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HISTORY AND SCIENCE

Letter

Dr. H. H. H.

East Lackawanna

W. H. H. H.

PROCEEDINGS AND COLLECTIONS

VOLUME ONE

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OF
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VOLUME ONE.

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A PRELIMINARY LIST
OF
THE VASCULAR PLANTS
OF THE
LACKAWANNA AND WYOMING VALLEYS.

COMPILED BY
WILLIAM R. DUDLEY,
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INTRODUCTION.

This list is preparatory to the systematic work of exploration, of collecting and preserving specimens of the living plants of the entire region, which is contemplated by the botanists of the Lackawanna Institute. Using this as a basis, something that approaches a complete *flora* of the two valleys may be gradually elaborated; but several years of active work on the part of all the botanical members must elapse before such a catalogue would be sufficiently complete for publication.

The writer was a guest of the members of the Institute during a part of the session of their summer class in geology under Professor BRANNER in June, 1886; and at their suggestion, but unfortunately only a short time before his departure, he planned this paper. To make it in some sense worthy of its object he extended his researches for several additional days to certain parts of the adjacent plateau known as "The Pocono," and in the autumn visited many parts of the Wyoming Valley and the lower Lackawanna Valley; he also sought to bring together all the facts possible to obtain from others. This list, therefore, incomplete though it is even in respect to common plants, is based on information from several sources:—

First—A collection of herbarium specimens, chiefly from these valleys, made by Mr. R. N. DAVIS, of the Archbald High School, to which were added some notes of observations, which were prepared with much care, and with an evident sense of the scientific value of accuracy of statement. His collection contained over two hundred named species of flowering plants and ferns, beside quite a number of unnamed

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but interesting species. The work of Mr. DAVIS has been of great service, and I have often given his name a place on the following pages, because of the indisputable evidence his specimens afforded me.

Second—Notes of observations which were generously sent me by Professor THOMAS C. PORTER, of Lafayette College, Easton, Pa., who is the best authority on the plants of his State. Besides his "Sketch of the Botany of Pennsylvania," published in *Gray's Atlas*, 1872, he forwarded selections from lists of plants observed on "The Pocono" and elsewhere in 1881 and 1884, also other notes of much value. In return I hope the botanists of the "Northern Anthracite Coal Valley" may be able to aid him essentially in the preparation of his forthcoming *Flora of Pennsylvania*.

Third—Lists of plants observed by Mrs. BEEBER and Mrs. BUELL, of Scranton, and Miss BANNISTER, of the Wyoming Seminary at Kingston, were placed in my hands, although they had no collections of pressed plants.

Fourth—The present Director of the Arkansas Geological Survey, Professor JOHN C. BRANNER, who is the authority on the topography of these valleys, gave me many valuable hints as to interesting localities, and accompanied me on several excursions.

Fifth—I have had my own collections and observations made during a week's stay in Scranton and on the Pocono in June, 1886; also in the exploration in the Wyoming Valley in the autumn. Quite full notes were taken down at the time, and the more interesting plants preserved in my herbarium.

The plan of the catalogue is as follows:—(1) All references to localities are for the Lackawanna and Wyoming Valleys and the mountains immediately bounding them. Because of their interest and proximity those plants we know to occur on the Elk Mountain (the highest point in N. E. Pennsylvania), and those at Tobyhanna, Gouldsboro, Lehigh Pond (near Gouldsboro and the source of one branch of the Lehigh River), Moosic Lake and other places on the neighboring Pocono plateau are included. "Common" means common over the areas of the valleys. (2) If a species is apparently

rare, or if it has not been observed in more than two or three stations, the stations are recorded. Otherwise "common," "frequent" or other expressions to indicate abundance are used. (3) All statements of localities, for a species or of its abundance, *not* followed by any name of a person, are based on the writer's own observations or collections. (4) If the name of a person follows any statement in the same sentence with it, it indicates that such person alone is authority for the statement. (5) References are frequently made to specimens in collections because such evidence is of the first importance. I would strongly urge every botanist of the valley to hereafter press all plants collected (certainly all those which are supposed to be at all rare), and place duplicates of them in the general herbarium of the Institute, for the use of future workers on the geographical distribution of species.

Geologically the Lackawanna and Wyoming form one long, closed valley, and its mountain-walls gradually coalesce at each end to become a single range. Because of the southeastern curvature of both of these ranges,—the Moosic on the southeast and the Lackawanna on the northwest,—it presents, on the map, almost the form of a crescent. Through the walls of Lackawanna Mountain the Susquehanna River has broken, and passes into the valley at Campbell's Ledge; then out of it, skirting the precipitous base of the River Mountain; then quite across the valley at Mocanaqua, and out again. This affords bold cliffs near a river, always favorite haunts of rare plants. Campbell's Ledge, above Pittston, at the upper gateway of the Susquehanna, rises abruptly 750 feet above the river, and over 1300 feet above tide. We find the Walking Leaf Fern and the Cliff Brake (*Pellaea atropurpurea*) on its summit, together with a rare flax (*Linum sulcatum*), and a still rarer grass (*Koeleria cristata*). The latter also occurs on the River Mountains. Several miles northeastward from Campbell's Ledge occurs the highest point of the Lackawanna range—Bald Mountain. It is easily reached by a good mountain-road from Scranton, and has an elevation of 2385 feet above tide. On its bold parapets of conglomerate

grow the rare fern *Asplenium montanum* and one plant known nowhere else in the State, viz.: *Potentilla tridentata*. East and southeast of Scranton the Moosic range rises gradually into and partly coalesces with the broad plateau—the Pocono Mountain, which sweeps away to the east, northeast and southeast with a general elevation in this region of from 1800 to 2100 feet. This is naturally a wilderness area, much of it rocky or barren, and in it occur numerous swamps, peat-bogs and cold mountain ponds, which are sources of the brooks which feed the Delaware, the Lehigh, the Lackawanna and the Susquehanna. Here occur occasional tracts—all too few at the present day—of the primeval forest, their dark, cool shades lighted up by the torches of Rhododendron flowers in June and July. I have particularly in mind Lehigh Pond, surrounded by a sphagnum bog, and a large tract of the virgin forest. In the cold sphagnum are the heaths, orchids and sedges of Labrador and Northern Europe, here almost on their southern limit. Such are: *Kalmia glauca*, *Ledum latifolium*, *Andromeda polifolia*, *Carex limosa*, *Carex Magellanica* and *Eriophorum vaginatum*. In the half-light of the forest bordering, on the crumbling trunks of fallen trees, under tall pines, spruces and fragrant balsams, spring the pink Oxalis, the odd Indian-cucumber, the Pappoose-Flower (*Trillium erectum*) and dusky orchids like *Habenaria orbiculata*, *Habenaria Hookeri*, the Coral-root and the pink Moccasin-flower (*Cypripedium acaule*). All of this is in delightful contrast with the areas outside, desolated by the axe and the saw, and now exhibiting only ghastly dead trunks, occasionally left standing, the bare rocks and intervening wastes covered chiefly by Red Raspberry and Blackberry bushes, the Wild Red Cherry and the Bristly Elder. In several localities in the ponds on the Moosic and Pocono, as well as in the valley, occurs *Orontium aquaticum* in abundance, supposed to be a coast plant, but extending, according to Professor PORTER, far into the Alleghenies, even 300 miles from the sea. At the head of Little Roaring Brook on the Moosic Mountain, near Tobyhanna on the Pocono, and probably elsewhere, occurs perhaps the most interesting species of

the flora. It is *Arceuthobium pusillum*, a little plant allied to the true Mistletoe, and hitherto not discovered outside of the State of New York. It is parasitic on the branches of the Black Spruce of the mountain swamps. It is a curious fact that it was not even known to science until 1871, when it was discovered by Miss L. A. MILLINGTON in Warren County, New York. Since then stations have been discovered in Essex, Rensselaer, Saratoga, Herkimer, Oswego, and Sullivan Counties of New York, last year by myself in Seneca County, New York, and Lackawanna and Monroe Counties in Pennsylvania. It may be looked for farther south, as the Black Spruce extends into North Carolina, and there is no reason to suppose it affects the North like so many of the plants about it. Nevertheless this plateau, in its undisturbed tracts, is remarkable for the predominance of northern plants, some of which find here their southern limits, some extend along the Alleghenies in a narrowing belt to their southern termination in North Carolina. In striking contrast to what has been mentioned above are the low, narrow valleys, 500 to 700 feet above tide, such as the lower part of the Lackawanna and the more alluvial Wyoming. The richer soil, the sheltered areas and the shores of a river afford an entirely different series of plants. The Cottonwood, the Silver Maple, the American Elm are frequent here, with occasional Black Walnuts. Here also, along the river banks, is a characteristic and picturesque tree, with a rich, salmon-colored bark—the River Birch (*Betula nigra*). It forms groves along the Susquehanna, and Everhart's Island, on the lower Lackawanna, is nearly covered with a fine growth of them. They have been noticed above Scranton to Peckville, but probably disappear with the changed character of the valley above Archbald. The Wild Yam is occasional in the Lackawanna and Wyoming Valleys, and where the Susquehanna breaks across at Mocanaqua, occurs *Dianthera*, a plant of the larger river and lake shores, conspicuous on the lower Susquehanna and the lower Juniata, but not known on the Delaware or its branches, or hitherto on the upper Susquehanna. Here also is *Physostegia Virginiana*, a handsome flowered western plant,

this station apparently being on its northeastern limit. It is rare in Pennsylvania, Professor PORTER reporting it on the Schuylkill below Norristown (its extreme eastern limit), and as sparingly on the lower Susquehanna. Near Moca-naqua occurs *Erysimum cheiranthoides*, hitherto regarded as peculiar to the Susquehanna below Harrisburg.

Outside the valley proper are localities of presumable interest to the botanist, because of their height and exposure; and they are near enough to be readily visited from Scranton, but it is doubtful whether they will yield as much that is of interest as the places already mentioned. Elk Mountain, ten miles northwest of Carbondale, has two peaks, the South Knob, 2575 feet, the North Knob, 2700 feet above tide. A single visit to this mountain in June revealed but few rare plants. *Panicum xanthophysum*, between the knobs, may be justly called so. It is not reported south of Luzerne County, and occurs but sparingly from Massachusetts to Minnesota. Sixteen miles north of Carbondale are Ararat Peak, 2600 feet, and Sugar Loaf, 2450 feet above tide. These have not been visited by myself.

The illustrations given indicate that our limits include many rare plants and a very great variety of soil and habitat; and yet it will be seen that explorations have been both hasty and incomplete. The promise is clearly great for the discovery of as interesting forms as any yet found, and there is, therefore, every incentive to this fascinating work for those who can carry it forward. Let everyone interested make it a point to press the plants secured, even the common ones; and let duplicates of each species, accompanied by a label giving exact date and locality,—even if the name be omitted,—be placed in the hands of a curator appointed by the Institute. From these labels a slip catalogue could be easily made and kept by the curator, and he could direct future searches for plants which ought to occur within limits, but which have not been secured. In doing this it would be wise to assign particular orders of plants to individuals and make each responsible for work done in collecting the species belonging to such orders. Let each specimen pressed be as

complete in regard to flowers, fruit, leaves, rootstock, bulb, and even roots in the case of herbs, as it is possible to make it, and let the specimen be cared for while in press so that its colors shall come out as bright and as natural as it is possible to make them. The more specimens one has when he attempts to work up a collection, the better. With such co-operation and care results can be accomplished which may be of much use to science.

BOTANICAL LABORATORY,
Cornell University, June 1, 1887.

PHÆNOGAMIA, OR FLOWERING PLANTS.

RANUNCULACEÆ.

1. *Clematis verticillaris*, DC. PURPLE CLEMATIS.
Elk Mountain, about "Prospect Rock."
2. *C. Virginiana*, L. WHITE CLEMATIS. VIRGIN'S BOWER.
Abundant. (*In herbarium of R. N. Davis.*)
3. *Anemone Virginiana*, L. VIRGINIAN ANEMONE.
Frequent.
4. *A. dichotoma*, L. (*A. Pennsylvanica*, L., Gray's Manual,
p. 37.)
Wilkes-Barre, near river. Near Kingston, (*Miss A. Ban-*
nister.)
5. *A. nemorosa*, L. WIND-FLOWER. WOOD-ANEMONE.
Common, (*R. N. D., in herb.*)
6. *A. Hepatica*, L. (*Hepatica triloba*, Chaix., Man., p. 38.)
HEPATICA.
Dry woods about the Lackawanna and Wyoming Valleys.
7. *A. acutiloba*, Lawson. (*Hepatica acutiloba*, DC., Man.
p. 38.) HEPATICA.
(*In herb. R. N. D.*)
8. *Anemonella thalioides*, Spach. (*Thalictrum anemon-*
oides, Michx., Man. p. 38.) RUE-ANEMONE.
Common, (*R. N. D. in herb.*)

9. *Thalictrum polygamum*, L. (*T. Cornuti*, L., Man. p. 39.)
TALL MEADOW-RUE.
Swamp near Wyoming.
10. *T. purpurascens*, L., var. *ceriferum*, Austin.
Mountain south of Wilkes-Barre, (*in herb. W. K. D.*)
11. *Ranunculus aquatilis*, L., var. *trichophyllus*, Chaix.
WHITE WATER-CROWFOOT.
In a stream above Gouldsboro.
12. *R. abortivus*, L. SMALL-FLOWERED CROWFOOT.
Frequent, (*R. N. D. in herb.*)
13. *R. recurvatus*, Poir.
Woods near Dunmore.
14. *R. Pennsylvanicus*, L.
Common, (*R. N. D. in herb.*)
15. *R. fascicularis*, Muhl. EARLY CROWFOOT.
Common, (*R. N. D. in herb.*)
16. *R. septentrionalis*, Poir. (The *R. repens* of Gray's Man.
only in part. The true *R. repens*, L., is a lower, slenderer
plant, more freely rooting from its runners than the above,
and often appears as if introduced.)
Plainsville, (*in herb. R. N. D.*)
17. *R. acris*, L. BUTTERCUP.
Common, (*R. N. D. in herb.*)
18. *Caltha palustris*, L. MARSH-MARIGOLD.
Stafford Meadow Brook, near Scranton. (*Mrs. Buell.*)
Near R. R. above Gouldsboro.
19. *Caltha palustris*, L., var. *Sibiricus*, is in Monroe County.
(*Professor Porter.*)
20. *Coptis trifolia*, Salisb. GOLD THREAD.
Swamp at the head of Little Roaring Brook.
21. *Aquilegia Canadensis*, L. COLUMBINE.
Common in rocky places.

