



Synonymization of *Calathea* subg. *Pseudophrynium* ser. *Polystachyae* with a new combination in the genus *Maranta* (Marantaceae)

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Abstract

Calathea subgenus *Pseudophrynium* series *Polystachyae* was proposed to accommodate a single species, *Calathea polystachya*. This species is herein transferred to *Maranta*, recognizing the wide morphological re-delimitation of this genus.

Key words: *Calathea polystachya*, Flora of Brazil, *Maranta purpurea*, Neotropics

Introduction

Schumann (1902) separated the genus *Calathea* Meyer (1818: 6) into four subgenera, but these were completely redefined by Borchsenius *et al.* (2012). As a result, the subg. *Calathea* (= *Eucalatheae*) and a part of the subg. *Pseudophrynium* ser. *Comosae* (Petersen 1890: 89, 118) Schumann (1902: 87), which corresponds to an informal *Calathea lanicaulis* group (*i.e.*, Kennedy 1988), remained in the genus *Calathea* (*sensu* Borchsenius *et al.* 2012). Meanwhile, the subgenera *Macropus* (Bentham 1883: 654) Schumann (1902: 76), *Microcephalum* (Bentham 1883: 654) Schumann (1902: 111), and *Pseudophrynium* (Köern. ex Bentham 1883: 654) Schumann (1902: 80) [including series *Scapifoliae* (Eichler ex Petersen 1890: 88, 107) Schumann (1902: 80), *Comosae* (except *Calathea lanicaulis* group), *Nudiscapae* (Petersen 1890: 87, 90) Schumann (1902: 80), and *Rhizanthae* (Eichler ex Petersen 1890: 89, 115) Schumann (1902: 107)] were transferred to the genus *Goepfertia* Nees (1831: 337). However, since it was not included in Borchsenius *et al.* (2012), subgenus *Pseudophrynium* ser. *Polystachyae* (Schumann 1902: 176) was not redefined; therefore, the complete reclassification of *Calathea* (*sensu* Schumann 1902) was never accomplished.

The *Calathea* subg. *Pseudophrynium* ser. *Polystachyae* was proposed by Schumann (1902: 176) to accommodate a single Brazilian endemic species, *Calathea polystachya* Schumann (1902: 176). This species was distinctly circumscribed as having multiple inflorescences arising from the leaf axils (Borchsenius *et al.* 2012), and according to Schumann (1902), this is a unique feature among all other species of *Calathea*.

In herbarium collections, *C. polystachya* had already been identified as *Maranta* sp., but the species has never been effectively transferred. The genus *Maranta* Linnaeus (1753: 2) is polyphyletic (Andersson & Chase 2001), resulting in Vieira & Souza (2008) to suggest enlarging the circumscription of this genus, instead of subdividing it, to include all Neotropical *Maranta* and *Myrosma* groups (*i.e.*, Andersson 1981, 1998, Andersson & Chase 2001). Such circumscription allowed these authors to describe *M. purpurea* Vieira & Souza (2008: 137) as a species easily distinguished from all other species of *Maranta* by its densely hirsute leaf sheaths, petioles and bracts, in addition to the dense and highly ramified inflorescences. These characteristics, when added to the other morphological features presented in the protologue of *M. purpurea*, are the same as those used by Schumann (1902) to delimit *C. polystachya*. Thus, after observing types, it was concluded that *M. purpurea* and *C. polystachya* are one in the same species. This evidences effectively the synonymization of *Calathea* subg. *Pseudophrynium* ser. *Polystachyae* to the genus *Maranta*, including *M. purpurea*, as a synonym of the new combination *M. polystachya* (K.Schum.) J.M.A.Braga proposed below.

Material and methods

The data presented were based on protologues and morphological studies, in addition to field observations. Types and others specimens from ESA, MBM, RB, UB and S were examined.

Taxonomic treatment

Maranta Linnaeus (1753: 2)

= *Calathea* subg. *Pseudophrynium* ser. *Polystachyae* Schumann (1902: 176), **syn. nov.** Type:—*Maranta polystachya* (K.Schum.) J.M.A.Braga [= *Calathea polystachya* Schumann (1902: 176)]

Maranta polystachya (K.Schum.) J.M.A.Braga, *comb. nov.*

Basionym:—*Calathea polystachya* Schumann (1902: 176). Type:—BRAZIL. Mato Grosso: Palmeiras, 25 December 1893, *C.A.M. Lindmann A2467* (holotype S!, isotype S!).

= *Maranta purpurea* Vieira & Souza (2008: 137), **syn. nov.** Type:—BRAZIL. Mato Grosso: Cáceres, estrada para Taquaral, 7.3 km da estrada Cáceres-Porto Estrela, 57°29'13"W, 15°58'01"S, 322 m, 10 January 2004, *S. Vieira et al. 142* (holotype ESA!).

References

- Andersson, L. (1981) The neotropical genera of Marantaceae: circumscription and relationships. *Nordic Journal of Botany* 1: 218–245.
<http://dx.doi.org/10.1111/j.1756-1051.1981.tb00692.x>
- Andersson, L. (1998) Marantaceae. In: Kubitzki, K. (Ed.) *The Families and Genera of Vascular Plants* 4. Springer-Verlag, Berlin, Heidelberg, New York, pp. 278–293.
- Andersson, L. & Chase, M.W. (2001) Phylogeny and classification of Marantaceae. *Botanical Journal of the Linnean Society* 135: 275–287.
<http://dx.doi.org/10.1111/j.1095-8339.2001.tb01097.x>
- Bentham, G. (1883) Marantaceae. In: Bentham, G. & Hooker, J.D. (Eds.) *Genera Plantarum* 3(2), L. Reeve & Co, London, pp. 649–654.
- Borchsenius, F., Suárez, L.S.S. & Prince, M.L. (2012) Molecular phylogeny and redefined generic limits of *Calathea* (Marantaceae). *Systematic Botany* 37: 620–635.
<http://dx.doi.org/10.1600/036364412X648571>
- Kennedy, H. (1988) *Calathea*. In: Harling, G. & Andersson, L. (Eds.) *Flora of Ecuador* 32, University of Göteborg, Göteborg; Riksmuseum, Stockholm; Pontificia Universidad Católica del Ecuador, Quito, pp. 14–136.
- Linnaeus, C. (1753) *Species Plantarum*. Laurentii Salvii, Holmiae, 1231 pp.
<http://dx.doi.org/10.5962/bhl.title.669>
- Meyer, G.F.W. (1818) *Primitiae Florae Essequiboensis adjunctis descriptionibus centum circiter stirpium novarum, observationibusque criticis*. Dieterich, Göttingen, 316 pp.
<http://dx.doi.org/10.5962/bhl.title.49397>
- Nees von Esenbeck, C.G.D. (1831) Über die Gattungen *Maranta* und *Thalia*. *Linnaea* 6: 303–431.
- Petersen, O.G. (1890) Marantaceae. In: Martius, C.F.P., Mez, C., Kronfeld, E.M. & Schumann, K. (Eds.) *Flora Brasiliensis* 3(3). Leipzig, München, Wien, pp. 81–172.
- Schumann, K. (1902) Marantaceae. In: Engler, A. (Ed.) *Das Pflanzenreich* 4(48). Engelmann, Leipzig, pp. 1–184.
- Vieira, S. & Souza, V.C. (2008) Four new species of *Maranta* L. (Marantaceae) from Brazil. *Botanical Journal of the Linnean Society* 158: 131–139.
<http://dx.doi.org/10.1111/j.1095-8339.2008.00852.x>