

NOMENCLATURAL NOTES FOR THE NORTH AMERICAN FLORA. IV.

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ABSTRACT

The authorship of the following names is discussed: *Bouteloua gracilis* (Willd. ex Kunth) Lag. ex Griffiths, *Brachiaria platyphylla* (Munro ex Wright) Nash in Small, *Bromus unioloides* Kunth, *Dichanthelium linearifolium* (Scribn. ex Nash) Gould, *Echinochloa frumentacea* Link, *Setaria sphacelata* (Schumach.) Stapf & Hubbard, and *Sporobolus vaginiflorus* (Torr. ex A. Gray) Wood. *Aira elegantissima* Schur and *Hymenachne amplexicaulis* (Rudge) Nees are accepted to be correct names.

KEY WORDS: Floristics, Nomenclature, Poaceae, *Aira*, *Bouteloua*, *Brachiaria*, *Bromus*, *Dichanthelium*, *Echinochloa*, *Hymenachne*, *Setaria*, and *Sporobolus*.

Introduction

Continuing with the "Nomenclatural notes for the North American flora" (Kartesz & Gandhi 1989; 1990a; 1990b), a fourth note in the series is presented here, toward advancing our understanding of North American plant names.

POACEAE

Aira elegantissima Schur

The European weed, commonly known as annual silver hair grass, has been treated by many workers as *Aira elegans* Willd. ex Gaudin. Tutin (1980) accepted the name *A. elegantissima* Schur for this grass and in synonymy stated that *A. capillaris* Host (*non* Savi) and *A. elegans* Willd. ex Gaudin

were illegitimate names. However, he did not elaborate on the illegitimacy of the latter name.

While reviewing Gaudin's (1811) work, we found that he numbered each of his accepted taxa, which has historically been a common practice by various workers. In the last paragraph of the protologue of *Aira caryphyllea* L. (number 7), he included the name "*A. elegans* Willd. *ined.*" and provided a brief description. Since the name *A. elegans* was not separately numbered, its inclusion within the protologue of *A. caryphyllea* could be interpreted as being a described name in synonymy, a provisional name, or both (Greuter 1988, Art. 34.1). Hence, the status of none of these can be considered legitimate. Therefore, the name *A. elegantissima* is the oldest legitimate name for this species complex.

Aira elegantissima Schur, Verh. Mitt. Siebenb. Ver. Naturw. 4(Sert. Fl. Transs.):85. 1853.

Aira capillaris Host, Icon. Gram. Austr. 4:20, t. 35. 1809, *non* Savi, 1798.

Aira elegans Willd. *ex* Gaudin, *Agrost. Helv.* 1:130. 355. 1811 (*pro syn.* and/or provisional name), *nom. invalid.*

Bouteloua gracilis (Willd. *ex* Kunth) Lag. *ex* Griffiths

Some authors, such as Gould (1975) and McVaugh (1983), attribute the name *Bouteloua gracilis* to (Willd. *ex* Kunth) Lag. *ex* Steud. In Steudel (1840), synonyms are provided in italics. On p. 219, 12 species of *Bouteloua* are listed in italics (including "*B. gracilis* Lag."). For the preceding name, Steudel cited "*Chondrosium gracile* H.B." as the accepted name. [The correct authorship for the name *C. gracile* is: Willd. *ex* Kunth, which was based on Willdenow's manuscript name *Actinochloa gracilis*]. On p. 355, Steudel listed the names of *Chondrosium* species that he accepted and their synonyms, but for *C. gracile*, he did not cite *B. gracilis*. Nevertheless, since Steudel did not accept the name *B. gracilis*, he did not validate the new combination (Greuter 1988, Art. 34.1a). Griffiths, who also attributed the name to Lagasca, inadvertently validated the combination.

Bouteloua gracilis (Willd. *ex* Kunth) Lag. *ex* Griffiths, Contr. U.S. Natl. Herb. 14:375. 1912. BASIONYM: *Chondrosium gracile* Willd. *ex* Kunth, Nov. Gen. et Sp. 1:176. 1814. *Bouteloua gracilis* (Willd. *ex* Kunth) Lag. *ex* Steud., Nom., ed. 2. 1:219. 1840, *pro syn.*

Brachiaria platyphylla (Munro ex Wright) Nash in Small

Webster (1988, p. 606) concluded that "combining *Urochloa* and *Brachiaria*, excluding the type [of *Brachiaria*], is morphologically justified and taxonomically necessary." He made four new combinations in *Urochloa*. However, we consider *Brachiaria* as distinct from *Urochloa*.

