



Typifications in *Passiflora* L. (Passifloraceae) described by Frei José Mariano da Conceição Vellozo

Michaele Alvim Milward-de-Azevedo¹

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ABSTRACT

This work presents 19 lectotypifications and one epitype for the genus *Passiflora* (Passifloraceae *sensu stricto*) described by Frei José Mariano da Conceição Vellozo in Flora Fluminensis. The original illustrations are designated as lectotypes. *Passiflora obtusa* is here proposed to be a synonym of *P. porophylla*.

Keywords: Brazil, Flora Fluminensis, epitype, lectotype, nomenclature, passionflower

Introduction

“Flora Fluminensis” is considered one of the first compilations of Brazilian flora (Knapp *et al.* 2015), and was the result of pioneering surveys of plants in the state of Rio de Janeiro and some parts of the state of São Paulo, when the state of Rio de Janeiro had not yet been defined (Damasceno 1977; Lima 1995; Knapp *et al.* 2015). Led by Frei José Mariano da Conceição Vellozo during the 18th century (1782–1790), Flora Fluminensis provided 1,639 succinct descriptions and botanical illustrations of diagnostic characters distributed among 11 volumes, which were effectively published 39 years later, leading to the loss of authorship of many genera and species (Cervi & Rodrigues 2010; Bediaga & Lima 2015).

According to Borgmeier (1937) and Carauta (1973), Flora Fluminensis was published over three different time periods: the text was printed in 1825 and distributed in 1829; the illustrations were edited in 1827 and published 1831; and the species descriptions were printed in 1881.

Vellozo’s morphological descriptions usually mentioned the place of collection and popular or indigenous names

and uses, and followed the sexual classification system proposed by Linnaeus (Kury 2015), but without indicating vouchers (Lima 1995). These factors have made it difficult to identify these species, and many names have since been treated as problematic or altogether ignored by science (Knapp *et al.* 2015).

According to Kury (2015), the illustrations of Flora Fluminensis, especially of the reproductive parts of flowers, serve as valuable references because no information exists regarding herbarium or type material fixed to species names. Prior to the 20th century, modern rules of the International Code of Botanical Nomenclature were not in force, thus adding even more value to the illustrations. Braga (2005) points out that Vellozo does not mention the existence of watercolors or living or herbarium material, and that he only had access to monochromatic versions of the illustrations.

Binomials were included in Flora Fluminensis along with descriptions of new species, as examined by Cervi & Rodrigues (2010) in their study of the species names, diagnoses, and illustrations in Volume 9.

Due to the absence of type material, and according to Art. 9.11 of the International Nomenclature Code for algae, fungi

¹ Departamento de Ciências do Meio Ambiente, Instituto Três Rios, Universidade Federal Rural do Rio de Janeiro, Av. Prefeito Alberto da Silva Lavinhas 1847, Centro, 25802-100, Três Rios, RJ, Brazil, michaelemilward@gmail.com

and plants (McNeill *et al.* 2012), it is necessary to designate lectotypes for these species. Recently, lectotypifications for the species described and illustrated by Vellozo were undertaken by Lima (1995), Braga (2005), Lack (2012), Buzatto *et al.* (2013), Pastore (2013), Porter-Utley (2014), Knapp *et al.* (2015), Pellegrini (2015), Pellegrini *et al.* (2015) and Svoboda *et al.* (2016).

In the revisions of the Brazilian species of *Passiflora* L. (Passifloraceae *sensu stricto*) by Cervi (1997; 2000), and Milward-de-Azevedo *et al.* (2012), many names were evaluated, among which were those for species described by Vellozo, but these authors did not assign lectotypes. Portey-Utley (2014) performed a revision of the *Passiflora* subgenus *Decaloba* (DC.) Rchb. supersection *Cieca* (Medik.) J.M. MacDougal & Feuillet, and established lectotypes for *P. globosa* and *P. oliviformis*, both originally described by Vellozo (1831/1881), and both synonyms of *P. suberosa* L. subsp. *litoralis* (Kunth) Port.-Utl. ex M.A. Milward-de-Azevedo, J.F. Baumgratz & V. Gonçalves-Esteves. Svoboda *et al.* (2016) typified the species *Passiflora* subgenus *Passiflora* section *Dysosmia* DC., *P. foetida*, described by Vellozo, as synonymous with *P. foetida* var. *fluminensis* (M. Roem.) Killip, and *P. villosa*.

