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# NOMENCLATURAL NOTES FOR THE NORTH AMERICAN FLORA. XI

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## ABSTRACT

*Epilobium brachycarpum* Presl is accepted to be the correct name in place of *E. paniculatum* Nutt. *ex* Torr. & Gray. The disposition of *Websteria confervoides* (Poir.) Hooper is discussed. The quadrinomial *Sidalcea malviflora* (DC.) A. Gray *ex* Benth. subsp. *laciniata* C.L. Hitchc. var. *laciniata* C.L. Hitchc. is recognized as two trinomials: *Sidalcea malviflora* subsp. *laciniata* C.L. Hitchc. and *Sidalcea malviflora* var. *laciniata* C.L. Hitchc. The authorship of *Amelanchier alnifolia* (Nutt.) Nutt. *ex* M. Roemer, *A. pumila* (Torr. & Gray) Nutt. *ex* M. Roemer, *Aronia arbutifolia* (L.) Pers., *Choenomeles japonica* (Thunb.) Lindl. *ex* Spach, *Malus pumila* C. Bauhin *ex* P. Mill., *M. sieboldii* (Regel) Rehder, *M. sylvestris* P. Mill., and the new Vitaceae names proposed in Gray's 1897 work is discussed. "*Senna artemisioides* (DC.) Kartesz & Gandhi" is treated as an isonym of *S. artemisioides* (DC.) Randell. One new combination is proposed: **Spiranthes confusa** (Garay) Kartesz & Gandhi.

KEY WORDS: Cyperaceae, Fabaceae, Malvaceae, Onagraceae, Orchidaceae, Rosaceae, Vitaceae, *Amelanchier, Aronia, Choenomeles, Epilobium, Malus, Senna, Sidalcea, Spiranthes, Websteria*, Bailey, Gray

## INTRODUCTION

Continuing with the "NOMENCLATURAL NOTES FOR THE NORTH AMERICAN FLORA" (Kartesz & Gandhi 1989, 1990a, 1990b, 1990c, 1991a, 1991b, 1991c, 1991d, 1992a, 1992b), an eleventh note in the series is presented here toward advancing our understanding of North American plant names.

CYPERACEAE

*Websteria confervoides*

*Scirpus confervoides* Poir. is a leafless, submerged aquatic found throughout the tropics and subtropics. It has a diffuse growth habit, slender terete stems, capillary branches in pseudo-whorls, and pedicelled ascending spikelets. Each spikelet has two distichous scales, with the upper scale subtending 6-11 retrorsely barbed bristles, 3 stamens, and an ovary with two style branches. Because of its unique morphology, its taxonomic disposition has been in dispute, as discussed below.

Hooper (Kew Bull. 26:582. 1972.) transferred *Scirpus confervoides* to the genus *Websteria* S.H. Wright [*W. confervoides* (Poir.) Hooper]. Without referencing Hooper, Kern (1974, p. 505) retained Poiret's plant within *Scirpus* L. Tucker (J. Arnold Arbor. 68:388. 1987) transferred it to the genus *Eleocharis* R. Br. and proposed the combination "*E. confervoides* (Poir.) Tucker." Prior to Tucker's publication, Miquel (1856, p. 303) made the combination *E. confervoides*. Since both Miquel and Tucker independently made the same combination based on the same type, Tucker's later combination must be considered an isonym (cf. Nicolson, Taxon 24:461-466. 1975). Ironically, both Miquel's and Tucker's combinations are later homonyms of *E. confervoides* Steud. (*Syn. Pl. Glumac.* 2:82. 1854-1855.).

For the inclusion of Poiret's taxon in *Eleocharis*, Tucker derived support from a lack of leaf blades and from some embryological characters. [The embryo in *Eleocharis* is a variant of the *Fimbristylis*-type: top shaped, with basal coleoptyle, lateral rootcap, and first leaf more or less protruding from the germ pore (*fide* Kern 1974, pp. 446, 523).] Regarding the embryological character, Kern (p. 447) remarked that more than one type of embryo may occur within a genus or a single embryo type may occur in more than one genus. He stated that *S. confervoides* "has its own embryo type, similar to that of *Eleocharis*, but somewhat more differentiated." He further suggested the retention of Poiret's taxon within *Scirpus* because of its floral characters.

