VASCULAR FLORA OF MONROE CO., W. VA.

EMORY DAVID L.

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THE VASCULAR FLORA OF MONROE COUNTY, WEST VIRGINIA

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LOCATION AND ESTABLISHMENT

Monroe County is located in southeastern West Virginia, with Union, its county seat, at the approximate center at 37°36'N. latitude and 80°32' W. longitude. The county is shaped somewhat like a much broadened arrowhead with the tip at the northwest at Alderson on the Greenbrier River and the opposite end in the 12 mile portion of Potts Creek Valley that belongs to West Virginia. Giles,Craig and Alleghany counties of Virginia are adjacent to the south, southeast and northeast, respectively, while Greenbrier and Summers counties of West Virginia form the north and northwest boundaries (Figure 1).

Monroe County was formed from part of Greenbrier County by Act of the Virginia General Assembly on January 14, 1799, and named for the Virginian who was to become the nation's fifth president. In 1802, approximately 150 square miles of territory were added on the eastern side of the county, but on eight occasions between 1806 and 1871 territory was removed to form (in part) the present counties of Giles and Alleghany in Virginia and Summers in West Virginia, or to enlarge Greenbrier, Giles, Alleghany and Craig counties. Monore County has been part of West Virginia since June 20, 1863 by Act of Congress. The present boundaries have remained unchanged since 1871. The area of the county is 473.80 square miles, or 302,720 acres.

PHYSIOGRAPHY

The general features of the county as described in this section are included in Figure 1.

In elevation Monroe County ranges from 4045 feet above sea level on the crest of Peters Mountain on the Virginia border down to 1490 feet where the westernmost point of the county touches the New River.

The county is situated in two physiographic provinces, the Ridge and Valley in the east and in a narrow strip along the southeast, and the Appalachian Plateau in the west, with a broad limestone valley (part of the Ridge and Valley Province) separating these two in the north central part of the county.

The topography is rather distinctive in each of these three parts. The east and southeast portions of the county are characterized by long, straight, steep-sided ridges separated by narrow valleys. Peters Mountain, the most prominent topographic feature of the county, forms the long southeastern boundary of the county except for the 12 miles of Potts Creek Valley to the southeast, which is bordered by the parallel ridge of Potts Mountain. To the northwest, Peters Mountain is paralleled by Little, Gap, Middle, Cove, Brushy, and White Rock mountains and Eads Ridge. These ridges have elevations for the most part between 3000 and 4000 feet, while the intervening valleys are at elevations between 2000 and 2500 feet.

In the western part of the county, Flattop Mountain and Swoopes Knobs form a portion of the Alleghany Escarpment or

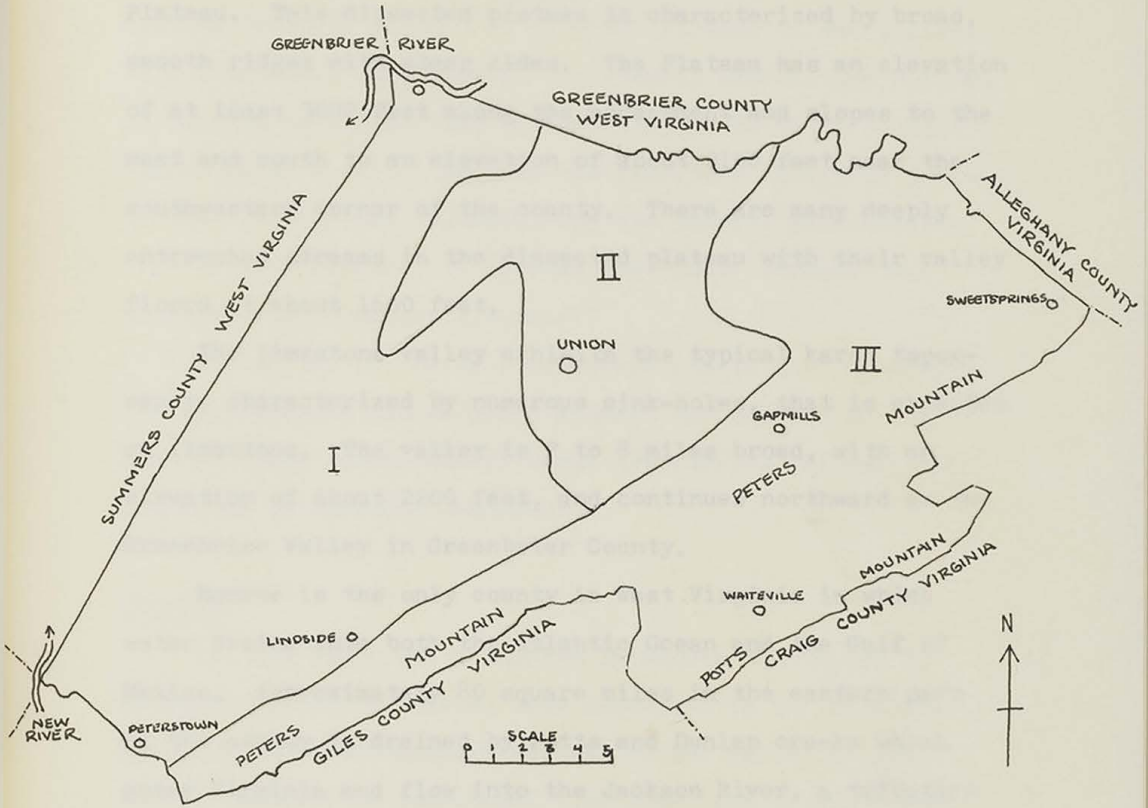

Figure 1. Map of Monroe County, West Virginia

Physiographic Areas:

I Appalachian Plateau

II Limestone Valley

III Ridge and Valley

Alleghany Front which marks the edge of the Appalachian Plateau. This dissected plateau is characterized by broad, smooth ridges with steep sides. The Plateau has an elevation of at least 3000 feet along the escarpment and slopes to the west and south to an elevation of about 2100 feet near the southwestern corner of the county. There are many deeply entrenched streams in the dissected plateau with their valley floors at about 1600 feet.

The limestone valley exhibits the typical karst topography, characterized by numerous sink-holes, that is expected on limestone. The valley is 7 to 8 miles broad, with an elevation of about 2200 feet, and continues northward as the Greenbrier Valley in Greenbrier County.

Monroe is the only county in West Virginia in which water drains into both the Atlantic Ocean and the Gulf of Mexico. Approximately 80 square miles in the eastern part of the county is drained by Potts and Dunlap creeks which enter Virginia and flow into the Jackson River, a tributary of the James which ends in Chesapeake Bay at Norfolk. The northern part of the county is drained by the Greenbrier River through its tributaries: Second Creek (including Laurel Creek) and Wolf, Kelly, Wind, Stony and Little Stony creeks. The Greenbrier soon enters the New River which also drains the remainder of the county through Indian Creek (including Turkey, Rock Camp and Hands creeks) and Rich Creek. Waters of the New River flow through the Kanawha, Ohio, and Mississippi rivers to the Gulf of Mexico.

The Ridge and Valley Province is characterized by a trellis drainage pattern of parallel streams in the valleys with occasional gaps through the ridges, whereas the Plateau is drained by a dendritic pattern similar to the irregular branching of a tree. Much of the limestone valley is drained through underground channels, and the surface is characterized by many sink-holes, springs and "lost" streams that disappear and reappear elsewhere.

During the period of Pleistocene glaciation, an area of the Appalachians and adjacent Midwest was drained by the ancient Teays River, one of whose tributaries followed the course of the present New River.