The combinations *Panicum platyphyllum* (Griseb.) Munro ex Wright (1871), *Brachiaria platyphylla* (Griseb.) Nash, and *Urochloa platyphylla* (Griseb.) Webster were based on *Paspalum platyphyllum* Griseb. Unfortunately, this basionym is a later homonym of *Panicum platyphyllum* J.A. Schultes (1827). Hence, Grisebach must not be cited as the parenthetical author for these names. Wright's new combination should be treated as a *nomen novum*, without a parenthetical author (Greuter 1988, Art. 72.2, Note 1), and with its priority starting from 1871 (not from 1866). This name thus can serve as a basionym for *B. platyphylla* (Munro ex Wright) Nash and *U. platyphylla* (Munro ex Wright) Webster. The correct nomenclature is given below.

Brachiaria platyphylla (Munro ex Wright) Nash in Small, *Fl. Southeast. U.S.* 81. 1903. BASIONYM: *Panicum platyphyllum* Munro ex Wright, *Anal. Acad. Cienc. Habana* 8:206. 1871. *Urochloa platyphylla* (Munro ex Wright) R. Webster, *Syst. Bot.* 13:606. 1988. *Paspalum platyphyllum* Griseb., *Cat. Pl. Cubensium* 230. 1866, non J.A. Schultes 1827.

Bromus

Bromus catharticus Vahl

Although the names *Bromus unioides* Kunth (1815) and *Festuca unioides* Willd. (1803) share specific epithets, they are based on different types, the former from Ecuador, the latter from Carolina. In conjunction with his description of *B. unioides*, Kunth did not cite Willdenow either directly or indirectly. For his *B. unioides*, Kunth (1829) cited *Schenodorus unioides* Roem. & Schult. (1817) in synonymy. Moreover, Kunth considered Willdenow's *F. unioides* to be a different species, and in transferring it to *Bromus*, named it *B. willdenowii* Kunth (1829), citing *F. unioides* and *Ceratochloa unioides* (Willd.) P. Beauv. (1812) in synonymy. Some authors, such as Gould (1975), include the parenthetical author for *B. unioides*, which is incorrect, whereas the author citation used by Hitchcock & Chase (1951, p. 833) and McVaugh (1983) is correct. We provide the following nomenclatural summary.

Bromus catharticus Vahl, *Symb. Bot.* 2:22. 1791.

Festuca unioloides Willd., *Hort. Berol.* 3, t. 3. 1803. *Ceratochloa unioloides* (Willd.) P. Beauv., *Ess. Agrost.* 75, t. 15, f. 7. 1812. *Bromus unioloides* (Willd.) Raspail, *Ann. Sci. Nat. Bot.* 5:439. 1825, non Kunth 1815. *Bromus willdenowii* Kunth, *Rev. Gramin.* 1:134. 1829.

Bromus unioloides Kunth in H.B.K., *Nov. Gen. Sp.* 1:151. 1815. *Schenodorus unioloides* (Kunth in H.B.K.) Roem. & Schult., *Syst. Veg.* 2:708. 1817. *Zerna unioloides* (Kunth in H.B.K.) Lindm., *Svensk Fanerogamfl.* 101. 1918.

Dichanthelium linearifolium (Scribn. ex Nash) Gould

Gould (1974) based his new combination *Dichanthelium linearifolium* on *Panicum linearifolium* "Scribn.," which was proposed in an appendix given in volume 3 of Britton & Brown (1898). The basionym authorship is discussed below.

The first edition of Britton and Brown's *Ill. Fl. N. U.S.* was issued in three volumes, with volume 1 in 1896 and volume 3 in 1898. The grass family was treated in vol. 1, in which (p. 94) Britton indicated in a footnote that the grass text was elaborated with the assistance of G.V. Nash. In his introduction to the second edition, Britton (in Britton & Brown 1913, p. XIII) explicitly stated that the "text of the grass family has been written by Mr. George V. Nash for both editions." Hence, all new names of grasses found in those editions must be attributed to Nash.

Britton (Britton & Brown 1898) stated that the appendix in volume 3 included "new discoveries or new determinations, mostly from the west, made while the work has been in press." Although the name *Panicum linearifolium* was attributed to Scribner, there was no indication that it was a new species nor that the text was from Scribner. The distribution was given as "New York, and New Jersey to Missouri." Thus, this was not one of the new species from the west, but a new determination. Had Nash mentioned this new species as "*P. linearifolium* Scribner, *sp. nov.*" (instead of "*P. linearifolium* Scribner"), we would accept Scribner to be the author of this species, but that was not the case. It was most likely that Scribner provided the material and epithet for this name. We conclude that the authorship of *P. linearifolium* should be: Scribn. ex Nash, and provide the following nomenclatural summary.