We disagree with both Kern's and Tucker's disposition of Poiret's taxon. We believe that inclusion of Poiret's taxon either within *Scirpus* or within *Eleocharis* is anomalous. We concur with Wright's (Bull. Torrey Bot. Club 14:135. 1887.) and Hooper's (*l.c.*) analyses that the unique morphology of Poiret's taxon deserve its disposition in the monotypic genus *Websteria* S.H. Wright.

*Websteria confervoides* (Poir.) Hooper, Kew Bull. 26:582. 1972. BASIONYM: *Scirpus confervoides* Poir. *in* Lam., *Encycl.* 6:755. 1804. *Eleocharis confervoides* (Poir.) Miq., *Fl. Ind. Bat.* 3:303. 1856.; Tucker, J. Arnold Arbor. 68:388. 1987., *non* Steud. 1854-1855.

FABACEAE
*Senna artemisioides*

Unaware of the publication of *Senna artemisioides* (Gaud. *ex* DC.) Randell (J. Adelaide Bot. Gard. 12(2):220. 1989.), we (Phytologia 72:87. 1992.) made the identical combination. Barneby (NY) brought Randell's combination to our attention.

Prior to making our combination, we searched Index Kewensis, Kew Index, and Gray Herbarium Card Index to insure that this combination did not exist. At the time of our search, the NCU Library had holdings of Kew Index for the years ending 1989; unfortunately, Randell's combination is not listed in the Kew Index for 1989 and is most likely listed in the Kew Index for 1990 (for which we do not have access to date). Nevertheless, we regret our oversight and consider our combination as an isonym of Randell's combination.

*Senna artemisioides* (Gaud. *ex* DC.) Randell, J. Adelaide Bot. Gard. 12(2):220. 1989.; Kartesz & Gandhi, Phytologia 72:87. 1992.

MALVACEAE
*Sidalcea*

Hitchcock (1957, pp. 29-30) proposed *Sidalcea malviflora* subsp. *laciniata*, under which he recognized two varieties: *S. malviflora* subsp. *laciniata* var. *laciniata* and *S. malviflora* subsp. *laciniata* var. *sancta* C.L. Hitchc. Hitchcock provided a Latin description for his subspecies and a Latin diagnosis for his var. *sancta*. He provided a diagnosis in English for var. *laciniata*. Since he intended var. *laciniata* to be the autonym of subsp. *laciniata* (he cited the same type for both ranks) and since the *International Code of Botanical Nomenclature* (*ICBN*) (Lanjouw 1956, Art. 26) mandated at that time that a) autonyms were to be cited without an author and b) that autonyms did not have taxonomic standing, Hitchcock neither provided a Latin diagnosis nor authorship details for *S. malviflora* subsp. *laciniata* var. *laciniata*. Under the present *ICBN* (Greuter 1988), autonyms exist only for species, but not for infraspecific taxa, such as subspecies and varieties. Furthermore, all names (including infraspecific ranks, but excluding autonyms of species) must have an author citation (*ICBN* Art. 46.1). Since var. *laciniata* is not an autonym of *S. malviflora*, the former name requires authorship.

According to Art. 34 Ex. 11, an author can simultaneously validate a single combination at different infraspecific ranks within a species. Example 11 illustrates that the description of "*Malvastrum bicuspidatum* subsp. *tumidum* S.R. Hill var. *tumidum*, subsp. et var. nov." (Hill, Brittonia 32:474. 1980.) simultaneously validated both *M. bicuspidatum* subsp. *tumidum* S.R. Hill and

