



Typification of the Linnaean name *Bignonia peruviana* (Vitaceae)

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Vitaceae Juss. is a family of 15 genera and about 750 species mainly distributed in tropical regions of Asia, Africa, Australia, the neotropics, and the Pacific islands, with a few genera [*Vitis* Linnaeus (1753: 202), *Parthenocissus* Planchon [1887: 447(–448)], *Ampelopsis* Michaux (1803: 159), and *Nekemias* Rafinesque (1838: 87)] occurring in temperate regions (APGIII 2009, Wen 2007, Wen *et al.* 2014). The family is well known for its economical importance since several species, especially *Vitis vinifera* Linnaeus (1753: 202) and several artificial hybrids of *Vitis*, are important sources of grapes, wine, and raisins (Ardenghi *et al.* 2014). *Bignonia peruviana* Linnaeus (1753: 625), one of the 19 Vitaceae names published by Carl Linnaeus (see Jarvis 2007) appears to be yet untypified, and is here investigated as part of ongoing studies on: (1) Linnaean types (by D. Iamonico, see e.g., Ferrer-Gallego *et al.* 2014, Iamonico 2014a, 2014b, 2014c, Iamonico *et al.* 2014, 2015, Sukhorukov *et al.* 2014); (2) the genus *Vitis* in Italy (by N.M.G. Ardenghi, E. Banfi, and G. Galasso, see e.g. Ardenghi *et al.* 2014, 2015a, 2015b); (3) the Neotropical Vitaceae (by J. Lombardi, see e.g., Lombardi 1995, 1997, 2000, Rodrigues *et al.* 2014); and (4) the Bignoniaceae (by L.G. Lohmann, see e.g., Lohmann *et al.* 2013, Lohmann & Taylor 2014, Fonseca *et al.* 2015, Medeiros & Lohmann 2015, Zuntini *et al.* 2014).

The Linnaean protologue (Linnaeus 1753: 625) consisted of a short diagnosis (“*BIGNONIA foliis decompositis: foliolis incisis, geniculis cirrhosis*”), the first part of which was taken directly from Linnaeus (1738: 317), and synonyms by Royen (1740: 290), Plumier (1703: 5), and Plukenet (1692: pl. 162 fig. 4; 1696: 108) were cited. Linnaeus (1738: 317) originally reported the provenance of *Bignonia peruviana* as “*Crescit in America*”, and subsequently as “*Habitat in Peru*” (1753: 625).

Plukenet (1692, 1696) provided an iconography that is original material for the name *Bignonia peruviana*. In the Clifford Herbarium at BM, there is one sheet (“*Bignonia 5*” barcode BM000646173) that includes the Clifford phrase “*Bignonia americana arbor, flore luteo, fraxini folio*” which is linked to Plumier’s synonym cited by Linnaeus (1753). This sheet represents original material. No other original material was located at any other Linnaean or Linnaean-linked herbaria (see Jarvis 2007).

The illustration by Plukenet matches the Linnaean diagnosis partially as it shows composite leaves with incised margins (“*foliis decompositis: foliolis incisis* [...]”), but lacks tendrils at nodes (“*geniculis cirrhosis*”). This illustration, therefore, seems to disagree from the diagnosis and we prefer to avoid it for typification purposes. On the other hand, the Clifford specimen perfectly matches the diagnosis of Linnaeus and is here designated as the lectotype of the name *Bignonia peruviana*.

The Clifford specimen is characterized by the following traits: liana habit; stem glabrous; stipulate, alternate, bipinnate leaves; leaflets ovate with margins dentate to incised, base attenuate, apex acute, abaxially sparsely pubescent; tendrils opposite to leaves. The specimen shows two very young inflorescence buds, showing the little flowers characteristic of Vitaceae. Another important character recovered from Clifford’s specimen is the opposite position of tendrils that is so typical of members of the family Vitaceae. Among the Neotropical Vitaceae, the only species that shows a leaf that resembles that of *Bignonia peruviana* is *Nekemias arborea* (L.) J.Wen & Boggan in Wen *et al.* (2014: 13, see e.g., Lombardi, 2000). A detailed comparison of Clifford’s specimen with the type of *Vitis arborea* Linnaeus (1753: 203) [an image by Plukenet (1705: pl. 412 fig. 2, “*Frutex scandens Petroselini foliis Virginianus, claviculis donatus*”) designated by J. Reveal in Jarvis (2007: 925)] further indicates that the Clifford specimen at BM indeed represents *Nekemias arborea*.