

ADDITIONS TO THE FLORA OF WASHINGTON
AND VICINITY, FROM APRIL 1, 1884,
TO APRIL 1, 1886.

By F. H. KNOWLTON, B. S.

[The following notes are supplementary to Ward's "Guide to the Flora of Washington and Vicinity" (Bulletin No. 22, U. S. National Museum). The species added to the Flora between April 1, 1884, and April 1, 1885, were enumerated by Prof. Ward in a paper read before the Society Dec. 13, 1884; the additions and changes for 1885 were presented by the author in a paper read March 20, 1886. The first collector of each species is given due credit in the proper place.]

ANALYSIS.

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I. LIST OF VASCULAR PLANTS ADDED TO THE FLORA OF
WASHINGTON FROM APRIL 1, 1884; TO APRIL 1, 1886.

11a. *Trautvetteria palmata*, Fischer & Meyer.

Great Falls, Virginia side. Mr. J. S. Barker, June 22, 1884.
Also found on the Mt. Vernon estate by Mr. William Hunter,
June 21, 1885.

22a. *Caltha palustris*, L. MARSH MARIGOLD.

Rock Creek. Collected by Mr. Gerald McCarthy in 1884.

99a. *Polygala Curtissii*, Gray, var. *pycnostachya*, Gray.

Collected south of Arlington P. O., near Four Mile Run, June
29 and July 30, 1884, and on the Marlboro' road, August 3,
1884, by Prof. Ward. Specimens of this plant have been
sent to Dr. Asa Gray, who states that he considers this
form to be the type, and that the original specimens col-

lected by Curtiss were abnormal. Until an authoritative revision of the genus is made, however, it must stand as above.

195a. *Trifolium hybridum*, Savi.

Alexander's Island, June 25, 1885, by Mr. J. A. Allen.

295a. *Ribes floridum*, L'Her. WILD BLACK CURRANT.

Blagden's Mill, at the head of the mill-race on the creek side,
April 27, 1884. Prof. Ward.

297a. *Sedum Telephium*, L.

Found near Woodlawn (Mt. Vernon) July 25, 1885, by Mr.
Wm. Hunter.

351a. *Aralia quinquefolia*, Decsne & Planch.

Collected by the late Dr. A. C. Schott in the vicinity of Rock-
ville, Md., nearly twenty-five years ago. The specimens
have, unfortunately, all been sent to Scotland and none
since collected.

390a. *Eupatorium purpureum*, L., var. *amœnum*, Gray.

Rock Creek, Sept. 17, 1882. Mentioned as a form in the "Flora"
by Prof. Ward.

391a. *Eupatorium hyssopifolium*, L., var. *laciniatum*, Gray.

Back of Mount Hamilton, Oct. 11, 1885. Prof. Ward and the
author.

436a. *Aster ericoides*, L., var. *villosus*, Torr & Gray.

Near upper end of Lobelia Run, Sept. 17, 1882. Prof. Ward.

462a. *Inula Helenium*, L. ELECAMPANE.

Found on the Mount Vernon estate, one mile west of the
Mansion, by Mr. William Hunter, who states that it has
been established there for thirty years.

494a. *Bidens connata*, Muhl. SWAMP BEGGAR-TICKS.

Holmead Swamp, September 22, 1878. Placed in the her-
barium under the name of *Bidens cernua*, L., and only
recently detected. Prof. Ward.

502c. *Artemisia vulgaris*, L. MUGWORT.

Collected at the mouth of Pope's Head Creek, near Clifton
Station, Fairfax county, Va., October 9, 1884, by Prof.
Ward.

- 563a. *Clethra alnifolia*, L. WHITE ALDER. SWEET PEPPER BUSH.
Left bank of Bladensburg mill-race below second foot bridge, 200 yards above sluice gate. In flower July 27, 1884, in fruit August 24, 1884. Prof. Ward.
- 585a. *Apocynum androsæmifolium*, L.
Collected near Woodlawn, Fairfax county, Va., August, 1885, by Mr. Wm. Hunter.
- 614a. *Hydrophyllum Canadense*, L. WATERLEAF.
In a ravine containing a cataract which was christened "Hydrophyllum Run," nearly opposite Eads' Mill, Va., July 6, 1884, then a little past flowering time. Prof. Ward. Fine flowering specimens collected June 21, 1885.
- 620a. *Borago officinalis*, L.
Foundry Run, June 23, 1885. Mr. A. L. Schott.
- 675a. *Gerardia auriculata*, Michx.
Below Alexandria, Va., Sept. 9, 1885. Mr. Wm. Hunter.
- 825a. *Comptonia asplenifolia*, Ait. SWEET FERN.
Between the Reform School and Highlands, Md., on an abandoned earthwork, June 22, 1884, by Prof. Ward.
- 826a. *Betula lenta*, L. CHERRY, SWEET, or BLACK BIRCH.
Found by Dr. G. W. Hill at the mouth of Difficult Run, Va., May 11, 1884. Dr. Hill states that he could find no full-grown trees, and none bearing fruit or flowers. Mr. Wm. Hunter reports this species from Clifton Station, Va., also as a mere shrub.

The following remarkable forms of *Quercus*, supposed to be of hybrid origin, are deserving of special mention in the catalogue. Most of them were described by Dr. George Vasey in an article published in the "Bulletin of the Torrey Botanical Club" for March, 1883, with figures (plates xxviii-xxx). Their principal peculiarities were further pointed out in a paper by Prof. Ward, read before this Society April 13, 1883.

The names given below are based on the assumption that they are hybrids, the one standing first being that of the species supposed to predominate in the hybridism.

- 831a. *Quercus alba* × *obtusiloba*.

Discovered by Dr. Vasey near Silver Spring, Maryland, September 20, 1882.

