

# NOTES ON SOME BRAZILIAN AND OTHER LEGUMINOSAE

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## INTRODUCTION

Through the courtesy of Dr. Lyman B. Smith of the U. S. National Herbarium, I have received an interesting collection of Brazilian Leguminosae for identification. In addition, studies have been made for several years of large Brazilian collections in the Darwiniön herbarium sent to the writer by Father B. Rambo (Pôrto Alegre, Rio Grande do Sul), Father R. Reitz (Itajaí, Santa Catarina), Dr. Amaro Macedo (Ituiutaba, Minas Gerais), and other correspondents. Some nomenclatorial results of these studies already have been published in previous papers in "Darwiniana" while others are published here for the first time. The principal aim of this paper is to establish correct specific epithets according to priority as established in the "International Code of Botanical Nomenclature" (1956).

**Mimosa vellosiella** Herter, Rev. Sudam. Bot. 6:151. 1940; Burkart, Darwiniana 8:94. 1948.

*Mimosa cinerea* Vell. Fl. Flumin. Icones 11:pl. 35. 1835(real date; cf. O. Kuntze, Rev. Gen. Pl. 1:CXLV. 1891); text edit. L. Netto, Archivos Mus. Nac. Rio de Janeiro 5:438. 1881, non L. 1753.

### BRAZIL:

RIO DE JANEIRO: Cabo Frio, Praia do Pontal, near sea level, *L. B. Smith* 6610, 6615 (US).

The specimens are interesting because they must represent the typical variety of this taxon, based on *Mimosa cinerea* Vell. from Rio de Janeiro (Vellozo's "Flora Fluminensis" treats especially this state). There are no type specimens known of Vellozo's species. This typical variety (var. *vellosiella*) is a creeping shrubby perennial with adventitious roots on the lower internodes. It becomes blackish in the herbarium and the loment is smaller and less setose, its articles being rectangular and much broader than long (3-5 mm. long, 10 mm. broad). The plant of Argentina, Paraguay, and perhaps southern Brazil, which I described in 1948 (loc. cit.) probably merits varietal recogni-

tion, as it does not blacken, and has larger leaves and lomenta with larger segments.

**Cassia australis** Vell. Fl. Flumin. 166. 1825; text edit. L. Netto, Archivos Mus. Nac. Rio de Janeiro 5:159. 1881; Vell. Icones 4:pl.65. 1835 (real date, cf. supra, not "1827").

*Cassia appendiculata* Vogel, Linnaea 11:670. 1837; Benth. in Mart. Fl. Bras. 15, pt. 2:119, pl. 36. 1870.

#### BRAZIL:

DISTRITO FEDERAL: Praia de Sernambetiba (23° S. lat.), near sea level, in flower and fruit, Apr. 4, 1952, L. B. Smith 6350 (US, 2 sheets).

The priority of Vellozo's name over Vogel's is clear. Evidence at hand is also in favor of its priority over *Cassia australis* Sims (Bot. Mag. 53:pl. 2676. 1826). The date of publication of Vellozo's partial text as 1825 is doubtfully questioned by Borgmeier (Rodriguesia 3, pt. 9:94. 1937), but without definite proof, the authoritative opinions of L. Netto (Archivos Mus. Nac. Rio de Janeiro 5:XI. 1881), "Index Kewensis," and Otto Kuntze (Rev. Gen. Plant. 1:CXLV. 1891) have to be accepted, even if the text volume of Vellozo was known to European botanists only some years later. Moreover, Vellozo's name is accompanied by an exceptionally good plate.

Unfortunately, the Australian *Cassia australis* Sims must change its name because *C. australis* Vell. is a valid species. The proper name for the former apparently is *C. schultesii* Colla (Hort. Ripul., App. 2:344. 1829) which seems to have priority over *C. australis* Sims, as well as over *C. umbellata* Reichenbach (Icon. Bot. Exot. pl. 206. 1830) both cited as synonyms of *C. australis* by Bentham (Rev. Gen. Cassia, Trans. Linn. Soc. London 27:555. 1871).

