

## Diversity of Dwarf Hunting Spiders (Family: *Oonopidae*) in Sri Lanka

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### Abstract

Dwarf hunting spiders or goblin spiders (Family: *Oonopidae*) number over 600 described species in 88 genera worldwide. Members of this family are small (1-4 mm), haplogyne, six eyed species that dwell in litter or in the canopy. They do not build webs. Sri Lanka hosts a large diversity of spider families, including *Oonopidae*, with 23 species in 8 genera known. Genera *Aprusia*, *Brignolia*, *Camptoscaphiella*, *Gamasomorpha* and *Xestaspis* have been redescribed, however, genera of *Epectris*, *Ischnothyreus* and *Orchestina* were last reported almost a century ago. So far, no specific extensive study has been done for oonopids in Sri Lanka. The present study is aimed at assessing the diversity of the *Oonopidae* spider family in the country. Sample collection was conducted by sifting litter and beating method in 37 selected sites within 14 districts in Sri Lanka. The collected spiders were then sorted into genera, preserved in alcohol and identified morphologically using recently published international revisionary studies. Our collections consist of 226 specimens of the genera *Aprusia* (48), *Brignolia* (33), *Xestaspis* (65), *Camptoscaphiella* (1), *Orchestina* (26), *Ischnothyreus* (19) and *Opopaea* (27). There were 65 specimens of *Xestaspis*, which were generally characterized by their reddish brown color and completely sclerotized dorsal scuta. They were found in the Kandy, Puttalam, Matale, Ampara, Nuwara Eliya, Kurunagala, Monaragala, Badulla and Anuradhapura districts. Thirty-three specimens of the genus *Bignonia* were found from Puttalam, Kurunagala, Kegalle, Kandy, Matale, Ampara, Monaragala, Anuradhapura and Badulla districts. Males in this genus can be easily distinguished by their heavily sclerotized palp. The South Asian genus *Aprusia* is recognized by the presence of the strong macrosetae on the forelegs. There were 48 specimens of *Aprusia* which were distributed in the Gampaha, Kandy, Rathnapura, Badulla and Anuradhapura districts. Interesting characters of the Asian genus *Camptoscaphiella* are the ventrally greatly enlarged bulb and inverted T-shaped distal end, only one specimen of this genus was reported from Kandy district. Spiders of the genus *Orchestina* are very small non scutate oonopids with an enlarged femur on leg IV. Twenty-six specimens were collected from Kandy, Nuwara Eliya and Badulla districts. The genus *Ischnothyreus* which has a sclerotized palp with spine legs was reported in Kandy and Kurunagala districts. These two genera were reported in Sri Lanka after 1893. Genus *Opopaea* is reported in Sri Lanka for the first time. 27 specimens of genus *Opopaea* were collected. Seven specimens cannot be sorted in to generic level according to literature and were tentatively labeled as genus 01, 03 and 04. The present study records seven genera of the spider family *Oonopidae*. Future work will focus on taxonomic revisions of *Oonopidae* in Sri Lanka based on morphological and molecular data. Spiders like many other creatures are affected by habitat disturbances. Due to rapid reduction of forest cover, some species may go extinct; before we documents there existence. Therefore, we must enhance ecosystem protection to preserve spider biodiversity in Sri Lanka.

**Key words:** Goblin Spiders, *Oonopidae*, Taxonomy & Conservation.