GEOLOGY

All the rocks which outcrop in Monroe County are of sedimentary origin, having been deposited in the Silurian, Devonian and Mississippian Periods of the Paleozoic Era, 425 to 310 million years ago. The area that is now Monroe County was above the sea during the Pennsylvanian and Permian Periods that continued the Paleozoic Era and was elevated with folding and faulting to form mountains at the end of the Paleozoic. Thus the past 310 million years have been a period of erosion of land rather than of the deposition of new rock.

The Ridge and Valley Province contains folded pre-Mississippian strata of resistant sandstone forming the ridges, limestone in the valleys, and shale on the lower slopes. The Plateau is underlain by Mississippian sandstone, siltstone, and shale, while the limestone valley is rather uniformly

underlain by Mississippian limestone (the Greenbrier Limestone) and shale.

Monroe County has been noted for its number of mineral (especially sulphur) springs around which elaborate resorts or spas were developed in the 19th century. The best known of these were at Sweet Springs, Salt Sulphur Springs, and Red Sulphur Springs. At Salt Sulphur Springs there is an iodine spring, one of only two such in the world (the other being in Italy).

A geological survey of Monroe County has been carried out and reported by Reger (1926). The soils of Monroe County have been studied by Gorman and Newman (1965).

CLIMATE

Monroe County has a climate described as humid and temperate, although the average rainfall of 36.74 inches at Union is nearly the lowest in West Virginia. An area east of the Alleghenies in the northeastern part of the state has the lowest average rainfall, with the southeastern corner of the state (including Monroe County) having the next lowest. The mean annual temperature recorded at Union is 52.6°F., nearly as low as any in the state except for the Allegheny Mountain and Upland Section. The data for Union, summarized in Tables I, II, and III will be typical for much of the county, although the higher mountains will be cooler, drier on their southeast slopes, and wetter on their northwest slopes.

Table I. Monthly Mean Temperatures (°F.)*

Month	Temperature		
	Average	Absolute Maximum	Absolute Minimum
January	33.3	75	-16
February	35.2	75	-10
March	43.4	90	- 1
April	51.8	94	9
May	60.9	95	21
June	67.8	99	32
July	71.6	102	37
August	70.2	100	36
September	66.1	98	25
October	54.4	93	10
November	42.4	87	-31
December	34.0	73	-34
Year	52.6	102	-34

Frost-free period (average 1906 - 1952): May 10 - Oct. 5.

148-day growing season

*Gorman and Newman (1965)

Table II. Mean Monthly Precipitation (inches)

Month	(a)* 1902-1923	(b) 1905-1959	(c) 1931-1960	(d) 1972
Jan.	3.43	3.07	2.94	4.11
Feb.	2.78	2.80	2.79	4.75
Mar.	3.60	3.51	3.63	1.80
Apr.	2.83	2.85	2.74	4.38
May	2.82	3.09	3.43	3.94
June	4.13	3.81	3.68	5.41
July	4.52	4.03	4.15	4.33
Aug.	3.77	3.54	3.38	2.10
Sept.	2.59	2.57	2.65	5.02
Oct.	2.76	2.56	2.14	3.34
Nov.	2.09	2.26	2.22	4.50
Dec.	2.74	2.65	2.48	3.29
Annual	38.06	36.74	36.23	46.97

Wettest year (1910-1959): 46.99" (1948)

Driest year (1910-1959): 18.83" (1930)

*(a) from Reger (1926)

(b) from Gorman and Newman (1965)

(c) from USDC (1973), "Normal" precipitation

(d) from USDC (1973)

Table III. Snowfall (inches)

Month	Reger (1926) 1907-1923	Gorman & Newman (1965) 1914-1952
Jan.	8.0	6.2
Feb.	3.9	6.3
Mar.	3.2	4.7
Apr.	0.5	0.8
May	0.0	trace
June	0.0	0.0
July	0.0	0.0
Aug.	0.0	0.0
Sept.	0.0	0.0
Oct.	0.6	0.5
Nov.	1.1	1.0
Dec.	6.0	4.7
Annual	23.3	24.2

HUMAN OCCUPANCY

Morton (1916) has provided a detailed account of the early days of settlement of Monroe County. Before settlement by Europeans, the area was used as a hunting ground by the Indians,who came to hunt deer, bear, and smaller game, and also as an avenue of travel. The Indians were Senecas, Piquas, and Delawares, and the present highway US 219 traces the old "Seneca Trail" or "Warriors' Road" which followed the valley east of the Allegheny Escarpment for hundreds of miles, possibly from New York to Georgia. There were, however, no permanent Indian settlements in the area.

Europeans began permanent settlement in the 1770's with the town of Union founded in 1774. The "Seneca Trail" also marked the official limit of English occupation at the time of the Revolutionary War. The originally continuous forest was gradually cleared for agriculture, especially in the limestone valley, and lumbering was carried out extensively after 1880, especially in the Ridge and Valley Province.

The population has remained small, and the county has retained a sparsely but uniformly populated, distinctly rural aspect. Table IV shows the population trends of the last 100 years, during which growth due to lumbering has been followed since 1940 by a decline due to the gradual elimination of marginal agriculture and the lack of industrial employment.

The largest communities, with their populations in 1970, are Union (566), Peterstown (563), and Alderson (386 for that part of the town which is in Monroe County).

Table IV Population of Monroe County, 1870-1970*

Year	Population	Persons/ mi.^{2}
1870	11,124	23.5
1880	not available	
1890	12,429	26.2
1900	13,130	27.7
1910	13,055	27.5
1920	13,141	27.7
1930	11,949	25.2
1940	13,577	28.6
1950	13,123	27.7
1960	11,584	24.5
1970	11,272	23.8

*Weston, 1970.

The only railroad in the county today is a short stretch of the Chesapeake and Ohio main line at Alderson, although early in this century the Potts Valley Branch of the Norfolk and Western served the southeastern portion of the county, primarily for the removal of lumber.

LAND USE

Except for residential and commercial use and roads, the area of Monroe County is made up of farmland and forest.

About 70% is in forest, while 53.4% (in 1969) is in farms. This overlap occurs because many of the farms contain woodlots. Table V summarizes several reports of the U. S. Census of Agriculture. The most obvious trends in these reports are the decrease since 1925 in the total acreage farmed and the more rapid decrease in the number of farms, resulting in an increase in the size of an average farm. Acreage devoted to crops versus that used for pasture fluctuates due to changes in the farmers' economic outlook, but farm woodlots have declined in acreage as farmers have cut wood from them.

Cattle-raising, primarily for beef but also much dairying, is the main agricultural occupation. Much of the cleared land is thus in pasture, but much is also in crops such as corn to be used as feed. The limestone valley is well suited for agriculture due to its level terrain and fertile soil and has mostly been cleared for this purpose. The valleys of the other two regions are also farmed, but the slopes and ridges are still wooded.

In the early years of settlement, most of the tree cutting was for the purpose of clearing land and obtaining lumber for buildings, furniture and fuel. Beginning in the 1880's, lumbering was carried out extensively, especially in the Ridge and Valley section, and continues on a modest scale to the present. Most of the trees now cut are marketed in Virginia as pulpwood or as mine timbers in the counties of West Virginia further west. Much of the forest is thus second growth, and in many areas abandoned farmland is gradually returning to forest.