22. *Cimicifuga racemosa*, Ell. BLACK SNAKE-ROOT.

Campbell's Ledge. Abundant along the Mountain Inn road and elsewhere about the Wyoming Valley. (*In herb. W. R. D.*)

MAGNOLIACEÆ.

23. *Magnolia acuminata*, L. CUCUMBER TREE.

It is said to occur near Waverly, Pa.

24. *Liriodendron Tulipifera*, L. WHITE-WOOD. TULIP-TREE.

Abundant in Lackawanna and Wyoming Valleys. (*In herb. R. N. D.*)

MENISPERMACEÆ.

25. *Menispermum Canadense*, L. MOON-SEED VINE.

Near Kingston.

BERBERIDACEÆ.

26. *Podophyllum peltatum*, L. MANDRAKE.

Common, (*R. N. D. in herb.*) Mountain Inn road.

NYMPHÆACEÆ.

27. *Nymphæa odorata*, Ait. WHITE POND-LILY.

In the ponds on the hills near Crystal Lake.

28. *Nuphar advena*, Ait. YELLOW POND-LILY.

Still water above and below Scranton and near Wyoming.

29. *N. pumilum*, Smith.

Tobyhanna Mills. (*1881, Professor T. C. Porter.*)

SARRACENIACEÆ.

30. *Sarracenia purpurea*, L. PITCHER-PLANT.

Formerly near the Scranton Court-house. (*Mrs. Beeber.*)
Swamp at the head of Little Roaring Brook. Moosic Lake.

PAPAVERACEÆ.

31. *Chelidonium majus*, L. CELANDINE.
Near Scranton, (*Mrs. Buell.*) Near Kingston, (*Miss Ban-*
nister.)
32. *Sanguinaria Canadensis*, L. BLOOD-ROOT.
Near Scranton, (*Mrs. Buell.*)

FUMARIACEÆ.

33. *Adlumia cirrhosa*, Raf. ALLEGHENY VINE.
Rocks by R. R. above Mocanaqua. Lynn, (*in herb.*
R. N. D.)
34. *Dicentra Cucullaria*, DC. DUTCHMAN'S BREECHES.
Near Hyde Park, (*Mrs. Buell.*) Toby's Eddy (?),
(*R. N. D.*)
35. *D. Canadensis*, DC. SQUIRREL CORN.
Reported by Mrs Buell and by Mr. Davis.
36. *Corydalis glauca*, Pursh.
Rocks, etc., in Lackawanna and Wyoming Valleys. (*In*
herb. W. R. D. and *R. N. D.*)

CRUCIFERÆ.

37. *Cardamine rhomboidea*, DC.
Woods near Gouldsboro.
38. *C. hirsuta*, L.
Lower Lackawanna Valley.
39. *C. hirsuta*, L., var. *sylvatica*, Gr.
On rocks on the River Mountains above Mocanaqua,
(*Herb. W. R. D.*)
40. *Arabis lyrata*, L.
Elk Mountain. Bald Mountain. Campbell's Ledge.
River Mountains. (*Herb. W. R. D.*)

41. **A. hirsuta**, Scop.
Sandstone ledge north of Taylorville.
42. **A. Canadensis**, L. SICKLE-POD.
Lower Lackawanna Valley.
43. **Erysimum Cheiranthoides**, L.
Near the Susquehanna below Mocanaqua. (Not reported before from this part of the State. It occurs on the lower Susquehanna according to Professor Porter.)
44. **Barbarea vulgaris**, R. Br. WINTER CRESS.
Common, (*R. N. D. in herb.*)
45. **Sisymbrium officinale**, Scop. HEDGE MUSTARD.
Scranton. Common, (*R. N. D. in herb.*)
46. **Brassica Sinapistrum**, Boiss. WILD MUSTARD.
Near Scranton, (*Mrs. Buell.*) Near Crystal Lake.
47. **B. nigra**, Gray. BLACK MUSTARD.
Common, (*R. N. D. in herb.*)
48. **Nasturtium officinale**, R. Br. WATER CRESS.
Roaring Brook, (*Mrs. Buell.*) Common, (*R. N. D. in herb.*)
49. **N. palustre**, DC.
Common, (*R. N. D. in herb.*)
50. **Capsella Bursa-pastoris**, Mæneh. SHEPHERD'S PURSE.
Common, (*R. N. D. in herb.*)
51. **Lepidium Virginicum**, L. PEPPER-GRASS.
Common, (*R. N. D. in herb.*)
52. **L. ruderale**, L.
Wilkes-Barre and Scranton.

CAPPARIDACEÆ.

53. **Polanisia graveolens**, Raf.
Susquehanna River, near the Lackawanna and Bloomsburg Junction.

CISTACEÆ.

54. *Helianthemum Canadense*, Michx. ROCK-ROSE.
Campbell's Ledge, (*in herb. W. R. D.*) Near pond below
Lackawanna Station.
55. *Leechea thymifolia*, Pursh. PINWEED.
Common, (*in herb. W. R. D.*)
56. *L. minor*, Lam.
Mountain Inn road, (*in herb. W. R. D.*)

VIOLACEÆ.

57. *Viola rotundifolia*, Michx. SWEET YELLOW VIOLET.
Common, (*R. N. D. in herb.*)
58. *V. blanda*, L. WHITE VIOLET.
Common, (*R. N. D. in herb.*)
59. *V. palmata*, L. (*V. cucullata*, Ait., var. *palmata*, Gr.
Man. p. 78.)
Back of Plainsville, (*R. N. D. in herb.*)
60. *V. palmata*, L., var. *cucullata*, Gr. (*V. cucullata*, Ait.,
Man. p. 78.)
Common, (*R. N. D. in herb.*)
61. *V. Sagittata*, Ait. ARROW-LEAVED VIOLET.
Common in both valleys. (*In herb. R. N. D.*)
62. *V. canina*, L., variety *Muhlenbergii*, Gray. (*V. canina*,
L., var. *sylvestres*, Reg.)
Common, (*R. N. D. in herb.*)
63. *V. rostrata*, Pursh. LONG-SPURRED VIOLET.
64. *V. Canadensis*, L.
Common, (*R. N. D. in herb.*)
65. *V. pubescens*, Ait. DOWNY YELLOW VIOLET.
Common, (*R. N. D. in herb.*)

66. *V. lanceolata*, L.

Near the canal at Plainsville, (*in herb. R. N. D.*)

POLYGALACÆ.

67. *Polygala verticillata*, L.

Near Wilkes-Barre.

68. *P. ambigua*, Nutt.

On ledges of "red shale" above Mocanaqua, (*In herb. W. R. D.*)

69. *P. sanguinea*, L.

"Fields back of Plainsville," (*R. N. D. in herb.*)

70. *P. paucifolia*, Wild. FRINGED POLYGALA. INDIAN PINK.

Common, (*R. N. D. in herb.*)

CARYOPHYLLACÆ.

71. *Saponaria officinalis*, L.

Common, (*R. N. D. in herb.*)

72. *Silene stellata*, Ait. STARRY CAMPION.

Along the west bank of the lower Lackawanna valley, (*in herb. W. R. D.*)

73. *S. antirrhina*, L. SLEEPY CATCHFLY.

Ledges and dry soil, Campbell's Ledge, etc., (*in herb. W. R. D.*)

74. *Lychnis Githago*, Lam. CORN COCKLE.

In cultivated fields, (*R. N. D. in herb.*)

75. *Cerastium viscosum*, L. MOUSE-EAR CHICKWEED.

Common, (*R. N. D. in herb.*)

76. *Stellaria Media*, Sm. CHICKWEED.

Common.

77. *S. borealis*, Bigel.

Elk Mountain. (Also sent, with *Stellaria ulegnosa*, to Professor Porter, from Wayne County, by John M. Dolph.)

78. *Arenaria serpyllifolia*, L. SANDWORT.

Wilkes-Barre, etc.

79. *Spergula arvensis*, L. CORN-SPURREY.

Above Carbondale.

PORTULACACEÆ.

80. *Portulaca oleracea*, L. PURSLANE.

Common.

81. *Claytonia Virginica*, L. SPRING BEAUTY.

Near Scranton, (*Mrs. Buell*.)

82. *C. Caroliniana*, Michx. SPRING BEAUTY.

Common, (*R. N. D.*)

HYPERICACEÆ.

83. *Hypericum Ellipticum*, Hook. Tobyhanna Mills, (1881, *Prof. Porter*.)

84. *H. perforatum*, L. COMMON ST. JOHN'S WORT.

Common, (*R. N. D. in herb.*)

85. *H. maculatum*, Walter, (*H. corymbosum*, Muhl. Man. p. 85.)

(*In herb. R. N. D.*) "probably from the two valleys."

86. *H. mutilum*, L.

Abundant near Wilkes-Barre, Scranton, and Crystal Lake.

87. *H. Canadense*, L.

Pocono Station, on D., L. & W. R. R., (1881, *Prof. Porter*.)

88. *H. Sarothra*, Michx. PINE-WEED.

Dry fields south of Wilkes-Barre.

89. *Elodea campanulata*, Pursh. (*Elodes Virginica*, Nutt. Man. p. 86.)

Near pond in the lower Lackawanna Valley. Lehigh Pond,
Near Gouldsboro.

MALVACEÆ.

90. *Malva rotundifolia*, L. COMMON MALLOW.
Common, (*R. N. D. in herb.*)

91. *Abutilon Avicennæ*, Gærtn. VELVET-LEAF.
Wilkes-Barre. Wyoming.

TILIACEÆ.

92. *Tilia Americana*, L.
Everywhere abundant.

LINACEÆ.

93. *Linum Virginianum*, L.
Campbell's Ledge. Red-shale ledges above Mocanaqua,
etc.

94. *L. sulcatum*, Ridd.
Top of Campbell's Ledge, (*in herb. W. R. D.*)
This rare plant is reported from Pennsylvania only from
two or three other localities, (*Prof. Porter.*)

GERANIACEÆ.

95. *Geranium maculatum*, L. WILD CRANES-BILL.
Common.

96. *G. Carolinianum*, L.
South of Plainsville Brick-church, (*R. N. D. in herb.*)
Near Kingston, (*Miss Bannister.*)

97. *G. Robertianum*, L. HERB ROBERT.
Near Scranton, (*Mrs. Buell.*)

98. *Impatiens pallida*, Nutt. PALE TOUCH-ME-NOT.
Woods across the river from Wilkes-Barre.
99. *I. fulva*, Nutt.
Common. (*In herb R. N. D.*)
100. *Oxalis acetosella*, L.
White Oak ravine near Archbald, (*R. N. D. in herb*).
Near the Archbald "pot-hole."
101. *O. stricta*, L. YELLOW WOOD-SORREL.
Common. (*In herb R. N. D.*)

SIMARUBACEÆ.

102. *Ailanthus glandulosus*, Desf. AILANTHUS.
Escaped, near the S. H. below Lackawanna Station.

ILICINEÆ.

[AQUIFOLIACEÆ of Gray's Man., p. 305.]

103. *Ilex verticillata*, Gray. WINTER-BERRY. BLACK ALDER.
Swamps on the mountains and in the valley.
104. *I. lævigata*, Gray.
Swamp at head of little Roaring Brook. Lehigh Pond,
(*Herb. W. R. D.*) Before reported from Lancaster County,
and Broad Mountain, Schuylkill County, (*Prof. Porter.*)
105. *I. monticola*, Gray.
Elk Mountain, (*herb. W. R. D.*) South-east of Dunmore (?)
106. *I. mollis*, Gray.
Apparently this species, from R. N. D., Dec., 1886;—fruit
and old leaves only, from near the railroad above Archbald.
107. *Nemopanthes Canadensis*, DC. MOUNTAIN HOLLY.
Swamp at the head of Little Roaring Brook.

CELASTRACEÆ.

108. *Celastrus scandens*, L. BITTER SWEET.
Occasional, (*R. N. D. in herb.*) Campbell's Ledge, etc.

RHAMNACEÆ.

109. *Ceanothus Americanus*, L. JERSEY TEA.
Common in dry rocky woods.

VITACEÆ.

110. *Vitis Labrusca*, L. FOX OR SWAMP GRAPE.
By streams, south of Wilkes-Barre. Lower Lackawanna Valley.
111. *V. æstivalis*, Michx. SWEET FROST-GRAPE.
Frequent.
112. *V. riparia*, Michx. (*V. cordifolia* of Gray's Man. p. 112, in part.)
Flats opposite Wilkes-Barre.
113. *Ampelopsis quinquefolia*, Michx. VIRGINIA CREEPER.
Common. (*In herb. R. N. D.*)

SAPINDACEÆ.

114. *Æsculus Hippocastanum*, L. HORSE-CHESTNUT.
Rarely escaping. (*R. N. D. in herb.*)
115. *Acer Pennsylvanicum*, L. STRIPED MAPLE.
Elk Hills. Bald Mount. Frequent toward Shickshinny.
116. *A. spicatum*, Lam. MOUNTAIN MAPLE.
Bald Mount.
117. *A. saccharinum*, Wang. SUGAR MAPLE.
Frequent.

118. *A. dasycarpum*, Ehrhart. SILVER MAPLE.
Banks of the Susquehanna River opposite Wilkes-Barre.
119. *A. rubrum*, L.
Common.

ANACARDIACEÆ.

120. *Rhus typhina*, L. STAGS-HORN SUMAC.
Common.
121. *R. glabra*, L. SMOOTH SUMAC.
Common.
122. *R. venenata*, DC.
Swamp above Gouldsboro.
123. *R. Toxicodendron*, L. POISON IVY. POISON OAK.
Common.
124. *R. copallina*, L.
Frequent, near Scranton, Wilkes-Barre, Wanamie, etc.

