

## Nomenclatural and taxonomic review of Passifloraceae species illustrated and described by Vellozo in *Flora Fluminensis*

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**RESUMO** – (Revisão nomenclatória e taxonômica das espécies de Passifloraceae descritas e ilustradas por Vellozo na *Flora Fluminensis*) A nomenclatura e a taxonomia das 25 espécies de Passifloraceae nomeadas por Vellozo na *Flora Fluminensis* foram revisadas com base na consulta das estampas e diagnoses latinas. *Passiflora mediterranea*, *P. ovalis*, *P. porophylla*, *P. silvestris*, *P. tetraden* e *P. villosa* são as espécies propostas por Vellozo aceitas aqui. Quinze espécies (*P. arvensis*, *P. bilobata*, *P. dentata*, *P. diaden*, *P. globosa*, *P. lunata*, *P. maliformis*, *P. oliviformis*, *P. pallida*, *P. pertusa*, *P. polyaden*, *P. quadrangularis*, *P. rubra*, *P. sururuca* e *P. violacea*) são sinônimas, foram identificadas erroneamente ou possuem nomes ilegítimos: *Passiflora edulis*, *P. foetida* e *P. racemosa* foram corretamente identificadas; no entanto, a planta reconhecida por Vellozo como *P. foetida* é atualmente considerada *P. foetida* var. *fluminensis*. *Passiflora obtusa* foi considerada *incertae sedis*.

**Palavras-chave:** Brasil, *Passiflora*, José Mariano da Conceição Vellozo, nomenclatura, taxonomia

**ABSTRACT** – (Nomenclatural and taxonomic review of Passifloraceae species described and illustrated by Vellozo in *Flora Fluminensis*). The nomenclature and taxonomy of the 25 species of Passifloraceae named by Vellozo in *Flora Fluminensis* were reviewed by examining the plates and Latin diagnoses. *Passiflora mediterranea*, *P. ovalis*, *P. porophylla*, *P. silvestris*, *P. tetraden*, and *P. villosa* are species proposed by Vellozo that are accepted herein. Fifteen species (*P. arvensis*, *P. bilobata*, *P. dentata*, *P. diaden*, *P. globosa*, *P. lunata*, *P. maliformis*, *P. oliviformis*, *P. pallida*, *P. pertusa*, *P. polyaden*, *P. quadrangularis*, *P. rubra*, *P. sururuca*, and *P. violacea*) are synonyms, were misidentified, or have illegitimate names. *Passiflora edulis*, *P. foetida*, and *P. racemosa* were correctly identified; however, the plant recognized by Vellozo as *P. foetida* is now considered *P. foetida* var. *fluminensis*. *Passiflora obtusa* was considered *incertae sedis*.

**Key words:** Brazil, *Passiflora*, José Mariano da Conceição Vellozo, nomenclature, taxonomy

*Flora Fluminensis* is the first and one of the most important works edited by a Brazilian on the flora of Brazil. It is the result of the first botanical expedition in southern Brazil, which was led by a Franciscan friar, José Mariano da Conceição Vellozo (1742–1811). The goal of the expedition was to gather information on natural resources, especially the flora, from the captainship of Rio de Janeiro to the hinterland of the captainship of São Paulo. The research took place between 1782 and 1790 and the published work included 1,640 species and 374 genera, 104 of which were considered new. Vellozo was supported by the Vice-Roy Luis de Vasconcellos e Souza and was helped by a number of collaborators, including several draftsmen, the military (during the fieldwork), and other botanists who described and identified the plants and probably came from Portugal where he took the entire collection to finish the project (Damasceno 1977; Lima 1995).

Vellozo (1831) illustrated 25 species of *Passiflora*, but the descriptions were published later (Vellozo 1881), with the exception of *P. racemosa*. *Flora Fluminensis* was published in three distinct periods: some text was printed in 1825, excluding the species of Passifloraceae, but effectively published in 1829 (from September 7<sup>th</sup> to November 28<sup>th</sup>); the illustrations were printed in 11 volumes, which were edited in 1827 and effectively published in 1831 (on October 29<sup>th</sup>); and the nearly complete text, with all species described, was

issued on July 8<sup>th</sup>, 1881 (Borgmeier 1937; the reasons for the delays in the publications are discussed in Carauta 1973 and Lima 1995).

