

**MITOCHONDRIAL DNA BASED PHYLOGENY OF SRI LANKAN SUNBIRDS  
(PASSERIFORMES: NECTARINIIDAE)**

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Sunbirds are small nectar-feeding pollinators found throughout Africa, southern-Asia, and Australasia. Though over 125 species of sunbirds have been identified under 14 genera, phylogenetic relationships of most species within the family are poorly known. Sri Lankan biota includes three non-endemic sunbird species; Loten's sunbird (*Cinnyris lotenius*), Purple sunbird (*Cinnyris asiaticus*), and Purple-rumped sunbird (*Leptocoma zeylonica*), that also inhabit regions in Southern-Asia. As no phylogenetic hypothesis exists for sunbirds reported in Sri Lanka, this preliminary study was conducted to establish their molecular phylogeny using mitochondrial ATPase subunit 6 (ATPase 6) and NADH dehydrogenase subunit 3 (ND3) gene sequences. A concatenated data set with total of 900 bp (ATPase 6, 591 bp; ND3, 309 bp), including seven sequences of the three Sri Lankan species from Mannar and Bundala and 31 reference sequences (30 other sunbird species in the world and an outgroup; *Pycnonotus barbatus*), obtained from National Centre for Biotechnology Information was analysed. Phylogenetic trees were constructed using Maximum Likelihood and Bayesian Inference. The topologies of the resulting trees were 100% congruent. Results revealed that Purple-rumped sunbird forms a strongly-supported monophyletic basal lineage sister to all the other sunbirds included in this analysis, reinforcing the hypothesis of Asian (Indian subcontinent) origin of sunbirds. Purple sunbird and Loten's sunbird are found in a clade where majority are from Africa. Further, Purple sunbird is the most recently evolved Sri Lankan sunbird which shows a sister-group relationship with Loten's sunbird. Results also reaffirmed the polyphyletic nature of genus *Cinnyris*. This study concludes that in Sri Lanka, Purple-rumped sunbird is evolutionarily the oldest sunbird and perhaps could be one of the ancestral species remaining today. However, a detailed phylogenetic analysis should be done using nuclear genes and more samples from a wider geographical range to unravel the evolutionary history of sunbirds in Sri Lanka.

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