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NOMENCLATORIAL NOTES

ON PLANTS GROWING IN THE BOTANICAL GARDEN OF THE ATKINS INSTITUTION OF THE ARNOLD ARBORETUM AT SOLEDAD, CIENFUEGOS, CUBA

BY

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In preparing a list of the plants growing in the botanical garden at Soledad, several instances of nomenclatorial difficulty have been revealed. Ordinarily the new combinations made necessary by the transfer of a name from one genus or from one specific name to another are clear without further explanation, but in some cases the nomenclature has become so involved that it has seemed advisable to discuss it.

The following notes are issued in order to publish those new combinations which are necessary and to clarify those points which seem involved and uncertain.

ACTINOPHLOEUS *Beccari* in Ann. Jard. Bot. Buitenz. 2 (1885) 126, *in textu.*

Beccari in Malesia 1 (1877) 42 originally characterized the group as a subgenus of *Drymophloeus* Zipp. The spelling of the subgeneric name is *Actynophloeus.*

The species cultivated in the garden is:

Actinophloeus Marcarthurii *(H. Wendl.) Beccari* apud Wigman in Bull. Dépt. Agric. Indes Néerl. no. 31 (1909) 1, *nomen* — Beccari in Webbia 4 (1913) 154 — Radermacher in Ann. Jard. Bot. Buitenz. 35 (1925) 12. [The first complete description of the species].

Kentia Macarthuri Hort. apud Belg. Hort. 27 (1877)241, *nomen* (as Mac Arthuri)— H. Wendland apud T. Moore in Florist & Pomol. 1879 (Aug. 1879) 115, text cut — H. Wendland apud Ill. Gartenz. 23 (Dec. 1879) 265, t. 36.

Ptychosperma Macarthurii H. Wendland apud Kew Rept. 1882 (1884) 55.

This species, nomenclaturally, has had a complicated history. Originally introduced about 1877, it was placed in the genus *Kentia* and was described (rather inadequately) in 1879. Later it was transferred to *Ptychosperma*. In horticulture it has been frequently cultivated under both names, but usually as *Kentia Macarthuri*. In 1913 Beccari removed it to *Actinophloeus* where we believe it more correctly belongs.

Brachychiton populneus *(Schott & Endl.) R. Brown* in Bennett Pl. Jav. Rar., pt. 3 (1844) 234.

Sterculia diversifolia G. Don in Loudon, Hort. Brit. (1830) 392, *nomen* — G. Don, Gen. Syst. Gard. & Bot. 1 (1831) 516, non Brachychiton diversifolius *R. Brown* in Bennett Pl. Jav. Rar. pt. 3 (1844) 234 which is Sterculia caudata *Heward* in Herb. Cunn. apud Bentham, Fl. Austral. 1 (1863) 230.

Poecilodermis populnea Schott & Endlicher, Melet. Bot. (1832) 33.

Following Engler and Prantl and recent authors it has seemed best to accept the genus *Brachychiton* Schott & Endl. It is not, however, possible to apply the earl-

iest specific name "*diversifolia*" on account of the earlier *Brachychiton diversifolius* R. Br. Robert Brown's binomial undoubtedly refers, as pointed out by Bentham (Fl. Austral. 1 (1836) 230) to *Sterculia caudata* Heward in Herb. Cunn.

Consequently the oldest available specific name is "*populnea*" based on *Poecilodermis populnea* Schott & Endl. and the correct combination is *Brachychiton populneus* (Schott & Endl.) R. Br.

CALADIUM *Ventenat*, Descr. Pl. Nouv. Jard. Cels, livr. 3 (1801) t. 30 and in Roem. Archiv. Bot. 2 (1801) 347.

In discussing this genus, W. F. Wight (in Safford in Contrib. U.S. Nat. Herb. 9 (1905) 208) advanced the idea that *Caladium* Vent. applied to the genus commonly known as *Colocasia* Schott. The basis of his argument was that Ventenat drew his generic name from Rumphius who used this name for certain species of *Arum*. This is undoubtedly true. Starting with this premise, Wight argues that the only species common to both Rumphius and Ventenat is "*esculentum*", which is likewise the fact.

Granted the truth of both statements, we cannot agree with Wight's deduction that *Caladium* Vent. must apply to that part of the material included in the genus typified by "*esculentum*". In the first place, from the point of view of Ventenat's genus the governing factor is what did he describe, not the source from which he drew the generic name. The generic description seems broad enough to cover both types of plants included in his subsequent list of species composing the genus. However, the species to which he refers throughout the text and which he illustrates is *C. bicolor* and no mention of "*esculentum*" is made until at the end he sums up those species of *Arum* which he believes belong

to the genus.

