have changed dramatically since Simon (1886) introduced the group name. Originally, the tribe included only Miturga but was later expanded to be included within the liocranine Clubionidae Wagner, 1887 (Simon 1897). However, that initial subfamily concept admitted the ctenid Vulsor Simon, 1889, and the zorid Argoctenus L. Koch, 1878, along with Miturga, Prochora Simon, 1886, and two eutichurine genera.

Lehtinen (1967) elevated the Miturgeae to family status but listed it within the Amaurobioidea, rather than the Lycosoidea. Lehtinen's Miturgidae included genera now listed in at least three other families, viz., the preoccupied Machadoninae (= Griswoldiinae), Uliodoninae (mistakenly founded on Mituliodon tarantulinus (L. Koch, 1873), not the type species of Uliodon L. Koch, 1873), Tengellidae Dahl, 1908, Amaurobioidinae (now listed in the Anyphaenidae Bertkau, 1878), as well as the Eutichurinae Griswold (1993) made substantive changes to Lycosoidea, to which he transferred the Miturgidae and the elevation of the Tengellidae was supported. Further changes were made by Raven & Stumkat (2001, 2003), Silva (2003) and Raven & Stumkat (2005) through cladistic analyses. Of the miturgid subfamilies included by Lehtinen (1967), Raven & Stumkat (2005) transferred the Griswoldiinae with Uliodon and related genera to the Zoropsidae.

Through all, the position of the Eutichurinae has remained unsatisfactorily supported. Despite the absence of supporting cladistic analyses, genera related to Cheiracanthium C. L. Koch, 1839 in the subfamily Eutichurinae, are currently listed in the Miturgidae (Platnick 2008). That grouping is here not followed because the two published cladograms which include the Miturgidae (s. strict.), Clubionidae and the Eutichurinae show that the Eutichurinae are more closely related to the Clubionidae than to the Miturgidae (Silva, 2003, Raven & Stumkat, 2005). A part of that confusion has lain in the distribution of the longer apical segment of the posterior lateral spinnerets, a character well-known in the Agelenidae C. L. Koch, 1837 and venoniine Lycosidae Sundevall, 1833 and substantially developed in the Hahniidae Bertkau, 1878 and Hersiliidae Thorell, 1870 (e.g., Raven et al. 2002). The miturgids treated here reflect the distribution of the short, domed segment of the posterior lateral spinnerets. “Miturgid genera used by Griswold et al. (1999) were transferred by Raven & Stumkat (2005) to the Zoropsidae Bertkau, 1882.

This study is one in a series of papers on the Australian Miturgidae and other fossorial families (e.g., Zoridae; Raven 2008). The concept of the Miturgidae was modified implicitly by the removal of taxa like