Table V. Reports from U. S. Census of Agriculture*

	1880	1900	1920	1925	1959	1964	1969
% of county in farms	38.9	ca. 57.8	ca.57.8	78.4	60.5	54.9	53.4
acres farmed (000's)	118	ca. 175	ca. 175	237	183	166	162
no. of farms	1248	1794	1834	1961	1199	967	853
acres/farm	94.3	ca. 97.5	ca. 95.4	121.1	152.7	171.9	189.5
total cropland (acres 000's)	30			44	35	30	50
harvested cropland (acres 000's)					26	23	21
pasture (acres 000's)				106	7	4	26
other cropland (acres 000's)					2	3	3
woodland (acres 000's)				88	67	62	57

*Sources: (1) Gorman and Newman (1965)

(2) 1969 U. S. Census of Agriculture (1972)

Table VI shows the percentages of various hardwood and softwood species that account for the total growing stock of harvestable forest trees, estimated in 1961. The early history of forestry in Monroe County and the rest of West Virginia has been summarized by Brooks (1910).

Table VI Volume of Growing Stock by Species*

Monroe County, West Virginia

1961 Estimate

Total Growing Stock: 158,300,000 cubic feet

tuliptree	15.3%
hickory	10.4
chestnut oak	10.3
red oak	9.4
white oak	7.6
other oaks	11.8
red maple	5.5
beech	4.5
sugar maple	3.5
basswood	3.2
ash, walnut, cherry	3.0
yellow birch	1.2
other hardwoods	10.3
(total hardwoods)	96.0%
yellow pine	1.8%
hemlock	1.2
other softwoods	1.0
(total softwoods)	4.0%

*Ferguson, 1964.

VEGETATION

Core (1966) classifies the climax vegetation (ultimate plant cover before the influence of man) of this region as Central Hardwood Forest. Braun (1950) designates Oak-Chestnut Forest for the Ridge and Valley Province and Mixed Mesophytic Forest for the Plateau Province. Küchler (1964) shows Oak-Hickory-Pine in the Ridge and Valley and Mixed Mesophytic in the Plateau sections.

Before European settlement the area of Monroe County was entirely forested and the differences in the vegetation of the two physiographic provinces were clear. Brooks (1910) reports that the mountains in the eastern part of the county were covered with scrubby chestnut oak and pitch pine, whereas the characteristic trees of the limestone areas were white oak, red oak, black oak, sugar maple, black walnut, shellbark hickory, wild cherry, poplar (tuliptree), basswood, and cucumber (magnolia).

Despite differences in overall plant species lists, the two regions are also basically similar in that the ridges and southeast-facing slopes support a xeric forest of oak, hickory and pine, while the well-watered northwest-facing slopes support a mesic forest of cove hardwoods (basswood, magnolia, tuliptree, beech, birch, sugar maple, buckeye, black cherry, and ash). Chestnut was once a dominant species on drier sites but was eliminated in the years 1910 - 1925 by chestnut blight, a fungus disease, leaving only stump sprouts.

Perhaps the most interesting ecosystem in Monroe County, and certainly the most thoroughly botanized, is the shale barren on Slaty Mountain, two miles northwest of Sweet Springs in the extreme north-eastern part of the county. This shale barren is located not far from the famous Kates Mountain near White Sulphur Springs in Greenbrier County where a number of shale barren endemics were first discovered. Several of these rare species are found on Slaty Mountain: Eriogonum alleni, Trifolium virginicum, Oenothera argillicola, Pseudotaenidia montana, and Senecio antennariifolius, as well as Convolvulus purshianus, described from Monroe County (Sweet Springs, possibly Slaty Mountain).

VEGETATIONAL HISTORY

The area of Monroe County has been continuously available for occupancy by land plants for approximately 310 million years, since the close of the Mississippian Period of the Paleozoic Era. That is, the land has never been submerged beneath the sea since that time, nor has the area been covered with ice during the relatively recent period of Pleistocene glaciation.

The controversy remains unresolved as to whether the effects of the glacier were felt much further south than its limit (about 225 miles north of Monroe County). Whitehead (1965) maintains that during the period of maximum glaciation a boreal forest of spruce and fir, typical of Canada today, was present in the southern Appalachians because of cold temperatures far beyond the glacial limit. Braun (1955),

however, feels that the effects of the glacier beyond its limits were minimal and that the deciduous forest of the central and southern Appalachians was very much as it is today.

Thus, a mid-Appalachian flora has had a long time in which to evolve, it may or may not have moved south and then north along the mountains, and it has more recently received additional species from outside sources.

FLORISTIC ELEMENTS

There are perhaps five elements in the flora of the mid-Appalachian region:

1. The Appalachian Element. This is the deciduous forest flora that has evolved during the long period of post-Mississippian occupancy and is centered in the southern Appalachians. The majority of species in the present flora come from this source.
2. The Prairie Element. A number of species in the local flora are found primarily on the prairies in the central part of the continent: Andropogon scoparius, Opuntia humifusa, Penstemon canescens, and Asclepias verticillata. These species were present in the "prairie peninsula" that extended east as far as central Ohio and presumably entered the mid-Appalachians from there. Keener (1970) suggests that many of the shale barren endemics (especially Eriogonum alleni and Senecio antennariifolius) may have evolved from ancestors that have migrated from the west over "shale stepping stones."

3. Coastal Plain Element. Species have been able to enter Monroe County (and others in the Appalachians) from the coastal plain by following the ancient Teays River and its modern counterpart, the New River. Ptelea trifoliata and Chionanthus virginica are now found in West Virginia only in counties in the New and Potomac river valleys and presumably entered through these routes.
4. Endemic Species. The restricted shale barren endemics are found only in the mid-Appalachians, but, because of the ranges of their presumed closest relatives, it is thought that some have evolved from ancestors migrating from the west, whereas others seem to have evolved from local ancestors.
5. Introduced Species. A sizeable proportion of the flora consists of non-native plants that have been introduced by man, either inadvertently or as escapes from cultivation. Most of the former are herbaceous weeds from the Old World.

LIMITS AND DISJUNCTIONS

Although a number of species have ranges largely to the north, south, or west of Monroe County and are therefore close to their limits, very few are known to be at their absolute limits. Since there are few shale barrens further south than Monroe County, all of the endemics on Slaty Mountain are close to their southern limit, and one, Trifolium virginicum, is at its limit.

In 1970, about 60 plants of a fern, Asplenium septentrionale, the forked spleenwort, were found on a shale bluff in Monroe County, separated by 1200 miles from the next nearest locality in westernmost Oklahoma (Emory, 1970). Presumably spores were blown by westerly winds from the Rockies and chanced to land in a suitably dry, open habitat to produce this disjunct population.

COLLECTING HISTORY

Boone (1965) has recorded the history of botany in West Virginia and provides much of the information in the following chronological list of botanical collectors in Monroe County. Unless otherwise indicated, these collections are believed to be in the herbarium of the University of West Virginia.

Pursh, Frederick. Collected in the neighborhood of Sweet Springs in 1805. Prime collection in the herbarium of the Royal Botanical Gardens at Kew, England.

Millspaugh, Charles Frederick. Botanist at the State Experiment Station in Morgantown, 1889-1894. Author of the first flora of West Virginia. Made a systematic survey of the plant life in the state, visiting nearly every county.

Nuttall, Lawrence William. Amateur botanist, collected extensively in the late 19th century, especially 1890-1897.

Morris, Edward Lyman. Collected in southern West Virginia in 1900 while doing field work for the U. S. Fish Commission. Collection in the U. S. National Herbarium.

Steele, Edward Strieby. Collected near Sweet Springs in 1903 and 1905. Originated the term "shale barren." Collections in the U. S. National Herbarium.

Sheldon, John Lewis. Professor of Botany at West Virginia University 1903-1919. Collected extensively throughout the state.