- 831*b*. *Quercus alba* × *Prinus*.
 On the Rockville Road a few rods north of Woodley Park Road.
 Discovered October 22, 1882, by Prof. Ward. A large tree
 standing just inside the fence on the west side of the road.
- 832*a*. *Quercus obtusiloba* × *alba*.
 Discovered by Dr. Vasey by the roadside near Piney Branch,
 September 20, 1882.
- 836*a*. *Quercus Prinus* × *alba*. SAUL'S OAK.
 Pointed out to Dr. Vasey by Mr. John Saul in his nursery, just
 back of his residence, September 20, 1882.
- 890*a*. *Potamogeton crispus*, L.
 Near mouth of Gravelly Run, Va., October 26, 1884. The
 specimens seen were all without fruit. Prof. Ward and
 the author.
- 924*a*. *Allium sativum*, L. ENGLISH GARLIC.
 Georgetown College grounds, July 22, 1882. Prof. Ward. In
 addition to this locality he found it below the Insane Asy-
 lum, June, 1884.
- 1093*a*. *Carex utriculata*, Boott.
 Eastern Branch Marsh, June 8, 1879. These specimens were
 confounded with those of *C. riparia* from the same locality,
 and under that name sent to Mr. Walter Deane, of Cam-
 bridge, who pointed out the error.
- 1101*a*. *Sporobolus vaginæflorus*, Torr.
 Monument Grounds, Sept. 12, 1885. Prof. Ward.
- 1103*a*. *Agrostis canina*, L.
 Vacant lots near B. & O. depot, July, 1885. Prof. F. Lamp-
 son Scribner.
- 1125*a*. *Eatonia obtusata*, Gray.
 Collected by Dr. George Vasey, June, 1884.
- 1153*a*. *Bromus tectorum*, L.
 Kendall Green, July, 1885. Prof. F. Lampson Scribner.
- 1172*a*. *Phalaris arundinacea*, L.
 Collected on the Seventh street road by Dr. Geo. Vasey, June,
 1884.

1205*a*. *Taxodium distichum*, Richard.

Marshall Hall, Md., Sept. 13, 1885. Collected by Mr. Wm. Palmer and Mr. O. N. Bryan. Mr. Bryan regards these trees as undoubtedly indigenous.

1225*a*. *Asplenium montanum*, Willd.

A short distance above Great Falls, Virginia side, Aug. 30, 1885. Mr. Wm. Palmer.

1233*a*. *Aspidium spinulosum*, Swz. SPINULOSE WOOD FERN.

In a ravine (Goldianum Run) on the Virginia side of the Potomac, opposite the Distributing Reservoir, July 6, 1884, by Prof. Ward.

1248*a*. *Lycopodium inundatum*, L.

Near the *Sarracenia* swamp; first detected May 10, 1885. Fruiting specimens collected Sept. 10, 1885. Also found near Woodlawn, Fairfax Co., Va., Oct. 1885, by Wm. Hunter.

1248*a*. *Lycopodium annotinum*, L.

Specimen in herb. Mr. Wm. Palmer, said to have been collected by Dr. E. Foreman in Holmead Swamp. Station long since obliterated.

1249*a*. *Lycopodium clavatum*, L.

Above Great Falls, Virginia side, Aug. 30, 1885, by Mr. Wm. Palmer. Also Silver Spring, Md., Jan. 2, 1886.

1382*a*. *Nitella megacarpa*, Allen.

Eastern Branch, above Benning's Bridge, Sept. 21, 1884. In fine fruiting condition. Identified by Dr. T. F. Allen, of New York.

II. A REVISION OF THE MUSCI AND HEPATICÆ OF WASHINGTON AND VICINITY, WITH NUMEROUS ADDITIONS.

By Rev. E. LEHNERT.

[It is with great pleasure that I am able to include in this communication the much-needed revision of our Mosses and Liverworts, which has been so kindly placed at my disposal by Mr. Lehnert. The list given in the "Flora," which was prepared by Mr. Rudolph Oldberg, enumerates 127 species. We are now able to augment that list by the addition of 111 species, of which 83 are Frondosi and 28 Hepaticæ, making a total of 238 species.

The nomenclature followed is, for the Frondosi, "The Mosses of North America," by Lesquereux and James, and for the Hepaticæ, the "Descriptive Catalog of Hepaticæ," by Underwood.]

A. MUSCI FRONDOSI.

ORD. 1. *SPHAGNACEÆ*.

- Sphagnum cymbifolium, Ehrh.
- “ squarrosum, Pers.
- “ acutifolium, Ehrh.
- “ subsecundum, Nees.
- “ intermedium, Hoff.

ORD. 2. *ANDRÆACEÆ*.

- Andræa rupestris, Turn.

ORD. 3. *BRYACEÆ*.

a. *Acrocarpi*.

1. *PHASCEÆ*.

- Ephemerum crassinervium, Hampe.
- “ stenophyllum, Schimp.
- “ cohærens, Muell.
- “ spinulosum, Br. & Sch.
- Sphærangium triquetrum, Schimp.
- Phascum cuspidatum, Schreb.
- Pleuridium subulatum, Br. & Sch.
- “ alternifolium, Brid.
- “ Sullivantii, Aust.
- Archidium Ravenelii, Aust.
- Bruchia flexuosa, Muell.
- “ brevifolia, Sull.

2. *WEISIEÆ*.

- Astomum nitidulum, Schimp.
- “ Sullivantii, Schimp.
- Weisia viridula, Brid.
- Trematodon longicollis, Michx.
- Dicranella varia, Schimp.
- “ heteromalla, Schimp.
- Dicranum scoparium, Hedw.
- “ majus, Turn.
- “ Drummondii, Muell.
- “ undulatum, Turn.

3. FISSIDENTEÆ.

- Fissidens adiantoides*, Hedw.
 “ *taxifolius*, Hedw.
 “ *minutulus*, Sull.
 “ *osmundoides*, Hedw.

4. LEUCOBRYEÆ.

- Leucobryum vulgare*, Hampe.
 “ *minus*, Sull.

5. CERATODONTEÆ.

- Ceratodon purpureus*, Brid.