In Flora Fluminensis, Vellozo (1831/1881) named 25 species of Passifloraceae, all belonging to the genus *Passiflora*. Cervi & Rodrigues (2010) reviewed these species based on prints and Latin diagnoses, but did not typify the names. They accepted six of the species as valid (*P. mediterranea*, *P. ovalis*, *P. porophylla*, *P. silvestris*, *P. tetraden* and *P. villosa*), considered sixteen species to be synonyms (*P. arvensis*, *P. bilobata*, *P. dentata*, *P. diaden*, *P. foetida*, *P. globosa*, *P. lunata*, *P. maliformis*, *P. oliviformis*, *P. pallida*, *P. pertusa*, *P. polyaden*, *P. quadrangularis*, *P. rubra*, *P. sururuca* and *P. violacea*), recognized *P. edulis* Sims and *P. racemosa* Brot. as correctly identified; and considered the species *Passiflora obtusa* as *incertae sedis*.

Subsequent studies have involved analyses of protologues and illustrations of the species of Passifloraceae described by Vellozo, which has led to the detection of various nomenclatural problems, mainly regarding typification and synonymy, which are addressed here.

Materials and methods

The brief descriptions of this work were based on digital images of all original illustrations of *Passiflora* available through the website of the Biblioteca Nacional (<http://bndigital.bn.br/acervodigital>), and the published illustrations and descriptions from Flora Fluminensis (1831/1881) available through the Biodiversity Heritage Library (<http://www.biodiversitylibrary.org/>). Terminology followed Rizzini (1977) and Stearn (2004), and geographical references, when cited in species descriptions, were based on the interpretations of Lima (1995).

Results and discussion

Nineteen lectotypifications and one epitype for species described by Vellozo, which have not yet been typified, are provided in accordance with the guidelines established by the Melbourne Code (McNeill *et al.* 2012). The illustrations of these species are considered valid publications because the names are accompanied by analyses in accordance with articles 38.8 and 38.9 of Melbourne Code (McNeill *et al.* 2012).

The validations of *P. pertusa* and *P. polyadena* were performed together with the description of 1881, because only the vegetative parts were illustrated in 1831 and so did not meet the requirements for identification.

Typifications and taxonomy

1. *Passiflora alata* Curtis, Botanical Magazine 1: 66, fig. 66. 1790.

= *Passiflora maliformis* Vell., Fl. Flumin. 9, fig. 73. 1831 ("1827"); Arch. Mus. Nac. Rio de Janeiro 5: 376. 1881. Lectotype (designated here): Brazil. [Rio de Janeiro or São Paulo]: "*maritimis e mediterraneis*"; [illustration] Original parchment plate of *Flora Fluminensis* in the Manuscript Section of the Biblioteca Nacional, Rio de Janeiro [cat. no.: mss1198658_077] and later published in Vellozo, Fl. flumin. 9, fig. 73, 1831.

= *Passiflora quadrangularis* Vell., Fl. Flumin. Icon. 9: tab. 76. 1831 ("1827"); Arch. Mus. Nac. Rio de Janeiro 5: 377. 1881. Lectotype (designated here): Brazil. [Rio de Janeiro or São Paulo]: "*tum maritimis, cum mediterraneis*"; [illustration] Original parchment plate of *Flora Fluminensis* in the Manuscript Section of the Biblioteca Nacional, Rio de Janeiro [cat. no.: mss1198658_080] and later published in Vellozo, Fl. flumin. 9, fig. 76, 1831.

Curtis (1790) describes and illustrates *P. alata* with a quadrangular-alate stem; lanceolate to ovate stipules and bracts; leaves with petioles with two pairs of urceolate glands, ovate blades, acute apex and cordate base; and flowers with aristate sepals, red petals and white, red, and lilac banded external filaments of the corona.

The illustration of *P. maliformis* clearly shows a quadrangular stem; ovate stipules; leaves with petioles with one pair of glands, ovate blades, acute apex and cordate base; flower with coronal filaments banded, and ellipsoid fruit. *Passiflora quadrangularis*, exhibits quadrangular-alate stem; ovate stipules; leaves with petioles with two pairs of glands, blades oblong-lanceolate, apex acuminate, base truncate, bracts ovate, flowers with aristate sepals, and fruits piriform. The illustrations and descriptions of both *P. maliformis* and *P. quadrangularis* are very similar, as confirmed by Cervi & Rodrigues (2010). They occur in coastal restingas and forest edges where *P. alata* is frequent (Cervi 1997).



