

An analysis of the sectional classification of *Anthurium* (Araceae): comparing infrageneric groupings and their diagnostic morphology with a molecular phylogeny of the genus

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This study presents an evaluation of the currently accepted sectional classification of the genus *Anthurium* Schott (Araceae) in light of a recently published molecular phylogeny for the group. In general, disagreements between these two occur because many diagnostic morphological characters used in the sectional classification turned out to be highly homoplasious within *Anthurium*, with multiple independent gains or losses of seemingly similar morphologies in distantly related clades. A new sectional classification of *Anthurium* that more accurately represents species relationships and the evolutionary history of the genus is much needed, and here we propose the first steps toward it. Results from this study suggest that out of the 18 sections and two series recognized in *Anthurium*, only eight of these groups are monophyletic (i.e., sections *Andiphilum* (Schott) Croat, *Calomystrium* (Schott) Engl., *Dactylophyllium* (Schott) Engl., emend. Croat & Carlsen, *Leptanthurium* (Schott) Engl., *Polyphyllium* Engl., *Tetraspermium* (Schott) Engl., and the newly recognized sections *Multinervia* (Croat) Carlsen & Croat and *Cordato-punctatum* Croat & Carlsen). All other sections are either not monophyletic or their monophyly could not be accurately tested. A complete revision of the sectional classification of *Anthurium* will require a more comprehensive taxon sampling and a better supported molecular phylogeny.

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