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# A PRELIMINARY PHYLOGENY AND MORPHOLOGICAL ANALYSIS OF GENUS *Epidelaxia* (ARANEAE: SALTICIDAE) IN SRI LANKA

**A. Satkunanathan, N. Kanesharatnam, N. Athukorala and S.P. Benjamin***

*National Institute of Fundamental Studies, Kandy, Sri Lanka*
**suresh.benjamin@gmail.com*

The genus *Epidelaxia* Simon, 1902 contains four species, of which *Epidelaxia albostellata, Epidelaxia albocruciata* and *Epidelaxia obscura* are endemic to Sri Lanka. The fourth species, *Epidelaxia maurerae*, is found in the Philippines. Since its initial description, *Epidelaxia* remained taxonomically unrevised and has never been subjected to phylogenetic evaluation. The objective of the present study was to undertake taxonomical revision and phylogenetically place *Epidelaxia.* Fieldwork was conducted in 31 localities covering the central highlands and lowland rain forests of Sri Lanka based on the localities of the described species. Beating, hand collection and litter sampling were undertaken. Seventy-one specimens were collected and preserved in either 70% ethanol for morphological identification or 100% for molecular analysis. Left male palp and female genitalia were illustrated using stereo microscopes. A series of phylogenetic analysis was performed both on morphological and molecular data. Total genomic DNA was extracted from 25 specimens using DNeasy Tissue Kit. Partial fragment of mitochondrial protein-encoding gene cytochrome c oxidase subunit I (*COI*) and two nuclear ribosomal genes, 18S and 28S rRNA, were amplified. Sixteen DNA sequences were edited and assembled using Geneious 11.0.2 software. Maximum likelihood (ML) trees were inferred with MEGA ver. (X). Parsimony analysis of the morphological data matrix was carried out in TNT 1.1. *E. albostellata*, *E. albocruciata* and *E. obscura* are redescribed and an identification key for all species of *Epidelaxia* from Sri Lanka is provided. *E. albostellata* (60%) is widely distributed in the Central Highlands. *E. albocruciata* (28%) is distributed only in low land rain forests. *E. obscura* (5%) is recorded only in Kandy and Badulla Districts. Two new *Epidelaxia* species were recorded from the Knuckles region and the Kataragama peak. The resulting cladistics analysis, based on 63 morphological characters from 17 taxa (5 *Epidelaxia* species and 12 out - groups) supports 5 species in the genus *Epidelaxia.* All ML trees recovered the *E. albostellata*, *E. albocruciata* clades and validated the existence of two new species. *E. obscura* needs to be validated in ML tree. Further, ML trees validated the placement of genus *Epidelaxia* and new genera under the tribe Nannenini.

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