Dichanthelium linearifolium (Scribn. ex Nash) Gould, *Brittonia* 26:60. 1974.

BASIONYM: *Panicum linearifolium* Scribn. ex Nash in Britton & Brown, *Ill. Fl. N. U.S.* 3:500. 1898.

Echinochloa frumentacea Link

The combinations *Echinochloa frumentacea* Link (1827), *Oplismenus frumentaceus* Kunth (1829), *Panicum crusgalli* L. var. *frumentaceum* Trimen (1885), and *E. crusgalli* (L.) P. Beauv. var. *frumentacea* Wight (1909) are presumed to have been based on *P. frumentaceum* Roxb. (1820), which is a later homonym of *P. frumentaceum* Salisbury (1796). Although the latter name is superfluous, and thus illegitimate (Salisbury cited *Holcus sorghum* L. in synonymy), *P. frumentaceum* Roxb. must be rejected as a later homonym (Greuter 1988, Art. 64.1, Note 1) and cannot serve as a basionym. Link's new combination must be considered as a *nomen novum* (Greuter 1988, Art. 72.2, Note 1), with priority from 1827 (not from 1820). The combination *E. frumentacea* Link can serve as a basionym for Kunth's and Trimen's combinations. We provide the following nomenclatural summary.

Echinochloa frumentacea Link, *Hort. Berol.* 1:204. 1827. *Oplismenus frumentaceus* (Link) Kunth, *Rev. Gram.* 1:445. 1829. *Panicum crusgalli* L. var. *frumentaceum* (Link) Trimen, *Syst. Cat. Fl. Pl. Ceylon* 104. 1885. *Echinochloa crusgalli* (L.) P. Beauv. var. *frumentacea* (Link) W. Wight, *Cent. Dict. Sup.* 810. 1909. *Panicum frumentaceum* Roxb., *Fl. Ind.* 1:307. 1820, non Salisb. 1796.

Elymus alaskanus (Scribn. & Merr.) Löve ssp. *latiglumis* (Scribn. & J.G. Smith) Löve

The subspecific new combination *Elymus trachycaulus* (Link) Gould *ex* Shinnery ssp. *latiglumis* (Scribn. & J.G. Smith) Barkworth & D.R. Dewey (Great Basin Naturalist 43:562. 1983) was not validly made, because of the lack of citation of the basionym and a full and direct reference to its author and place of valid publication with page and date (Greuter 1988, Art. 33.2). Hence, to date, the above new combination remains invalid.

Barkworth (pers. comm.) informed us that although she was aware of the nomenclatural problem, she does not intend to correct it, since she presently prefers to follow Löve's treatment of this taxon (given below).

Elymus alaskanus (Scribn. & Merr.) Löve ssp. *latiglumis* (Scribn. & J.G. Smith) Löve, *Taxon* 29:166. 1980. BASIONYM: *Agropyron violaceum* (Hornem.) Lange var. *latiglume* Scribn. & J.G. Smith, U.S.D.A., Div. Agrost. Bull. 4:30. 1897. *Elymus trachycaulus* (Link) Gould *ex* Shinnery ssp. *latiglumis* (Scribn. & J.G. Smith) Barkworth & D.R. Dewey, *nom. invalid.*

Hymenachne amplexicaulis (Rudge) Nees

The genus *Hymenachne* consists of eight species (*vide* Webster 1987). The species *H. amplexicaulis* (Rudge) Nees (1829), a native of the West Indies, is reported from Florida. This species was based on *Panicum amplexicaule* Rudge (1805). Hsu (1978) treated *H. amplexicaulis* as a synonym of *H. pseudointerrupta* C. Muell. (Bot. Zeit. 19:333. 1861), giving the range of this grass as "Assam, Burma, Malaya to Indo-China, China and Polynesia." Webster treated both *H. amplexicaulis* and *H. pseudointerrupta* as synonyms of *H. acutigluma* (Steud.) Gilliland (Gard. Bull. Singapore 20:314. 1964), with the latter name being based on *P. acutigluma* Steud. (1854). Webster commented that *H. acutigluma* is a native of Australia. In researching this problem, we found that the oldest name in this complex is *P. amplexicaule*. Hsu and Webster gave no reasons for rejecting this name and inexplicably accepting a later name.