6. POTTIEÆ.

- Pottia truncata*, Fuern.
Leptotrichum tortile, Muell.
 “ *vaginans*, Lesq. & James.
 “ *pallidum*, Hampe.
 “ *glaucescens*, Hampe.
Barbula unguiculata, Hedw.
 “ *marginata*, Br. & Sch.
 “ *cæspitosa*, Schwg.
 “ *convoluta*, Hedw.
 “ *muralis*, Timm.

7. GRIMMIEÆ.

- Grimmia apocarpa*, Hedw.
 “ *Pennsylvanica*, Schwg.
 “ *Olneyi*, Sull.
 “ *conferta*, Funck.
Racomitrium fasciculare, Brid.
Hedwigia ciliata, Ehrh.

8. ORTHOTRICHEÆ.

- Ptychomitrium Drummondii*, Sull.
 “ *incurvum*, Sull.
Drummondia clavellata, Hook.
Ulota crispa, Brid.
 “ *crispula*, Brid.
 “ *Huthinsiaë*, Schimp.
Orthotrichum canadense, Br. & Sch.
 “ *obtusifolium*, Schrad.
 “ *exiguum*, Sull.

- Orthotrichum strangulatum*, Beauv.
 " *Ohioense*, Sull. & Lesq.
 " *cupulatum*, Hoff.
 " *psilocarpum*, James.

9. TETRAPHIDEÆ.

Tetraphis pellucida, Hedw.

10. PHYSCOMITRIEÆ.

- Physcomitrium pyriforme*, Brid.
 " *Hookeri*, Hampe.
Funaria hygrometrica, Sibth.
 " *flavicans*, Michx.
 " *calvescens*, Schwg.

11. BARTRAMIEÆ.

- Philonotis Muhlenbergii*, Brid.
 " *fontana*, Brid.
Bartramia pomiformis, Hedw.
 " *radicalis*, Beauv.

12. BRYEÆ.

- Leptobryum pyriforme*, Schimp.
Webera albicans, Schimp.
Bryum argenteum, L.
 " *cæspiticium*, L.
 " *capillare*, L.
 " *pseudotriquetrum*, Schwg.
Rhodobryum roseum, Schrb.
Mnium stellare, Reich.
 " *hornum*, L.
 " *Drummondii*, Br. & Sch.
 " *punctatum*, Hedw.
 " *cuspidatum*, Hedw.
 " *affine*, Bland.

13. AULACOMNIEÆ.

- Aulacomnium palustre*, Schwgr.
 " *heterostichum*, Br. & Sch.

14. POLYTRICHEÆ.

- Atrichum angustatum*, Beauv.
 " *undulatum*, Beauv.
 " *crispum*, James.

- Pogonatum brevicaule, Brid.
 " umigerum, Brid.
 Polytrichum commune, L.
 " juniperinum, Willd.
 " perigoniale, Michx.
 " formosum, Hedw.
 " piliferum, Schreb.

15. BUXBAUMIÆ.

- Diphyscium foliosum, Mohr.
 Buxbaumia aphylla, L.

b. Cladocarpi.

16. FONTINALEÆ.

- Fontinalis biformis, Sull.
 Dichelyma subulatum, Myrin.
 " capillaceum, Br. & Sch.

c. Pleurocarpi.

17. NECKEREÆ.

- Cryphæa glomerata, Br. & Sch.
 Neckera pennata, Hedw.
 Leptodon trichomitron, Mohr.

18. LEUCODONTEÆ.

- Leucodon julaceus, Sull.
 " brachypus, Sull.
 Clasmatodon parvulus, Sull.

19. LESKEÆ.

- Thelia hirtella, Sull.
 " asprella, Sull.
 " Lescurii, Sull.
 Leskea obscura, Hedw.
 " polycarpa, Ehrh.
 " denticulata, Sull.
 " tristis, Cesat.
 Anomodon rostratus, Schimp.
 " attenuatus, Hüb.
 " obtusifolius, Br. & Sch.

20. ORTHOTHECIEÆ.

- Platygyrium repens, Br. & Sch.
 Pylaisia intricata, Br. & Sch.
 " velutina, Br. & Sch.

- Homalothecium subcapillatum, Sull.
 Cylindrothecium cladorrhizans, Schimp.
 " seductrix, Sull.
 " Drummondii, Br. & Sch.
 " compressum, Br. & Sch.
 Climacium Americanum, Brid.

21. HYPNEÆ.

- Hypnum minutulum, Hedw.
 " scitum, Beauv.
 " recognitum, Hedw.
 " delicatulum, Linn.
 " lætum, Brid.
 " acuminatum, Beauv.
 " salebrosum, Hoff.
 " velutinum, L.
 " rutabulum, L.
 " Novæ-Angliæ, Sull & Lesq.
 " rivulare, Bruch.
 " populeum, Hedw.
 " plumosum, Swartz.
 " strigosum, Hoff.
 " Boscii, Schwgr.
 " Sullivantii, Spruce.
 " hians, Hedw.
 " piliferum, Schreb.
 " demissum, Wils.
 " Novæ-Cesareæ, Aust.
 " recurvans, Schwgr.
 " deplanatum, Schimp.
 " serrulatum, Hedw.
 " rusciforme, Weis.
 " Alleghaniense, Muell.
 " micrans, Swartz, var. fulvum.
 " denticulatum, L.
 " Sullivantiæ, Schimp.
 " sylvaticum, Huds.
 " minutissimum, Sull. & Lesq.
 " serpens, L.

- Hypnum radicale*, Beauv.
 " *orthocladon*, Beauv.
 " *riparium*, Hedw.
 " *vacillans*, Sull.
 " *hispidulum*, Brid.
 " *chrysophyllum*, Brid.
 " *stellatum*, Schreb.
 " *uncinatum*, Hedw.
 " *fluitans*, L.
 " *molluscum*, Hedw.
 " *imponens*, Hedw.
 " *cupressiforme*, L.
 " *curvifolium*, Hedw.
 " *arcuatum*, Ldb.?
 " *pratense*, Koch.
 " *stramineum*, Dicks.
 " *Schreberi*, Willd.
 " *splendens*, Hedw.
 " *Oakesii*, Sull.
 " *triquetrum*, L.

