

Molecular phylogeny of the spider family Oonopidae (Araneae, goblin spiders)

U. G. S. L. RANASINGHE, N. ATHUKORALA and S. P. BENJAMIN

National Institute of Fundamental Studies, Hantana Road, Kandy, Sri Lanka; email: suresh.benjamin@gmail.com

Goblin spider diversity on the island of Sri Lanka is very high, with at least 44 species of which 39 are endemic. We present phylogenetic evidence from two nuclear ribosomal loci showing the relationship of 43 taxa from Sri Lanka (41 endemics) to the remaining global goblin spider fauna. The Oonopidae is shown to be monophyletic, confirming previous studies. *Brignolia* and *Opopaea* are both paraphyletic and should be redefined in morphological terms. This result is in contrast with the current morphological hypothesis that both genera are monophyletic. The same goes for *Aprusia* and *Ischnothyreus*. Further, our results confirm that a low degree of body sclerotisation within the Oonopidae is plesiomorphic, as found in previous studies. Sri Lanka has a diverse goblin spider fauna with numerous undescribed species. Most of this diversity is generated by within-island speciation, as demonstrated in species of *Aprusia*, *Brignolia* and *Xestaspis*, all of which consist of closely related assemblages of more than two species. These species are narrow endemics with very restricted distributions. However, to document this biodiversity and its evolutionary origins more research is needed.

Funding provided by the National Institute of Fundamental Studies (Sri Lanka) is acknowledged.

Keywords: diversity, endemics, island speciation, spider fauna, Sri Lanka.