Binomials that were not new taxa were included in the *Flora Fluminensis* along with their botanical descriptions, indigenous names, uses and habitats, but without authorship. By examining the list of names, the diagnoses and the illustrations in volume 9 (Vellozo, 1831), we noticed that some binomials used by Vellozo were synonyms or homonyms of names previously adopted by others. In spite of this, *Flora Fluminensis* is a remarkable work that has been consulted and reviewed by numerous taxonomists worldwide. Unfortunately, the botanical collections made by Vellozo were expropriated during the Napoleonic invasion of Portugal, in 1808, and disappeared after they were taken to France. Due to the lack of voucher collections, the plates, many of them of excellent quality, are usually the best option that botanists have for reviewing the described taxa (e.g., Sampaio & Peckolt 1943; Stellfeld 1950; Mello Filho 1975; Lima 1995).

The 25 species of Passifloraceae named by Vellozo in *Flora Fluminensis* are listed below; the accepted names are in boldface. The analysis was based on the plates and Latin diagnoses in Vellozo's (1831, 1881) works and the names have been reviewed and updated to reflect current nomenclatural and taxonomic perspectives.

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- 1- *Passiflora arvensis* Vell., Fl. Flumin. Icon. 9: tab. 71. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 376. 1881. = *P. ovalis* Vell. [Vitta & Bernacci 2004; *contra* Killip 1938, who identified it as *Tetrastylis ovalis* (Vell.) Killip].
- 2- *Passiflora bilobata* auct. non Juss. (1805) in Vell., Fl. Flumin. Icon. 9: tab. 78. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 378. 1881. = *P. rubra* L. (Killip 1938; *contra* Sampaio & Peckolt 1943, who identified it as *P. capsularis* L.).
- 3- *Passiflora dentata* Vell., Fl. Flumin. Icon. 9: tab. 94. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 381. 1881. = *P. kermesina* Link & Otto (Killip 1938; Cervi 1997). It is not *P. raddiana* DC.; *contra* Sampaio & Peckolt 1943).
- 4- *Passiflora diaden* Vell., Fl. Flumin. Icon. 9: tab. 90. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 380. 1881. = *P. edulis* Sims (Killip 1938; Cervi 1997).
- 5- *Passiflora edulis* Sims (1818) in Vell., Fl. Flumin. Icon. 9: tab. 89. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 380. 1881.
- 6- *Passiflora foetida* auct. non L. (1753) in Vell., Fl. Flumin. Icon. 9: tab. 86. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 379. 1881. = *P. foetida* var. *fluminensis* (M. Roem) Killip (Killip 1938; *contra* Gardner 1845 and Sampaio & Peckolt 1943, who identified it as *P. vellozii* Gardner).
- 7- *Passiflora globosa* Vell., Fl. Flumin. Icon. 9: tab. 85. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 379. 1881. = *P. suberosa* L. (Killip 1938; Sampaio & Peckolt 1943).
- 8- *Passiflora lunata* auct. non Sm. (1790); Fl. Flumin. Icon. 9: tab. 80. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 378. 1881. = *P. rubra* L. (Killip 1938; *contra* Sampaio & Peckolt 1943, who identified it as *P. capsularis* L.).
- 9- *Passiflora maliformis* auct. non L. (1753) in Vell., Fl. Flumin. Icon. 9: tab. 73. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 376. 1881. = *P. alata* Curtis (Killip 1938, as *P. alata* 'Dryand.').
- 10- *Passiflora mediterranea* Vell., Fl. Flumin. Icon. 9: tab. 72. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 376. 1881.  
*Passiflora jilekii* Wawra, Oesterr. Bot. Z. 13: 110. 1863. (as 'Jileki'). **Syn. nov.**