B. MUSCI HEPATICI.

ORD. 1. *RICCIACEÆ*.

- Riccia lutescens*, Schwein.
 " *fluitans*, L.
 " *natans*, L.
 " *arvensis*, Aust.

ORD. 2. *ANTHOCEROTACEÆ*.

- Anthoceros punctatus*, L.
 " *lævis*, L.
Notothylas orbicularis, Sull.

ORD. 3. *MARCHANTIACEÆ*.

- Marchantia polymorpha*, L.
Conocephalus conicus, Dumort.
Asterella hemisphærica, Beauv.
Dumortiera hirsuta, Nees.
Fimbriaria tenella, Nees.
Lunularia cruciata, Dumort.

ORD. 4. *FUNGERMANIACEÆ.*

- Aneura palmata*, Nees.
Pellia epiphylla, Nees.
Blasia pusilla, L.
Steetzia Lyellii, Lehm.
Metzgeria pubescens, Raddi.
 " *conjugata*, Lindb.
Frullania Grayana, Mont.
 " *tamarisci*, Nees.
 " *Virginica*, Gottsche.
 " *brunnea*, Spreng.
 " *Eboracensis*, Gottsche.
 " *plana*, Sull.
Phragmicoma cucculata? Nees.
Lejeunia cyclostipa? Tayl.
 " *calyculata*, Tayl.
 " *minutissima*, Dumort.
Madotheca platyphylla, Dumort.
 " *porella*, Nees.
Radula complanata, Dumort.
 " *tenax*, Lindb.
 " *obconica*, Sull.
Blepharostoma trichophylla, Dumort.
Blepharozia ciliaris, Dumort.
Trichocolea tomentella, Dumort.
Bazzania trilobata, B. Gr.
Lepidozia reptans, Dumort.
 " *setacea*, Mitt.
Calypogeia trichomanis, Corda.
 " *Sullivanti*, Aust.
Geocalyx graveolens, Nees.
Chiloscyphus polyanthos, Corda.
Lophocolea bidentata, Dumort.
 " *heterophylla*, Nees.
 " *minor*, Nees.
Odontoschisma sphagni, Dumort.
 " *denudata*, Dumort.
Cephalozia curvifolia, Dumort.
 " *multiflora*, Lindb.

Jungermania Schraderi, Mart.

Scapania albicans, Mitt. : var. *taxifolia*, Undw.

“ *nemorosa*, Nees.

“ *compacta*, Dumort; var. *irigua*, Undw.

Plagiocheila asplenioides, Nees & Mont.

“ *spinulosa*, Nees & Mont.

III. A LIST OF THE LICHENS OF WASHINGTON AND VICINITY.

By Rev. E. LEHNERT.

[This great desideratum, a list of our Lichens, is at last supplied, through the indefatigable labors of Mr. Lehnert, who has also placed it at my disposal.

In a prefatory note accompanying the list, Mr. Lehnert says: “So far as known, the Lichens of the District comprise 251 species, with 89 varieties, a total of 340 forms. In the main our species are not as showy as those from the North or South, but have, when compared with the same species from these localities, a dwarfed and depauperate aspect, caused, possibly, by the dryness of our climate, as we have very warm summers and cold winters”].

(According to Tuckerman's *Genera Lichenum Emend*).

A. GYMNOCARPI.

Trib. 1. Parmeliacei.

Fam. 1. USNEEL.

Ramalina rigida, Pers.

“ *calicaris*, Fr.

“ “ var. *fraxinea*, Fr.

“ “ “ *farinacea*, Schær.

“ “ “ *fastigiata*, Fr.

“ “ “ *canaliculata*, Fr.

Cetraria Fahlunensis, Schær.

“ *juniperina*, Ach.

“ *aleurites*, Fr.

“ “ var. *placorodia*, Tuck.

“ *Fendleri*, Tuck.

“ *lacunosa*, Ach.

“ *ciliaris*, Ach.

“ *sæpincola*, Ach.

“ *Oakesiana*, Tuck.

Evernia furfuracea, Mann.

Usnea barbata, Fr.

- “ “ var. *florida*, Fr.
- “ “ “ *hirta*, Fr.
- “ “ “ *rubiginia*, Michx.
- “ “ “ *dasy-poga*, Fr.
- “ “ “ *ceratina*, Schær.
- “ *angulata*, Ach.
- “ *trichodea*, Ach.

Alectoria jubata, L.

Fam. 2. PARMELIÆ.

Theloschistes chrysophthalmus, Norm.

- “ “ var. *flavicans*, Wallr.
- “ *parietinus*, Norm.
- “ *polycarpus*, Ehrh.
- “ *lychneus*, Nyl.
- “ *concolor*, Dick.
- “ “ var. *effuse*, Tuck.

Parmelia perforata, Ach.

- “ “ var. *hypotropa*, Nyl.
- “ *crinita*, Ach.
- “ *saxatilis*, Fr.
- “ *physodes*, Ach.
- “ *Borreri*, Turn.
- “ “ var. *rudecta*, Tuck.
- “ *lævigata*, Nyl.
- “ *tiliacea*, Floerke.
- “ “ var. *sublævigata*, Nyl.
- “ “ “ *sulphurosa*, Tuck.
- “ *cetrata*, Ach.
- “ *colpodes*, Nyl.
- “ *olivacea*, Ach.
- “ *caperata*, Ach.
- “ *conspersa*, Ach.
- “ *ambigua*, Ach.

Physcia speciosa, Nyl.

- “ *hypoleuca*, Tuck.
- “ *comosa*, Nyl.
- “ *granulifera*, Tuck.

