Peperomia leptostachya (Piperaceae) revived

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Peperomia leptostachya (Piperaceae) revived

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Abstract

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For about forty-five years a far too heterogenous concept of *Peperomia blanda* (Jacq.) Kunth has been adopted. A strong plea is made to apply the name *Peperomia leptostachya* Hook. & Arn. for a species with a wide distribution in the paleotropics and to limit the use of the name *Peperomia blanda* to a neotropical species from northern Venezuela. Several new synonyms of *Peperomia leptostachya* are presented.

Keywords

PIPERACEAE – *Peperomia* – Taxonomy – Synonymy

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Introduction

About 45 years ago, after having served anybody's need for more than 140 years, *Peperomia leptostachya* Hook. & Arn. (*Piperaceae*) (Fig. 1) from the paleotropics was reduced to varietal rank as *P. blanda* var. *leptostachya* (Hook. & Arn.) Düll. The justification was its 'strong resemblance' with *P. blanda* (Jacq.) Kunth from the neotropics (Düll, 1973: 110). This resemblance is based on an extremely wide, hence heterogeneous, concept of *P. blanda*. Nevertheless, the excellent illustration of the basionym, *Piper blandum* Jacq. (Jacquin, 1793; Fig. 2), the well-preserved holotype, *Jacquin s.n.* at W [W-0024313] and the many extant 19th century herbarium specimens of cultivated plants, many of them apparently propagated from cuttings taken at the Schönbrunn greenhouses in Vienna from the same clone from which the type was pressed, leave very little room for interpretation. They all show plants with a distinct leaf dimorphism: small and elliptic at the base and gradually larger and more lanceolate with a long acuminate apex towards the top of the stem. This is quite different from plants that occur in the paleotropics, with elliptic to obovate leaves and a short acute to obtuse or even rounded apex along the entire stem. Amount, kind and distribution of indument and colours may also differ (Fig. 3), but differences are minor and more variable. The presence or absence of a pseudopeduncle in mature fruits appears to be variable and of no significance in distinguishing both taxa.

Even within the neotropics a far too wide *P. blanda* concept has been followed. *Peperomia blanda* does not appear to occur outside northern Venezuela and specimens form elsewhere identified as *P. blanda* apparently belong to several other species (Zanotti et al., 2012: 135, 145).

Hüber (1988: 294) introduced the new combination *P. blanda* var. *floribunda* (Miq.) Huber for *P. arabica* var. *floribunda* Miq. and mentioned among the synonyms *P. blanda* var. *leptostachya* (Hook & Arn.) Düll. The latter makes the name *P. blanda* var. *floribunda* nomenclaturally superfluous and the earlier published name at varietal rank, *P. blanda* var. *leptostachya*, takes priority (Turland et al., 2018: Art. 52.1). The variety *floribunda* is generally adopted in studies that cover the Pacific area (Fosberg, 1992; Forster, 1993; Wrigley & Fagg, 1996; Florence et al., 1995; Florence, 1997; Welsh, 1998; Herbst & Wagner, 1999). However, its type, *Goudot s.n.* (holo-: G [G00014183]!; iso-: U [U0074949]!) is from Madagascar. On the other hand, the name *P. blanda* var. *leptostachya* is generally used for Africa (Gibbs Russell et al., 1987; Jaarsveld, 1992; Diniz, 1996; Fabian & Germishuizen, 1997; Phiri, 2005), while its type, *Beechey s.n.* [*Lau & Collie s.n.*] (G [G00438518]!, K [K000820455]!), is from the Hawaiian Islands.

The presentation of the paleotropical *P. leptostachya* as a variety of the neotropical *P. blanda* (either as var. *leptostachya* or var. *floribunda*) leads to a considerable widening of the *P. blanda* concept and eventually to a synonymization of both varietal names with *P. blanda* itself (Verdcourt, 1996; Gilbert & Xia, 1999; Tseng et al., 1999; Edwards et al., 2000; Immelman, 2000). This results in a current pantropical *P. blanda* concept, serving as a general container for several distinct entities and not in accordance any more with the original *P. blanda* description and type. It is true that also the current concept of *P. leptostachya* is rather wide and researchers might come up with sound argumentation for reinstating some of its synonyms. However, when this would be proposed, comparison should be made with *P. leptostachya* and not with *P. blanda*. Otherwise unnecessary reinstatement of synonyms might result. The reinstatement of *P. dindygulensis* Miq. is a recent example. Differences with *P. blanda* were correctly evaluated but, unfortunately, no comparison with *P. leptostachya* was presented (Suwanphakdee et al., 2017).

