(2786) Proposal to change the conserved type of *Ipomoea*, nom. cons. (*Convolvulaceae*)

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(2786) ***Ipomoea*** L., Sp. Pl.: 159. 1 Mai 1753 [*Convolvul.*], nom. cons.
Typus: *I. triloba* L., typ. cons. prop.

Ipomoea L. is the largest (650–900 species, depending on the concept adopted) and most iconic genus in *Convolvulaceae*, a family of c. 1880 species (data from Staples, Convolvulaceae Unlimited, 2012 at: http//convolvulaceae.myspecies.info), including the important crop sweetpotato, *Ipomoea batatas* (L.) Lam. (Tabl. Encycl. 1: 465. 1793), and several ornamental species commonly known as "bindweeds" or "morning glories" (Wilkin in Kew Bull. 54: 853–876. 1999; Mabberley, Mabberley's Plant-book. 2008). The genus has a long history of taxonomic and nomenclatural problems, mainly for the lack of a clear morphological circumscription and overlap with other genera. In his *Species plantarum* (1753), Linnaeus distinguished two genera, *Convolvulus* L. and *Ipomoea*, whose species suffered numerous re-arrangements, between *Ipomoea* and *Convolvulus*, but especially into numerous more recently described genera, which amount today to a total of 60 (Staples in World Checklist of Vascular Plants, v.2.0. 2020, http://wcvp.science.kew.org/ retrieved 2 Apr 2020).

Linnaeus included 17 species in *Ipomoea*. However, of these, only the first, *I. quamoclit* L., truly matched his earlier generic description published in 1737 (Gen. Pl.: 47; "*Petalum infundibuliforme; Tubus sere cylindraceus, longissimus*"). Linnaeus actually replaced the name *Quamoclit* of Tournefort (Inst. Rei Herb., ed. 3, 2: t. 39. 1719) with his own *Ipomoea* (see Manitz in Taxon 25: 193–194. 1976). Hence, *I. quamoclit* would be the logical type of *Ipomoea*. However, in the past, some argued for a separation between the genus *Quamoclit* Mill. and *Ipomoea* (Roberty in Candollea 14: 11–65. 1952) that would result in an unfortunate recombination of hundreds of *Ipomoea* names, and which led Manitz (l.c.) to propose to conserve the name *Ipomoea* with another, conserved, type, *I. pes-tigridis* L., which was accepted (see Taxon 30: 145. 1981, 31: 310. 1982).

More recently, molecular phylogenetic analyses have greatly assisted in obtaining a better understanding of the classification and phylogeny of the family as a whole and a much more stable taxonomy is now emerging. These studies have also shown that within the tribe *Ipomoeeae* Hall. f. s.l., *Ipomoea* is paraphyletic with 10 genera nested within it: *Argyreia* Lour., *Astripomoea* A. Meeuse, *Blinkworthia* Choisy, *Lepistemon* Blume, *Lepistemonopsis* Dammer, *Mina* Cerv., *Paralepistemon* Lejoly & Lisowski, *Rivea* Choisy, *Stictocardia* Hall. f., and *Turbina* Raf. (Wilkin, l.c.; Manos & al. in Syst. Bot. 26: 585–602. 2001; Miller & al. in Syst. Biol. 51: 740–753. 2002; Stefanović & al. in Amer. J. Bot. 89: 1510–1522. 2002, in Syst. Bot. 28: 701–806. 2003; Eserman & al. in Amer. J. Bot. 101: 92–103. 2014; Simões & al. in Bot. J. Linn. Soc. 179: 374–387. 2015). This furthered the debate about the actual identity of *Ipomoea*. Wilkin (l.c.) proposed the inclusion of all genera of *Ipomoeeae* into an *Ipomoea* s.l. This was recently taken up by Munõz-Rodríguez & al. (in Nature, Pl. 5: 1136–1154. 2019), soaring the genus to c. 900 species, without proposing any infrageneric classification and allowing huge morphological variation.

As molecular phylogenetic results have also demonstrated, tribe *Ipomoeeae* can be subdivided into two main clades (Stefanović & al., l.c. 2003; Wood & al. in Phytokeys 143: 1–823. 2020) with the informal names "Astripomoeinae" and "Argyreiinae". While the first concentrates a large diversity of the Neotropical *Ipomoea*, the latter is more widely distributed throughout Africa, Asia, Australia, and many of the Pacific islands, and is mostly absent from the Neotropics. Unfortunately, "Argyreiinae" includes the presently conserved type of *Ipomoea*, *I. pes-tigridis* L. Hence, implementing a new classification with the distinction of several clades at genus level would result in around 600 name changes for the *Ipomoea* within the "Astripomoeinae" clade, affecting mostly the American species of the genus, many of which have ornamental value. Moreover, the most economically important species, *I. batatas* (L.) Lam., also does not belong to the clade including the type; therefore, a potential segregation of *Ipomoea* s.l. into smaller genera would result in the renaming of sweetpotato. With an annual production of over 90 million metric tons (data from Shahbandeh, Global sweet potato production volume 2010–2018. 2020, https://www.statista.com/statistics/812343/global-sweet-potato-production) and hundreds if not thousands of registered cultivars (in Asia and the Pacific region alone, there exists an estimated 12,000 landraces, while in 1994 the International Potato Center (CIP) in Peru held a total of 6500 sweetpotato accessions; Takagi & al. in Flach & Rumawas, PROSEA 9, Plants Yielding Non-seed Carbohydrates: 102–107. 1999), a name change in sweetpotato would certainly result in a very costly and extreme effort by the commercial enterprises involved.