- Physcia aquila*, Nyl. var. *detonsa*, Tuck.
 “ *pulverulenta*, Nyl.
 “ *stellaris*, L.
 “ “ var. *aipolia*, Nyl.
 “ *astroidea*, Ach.
 “ *crispa*, Nyl.
 “ *tribacia*, Tuck.
 “ *cæsia*, Nyl.
 “ *obscura*, Nyl.
 “ “ var. *endochrysea*, Nyl.
 “ *adglutinata*, Nyl.

Pyxine sorediata, Fr.

Fam. 3. PELTIGEREL.

- Sticta pulmonaria*, Ach.
 “ *amplissima*, Mass.
 “ *quefcizans*, Ach.
Nephroma lævigatum, Ach.
 “ *Helveticum*, Ach.
Peltigera scutata, Leightf.
 “ *aphthosa*, Hoff.
 “ *polydactyla*, Hoff.
 “ *rufescens*, Hoff.
 “ *horizontalis*, Hoff.
 “ *canina*, Hoff.
 “ “ var. *spongiosa*, Tuck.
 “ “ “ *sorediata*, Sch.
 “ “ “ *spuria*, Ach.

Fam. 4. PANNARIEL.

- Endocarpiscum Guepini*, Nyl.
Physma luridum, Mont.
Pannaria lanuginosa, Koerb.
 “ *leucosticta*, Tuck.
 “ *microphylla*, Delis.
 “ *tryptophylla*, Mass.
 “ *molybdæa*, Tuck.
 “ *nigra*, Nyl.
 “ *rubiginosa*, Delis.

Fam. 5. COLLEMEI.

- Pyrenopsis Schærerii*, Nyl.

Omphalaria phyllisca, Tuck.

Collema myriococcum, Arn.

“ *pycnocarpum*, Nyl.

“ *cyrtaspis*, Tuck.

“ *verruciforme*, Nyl.

“ *leptaleum*, Tuck.

“ *flaccidum*, Ach.

“ *nigrescens*, Ach.

ryssoleum, Tuck.

“ *pulposum*, Nyl.

“ *limosum*, Ach.

“ *pustulatum*, Ach.

Leptogium bolacinum, Stizenb.

“ *minutissimum*, Mass.

“ *lacerum*, Fr.

“ *pulchellum*, Nyl.

“ *Tremelloides*, Fr.

“ *juniperinum*, Tuck.

“ *chloromelum*, Nyl.

“ *myochroum*, Tuck.

“ “ var. *saturnium*, Sch.

“ “ “ *tomentosum*, Sch.

Fam. 6. LECANOREI.

Placodium cinnabarrinum, Anz.

“ *vittelinum*, Ach.

“ “ var. *aurellam*, Ach.

“ *cerinum*, Naeg. & Hepp.

“ “ var. *sideritis*, Tuck.

“ “ “ *pyracea*, Nyl.

“ *aurantiacum*, Naeg. & Hepp.

“ *microphyllum*, Tuck.

“ *camptidium*, Tuck.

“ *ferrugineum*, Hepp.

“ “ var. *pollinii*, Tuck.

“ “ “ *discolor*, Willey.

Lecanora rubina, Ach.

“ *muralis*, Schær.

“ *pallida*, Schær.

Lecanora pallida, var. *cancriformis*, Tuck.

“ “ “ *angulosa*, Hoff.

“ *miculata*, Ach.

“ *subfusca*, Ach.

“ “ var. *allophana*, Ach.

“ “ “ *distans*, Ach.

“ “ “ *coilocarpa*, Ach.

“ “ “ *argentata*, Ach.

“ *Hageni*, Ach.

“ *atra*, Ach.

“ *varia*, Nyl.

“ “ var. *symmicta*, Ach.

“ “ “ *sæpincola*, Fr.

“ *Cupressi*, Tuck.

“ *pallescens*, Schær.

“ “ var. *rosella*, Tuck.

“ *tartarea*, Ach.

“ *cinerea*, Sommer.

“ “ var. *lævata*, Fr.

“ *lacustris*, Nyl.

“ *fuscata*, Th., Fr.

“ *privigna*, Nyl.

“ “ var. *pruinosa*, Auctt.

“ “ “ *Clavus*, Koerb.

Rinodina oreina, Mass.

“ *sophodes*, Mass.

“ “ var. *atrocinerea*, Nyl.

“ “ “ *confragosa*, Nyl.

“ “ “ *exigua*, Fr.

“ “ “ *tephraspis*, Tuck.

“ *constans*, Tuck.

“ *milliaria*, Tuck.

Pertusaria communis, DC.

“ *multipuncta*, Nyl.

“ *velata*, Nyl.

“ *pustulata*, Nyl.

“ *Wulffonii*, DC.

“ *leioplaca*, Schær.

- Pertusaria globularis*, Ach.
Conotrema urceolatum, Tuck.
Gyalecta Pineti, Fr.
 " *cupularis*, Schær.
 " *geoica*, (?) Ach.
 " *lutea*, Tuck.
Urceolaria scruposa, Snif.
 " " var. *parasitica*, Sommerf.
 " " " *gypsacea*, Nyl.
 " *actinostoma*, Pers.
Myriangium Curtissii, M. & B.

Frib. I. Lecideacei.

Fam. I. CLADONIEL.

- Cladonia Papillaria*, Hoff.
 " *pyxidata*, Fr.
 " " var. *Pocillum*, Ach.
 " *alcicornis*, Floerke.
 " *symphycarpa*, Fr.
 " " var. *epiphylla*, Nyl.
 " *Mitrula*, Tuck.
 " *cariosa*, Spreng.
 " *decorticata*, Floerke.
 " *fimbriata*, Fr.
 " " var. *tubæformis*, Fr.
 " " " *radiata*, Fr.
 " *gracilis*, Fr.
 " " var. *verticillata*, Fr.
 " " " *hybrida*, Schær.
 " " " *cervicornis*, Floerke.
 " *degenerans*, Floerke.
 " *Santensis*, Tuck.
 " *cæspiticia*, Fl.
 " *furcata*, Fr.
 " " var. *subulata*, Fl.
 " " " *racemosa*, Fl.
 " *rangiferina*, Hoff.
 " " var. *sylvatica*, L.
 " " " *alpestris*, L.
 " *uncialis*, Fr.