*M. bicuspidatum* var. *tumidum* S.R. Hill. In his work, Hill also proposed *M. bicuspidatum* subsp. *tumidum* var. *glabrum* S.R. Hill and provided the following diagnosis: "A varietate typica foliorum lamina angustata ovato-lanceolata petiolo 8-plo usque longiori, bracteolis calycem aequantibus, schizocarpis maturis glabris aut scabrellis et in vivo apice rubris, mericarpiis minoribus ca 5.0 mm diametro differt." An analysis of the Latin description of *M. bicuspidatum* subsp. *tumidum* var. *tumidum* indicates that Hill did not compare the length of the blade with that of the petiole, nor did he compare the bracteoles with that of the calyx, or the size of the mericarps. However, he did describe the mericarps as "often tinted rose-red drying to red-brown or brown" with the vestiture restricted to the apical and cusp surfaces. Furthermore, Hill provided a single description to validate both ranks (subsp. *tumidum* and var. *tumidum*); hence, this description is not the sum of var. *tumidum* and var. *glabrum*. According to Art. 25 Ex. 1, an infraspecific taxon, for nomenclatural purposes, is regarded as the sum of its subordinate taxa. In Hill's treatment, it is evident that var. *glabrum* is taxonomically differentiated from var. *tumidum*, but for nomenclatural purposes, it is questionable whether subsp. *tumidum* can be regarded as the sum of its vars. *tumidum* and *glabrum*.

Hill's and Hitchcock's treatments are not identical. Unlike Hill's treatment, Hitchcock's Latin description of subsp. *laciniata* is explicitly a sum of its two varieties (var. *laciniata* and var. *sancta*). Evidently, Hitchcock met the requirements of Art. 25.1, but whether var. *laciniata* was validly published is questionable. In personal communications, Nicolson (US) and McVaugh (NCU) asserted that var. *laciniata* was validly published in Hitchcock's treatment. Their assertion is in accordance with Rec. 26A.1.

*Sidalcea malviflora* (DC.) A. Gray *ex* Benth. var. *laciniata* C.L. Hitchc., Univ. Washington Publ. Biol. 18:30. 1957.

## ONAGRACEAE

### *Epilobium brachycarpum*

For 140 years (1840-1981), the Tall Annual Willowherb was known by the name *Epilobium paniculatum* Nutt. *ex* Torr. & Gray (published in 1840). In 1981, Hoch & Raven (Taxon 30:666) stated that *E. brachycarpum* Presl (published in 1831) and *E. paniculatum* were conspecific. These authors remarked that the name *E. brachycarpum* "has been incorrectly applied to plants of the *E. ciliatum* complex in the only four treatments in which the name has been used in the last hundred years." Furthermore, these authors believed *E. paniculatum* to be an universally accepted name for the willowherb in question. Based on *ICBN* Art. 69, Hoch & Raven proposed to reject the name *E. brachycarpum*.

In anticipation of the acceptance of Hoch & Raven's proposal by the nomenclatural committee of the *ICBN*, Solomon (1982, p. 330) recognized the name *Epilobium paniculatum* and cited *E. brachycarpum* as a synonym. However, the nomenclatural committee (Taxon 33:300. 1984.) remarked that the name *E. brachycarpum* was neither widely nor persistently misused and that *ICBN* Art. 69 was not designated to cover a case such as Hoch & Raven proposed. Therefore, the committee unanimously rejected Hoch & Raven's proposal and stated that the name *E. paniculatum* must be replaced by the earlier name *E. brachycarpum*.

Without referencing the committee's rejection, Hoch (1986, p. 508) used the name *Epilobium paniculatum*, whereas Welsh *et al.* (1987, p. 441), Dorn (1988, p. 204), and Gleason & Cronquist (1991, p. 317) correctly used the name *E. brachycarpum*.

*Epilobium brachycarpum* Presl, *Rel. Haenk.* 2:30. 1831.

*Epilobium paniculatum* Nutt. *ex* Torr. & Gray, *Fl. N. Amer.* 1:490. 1840.

ORCHIDACEAE

*Spiranthes confusa*

Garay (1980) segregated members of *Deiregyne* Schlechter from *Spiranthes* L.C. Rich. *sens. lat.* According to Garay, *D. durangensis* (Ames & C. Schweinf.) Garay (= *S. durangensis* Ames & C. Schweinf.) does not occur in Texas. He assigned the Texas orchids, known by the preceding name, to *D. confusa* Garay and stated that *D. confusa* differs from *D. durangensis* "in having glandular pubescent sepals, a differently proportioned lip with a different callus at its base and shape of the rostellum." We concur with Garay's treatment of *D. durangensis*, but for the North American flora, we include it within *Spiranthes* sens. lat. (including *Deiregyne*), requiring the new combination proposed below.