**Cassia cathartica** Mart. in Spix & Mart. Reise in Brasilien 2:548. 1828; Benth. in Mart. Fl. Bras. 15, pt. 2:155. 1870.

*Cassia hirsuta* Vell. Fl. Flumin. 170. 1825; Icon. 4:pl. 80. 1835, non L. 1753.

*Cassia pachycalyx* Vogel, Linnaea 11:699. 1837.

#### BRAZIL:

MINAS GERAIS: Tres Barras, north of Lagoa Santa, May 2, 1952, L. B. Smith 6899 (US). Belo Horizonte, November 1945, L. O. Williams & V. Assis 7470 (SI).

SÃO PAULO: Emas, Pirassununga, June 16, 1949, A. Brandão Joly 726 (SI).

*Cassia aprica* Vell. (Fl. Flumin. 169. 1825; Icon. 4:pl. 76. 1835), which would have priority over *C. cathartica* Mart., seems to be another species, inasmuch as the original description contains this character: "foliis . . . eglandulatis." However, if Vogel and Bentham were right in synonymizing *C. aprica* Vell. with *C. cathartica* Mart., then Vellozo's name would prevail.

*Cassia benthamiana* Harms, Repert. Sp. Nov. Fedde 20:128. 1924.

BRAZIL:

GOIÁS: Mun. Corumbá: Serra dos Pirineus, in campo, December 1951, A. Macedo 3513 (SI). Caldas Novas, in campo, subprostrate, December 1951, A. Macedo 3547 (SI).

Like Harms but independently, I concluded from the "Flora Brasiliensis" that the above specimens might be a new species in the vicinity of *C. decumbens* Benth. (cf. Photo Field Mus. Chicago type series No. 6232), belonging to section *Absus*, series *Rigidulae*, of the subgenus *Lasiorhegma*. The species is also very near the series *Nigricantes* of the same section. As Harms states, the differences from *C. decumbens* are: Petiole nearly absent (first pair of leaflets subsessile), whole plant somewhat pilose or hirsute, racemes simple, very long (20–45 cm.), aureo-hirsute, somewhat viscid, pedicels 1–4.5 cm. long, hirsute, bracts and bractlets linear, persistent, corolla showy, petals obconic, 1.5–2 cm. long, stamens 10, subequal, anthers subsessile, 5 mm. long, barbellate, ovary very hirsute, style pilose, immature pod aureo-hirsute, linear, compressed, 4 cm. long, 5 mm. wide, sessile, narrowed at base.

*Cassia tetraphylla* Desv. Journ. de Bot. 3:72. 1814; Amshoff, On South Am. Papilionac., Mededeel. Bot. Mus. Herb. Utrecht 52:24–27. 1939; Amshoff in Pulle, Fl. Suriname 2, pt. 2:74. 1939.

*Cassia uniflora* sensu Benth. in Mart. Fl. Bras. 15, pt. 2:157. 1870, non Spreng. 1820.

BRAZIL:

RIO DE JANEIRO: Mun. Cabo Frio: Praia do Pontal, Apr. 17, 1952, L. B. Smith 6611 (US).

SÃO PAULO: Praia Grande, São Vicente, April 1949, A. Brandão Joly No. C (SI 19,821).

Colladon (Hist. Nat. & Med. Casses 130. 1816) founds another *Cassia tetraphylla*, which is invalidated by the earlier homonym of Desvaux. In the same work (p. 131) Colladon founds *C. desvauxii* nov. nom. for *C. tetraphylla* Desv. "non Mill.," and DeCandolle (Prodr. 2:505. 1825) repeats this. However, I cannot find any "*C. tetraphylla* Miller," so I think there has been a mistake on the part of Colladon; and *C. tetraphylla* Desv. is valid, as Amshoff accepts it. Amshoff has examined the type of the species and her conclusions ought to be followed. The species belongs to a widespread and complex group which requires more study.

*Andira legalis* (Vell.) Toledo, Arquiv. Bot. Estado São Paulo, nov. ser. 2:29. 1946.