- Cladonia macilenta*, Hoff.
 “ *Floerkiana*, Fr.
 “ *pulchella*, Schwein.
 “ *cratatella*, Tuck.
 “ *leporina*, Fr. (var.)
Cystocoleus rupestris, Rabh.

Fam. 2. LECIDEEL.

- Bæomyces roseus*, Pers.
Biatora rufo-nigra, Tuck.
 “ *coarctata*, Th. Fr.
 “ *decolorans*, Fr.
 “ *russula*, Mont.
 “ *sanguineo-atra*, Fr.
 “ *atro-rufa*, Ach.
 “ *exigua*, Fr.
 “ *milliaria*, Fr.
 “ *anomala*, Fr.
 “ *mixta*, Fr.
 “ *rubella*, Fr.
 “ “ *var. spadicea*, Ach.
 “ “ “ *suffusa*, Fr.
 “ “ “ *Schweinitzii*, Tuck.
 “ “ “ *incompta*, Nyl.
 “ “ “ *inundata*, Fr.
 “ “ “ *arceutina*, Ach.
 “ *umbrina*, Ach.
 “ *chlorosticta*, Tuck.
 “ *vernalis*, Fr.
 “ *uliginosa*, Fr.
 “ *hypnophila*, Turn.
 “ *campestris*, Fr.
 “ *resinæ*, Fr.
Heterothecium sanguinarium, Tuck.
 “ *leucoxanthum*, Spreng.
 “ *vulpinum*, Tuck.
Lecidea contigua, Fr.
 “ *enteroleuca*, Fr.
 “ “ *var. olivacea*, Fr.

Lecidea enteroleuca, var. *theioplaca*, Tuck.

“ “ “ *arenaria*, Fl.

“ *insularis*, Nyl.

“ *albo-cærulescens*, Fr.

Buellia lactea, Mass.

“ *lepidastræa*, Tuck.

“ *atro-alba*, Fl.

“ *parasema*, Krb.

“ “ var. *cæsio-pruinosa*, Nyl.

“ “ “ *triphragmia*, Nyl.

“ “ “ *microcarpa*, Nyl.

“ *dialyta*, Nyl.

“ *myriocarpa*, Dl.

“ *Schærerii*, Dnot.

“ *Elizæ*, Tuck.

“ *petræa*, Tuck.

“ “ var. *Montagnei*, Fl.

“ “ “ *Oederi*, Krb.; and others undefined.

Trib. III. Graphidacei.

Fam. 1. LECANACTIDEA.

Lecanactis chloroconia, Tuck.

Fam. 2. OPEGRAPHEI.

Opegrapha demissa, Tuck.

“ *varia*, Fr.

“ “ var. *notha*, Fr.

“ “ “ *pulicaris*, Fr.

“ “ “ *diaphora*, Fr.

“ “ “ *rimalis*, Fr.

“ *atra*, Nyl.

“ *vulgata*, Nyl.

Xylographa opegraphella, Nyl.

Graphis scripta, Ach.

“ “ var. *limitata*, Schær.

“ “ “ *recta*, Schær.

“ “ “ *serpentina*, Ach.

“ “ “ *sophistica*, Nyl.

“ “ “ *assimilis*, Nyl.

“ *dentritica*, Ach.

- Graphis dentritica*, var. *inusta*, Ach.
 “ *tricosa*, Ach.
 “ *nitidia* (?), Nyl.

Fam. 3. ARTHONIEL.

- Arthonia pyrrhula*, Nyl.
 “ *rubella*, Nyl.
 “ *cinereo-pruinosa*, Schær.
 “ *cinnabarina*, Wallr.

- Arthonia lecidella*, Nyl.
 “ *lurida*, Ach.
 “ *patellulata*, Nyl.
 “ *astroidea*, Nyl.
 “ *epipasta*, Ach.
 “ *macularis*, Fr.
 “ *obscura*, Ach.
 “ *punctiformis*, Ach.
 “ *polymorpha*, Ach.
 “ *tædiosa*, Nyl.
 “ *spectabilis*, Fl.
 “ *anastomosans*, Ach.

- Mycoporum pycnocarpum*, Nyl.

Trib. IV. Caliciacei.

- Acolium tigillare*, Dnot.
Calicium trichiale, Ach.
 “ *brunneolum*, Ach.
 “ *subtile*, Fr.
 “ *trachelinum*, Ach.
 “ *turbinatum*, Pers.
 “ *leucopodum*, Nyl.
 “ *albo-nigrum*, Nyl.

B. ANGIOCARPI.

Trib. V. Verrucariacei.

Fam. 1. ENDOCARPEI.

- Endocarpon miniatum*, Schær.
 “ “ var. *complicatum*, Schær.
 “ “ “ *aquaticum*, Schær.
 “ *arboreum*, Schwein.
 “ *rufescens*, Ach.
 “ *pusillum*, Hedw.

Fam. 2. VERRUCARIEL.

- Staurothele difractella*, Tuck.
 " *Drummondii*, Tuck.
 " *umbrina*, Tuck.
Trypethelium virens, Tuck.
Sagedia lactea, Kbr.
 " *oxyspora*, Tuck.
 " *cestrensis*, Tuck.
Verrucaria epigæa, Ach.
 " *margacea*, Nyl.
 " *nigrescens*, Pers.
 " *rupestris*, Schrad.
 " *muralis*, Ach.

- Pyrenula thelena*, Tuck.
 " *micula*, Fl.
 " *punctiformis*, Naeg.
 " *fallax*, Nyl.
 " *gemmata*, Naeg.
 " *hyalospora*, Tuck.
 " *glabrata*, Mass.
 " *Santensis*, Nyl.
 " *nitida*, Ach.
 " *lactea*, Tuck.
 " *subprostans*, Tuck.
 " *falliciora*, Nyl.
 " *leucoplaca*, Kbr.
 " *thelomorpha*, Tuck.