Bor (1960) remarked that the grass in Assam (India), known as *Hymenachne amplexicaulis*, is distinct from the American *H. amplexicaulis*. He assigned the Indian element to *H. pseudointerrupta*. Koyama (1987) essentially followed Bor in accepting the name *H. pseudointerrupta* for a Japanese species and considered (p. 510) the name *H. amplexicaulis* to be misapplied to a grass in SE Asia.

We accept Bor's and Koyama's interpretation that the American element *Hymenachne amplexicaulis* is distinct from the SE Asian *Hymenachne*. Accordingly, we conclude that *H. amplexicaulis* is the correct name for the New World *Hymenachne*. If *H. acutigluma* and *H. pseudointerrupta* are conspecific (as indicated by Webster), then *H. acutigluma* has priority over *H. pseudointerrupta*. Both Hsu and Webster were correct at the time of their publications; the former choosing the name *H. pseudointerrupta*; the latter choosing the name *H. acutigluma*. However, both authors erred in citing *H. amplexicaulis* as a synonym of their respective combinations. For the American element, the correct nomenclature is given below:

Hymenachne amplexicaulis (Rudge) Nees, *Agros. Bras.* 276. 1829. **BA-
SYNONYM:** *Panicum amplexicaule* Rudge, *Pl. Guian.* vol. 1:21. 1805.
Non *Hymenachne amplexicaule* sensu Hsu or Webster.

Setaria sphacelata (Schumach.) Stapf & Hubbard

The tropical African grass *Setaria sphacelata* has become naturalized in California and elsewhere in the U.S.A. The name has been attributed to "Stapf & Hubbard" (Chipp 1929), to "Stapf & Hubbard *ex* Moss" (Stapf & Hubbard

1930), to "(Schumach.) Stapf & Hubb. *ex* Moss" (Clayton 1966), to "(Schumach.) Moss" (Clayton 1972, 1979; Clayton & Renvoize 1982; Webster 1987), or to "(Schumach.) Stapf & Hubb." (Hitchcock & Chase 1951; Munz 1968, p. 197 in supplement; Kartesz & Kartesz 1980).

The name first appeared in T.F. Chipp's (1929, pp. 184, 195) article on the Imatong Mountains of Sudan, where he stated (p. 195) "*Setaria sphacelata* Stapf & Hubbard. E. of Kippia, 9000 ft. A grass 3 ft. high, one of the commonest constituents of the mountain meadows. No. 98." The serial no. 98 refers to the collector's field number of the collections made in the Imatong Mountains (as per * mark note on p. 179). A section of Chipp's article (pp. 195-197) includes new species that were attributed to M.B. Moss, and with all newly described species provided with detailed descriptions. However, the species in question is not one of the new species. Hence, we speculate that Chipp did not consider this grass to be new. Attribution of the new species to Moss might have misled some authors, such as Clayton, to believe that Moss was the author of the combination *S. sphacelata*.

On p. 184 (Chipp 1929), the mention of this species name is a *nomen nudum* and does not constitute a valid publication (Greuter 1988, Art. 32.1; Rec. 50B). In the protologue given on p. 195, no basionym is mentioned and no reference is made to Schumacher, either directly or indirectly. If Chipp intended the name *Setaria sphacelata* to be a new combination authored by (Schumach.) Stapf & Hubb., the protologue does not meet the minimum requirement, *i.e.*, an indirect reference to Schumacher's *Panicum sphacelatum*, and therefore, Chipp cannot be credited with the new combination. Because of the ambiguity of the description given by Chipp (a 5 word description: "A grass 3 ft. high"), the alternative possibility of considering the name as *sp. nov.* is also eliminated.

In light of the above analysis, we believe that the name *Setaria sphacelata* does not have valid taxonomic and nomenclatural standing in Chipp's article. To our best knowledge, Stapf & Hubbard (1930) used this name, attributing it to Stapf & Hubb. *ex* Moss, and cited the basionym (p. 796). Thus, the new combination (*S. sphacelata*) was not made in Chipp's article, but made by Stapf & Hubbard. Accordingly, the correct authority for *S. sphacelata* is: (Schumach.) Stapf & Hubbard (as given by Hitchcock & Chase, Munz, and Kartesz & Kartesz).