*Lumbricidia legalis* Vell. Fl. Flumin. 306. 1825; Icon. 7:pl. 105. 1835.

*Andira stipulacea* Benth. Anal. Mus. Vindobon. 2, pt. 2:107. 1838; Benth. in Mart. Fl. Bras. 15, pt. 1:292. 1862.

## BRAZIL:

RIO DE JANEIRO: Mun. Cabo Frio: Arraial do Cabo, April 1952, *L. B. Smith* 6554 (SI, US).

Toledo rightly took up Vellozo's specific name which already had been identified with *Andira stipulacea* by Bentham.

**Dalbergia ecastaphyllum** (L.) Taubert in Engler & Prantl, *Pflanzenfam.* 3, Abt. 3:335. 1891.

*Hedysarum ecastaphyllum* L. *Syst. Nat.* ed. 10. 2:1169. 1759.

*Hecastophyllum brownei* Pers. *Syn.* 2:277. 1807; Benth. in Mart. *Fl. Bras.* 15, pt. 1:228. 1862.

## BRAZIL:

DISTRITO FEDERAL: Praia de Grumari, near Guaratiba, Apr. 11, 1952, *L. B. Smith* 6541 (SI, US).

SÃO PAULO: Ilha de Santo Amaro, *Hoehne* (SP 29, 614, SI).

PARANÁ: Paranaguá, Matinhos, January 1951, *Hatschbach* 2099 (SI).

SANTA CATARINA: Ilha de Santa Catarina, *Reitz* 5095 (SI). Palheça, *Reitz* 685; 5523 (SI).

It must be pointed out that the correct original spelling of this specific epithet is *ecastaphyllum*, and not *ecastophyllum* as Taubert himself wrote when publishing the valid name, or *hecastophyllum* as other authors did. Fawcett & Rendle (*Flora of Jamaica* 4:77. 1920) gave a description based on the Linnean type specimen. I did not change the ending to *ecastaphylla* because it derives from a genus name of Patrick Browne. Heretofore the species has not been known south of Rio de Janeiro.

**Tephrosia sessiliflora** (Poir.) Hassler, *Repert. Sp. Nov.* Fedde 16:162. 1919.

*Cytisus sessiliflorus* Poir. in Lam. *Encycl. Suppl.* 2:439. 1811.

*Tephrosia brevipes* Benth. *Ann. Nat. Hist.* I. 3:432. 1839; in Mart. *Fl. Bras.* 15, pt. 1:46. 1859.

## BRAZIL:

MINAS GERAIS: Mun. Campina Verde: Fazenda Yaraguá, February 1949, *A. Macedo* 1718 (SI).

RIO BRANCO: Boa Vista, bank of the Rio Branco, Aug. 26, 1951, *G. A. Black & D. Magalhães* 51-12, 994 (SI).

This is a beautiful, erect, seemingly annual plant with dense silvery white tomentum on the young shoots and lower face of the leaves. In the "Flora Brasiliensis" the correct name had not been adopted.

**Tephrosia sinapou** (Buc'hoz) A. Chevalier, *Compt. Rend. Acad. Sci.* 180:1522. 1925, as "*singapou*"; C. Wood, *Rhodora* 51:249. 1949.

*Galega sinapou* Buc'hoz, *Hist. Univ. Reg. Veg. pl.* 994. 1775.

*Galega toxicaria* Sw. *Prodr.* 108. 1788.

*Tephrosia toxicaria* Pers. *Syn. Plant.* 2:329. 1807.

## BRAZIL:

RIO BRANCO: Rio Cantá, virgin forest, December 1951, *G. A. Black* 51-13, 923 (SI).

## BOLIVIA:

LA PAZ: Nor-Yungas: Polo-Polo near Coroico, December 1912, *Buchtien* 662 (SI).

## ARGENTINA:

SANTIAGO DEL ESTERO: Cultivated, Experiment Station, La Banda, July 1950, *R. F. Cornejo* (SI 17,412).