IV. CHANGES IN NOMENCLATURE.

[The recent published works of Drs. Gray and Vasey have made necessary many changes in the nomenclature of our species. It has been suggested that these changes be deferred until the publication of a second edition of the "Flora," but this has seemed to be inadvisable, as it must be some years before a second edition can be brought out, if ever, and if we are constantly confronted by the old names we shall never become familiar with the new and correct ones.]

295. *Ribes rotundifolium*, Michx., = *Ribes oxycanthoides*, Linn.

Pointed out by Mr. Walter Deane, of Cambridge, who has carefully compared it at the Gray Herbarium.

395. *Eupatorium pubescens*, Muhl., = *Eupatorium rotundifolium*, L.,
 var. *ovatum*, Torr.

412. *Solidago stricta*, Ait., = *Solidago neglecta*, Torr. & Gr.
414. *Solidago Virga-aurea*, L., var. *humilis*, Gray, = *Solidago humilis*, Pursh.
416. *Solidago elliptica*, Ait., = *Solidago Elliottii*, Torr. & Gray.
417. *Solidago arguta*, Ait., = *Solidago juncea*, Ait.
418. *Solidago altissima*, L., = *Solidago rugosa*, Mill.
439. *Aster miser*, L., (Ait. of Gray's "Manual"), = *Aster vimineus*, var. *foliolosus*, Gray. (?)
440. *Aster simplex*, Willd., = *Aster paniculatus*, Lam.
442. *Aster carneus*, Nees, = *Aster salicifolius*, (Lam.) Ait.
443. *Aster æstivus*, Ait., = *Aster junceus*, Ait.
445. *Aster puniceus*, L., var. *vimineus*, Torr. & Gray, = *Aster puniceus*, L., var. *lucidulus*, Gray.
449. *Diplopappus linearifolius*, Hook., = *Aster linearifolius*, L.
450. *Diplopappus umbellatus*, Torr. & Gray, = *Aster umbellatus*, Mill.
451. *Diplopappus cornifolius*, Darl., = *Aster infirmus*, Michx.
473. *Eclipta procumbens*, Michx., = *Eclipta alba*, Hasskarl.
489. *Verbesina Siegesbeckia*, Michx. = *Verbesina occidentalis*, Walt.
510. *Lappa officinalis*, Allioni, = *Arctium Lappa*, L., var. (?)
512. *Cnicus discolor*, Gray, = *Cnicus altissimus*, Willd., var. *discolor*, Gray.
520. *Cynthia Dandelion*, DC., = *Krigia Dandelion*, Nutt.
523. *Hieracium venosus*, L., var. *subcaulescens*, Gray, = *Hieracium venosus*, Gray.
526. *Taraxacum Dens-leonis*, Desf., = *Taraxacum officinalis*, Weber.
529. *Lactuca Canadensis*, L., var. *integrifolia*, Gray, = *Lactuca integrifolia*, Bigel.
530. *Mulgedium acuminatum*, DC., = *Lactuca acuminata*, Gray.
531. *Mulgedium Floridanum*, DC., = *Lactuca Floridana*, Gærtn.
532. *Mulgedium leucophæum*, DC., = *Lactuca leucophæa*, Gray.
533. *Nabalus albus*, Hook., = *Prenanthes alba*, L.
534. *Nabalus Fraseri*, DC., = *Prenanthes serpentaria*, Pursh.
644. *Physalis viscosa*, L., of Gray's Manual, = *Physalis Virginiana*, Mill. of Syn., Fl. of N. A. This change has been pointed out by Mr. Deane.

832. *Quercus stellata*, Wang., = *Quercus obtusiloba*, Michx., as adopted by Sargent in his "Forest Trees of N. A.," vol. ix, Tenth Census of United States.
837. *Quercus Muhlenbergii*, Engel, = *Quercus prinoides*, Willd., as adopted by Sargent.
1101. *Vilfa aspera*, Beauv. = *Sporobolus aspera*, Kth.
1105. *Agrostis alba*, L., = *Agrostis vulgaris*, var. *alba*, Vasey.
1114. *Calamagrostis Nuttalliana*, Steud., = *Deyeuxia Nuttalliana*, Vasey.
1124. *Tricuspis seslerioides*, Torr., = *Triodia seslerioides*, Vasey.
1129. *Glycera aquatica*, Smith, = *Glycera arundinacea*, Kth.
1140. *Eragrostis poæoides*, Beauv., = *Eragrostis minor*, Host.
1141. *Eragrostis poæoides*, var. *megastachya*, Gray, = *Eragrostis major*, Host.
1165. *Gymnostichum Hystrix*, Schreb., = *Asperella Hystrix*, Willd.
1187. *Panicum pauciflorum*, Ell., = *Panicum scoparium*, Lam.
1198. *Erianthus alopecuroides*, Ell., = *Panicum saccharoides*, Michx.
1199. *Andropogon furcatus*, Muhl., = *Andropogon provincialis*, Lam.
1201. *Andropogon argenteus*, Ell., = *Andropogon argyræus*, Schultz.
1202. *Andropogon Virginicus*, L., = *Andropogon dissitiflorus*, Michx.
1204. *Sorghum nutans*, Gray, = *Chrysopogon nutans*, Benth.

V. NEW LOCALITIES FOR RARE SPECIES.

26. *Aconitum uncinatum*, L.
Near Clifton Station, Va., Sept. 20, 1885, by Prof. Ward.
78. *Thlaspi arvense*, L. Field Pennycress.
Below St. Elizabeth's, May 18, 1884, by Prof. Ward.
106. *Silene nivea*, DC.
Alexander's Island, June 25, 1885. Mr. J. A. Allen.
300. *Drosera rotundifolia*, L.
Sarracenia Swamp, May 10, 1885; also at Fort Ethan Allen, by Mr. William Palmer.
304. *Callitriche Austini*, Engelm.
Brightwood, May 16, 1885. Mr. J. A. Allen.
415. *Solidago rigida*, L.
Woodley Park, in fruit, Oct. 18, 1885. Prof. Ward and myself.