LEGUMINOSÆ.

125. *Baptisia tinctoria*, R. Br. WILD INDIGO.
Everywhere abundant in dry woods. In herbarium.
126. *Lupinus perennis*, L. LUPINE.
North of Dunmore. Common, (*R. N. D. in herb.*)
127. *Medicago lupulina*, L. BLACK MEDIC.
Near Scranton. (?)
128. *Trifolium pratense*, L. RED CLOVER.
Common.
129. *T. repens*, L. WHITE CLOVER.
Common.
130. *T. agrarium*, L. YELLOW CLOVER.
Common, (*R. N. D. in herb.*) Near Waymart.

131. *Tephrosia Virginiana*, Pers. HOARY PEA.
Northeast of Dunmore. Campbell's Ledge, frequent. Red
shales above Mocanaqua.
132. *Robinia Pseudacacia*, L. LOCUST-TREE.
Near Scranton. Rarely escaping, (*R. N. D. in herb.*).
At Locust Ridge, six miles southwest of Tobyhanna Mills,
where it is certainly indigenous, (*Prof. Porter.*)
133. *Desmodium nudiflorum*, DC.
South of Wilkes-Barre. The small form with scattered
leaves in the woods of Campbell's Ledge. (*In herb. W. R. D.*)
134. *D. acuminatum*, DC.
Near Wilkes-Barre and Shickshinny in mountain woods.
135. *D. rotundifolium*, DC.
On the red shale ledges above Mocanaqua.
136. *D. canescens*, DC.
Near Wyoming, (*in herb. W. R. D.*) Red shale ledges,
Mocanaqua.
137. *D. cuspidatum*, Torr. and Gray.
Campbell's Ledge. Red shales near Mocanaqua.
138. *D. Dillenii*, Darlingt.
Red shale ledges above Mocanaqua.
139. *D. paniculatum*, DC.
Frequent.
140. *D. Canadense*, DC.
Not common. Above Pittston. Red shales above Mocanaqua.
141. *D. rigidum*, DC.
Red shales (*in herb. W. R. D.*) A rare plant in Pennsylvania, (*Prof. Porter.*)
142. *D. Marilandicum*, Boott.
Red shales. Campbell's Ledge.

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143. *D. ciliare*, DC.
Campbell's Ledge, (*in herb. W. R. D.*)
144. *Lespedeza repens*, Bart.
Campbell's Ledge. The red shales. Southeast of Wilkes-Barre, (*in herb. W. R. D.*)
145. *L. violacea*, Pers.
Frequent in the lower Lackawanna Valley.
146. *L. hirta*, Ell.
Frequent.
147. *L. capitata*, Michx.
Near Wyoming. Lower Lackawanna Valley.
148. *Vicia Caroliniana*, Walt. WILD VETCH.
Mountain Inn road. Campbell's Ledge.
149. *V. Cracea*, L.
Tobyhanna Mills, 1881, (*Prof. Porter.*)
150. *Apios tuberosa*, Moench. GROUND-NUT.
Low grounds near Wyoming.
151. *Amphicarpæa monoica*, Nutt.
Frequent.

ROSACEÆ.

152. *Prunus Americana*, Marshall. WILD PLUM.
Throughout the lower Lackawanna Valley and Wyoming Valley. Two trees near Everhart's Island, each ten inches in diameter.
153. *P. avium*, L. ENGLISH BLACK CHERRY.
By Lackawanna road below Scranton.
154. *P. Pennsylvanica*, L. WILD RED CHERRY.
Frequent.
155. *P. Virginiana*, L.
Common.

156. *P. serotina*, Ehrh.
Common, especially in the valley woods.
157. *Spiraea salicifolia*, L. MEADOW-SWEET.
Abundant in the Lackawanna Valley. (*In herb. W. R. D.*)
158. *S. tomentosa*, L.
Very abundant about Carbondale. Fewer in the lower Lackawanna Valley and Wyoming Valley.
159. *Physocarpus opulifolius*, Maxim. (*Spiraea opulifolia* L., Man. p. 149.) NINEBARK.
Lower Lackawanna Valley, near old track of the Delaware, Lackawanna and Western Railroad. (*In herb. W. R. D.*)
160. *Gillenia trifoliata*, Mœnch.
Campbell's Ledge. Mountain Inn road, etc.
161. *Dalibarda repens*, L.
Swamp at the head of Little Roaring Brook. Near Lehigh pond. Peat bog above Gouldsboro by railroad.
162. *Rubus odoratus*, L. FLOWERING RASPBERRY.
Campbell's Ledge. Mocanaqua, etc. (*In herb. R. N. D.*)
163. *R. neglectus*, Pk. (See 22d Rep. to the Regents of N. Y., p. 23.)
Lower Lackawanna Valley, (*in herb. W. R. D.*) Also in herb. R. N. D.
164. *R. strigosus*, Michx. RED RASPBERRY.
Common, especially on the mountains. (*In herb. R. N. D.*)
165. *R. occidentalis*, L. BLACK-CAP RASPBERRY.
Frequent.
166. *R. villosus*, Ait. BLACKBERRY.
Common.
167. *R. Canadensis*, L. DEWBERRY.
Common.
168. *R. hispidus*, L. SWAMP BLACKBERRY.
Swamp at head of Little Roaring Brook.

169. *Geum album*, Gmelin.
Lower Lackawanna Valley.
- 169½. *G. strictum*, Ait.
Tobyhanna Mills, (*Prof. Porter.*)
170. *Waldsteinia fragarioides*, Willd. BARREN STRAWBERRY.
Near Scranton, (*Mrs. Buell.*)
171. *Fragaria Virginiana*, Ehrh. WILD STRAWBERRY.
Common, (*R. N. D. in herb.*)
172. *F. vesca*, L. WOOD STRAWBERRY.
Common, (*R. N. D. in herb.*)
173. *Potentilla Norvegica*, L.
Common.
174. *P. Canadensis*, L. FIVE-FINGER.
Common.
175. *P. argentea*, L. SILVERY CINQUE-FOIL.
Campbell's Ledge. South of Wilkes-Barre. Also in
Susquehanna County, (*Prof. Porter.*)
176. *P. arguta*, Pursh.
Campbell's Ledge, (*in herb. W. R. D.*)
Rare in Pennsylvania. Only reported from the Susque-
hanna River below Harrisburg, and the Delaware River near
Easton, (*Prof. Porter.*)
177. *P. palustris*, Scop. MARSH FIVE-FINGER.
Wyoming, abundant in the swamp. Lehigh Pond, (*in
herb. W. R. D.*)
Previously reported from Pennsylvania only from one
station in Pike County, (*Prof. Porter.*)
178. *P. tridentata*, Ait.
On the lookout ledges, on the summit of Bald Mountain,
(*in herb. W. R. D.*)
Not before observed in the State, (*Prof. Porter.*) Before I
secured it in 1886, the plants had attracted the attention of Pro-

fessor Branner, who recognized it as a species of the northern mountains: It also appears on the tops of the highest peaks in North Carolina.

179. *Agrimonia Eupatoria*, L. AGRIMONY.
Frequent.
180. *Rosa Carolina*, L. CAROLINA ROSE.
Not uncommon.
181. *R. humilis*, Marsh. (*R. lucida* of Gray's Man. p. 158, for most part.)
Frequent, especially in the mountain woods.
182. *R. setigera*, Michx. PRAIRIE ROSE.
By road north of Taylorville (a doubtful specimen).
183. *R. rubiginosa*, L. SWEET-BRIER.
Frequent.
184. *Pirus malus*, L. APPLE.
Wild in the lower Lackawanna Valley.
185. *P. coronaria*, L. WILD CRAB-APPLE.
Frequent in the Lackawanna and Wyoming Valleys. (*In herb. R. N. D.*)
186. *P. arbutifolia*, L. CHOKEBERRY.
Little Roaring Brook swamp. Pond near Waymart.
187. *P. Americana*, DC. MOUNTAIN ASH.
Bald Mountain.
188. *Crataegus oxycantha*, L. ENGLISH HAWTHORN.
Escaped to roadside, (several shrubs,) by road north of Dundaff.
Hitherto escaped in Pennsylvania only near Philadelphia, (*Prof. Porter.*)
189. *C. coccinea*, L. SCARLET THORN.
Frequent.

190. *C. coccinea*, L. var. *macracantha*, Dudley. (See *Cayuga Flora*, p. 33.)
South of Wilkes-Barre. Lower Lackawanna Valley.
191. *C. tomentosa*, L. BLACK THORN.
Lower Lackawanna Valley, etc.
192. *C. tomentosa*, L. var. *punctata*, Gray.
Near Wilkes-Barre. Mountain Inn road.
193. *C. crus-galli*, L. COCKSPUR THORN.
Southeast of Wilkes-Barre.
194. *Amelanchier Canadensis*, Torr. and Gray. JUNE-BERRY.
SHAD-BUSH.
Common, (*R. N. D. in herb.*)
195. *A. Canadensis*, T. and Gr. var. *rotundifolia*, Gray.
Campbell's Ledge. Bald Mountain. Red shales, Mocan-
aqua.

SAXIFRAGACEÆ.

196. *Saxifraga Virginiensis*, Michx. EARLY SAXIFRAGE.
Rather common on rocks.
197. *Tiarella cordifolia*, L. FALSE MITRE-WORT.
Near Scranton, (*Mrs. Buell and Mrs. Beeber*).
198. *Mitella diphylla*, L. MITRE-WORT. BISHOP'S-CAP.
Frequent.
199. *M. nuda*, L.
Swamp on the Pocono Mountain northeast of Tobyhanna.
Rare in Pennsylvania (*Prof. Porter*).
200. *Chrysosplenium Americanum*, Schw. GOLDEN SAXI-
FRAGE.
Spring brooks near Archbald "pot holes."
201. *Ribes cynosbati*, L. PRICKLY GOOSEBERRY.
Elk Hills. A few on the sandstone ledge above Taylor-
ville.

202. *R. rotundifolium*, Michx.
Campbell's Ledge cliffs.
203. *R. prostratum*, L'Her. FETID CURRANT.
Swamp above Gouldsboro.
204. *R. floridum*, L. BLACK CURRANT.
Plainsville, (*R. N. D. in herb.*) Below Scranton.
205. *R. rubrum*, L. RED GARDEN-CURRANT.
Rare as a scape, (*in herb. R. N. D.*)
206. *Hydrangea arborescens*, L. WILD HYDRANGEA.
Near Scranton, (*Mrs. Buell*). Lower Lackawanna Valley,
(*in herb. W. R. D.*) Campbell's Ledge. Mountain ravines
of the Wyoming Valley.

CRASSULACEÆ.

207. *Penthorum sedoides*, L. DITCH STONE-CROP.
Common.
208. *Sedum Telephium*, L. LIVE-FOR-EVER.
Below Wilkes-Barre and east of Wyoming.

DROSERACEÆ.

209. *Drosera rotundifolia*, L. ROUND-LEAVED SUNDEW.
On Moosic Mountain. Near Moosic Lake.
210. *D. intermedia*, Dr. and Hayne. *Var. Americana*, DC.
In the bog about Lehigh Pond.

HAMAMELACEÆ.

211. *Hamamelis Virginiana*, L. WITCH-HAZEL.
Common.

ONAGRACEÆ.

212. *Epilobium Angustifolium*, L. FIRE-WEED.
Common.

213. *E. palustre*, L. var. *lineare*, Gray.
Swamp at the head of Little Roaring Brook.
214. *E. coloratum*, Muhl.
Frequent.
215. *Ludwigia palustris*, Ell. FALSE LOOSESTRIFE.
Wyoming swamp.
216. *L. alternifolia*, L.
Gravelly shores of the Susquehanna. Southeast of Moca-
aqua, (*in herb. W. R. D.*)
217. *Oenothera biennis*, L. EVENING PRIMROSE.
Frequent.
218. *O. pumila*, L.
Toward Crystal Lake. "Common near Plainsville," (*R.*
N. D. in herb.)
219. *O. fruticosa*, L.
Below Campbell's Ledge, (*R. N. D. in herb.*) Near top of
Bald Mountain, (*in herb. W. R. D.*)
220. *Gaura biennis*, L.
Near Kingston. Also by Miss Bannister.
221. *Circæa lutetiana*, L. ENCHANTER'S NIGHTSHADE.
Frequent.
222. *C. alpina*, L.
Swamp near the Mountain Inn; also on top of the River
Mountains.

CUCURBITACEÆ.

223. *Sicyos angulatus*, L. STAR CUCUMBER.
Waste places in Wilkes-Barre, and the lower Lackawanna
Valley.

FICOIDEÆ.

224. *Mollugo verticillata*, L. CARPET-WEED.
Frequent about Scranton and Wilkes-Barre.

UMBELLIFERÆ.

225. *Hydrocotyle Americana*, L. PENNYWORT.
Wyoming swamp. Above Dunmore.
226. *Sanicula Marilandica*, L. BLACK SNAKE-ROOT.
Frequent.
227. *Conium maculatum*, L. POISON HEMLOCK.
More or less frequent in waste places, (*R. N. D. in herb.*)
228. *Cicuta maculata*, L. WATER HEMLOCK.
Wyoming swamp.
229. *Carum Carui*, L. CARAWAY.
Often by roadsides, (*R. N. D. in herb.*)
230. *Sium cicutæfolium*, Gmelin. (*S. lineare*, Michx.)
231. *Pimpinella integerrima*, Benth. and Hook. (*Zizia* of
Gray's Man.)
Above Dunmore. Mountain Inn road.
232. *Cryptotaenia Canadensis*, DC. HONEWORT.
Not uncommon.
233. *Osmorrhiza brevistylis*, DC. HAIRY SWEET CICELY.
Lynn, (*in herb. R. N. D.*) Mountain Inn road.
234. *Thaspium trifoliatum*, Gray.
Campbell's Ledge. Lower Lackawanna Valley.
235. *Archangelica hirsuta*, Torr. and Gray.
Campbell's Ledge. Near pond in the lower Lackawanna
Valley. Near Mocanaqua.
236. *A. atropurpurea*, Hoffm.
Near the pond in the lower Lackawanna Valley.
237. *Pencedanum sativum*, Benth. and Hook. (*Pastinaca
sativa*, L.) WILD PARSNIP.
Frequent.