Passiflora maliformis was synonymized by Killip (1938) and *P. quadrangularis* by Cervi & Rodrigues (2010).

2. *Passiflora amethystina* J.C. Mikan, Delectus Florae et Faunae Brasiliensis 20. 1820.

= *Passiflora violacea* Vell., Fl. Flumin. 9, fig. 84. 1831 (“1827”); Arch. Mus. Nac. Rio de Janeiro 5: 379. 1881. Lectotype (designated here): Brazil. [Rio de Janeiro or São Paulo]: “*silvis maritimis*”; [illustration] Original parchment plate of *Flora Fluminensis* in the Manuscript Section of the Biblioteca Nacional, Rio de Janeiro [cat. no.: mss1198658_088] and later published in Vellozo, Fl. flumin. 9, fig. 84, 1831.

Mikan (1820) describes and illustrates *P. amethystina* as a herbaceous vine, with falcate or semicordate stipules; leaves with petioles with 3-7 glands, blades trilobate, apex acute and base cordate; flower single, with aristate sepals and corona with 8 series of filiform filaments. The illustration of *P. violacea* clearly shows oblong-lanceolate asymmetrical stipules; leaves with petioles with 6 glands, trilobate leaf blades, lanceolate lobes, acute apex, cordate base and lanceolate bracts; flowers with aristate sepals, and oblong-lanceolate fruits with three carpels. Occurs in forest formations of the coastal plain. The illustration and description presented by Vellozo (1831/1881), are very similar to the illustration and description of *P. amethystina*, as already synonymized by Cervi (1997) and confirmed by Cervi & Rodrigues (2010).

3. *Passiflora capsularis* L., Species Plantarum 2: 957. 1753.

= *Passiflora bilobata* Vell., Fl. flumin. 9, fig. 78. 1831 (“1827”); Arch. Mus. Nac. Rio de Janeiro 5: 378. 1881. *Decaloba bilobata* (Vell.) M. Roem., Prospect. Fam. nat. syn. monogr. 2: 154. 1846. Lectotype (designated here): Brazil. [Rio de Janeiro or São Paulo]: “*maritimis*”; [illustration] Original parchment plate of *Flora Fluminensis* in the Manuscript Section of the Biblioteca Nacional, Rio de Janeiro [cat. no.: mss1198658_082] and later published in Vellozo, Fl. flumin. 9, fig. 78, 1831.

= *Passiflora lunata* Vell., Fl. flumin. 9, fig. 80. 1831 (“1827”); Arch. Mus. Nac. Rio de Janeiro 5: 378. 1881. Lectotype (designated here): Brazil. [Rio de Janeiro or São Paulo]: “*campis mediterraneis transalpinis*”; [illustration] Original parchment plate of *Flora Fluminensis* in the Manuscript Section of the Biblioteca Nacional, Rio de Janeiro [cat. no.: mss1198658_084] and later published in Vellozo, Fl. flumin. 9, fig. 80, 1831.

Despite the brief description by Linnaeus (1753), *P. capsularis* was described as a species with petiolate leaves, bilobate and cordate leaf blade; and reddish fruit. The illustrations and descriptions by Vellozo (1831/1881) demonstrate that the species *P. bilobata* and *P. lunata* are synonymous with *P. capsularis*, as confirmed and synonymized by Milward-de-Azevedo *et al.* (2012), and not synonymous with *P. cervii* Milward-de-Azevedo or *P.*

rubra L., species with great morphological affinity. *Passiflora cervii* is distinguished by leaf blades trilobate to the apex; flowers with ligulate corona filaments, and ovate fruits. *Passiflora rubra* is distinguished by having flowers with hirsute ovaries and ovate fruits; it also does not occur in the Southeast Region of Brazil.

The illustrations of *P. bilobata* and *P. lunata* show a pubescent indument, linear-subulate stipules; bilobate leaf blades, petiolar glands and ocelli absent; flowers without pedicels and uniseriate corona. *Passiflora bilobata* also exhibits fusiform capsular fruit. The taxa occur in coastal vegetation, including formations of the Paraíba do Sul river and the Mantiqueira Mountains (Serra da Mantiqueira).