Ventenat's treatment of *Caladium* in Roemer Archiv für die Botanik follows the same course, discussing *C. bicolor* and at the end mentioning "*esculentum*".

Consequently, we feel that the standard species of *Caladium* is *C. bicolor* and not *C. esculentum* as advocated by Wight and accepted by certain recent authors.

CATHARANTHUS *G. Don*, Gen. Syst. Gard. & Bot. 4 (1838) 95.

Lochnera Reichenbach, Consp. Reg. Veg. (1828) 134, non Lochneria *Heist.*, non Lochneria *Scop.*

On account of the earlier uses of the name *Lochnera* Reichb. must be replaced by *Catharanthus* G. Don. Dalla Torre and Harms (Gen. Siphon. fasc. 6 (1904) 406) are obviously in error when they refer *Catharanthus* G. Don to *Vinca* L. as Don treated but two species — *C. pusillus* and *C. roseus* — both of which are included in *Lochnera* by Engler and Prantl.

The transfer of the plant known both as *Vinca rosea* L. and *Lochnera rosea* Reichb. was made by G. Don (Gen. Syst. Gard. & Bot. 4 (1838) 95).

The synonymy of the two varieties of this species growing in the garden is:

Catharanthus roseus (L.) *G. Don* var. **albus** *(Sweet) G. Don*, Gen. Syst. Gard. & Bot. 4 (1838) 95.

Vinca rosea L. var. *alba* Sweet, Hort. Brit. (1827) 274.

Catharanthus roseus *(L.) G. Don* var. **ocellatus** *(Sweet) G. Don*, Gen. Syst. Gard. & Bot. 4 (1838) 95 *(sphalmate occellatus)*.

Vinca rosea L. var. *ocellatus* Sweet, Hort. Brit. (1827) 274.

Vinca rosea L. var. *oculata* W. Miller in L. H. Bailey, Cycl. Am. Hort. 4 (1902) 1935.

Colocasia esculenta *(L.) Schott* var. **antiquorum** *(Schott) Hubbard & Rehder, comb. nov.*

Colocasia antiquorum Schott in Schott & Endlicher, Melet. Bot. 1 (1832) 18.

Authors in general, who separate this variety from the species, have made it the species and have reduced *C. esculentum* (L.) Schott to varietal rank. While there is hardly any doubt that var. *antiquorum* is the phylogenetic type of the species, it is nomenclaturally inadmissible to reduce an older specific name to varietal rank under a name of later date of publication. In consequence the ranks must be reversed and *C. esculenta* become the species with a variety *antiquorum.*

Dipteryx panamensis *(Pittier) Hubbard & Rehder, comb. nov.*

Coumarouna panamensis Pittier in Contrib. U. S. Nat. Herb. 18 (1917) 236.

The genus *Dipteryx* Schreb. is conserved over *Coumarouna* Aubl. The transfer of this species makes a new combination.

Gardenia jasminoides *Ellis* in Phil. Trans. 51, pt. 2 (1761) 935.

Varneria augusta Stickman in Linnaeus, Amoen. Acad. 4 (1759) 136, *nomen.*

Gardenia florida Linnaeus, Sp. Pl., ed. 2 (1762) 305.

Gardenia augusta Merrill, Interp. Rumph. Herb. Amb. (1917) 50, 485, 547.

Merrill undoubtedly went too far when he accepted Stickman's *Varneria augusta* as valid publication. According to the International Rules, it can only be considered as a nomen nudum as the Rhumphius reference given is to a plate lacking analytic details and furthermore at the time of publication the genus to

which the species belonged was undescribed.

Gliricidia sepium *(Jacq.) Walpers*, Repert. Bot. Syst. 1 (1842) 679 — Standley in Contrib. U. S. Nat. Herb. 23 (1922) 482.

Robinia Sepium Jacquin, Enum. Pl. Carib. (1760) 28.

Robinia maculata Humboldt Bonpland & Kunth, Nov. Gen. et Sp. 6 (1824) 393 (Quarto ed.), 309 (Folio ed.).

Lonchocarpus sepium De Candolle, Prodr. Syst. Nat. 2 (1825) 260.

Lonchocarpus maculatus De Candolle, Prodr. Syst. Nat. 2 (1825) 260.

Robinia variegata Schlechtendal in Linnaea 12 (1836) 301.

Gliricidia maculata Walpers, Repert. Bot. Syst. 1 (1842) 679.

Gliricidia Lambii Fernald in Bot. Gaz. 20 (1895) 533.

There has been considerable difference of opinion as to the authority to be given for the combinations *Gliricidia sepium* and *Gliricidia maculata.* According to Index Kewensis 1 (1895) 1033, "H. B. & K. Nov. Gen. et Sp. vi. 393 in nota" [Quarto ed.] is given as the place of publication of both combinations. Neither combination, however, was made in either the quarto or folio edition of Humboldt Bonpland and Kunth, Nova Genera et Species Plantarum. . . or in Kunth, Syn. Pl. 4 (1825) 81.