238. *Daucus carota*, L. WILD CARROT.

Frequent in the Lackawanna Valley. Occasional near Wilkes-Barre.

ARALIACEÆ.

239. *Aralia racemosa*, L. SPIKENARD. WHITE-ROOT.

Near Campbell's Ledge. By the Mountain Inn road, and on the red shales of the River Mountains.

240. *A. hispida*, Michx. BRISTLY SARSAPARILLA.

Top of the River Mountains. Common near Archbald, (*R. N. D. in herb.*) Common on the barren ledges near Gouldsboro, etc.

241. *A. nudicaulis*, L. WILD SARSAPARILLA.

Frequent.

CORNACEÆ.

242. *Cornus Canadensis*, L. BUNCH-BERRY.

Swamp at the head of Little Roaring Brook. Abundant near Moosic Mountain back of Scranton, (*Mrs. Buell*). Plainsville, (*R. N. D. in herb.*)

243. *C. florida*, L. FLOWERING DOGWOOD.

Frequent in woods.

244. *C. circinata*, L'Her.

Elk Hills. Bald Mountain.

245. *C. sericea*, L. SILKY DOGWOOD.

Frequent in low thickets.

246. *C. stolonifera*, Michx. RED OSIER.

Frequent.

247. *C. alternifolia*, L.

Frequent.

248. *Nyssa multiflora*, Wang. PEPPERIDGE.

Frequent in rocky woods. Rarely in the valley bottoms.

GAMOPETALÆ.

CAPRIFOLIACEÆ.

249. *Sambucus racemosa*, L. (*S. pubens*, Michx.) RED-BERRIED ELDER.
Frequent.
250. *S. Canadensis*, L. COMMON ELDER.
251. *Viburnum lantanoides*, Michx. HOBBLE-BUSH.
Near Archbald "pot holes." Woods about Lehigh Pond.
Near Mountain Inn road. Also in herb. R. N. D.
252. *V. acerifolium*, L. MAPLE-LEAVED ARROW-WOOD.
Frequent in upland woods.
253. *V. pubescens*, Pursh. DOWNY ARROW-WOOD.
Elk Mountain.
254. *V. dentatum*, L.
Frequent in low grounds.
255. *V. cassinoides*, L. (*V. nudum*, L., var. *cassinoides*. Man. p. 206.)
Head of Little Roaring Brook. In swamps about Gouldsboro. Near Moosic Lake.
256. *V. Lentago*, L. SWEET VIBURNUM.
Common.
257. *Linnaea borealis*, Gronov. TWIN-FLOWER.
"Near Dunmore Cemetery, scarce," (*Mrs. Buell*). Professor Porter says it is found in the counties of Sullivan, Lycoming and Tioga (see "Sketch").
258. *Lonicera ciliata*, Muhl. FLY HONEYSUCKLE.
Elk Mountain. Near Lackawanna, at Green Ridge, (*Mrs. Beeber*). "Not rare in the Alleghenies, and found by me on the Pocono," (*Prof. Porter*).

259. *L. Glauca*, Hill. (*L. parviflora*, Lam. Man. p. 204.)

Frequent.

260. *Diervilla trifida*, Mœnch. BUSH HONEYSUCKLE.

Elk Mountain. Bald Mountain. Mountain Inn road.
Campbell's Ledge, etc.

RUBIACEÆ.

261. *Houstonia cœrulea*, L. BLUETS. INNOCENCE. WILD FORGET-ME-NOT.

Above Dummore. Campbell's Ledge. Plainsville, (*R. N. D. in herb.*) Near Kingston, (*Miss Bannister*).

262. *Cephalanthus occidentalis*, L. BUTTON-BUSH.

Moosic Mountain. Taylorville marsh. Swamp near Wyoming.

263. *Mitchella repens*, L. PARTRIDGE-BERRY.

Frequent.

264. *Galium Aparine*, L. CLEAVERS.

Near Campbell's Ledge.

265. *G. circæzans*, Michx.

Frequent.

266. *G. lanceolatum*, Torr.

Frequent.

267. *G. trifidum*, L. SMALL BEDSTRAW.

Lehigh Pond.

268. *G. asprellum*, Michx. ROUGHER BEDSTRAW.

Swamp near Wyoming.

269. *G. triflorum*, Michx. SWEET BEDSTRAW.

Campbell's Ledge. Mountain Inn road.

DIPSACEÆ.

270. *Dipsacus sylvestris*, Mill. TEASEL.

North of Taylorville (apparently not common).

COMPOSITÆ.

271. *Vernonia novaboracensis*, Willd. IRONWEED.
Lower Lackawanna Valley near the pond.
272. *Eupatorium purpureum*, L. PURPLE THOROUGHWORT.
Frequent.
273. *E. sessilifolium*, L.
Near Wyoming.
274. *E. perfoliatum*, L. BONESET.
Frequent.
275. *E. ageratoides*, L. WHITE SNAKE-ROOT.
Frequent.
276. *Solidago squarrosa*, Muhl.
Near Campbell's Ledge. West side Lackawanna Valley.
277. *S. caesia*, L.
Frequent.
278. *S. latifolia*, L.
Mountain Inn road. Solomon's Gap, south of Wilkes-Barre.
279. *S. bicolor*, L.
Frequent.
280. *S. bicolor*, L. var. *concolor*, Gr. and Torr.
Woods at the foot of Campbell's Ledge.
281. *S. odora*, Ait. SWEET-SCENTED GOLDEN-ROD.
Frequent in rocky soil on the mountains.
282. *S. puberula*, Nutt.
Mountains southeast of Wilkes-Barre, (*in herb. W. R. D.*)
283. *S. uliginosa*, Nutt. (*S. stricta* of the Man. p. 240.)
Near Lehigh Pond.
284. *S. rugosa*, Mill. (*S. altissima*, L. of Man. p. 243.)
Frequent in both valleys.

285. *S. ulmifolia*, Muhl.
Woods near Campbell's Ledge.
286. *S. neglecta*, Torr. and Gray.
"Near Pocono Station, D., L. & W. R. R., 1869," (*Prof. Porter.*)
287. *S. arguta*, Ait. (*S. Muhlenbergii*, Torr. and Gray, Man. p. 243.)
Frequent on the mountains.
288. *S. juncea*, Ait. (*S. arguta* of Gray's Man. p. 243.)
Campbell's Ledge, etc.; probably common.
289. *S. serotina*, Ait. (*S. gigantea* of Gray's Man. p. 245.)
Common in Wyoming and lower Lackawanna Valley.
290. *S. Canadensis*, L.
Common.
291. *S. nemoralis*, Ait.
Frequent.
292. *S. lanceolata*, L.
Frequent.
293. *Sericocarpus conyzoides*, Nees. WHITE-TOPPED ASTER.
Wilkes-Barre Mountain. Woods on Campbell's Ledge.
294. *Aster corymbosus*, Ait.
Common.
295. *A. macrophyllus*, L.
Bald Mountain woods.
296. *A. Novæ Angliæ*, L.
Not abundant. Lower Lackawanna Valley. Campbell's Ledge. Wyoming. Kingston. North of Wilkes-Barre.
297. *A. undulatus*, L.
Frequent in mountain woods.
298. *A. cordifolius*, L.
Common.

299. *A. levis*, L.
Lower Lackawanna Valley and elsewhere. A slender form with open panicle along the railroad above Solomon's Gap.
300. *A. patens*, Ait.
Frequent along mountain roads and on dry banks.
301. *A. ericoides*, L.
Lower Lackawanna and Wyoming Valleys.
302. *A. diffusus*, Ait. (*A. miser* of Manual.)
Frequent.
303. *A. paniculatus*, Lam. (*A. carneus*, Nees, Man. p. 233.)
Near Wyoming, Kingston, and lower Lackawanna Valley.
304. *A. prenanthoides*, Muhl.
Seen only near Waymart, but probably within limits.
305. *A. puniceus*, L.
Low grounds east of Wilkes-Barre. Along Black Creek.
306. *A. umbellatus*, Mill. (*Diplopappus umbellatus* of Man.)
Woods above Dunmore.
307. *A. infirmus*, Michx. (*Diplopappus cornifolius* of Man.)
Ledges along Mountain Inn road, (*in herb. W. R. D.*)
Ledges above Mocanaqua.
308. *A. linearifolius*, L. (*Diplopappus linearifolius* of Man.)
Apparently frequent on mountain declivities. Wilkes-Barre Mountains. Bald Mountain. Campbell's Ledge, etc.
309. *A. acuminatus*, Michx.
Frequent in ravines and mountain woods.
310. *Erigeron bellidifolius*, Muhl. ROBIN'S PLANTAIN.
Abundant near Campbell's Ledge, probably so elsewhere.
311. *E. Philadelphicus*, L. PINK FLEABANE.
Near Mocanaqua by railroad. (?)
312. *E. annuus*, Pers. TALL DAISY.
Frequent.

313. *E. strigosus*, Muhl. DAISY FLEABANE.
Frequent.
314. *E. Canadensis*, L. HORSEWEED.
Abundant.
315. *Antennaria plantaginifolia*, Hook. PLANTAIN-LEAVED
EVERLASTING.
Frequent in pastures.
316. *Anaphalis margaritacea*, Benth. and Hook. (*Antennaria
margaritacea*, R. Br., Man. p. 269.) PEARLY EVERLASTING.
Frequent.
317. *Gnaphalium polyccephalum*, Michx.
Frequent in mountain woods.
318. *G. decurrens*, Ives. COMMON EVERLASTING.
Tobyhanna, 1881, and Moosic Lake, 1884, (*Prof. Porter*).
319. *G. uliginosum*, L.
Frequent.
320. *Inula Helenium*, L. ELECAMPANE.
Below Lackawanna Station on L. & B. R. R.
321. *Polymnia Canadensis*, L. LEAF-CUP.
In rocky woods near the road by Campbell's Ledge. Ap-
parently scarce in Pennsylvania, Professor Porter reporting
it only from the southeastern part of the State, at two
stations.
322. *Ambrosia trifida*, L. GREAT RAGWEED.
Along the Susquehanna River, (*R. N. D. in herb.*)
323. *A. artemisiæfolia*, L. RAGWEED.
Common.
324. *Xanthium Canadense*, Mill. COCKLE-BUR.
Susquehanna River banks.
325. *Heliopsis lævis*, Pers. OX-EYE.
Near the mouth of the Lackawanna River.

326. *Rudbeckia hirta*, L. YELLOW DAISY. CONE FLOWER.
Common, (*R. N. D. in herb.*) Near Wilkes-Barre and
Wyoming.
327. *Helianthus divaricatus*, L.
Frequent on the mountains.
328. *H. decapetalus*, L.
Lower Lackawanna Valley.
329. *H. tuberosus*, L. JERUSALEM ARTICHOKE.
Opposite Wilkes-Barre on the river-bank. By the railroad
between Pittston and Campbell's Ledge.
330. *H. giganteus*, L.
Near the pond in the lower Lackawanna Valley.
331. *Bidens frondosa*, L. COMMON BEGGAR-TICKS.
Lower Lackawanna Valley.
332. *B. connata*, Muhl.
Bog above Taylorville, etc.
333. *B. cernua*, L.
Near the pond in the lower Lackawanna Valley.
334. *B. chrysanthemoides*, Michx.
Common, (*R. N. D. in herb.*)
335. *Helenium autumnale*, L. SNEEZE-WEED.
Mouth of the Lackawanna River (?)
336. *Anthemis Cotula*, L.
Common.
337. *Achillea millefolium*, L. YARROW.
Common.
338. *Chrysanthemum Leucanthemum*, L. DAISY.
Lower Lackawanna Valley.
339. *Tanacetum vulgare*, L. TANSY.
Common.

340. *Snecio* (Sp.?)
Near Kingston, (*Miss Bannister*).
341. *Erechtithites hieracifolia*, Raf. FIRE-WEED.
Common, (*R. N. D.*) Especially in clearings on the mountains.
342. *Arctium Lappa*, L. (*Lappa officinalis*, All.) BURDOCK.
Common.
343. *Cnicus* (*Cirsium*, of DC.) *arvensis*, Hoffm. CANADA THISTLE.
Not observed in Wyoming Valley. Occasional above and below Scranton.
344. *C. lanceolatus*, Hoffm. COMMON THISTLE.
Common.
345. *C. pumilus*, Torr. PASTURE THISTLE.
Tobyhanna Mills and Pocono Station, (*Prof. Porter*).
346. *C. altissimus*, Willd. var. *discolor*, Gray. (*Cirsium discolor*, Spring.)
Frequent in the lower Lackawanna Valley.
347. *Hieracium Canadense*, Michx. CANADA HAWKWEED.
Woods, occasional.
348. *H. paniculatum*, L.
Frequent.
349. *H. venosum*, L. RATTLESNAKE HAWKWEED.
Frequent.
350. *H. scabrum*, Michx. ROUGHIER HAWKWEED.
In woods; the slender form approaching *H. Marianum* (see Gray's *Synoptical Flora of N. Amer.*) occurs along the Mountain Inn road and elsewhere.
351. *Prenanthes alba*, L. (*Nabalus albus*, Hook.)
Mountain Inn road. Bald Mountain woods.
352. *P. serpentaria*, Pursh. (*N. Fraseri*, DC.)
Mountain woods, frequent.

353. *P. altissima*, L. (*N. altissimus*, Hook.)
Tobyhanna Mills, (*Prof. Porter*).
354. *Taraxacum officinale*, Web. (*T. Dens-leonis*, Desf.) DAN-
DELION.
Common.
355. *Lactuca Canadensis*, L. WILD LETTUCE.
Ledge near Keyser Valley, and elsewhere.
356. *L. leucophaea*, Gray. (*Mulgedium leucophœum*, DC.)
Abundant in the lower Lackawanna Valley.
357. *Sonchus oleraceus*, L.
Ledge near Keyser Valley. Scranton streets.

LOBELIACEÆ.

