

Oral presentation

Does the current taxonomic delimitation of *Galianthe* find support in phylogenetic perspective?

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Galianthe Griseb. is a neotropical genus comprising 50 species divided into two subgenera: *G.* subgen. *Galianthe* (41 spp.), characterized by homogeneous morphological traits, with species further divided into two sections (*G.* secc. *Galianthe* and *G.* secc. *Laxae*); and *G.* subgen. *Ebelia* (14 spp.) with more heterogeneous morphological characteristics. Due to its morphological similarity with other genera, *Galianthe* has historically been associated with *Borreria*, *Spermacoce*, *Diodia* (based on fruit type), as well as *Denscantia* and *Emmeorrhiza* (based on inflorescence type). In recent years, molecular studies have established *Galianthe* as a basal genus within the *Spermacoce* clade, closely related to other genera such as *Carajasia* and *Schwendenera*. Despite the progress made in recent molecular studies, the studies have focused on a limited number of species within the genus, failing to encompass all infrageneric categories. Questioning of the current taxonomic delimitation of the genus, this study aims to test the monophyly of *Galianthe* and explore its infrageneric and interspecific phylogenetic relationships. Three markers (two nuclear: ITS, ETS, and one plastid: *rps16*) were utilized, encompassing 107 entities, including 42 *Galianthe* species, thereby representing 76% of the current genus diversity, as well as 17 closely related genera within the *Spermacoce* clade. The phylogenetic results confirm the monophyly of *Galianthe*, revealing the presence of three major subclades. Subclades I and II comprise several *G.* subgen. *Ebelia* species, whereas subclade III consists of all *G.* subgen. *Galianthe* species plus *G. angulata*. Regarding the sections, monophyly was not supported. Based on these findings, it can be concluded that *G.* subgen. *Ebelia* is paraphyletic, *G.* subgen. *Galianthe* is potentially paraphyletic due to *G. angulata*, and there is no clear distinction between the sections.