- 11- *Passiflora obtusa* auct. non L. (1753) in Vell., Fl. Flumin. Icon. 9: tab. 81. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 378. 1881. *Incertae sedis*.  
It is not *P. pohlii* Mast. (*contra* Killip 1938) because, based on the plate, it appears to be glabrous. It cannot be safely considered a synonym of *P. organensis* Gardner (Gardner 1845, Sampaio & Peckolt 1943) because the flower was not illustrated.
- 12- *Passiflora oliviformis* auct. non Mill. (1768) in Vell., Fl. Flumin. Icon. 9: tab. 83. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 379. 1881. (as 'olivaeforma'). = *P. suberosa* L. (Killip 1938; Sampaio & Peckolt 1943).
- 13- *Passiflora ovalis* Vell., Fl. Flumin. Icon. 9: tab. 75. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 377. 1881.
- 14- *Passiflora pallida* auct. non L. (1753); Vell., Fl. Flumin. Icon. 9: tab. 70. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 376. 1881. = *P. mucronata* Lam. (Killip 1938; Sampaio & Peckolt 1943; Cervi 1997).
- 15- *Passiflora pertusa* Vell., Fl. Flumin. Icon. 9: tab. 79. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 378. 1881. = *P. porophylla* Vell. **Syn. nov.** (*contra* Killip 1938 and Sampaio & Peckolt 1943, who identified it as *P. organensis* Gardner).
- 16- *Passiflora polyadena* Vell., Fl. Flumin. Icon. 9: tab. 92. 1831 ('1827'). (as 'polyaden'); Arch. Mus. Nac. Rio de Janeiro 5: 381. 1881. = *P. foetida* L. var. *foetida* (Killip 1938; Sampaio & Peckolt 1943).
- 17- *Passiflora porophylla* Vell., Fl. Flumin. Icon. 9: tab. 82. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 378. 1881.  
*Passiflora organensis* Gardner, London J. Bot. 4: 104. 1845. **Syn. nov.**
- 18- *Passiflora quadrangularis* auct. non L. (1759) in Vell., Fl. Flumin. Icon. 9: tab. 76. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 377. 1881. = *P. alata* Curtis.  
It differs from *P. quadrangularis* L. because the leaves have 6 or 9 pairs of veins rather than 10–12 pairs on each side (*contra* Sampaio & Peckolt 1943).
- 19- *Passiflora racemosa* Brot. (1818) in Vell., Fl. Flumin. Icon. 9: tab. 93. 1831 ('1827').  
It was not published as a new species (*contra* Sampaio & Peckolt 1943).
- 20- *Passiflora rubra* Vell., Fl. Flumin. Icon. 9: tab. 77. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 377. 1881, *hom. post.*, non L. (1753). = *Passiflora porophylla* Vell. **Syn. nov.** (*contra* Gardner 1845, Killip 1938, Sampaio & Peckolt 1943, who identified it as *P. organensis* Gardner).
- 21- *Passiflora silvestris* Vell., Fl. Flumin. Icon. 9: tab. 74. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 377. 1881.

*Passiflora galbana* Mast., Gard. Chron. 20: 555; fig. 97. 1896. **Syn. nov.**

22- *Passiflora sururuca* Vell., Fl. Flumin. Icon. 9: tab. 88. 1831 (1827); Arch. Mus. Nac. Rio de Janeiro 5: 380. 1881. = *P. setacea* DC. (Killip 1938; Sampaio & Peckolt 1943; Cervi 1997).

23- *Passiflora tetraden* Vell., Fl. Flumin. Icon. 9: tab. 91. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 381. 1881.

*Passiflora sidifolia* M. Roem., Fam. Nat. Syn. Monogr. 2: 173. 1846 (as 'sidaefolia'). **Syn. nov.**

24- *Passiflora villosa* Vell., Fl. Flumin. Icon. 9: tab. 87. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 380. 1881.

25- *Passiflora violacea* Vell., Fl. Flumin. Icon. 9: tab. 84. 1831 ('1827'); Arch. Mus. Nac. Rio de Janeiro 5: 379. 1881. = *P. amethystina* J.C. Mikan (Deginani 2001)

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