

**PROCEEDINGS OF THE BIOLOGICAL
SOCIETY OF WASHINGTON, VOL. XVI,
JUNE 19, 1901: SIXTH LIST OF ADDITIONS
TO THE FLORA OF WASHINGTON, D. C.
AND VICINITY, PP. 47-86**

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EDWARD S. STEELE

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PROCEEDINGS
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BIOLOGICAL SOCIETY OF WASHINGTON

SIXTH LIST OF ADDITIONS TO THE FLORA OF
WASHINGTON, D. C. AND VICINITY.

BY EDWARD S. STEELE.

WITH DESCRIPTIONS OF NEW SPECIES AND VARIETIES BY
EDWARD L. GREENE, ALVAH A. EATON, AND
THE AUTHOR.

The following list is based upon a course of collecting prosecuted outside of my routine work for five years beginning with 1896. The general purpose has been merely to record names of new and less familiar plants, with stations; but advantage has been taken of the opportunity to publish a few descriptions of new local material and to record some observations.

Professor Greene has kindly furnished for publication here a name and character for a new violet which I was so fortunate as to discover. Mr. Alvah A. Eaton describes two new forms of *Isoetes*, which are not, however, my own discoveries. I propose a segregate from the *Lycopus virginicus* of authors, a well-marked species long since noticed, but apparently never properly named. In an extended note on *Vernonia glauca* I hope to have set that species in a somewhat clearer light. Other notes are scattered through the list.

I am indebted to several gentlemen for the revision of my determinations, particularly to Mr. L. H. Dewey, who studied all my earlier collections of grasses. The dichotomous Pani-

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LIBRARY OF THE GRAY HERBARIUM
HARVARD UNIVERSITY.

THE GIFT OF
B. L. Robinson.

cums I have of late left wholly to the skill and kindness of Mr. E. D. Merrill, who is working with Professor Scribner in that trying field. Professor C. F. Wheeler has been referee for about all of the Carices that presented difficulties, and I am also the beneficiary of Mr. Geo. B. Sudworth, Mr. Frederick V. Coville, Mr. J. N. Rose, Mr. Charles L. Pollard, and others.

The arrangement of the list follows the sequence of Engler and Prantl, but the numbers prefixed are those of Professor Ward's Guide to the Flora of Washington and Vicinity (Bull. U. S. Nat. Mus. No. 22, 1881) and the subsequently published additions. In order to preserve the original numeration, and at the same time place the additions in their proper connections, the use of appended letters has been resorted to.

The prefixed asterisk denotes a species not hitherto recorded in print as belonging to our flora. In the case of a number of these species my collection has probably been anticipated by that of other collectors whose results have not been published, but it is not practicable wholly to avoid this injustice. On the other hand, some first collected by me have in the same manner been entered in an earlier list.

1217a. *Pteris aquilina pseudocaudata Clute. (*P. aquilina caudata* of American authors, not of Linnaeus).

Kenilworth, abundant near the railroad, September 20, 1900. Also near Hyattsville.

1233a. *Dryopteris spinulosa* (Retz) Kuntze.

In a ditch near Captain Jones' place beyond Chevy Chase Lake.

1234. *Dryopteris spinulosa intermedia* (Muhl.) Und.

Not seen near the city. Found at Suitland, near Kensington, and near Great Falls on the Virginia side.

1237a. *Onoclea struthiopteris* (L.) Hoffm.

A few sterile fronds, Plummer's Island, May 31, 1897.

1240. *Lygodium palmatum* (Bernh.) Sw.

In a drained swamp, eastern part of Suitland, Sept. 8, 1899.

1213a. *Equisetum robustum A. Br.

On both sides of Beaver Dam Branch, near the road. Rarely found in fruit.

1253c. *Isoetes saccharata Engelm.

In tide mud among coarse gravel along the bay at the mouth of Four Mile Run, August 5, 1898. The range as given in Britton and Brown's Flora is "Wicomico and Nanticoke rivers, eastern Maryland". The following varieties, though not of my own collecting, may be appropriately published in this place.

***1253d. Isoetes saccharata Palmeri** A. A. Eaton, var. nov.

Aspect of *riparia*. Leaves much stouter than in the type, 1 to 1½ dm. long, recurved; macrospores 500 to 550M, with markings taller and more confluent, strongly suggesting *riparia*.

