

**INFERENCES FROM THE PHYLOGENETIC ANALYSIS OF
ENDEMIC GENERA *ALPINIA* AND *AMOMUM* OF FAMILY
ZINGIBERACEAE IN SRI LANKA**

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In an attempt to assess the systematics and the phylogenetic placement of the members of the two endemic genera *Alpinia* Roxb. and *Amomum* Roxb. in Sri Lanka using both molecular and morphological data, DNA sequence data of twelve in-group species together with three out-group taxa of the family Zingiberaceae were analysed. These two are the largest genera that list the highest number of endemics of family Zingiberaceae in Sri Lanka. The family is recognized as a least studied plant group in the country, justifying the need for a thorough study. The current analysis of the evolutionary relationships of the members of the interested genera, utilizing DNA sequence data of the chloroplast genome regions *trn L-F* and *trn S-fM* and the combined data set, resolved four groups of *Alpinia* and two major clades of *Amomum* with considerable parsimony analysis consistency values. This result is in congruence and consistent with the recent phylogenetic analyses of the two genera, except for the placement of each genus as monophyletic groups in the context of our study. Results of the morphological analysis revealed the segregation of species rather depending on both vegetative and floral characters than only on floral characters.

Furthermore, morphological interpretation of the molecular analysis results illuminated that the clades observed can be better explained according to fruit morphology which also agrees with the circumscriptions brought up by contemporary studies on the family Zingiberaceae. Here, we suggest the consideration of acquiring a new generic name and changing the type species of an *Alpinia* clade observed in previous studies. Illumination of an immediate need for conservation efforts of these species is another important finding of the current study.

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