Fig. 1. – *Peperomia leptostachya* Hook. & Arn. Ink and watercolours on paper by Charles White from the Endeavour botanical illustrations. [BF: tab. 644; © The Trustees of the Natural History Museum, London]

Fig. 2. – *Peperomia blanda* (Jacq.) Kunth. Colour copper engraving from Jacquin (1793: tab. 218). [Bibliothèque des Conservatoire et Jardin botaniques, Genève]

Taxonomy

Peperomia leptostachya Hook. & Arn., Bot. Beechey Voy. 2: 96. 1832.

≡ *Peperomia blanda* var. *leptostachya* (Hook. & Arn.) Düll. in Bot. Jahrb. Syst. 93: 110. 1973.

Lectotypus (designated by Yuncker, 1937: 58): **Hawaii:** Oahu, s.d., *Beechey s.n. [Lau & Collie s.n.]* (K [K000820455]!; isolecto-: G [G00438518]!).

= *Peperomia recurvata* var. *philippinensis* Miq. in London Journ. Bot. 4: 423. 1845, **syn. nov.**

= *Peperomia moerenhoutii* var. *petiolata* C. DC. in A. DC., Prodr. 16(1): 458. 1869, **syn. nov.**

= *Peperomia arabica* var. *parvifolia* C. DC. in Bot. Jahrb. Syst. 19: 230. 1894, **syn. nov.**

= *Peperomia brachytrichoides* Engl. in Bot. Jahrb. Syst. 45: 277. 1910, **syn. nov.**

= *Peperomia kyimbilana* C. DC. in Bot. Jahrb. Syst. 57: 19. 1920, **syn. nov.**

= *Peperomia moerenhoutii* var. *macrophylla* Setchell in Univ. Calif. Publ. Bot. 12: 164. 1926, **syn. nov.**

= *Peperomia leptostachya* var. *attenuapica* Yunck. in Bull. Bishop Mus. 143: 61. 1937, **syn. nov.**

= *Peperomia blanda* var. *floribunda* (Miq.) Hüber in Dass. & Fosberg, Revised Handb. Fl. Ceylon 6: 294. 1988, **syn. nov.**

Notes. – A strong plea is made in favour of using the name *P. leptostachya* for a species with a wide paleotropic distribution, for which many names have been introduced during the years, whereas the name *P. blanda* should be restricted to specimens fully agreeing with its type and protologue and with a distribution limited to northern Venezuela.

Only synonyms of *P. leptostachya* are listed here that, to our knowledge, have not been presented in print yet. Several further synonyms have been published earlier in Miquel (1843), Yuncker (1937), Gibbs Russel et al. (1987), Hüber (1988), Forster (1993), Dimiz (1996), Gilbert & Xia (1999), Tseng et al. (1999) and Suwanphakdee et al. (2017).

No type is designated in the protologue of *P. leptostachya*. However, because the publication concerned only covers collections made by the botanists Lau and Collie during Captain Beechey's Voyage, it is quite easy to pinpoint the collection on which the protologue is based. Two duplicates are extant (G and K). They both bear an identical annotation "*Peperomia leptostachya* H&A, Oahu, Beechey". Miquel annotated both specimens but only cited the one in G in Miquel (1843: 138). This cannot be accepted as an effective lectotypification (Turland et al., 2018: Art. 9.23) because another specimen is also cited (*Gaudichaud s.n.*). Yuncker (1937: 58) cited the specimen at K as type and this is here treated as an error to be corrected to lectotype (Turland et al., 2018: Art. 9.10). Düll (1973: 110) and Florence (1997: 173) cited the G specimen as the holotype without any argumentation. Forster (1993: 97) cited a picture at BRI of the "isoype" at K. Verdcourt (1996: 18) cited both the G and K specimens but with question marks about their exact type status. He wrote: "The holotype could be expected in E where both Hooker's and Arnott's collections are of this period". Scrutinizing the *Peperomia* holdings at E does not reveal an additional duplicate. However, the specimen at K is bearing a stamp that points to its provenance from Hooker's herbarium and should be considered as the lectotype.

Scans of the diagnoses as well as pictures of the types of the mentioned taxa are accessible online through the *Taxonomic Repertory of the genus Peperomia* (Mathieu, 2001–2020).

Fig. 3. – *Peperomia* Ruiz & Pavon in cultivation at the Ghent University Botanical Garden. **A.** *Peperomia blanda* (Jacq.) Kunth (from Venezuela); **B.** *Peperomia leptostachya* Hook. & Arn. (from Hawaiian Islands). [Photos: A. Vanden Bavière, 2005]

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