This variety might easily pass for *riparia*, which has, indeed, happened several times; but the very narrow, almost obsolescent velum, the less tuberculate microspores, the smaller, more closely sculptured macrospores, and the dirty brownish color when dry, sufficiently distinguish it. The spores appear intermediate between *riparia* and the varieties of *echinospora* in sculpture, some of the markings being irregular walls, others broad, often forked spinules as in *Braunii*.

First collected by Mr. T. C. Palmer, of Media, Pa., at Lloyd's Creek, Sassafras River, Maryland, August 12, 1895, and by him ably characterized*. Specimens collected by Mr. Frederick V. Coville at the foot of the Washington estate, Mount Vernon, Va., do not fully agree, but apparently connect the variety with the typical form of the species.

Types in the herbarium of A. A. Eaton, the National Herbarium, and those of the Missouri Botanical Garden, the University of Minnesota, and the Linnaean Fern Chapter. — A. A. Eaton.

1253b. Isoetes saccharata reticulata A. A. Eaton, var. nov.

Smaller; leaves 10 to 20, slender, erect, vivid green, 1.5 to 2 dm. long, with abundant stomata; macrospores 400 to 432M, marked with low, parallel, anastomosing walls above and more or less regularly reticulate below.

The aspect of this plant also suggests *riparia* rather than *saccharata*. The spores sometimes resemble those of small *Tuckermanni* or even *Engelmanni*, but the walls are much lower, often mere threads. Occasionally a spore is found which bears parallel walls below as well as above.

Hunting Creek by the wagon bridge near its mouth, one mile below Alexandria, Va., July 22, 1888, Geo. Vasey and Frederick V. Coville; same station, September 22, 1900, Wm. R. Maxon, No. 365. Also tide beach, Anacostia river, Washington, D. C., September 1, 1900, E. S. Steele. Perhaps referred to by Palmer (l. c. p. 222). Type specimens are deposited in the herbaria mentioned in the description of the preceding variety. †—A. A. Eaton.

886. Potamogeton Nuttallii Cham. & Schlecht. (*P. Claytonii* of Ward's Catalogue.)

Common in the tributaries of the Eastern Branch.

***885a. Potamogeton amplifolius** Tuckerm.

Mouth of Four Mile Run and Hunting Creek, also in Anacostia river, but flowers and fruit not seen.

***893a. Echinodorus radicans** (Nutt.) Engelm.

Along a depression in the flats below Chain Bridge, perhaps a dozen

*Bot. Gaz. 4: 221. 1896.

†The Vasey and Coville specimen cited above is that determined by Theo. Holm in the third list of additions as *I. riparia* Engelm. It is hence given the same number, and the asterisk is omitted.—E. S. S.

specimens, some well developed, August 1, 1900. In Britton and Brown's Flora the northern limit of this species on the Atlantic coast is given as North Carolina.

*893. *Lophocarpus calychnus* (Engelm.) J. G. Smith.

Eastern Branch below Navy Yard, growing in tide mud; also below Alexandria, September 4, 1899. Apparently scarce within our limits.

*894a. *Sagittaria Engelmanniana* J. G. Smith.

First collected, in sterile condition only, in a swampy pasture near Ardwick, Md., September 6, 1899. Two or three fruiting specimens were found on the water's edge at Great Falls, October 3, 1899. This extends the known range of the species, and proves that it is sometimes dioecious. Determination confirmed by Mr. J. G. Smith.

894b. *Sagittaria pubescens* Muhl.

Very common in swamps, springy places, and ditches, but in my experience not found in or close to open water. It reaches the edge of the river marsh, but I have not observed it far inside.

I have been somewhat inclined to regard this plant as specifically distinct from *S. latifolia*, and as Mr. J. G. Smith is willing to be quoted in support of this view, I feel warranted in restoring it. The leaves greatly resemble in form those of typical *latifolia*. They vary in length from 4 inches to a foot, including the lobes, and are rounded or obtusely angled at the apex, differing somewhat in the length of the lobes, which, however, are usually moderately shorter than the blade; but they do not run into the well known eccentricities of the *latifolia* forms. A very characteristic feature is found in the involucrel bracts, which are at least as broad as long, of a yellowish white and translucent hue, and densely hirsute-pubescent.

*894c. *Sagittaria longirostra* (Michx.) J. G. Smith.

