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# SPECIES LIMITS OF *Lagenandra* IN SRI LANKA USING MOLECULAR DATA

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*Lagenandra* Dalz. is a genus of semiaquatic flowering plants belonging to the Family Araceae. This genus is mainly distributed in India and Sri Lanka. According to the last revision in 2000, eight species are recorded in Sri Lanka of which seven are endemic to the country. The genus is of enormous export value to the aquatic plant industry in Sri Lanka, where many members are traded. Overexploitation, destruction of habitats and illegal constructions have imposed many threats to the genus. Consequently, all the species except *L. ovata* and *L. praetermissa* have been listed as endangered during the national red listing in 2012. In Sri Lanka, the taxonomic literature available on the genus is lacking. A preliminary morphometric analysis has revealed eleven phenetic groups within the genus. The objective of the present study was to re-evaluate these phenetic groups using molecular data to determine the species limits of the genus. Molecular analysis was carried out for the genus *Lagenandra*, using the internal transcribed spacer region (ITS) of the nuclear ribosomal DNA. Extraction of DNA was perfromed from freshly collected leaves, followed by PCR amplification. Sequences were edited and phylogenetic trees were constructed using the Parsimony method and model-based methods, such as Maximum likelihood and Bayesian inference analysis. *Lagenandra* species included in the present study were supported as a monophyletic genus in all the trees. Each phylogenetic tree consisted of eleven phyletic groups corresponding to the phenetic groups in the morphological study. Therefore, results support the recognition of eleven phenetic groups in the genus *Lagenandra* in Sri Lanka indicating the presence of more than eight species. This study would bring new insights into taxonomic updating and the conservation strategies of genus *Lagenandra* in Sri Lanka. This is the first study in the world for genus *Lagenandra*, based on DNA sequence data for molecular phylogeny.

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