Gray, Fred William. Minister and amateur botanist. Collected extensively in the 1920's. Interested especially in the box huckleberry and described two new forms of ferns from Monroe County.

Wherry, Edgar T. Professor of Botany at the University of Pennsylvania. Interested especially in soil pH preferences of plants. Student of shale barrens. Named two new species of flowering plants growing on shale in Monroe County. Collected in Monroe County in 1924, 1929, and 1939. These collections in the U. S. National Herbarium and the Philadelphia Academy of Natural Sciences.

Strausbaugh, Perry Daniel. Professor of Botany at University of West Virginia 1923-1948. Co-author of the Flora of West Virginia. Organized the WVU Botanical Expeditions beginning in 1926. Visited Slaty Mountain in 1927, 1928, 1929.

Core, Earl Lemley. Professor of Botany at University of West Virginia 1926-1970. Co-author of the Flora of West Virginia. Most active collector of, and most active writer about, West Virginia plants.

Roush, Eva M. Fling. Instructor of Botany at University of West Virginia 1917-1924. Collected at Slaty Mountain in 1927, probably with the WVU Botanical Expedition. Collection at the Missouri Botanic Garden.

Leeds, Arthur N. Amateur collector, often accompanied Wherry. Collected at Slaty Mountain in 1931. Collection at the Philadelphia Academy of Natural Sciences.

Boone, Weldon Wesley. Biology teacher and principal in high schools in Summers County since 1931. Collected in Summers and surrounding counties since 1933. Author of History of Botany in West Virginia.

Cordray, Harry. Collected in Monroe County in 1935-1936 while in the Barberry Eradication Service of the U. S. Department of Agriculture.

Gilbert, Frank Albert. Professor of Botany at Marshall University 1927-1942. Collected at Slaty Mountain in 1936. Collection in the Gray Herbarium.

McNeill, Ellis Meade. Professor of Botany at Concord College 1928-1972. Collected extensively in Mercer and adjacent counties, frequently in Monroe County.

Hunnewell, Francis Welles. Amateur botanist. Collected extensively in mountains of West Virginia. Collections in New England Botanical Club Herbarium, Gray Herbarium and WVU Herbarium.

Platt, Robert B. Studied the shale barrens and their endemics (1951). Probably collected at Slaty Mountain. Collections at University of Pennsylvania and Emory University.

Bradley, Betty. Amateur naturalist now living near Lindside, Monroe County. Has sent specimens in 1971 and 1972 to Core for identification. At least 25 species reports in this study are based on her collections.

TYPE LOCALITIES

Monroe County is the type locality of four taxa of vascular plants:

CAMPTOSORUS RHIZOPHYLLUS (L.) Link forma ANGUSTATUS F. W. Gray. near Alderson. American Fern Journal 14:11. 1924.

POLYPODIUM VIRGINIANUM L., forma CAMBRICOIDES F. W. Gray. near Peterstown. American Fern Journal 20:32. 1930.

ALLIUM OXYPHILUM Wherry. near Lillydale. Journ. Wash. Acad. Sci. 15:370-372. 1925.

CONVOLVULUS PURSHIANUS Wherry. ridge back of Sweet Springs. Proc. Pa. Acad. Sci. 7:163. 1933.

LOCAL FLORAS

The vascular flora of at least 16 other West Virginia counties has been studied, usually for a Master of Science

degree at the University of West Virginia. Those that are of particular interest because of their proximity to Monroe County are:

Raleigh County	John Paul Tosh	1942
Mercer County	Percy Lane Lilly	1951 unpubl.
Summers County	Weldon Wesley Boone	1961 unpubl.

The vascular flora of Giles County, Virginia, has been studied extensively by faculty, investigators, and students at the Mountain Lake Biological Station and reported by Thorne and Cooperrider (1960), and Cooperrider and Thorne (1964).

The flora of Monroe County has been compared with those of Raleigh and Giles counties and seems to be quite similar in the species found to each of the others. The most obvious reasons for differences are the facts that Monroe County has the only shale barren (Slaty Mountain) and that Giles County has more area at a high elevation than the other two counties.

PRESENT STUDY

Collections for the present study of the vascular flora of Monroe County have been made during the summers 1970 - 1973.

County records: Since Monroe County has not been thoroughly collected before the present study (except for Slaty Mountain), it is likely that up to half the species reported here represent county records.

State records: Ten species reported in the present study are not recorded in Strausbaugh and Core's Flora of West Virginia. Five of them are cultivated species, escaped from gardens,

persisting after cultivation, or found as roadside waifs:

AVENA SATIVA L., oats.

HORDEUM VULGARE L., barley.

ACER PLATANOIDES L., Norway maple.

LIGUSTRUM SINENSE Lour., Chinese privet.

VINCA MAJOR L., greater periwinkle, found by Betty Bradley.

The other five species are native plants, hitherto unreported from West Virginia:

ISOËTES RIPARIA Engelm. found by W. H. Wagner in 1970 and D. L. Emory in 1973.

TRICHOMANES SP. GAMETOPHYTE. found by W. H. Wagner. Specimen in University of Michigan herbarium.

ASPLENIUM SEPTENTRIONALE (L.) Hoffm.

POLYGALA INCARNATA L.

LACTUCA BIENNIS (Moench.) Fernald.

Regional record: One species is new to the flora of the Northeast:

ASPLENIUM SEPTENTRIONALE (L.) Hoffm.

Hybrids: Six interspecific hybrids have been found in Monroe County, five of them previously unreported from the county and three new to the state:

LYCOPODIUM X HABERERI House. (Lycopodium flabelliforme x tristachyum). County record. Found in 1970 by Pteridology Class at Mountain Lake Biological Station. Specimen at University of Michigan Herbarium.

DRYOPTERIS X TRIPLOIDEA Wherry. (Dryopteris intermedia x spinulosa). State record. Specimen (Emory 70026) in University of Michigan Herbarium.

ASPLENIUM X EBENOIDES R. R. Scott. (Asplenium platyneuron x rhizophyllum). County record.

ASPLENIUM X TRUDELLII Wherry. (Asplenium montanum x pinnatifidum). Reported for Monroe County in Strausbaugh and Core.

VERBENA X ENGELMANNII Moldenke. (Verbena hastata x urticifolia). State record.

AMBROSIA ARTEMISIIFOLIA X TRIFIDA. State record.

Nomenclature: The nomenclature in the following species lists follows that of Strausbaugh and Core in their Flora of West Virginia, which in turn is based largely on Fernald's 8th edition of Gray's Manual (1950). An exception is in the Pteridophyta (ferns and fern allies), where the nomenclature follows that of Evans in Radford, Ahles, and Bell's Manual of the Vascular Flora of the Carolinas (1968).

Introduced species are indicated by an asterisk (*).

The section(s) of the county in which specimen(s) have been collected is indicated by the following abbreviations:

R = Ridge and Valley Province

L = limestone valley portion of Ridge and Valley Province

P = Appalachian Plateau Province

Species listed but not collected by the author are nevertheless known to be present on the basis of:

S = Strausbaugh + Core's Flora of West Virginia

B = collections of Betty Bradley identified by Core

The relative frequency of occurrence of the species listed is designated by the abbreviations:

c = common

o = occasional

rare = rare

PRELIMINARY CATALOGUE OF THE VASCULAR PLANTS OF MONROE COUNTY, WEST VIRGINIA

EQUISETACEAE (Horsetail Family)

EQUISETUM ARVENSE L., common horsetail. Sandy soils and waste places. R. o.