**Spiranthes confusa** (Garay) Kartesz & Gandhi, *comb. nov.* BASIONYM: *Deiregyne confusa* Garay, Bot. Mus. Leafl. 28:283. Apr 1982 (Sep 1980). TYPE: MEXICO. Hidalgo: Lagoon of Metztitlán, *Gonzáles s.n., sub Nagel 2194* (AMES).

*Spiranthes durangensis* auct. non Ames & C. Schweinf.

ROSACEAE

*Amelanchier alnifolia*

Jackson (1895), Jones (1946, p. 67) and Phipps *et al.* (1990, p. 2231, no. 1) attributed the combining authorship of *Amelanchier alnifolia* to (Nutt.) Nutt. (J. Acad. Nat. Sci. Philadelphia 7:22. 1834.). In Nuttall's work, the combination *Amelanchier alnifolia* was cited without authorship. Nuttall neither provided a description nor cited a direct or an indirect reference to the basionym *Aronia alnifolia* Nutt. Since Nuttall did not meet the requirements of *ICBN* Arts. 32.1c, 32.3, and 32.4, the combination *Amelanchier alnifolia* was not validly made in Nuttall's 1834 work. To our knowledge, M. Roemer was the first to validate the preceding combination.

*Amelanchier alnifolia* (Nutt.) Nutt. *ex* M. Roemer, *Fam. Nat.* 3:147. 1847. BASIONYM: *Aronia alnifolia* Nutt., *Gen. N. Amer.* 1:306. 1818.

*Amelanchier pumila*

Jackson (1895) attributed *Amelanchier pumila* to Nutt. *ex* Torr. & Gray, whereas Phipps *et al.* (1990, p. 2232, no. 27) to Nuttall. Nuttall's manuscript name *A. pumila* was validly published in Torrey & Gray's work at varietal rank. Hence, none of these authors must be credited with authorship of the preceding binomial. To our knowledge, M. Roemer was the first to elevate Nuttall's taxon to specific rank, which he attributed to Nuttall. The full author citation is given below.

*Amelanchier pumila* (Torr. & Gray) Nutt. *ex* M. Roemer, *Fam. Nat.* 3:145. 1847. BASIONYM: *Amelanchier canadensis* (L.) Medik. var. *pumila* Torr. & Gray, *Fl. N. Amer.* 1:474. 1840.

*Aronia arbutifolia*

The name *Aronia arbutifolia* has been attributed to either Medicus (Jackson 1895) or to (L.) Ell. (Soil Conservation Service 1982, p. 140; Phipps *et al.* 1990, p. 2232, no. 1). In our study, we found that neither is correct. Medicus (1789, pp. 140, 155) cited the generic name *Aronia* and the binomial *Mespilus arbutifolia*. This does not constitute valid publication of the combination *A. arbutifolia*, since Medicus did not definitely associate the epithet *arbutifolia* with the generic name *Aronia*; hence, Medicus must not be credited with authorship of the combination (*ICBN* Art. 33, Ex. 2). Although Elliott (1821, p. 556) validly used the name *A. arbutifolia*, Persoon made this combination fourteen years prior to Elliott's work. Accordingly, Persoon is the combining author of this binomial.

*Aronia arbutifolia* (L.) Pers., *Syn. Pl.* 2:39. 1807. BASIONYM: *Mespilus arbutifolius* L., *Sp. Pl.* 478. 1753.

*Choenomeles japonica*

The combining authorship of *Choenomeles japonica* has often been attributed to Lindley (Jackson 1895; Ohwi 1965, p. 547; Phipps *et al.* 1990, p. 2233, no. 2). Although Lindley (Trans. Linn. Soc. London 13:97. 1822.) proposed the genus *Choenomeles* and cited the name *Pyrus japonica* Thunb. (as the type), this does not constitute valid publication of the combination *C. japonica*, since Lindley did not definitely associate the epithet *japonica* with the generic name *Choenomeles*; hence, Lindley must not be credited as the author of this combination (*ICBN* Art. 33, Ex. 2). To our knowledge, Spach was the first to associate the epithet *japonica* with the generic name *Choenomeles* and he attributed the combination to Lindley. The full author citation is given below.