4. *Passiflora edulis* Sims, Botanical Magazine 45: pl. 1989. 1818.

= *Passiflora diaden* Vell., Fl. Flumin. 9, fig. 90. 1831 (“1827”); Arch. Mus. Nac. Rio de Janeiro 5: 380. 1881. Lectotype (designated here): Brazil. [Rio de Janeiro or São Paulo]: “*silvis maritimis*”; [illustration] Original parchment plate of *Flora Fluminensis* in the Manuscript Section of the Biblioteca Nacional, Rio de Janeiro [cat. no.: mss1198658_094] and later published in Vellozo, Fl. flumin. 9, fig. 90, 1831.

Sims (1818), describes and illustrates *P. edulis* as a herbaceous vine with linear-subulate stipules; leaves with petioles with one pair of glands, trilobate leaf blades, acute apex, cordate base, serrate margin, ovate bracts, solitary flower with aristate sepals and fruit a globose berry. The illustration of *P. diaden* shows leaves with petioles with one pair of glands, trilobate leaf blades with glands between the sinus, acute to obtuse apex, cordate base and serrate margin, ovate bracts with denticulate margin; and solitary flowers. The illustration and description by Vellozo (1831/1881), are very similar to the illustration and description of *P. edulis*, as already synonymized by Cervi (1997) and confirmed by Cervi & Rodrigues (2010).

5. *Passiflora foetida* var. *foetida* L., Species Plantarum 2: 959. 1753.

= *Passiflora polyadena* Vell., Fl. Flumin. 9, fig. 92. 1831 (“1827”); Arch. Mus. Nac. Rio de Janeiro 5: 381. 1881. Lectotype (designated here): Brazil. [Rio de Janeiro or São Paulo]: “*collibus maritimis prope urbem*”; [illustration] Original parchment plate of *Flora Fluminensis* in the Manuscript Section of the Biblioteca Nacional, Rio de Janeiro [cat. no.: mss1198658_096] and later published in Vellozo, Fl. flumin. 9, fig. 92, 1831.

Despite the brief description by Linnaeus (1753), *P. foetida* was described as a species with trilobate leaf blades, cordate base, villous indument and pinnatisect bracts. *Passiflora foetida* is distinguished by pinnatisect stipules and bracts. The illustration of *P. polyadena* shows a vine with villous indument, glandular pinnatisect stipules, leaf blade trilobate to the apex, acute apex, cordate base, and pinnatisect glandular bracts.



There is no illustration of the flower and fruit, however, in the description published in 1881, Vellozo mentioned a terminal racemose inflorescence, flowers with scarlet petals, and fruits as ovate berries, which demonstrates the similarity with *P. foetida* var. *foetida*, as already confirmed and synonymized by Cervi & Rodrigues (2010).

6. *Passiflora kermesina* Link & Otto, Verhandlungen des Vereins zur Beförderung des Gartenbaues in den Königlich Preussischen Staaten 2: 403, t. 15. 1826.

= *Passiflora dentata* Vell. Fl. Flumin. 9, fig. 94. 1831 (“1827”); Arch. Mus. Nac. Rio de Janeiro 5: 381. 1881. Lectotype (designated here): Brazil. [Rio de Janeiro]: “*collibus maritimis prope urbem*”; [illustration] Original parchment plate of *Flora Fluminensis* in the Manuscript Section of the Biblioteca Nacional, Rio de Janeiro [cat. no.: mss1198658_098] and later published in Vellozo, Fl. flumin. 9, fig. 94, 1831.

Passiflora kermesina presents reniform stipules; leaves with petioles with 2-4 glands, trilobate leaf blades, acute to obtuse apiculate apex, cordate to truncate base, dentate margin, linear bracts; and reddish solitary flowers. *Passiflora dentata* was considered synonymous with *P. kermesina*, as already synonymized by Killip (1938) and confirmed by Cervi & Rodrigues (2010), because the illustration and description by Vellozo (1831/1881) presents semi-cordate asymmetrical stipules, leaves with petioles with glands, trilobate leaf blades, acute apex, cordate to rounded base, dentate margin; and solitary flowers.