E. HYEMALE L., scouring rush. Along streams. P. rare.

LYCOPODIACEAE (Clubmoss Family)

LYCOPODIUM FLABELLIFORME (Fernald) Blanchard, groundpine. Dry woods and open hillsides. R. o.

L. X HABERERI House. Dry sandy soil. R. rare.

L. OBSCURUM L., groundpine, tree clubmoss. Moist rich woods, under hemlocks. R. o.

L. POROPHILUM Lloyd & Underw., rock clubmoss. Crevices of rocks. R. rare.

L. TRISTACHYUM Pursh, slender groundpine. Dry sandy soil. R. o.

SELAGINELLACEAE (Spikemoss Family)

SELAGINELLA APODA (L.) Spring, meadow spikemoss. Meadows, stream banks, and in moist grassy places. R. o.

ISOËTACEAE (Quillwort Family)

ISOËTES RIPARIA Engelm., quillwort. Shallow water in ponds, rooted in mud. R. rare.

OPHIOGLOSSACEAE (Adder's Tongue Family)

BOTRYCHIUM DISSECTUM Spreng., cutleaf grapefern. Pastures, clearings, old fields, open thickets, woods. R. o.

B. VIRGINIANUM (L.) Sw., rattlesnake fern. Well-drained soil in rich woods. R. c.

OSMUNDACEAE (Royal Fern Family)

OSMUNDA CINNAMOMEA L., cinnamon fern. Woods, especially near streams. R. c.

O. CLAYTONIANA L., interrupted fern. Woods and road banks. R.o.

O. REGALIS L., var. SPECTABILIS (Willd.) Gray, royal fern. Swampy places. R. o.

HYMENOPHYLLACEAE (Filmy Fern Family)

TRICHOMANES SP. GAMETOPHYTE. Dark, damp surfaces under rock ledges. R. rare.

PTERIDACEAE (Bracken Fern Family)

ADIANTUM PEDATUM L., maidenhair fern. Mesic woods. R. o.

CHEILANTHES LANOSA (Michx.) D.C. Eat., hairy lip fern. Dry rocks, especially on shale barrens. R. rare.

DENNSTAEDTIA PUNCTILOBULA (Michx.) Moore, hay-scented fern. Roadsides and dry open woods. R. o.

PELLAEA ATROPURPUREA (L.) Link, purple cliffbrake. Dry limestone rocks. R. o.

PTERIDIUM AQUILINUM (L.) Kuhn, brake, bracken. Dry woods and fields. R. c.

ASPIDIACEAE (Shield Fern Family)

ATHYRIUM ASPLENIOIDES (Michx.) A. Eaton, southern lady fern. Mesic woods, near streams. R. o.

A. THELYPTERIOIDES (Michx.) Desv., silvery athyrium. Mesic woods. R. rare.

CYSTOPTERIS BULBIFERA (L.) Bernh., bulbiferous bladder fern. Limestone. RL. o.

C. FRAGILIS (L.) Bernh. brittle fern. Cool rock crevices. R. rare.

C. PROTRUSA (Weatherby) Blasdell, lowland brittle fern. Mesic woods. R. o.

DRYOPTERIS GOLDIANA (Hook.) Gray, Goldie's shield fern. Mesic woods. R. rare.

D. INTERMEDIA (Willd.) Gray, intermediate wood fern. Mesic woods, especially well-drained. R. c.

D. MARGINALIS (L.) Gray, marginal shield fern. Mesic woods, especially well-drained. R. c.

D. SPINULOSA (Mueller) Watt, spinulose shield fern. Swamps and mesic woods near streams. R. o.

D. X TRIPLOIDEA Wherry. Mesic woods. R. rare.

ONOCLEA SENSIBILIS L., sensitive fern, bead fern. Roadside ditches. R. c.

POLYSTICHUM ACROSTICHOIDES (Michx.) Schott., Christmas fern. Mesic woods. R. c.

THELYPTERIS HEXAGONOPTERA (Michx.) Weatherby, broad beech fern. Mesic woods. R. o.

T. NOVEBORACENSIS (L.) Nieuwl., New York fern. Woods, moist or dry. R. c.

T. PALUSTRIS Schott, marsh fern. Marshes. R. rare.

T. PHEGOPTERIS (L.) Slosson, long beech fern. Moist rocks. R. rare.

WOODSIA ILVENSIS (L.) R. Br., rusty woodsia. Shaly banks.R.rare.

W. OBTUSA (Spreng.) Torr., blunt-lobed woodsia. Rocks and cliffs, especially limestone. R. o.

W. SCOPULINA D.C. Eaton, Allegheny cliff fern. Dry shale cliffs. R. rare.

ASPLENIACEAE (Spleenwort Family)

ASPLENIUM BRADLEYI D.C. Eaton, Bradley's spleenwort. Sandstone and shale cliffs. S. rare.

A. X EBENOIDES R.R. Scott, walking spleenwort. Moist limestone. R. rare.

A. MONTANUM Willd., mountain spleenwort. Sandstone cliffs.R.rare.

A. PINNATIFIDUM Nutt., pinnatifid spleenwort. Sandstone cliffs. S. rare.

A. PLATYNEURON (L.) Oakes, ebony spleenwort. On rocks and rocky banks. R. o.

A. RESILIENS Kunze, black-stem spleenwort. On limestone rocks.R.o.

A. RHIZOPHYLLUM L., walking fern. Moist limestone. RL. o.

A. RUTA-MURARIA L., rue spleenwort, American wallrue. On limestone rocks. R. rare.

A. SEPTENTRIONALE (L.) Hoffm., forked spleenwort. On shale bluff. R. rare.

A. TRICHOMANES L., maidenhair spleenwort. On rocks, especially limestone. R. o.

A. X TRUDELLII Wherry, Trudell's spleenwort. On sandstone ledges. S. rare.

POLYPODIACEAE (Rockcap Fern Family)

POLYPODIUM POLYPODIOIDES (L.) Watt., little gray polypody, resurrection fern. On rocks and bark. S. rare.

P. VIRGINIANUM L., common polypody. On rocks, especially sandstone. RP. o.

PINACEAE (Pine Family)

PINUS PUNGENS Lamb., table mountain pine. Dry woods, shale barrens. S. o.

P. RIGIDA Mill, pitch pine. Dry woods. S. c.

P. STROBUS L., white pine. Woods. R. c.

P. VIRGINIANA Mill., scrub pine. Dry woods. S.c.

TSUGA CANADENSIS (L.) Carr., hemlock. Damp woods and ravines. R.c.

CUPRESSACEAE (Cypress Family)

JUNIPERUS VIRGINIANA L., red cedar. Old fields, dry hillsides. L.c.

TYPHACEAE (Cattail Family)

TYPHA LATIFOLIA L., broad-leaved cattail. Ditches and ponds. R.o.

SPARGANIACEAE (Burreed Family)

SPARGANIUM AMERICANUM Nutt., American burreed. Muddy places. L.o.

ZOSTERACEAE (Pondweed Family)

POTAMOGETON DIVERSIFOLIUS Raf., variable pondweed. Ponds. RIP.o.

P. PECTINATUS L., sago pondweed. Calcareous waters. S. rare.

ALISMATACEAE (Water Plantain Family)

ALISMA SUBCORDATUM Raf., common water plantain. Muddy places. LP.o

SAGITTARIA LATIFOLIA Willd., wapato, duck-potato. Ditches, shallow water. R. o.

HYDROCHARITACEAE (Frog's Bit Family)

ELODEA CANADENSIS Michx., Canada waterweed. Streams and ponds. B.rre.

GRAMINEAE (Grass Family)

AGROPYRON REPENS (L.) Beauv., quackgrass. Fields, roadsides and waste places. R. o.