*Choenomeles japonica* (Thunb.) Lindl. *ex* Spach, *Hist. Nat. Veg. Phan.* 2:159. 1834. BASIONYM: *Pyrus japonica* Thunb., *Fl. Jap.* 207. 1784.

*Malus pumila*

The Soil Conservation Service (1982, p. 144) attributed the name *Malus pumila* to "(L.) Mill." and assigned an * to the authorship indicating that the nomenclature was verified. However, Terrell *et al.* (1986, p. 92) and Phipps *et al.* (1990, p. 2234, no. 11) did not cite a parenthetical authorship for *M. pumila*. Our study follows.

In his treatment of *Malus*, Miller (1768) referenced Linnaeus. For *M. pumila*, Miller cited a reference to Bauhin's *M. pumila* (a pre-1753 publication). *Pyrus malus* L. var. *paradisiaca* L. (1753, p. 479) was also based on Bauhin's *M. pumila*. Although both Miller and Linnaeus referenced Bauhin, they recognized different taxonomic ranks and used different epithets. Even in the second edition of *Species Plantarum*, Linnaeus (1762, p. 686) maintained his 1753 treatment of *P. malus* var. *paradisiaca*. Since Miller did not base his *M. pumila* on the Linnaean work, the authorship of *M. pumila* must not include a parenthetical authorship, as indicated by Terrell *et al.*

*Malus pumila* P. Mill., *Gard. Dict.*, ed. 8. no. 3. 1768.

*Pyrus malus* L. var. *paradisiaca* L., *Sp. Pl.* 479. 1753.

*Malus sieboldii*

Jackson (1895) attributed the name *Malus sieboldii* to Dippel (1893; p. 406), but Phipps *et al.* (1990, p. 2235, no. 29) attributed it to Rehder. Since Dippel made a reference to "*Mal. Sieboldii* Rgl. in Gartenflora 1859. S. 82," some authors may believe that the reference to Regel was an indirect reference to the basionym *Pyrus sieboldii* Regel and that Dippel made the combination *M. sieboldii*. However, Dippel cited the preceding name as a synonym of *M. toringo* Sieb. Since Dippel did not accept the name *M. sieboldii*, he must not be credited with its authorship (*ICBN* Art. 34.1a). To our knowledge, Rehder was the first to validly make the combination.

*Malus sieboldii* (Regel) Rehder, Rev. Hort. IV. 451. 1870. BASIONYM: *Pyrus sieboldii* Regel, Ind. Sem. Hort. Petrop. 51. 1858.

*Malus sylvestris*

Some authors, such as Rehder (1940, p. 391), believe that the name *Malus sylvestris* P. Mill. was based on "*Pyrus malus* var. *sylvestris* L." In his treatment of the genus *Malus*, Miller (1768) indeed referenced Linnaeus. Under *P. malus* L., Linnaeus (1753, pp. 479-480) cited six epithets, of which *sylvestris* was the first. Superficially it might appear as though Linnaeus used the epithet *sylvestris* at varietal rank. Our study follows.

Of the six epithets, the last five are associated with Greek letters, whereas *sylvestris* is not. According to Stearn (1957, pp. 90, 93), if Linnaeus considered his varieties to be well marked from the species, then such varieties were given epithets and Greek letters, whereas the species proper were given no Greek letter. In several cases, species proper were given an additional epithet (but no Greek letter) to contrast them with his other varieties. Based on Stearn's analysis, we conclude that Linnaeus used the epithet *sylvestris* to distinguish the common expression of *Pyrus malus* from its other five varieties. Hence, "*P. malus sylvestris* L." was never validly published and *Malus sylvestris* must not have a parenthetical authorship.

*Malus sylvestris* P. Mill., *Gard. Dict.*, ed. 8. *Malus*, no. 1. 1768.