7. *Passiflora mediterranea* Vell., Fl. Flumin. 9, fig. 72. 1831 (“1827”); Arch. Mus. Nac. Rio de Janeiro 5: 376. 1881. Lectotype (designated here): Brazil. [Rio de Janeiro or São Paulo]: “*fruticetis mediterraneis transalpinis*”; [illustration] Original parchment plate of *Flora Fluminensis* in the Manuscript Section of the Biblioteca Nacional, Rio de Janeiro [cat. no.: mss1198658_076] and later published in Vellozo, Fl. flumin. 9, fig. 72, 1831.

Frequently identified as *P. jilekii* Wawra, described in 1863, the name *P. mediterranea* has priority, as already established by Cervi & Rodrigues (2010), in accordance with articles 38.8 and 38.9 of Melbourne Code (McNeill *et al.* 2012). *Passiflora mediterranea* has reniform stipules; oblique leaves with petioles with 7 glands, ovate leaf blades, acute apex, cordate base, entire margin, ovate bracts; and reddish solitary flowers solitary with scarlet petals. It occurs in vegetation formations along the Paraíba do Sul river and Mantiqueira Mountains (Serra da Mantiqueira).

8. *Passiflora mucronata* Lam., Encyclopédie Méthodique, Botanique 3: 33. 1789.

= *Passiflora pallida* Vell., Fl. Flumin. 9, fig. 70. 1831 (“1827”); Arch. Mus. Nac. Rio de Janeiro 5: 376. 1881. Lectotype (designated here): Brazil. [Rio de Janeiro or São Paulo]: “*fruticetis maritimis ad loca arenosa*”; [illustration]

Original parchment plate of *Flora Fluminensis* in the Manuscript Section of the Biblioteca Nacional, Rio de Janeiro [cat. no.: mss1198658_074] and later published in Vellozo, Fl. flumin. 9, fig. 70, 1831.

Lamarck (1789) described *P. mucronata* as a vine without indumentum and with cordate leaf blades and ovate stipules. The illustration of *P. pallida* shows ovate stipules, leaves with petioles with one pair of glands, ovate leaf blades, acute apex, rounded base and entire margin; and flowers with aristate sepals. The description adds information about the white color of the petals and the popular name “maracujás-dos-morcegos”. *Passiflora pallida* was considered synonymous with *P. mucronata*, as already synonymized by Killip (1938) and confirmed by Cervi & Rodrigues (2010). This species is very common in the restingas of the Northeast and Southeast regions of Brazil.

9. *Passiflora ovalis* Vell., Fl. Flumin. 9, fig. 75. 1831 (“1827”); Arch. Mus. Nac. Rio de Janeiro 5: 377. 1881. Lectotype (designated here): Brazil. [Rio de Janeiro]: “*fruticetis maritimis*”; [illustration] Original parchment plate of *Flora Fluminensis* in the Manuscript Section of the Biblioteca Nacional, Rio de Janeiro [cat. no.: mss1198658_079] and later published in Vellozo, Fl. flumin. 9, fig. 75, 1831. Epitype (designated here): Brazil, Rio de Janeiro, Paraty, Área de Proteção Ambiental do Cairuçu, Laranjeiras, estrada para a Praia do Sono, C. Duarte 88, 09/VIII/1994 (RB 310926).

= *Passiflora arvensis* Vell., Fl. Flumin. 9, fig. 71. 1831 (“1827”); Arch. Mus. Nac. Rio de Janeiro 5: 376. 1881. Lectotype (designated here): Brazil. [Rio de Janeiro or São Paulo]: “*silvis maritimis*”; [illustration] Original parchment plate of *Flora Fluminensis* in the Manuscript Section of the Biblioteca Nacional, Rio de Janeiro [cat. no.: mss1198658_075] and later published in Vellozo, Fl. flumin. 9, fig. 71, 1831.

Frequently identified as *Tetrastylis ovalis* (Vell.) Killip, the name *P. ovalis* has priority because the genus *Tetrastylis* Barb. Rodr. was subordinated to the section *Tetrastylis* (Barb. Rodr.) Harms, subgenus *Deidamioides* (Harms) Killip (MacDougal & Feuillet 2004).