Urban, Symb. Antill. 2 (1900) 288, and other authors refer both combinations to Steudel, Nomencl. Bot. ed. 2, 1 (1840) 688. While both combinations exist there, they are distinctly synonyms and are cited as being made by Kunth [HBK.]. Consequently, as they are published in synonymy, they have no valid standing.

The earliest actual publication of the combinations which we have been able to find is in Walpers, Repert. Bot. Syst. 1 (1842) 679.

Maranta gibba *Smith* in Rees Cycl. 22 (1819) no. 2.

Maranta divaricata Roscoe, Mondr. Pls. (1828) t. 7.

K. Schumann in Engler, Pflanzenreich IV. 48 (Heft 11) (1902) 126 cites *M. gibba* Sm. in Rees in synonymy under *M. divaricata* Rosc. It is evident that Schumann had no knowledge of the date of issue of volume 22 of Rees Cyclopedia as he fails to cite the year. It contains the earliest name of the species.

PHOENICOPHORIUM *H. Wendland* in Ill. Hort. 12 (Feb. 1865) Misc. 5 and (May 1865) t. 433.

Stevensonia Duncan, Cat. Roy. Bot. Gard. Mauritius (1863), *nomen* — L. H. Bailey, Gentes Herb. 2 (1930) 192.

Stephensonia Hort. apud Van Houtte in Fl. des Serres 15 (May 20, 1865) 177, *in synon.*

We are unable to agree with the deductions of Prof. L. H. Bailey in Gentes Herbarum 2 (1930) 192 and,– in agreement with H. C. Skeels (in Bull. Torr. Bot. Cl. 58 (1931) 49),– we cannot accept his reasoning that the generic name *Phoenicophorium* should be outlawed. There is no provision in the International Rules that we feel could be construed to cover the case.

The genus *Phoenicophorium* was proposed and well described by H. Wendland in Illustration Horticole 12 (Feb. 1865) Misc. 5 and later illustrated by him in the same periodical (May 1865) t. 433. Apparently Prof. Bailey has overlooked the date of publication of the Miscellanées when he states, "A portrait of the palm appeared in L'Illustration Horticole bearing date April 1865, . . ." The footnote date on page 5 of the Miscellanées is Février 1865 and we can find no reason why this date should not be accepted.

The generic name *Stevensonia* was first published by James Duncan in 1863 (Cat. Roy. Bot. Gard. Mauritius). It is a nomen nudum. Furthermore we are not able to agree with Prof. Bailey that Van Houtte in Fl. des Serres 15 (May 20, 1865) 177, t. 1595-1596 published or even intended to publish a generic description under *Stevensonia*. The fact that *Phoenicophorium* was used as the page heading and as the title entry in the Table des matières on the back cover of the Livraison with *Stevensonia grandifolia* Dunc. in italics and clearly in synonymy convince us that Van Houtte was considering the species as a *Phoenicophorium*. Moreover the date of publication of the "Onzième livraison du tome XV" is clearly given on the cover of the copy in the Gray Herbarium, which is bound with the covers in place, as "Paru le 20 Mai 1865".

We are therefore unable to accept *Stevensonia* Dunc. as the generic name.

The species cultivated in the garden is:

Phoenicophorium Borsigianum *(C. Koch) Stuntz* in Invent. Seeds & Pls. Introd. no. 31 (1914) 88 (Bur. Pl. Indust.).

Astrocaryum aureo-pictum Hort. apud Verschaffelt, Cat. Ill. no. 12, misc. page 5 (fide Van Houtte in Fl. des Serres 15 (1865) 177, *in synon.*) — Verschaffelt, Cat. Ill. no. 74 (1864) 12, *nomen.*

Astrocaryum Borsigianum C. Koch in Wochenschr. Gärt. u. Pflanzenk. 2 (Dec. 22, 1859) 401 — C. Koch apud Regel in Gartenfl. 10 (1861) 29.

Areca Sechellarum Hort. apud C. Koch in Wochenschr. Gärt. u. Pflanzenk. 2 (1859) 401, *mention.*

Astrocaryum Borsigii Hort. apud C. Koch in Wochenschr. Gärt. u. Pflanzenk. 2 (1859) 402, *mention.*

Astrocaryum aureo-punctatum Lemaire in Ill. Hort. 6 (Dec. 1859) in nota sub t. 229, *nomen.*

Stevensonia grandifolia Duncan, Cat. Roy. Bot. Gard. Mauritius (1863), *nomen.*

Stephensonia grandifolia Hort. Veitch apud Proc. Roy. Hort. Soc. Lond. 4 (1864) 134, *nomen.*

Phoenicophorium Sechellarum H. Wendland in Ill. Hort. 12 (Feb. 1865) Misc. 5 and (May 1865) t. 433.