*AGROSTIS ALBA L., redtop. Meadows and pastures. R. c.

ANDROPOGON ELLIOTTII Chapm., Elliott beardgrass. Dry soil in open ground. S. rare.

A. SCOPARIUS Michx., little bluestem. Fields and banks. RL. c.

A. VIRGINICUS L., broomsedge. Old fields, pastures, and meadows. R. o.

ARISTIDA DICHOTOMA Michx., three-awn grass. Sterile soil. RL. o.

*ARRHENATHERUM ELATIUS (L.) Mert. & Koch., tall oat-grass. Roadsides, escaped. RL. c.

*AVENA SATIVA L., oat. Roadside waif. R. rare.

*BROMUS INERMIS Leyss., smooth bromegrass. Roadsides and waste places. RLP. c.

*B. JAPONICUS Thunb., Japanese bromegrass. Waste places. RL. c.

B. PURGANS L., Canada bromegrass. Woods. R. o.

CINNA ARUNDINACEA L., wood reed-grass. Swamps and moist woods. P.o.

*DACTYLIS GLOMERATA L., orchard grass. Meadows and pastures. R.c.

DANTHONIA SPICATA (L.) Beauv., poverty oatgrass, poverty grass, moonshine grass. Dry, sterile soil. R. o.

*DIGITARIA ISCHAEMUM (Schreb.) Muhl., smooth crabgrass. Cultivated and waste ground. R. c.

ECHINOCLOA CRUSGALLI (L.) Beauv., barnyard grass. Ditches and cultivated fields. R. o.

ELYMUS RIPARIUS Wieg., wild rye. Riverbanks and low ground. L. o.

E. VILLOSUS Muhl., wild rye. Rocky woods and banks. R. o.

*FESTUCA ELATIOR L., meadow fescue. Meadows, roadsides and waste places. R. c.

F. OBTUSA Biehler, nodding fescue. Rocky woods and banks. R.o.

F. OCTOFLORA Walt., six-weeks' fescue. Dry, sterile soil. R. o.

*F. OVINA L., sheep fescue. Open woods and stony slopes. RLP. c.

GLYCERIA MELICARIA (Michx.) F.T. Hubb. Wet woods and swamps. R.o.

G. STRIATA (Lam.) Hitchc., fowl mannagrass. Wet places. R. o.

*HOLCUS LANATUS L., velvet grass. Moist meadows. R. c.

*HORDEUM VULGARE L., barley. Roadside waif. L. rare.

HYSTRIX PATULA Moench., bottle-brush grass. Moist woods. R. o.

LEERSIA ORYZOIDES (L.) Sw., rice cutgrass. Swamps and streams. RP.o.

L. VIRGINICA Willd., white grass. Wet woods, streams. RP. o.

MELICA MUTICA Walt., two-flower melic. Dry, open woods. R. rare.

MUHLENBERGIA SCHREBERI J.F. Gmel., nimblewill. Dry woods and waste places. RL. c.

PANICUM ANCEPS Michx., flat-stemmed panic grass. Moist sandy soil. P. o.

P. BOSCII Poir. Woods. R. o.

P. CAPILLARE L., old witch grass. Sandy soil in fields. R.o.

P. CLANDESTINUM L., deertongue grass. Moist sandy ground. R. o.

P. DICHOTOMIFLORUM Michx., spreading witch grass. Low waste ground and cultivated fields. R. o.

P. DICHOTOMUM L., including var. BARBULATUM (Michx.) Wood, bushy panic grass. Dry open woods. R. o.

P. FLEXILE (Gattinger) Schribn., wiry witch grass. Sandy soil of meadows and open woods. S. o.

P. GATTINGERI Nash, ticklegrass. Moist, open ground and waste places. R. o.

P. IMPLICATUM Schribn. Wet meadows and wooded swamps. R. o.

P. LINEARIFOLIUM Schribn., var. WERNERI (Schribn.) Fernald, low panic grass. Dry woods, shale barrens. R. o.

P. MICROCARPON Muhl., small-fruited panic grass. Wet woods and swampy places. R. o.

P. POLYANTHES Schultes, many-flowered panic grass. Damp ground, woods, and openings. R. o.

PASPALUM PUBESCENS Muhl. Sandy soil in old fields, pastures, and dry woods. R. o.

*PHLEUM PRATENSE L., timothy. Meadows, roadsides. R. c.

*POA COMPRESSA L., Canada bluegrass. Fields. R. c.

*SETARIA FABERII Herrm. Fields and waste places. R. o.

*S. GLAUCA (L.) Beauv., yellow foxtail. Cultivated ground and waste places. RLP. c.

SORGHASTRUM NUTANS (L.) Nash, Indian grass. Open woods and fields. L. o.

TRIODIA FLAVA (L.) Smyth, purpletop, tall redtop. Open places and waste ground. RP. o.

CYPERACEAE (Sedge Family)

CAREX BLANDA Dewey. Dry or moist woods. R. o.

C. CEPHALOPHORA Muhl. Dry woods and thickets. L. o.

C. FRANKII Kunth. Swamps and wet meadows. RLP. o.

C. GRACILLIMA Schwein. Dry open woods and thickets. R. o.

C. GRANULARIS Muhl. Moist meadows. RL. o.

C. GYNANDRA Schwein. Swampy woodlands. R.o.

C. HIRSUTELLA Mack. Dry thickets, old fields and pastures. RLP.o.

C. HYSTRICINA Muhl. Wet meadows. R. o.

C. INCOMPERTA Bickn. Wet soil. R. o.

C. INTUMESCENS Rudge. Swampy or moist woods. RP.o.

C. LUPULINA Muhl. Swamps and wet woods. RP. o.

C. LURIDA Wahl. Swamps and wet woods. RP. o.

C. PLATYPHYLLA Carey. Rich shady woods and banks. R. o.

C. PRASINA Wahl. Wet woods and thickets. R. o.

C. RADIATA (Wahl.) Dewey. Open woods. R. o.

C. ROSEA Schkuhr. Open dry woods. R. o.

C. SCOPARIA Schkuhr. Open wet places. L. o.

C. SQUARROSA L. Swamps and wet woods. RP. o.

C. STIPATA Muhl. Swamps and wet meadows. R. o.

C. TRIBULOIDES Wahl. Wet meadows. R. o.

C. VIRESCENS Muhl. Dry woods. R. o.

C. VULPINOIDEA Michx., foxtail sedge. Swamp places. R.o.

CYPERUS FLAVESCENS L. Marshy ground. RP. o.

C. RIVULARIS Kunth. Wet soil, near ponds and streams. R. o.

C. STRIGOSUS L., galingale. Damp or fertile soil. P. o.

ELEOCHARIS ACICULARIS (L.) R. & S. Ditches and muddy shores. R.o.

E. OBTUSA (Willd.) Schultes. Muddy places. RL. o.

RHYNCHOSPORA CAPITELLATA (Michx.) Vahl. Moist soil. R. o.

SCIRPUS AMERICANUS Pers., American bulrush, threesquare. Borders of ponds and streams. R. o.

S. ATROVIRENS Muhl. Swamps and meadows. RLP. o.

S. CYPERINUS (L.) Kunth, woolgrass. Wet meadows and swamps. R.o.

S. LINEATUS Michx. Wet meadows and swamps. RL. o.

S. POLYPHYLLUS Vahl. Swamps and borders of ponds. R. o.

S. VALIDUS Vahl, great bulrush. Margins of ponds. RLP. o.

ARACEAE (Arum Family)

ACORUS CALAMUS L., calamus, sweet flag. Swamps and wet meadows.LP.o.