358. *L. cardinalis*, L. CARDINAL FLOWER.
Roaring Brook, (*Mrs. Buell*). In herb. R. N. D. from
Wyoming Valley (?)
359. *L. syphilitica*, L. GREAT BLUE LOBELIA.
Near Kingston, (*Miss Bannister*). On the red shales along
the Mountain Inn road.
360. *L. inflata*, L. INDIAN TOBACCO.
Fields, etc.; common.
361. *L. spicata*, Lam.
Common, (*R. N. D. in herb.*)

CAMPANULACEÆ.

362. *Specularia perfoliata*, A. DC.
"Common in fields," (*R. N. D. in herb.*)
363. *Campanula rotundifolia*, L. HAREBELL.
Campbell's Ledge and elsewhere. In herb. R. N. D.

364. *C. aparinoides*, Pursh. MARSH BELL-FLOWER.
Marsh above Gouldsboro.

ERICACEÆ.

365. *Gaylussacia resinosa*, Torr. and Gray. BLACK HUCKLEBERRY.
Mountain and other dry woods.
366. *G. frondosa*, Torr. and Gray. DANGLEBERRY.
Pocono Station on D., L. & W. R. R., and Moosic Lake,
(*Prof. Porter*).
367. *Vaccinium stamineum*, L. DEER-BERRY.
Mountain woods, frequent.
368. *V. Pennsylvanicum*, L. DWARF BLUEBERRY.
Open, rocky soil or in mountain woods. A variable species, a form—possibly a good *variety*—with glaucous serrulate leaves and large, blackish berries, occurs with the type on Bald Mountain summit.
369. *V. Canadense*, Kalm. CANADA BLUEBERRY.
Lehigh Pond, (*in herb. W. R. D.*) Near its southern limit.
370. *V. vacillans*, Soland. LOW BLUEBERRY.
Common in dry woods.
371. *V. corymbosum*, L. SWAMP BLUEBERRY.
In the round marsh above Taylorville. Lower Lackawanna Valley, near the pond. In mountain swamps.
372. *V. Oxycoccens*, L. SMALL CRANBERRY.
Near Tobyhanna, 1881, (*Prof. Porter*). Near its southern limit.
373. *V. macrocarpon*, Ait. CRANBERRY.
About Lehigh Pond, (*in herb. W. R. D.*) Centre County is its southern limit, (*Prof. Porter*).
374. *Chiogenes hispidula*, Torr. and Gray. CREEPING SNOW-BERRY.
Near Tobyhanna Mills, 1881, (*Prof. Porter*). Near its southern limit.

375. *Epigaea repens*, L. TRAILING ARBUTUS. MAYFLOWER.
 Nay-Aug, etc., (*Mrs. Beeber*). Near Scranton, (*Mrs. Buell*).
 Common, (*R. N. D.*) River Mountains, etc.
376. *Gaultheria procumbens*, L. WINTERGREEN. TEABERRY.
 Common.
377. *Andromeda polifolia*, L.
 About Lehigh Pond, (*in herb. W. R. D.*) Not south of
 northeastern Pennsylvania, (*Prof. Porter*).
378. *A. ligustrina*, Muhl.
 Moosie Mountain. Bald Mountain woods. South of
 Wilkes-Barre.
379. *Cassandra calyculata*, Don. LEATHERLEAF.
 The round marsh north of Taylorville, and near the head
 of Little Roaring Brook, (*in herb. W. R. D.*) About Lehigh
 Pond. Marsh above Gouldsboro.
380. *Kalmia latifolia*, L. MOUNTAIN LAUREL.
 Frequent.
381. *K. angustifolia*, L. SHEEP LAUREL.
 Frequent. One of the most abundant and striking plants
 of the Lackawanna Valley.
382. *K. glauca*, Ait. PALE LAUREL.
 Marsh about Lehigh Pond, (*in herb. W. R. D.*) Near its
 southern limit.
383. *Rhododendron nudiflorum*, Torr. (*Azalea nudiflorum*, L.
 Man. p. 299.) PINK AZALEA.
 Common.
384. *R. viscosum*, Torr. WHITE AZALEA.
 Pocono Station, (*Prof. Porter*).
385. (?) *R. calendulaceum*, Torr.
 Forms on Bald Mountain summit, in fruit, apparently
 belong here, but they may be forms of *R. nudiflorum*.

386. *R. maximum*, L. BIG LAUREL. LAUREL.

Along the Lackawanna River below Taylorville. Along ravines descending from the mountains, and abundant in the evergreen forest tracts on the mountains.

387. *R. Rhodora*, Don. (*Rhodora Canadensis*, L., Gray's Man. p. 300.)

Slope of Moosic Mountains above Dunmore, (*in herb. W. R. D.*) Abundant on the Pocono, (*Prof. Porter*). Near its southern limit.

388. *Ledum latifolium*, Ait. LABRADOR TEA.

About Lehigh Pond. In the marsh above Gouldsboro by the railroad. Near its southern limit. Before reported from Pennsylvania only from the Tunkhanna, by *Prof. Porter*.

389. *Chimaphila umbellata*, Nutt. PRINCE'S PINE.

From the Lackawanna Valley, (*R. N. D. in herb.*) Near Scranton, (*Mrs. Buell*).

[*Moneses uniflora*, Gray, was found in northern Pennsylvania by the elder Canby, the specimen being at present in *Prof. Porter's* herbarium, but the locality remains unknown.]

390. *Pyrola rotundifolia*, L. FALSE WINTERGREEN.

Mountain Inn road and elsewhere.

391. *P. elliptica*, Nutt.

Common, (*R. N. D. in herb.*)

392. *Monotropa uniflora*, L. INDIAN PIPE.

Lynn, (*R. N. D. in herb.*) Near Scranton, (*Mrs. Buell*).

PRIMULACEÆ.

393. *Trientalis Americana*, Pursh. STAR-FLOWER.

Head of Little Roaring Brook. Lackawanna Valley, (*Mrs. Buell*). Near Green Ridge, (*Mrs. Beeber*).

394. *Steironema ciliatum*, Raf. (*Lysimachia ciliata*, L.)

Near the mouth of the Lackawanna River.

395. *Lysimachia quadrifolia*, L.

Common in thickets and mountain woods.

396. *L. stricta*, Ait.

"Very common on margins of standing water," (*R. N. D.*)

397. *L. thyrsiflora*, L.

Swamp near Wyoming. Northeastern Pennsylvania and north, (*Prof. Porter*).

OLEACEÆ.

398. *Fraxinus Americana*, L. WHITE ASH.

Frequent in the lower Lackawanna Valley. Keyser Valley, etc. "Occasional," (*R. N. D.*)

399. *F. sambucifolia*, Lam. BLACK ASH.

By the river below Scranton. "Occasional," (*R. N. D.*)

APOCYNACEÆ.

400. *Apocynum androsæmifolium*, L. DOGBANE.

Common, (*R. N. D. in herb.*)

401. *A. cannabinum*, L. INDIAN HEMP.

Lower Lackawanna Valley. Shores of the Susquehanna.

ASCLEPIADACEÆ.

402. *Asclepias incarnata*, L. SWAMP MILKWEED.

"Common," (*R. N. D. in herb.*) Peckville, etc.

403. *A. Cornuti*, Decaisne. COMMON MILKWEED.

Common.

404. *A. quadrifolia*, Michx.

Below Campbell's Ledge, (*R. N. D. in herb.*)

GENTIANACEÆ.

405. *Gentiana crinita*, Frœl. FRINGED GENTIAN.
Red shales of the Mountain Inn road, (*in herb. W. R. D.*)
In Scott, on the mountains five miles from Scranton, (*Mrs. Buell and Mrs. Beeber*).
406. *G. quinqueflora*, Lam.
"Rare in fields back of Plainsville," (*R. N. D. in herb.*)
407. *G. Saponaria*, L.
Red shales of the Mountain Inn road, (*in herb. W. R. D.*)
408. *G. Andrewsii*, Griseb.
Scott Township, about five miles from Scranton, (*Mrs. Buell*). Near Kingston, (*Miss Bannister*).
409. *G. linearis*, Frœl. (*G. Saponaria*, L. *var. linearis*, Gray.)
Pocono Station and Tobyhanna, 1881, (*Prof. Porter*).
410. *Bartonia tenella*, Muhl.
Moosic Lake, (*Prof. Porter*).
411. *Menyanthes trifoliata*, L. BUCKBEAN.
About Lehigh Pond, (*in herb. W. R. D.*)

POLEMONIACEÆ.

412. *Phlox subulata*, L. MOSS-PINK.
Mountain sides, (*R. N. D. in herb.*) Near Kingston, (*Miss Bannister*). Campbell's Ledge.

HYDROPHYLLACEÆ.

413. *Hydrophyllum Virginicum*, L. WATER-LEAF.
Elk Mountain, north knob.

BORRAGINACEÆ.

414. *Cynoglossum officinale*, L. HOUNDSTONGUE.
Near Scranton, (*Mrs. Buell*). South of Scranton.

415. *Echinosperrnum Virginicum*, Lehm. (*Cynoglossum Morisoni*, DC.)
Lower Lackawanna Valley.
416. *E. Lappula*, Lehm. STICKSEED.
Ledges near Keyser Valley.
417. *Myosotis laxa*, Lehm. (*M. palustris*, With., var. *laxa*, Gray.) The FORGET-ME-NOT (of America).
Near Scranton, (*Mrs. Buell*).

CONVOLVULACEÆ.

418. *Convolvulus sepium*, L. (*Calystegia sepium*, R. Br.)
Lower Lackawanna Valley.
419. *Cuscuta Gronovii*, Willd. DODDER.
Near Ladlin, on D. & H. R. R., (*R. N. D. in herb.*)

SOLANACEÆ.

420. *Solanum Dulcamara*, L. NIGHTSHADE BITTER-SWEET.
Common, (*R. N. D.*)
421. *Lycium vulgare*, Dunal. MATRIMONY-VINE.
Near Kingston, (*Miss Bannister*).
422. *Datura stramonium*, L. STRAMONIUM.
Port Griffith and common, (*in herb. R. N. D.*) North of Wilkes-Barre.

SCROPHULARIACEÆ.

423. *Verbascum Thapsus*, L. MULLEIN.
Common.
424. *Linaria vulgaris*, Mill. TOAD-FLAX.
Common.
425. *Scrophularia nodosa*, L. FIGWORT.
Frequent in the lower Lackawanna Valley, and Keyser Valley. Above Carbondale.

426. *Chelone glabra*, L. TURTLE-HEAD.
"Scarce," (*R. N. D. in herb.*) Frequent in lower Lackawanna Valley. Near Kingston, (*Miss Bannister*).
427. *Pentstemon pubescens*, Soland. BEARD-TONGUE.
Foot of Campbell's Ledge, (*R. N. D. in herb.*)
428. *Mimulus ringens*, L. MONKEY-FLOWER.
Lower Lackawanna Valley.
429. *Ilysanthes gratioloides*, Benth. FALSE PIMPERNEL.
Tobyhanna Mills, 1881, (*Prof. Porter*).
430. *Veronica Americana*, Schwein. BROOK-LIME.
Near the pond in the lower Lackawanna Valley.
431. *V. officinalis*, L. COMMON SPEEDWELL.
Frequent near Wilkes-Barre. Near Keyser Valley.
432. *V. serpyllifolia*, L. THYME-LEAVED SPEEDWELL.
Common.
433. *Gerardia pedicularia*, L.
Bank west of the lower Lackawanna Valley.
434. *G. flava*, L. DOWNY FALSE FOXGLOVE.
Woods of Campbell's Ledge. In herb. *R. N. D.*
435. *G. quercifolia*, Pursh. SMOOTH FALSE FOXGLOVE.
On Campbell's Ledge.
436. *G. tenuifolia*, Vahl. SLENDER GERARDIA.
Campbell's Ledge. Red shales of the River Mountains.
437. *Pedicularis Canadensis*, L. LOUSEWORT.
Near Scranton, (*Mrs. Buell*). In herb. *W. R. D.*
438. *Melampyrum Americanum*, Michx. COW-WHEAT.
Campbell's Ledge. Mountain Inn Road. On the River Mountains.

OROBANCHACEÆ.

439. *Epiphegus Virginiana*, Bart. BEECH-DROPS.
In herb. *R. N. D.*

LENTIBULACEÆ.

440. *Utricularia vulgaris*, L. COMMON BLADDERWORT.
Pond in the lower Lackawanna Valley.

ACANTHACEÆ.

441. *Dianthera Americana*, L. WATER-WILLOW.
Shores of the Susquehanna near Mocanaqua. Elsewhere
in Pennsylvania only on the lower Susquehanna and Juni-
ata, (*Prof. Porter*).

VERBENACEÆ.

442. *Verbena urticæfolia*, L. WHITE VERVAIN.
Common.
443. *V. hastata*, L. BLUE VERVAIN.
Common.

LABIATÆ.

444. *Trichostema dichotomum*, L. BLUE-CURLS.
Top of Campbell's Ledge, (*in herb. W. R. D.*)
445. *Teucrium Canadense*, L. GERMANDER.
In herb. R. N. D., probably from near the Susquehanna.
446. *Collinsonia Canadensis*, L. HORSE BALM.
Lower Lackawanna Valley, etc.
447. *Mentha viridis*, L. SPEARMINT.
Common, (*R. N. D. in herb.*)
448. *M. piperita*, L. PEPPERMINT.
Common.
449. *M. Canadensis*, L. WILD MINT.
Along the Susquehanna.
450. *Lycopus Virginicus*, L. BUGLE-WEED.
In herb R. N. D.