In this case again an earlier valid name must be accepted for a common species, called "timbo de Caiena" in Brazil (fide A. Ducke) or "barbasco" in Venezuela and used for fish-poisoning.

*Aeschynomene filosa* Mart. ex Benth. in Mart. Fl. Bras. 15, pt. 1:61. 1859.

## VENEZUELA:

GUÁRICO: El Socorro, July 1956, *A. Burkart* 17,203 (SI, US).

This species is an erect perennial with delicate foliage, very small leaflets and flowers, basally produced stipules, and biarticulate loment. Previously it was known only from tropical Brazil (Bahia, Minas Gerais, etc.), and is consequently new to the Venezuelan flora. My determination of the species was confirmed by Dr. Velva E. Rudd of the U. S. National Museum (letter of Oct. 28, 1952).

*Stylosanthes angustifolia* Vogel, Linnaea 12:63. 1838; Burkart, Darwiniana 3:260. 1939.

## VENEZUELA:

BOLÍVAR: Puruey, near the Río Orinoco, January 1948, *F. Tamayo* 3440 (SI).

## BRAZIL:

RIO BRANCO: August 1951, *G. A. Black* 12,481; 12,788; 13,096 (SI).

This species of *Stylosanthes* is new to the flora of Venezuela.

*Vicia hirsuta* (L.) S. F. Gray, Nat. Arrang. Brit. Pl. 2:614. 1821; E. Guinea, Estud. Bot. Vezas y Arvejas Español. 152-156, Inst. N. Investig. Agron. Madrid 1953; Burkart, Leg. Argent. ed. 2, 356, 359. 1952.

*Ervum hirsutum* L. Sp. Pl. 738. 1753.

## BRAZIL:

RIO GRANDE DO SUL: Montenegro, adventive in thickets ("in dumeto"), alt. 600 m., October 1949, *A. Sehnem* 3943 (SI). Porto Alegre, *K. Mohrdieck* 20 (SI).

## CHILE:

ACONCAGUA: Termas de Río Blanco, alt. 1,000 m., December 1952, *G. Kunkel* 2189 (SI).

CAUTÍN: Truf-Truf, weed in garden, December 1947, *H. Gunckel* 16,911 (SI).

OSORNO: Trumao, as weed, December 1947, *Gunckel* 16,859 (SI).

AISÉN: January 1946, *E. Barros* 7246 (SI).

This European species seems to be well established now in southern Brazil and especially in south-central Chile.

*Periandra mediterranea* (Vell.) Taubert in Engler & Prantl, Nat. Pflanzenfam. 3, Abt. 3:359. 1891.

*Glycyrrhiza mediterranea* Vell. Fl. Flumin. 317. 1825; Icon. 7:pl. 145. 1835; edit. L. Netto, Archivos Mus. Nac. Rio de Janeiro 5:297. 1881.

*Periandra dulcis* Mart. ex Benth. Ann. Mus. Vindobon 2, pt. 2:121. 1838; in Mart. Fl. Bras. 15, pt. 1:135, pl. 35. 1859.

## BRAZIL:

MINAS GERAIS: Mun. Jaboticatubas: Serra do Cipó, April 1952, *L. B. Smith* 7079 (US). Mun. Ouro Preto: Saramenha, December 1950, *A. Macedo* 2809 (SI). Mun. Itabirito: Pico de Itabirito, alt. 1500 m., December 1948, *Palacios, Balegno & Cuezco* 3862 (LIL).

SÃO PAULO: Caiciras, January 1945, *W. Hoehne* (SP 46,111, SI). Itararé, *A. Brandão Joly* 724 (SI).

PARANÁ: Jaguariaíva, in campo, October 1911, *P. Dusén* 13,214 (SI). Mun. Palmeira: Colonia Quero-Quero, November 1951, *G. Hatschbach* 2567 (SI).

The above combination of *P. Taubert* is valid, although he did not mention a basionym. The International Code of Botanical Nomenclature (Utrecht, 1952), article 42 (1956, Art. 32), accepts such new combinations if published before 1953. Evidently Taubert took up Vellozo's name from the publications of Bentham, who cited it as a synonym of *Periandra dulcis*.