In moderate quantity in the marsh around the mouth of Oxen Run, opposite Alexandria, August 18, 1900.

*1203a. *Andropogon Elliottii* Chapm.

Brightwood Park Swamp, September 20, 1896; Connecticut Avenue Bridge, October 7, 1896.

*1204a. *Andropogon Halepensis* (L.) Brot.

Rather common around dumping grounds. The cultivated sorghum and broom corn also appear occasionally in these situations.

*1191a. *Panicum Walteri* Pursh.

Shore west of bathing beach, September 2, 1897.

1178. *Panicum agrostoides* Trin. (*P. agrostidiforme* of Britton and Brown.)

River swamp, Brick Haven, October 10, 1896; also South Washington and below Alexandria.

*1178a. *Panicum longifolium* Torr.

Kenilworth Swamp, August 28, 1897. Also swamp above Hyattsville.

1187a. *Panicum sphaerocarpon* Ell.

Flats near mouth of Oxen Run, July 1, 1899. Also Arlington.

- 1188f. *Panicum polyanthes* Schultes. (*P. microcarpon* of Ward's Catalogue.)

District Line, August 4, 1896. Also Four Mile Run.

1187. *Panicum Ravenelii* Scribn. & Merrill. (*P. pauciflorum* of Ward's Catalogue.)

Slope above Canal road, May 24, 1898, June 12, 1900.

- *1188c. *Panicum Scribnerianum* Nash.

Kenilworth, June 9, 1899.

1188. *Panicum dichotomum* L.

Of the *dichotomum* group I have, as determined by Mr. E. D. Merrill, besides *dichotomum* itself: *Atlanticum* Nash, *barbulatum* Michx., *Clutei* Nash, *Columbianum* Scribner, *commutatum* of authors, not of Schultes, *implicatum* Scribner (doubtful species), *lanuginosum* Ell., *latiflorum* Lam., *lucidum* Ashe, *unciphyllum* Trin. The *lucidum* takes the place of *sphagnicolum* Nash as to this locality.

- 1192a. *Panicum miliaceum* L.

Waste ground, several places.

- *1180c. *Panicum capillare Gattingeri* Nash.

Plummer's Island, August 24, 1897. Also Great Falls and Bethesda.

- 1180b. *Panicum flexile* (Gattinger) Scribn.

Near Glen Echo, September 11, 1896; Linnæan Hill Road, September 27, 1899.

- *1180d. *Panicum minimum* Scribn. & Merrill. (*P. minus* of Britt. & Brown.)

South Arlington near Four Mile Run, August 27, 1899; also Benning's.

- *1193a. *Chaetochloa imberbis perennis* (Hall) Scribn. & Merrill.

Kenilworth, first half of August, 1898, and in many places since; most abundant near Beaver Dam Branch; also at Jackson City, and near Brightwood swamp. It appears to be most at home in swamps and moist ground, but I have seen it in dry soil at West Eckington and even on a dry southern slope near the Massachusetts Avenue Bridge.

1193. *Chaetochloa verticillata* (L.) Scribn.

Occurs occasionally in waste ground, but appears never to multiply much.

- 1172a. *Phalaris arundinacea* L.

Wet field, Jackson City, west of road, June 14, 1896 and June 6, 1899.

1117. *Aristida gracilis* Ell.

Arlington, near the river, and also on the Rockville road. The form known as variety *depauperata* Gray was found at Benning's, September 18, 1897.

1108. *Muhlenbergia Mexicana* Trin.

A form with long culms and slender panicles, corresponding presumably to the variety *filiformis*, was collected along the Glen Echo railroad. The type has been found in several places.

1110. Muhlenbergia tenuiflora (Willd.) B. S. P.

Arlington near Four Mile Run, August 27, 1899; Hyattsville, September 26, 1900, the latter specimens over 4½ feet long.

***1111a. Muhlenbergia palustris** Scribn.

The peculiarities of this grass were noticed in my collection of 1896, but it was distributed as *M. diffusa* for lack of a better determination. The next year attention was again called to the differential characters, which resulted in its description as a new species. Outwardly it is distinguished by its habit, which is even more slender than that of *M. diffusa*, and by its pink purple instead of dark purple hue. More closely examined, the development of the lower glume will be noticed as the distinctive feature. The type locality is Brightwood Park swamp, which forms the head of Piney Branch. It still exists here, but is suffering much from the spirit of improvement. The only other station known is the wet meadow south of Beaver Dam Branch, west of the Anacostia road.