Passiflora ovalis is characterized by elliptical to lanceolate leaf blades, racemose inflorescence, and flowers with four styles and ovary with four carpels. The illustration of *P. ovalis* shows leaves with petioles with one pair of glands, elliptical leaf blades, acute apex and base, entire margin and linear bracts; and racemose inflorescence and fruits as ellipsoid berries with four carpels. Three, not four, persistent styles were observed in the fruit. The flowers were not illustrated or described in Vellozo (1831/1881). Therefore, C. Duarte 88 (RB 310926) is designated as the epitype, considering that this material is quite representative of the floral morphology, thereby complementing the illustration of Vellozo, because the original illustration of *P. ovalis* is very rudimentary having only fruits.



Passiflora arvensis was considered synonymous with *P. ovalis*, as already confirmed and synonymized by Cervi & Rodrigues (2010), and exhibits lanceolate-ovate leaf blades, acute apex and base, entire margin; racemose inflorescence, and fruits as ellipsoidal berries. The description and illustration show the petiole to lack glands, which were probably overlooked by Vellozo (1831/1881) because they are adpressed.

10. *Passiflora porophylla* Vell., Fl. flumin. 9, fig. 82. 1831 ("1827"); Arch. Mus. Nac. Rio de Janeiro 5: 378. 1881. *Cieca prophylla* (Vell.) M.Roem., Prospect. Fam. nat. syn. monogr. 2: 147. 1846. Lectotype (designated here): Brazil. [RJ, Rio de Janeiro, Bairro de Santa Cruz]: "*silvis maritimis Regii Praedii S. Crucis*"; [illustration] Original parchment plate of *Flora Fluminensis* in the Manuscript Section of the Biblioteca Nacional, Rio de Janeiro [cat. no.: mss1198658_086] and later published in Vellozo, Fl. flumin. 9, fig. 82, 1831.

= *Passiflora obtusa* Vell., Fl. flumin. 9, fig. 81. 1831 ("1827"); Arch. Mus. Nac. Rio de Janeiro 5: 378. 1881. *Decaloba obtusa* (Vell.) M.Roem., Prospect. Fam. nat. syn. monogr. 2: 155. 1846. Lectotype (designated here): Brazil. [RJ, Rio de Janeiro, Bairro de Santa Cruz]: "*silvis maritimis Regii Praedii S. Crucis*"; [illustration] Original parchment plate of *Flora Fluminensis* in the Manuscript Section of the Biblioteca Nacional, Rio de Janeiro [cat. no.: mss1198658_085] and later published in Vellozo, Fl. flumin. 9, fig. 81, 1831. Syn. Nov.

= *Passiflora pertusa* Vell., Fl. flumin. 9, fig. 79. 1831 ("1827"); Arch. Mus. Nac. Rio de Janeiro 5: 378. 1881. Lectotype (designated here): Brazil. [Rio de Janeiro or São Paulo]: "*collibus ad littora maris urbem*"; [illustration] Original parchment plate of *Flora Fluminensis* in the Manuscript Section of the Biblioteca Nacional, Rio de Janeiro [cat. no.: mss1198658_083] and later published in Vellozo, Fl. flumin. 9, fig. 79, 1831.

= *Passiflora rubra* Vell., Fl. flumin. 9, fig. 77. 1831 ("1827"); Arch. Mus. Nac. Rio de Janeiro 5: 377. 1881. Lectotype (designated here): Brazil. [Rio de Janeiro or São Paulo]: "*silvis maritimis*"; [illustration] Original parchment plate of *Flora Fluminensis* in the Manuscript Section of the Biblioteca Nacional, Rio de Janeiro [cat. no.: mss1198658_081] and later published in Vellozo, Fl. flumin. 9, fig. 77, 1831.

Frequently identified as *P. organensis* Gardner, described in 1845, the name *P. porophylla* has priority, as already established by Cervi & Rodrigues (2010), in accordance with articles 38.8 and 38.9 of Melbourne Code (McNeill *et al.* 2012). *Passiflora porophylla* has bilobate leaf blades with ocelli, acute apex and rounded base; flowers with corona of uniseriate dolabriform filaments, plicate operculum and fruits as globose berries.