ARISAEMA DRACONTIUM (L.) Schott, green dragon. Near streams. RP.o.

A. TRIPHYLLUM (L.) Schott, Indian turnip, Jack-in-the-pulpit. Mesic woods. R. o.

SYMPLOCARPUS FOETIDUS (L.) Nutt., skunk cabbage. Muddy places and wet woods. R. o.

COMMELINACEAE (Spiderwort Family)

*COMMELINA COMMUNIS L., Asiatic day-flower. Near dwellings and gardens. P. o.

TRADESCANTIA OHIENSIS Raf. Thickets. R. rare.

PONTEDERIACEAE (Pickeral-weed Family)

HETERANTHERA DUBIA (Jacq.) Mac M., mud-plantain. In shallow streams. S. rare.

JUNCACEAE (Rush Family)

JUNCUS ACUMINATUS Michx. Wet ground. RP. o.

J. BUFONIUS L., toad rush. Roadsides, ditches. R. o.

J. EFFUSUS L., common rush. Marshy ground. R. o.

J. SECUNDUS Beauv. Sandy or sterile soil. R. o.

J. TENUIS Willd., yard rush, path rush, wiregrass. Dry or moist soil, roadsides, fields. RL. o.

LUZULA ACUMINATA Raf., hairy woodrush. Woods and banks. R.o.

L. ECHINATA (Small) Hermann. Woodland thickets. R. o.

L. MULTIFLORA (Retz.) Lejeune, common woodrush. Fields, meadows and open woods. R. o.

LILIACEAE (Lily Family)

ALETRIS FARINOSA L., stargrass, colicroot. Meadows. R. o.

ALLIUM ALLEGHENIENSE Small, Allegheny wild onion. Rocky soil, on cliffs. S. rare.

A. CERNUUM Roth, wild onion. Banks and hillsides. RP. o.

A. OXYPHILUM Wherry, wild onion. Acid soils, shale. P. rare.

A. TRICOCCUM Ait., ramp, wild leek. Mesic woods. B. o.

*A. VINEALE L., wild garlic, crow garlic. Fields and meadows. L.o.

AMIANTHIUM MUSCAETOXICUM (Walt.) Gray, fly poison. Dry open woods. S. rare.

*ASPARAGUS OFFICINALIS L., garden asparagus. Fence rows. R. o.

CHAMAELIRIUM LUTEUM (L.) Gray, devil's bit, blazing star. Dry woods. R. rare.

CLINTONIA UMBELLULATA (Michx.) Morong, white clintonia, speckled wood-lily. Rocky mesic woods. R. o.

CONVALLARIA MONTANA Raf., American lily-of-the-valley. Dry woods. R. o.

DISPORUM LANUGINOSUM (Michx.) Nichols, hairy disporum. Mesic woods. R. o.

*HEMEROCALLIS FULVA L., common day lily. Ditches and roadsides. R.o.

LILIUM CANADENSE L., Canada lily. Swamps and meadows. R. o.

L. MICHAUXII Poir., Carolina lily. Dry woods. B. rare.

L. SUPERBUM L., Turk's cap lily. Swamps and meadows. R. o.

MAIANTHEMUM CANADENSE Desf., wild lily-of-the-valley. Moist woods. R. o.

MEDEOLA VIRGINIANA L., Indian cucumber-root. Mesic woods, near streams. R. o.

MELANTHIUM PARVIFLORUM (Michx.) S. Wats. Mesic woods. R. o.

POLYGONATUM BIFLORUM (Walt.) Ell., common Solomon's seal. Woods. R. o.

P. CANALICULATUM (Muhl.) Push, great Solomon's seal. Rich woods. R. o.

P. PUBESCENS (Willd.) Pursh, downy Solomon's seal. Mesic woods. RLP.o.

SMILACINA RACEMOSA (L.) Desf., plumelily, false spikenard, false Solomon's seal. Moist woods and thickets. RP. c.

SMILAX ECHIRRHATA (Engelm.) S. Wats., upright smilax. Dry soil. S. rare.

S. GLAUCA Walt., saw brier. Dry thickets and old fields. R.o.

S. HERBACEA L., carrion flower. Moist woods and thickets. RP.o.

S. HISPIDA Muhl., hispid greenbrier. Thickets, woods and fields. R. o.

S. PULVERULENTA Michx. Rich woods and thickets. R. o.

S. ROTUNDIFOLIA L., common greenbrier. Thickets and fence rows. R.o.

STREPTOPUS ROSEUS Michx., twisted stalk. Mesic woods. R. rare.

TRILLIUM ERECTUM L., ill-scented trillium, wake robin. Mesic woods. R. o.

T. UNDULATUM Willd., painted trillium. Damp woods, under hemlock. R. o.

UVULARIA GRANDIFLORA J.E. Smith, large-flowered bellwort. Mesic woods. R. rare.

U. PERFOLIATA L., mealy bellwort. Mesic woods. R. o.

U. PUDICA (Walt.) Fernald, mountain bellwort, merrybells. Dry woods. R. o.

*YUCCA SMALLIANA Fernald, Adam's needle. Escaped from cultivation. R. o.

DIOSCOREACEAE (Yam Family)

DIOSCOREA QUATERNATA (Walt.) J.F. Gmel.,four-leaved wild yam. Dry woods. R. o.

AMARYLLIDACEAE (Amaryllis Family)

HYPOXIS HIRSUTA (L.) Coville, yellow stargrass. Meadows and open woods. R. o.

IRIDACEAE (Iris Family)

IRIS VERNA L., dwarf iris, spring iris. Woods. R. rare.

SISYRINCHIUM ANGUSTIFOLIUM Mill. Grassy places. RP. c.

ORCHIDACEAE (Orchid Family)

APLECTRUM HYEMALE (Muhl.) Torr., puttyroot, Adam-and-Eve. Mesic woods. R. rare.

CORALLORHIZA MACULATA Raf., coralroot. Woods. RP. o.

C. ODONTORHIZA (Willd.) Nutt., small coralroot. Dry woods. B.rare.

CYPRIPEDIUM ACAULE Ait., pink lady's slipper, moccasin flower. Dry woods. R. o.

C. PUBESCENS Willd., large yellow lady's slipper. Dry woods. R.o.

GOODYERA PUBESCENS (Willd.) R. Br., downy rattlesnake plantain. Dry or moist woods. R. c.

HABENARIA CILIARIS (L.) R. Br., yellow fringed orchid, orange-plume. Dry woods. R. rare.

H. CLAVELLATA (Michx.) Spreng., small green wood orchid. Wet woods, near streams. R. o.

H. FLAVA (L.) R. Br., pale green orchis. Moist soil at edge of woods. R. o.

H. LACERA (Michx.) Lodd., ragged fringed orchid. Meadows, marshes. R. o.

H. ORBICULATA (Pursh) Torr., large round-leaved orchid. Dry woods. RP. o.

H. PERAMOENA Gray, purple fringeless orchid. Wet meadows. R.rare.

H. PSYCODES (L.) Spreng, small purple-fringed orchid. Meadows, swamps, wet woods. R. o.

ISOTRIA VERTICILLATA (Willd.) Raf., whorled pogonia. Dry woods. R. o.

LIPARIS LILIFOLIA (L.) Richard., large twayblade. Moist woods. R.rare.

MALAXIS UNIFOLIA Michx., green adder's-mouth. Dry woods. R. rare.

ORCHIS SPECTABILIS L., showy orchis. Mesic woods. R. o.

SPIRANTHES CERNUA (L.) Richard., nodding ladies' tresses. Wet meadows. R. o.