VITACEAE

## Authorship of the New Vitaceae Names Proposed in Gray's *Syn. Fl. N. Amer.*

In his treatment of *Vitis*, Moore (Sida 14:351, 357, 359. 1991.) attributed *V. cinerea* (Engelm.) Millard. var. *canescens* to (Engelm.) Bailey *ex* A. Gray; *V. candicans* Engelm. *ex* A. Gray var. *coriacea* to (Shuttlew. *ex* Planchon) Bailey *ex* A. Gray; and *V. longii* Prince var. *microsperma* to (Munson) Bailey *ex* A. Gray. However, for *V. cordifolia* Michx. var. *helleri* and for *V. rupestris* Scheele var. *dissecta*, Moore (pp. 352, 361) credited Bailey with authorship. We speculate that Moore most likely distinguished between *comb. nov.* (*e.g.*, vars. *canescens, coriacea*, and *microsperma*) and *var. nov.* (*e.g.*, vars. *dissecta* and *helleri*) and that he considered Gray to be responsible for the *comb. nov.*, while Bailey to be responsible for the *var. nov.* Regarding the authorship of the new names proposed within Vitaceae (treated in Gray's work) and their bibliographies, our analysis follows.

Between 1878 and 1897, Gray's *Synoptical Flora of North America* was issued in two volumes. The second volume appeared first, followed by part 2 of the first volume, and finally number 2 of part 1 of the first volume. The preceding no. 2 was published nine years after Gray's death. Although its text was chiefly written by Gray, it included several contributions from other workers. On p. 419 of no. 2, the treatment of Vitaceae was credited to Bailey, with a footnote stating that "ordinal and technical generic characters by A. Gray." Based on this information, perhaps, the treatment of Vitaceae may be credited to both Bailey and Gray, with Bailey as the first author.

Regarding the authorship of ten new varietal names (seven *comb. nov.*, two *var. nov.*, and one *nom. nov.*) proposed within Bailey and Gray's work, eight were ascribed to Bailey, one to Eggert, and one to Gray. Excluding the name credited to Gray, the remainder (nine names), should be credited to Bailey, since he (not Gray) was responsible for them.

Bailey based *Vitis candicans* var. *coriacea* on *V. coriacea* Shuttlew. *ex* Planchon (*in* DC., *Monogr. Phan.* 5:345. 1887., *non* Miq. 1863.). Since the preceding basionym is a later homonym and thus, illegitimate, it must not be taken into consideration for purpose of priority (*ICBN* Art. 45.3). Therefore, no parenthetical authorship should be cited for var. *coriacea* and it must be treated as a *nom. nov.*, with its priority from 1897 (*ICBN* Art. 72, Note 1). Moore (*l.c.*, p. 357) noted the illegitimacy of *V. coriacea*, but failed to omit parenthetical authorship for var. *coriacea*. The correct authorship of the ten names and their bibliographies are given below.

*Ampelopsis quinquefolia* Michx. var. *heptaphylla* (Buckley) A. Gray, *Syn. Fl. N. Amer.* 1[1(2)]:432. 1897.

*Ampelopsis quinquefolia* Michx. var. *pubescens* (Schlect.) Bailey *in* A. Gray, *Syn. Fl. N. Amer.* 1[1(2)]:432. 1897.

*Vitis aestivalis* Michx. var. *glauca* (Munson) Bailey *in* A. Gray, *Syn. Fl. N. Amer.* 1[1(2)]:427. 1897.

*Vitis aestivalis* Michx. var. *bourquiniana* (Munson) Bailey *in* A. Gray, *Syn. Fl. N. Amer.* 1[1(2)]:428. 1897.

*Vitis candicans* Engelm. *ex* A. Gray var. *coriacea* Bailey *in* A. Gray, *Syn. Fl. N. Amer.* 1[1(2)]:429. 1897.

*Vitis cinerea* (Engelm.) Millard. var. *canescens* (Engelm.) Bailey *in* A. Gray, *Syn. Fl. N. Amer.* 1[1(2)]:425. 1897.

*Vitis cordifolia* Michx. var. *helleri* Bailey *in* A. Gray, *Syn. Fl. N. Amer.* 1[1(2)]:424. 1897.

*Vitis longii* Prince var. *microsperma* (Munson) Bailey *in* A. Gray, *Syn. Fl. N. Amer.* 1[1(2)]:423. 1897.

*Vitis rupestris* Scheele var. *dissecta* Eggert *ex* Bailey *in* A. Gray, *Syn. Fl. N. Amer.* 1[1(2)]:422. 1897.

*Vitis vulpina* L. var. *praecox* (Engelm. *ex* Bailey) Bailey *in* A. Gray, *Syn. Fl. N. Amer.* 1[1(2)]:422. 1897.

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