451. *L. sinuatus*, Ell. (*L. Europæus*, L., var. *sinuatus*, Man. p. 345.)
Lower Lackawanna Valley.
452. *Cunila Mariana*, L. DITTANY.
Top of Campbell's Ledge, (*in herb. W. R. D.*) Red shales of the River Mountains.
Dr. Gray, in the *Synoptical Flora of North America*, says it occurs "from southern New York and Ohio to Georgia. This station is not far from its northern limit, although I have collected it near New York City.
453. *Pycnanthemum incanum*, Michx. MOUNTAIN MINT.
Frequent on banks near the lower Lackawanna Valley.
454. *Calamintha Clinopodium*, L. BASIL.
Common.
455. *Melissa officinalis*, L. COMMON BALM.
Near Scranton, (*Mrs. Buell*).
456. *Hedeoma pulegeoides*, Pers. PENNYROYAL.
Common.
457. *Monarda didyma*, L. SCARLET BALM.
Frequent in the lower Lackawanna Valley.
458. *M. fistulosa*, L. WILD BERGAMOT.
Bank west of the pond in the lower Lackawanna Valley.
459. *Lophanthus serophulariæfolius*, Benth. GIANT HYSSOP.
Near old track of the D., L. & W. in the lower Lackawanna Valley.
460. *Nepeta cataria*, L. CATNIP.
Common.
461. *Scutellaria lateriflora*, L. SKULL-CAP.
Tobyhanna, 1881, (*Prof. Porter*).
462. *Brunella vulgaris*, L. BRUNELLA.
Common.

463. *Physostegia Virginiana*, Benth. FALSE DRAGON-HEAD.

Gravelly shores of the Susquehanna southeast of Mocaqua, (*in herb. W. R. D.*) On its northeastern limit. Prof. Porter reports it from Pennsylvania only from the Schuylkill below Norristown, and from southeastern Pennsylvania (its eastern limit), and from Presque Isle on Lake Erie.

464. *Leonurus cardiaca*, L. MOTHERWORT.

Lower Lackawanna Valley.

465. *Stachys aspera*, Michx. (*S. palustris*, L., var. *aspera*, Gray.)

Near Kingston, (*Miss Bannister*).

PLANTAGINACEÆ.

466. *Plantago major*, L. PLANTAIN.

Near Wilkes-Barre.

467. *P. Rugelii*, Decaisne. (*P. Kamtschatica*, of Man. p. 311, in part.)

Lower Lackawanna Valley. "Common," (*R. N. D. in herb.*) The distinction between these two species is clearly set forth in the *Botanical Gazette*, iii., p. 41, 1878. See also *Cayuga Flora*, p. 74.

468. *P. lanceolata*, L. RIBWORT PLANTAIN.

Common.

APETALÆ.

ILLICEBRACEÆ.

469. *Anychia dichotoma*, Michx.
River Mountains (?)
470. *Scleranthus annuus*, L.
Frequent in barren fields near Wilkes-Barre.

AMARANTACEÆ.

471. *Amarantus retroflexus*, L. RED-ROOT PIGWEED.
Abundant below Scranton.
472. *A. albus*, L.
Common. A prostrate *Amarantus* with large seeds, short bracts, and resembling *A. blitoides*, Watson, (see *Proc. of Amer. Acad.*, xii., p. 273, and *Cayuga Flora*, p. 75) but having the utricle of *A. albus*, was found on the L. & B. R. R. near the station north of Kingston, (*in herb. W. R. D.*)

CHENOPODIACEÆ.

473. *Chenopodium album*, L. PIGWEED.
Common.
474. *C. hybridum*, L. MAPLE-LEAVED GOOSEFOOT.
Ledges above Taylorville.
475. *C. Botrys*, L. JERUSALEM OAK.
Wilkes-Barre.
476. *C. ambrosioides*, L. MEXICAN TEA.
Abundant in streets of Wilkes-Barre.
477. *Atriplex patula*, L. var. *hastata*, Gray.
Streets of Wilkes-Barre (?)

PHYTOLACCACEÆ.

478. *Phytolacca decandra*, L. POKEBERRY.
Frequent.

POLYGONACEÆ.

479. *Rumex obtusifolius*, L. BITTER DOCK.
Common, (*R. N. D. in herb.*)
480. *R. crispus*, L. YELLOW DOCK.
Common.
481. *R. acetosella*, L. SHEEP-SORREL.
Common.
482. *Polygonum Carey*i, Olney.
Pocono Station, D., L. & W. R. R., (*Prof. Porter*). Near
the pond in the lower Lackawanna Valley, a doubtful
specimen.
483. *P. Pennsylvanicum*, L.
Near Kingston, etc.
484. *P. incarnatum*, Ell.
Probably within limits, (*R. N. D. in herb.*)
485. *P. Persicaria*, L.
Near Scranton, (*Mrs. Buell*).
486. *H. Hydropiper*, L. SMARTWEED.
Common.
487. *P. acre*, H. B. K.
Frequent in swamps.
488. *P. hydropiperoides*, Michx. WATER-PEPPER.
Shore of Susquehanna below Mocanaqua (*in herb. W. R. D.*)
489. *P. amphibium*, L.
Shore of Susquehanna southeast of Mocanaqua.
490. *P. tenue*, Michx.
Top of Campbell's Ledge, (*in herb. W. R. D.*)

491. *P. aviculare*, L. KNOT-GRASS.
Common, (*R. N. D. in herb.*)
492. *P. erectum*, L. (*P. aviculare*, L., var. *erectum*, Man.
p. 417.)
Common, (*R. N. D. in herb.*)
493. *P. arifolium*, L. TEAR-THUMB.
Lower Lackawanna Valley.
494. *P. sagittatum*, L.
Tobyhanna, 1881, (*Prof. Porter*).
495. *P. convolvulus*, L. BLACK BINDWEED.
Frequent.
496. *P. dumetorum*, L., var. *scandens*, Gray. CLIMBING
BUCKWHEAT.
Lower Lackawanna Valley. Near Mocanaqua (*in herb.*
W. R. D.), and elsewhere in low grounds.
497. *P. cilinode*, Michx.
Near Dunnings and near Tobyhanna, on D., L. & W. R.
R. Northeastern Pennsylvania, (*Prof. Porter*).
498. *Fagopyrum esculentum*, Moench. BUCKWHEAT.
Escaped. (*R. N. D. in herb.*)

ARISTOLOCHIACEÆ.

499. *Asarum Canadense*, L. WILD GINGER.
In herb. R. N. D., probably within limits.

LAURACEÆ.

500. *Sassafras officinale*, Nees. SASSAFRAS.
"Common," (*R. N. D. in herb.*) Woods in lower Lackawanna Valley and on Bald Mountain. Scarce east of Dunmore.
501. *Lindera Benzoin*, Meisner. SPICE-BUSH.
By road south of Lackawanna Station ; probably frequent.

THYMELACEÆ.

502. *Dirca palustris*, L. LEATHERWOOD. MOOSEWOOD.
Elk Mountain.

LORANTHIACEÆ.

503. *Arcanthobium pusillum*, Pk. THE LESSER MISTLETOE.
Parasite on the limbs of the black spruce, in the swamp
at the head of Little Roaring Brook; also on the dwarf
forms about Lehigh Pond; discovered June 30 and July 6,
1886. (*In herb. W. R. D.*) Hitherto not known outside of
New York.

EUPHORBIACEÆ.

504. *Euphorbia maculata*, L. CREEPING SPURGE.
Wilkes-Barre, etc.
505. *E. hypericifolia*, L.
Fields near Wyoming.
506. *Acalypha Virginica*, L.
Ledges near Keyser Valley.

CERATOPHYLLACEÆ.

507. *Ceratophyllum demersum*, L. HORNWORT.
Pond in lower Lackawanna Valley.

CALLITRICHACEÆ.

508. *Callitriche heterophylla*, Pursh. WATER STARWORT.
Tobyhanna Mills, (*Prof. Porter*).

URTICACEÆ.

509. *Ulmus fulva*, Michx. SLIPPERY ELM.
Lower Lackawanna Valley.

510. *U. Americana*, L. WHITE ELM.
Common.
511. *Celtis occidentalis*, L. HACKBERRY.
South of Everhart's Island, and south of Lackawanna Station near Lackawanna River.
512. *Morus rubra*, L. RED MULBERRY.
Near road south of Lackawanna Station.
513. *Urtica gracilis*, Ait. SLENDER NETTLE.
Common, (*R. N. D. in herb.*)
514. *Laportea Canadensis*, Gaud. WOOD NETTLE.
Common, (*R. N. D. in herb.*)
515. *Pilea pumila*, Gray. RICHWEED.
Common, (*R. N. D. in herb.*)
516. *Parietaria Pennsylvanica*, Muhl. PELLITORY.
Ledges above Taylorville.
517. *Humulus Lupulus*, L. HOP.
"Escaped," (*in herb. R. N. D.*)

PLATANACEÆ.

518. *Platanus occidentalis*, L. BUTTONWOOD. SYCAMORE.
Along the Lackawanna and Susquehanna Rivers.

JUGLANDACEÆ.

519. *Juglans cinerea*, L. BUTTERNUT.
Lower Lackawanna Valley. Along the Susquehanna.
520. *J. nigra*, L. BLACK WALNUT.
"Occasional," (*R. N. D.*) Scarce in Lackawanna Valley from Scranton to Pittston. Along the Susquehanna. (Also above the Wyoming Valley to Ulster.)
521. *Carya alba*, Nutt. SHAGBARK HICKORY.
Woods, frequent.

522. *C. microcarpa*, Nutt.

Lower Lackawanna Valley (?)

523. *C. tomentosa*, Nutt. MOCKERNUT.

Campbell's Ledge woods, rather frequent. Southeast of Wilkes-Barre, (*in herb. W. R. D.*) (*In herb. R. N. D.* without label.)

524. *C. porcina*, Nutt. PIGNUT HICKORY.

Campbell's Ledge woods, etc.

525. *C. amara*, Nutt. BITTERNUT HICKORY.

Near the Lackawanna River above Pittston, also near its mouth.

MYRICACEÆ.

526. *Myrica Comptonia*, C. DC. (*Comptonia asplenifolia*, Ait.)

SWEET FERN.

Common in all dry woods.

527. *M. Gale*, L. SWEET GALE.

Pond south of Waymart. (Not seen within limits.)

BETULACEÆ.

528. *Betula lenta*, L. BLACK BIRCH. SWEET BIRCH.

Frequent.

529. *B. lutea*, Michx. YELLOW BIRCH.

Swamp at head of Little Roaring Brook. Near Gouldsboro.

530. *B. alba*, var. *populifolia*, Spach. WHITE BIRCH.

Dry soil, frequent.

531. *B. papyrifera*, Marshall. PAPER OR CANOE BIRCH.

By the mountain road near the summit of Bald Mountain, (*in herb. W. R. D.*)

532. *B. nigra*, L. RIVER BIRCH.

From Peckville to Wilkes-Barre and below. Abundant near Providence, and on Everhart's Island above Pittston.

533. *Alnus incana*, Willd. SPECKLED ALDER.
Lower Lackawanna Valley. On Moosic Mountains.
534. *A. serrulata*, Willd. SMOOTH ALDER.
Lower Lackawanna Valley. Moosic Mountain slopes.
Lower slopes of Bald Mountain. Mountain Inn road. (*In herb. W. R. D.*)

CUPULIFERÆ.

535. *Corylus Americana*, Walt. HAZEL-NUT.
Lackawanna Valley and Keyser Valley.
536. *C. rostrata*, Ait. BEAKED HAZEL.
Common, (*R. N. D.*) Ledges above Taylorville.
537. *Ostrya Virginica*, Willd. IRON-WOOD. DEER-WOOD.
Frequent.
538. *Carpinus Caroliniana*, Walt. BLUE BEECH.
Along all the streams, (*R. N. D. in herb.*)
539. *Quercus alba*, L. WHITE OAK.
Common.
540. *Q. bicolor*, Willd. SWAMP WHITE-OAK.
Toward the head of Little Roaring Brook.
541. *Q. Prinus*, L. ROCK OAK. CHESTNUT OAK.
Frequent on the Moosic and Bald Mountains, etc.
542. *Q. ilicifolia*, Wang. SCRUB OAK.
Abundant on the mountains. Also on the sandstone ledge
above Taylorville, (*in herb. W. R. D.*)
543. *Q. coccinea*, Wang. SCARLET OAK.
Frequent along Lackawanna River. Bald Mountain and
Moosic Mountain slopes.
544. *Q. tinctoria*, Bartram. YELLOW OAK.
Frequent.
545. *Q. rubra*, L. RED OAK.
Common.

546. *Castanea vulgaris*, Lam. var. *Americana*, A. DC. (*C. vesca*, L., var. *Americana*, Michx., Man. p. 455.) CHESTNUT.
Abundant in dry or mountain woods.
547. *Fagus ferruginea*, Ait. BEECH.
Along the Lackawanna River below Scranton, and occasional elsewhere.

SALICACEÆ.

548. *Salix nigra*, Marshall. BLACK WILLOW.
Abundant along the Lackawanna and Susquehanna Rivers. Low grounds on Moosic Mountains, (*in herb. W. R. D.*)
549. *S. discolor*, Muhl. PUSSY WILLOW.
Mountains east of Wilkes-Barre, etc.
550. *S. rostrata*, Richards. (*S. livida*, var. *occidentalis*, Man. p. 464.)
Tobyhanna Mills and Pocono Station, (*Prof. Porter*).
Mountain Inn road.
551. *S. sericea*, Marshall. SILKY WILLOW.
Lackawanna Valley above and below Scranton.
552. *S. humilis*, Marshall. LOW WILLOW.
Near Tobyhanna.
553. *S. cordata*, Muhl. HEART-LEAVED WILLOW.
Lower Lackawanna Valley.
554. *Populus tremuloides*, Michx. QUAKING ASPEN.
Common.
555. *P. grandidentata*, Michx.
Lower Lackawanna Valley. Keyser Valley.
556. *P. dilatata*, Ait. LOMBARDY POPLAR.
Escaped near Archbald, (*R. N. D. in herb.*)

MONOCOTYLEDONS.

ORCHIDACEÆ.