Based on the illustration of leaf blades and habit without indument, and the morphological description and area of occurrence (littoral of Rio de Janeiro) of *P. obtusa*, it is considered a new synonym for *P. porophylla*. Cervi &

Rodrigues (2010) considered the print *Incertae sedis* because they considered that it could not be a synonym of *P. pohlii* Mast., as designated by Killip (1938), because it appears glabrous in the print, and that it could not be a synonym of *P. organensis* Gardner, because the flower was not illustrated. *Passiflora pohlii* occurs in Cerrado (savanna) vegetation, and does not occur in the state of Rio de Janeiro. It differs morphologically from *P. porophylla* because it possesses a moderately to densely pubescent indumentums, and flowers with a corona of biseriate and ligulate filaments.

Passiflora pertusa, only illustrated, shows bilobate leaf blades with ocelli, as does *P. rubra*, which also has a flower with a corona with uniseriate filaments dilated at the apex. Both species are very similar to *P. porophylla*, as confirmed and synonymized by Cervi & Rodrigues (2010).

11. *Passiflora setacea* DC., Prodr. Systematis Naturalis Regni Vegetabilis 3: 329. 1828.

= *Passiflora sururuca* Vell., Fl. Flumin. 9, fig. 88. 1831 ("1827"); Arch. Mus. Nac. Rio de Janeiro 5: 380. 1881. Lectotype (designated here): Brazil. [Rio de Janeiro]: "*fruticetis mediterraneis transalpinis*"; [illustration] Original parchment plate of *Flora Fluminensis* in the Manuscript Section of the Biblioteca Nacional, Rio de Janeiro [cat. no.: mss1198658_092] and later published in Vellozo, Fl. flumin. 9, fig. 88, 1831.

Candolle (1828) described *P. setacea* based on a type material from Rio de Janeiro as having a velutine indumentum; leaves with petioles with two glands; trilobate leaf blades, acute apex, cordate base, serrate margin and ovate bracts. The illustration and description of *P. sururuca* shows a vine with a tomentose indumentums; leaves with petioles with one pair of glands, trilobate leaf blades, acuminate apex, cordate base, serrate margin and lanceolate-ovate bracts; and flowers with aristate sepals and fruit as globose berries. *Passiflora sururuca* was considered synonymous with *P. setacea*, as already synonymized by Killip (1938) and confirmed by Cervi & Rodrigues (2010), and according to Vellozo, the taxa occurs in vegetation formations along the Paraíba do Sul river and Mantiqueira Mountains (Serra da Mantiqueira).

12. *Passiflora silvestris* Vell., Fl. Flumin. 9, fig. 74. 1831 ("1827"); Arch. Mus. Nac. Rio de Janeiro 5: 377. 1881. Lectotype (designated here): Brazil. [Rio de Janeiro]: "*campis apricis mediterraneis transalpinis*"; [illustration] Original parchment plate of *Flora Fluminensis* in the Manuscript Section of the Biblioteca Nacional, Rio de Janeiro [cat. no.: mss1198658_078] and later published in Vellozo, Fl. flumin. 9, fig. 74, 1831.

Frequently identified as *P. galbana* Mast., the name *P. silvestris* has priority, as already established by Cervi & Rodrigues (2010), in accordance with articles 38.8 and 38.9 of Melbourne Code (McNeill *et al.* 2012). *Passiflora silvestris* has asymmetrical semicordate stipules; lanceolate-ovate



leaf blades, acute apex, obtuse to rounded base and entire margin; and oblong ovary and fruits.

13. *Passiflora tetraden* Vell., Fl. Flumin. 9, fig. 91. 1831 (“1827”); Arch. Mus. Nac. Rio de Janeiro 5: 381. 1881. Lectotype (designated here): Brazil. [Rio de Janeiro or São Paulo]: “*silvis maritimis prope urbem*”; [illustration] Original parchment plate of *Flora Fluminensis* in the Manuscript Section of the Biblioteca Nacional, Rio de Janeiro [cat. no.: mss1198658_095] and later published in Vellozo, Fl. flumin. 9, fig. 91, 1831.

Frequently identified as *P. sidiifolia* M. Roem., the name *P. tetraden* has priority, as already established by Cervi & Rodrigues (2010), in accordance with articles 38.8 and 38.9 of Melbourne Code (McNeill *et al.* 2012). *Passiflora tetraden* has asymmetrical semicordate stipules, leaf blades trilobate to the apex, obtuse apex, rounded base and entire margin; and flowers with banded coronal filaments.

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