1101a. Sporobolus vaginaeflorus (Torr.) Wood.

This species is now understood by the agrostologists of the Department of Agriculture as including *S. neglectus* Nash. A tuft with culms 2½ feet long was found on the Rockville road.

***1102a. Agrostis intermedia** Scribn.

Arlington, August 11, 1896; Chantauqua, August 17, 1896; also on the river near Cabin John, and on the wooded flats at Hyattsville.

1114a. Calamagrostis Canadensis (Michx.) Beauv.

Bladensburg, in swamp west of the railroad, found overripe in 1898, and in good condition June 17, 1899. Also seen in a swamp north of Beaver Dam Branch, west of Anacostia road.

1169a. Arrhenatherum elatius (L.) Beauv.

Now abundant near Kalorama, beyond Eckington, etc. I would call attention to the fact that our plant has not only the long awn on the lower flowering scale, but also an awn in a slit at the summit of the upper flowering scale. The cleft sometimes descends one-third the length of the scale, but is generally more shallow. The awn, which is upwardly barbellate, generally overtops the scale, but is sometimes about equal to it or even shorter.

***1123a. Spartina cynosuroides** (L.) Willd.

One small patch at Jackson City, east of the railroad. Seen in larger quantity on the river flats at Harper's Ferry.

***1123a. Leptochloa fascicularis** (Lam.) A. Gray.

Sewer, lower part of Duke street, Alexandria, September 4, 1899.

1140. Eragrostis Eragrostis (L.) Karst.

Parking southwest of Treasury Building, September 28, 1899; also in 1900.

***1143a. Eragrostis pilosa** (L.) Beauv.

Jackson City, August 3, 1896; also near Eastern Branch and Upper Paint Branch.

*1137a. *Poa flava* L.

Near railroad north of North Brookland, July 22, 1896; not since seen.

1129. *Panicularia Canadensis* (Michx.) Kuntze. (*Glyceria*, of Ward's Catalogue.)

Terra Cotta Swamp, collected in overripe condition in 1896 or 1897; in good condition June 23, 1899. Seen also in a swamp south of Four Mile Run.

1128a. *Panicularia pallida* (Torr.) Kuntze.

Bladensburg, a short distance beyond the spring, June 17, 1899.

1130. *Panicularia fluitans* (L.) Kuntze.

Feeder Dam, May 28, 1897. Seen also at Bladensburg, not far from the spring.

*1151c. *Bromus purgans incanus* Shear.

Plummer's Island, August 24, 1897; also Four Mile Run and near canal below Cabin John. This grass blooms two months later than *B. ciliatus*. Only a few of the upper leaves remain green at flowering time, commonly overtopping the surrounding vegetation.

*1151a. *Bromus unioloides* (Willd.) H. B. K.

Dumping grounds, May 28, 1898 and June 12, 1899.

*1151b. *Bromus inermis* Leys.

Dumping grounds, June 14, 1899; June 8, 1901.

*1151d. *Bromus maximus* Desf.

Dumping ground, June 5, 1901.

*1156a. *Hordeum pusillum* Nutt.

South Washington, 1896; Canal road, May 24, 1898.

*1156b. *Hordeum murinum* L.

Dumping grounds, May 28, 1898.

989. *Cyperus microdontus* Torr.

Bladensburg, September 7, 1896. Anacostia road above Kenilworth, October 1, 1899, September 20, 1900. Seen also on the railroad a mile above Anacostia. Grows always in wet sand, and sometimes fruits at the height of an inch or two. This is doubtless the *C. Nuttallii* of Ward's Flora, as that species can scarcely occur here.

990a. *Cyperus inflexus* Muhl.

Margin of water, Jackson City, August 1, 1899; Chain Bridge, Virginia side, August 17, 1900. Has the fragrance when dried of slippery elm.

*991a. *Cyperus fuscus viridescens* Hoffm.

Sewer at the foot of Duke street, Alexandria, September 4, 1899.

*991b. *Cyperus rotundus* L.

A small patch on the waste ground west of the old fish pond, October 13, 1899.

993. *Cyperus strigosus* L.

Besides the type the varieties *compositus* and *robustior* seem to be distinguishable here, the former, however, not very common.