551. *Gaultheria procumbens*, L. Wintergreen.
Found on the Mt. Vernon estate, Va, in October, 1884, by Mr. William Hunter.
589. *Asclepias rubra*, L.
Vicinity of Falls Church, Va., Miss M. A. Hayes, July 11, 1885.
599. *Enslenia albida*, Nutt.
Alexander's Island, June 25, 1885. Mr. J. A. Allen. Below Chain Bridge, in fruit, Sept. 12, 1885. Prof. Ward and myself.
627. *Lithospermum canescens*, Lehm.
North side of Woodley Park Road, first bend above the bridge. Collected May 17 and 21, 1884. Prof. Ward.
- 629a. *Heliotropium Europæum*, L. Heliotrope.
Alexandria, Va., near the ship-yard, July 4, 1884. Prof. Ward.
672. *Buchnera Americana*, L.
Near Clifton Station, Va, Sept. 20, 1885. Prof. Ward.
- 732a. *Scutellaria parvula*, Mx. Scullcap.
Kengla's Woods, June 4, 1884. Prof. Ward.
741. *Plantago cordata*, Lam.
Poplar Point, on the Eastern Branch, October 26, 1884. Prof. Ward and myself. Important on account of its greater accessibility.
805. *Cacalia reniformis*, Muhl.
Alexander's Island, June 25, 1885. Mr. J. A. Allen.
835. *Quercus Michauxii*, Nutt.
Near "Owl Bridge," (Northwest Branch). A large fine tree, quite typical. Found by Mr. H. W. Henshaw and myself, September 11, 1885.
849. *Quercus heterophylla*, Mx.
A fine tree of this species was discovered near Convalescent Camp, Virginia, June 29, 1884, by Prof. Ward. In fine fruiting condition, October 5, 1884. "The affinities of this specimen with *Q. Phellos* are closer than in any of the forms hitherto found. The leaves resemble in almost every respect those which I collected from the tree now standing in the Bartram estate, Philadelphia, south of the mansion, and which is said to have grown from an acorn of the

original Bartram Oak planted by the discoverer." Prof. Ward.

874. *Arisæma Dracontium*, Schott.

Analostan Island, June 20, 1885. Titus Ulke.

918. *Corallorhiza odontorhiza*, Nutt. Coral-root.

Found by Mr. Benj. Miller in Kengla's Woods, near the Foundry Run, May 7, 1884, and therefore constituting a case of the vernal blooming of an autumnal species. "I visited this spot in company with Mr. Miller on June 4, 1884, and found the plant nearly extinct. It had died down and withered away without fruiting. On September 28, 1884, I found it in abundance along the Northwest Branch of the Potomac."—Prof. Ward.

919. *Corallorhiza multiflora*, Nutt.

A single specimen, the second ever seen here, was found on the Northwest Branch of the Potomac, Sept. 28, 1884.

946. *Smilacina stellata*, Desf.

High Island, May 11, 1885. Four or five fine specimens found.
Hugh M. Smith.

951. *Erythronium albidum*, L.

Found at "Vis-a-vis" Landing, opposite Three Sisters, April 26, 1885. Mr. H. M. Smith.

1211. *Tsuga Canadensis*, Carrière.

Left bank of Pope's Head Creek, one-half mile below Clifton Station, Va., Sept. 20, 1885. Prof. Ward.

1216. *Pellæa atropurpurea*, Link.

Found June, 1885, by Mr. H. M. Smith, on the outer walls of the causeway connecting Analostan Island with the mainland. Plants numerous.

1223. *Asplenium augustifolium*, Michx.

Found at head of Asplenium Run, above Aqueduct Bridge, Sept. 19, 1885. Mr. H. W. Henshaw and myself.

1226. *Camptosorus rhizophyllus*, Link.

Near Burnt Mills, Md., July 1, 1885. Mr. H. W. Henshaw.
Also High Island, April, 1885. Mr. J. A. Allen.

1220. *Woodwardia Virginica*, Smith.

Below the Reform School, Aug. 19, 1885. Mr. Wm. Palmer and myself.

VI. SPECIES EXCLUDED.

172 *Vitis vulpina*, L., = *Vitis riparia*, Michx.

The specimens mentioned in the "Flora" that were referred to this species, were collected in flower May 22, 1881, and in young fruit June 4, 1881, at Sandy Landing, Md. Specimens in mature fruit collected Sept. 12, 1885, on the rocks below Chain Bridge. From characters furnished by the seeds and the diaphragms separating the nodes of the stem, as pointed out by Dr. Engelmann, this is referred to the *V. riparia*, Michx.

220. *Lespedeza violacea*, Pers., = *L. reticulata*, Pers.

This species has been compared at the Gray Herb. by Mr. Walter Deane, and referred as above.

973. *Juncus marginatus*, var. *bifloms*, Engl., = *Juncus marginatus*, Rostk.

Compared at the Gray Herbarium by Mr. Walter Deane who pronounces this to be the type and not the variety.

1251. *Lycopodium complanatum*, L., var. *sabinæfolium*, Spring., = *Lycopodium complanatum*, L.

The forms referred to this variety were collected two miles north of Bladensburg, in young fruit, July 20, 1879, and at Clifton Station, Va., Oct. 12, 1884, by Prof. Ward. These have been submitted to Prof. L. W. Underwood, of Syracuse University, and he pronounces them all to be *complanatum*. This variety, or, as it has been lately known, species, *sabinæfolium*, is distinguished by having the stems leafy to base of spikes, or nearly so, elongated, creeping, usually underground; branches erect, short, dichotomous; leaves 4-rowed, apparently terete.

In *complanatum* the stems are flattened, leaves of two forms, imbricated—oppressed in 4 ranks. These specimens are certainly anomalous in having the stems creeping underground, but otherwise they agree well with the type.