Stevensonia Sechellarum Hort. apud Van Houtte in Fl. des Serres 15 (May 20, 1865) t. 1595-1596, *in synon.*

Astrocaryum pictum Hort. apud Balfour f. in Baker Fl. Mauritius (1877) 388, *in synon.*

Stevensonia Borsigiana L. H. Bailey, Gentes Herb. 2 (1930) 192.

Poinciana pulcherrima *L.* var. **flava** (*Hort.* apud L. H. Bail. & Rehd.) *Hubbard & Rehder, comb. nov.*

Caesalpinia pulcherrima Sw. var. *flava* Hort. apud L. H. Bailey & Rehder in L. H. Bailey, Cycl. Am. Hort. 1 (1900) 206.

The combination for this horticultural variety has never been made under *Poinciana.*

SALACCA *Reinwardt* in Syll. Ratisb. 2 (1825) 3.

Zalacca Rumphius, Herb. Amb. 5 (1747) 113, t. 57, fig. 2 — Reinwardt apud Blume in Roemer & Schultes, Syst. Nat. 7, pt. 2 (1830) 1334.

Salakka Reinwardt apud Blume, Cat. Gew. Buitenz. (1823) 112, *nomen.*

The oldest valid post-Linnean spelling of the generic name is *Salacca* of Reinwardt, and from the standpoint of Latin it is also more correct than *Zalacca.*

The species involved is:

Salacca edulis *Reinwardt* in Syll. Ratisb. 2 (1825) 3.

Calamus Zalacca Gaertner, De Fruct. et Sem. Pl.

2 (1791) 267, t. 139.

Salakka edulis Reinwardt apud Blume, Cat. Gew. Buitenz. (1823) 112, *nomen.*

Zalacca edulis Reinwardt apud Blume, Roemer & Schultes, Syst. Nat. 7, pt. 2 (1830) 1334.

Zalacca Blumeana Martius, Hist. Nat. Palm. 3 (1838) 201, t. 123; t. 159, fig. 3.

SORGHUM Moench, Meth. (1794) 207.

The recent trend has been to conserve *Holcus* L. for *Holcus lanatus* L. and to place *H. halepensis* L. and *H. Sorghum* L. in *Sorghum* Moench.

In doing this, two new combinations are made necessary, namely:

Sorghum vulgare *Pers.* var. **caffrorum** *(Thunb.) Hubbard & Rehder, comb. nov.*

Holcus Caffrorum Thunberg, Prodr. Pl. Cap. 1 (1794) 20.

Sorghum Caffrorum Beauvois, Agrost. (1812) 131, 164, 178.

Holcus Sorghum L. var. *caffrorum* L. H. Bailey, Gentes Herb. 1 (1923) 133.

Sorghum vulgare *L.* var. **Durra** *(Forsk.) Hubbard & Rehder, comb. nov.*

Holcus Durra Forskål, Fl. Aegypt.-Arab. (1775) 174.

Andropogon Sorghum Brot. subsp. *sativus* Hack. [var.] *Durra* Hackel in De Candolle, Monogr. Phan. 6 (1889) 516.

Sorghum Durra Stapf in Prain, Fl. Trop. Afr. 9 (1917) 129.

Holcus Sorghum L. var. *Durra* L. H. Bailey, Gentes Herb. 1 (1923) 132.

The synonymy of the varieties of *Sorghum vulgare* is very involved and the identity of many varietal names

is, at present, not well known. Consequently, although evidence tends to lead one to believe that "*caffrorum*" and "*Durra*" are not the oldest varietal names for these forms, it has seemed advisable to retain them until a more complete study of the species has been made.

Talinum paniculatum *(Jacq.) Gaertn.* forma **variegatum** (*Hort.* apud W. Mill.) *Hubbard & Rehder, comb. nov.*

Talinum patens Willd. var. *variegatum* Hort. apud W. Miller in L. H. Bailey, Cycl. Am. Hort. 4 (1902) 1767.

The combination for this horticultural form does not appear to have been made previously under *T. paniculatum.*

Tipuana tipu *(Benth.) Hubbard & Rehder, comb. nov.*

Machaerium Tipu Bentham in Hook Journ. Bot. & Kew Gard. Misc. 5 (1853) 267.

Tipuana Tipa Lillo, Contrib. Conoc. Arbol. Argent. (1910) 58.

Lillo in transferring this species to *Tipuana* elected to use the other and possibly more correct spelling of the vernacular name. In consequence the adoption of Bentham's earlier specific name necessitates a new combination.