557. *Corallorhiza multiflora*, Nutt. CORAL-ROOT.
Woods on Bald Mountain slope. Lynn, (*herb. R. N. D.*)
558. *Spiranthes cernua*, Richard. LADIES' TRESSES.
Moosic Lake, 1884, (*Prof. Porter*).
559. *S. gracilis*, Bigel.
Woods near Scranton, (*Mrs. Beeber*).
560. *Goodyera pubescens*, R. Br. RATTLESNAKE PLANTAIN.
Woods near Scranton, (*Mrs. Beeber*).
561. *Calopogon pulchellus*, R. Br. CALOPOGON.
Road to Moosic Lake and road to Little Roaring Brook
swamp on Moosic Mountain.
562. *Pogonia ophioglossoides*, Nutt. POGONIA.
Shores of Moosic Lake.
- 563.* *Habenaria tridentata*, Hook.
Moosic Lake, 1884, (*Prof. Porter*).
565. *H. Hookeri*, Torr.
Woods near Lehigh Pond.
566. *H. ciliaris*, R. Br. YELLOW FRINGED ORCHIS.
Moosic Lake, 1884, (*Prof. Porter*).
567. *H. blephariglottis*, Hook. WHITE FRINGED ORCHIS.
Pocono Station, (*Prof. Porter*).

*562 (?) *H. hyperborea*, R. Br., is recorded from northeastern Pennsylvania by Prof. Porter, and ought to occur near Lehigh Pond. In my notes of July 6, 1886, is recorded "*H. dilatata*, near Lehigh Pond." As Prof. Porter writes that the latter has never been found in the State, it may have been a clerical error for *H. hyperborea*.

568. *H. psycodes*, Gray.
Lackawanna Valley, (*herb. R. N. D.*) Near Crystal Lake.
569. *H. flmbriata*, R. Br. PURPLE FRINGED ORCHIS.
Near Lehigh Pond.
570. *Cypripedium parviflorum*, Salisb. SMALL YELLOW LADY-SLIPPER.
Near Kingston, (*Miss Bannister*).
571. *C. acaule*, Ait. PINK LADY-SLIPPER.
Woods west of Lehigh Pond, (*in herb. W. R. D.*) Near Plainsville, (*in herb. R. N. D.*) Near Scranton, (*Mrs. Buell*).
Near Kingston, (*Miss Bannister*).

IRIDACEÆ.

572. *Iris versicolor*, L. BLUE FLAG.
Common.
573. *I. Virginica*, L.
Near Kingston, (*Miss Bannister*).
574. *Sisyrinchium anceps*, Cav. (*S. Bermudiana*, in part.)
BLUE-EYED GRASS.
Common, (*R. N. D. in herb.*)

AMARYLLIDACEÆ.

575. *Hypoxys erecta*, L. STAR-GRASS.
Not very common, (*R. N. D. in herb.*) Toward the head of Little Roaring Brook, by the road.

HEMODORACEÆ.

576. *Aletris farinosa*, L.
On the "Camel's Back," near Pittston, (*Prof. Porter*).

DIOSCORACEÆ.

577. *Dioscorea villosa*, L. WILD YAM.
Black Creek, near the mine of the West End Breaker.
Lower Lackawanna Valley, (*in herb. W. R. D.*)

SMILACEÆ.

578. *Smilax rotundifolia*, L. GREEN BRIER.

East of Dunmore, and near the sandstone ledge above Taylorville, (*in herb. W. R. D.*) Frequent in the lower Lackawanna Valley.

579. *S. rotundifolia*, L., var. *quadrangularis*, Gr., is not infrequent on the slopes of the Moosic Mountains. From the inadequate description of this *variety*, it is liable to be mistaken for *S. tannoides*. Its leaves are oblong usually, spinulose toothed on the margin, and often slightly fiddle-shaped.

580. *S. hispida*, Muhl.

Lower Lackawanna Valley.

581. *S. herbacea*, L. CARRION-FLOWER.

East of Dunmore. Near Mountain Inn road.

LILIACEÆ.

582. *Polygonatum biflorum*, Ell. SOLOMON'S SEAL.

Campbell's Ledge. Mountain Inn road.

583. *Smilacina racemosa*, Desf. FALSE SOLOMON'S SEAL.

Near Kingston, (*Miss Bannister*). East of Dunmore.

584. *S. stellata*, Desf.

Bog between Gouldsboro and Tobyhanna.

585. *S. trifolia*, Desf. THREE-LEAVED SOLOMON'S SEAL.

Swamp at head of Little Roaring Brook. Lehigh Pond.

586. *Maianthemum Canadense*, Desf. (*Smilacina bifolia*, var. *Canadensis*, Gr., Man. p. 530.)

"Everywhere in the shade," (*R. N. D. in herb.*) Near Kingston, (*Miss Bannister*).

587. *Asparagus officinale*, L. ASPARAGUS.

Near river at Mocanaqua.

588. *Lilium Philadelphicum*, L. WOOD LILY.

Woods toward Moosic Lake. Mountain Inn road. Near Kingston, (*Miss Bannister*).

589. *Erythronium Americanum*, Smith. ADDER-TONGUE.
Plainsville, (*R. N. D. in herb.*)
590. *Uvularia perfoliata*, L. BELLWORT.
Common, (*R. N. D.*)
591. *U. grandiflora*, Smith, is in herb. *R. N. D.*, probably
from this region.
592. *Oakesia sessilifolia*, Wats. (*Uvularia sessilifolia*, Man.
p. 528.)
Common, (*R. N. D. in herb.*)
593. *Clintonia borealis*, Raf. CLINTONIA.
"Near Archbald pot hole and probably elsewhere," (*R.
N. D. in herb.*) Near Lehigh Pond and in swamp north-
east of Tobyhauna.
594. *Medeola Virginica*, L. INDIAN CUCUMBER-ROOT.
Near Lehigh Pond. In herb. *R. N. D.*
595. *Trillium erectum*, L. BIRTHROOT.
Common, (*R. N. D. in herb.*) Near Lehigh Pond.
596. *T. grandiflorum*, Salisb. WHITE TRILLIUM.
Elk Mountain (?)
597. *T. erythrocarpum*, Michx. PAINTED TRILLIUM.
Scott Township, and abundant near Jones's Lake, Wayne
County, (*Mrs. Buell*). Winton, (*Mrs. Beeber*). Near Little
Roaring Brook Swamp. Near Lehigh Pond.
598. *Amianthium musætoxicum*, Gray. FLY-POISON.
Abundant in woods on Moosic Mountain, west and south
of Moosic Lake.

PONTEDERIACEÆ.

599. *Pontederia cordata*, L. PICKEREL-WEED.
Swamp near Wyoming.

ERIOCAULONACEÆ.

600. *Eriocaulon septangulare*, With.
Pond south of Waymart. (Probably within limits.)

XYRIDACEÆ.

601. *Xyris flexuosa*, Muhl., var. *pusilla*, Gr.
Moosic Lake and Tobyhanna Mills, (*Prof. Porter*).

JUNCACEÆ.

602. *Luzula campestris*, DC. WOOD-RUSH.
Woods near Campbell's Ledge.
603. *Juncus effusus*, L. BULRUSH.
Lower Lackawanna Valley, etc.
604. *J. marginatus*, Rostkov.
Mountain Inn road, on red shales.
605. *J. bufonius*, L.
Tobyhanna, Pocono Station, Moosic Lake, (*Prof. Porter*).
606. *J. pelocarpus*, E. Meyer.
Tobyhanna Mills, (*Prof. Porter*).
607. *J. tenuis*, Willd.
Bald Mountain woods, etc.
608. *J. Canadensis*, J. Gay, var. *subcandatus*, Eng.
Shore of the Susquehanna near Mocanaqua (*herb. W. R. D.*)
609. *J. Canadensis*, J. Gay, var. *coarctatus*, Eng.
Near Gouldsboro, and near the Mountain Inn road, (*in herb. W. R. D.*)

TYPHACEÆ.

610. *Typha latifolia*, L. CAT-TAIL.
Near pond in lower Lackawanna Valley, etc.
611. *Sparganium simplex*, Hudson. BUR-REED.
Near Plainsville, (*in herb. R. N. D.*)

612. *S. simplex*, Huds., var. *fluitans*, Gr.
Tobyhanna Mills, (*Prof. Porter*).

ARACEÆ.

613. *Arisema triphyllum*, Torr. INDIAN TURNIP.
Plainsville, (*R. N. D. in herb.*) Frequent.
614. *Calla palustris*, L. WILD CALLA.
Tobyhanna, 1881, (*Prof. Porter*). Lehigh Pond and the
marsh above Gouldsboro, (*in herb. W. R. D.*)
615. *Orontium aquaticum*, L. GOLDEN CLUB.
Swamp one mile east of Plainsville, (*in herb. R. N. D.*)
Moosie Lake, (*in herb. W. R. D.*)
616. *Symplocarpus fœtidus*, Salisb. SKUNK CABBAGE.
Common, (*R. N. D.*)
617. *Acorus calamus*, L. SWEET FLAG.
Frequent.

LEMNACEÆ.

618. *Lemna minor*, L. DUCKWEED.
Swamp near Wyoming.
619. *Spirodela polyrrhiza*, Schleid. (*Lemna polyrrhiza*, L.)
Swamp near Wyoming.

ALISMACEÆ.

620. *Alisma Plantago*, L., var. *Americannum*, Gr. WATER
PLANTAIN.
Near Wyoming.
621. *Sagittaria variabilis*, Englm. ARROW-HEAD.
Mouth of the Lackawanna River. Near Kingston.

NAIADACEÆ.

622. *Scheuchzeria palustris*, L.
Tobyhanna Mills, (*Prof. Porter*).

623. *Potamogeton natans*, L.
Pond in the lower Lackawanna Valley.
624. *P. Claytonii*, Tuck.
Tobyhanna Mills, (*Prof. Porter*).

CYPERACEÆ.

625. *Cyperus diandrus*, Torr.
Tobyhanna Mills, (*Prof. Porter*).
626. *Dulichium spathaceum*, Richard.
Tobyhanna Mills, 1881, (*Prof. Porter*.)
627. *Eleocharis obtusa*, Schultes.
Near Wilkes-Barre, etc.
628. *E. palustris*, R. Br.
Swamp near Wyoming.
629. *Scirpus subterminalis*, Torr.
Moosic Lake, 1884, (*Prof. Porter*).
630. *S. pungens*, Vahl.
Moosic Lake, 1884, (*Prof. Porter*).
631. *S. debilis*, Pursh.
Shores of the Susquehanna opposite Wilkes-Barre.
632. *S. Eriophorum*, Michx. WOOL-GRASS.
Near pond in lower Lackawanna Valley, etc. The slender mountain form of this species is in herbarium from Moosic Lake and near Lehigh Pond.
633. *Eriophorum vaginatum*, L.
About Lehigh Pond, (*in herb. W. R. D.*) Besides this, only two other stations in the State are known, according to Prof. Porter.
634. *E. Virginicum*, L.
Lehigh Pond, (*in herb. W. R. D.*)
635. *E. polystachyon*, L.
Tobyhanna Mills, (*Prof. Porter*).

636. *Fimbristylis capillaris*, Gray.
In sand near the railroad siding at Campbell's Ledge, (*in herb. W. R. D.*)
637. *Rhynchospora alba*, Vahl.
About Lehigh Pond, (*in herb. W. R. D.*)
638. *R. glomerata*, Vahl.
Mountain Inn road, (*in herb. W. R. D.*)
639. *Cladium mariscoides*, Torr.
About Lehigh Pond.
640. *Carex teretiuscula*, Good.
Lehigh Pond, (*in herb. W. R. D.*)
641. *C. vulpinoidea*, Michx.
Lackawanna Valley.
642. *C. stipata*, Muhl.
Near Gouldsboro, etc.
643. *C. rosea*, Schk., var. *radiata*, Dew.
Woods near Archbald "pot hole," (*in herb. W. R. D.*)
644. *C. trisperma*, Dew.
Marsh at the head of Little Roaring Brook. A form with
setaceous leaves, near Lehigh Pond and the marsh above
Gouldsboro, (*in herb. W. R. D.*)
645. *C. canescens*, L.
Near Lehigh Pond, (*in herb. W. R. D.*)
646. *C. canescens*, L., var. *vitilis*, Carey.
Woods near Lehigh Pond, (*in herb. W. R. D.*)
647. *C. Deweyana*, Schk.
Luzerne County (its southern limit for Pennsylvania),
(*Prof. Porter*).
648. *C. sterilis*, Willd.
Near Moosic Lake. Marsh above Gouldsboro, (*in herb. W. R. D.*)

649. *C. echinata*, Murr., var. *microstachys*, Beek. (*C. stellata*, var. *scirpoides*, Carey, Man. p. 579.)

Marsh above Gouldsboro.

650. *C. scoparia*, Schk.

Near Moosic Lake, etc., (*in herb. W. R. D.*)

651. *C. adusta*, Boott.

By railroad south of Gouldsboro (spikes inclining to be compound and plants robust. They correspond to Boott's fig. 381). Near the upper "pot hole" near Archbald, and on the River Mountains, (the *C. argyrantha* form). (*In herb. W. R. D.*)

652. *C. torta*, Boott.

In herb. R. N. D., from within limits probably.

653. *C. angustata*, Boott., var. *strictior*, Boott.

Head of Little Roaring Brook. Marsh above Gouldsboro. Near Lehigh Pond, (*in herb. W. R. D.*)

654. *C. gyanandra*, Schw.

Head of Little Roaring Brook. Pocono Station and Tobyhanna, (*Prof. Porter*).

655. *C. limosa*, L.

Lehigh Pond, (*in herb. W. R. D.*)

656. *C. Magellanica*, Lam. (*C. irrigua*, Sm., Man. p. 584.)

Swamp above Gouldsboro, where the specimens have much more obtuse perigynia than the ordinary American forms. Bracts are longer than the culm, and the plant robust. Also at Lehigh Pond. (*In herb. W. R. D.*)

657. *C. granularis*, Muhl.

Near Crystal Lake.

658. *C. virescens*, Muhl.

Near Archbald, (*in herb. W. R. D.*) Ledges above Taylorville.

659. *C. retrocurva*, Dew.

Beech woods west of Dundaff.