Sporobolus vaginiflorus (Torr. *ex* A. Gray) Wood

In 1861, Wood proposed the combination *Sporobolus vaginiflorus* and attributed the species epithet to Torrey. He also cited the following references: "*Agrostis* Muhl., *Crypsis* Nutt." Wood's combination has historically been presumed to be based on *Vilfa vaginiflora* Torrey. We came across discrepancies

on the authorship of both the basionym and new combination. The following names are involved in the taxonomy and nomenclature of *S. vaginiflorus*:

Agrostis virginica L. 1753; Muhl. 1817; Torr. 1824.

Crypsis virginica (L.) Nutt. 1818.

Vilfa vaginiflora Torr. "in" A. Gray 1834; Torr. 1843.

Sporobolus vaginiflorus (Torr.) Wood.

In 1824, Torrey used the name *Agrostis virginica* L. for a northern U.S. plant; however, he later realized that true *A. virginica* was taxonomically different and more widespread than the northern plant. For the northern grass, which he called "*A. virginica* L.," Torrey excluded the Linnean type and provided a new name: *Vilfa vaginiflora*. This is evident from his 1843 treatment of *V. vaginiflora*. He also asserted that even Muhlenberg's "*A. virginica*" belongs in Torrey's *V. vaginiflora*. Torrey's description of the plant, along with Muhlenberg's, although given under a misapplied name (i.e., *A. virginica*), clearly apply to *V. vaginiflora*. Since *V. vaginiflora* was not a new species, but rather a new name, no new description was necessary; a mere reference to either Muhlenberg's or Torrey's description was all that was required to validate the new name.

Between his 1824 and 1843 publications, Torrey had the name *Vilfa vaginiflora* in manuscript form. Prior to Torrey's 1843 publication of the name *V. vaginiflora*, Gray (1834) used the name and attributed it to Torrey. Gray indicated that it was Torrey's manuscript name. With reference to authorship of the name, there has been difference of opinion, with some workers (e.g., Voss 1966) attributing it to Torrey and others (e.g., Kartesz & Kartesz 1980) to Torr. ex A. Gray. Even Torrey cited the authorship as "Torr. in A. Gray" in his 1843 work. Voss argued that Gray published Torrey's label information of this name (*Vilfa vaginiflora* Torrey, *Synop. Flora*, ined. *Agrostis virginica* Muhl., *Gram.* p. 74, Torrey, *Flora*, v. 1, p. 89, non Elliott et Auct.). Voss further emphasized that Torrey's label information was sufficient to validate the name and that Gray's description was nonessential; hence, Torrey alone should be credited with authorship.

We assessed the problem to determine correct authorship. Although it is evident that Gray's description was nonessential to validate the name, it was Gray who actually published it. Whenever Gray used verbatim descriptions of others, he usually provided such descriptions in quotation. However, in this case, the description is not a critical issue. We believe that in order for Torrey to receive credit of authorship, Gray should have specifically stated that he published the name for Torrey; however this was not done. Mere attribution to Torrey alone does not justify authorship to Torrey. Such attributions to

manuscript authors were customary in the Torrey-Gray era. According to the present practice of the ICBN committee for Spermatophyta, nomenclatural decisions must be made on the published text (Taxon 33:300. 1984; on the authorship of the genus *Burtonia*: R. Brown vs. R. Brown *ex* Ait. f.). Hence we disagree with Voss and concur with Kartesz & Kartesz on the correct authorship being: Torr. *ex* A. Gray.

With reference to the authorship of the new combination (*Sporobolus vaginiflorus*), Soil Conservation Service (1982) gave the transfer authors as: Torr. *ex* Wood. As we indicated earlier, Wood attributed the name to Torrey and cited the references to *Agrostis* Muhl. and *Crypsis* Nutt. These two references must be construed as *Agrostis virginica* sensu Muhl. *non* L. and *Crypsis virginica* sensu Nutt. (*non* *A. virginica* L.). According to Greuter (1988), Art. 48.1, Wood excluded the Linnean material. Certainly, Wood was aware of Gray's publication, which excluded the Linnean material. Wood's reference to Torrey must be considered as an indirect reference to the basionym. This interpretation is based on Greuter (1988), Art. 32, Ex. 5. Hence, Wood is the sole transfer author for the combination *S. vaginiflorus* as indicated below:

Sporobolus vaginiflorus (Torr. *ex* A. Gray) Wood, *Class-book Bot.* 775. 1861.

BASIONYM: *Vilfa vaginiflora* Torr. *ex* A. Gray, *Gram. & Cyp.* 1:3. 1834.

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