



## Taxonomy and conservation of the Brazilian extra-Amazonian species of *Philodendron* subg. *Pteromischum* (Araceae)

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### Abstract

*Philodendron* subg. *Pteromischum* is one of the three *Philodendron* subgenera and most diverse within Amazonia. It can be recognised by anisophyllous sympodial growth, long sheaths, short petiole, gynoecea with broad shallow compitum, and numerous ovules per locule. The taxonomic revision for Brazilian extra-Amazonian species was based on the analysis of 590 herbaria specimens. Nine Brazilian extra-Amazonian *Pteromischum* species were recognized, five names previously recognised for the studied area were treated as synonyms. All the species were described and mapped. An identification key and comments on taxonomy, nomenclature, conservation, phenology were provided for each species. The concepts of leaf-sheath and petiole are also clarified.

**Key words:** Diversity, Araceae, *Philodendron*, extra-Amazon

### Introduction

*Philodendron* Schott (1829: 80) is the second largest genus of Araceae family with 482 exclusively Neotropical species (Boyce & Croat 2013). Brazilian species are more diverse in Amazonian and Atlantic rainforests (Sakuragui *et al.* 2014). In the most comprehensive revision for the genus (Krause 1913), two subgenera were recognised: *Meconostigma* (Schott 1832: 20), with 14 species, and *Euphilodendron* Engler (1899: 510) [= *Philodendron*], with 10 sections and 208 species. *Pteromischum* (Schott 1856: 77), one of the sections, was later elevated to the rank of subgenus, based mainly on anatomical investigations by Mayo (1989: 168). Currently, the subgenera *Philodendron*, *Pteromischum* and *Meconostigma* are widely accepted (Mayo 1989, Grayum 1996, Croat 1997, Sakuragui *et al.* 2005) and supported as monophyletic by molecular data (Gauthier *et al.* 2008).

The first record of the “grex” *Pteromischum* was in 1841 by Kunth. In the following years, many species of *Pteromischum* were discovered and described. Schott (1860) expanded the number of species in “grex” *Pteromischum* to 24. Later, Engler (1899) reduced this number to 21. Krause (1913) recognised 28 species in the section *Pteromischum*. Grayum (1996) revised 33 species for the group in Pacific and Caribbean Tropical America, extralimital species had only typification of names presented. From these works, we recorded 82 species, with 25% of those occurring in Brazil.

Morphologically, the *Pteromischum* species can be characterised by anisophyllous sympodial growth (Grayum 1996), short petiole and long sheath, elliptical, ovate to oblong leaves, with attenuate to rounded base, and cuspidate to acuminate apex. The inflorescences are usually solitary. The gynoecea present broad shallow compitum, generally the ovary slightly broader than style, ovary with 2–7 locules and numerous ovules per locule (Mayo 1991). Based mostly on vegetative characters, Grayum recognised two sections within the subgenus: sect. *Pteromischum* Grayum (1996) and sect. *Fruticosa* Grayum (1996). The first exhibits appressed-climbing habit, stem with epidermis drying yellowish to brownish brittle, and coarsely sulcate, or green and finely striate, short petiole, one to three inflorescences next to the trunk, cataphylls present, and long peduncle. In contrast, section *Fruticosa* is widely branched and presents shrubby habit, stem epidermis drying yellowish to dark brown, finely to coarsely sulcate, not markedly cracking and brittle, long petiole, usually solitary inflorescence born away from the supporting tree, cataphylls rarely present, and a short peduncle. The majority of Brazilian species belong to the section *Fruticosa*.

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