As shown above (Wilkin, l.c.; Munõz-Rodriguez & al., l.c.), some authors regard the presence of the type of *Ipomoea* in the "Argyreiinae" clade as an obstacle towards a most useful renewal of the re-circumscription of the genera in tribe *Ipomoeeae* because of the sheer amount of necessary name changes and have preferred to advocate the inclusion of all the taxonomic diversity into a mega-genus *Ipomoea*. We think nomenclature should not block the development of a more stable and logical classification and here propose to replace the conserved type of the genus with a species included in the "Astripomoeinae" clade. This would permit those who wish to create a new classification to do so with far fewer nomenclatorial consequences. Thus, the generic name *Ipomoea* would be retained for the clade with the highest taxonomic diversity (c. 600 species), while preventing a name change in the economically important *I. batatas*.

There are numerous examples of changes in nomenclature that are rejected by the scientific community when they cause significant destabilization. For example, the recent taxonomic changes in "monkeyflowers" (*Mimulus*, *Phrymaceae*; Barker & al. in Phytoneuron 39: 1–60. 2012, Lowry & al. in Taxon 68: 617–623. 2019, Nesom & al. in Taxon 68: 624–627. 2019) were rejected by the evolutionary biology community and have brought to the forefront discussions about when nomenclatural changes are appropriate. Most scientists recognize the importance of naming groups based on evolutionary lineages, but to what extent this is applied must be done with the utmost consideration. As it concerns *Ipomoea*, it is a priority to allow the possibility to subdivide the genus into smaller genera, while maintaining maximal nomenclatural stability.

Manitz (l.c.), in proposing to conserve *Ipomoea* with a conserved type, identified the early confusion in the circumscription of *Ipomoea* and *Convolvulus* and acknowledged the need to stabilize nomenclature. His argument followed previous authors, especially House (in Ann. New York Acad. Sci. 18: 181–263. 1908) in considering that, although *I. quamoclit* would be the "historically correct" species to be selected, its morphological particularities (red tubular corolla) might have blocked those who wanted to regard *Quamoclit* as a distinct genus because of the very high number of new names that would then be needed to accommodate the remainder of the *Ipomoea* species. What Manitz did not know, was that the type House had already proposed, *Ipomoea pes-tigridis* L., and which he selected for conservation, would later lead to almost the same situation.

In view of the recent molecular and systematic works that suggest the phylogenetic position of *I. pes-tigridis* as distantly related to the largest part of the genus *Ipomoea*, we would propose alternatively *I. triloba* L. as the conserved type for the genus. The broad-

scale molecular phylogenetic study of Wood & al. (l.c.) demonstrated with ample sampling that *I. triloba* is one of the most closely related species to *I. batatas*. A range of important ornamental species are also fairly closely related to *I. batatas* and *I. triloba*, when considering a broader clade (e.g., *I. nil* (L.) Roth, *I. tricolor* Cav., and *I. purpurea* (L.) Roth). Therefore, our proposed type will allow future studies to re-assess the generic delimitation within tribe *Ipomoeeae*, without the fear of destabilizing the nomenclature of the group, in particular the species with greatest economic importance.

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(2787) Proposal to conserve the name *Graffenrieda* against *Centronia* (*Melastomataceae*: *Merianieae*)

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(2787) ***Graffenrieda*** DC., Prodr. 3: 105. Mar (med.) 1828 [*Melastomat.*], nom. cons. prop.
Typus: *G. rotundifolia* (Bonpl.) DC. (*Rhexia rotundifolia* Bonpl.).

(=) *Centronia* D. Don in Mem. Wern. Nat. Hist. Soc. 4: 284, 314. 1823 (post 17 Mai), nom. rej. prop.
Typus: *C. laurifolia* D. Don.

Phylogenetic analyses of the tribe *Merianieae* (*Melastomataceae*) have shown that the type of *Centronia* D. Don is resolved within *Graffenrieda* DC., which is otherwise resolved as monophyletic (Dellinger & al. in New Phytol. 221: 1136–1149. 2018, in Commun. Biol. 2: 453. 2019; Caetano & al. in Perspect. Pl. Ecol. Evol. Syst. 46: 125556. 2020; Reginato & al. in Molec. Phylogen. Evol. 148: 106815. 2020). *Centronia* has long been considered a genus with problematic delimitations, especially when compared with *Graffenrieda* and *Meriania* Sw. (Wurdack in Lasser, Fl. Venezuela 8: 226. 1973, in Phytologia 35: 1–13. 1976; Almeda in Proc. Calif. Acad. Sci., ser. 4, 48: 141–152. 1993; Mendoza & Fernández in Anales Jard. Bot. Madrid. 69: 259–294. 2012). To date, 21 species names have been validly published in *Centronia*. However, only five, including the type, *C. laurifolia* D. Don, are currently accepted in the genus as the remaining have been transferred to *Meriania*