Vellozo's plate is not bad; the newer one in "Flora Brasiliensis" is better but wrong in one character in which Vellozo's plate is correct: the flowers are not shown in their natural resupinate position. All specimens seen by the writer have resupinate flowers, i. e., with the vexillum lowest. This resupination seems to be general in the flowers of most or all species of *Periandra*, *Clitoria*, *Cenrosema*, and *Canavalia*.

*Galactia glaucescens* H. B. K. Nov. Gen. & Sp. 6:338 (or 431). 1823; DC. Prodr. 2:238. 1825.

*Collaea glaucescens* Benth. Ann. Mus. Vindobon. 2, pt. 2:128. 1838; in Mart. Fl. Bras. 15, pt. 1:150. 1859; M. Micheli in Warming, Symb. Fl. Bras. Centr., Vidensk. Meddelels. Nat. For. Kjöbenhavn 5-8:82. 1875.

## BRAZIL:

MINAS GERAIS: Lagôa Santa, April 1952, *L. B. Smith* 6728 (SI).

## BOLIVIA:

SANTA CRUZ: Buena Vista, September 1916, *J. Steinbach* 2809 (SI).

The type of this species came from Ecuador: ". . . in Regno Quitensi pr. Penipe" according to the original description. De Candolle (loc. cit.), adds: ". . . ad ripam flum. Cuellae." This last locality is on the label of Kunth's specimen (cfr. phototype collection Field Mus. Chicago no. 2388). The Brazilian plant has the leaflets broader and more rounded than the type but otherwise it is the same.

This is a real *Galactia* and, because of the clearly diadelphous stamens, not a *Collaea*, the vexillar filament being entirely free. It is an ascending plant, but the difference of erect versus voluble has no value as a generic distinction, many real *Galactiae* being nonvoluble. Technically, the taxon *Collaea glaucescens* Benth. is not a combination based on the earlier *Galactia glaucescens* H. B. K., but an independent entity; nevertheless, they are synonymous, as already recognized by Bentham.

The species sometimes develops male flowers by abortion, their ovary being present but the style reduced to a little hook. Otherwise the flower is like the normal hermaphroditic one. Such an andromonoecism has been recorded in the generic diagnosis of *Galactia* by Kunth (loc. cit.) and has been observed in Caribbean *Galactiae*. I. Urban (Symb. Ant. 2:307. 1900) writes: "Ut jam ill. Jacquin (Hort. Vindob. I p. 32) observavit, flores (praeter hermaphroditos) nonnulli masculi ovario plus minus evoluto sed stylo abortivo in pluribus speciebus inveniuntur."

**Phaseolus halophilus** C. V. Piper, Contr. U. S. Nat. Herb. 22:675. 1926.

**BRAZIL:**

DISTRITO FEDERAL: Guaratiba, Praia de Grumari, Apr. 11, 1952, L. B. Smith 6526 (US).

This species, heretofore known only from the type collected by Salzmänn more than a century ago, has much affinity with *Phaseolus candidus* Vell. (*P. membranaceus* Benth.), but the flowers are much smaller (15 mm. long). Smith's specimen extends its distribution 1,300 km. to the south, but the habitat remains the same, the tropical seashore.

**Erythrina speciosa** Andr. Bot. Reposit. 7:pl. 443. 1806; Krukoff, Am. Sp. Erythrina, Brittonia 3:243. 1939.

*Erythrina reticulata* Presl, Symb. Bot. 2:22, pl. 68. 1832; Benth. in Mart. Fl. Bras. 15, pt. 1:174. 1859.

**BRAZIL:**

SANTA CATARINA: Itajaí, secondary woods (capoeira), July 17, 1950 in flower, R. Reitz 3604 (SI). Local name: "Bico de papagaio."

Here again the correct name according to present rules is not the one used in the monumental "Flora Brasiliensis." Reitz's specimen extends the area a little farther south (Krukoff cites Minas Gerais, Rio de Janeiro, São Paulo, and Paraná).