660. *C. digitalis*, Willd.
Beech woods west of Dundaff.
661. *C. Hitchcockiana*, Dew.
Beech woods west of Dundaff, (*in herb. W. R. D.*) Rare
in Pennsylvania, (*Prof. Porter*).
662. *C. Pennsylvanica*, Lam.
Woods near Wilkes-Barre, etc.
663. *C. varia*, Muhl.
Bald Mountain, (*in herb. W. R. D.*) Ledges above Tay-
lorville.
664. *C. debilis*, Michx.
Head of Little Roaring Brook. Near Archbald. Moosic
Mountains. The perigynia of the latter specimens are larger
than usual, and in texture and nerves suggest *C. glabra*, but
the orifice is hyaline and there is a slight beak, (*in herb.*
W. R. D.)
665. *C. trichocarpa*, Muhl.
Lower Lackawanna Valley.
666. *C. tentaculata*, Muhl.
Above Gouldsboro, etc.
667. *C. tentaculata*, Muhl., *var. gracilis*, Boott.
Swamp near Tobyhanna, (*in herb. W. R. D.*)
668. *C. intumescens*, Rudge.
Tobyhanna Mills, 1881, (*Prof. Porter*).
669. *C. lupulina*, Muhl.
By the railroad above Gouldsboro.
670. *C. folliculata*, L., (*in herb. W. R. D.*)
Head of Little Roaring Brook. Moosic Lake.
671. *C. utriculata*, Boott.
Moosic Lake, 1884, and Tobyhanna, (*Prof. Porter*).

The following additional species of rare *Cariccs* have been reported by Prof. Porter from northern or northeastern Penn-
sylvania, but outside our limits: *C. pauciflora*, Lightfoot,

from Wayne County; *C. chordorhiza*, Ehr., and *C. arcta*, Boott., from Tioga County; *C. pallescens*, L., *C. arctata*, Boott., *C. æstivalis*, M. A. C., *C. subulata*, Michx., from northeastern Pennsylvania; *C. longirostris*, Torr., and *C. oligosperma*, Michx., from Monroe County. These may be confidently sought for in our territory, as well as a considerable number of commoner forms which have been overlooked because of incomplete exploration or hasty observation.

GRAMINEÆ.

672. *Panicum glabrum*, Gaudin.

Near Wilkes-Barre.

673. *P. sanguinale*, L. CRAB-GRASS.

Common.

674. *P. proliferum*, Lam.

Southeast of Wilkes-Barre, on the flat near the Empire Shaft, in the influence of the brackish overflow from the mine, (*in herb. W. R. D.*)

675. *P. agrostoides*, Spreng.

Shores of the Susquehanna southeast of Mocanaqua.

676. *P. capillare*, L. OLD-WITCH GRASS.

Near Wyoming, etc.

677. *P. virgatum*, L.

The river-terrace near the railroad siding at Campbell's Ledge.

678. *P. latifolium*, Muhl.

Lower Lackawanna Valley.

679. *P. clandestinum*, L.

Lower Lackawanna Valley.

680. *P. xanthophysum*, Gray.

Elk Mountain between the knobs, (*in herb. W. R. D.*) Luzerne County, (*Prof. Porter*)—its southern limit.

681. *P. dichotomum*, L.
Lower Lackawanna Valley. Wyoming Valley, etc.
682. *P. dichotomum*, L., var. *nitidum*, Gray.
Bald Mountain, (*in herb. W. R. D.*)
683. *P. dichotomum*, L., var. *pubescens*, Vasey.
Moosic Lake. Near Providence, (*in herb. W. R. D.*)
684. *P. depauperatum*, Muhl.
Frequent.
685. *P. Crus-galli*, L. BARN-YARD GRASS.
Near Kingston, etc.

[A form,—possibly *P. nervosum*, Muhl.,—was collected on Moosic Mountain and Campbell's Ledge, but more material is needed to decide with certainty.]
686. *Setaria glauca*, Beauv. FOX-TAIL.
Frequent.
687. *S. viridis*, Beauv.
Frequent.
688. *Leersia oryzoides*, Swartz. CUT-GRASS.
Near the mouth of the Lackawanna.
689. *Andropogon scoparius*, Michx.
Frequent in dry soils. A glaucous form occurs on Campbell's Ledge and the River Mountains.
690. *Anthoxanthum odoratum*, L. SWEET-SCENTED GRASS.
Tobyhanna, 1881, (*Prof. Porter.*)
691. *Aristida dichotoma*, Michx.
Near the breaker, southeast of Wilkes-Barre, (*in herb. W. R. D.*)
692. *Oryzopsis asperifolia*, Michx. MOUNTAIN RICE.
Moosic Mountain.
693. *Milium effusum*, L.
Luzerne and Lackawanna Counties, (*Prof. Porter.*)

694. *Muhlenbergia sobolifera*, Trin.
Ledges above Taylorville, (*in herb. W. R. D.*)
695. *M. glomerata*, Trin.
Bald Mountain. Southeast of Wilkes-Barre, (*in herb. W. R. D.*)
696. *M. Mexicana*, Trin.
Frequent.
697. *M. sylvatica*, Torr. and Gray.
Ledges above Taylorville.
698. *Brachyelytrum aristatum*, Beauv.
Moosic Lake, (*Prof. Porter*).
699. *Phleum pratense*, L. TIMOTHY.
Frequent.
700. *Agrostis perennans*, Tuck.
Ledges above Taylorville.
701. *A. scabra*, Willd.
Tobyhanna and Pocono Station, (*Prof. Porter*).
702. *A. vulgaris*, With. RED TOP.
Common.
703. *A. vulgaris*, With., var. *alba*, Vasey. (*A. alba*, L.)
Tobyhanna, (*Prof. Porter*).
704. *Cinna arundinacea*, L.
Lower Lackawanna Valley.
705. *C. pendula*, Trin.
"Tobyhanna and Moosic Lake, not uncommon in Pennsylvania," (*Prof. Porter*).
706. *Deyeuxia* (*Calamagrostis* of Gray's Man., p. 614,) *Canadensis*, Beauv.
Pocono Station, (*Prof. Porter*); probably frequent.
707. *D. Nuttalliana*, Stend.
Moosic Lake and Tobyhanna, (*Prof. Porter*).

708. *D. Porteri*, Vasey. A doubtful specimen of this rare plant, with leaves only, was found near Moosic Lake.
709. *Deschampsia* (*Aira* of Man. p. 641) *flexuosa*, Vasey.
Near Taylorville. Near pond in lower Lackawanna Valley. Bald Mountain summit.
710. *Danthonia compressa*, C. F. Austin.
Moosic Lake, (*Prof. Porter*).
711. *D. spicata*, Beauv.
Bald Mountain, (*in herb. W. R. D.*)
712. *Eleusine Indica*, Gaert.
In Shickshinny village, (*in herb. W. R. D.*)
713. *Eatonia Dudleyi*, Vasey. (See *Cayuga Flora*, p. 126.)
Woods near Archbald "pot hole."
714. *Koeleria cristata*, Pers.
Top of Campbell's Ledge and River Mountains, (*in herb. W. R. D.*) Prof. Porter says of this: "It is credited to Pennsylvania in Gray's Manual, but these are the first specimens I have seen from our State."
715. *Poa compressa*, L.
Bald Mountain. Campbell's Ledge, (*in herb. W. R. D.*)
716. *P. pratensis*, L. KENTUCKY BLUE-GRASS.
Frequent.
717. *Glyceria Canadensis*, Trin. RATTLESNAKE GRASS.
Near the pond in the lower Lackawanna Valley.
718. *G. elongata*, Trin.
Swamp at head of Little Roaring Brook, (*in herb. W. R. D.*)
719. *Eragrostis reptans*, Nees.
Along the Susquehanna.
720. *Elymus striatus*, Willd.
Top of Campbell's Ledge.

GYMNOSPERMÆ.

CONIFERÆ.

721. *Taxus Canadensis*, Willd. (*T. baccata*, L., var. *Canadensis*, Man. p. 474.) GROUND HEMLOCK.

"In deep woods," (*R. N. D.*) Swamp near the Mountain Inn road.

722. *Pinus strobus*, L. WHITE PINE.

Common on the hills.

723. *P. resinosa*, Ait. NORWAY PINE. RED PINE.

Probably within limits, as would be indicated by a remark of Michaux in his *Sylva* (iii., p. 91): "I have not seen it (*Pinus resinosa*) beyond Wilkes-Barre, Pa." Prof. Porter reports it from Tioga County.

724. *P. inops*, Ait. SCRUB PINE.

South of Warrior Run and south of Wanamic. It is not infrequent along the Mountain Inn road.

725. *P. rigida*, Mill. PITCH PINE.

Frequent on dry hills.

726. *Picea nigra*, Link. (*Abies nigra*, Poir.) BLACK SPRUCE.

Swamp at the head of Little Roaring Brook. About Lehigh Pond, near Tobyhanna, and elsewhere on the Pocono plateau.

727. *Tsuga Canadensis*, Carriere. (*Abies Canadensis*, Michx.) HEMLOCK.

Archbald. Campbell's Ledge. Near Little Roaring Brook. Mountain Inn road, etc.

728. *Abies balsamea*, Miller. FIR. BALSAM FIR.

Lehigh Pond and woods near. Near Tobyhanna in swamp.

729. *Larix Americana*, Michx. LARCH. TAMARACK.

About Lehigh Pond.

Juniperus Virginiana, L., RED CEDAR, is not recorded in my notes, but is probably frequent along such declivities as Campbell's Ledge.

THE VASCULAR CRYPTOGRAMIA.

EQUISETACEÆ.

730. *Equisetum arvense*, L.
Common, (*R. N. D. in herb.*)
731. *E. hyemale*, L. SCOURING RUSH.
Occasional.
732. *E. limosum*, L.
Near Pocono Station, (*Prof. Porter*).

FILICES.

733. *Polypodium vulgare*, L. POLYPODY.
Common.
734. *Pellaea atropurpurea*, Link. CLIFF-BRAKE.
Sandstone Ledge above Taylorville, and Campbell's Ledge,
(*in herb. W. R. D.*) Elk Mountain.
735. *Pteris aquilina*, L. BRAKE.
Common, (*in herb. R. N. D.*)
736. *Adiantum pedatum*, L. MAIDEN-HAIR FERN.
Common, (*in herb. R. N. D.*)
737. *Camptoson's rhizophyllus*, Link. WALKING-LEAF.
Ledge above Taylorville. Campbell's Ledge. By railroad
above Mocanaqua, on the conglomerate, where the fronds
are strongly auricled at the base. In herb. W. R. D. In
herb. R. N. D. from Lynn.
738. *Asplenium Trichomanes*, L.
Frequent on rocks.

739. *Asplenium ebeneum*, Ait.

Frequent. Woods above Dunmore, and above Taylorville.
Elk Mountain. Mountain Inn road.

740. *A. montanum*, Willd. MOUNTAIN SPLEENWORT.

On the southern face of the cliffs on Bald Mountain summit. This has been found in Pennsylvania only on the Susquehanna below Harrisburg, on the Delaware at Easton, and at Glen Onoko on the Lehigh, (*Prof. Porter*). It is not known farther north than the Shawangunk Mountains in New York.

741. *A. thelypteroides*, Michx.

In herb. R. N. D., who thinks it came from the valleys.

742. *A. Filix-femina*, Bernh. LADY FERN.

Frequent in ravines, etc.

743. *Phegopteris polypodioides*, Fee. BEECH FERN.

Abundant above Carbondale. White Oak Glen near Archbald, (*R. N. D. in herb.*)

744. *P. hexagonoptera*, Fee.

Elk Mountain.

745. *P. Dryopteris*, Fee.

Archbald near the "pot hole"; also White Oak Glen, (*R. N. D. in herb.*)

746. *Aspidium Novaboracense*, Swz.

Moosie and Bald Mountain woods. Mountain Inn road, etc.

747. *A. spinulosum*, Swz. (type form).

Swamps near the head of Little Roaring Brook.

748. *A. spinulosum*, Swz., *var. intermedium*, Eaton.

Frequent.

749. *A. spinulosum*, Swz., *var. dilatatum*, Gray.

Near Tobyhanna, (*Prof. Porter*).

750. *A. cristatum*, Swz.

Tobyhanna, (*Prof. Porter*).

751. *A. marginale*, Swz.
Frequent.
752. *A. acrostichoides*, Swz. CHRISTMAS FERN.
Mountain woods and ravines.
753. *Onoclea sensibilis*, L. SENSITIVE FERN.
Common in low grounds. The form *obtusilobata* is in Mr. Davis's herbarium as "very rare."
754. *Cystopteris fragilis*, Bernh.
Elk Mountain. Sandstone above Taylorville.
755. *Woodsia ilvensis*, R. Br.
Elk Mountain, on Prospect Rock. Campbell's Ledge, (*in herb. W. R. D.*)
756. *W. obtusa*, Torrey.
Elk Mountain. Campbell's Ledge.
757. *Dicksonia pilosiuscula*, Willd.
Common on newly cleared slopes, etc.
758. *Osmunda regalis*, L. ROYAL FLOWERING FERN.
Toward head of Little Roaring Brook. Near Plainsville church, (*R. N. D. in herb.*)
759. *O. Claytoniana*, L.
Toward the source of Little Roaring Brook, etc.
760. *O. cinnamomea*, L.
Moosie Mountain. Taylorville marsh, etc.
761. *Botrychium ternatum*, Swz., var. *obliquum*, Eaton.
Near Waymart.
762. *B. Virginicum*, Swz. GRAPE FERN.
Frequent in woods.

LYCOPODIACEÆ.

763. *Lycopodium lucidulum*, Michx.
Frequent in damp woods.

764. *L. inundatum*, L.
Moosic Lake, (*Prof. Porter*).
765. *L. dendroideum*, Michx.
Near Archbald "pot hole." Mountain Inn road, (*in herb.*
W. R. D.)
766. *L. clavatum*, L. CLUB-MOSS.
Near Archbald, (*R. N. D. in herb.*) Near Waymart.
767. *L. complanatum*, L.
Moosic Lake and Tobyhanna, (*Prof. Porter*).

[*L. selago*, a subalpine or alpine species, has been found
by Prof. Porter on the Blue Mountains at the Delaware
Water Gap.
768. *Selaginella rupestris*, Spring.
Bald Mountain. Campbell's Ledge. Rocks on Little
Wilkes-Barre Mountain. Elk Mountain.
769. *Isoetes Engelmanni*, Braun., *var. gracilis*, Engel. QUILL-
WORT.
Shores of the Susquehanna near Mocanaqua, (*in herb.*
W. R. D.)

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