

MOLECULAR PHYLOGENETIC STUDY ON DAVALLIACEAE

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ABSTRACT

In previous classifications based on morphological characters, Davalliaceae comprises from four to ten genera, whose concepts differ among authors. This study analyzed a molecular phylogeny of 36 species in five genera. Deduced phylogenetic relationships based on a combined dataset of five continuous chloroplast regions, *atpB*, *rbcL*, *accD*, *atpB-rbcL* spacer, and *rbcL-accD* spacer, are incongruent to any previous classifications, and none of the genera are monophyletic. *Araiostegia* is divided to two clades, one of which is the most basal and includes *Davallodes*, and the other is nested within the rest of the family. *Davallia* is divided into three clades, in accordance with three sections classified mainly by scale morphologies, and the clades are separated by the intervention of a clade of *Araiostegia*, *Humata* and *Scyphularia*. *Humata* and *Scyphularia* are also paraphyletic.