S. GRACILIS (Bigel.) Beck., slender ladies' tresses. Dry open woods, pastures. B.rare.

S. LUCIDA (H.H. Eaton) Ames., shining ladies' tresses. Wet meadows. B. rare.

SALICACEAE (Willow Family)

SALIX HUMILIS Marsh., upland willow. Roadside banks, fields. RL.o.

S. NIGRA Marsh., black willow. Along streams. R. o.

S. SERICEA Marsh., silky willow. Along streams. S. rare.

S. TRISTIS Ait., dwarf gray willow. Sandy soil.L. rare.

POPULUS GRANDIDENTATA Michx., bigtooth aspen. Old fields. R. o.

JUGLANDACEAE (Walnut Family)

CARYA GLABRA (Mill.) Sweet, pignut hickory. Dry woods. R. c.

C. TOMENTOSA Nutt., mockernut hickory. Rich hillsides. R. c.

JUGLANS CINEREA L., butternut. Near streams. R. o.

J. NIGRA L., black walnut. Woods and wood edges. R. c.

CORYLACEAE (Hazel Family)

ALNUS SERRULATA (Ait.) Willd., smooth alder, brookside alder. Moist soil near streams RP. c.

BETULA LENTA L., sweet birch, black birch, cherry birch. Mesic woods. R. c.

B. NIGRA L., river birch, red birch. Moist soil near streams. R. o.

CARPINUS CAROLINIANA Walt., American hornbeam, blue beech, water beech, muscle tree. Moist soil near streams. RLP.o.

CORYLUS AMERICANA Walt., hazelnut. Thickets. RP. o.

C. CORNUTA Marsh., beaked hazelnut. Mesic woods. R. rare.

FAGACEAE (Beech Family)

CASTANEA DENTATA (Marsh.) Borkh., chestnut. Dry woods. R. o.

C. PUMILA (L.) Mill., chinquapin. Dry thickets. R. o.

FAGUS GRANDIFOLIA Ehrh., American beech. Mesic woods. R. o.

QUERCUS ALBA L., white oak. Rich moist soil. R. c.

Q. ILICIFOLIA Wang., scrub oak, bear oak, turkey oak. Dry sandy soil and shale barrens. R. o.

Q. MUEHLENBERGII Engelm., yellow oak, chinquapin oak. Dry hillsides. S. rare.

Q. PRINUS L., chestnut oak, rock oak. Dry woods. R. c.

Q. RUBRA L., red oak. Woods. R. c.

Q. STELLATA Wang., post oak. Dry sandy soil. S. o.

Q. VELUTINA Lam., black oak. Dry woods. R. c.

ULMACEAE (Elm Family)

CELTIS TENUIFOLIA Nutt., dwarf hackberry. Dry shaly soil. R.o.

ULMUS AMERICANA L., American elm. Rich woods near streams. L. o.

U. RUBRA Muhl., slippery elm, red elm. Woods. RLP. o.

U. THOMASI Sarg., rock elm, cork elm. Rich soil. S. rare.

MORACEAE (Mulberry Family)

*MORUS ALBA L., white mulberry. Roadsides, escaped from cultivation. L. o.

M. RUBRA L., red mulberry. Mesic woods. RP. o.

*MACLURA POMIFERA (Raf.) Schneider, osageorange, hedgeapple. Moist soil near streams. L. o.

URTICACEAE (Nettle Family)

BOEHMERIA CYLINDRICA (L.) Sw., false nettle. Moist soil. RP.o.

LAPORTEA CANADENSIS (L.) Wedd., wood nettle. Mesic woods.R. o.

PARIETARIA PENSYLVANICA Muhl., Pennsylvania pellitory. Rocky banks. L. o.

PILEA PUMILA (L.) Gray, clearweed, richweed. Moist woods. RLP. o.

SANTALACEAE (Sandalwood Family)

PYRULARIA PUBERA Michx., buffalonut, oilnut. Mesic woods. R.rare.

ARISTOLOCHIACEAE (Birthwort Family)

ARISTOLOCHIA MACROPHYLLA Lam., pipevine, Dutchman's pipe. Mesic woods. R. rare.

A. SERPENTARIA L., Virginia snakeroot. Mesic woods. RP. o.

ASARUM CANADENSE L., wild ginger. Mesic woods. R. o.

A. MEMMINGERI Ashe. Acid woodlands. S. rare.

A. VIRGINICUM L., coltsfoot. Mesic woods. R. o.

POLYGONACEAE (Buckwheat Family)

ERIOGONUM ALLENI Wats., yellow buckwheat. Shale barrens. R. rare.

*FAGOPYRUM SAGITTATUM Bilib., buckwheat. Fields, remaining after cultivation. R. o.

POLYGONUM ARIFOLIUM L., halberdleaf tearthumb. Wet soil. R.rare.

P. CONVOLVULUS L., black bindweed. Cultivated and waste places. RP.o.

P. CRISTATUM Engelm. & Gray, hedge buckwheat. Rich open woods. Rare.

P. COCCINEUM Muhl., water smartweed. Muddy places. S. rare.

P. ERECTUM L., erect knotweed. Roadsides and waste places. RL. o.

P. HYDROPIPER L., common smartweed, water pepper. Moist waste places. R. o.

*P. ORIENTALE L., prince's feather. Roadside. R. rare.

P. PENSYLVANICUM L., Pennsylvania smartweed. Moist soil, waste places. RP. o.

*P. PERSICARIA L., lady's thumb, heart's ease. Waste places. R. o.

P. SAGITTATUM L., arrowleaf tearthumb. Wet soil. RP. o.

P. SCANDENS L., climbing false buckwheat. Moist thickets. RP. o.

P. TENUE Michx., slender knotweed. Dry soil. S. rare.

*RUMEX ACETOSELLA L., field sorrel, sheep sorrel. Fields. R. c.

*R. CRISPUS L., curly dock, yellow dock. Cultivated and waste places. RL. o.

*R. OBTUSIFOLIUS L., broadleaf dock, bitter dock. Fields, ditches and waste places. RP. c.

TOVARA VIRGINIANA (L.) Raf., Virginia knotweed, rattail. Mesic woods. P. o.

CHENOPODIACEAE (Goosefoot Family)

*CHENOPODIUM ALBUM L., lamb's quarters. Cultivated fields. RP. c.

AMARANTHACEAE (Amaranth Family)

AMARANTHUS SPINOSUS L., spiny amaranth. Fields and waste places. P. o.

PHYTOLACCACEAE (Pokeweed Family)

PHYTOLACCA AMERICANA L., pokeweed. Moist soil. RP. c.

AIZOACEAE (Carpetweed Family)

*MOLLUGO VERTICILLATA L., carpetweed. Cultivated fields. P. o.

PORTULACACEAE (Purslane Family)

*PORTULACA OLERACEA L., common purslane. Cultivated fields. P. o.

CARYOPHYLLACEAE (Pink Family)

*AGROSTEMMA GITHAGO L., corn cockle. Roadsides. R. rare.

ARENARIA SERPYLLIFOLIA L., thymeleaf sandwort. Sandy or rocky soil. R. o.

CERASTIUM NUTANS Raf., nodding chickweed, powderhorn. Rich moist soil. R. o.

*C. VULGATUM L., common mouse-ear chickweed. Fields. RL. o.

*DIANTHUS ARMERIA L., Deptford pink. Roadsides and fields. R. c.

*D. PROLIFER L., proliferous pink. Waste places. S. rare.

*LYCHNIS ALBA Mill., white campion. Roadsides and waste places. R.o.

PARONYCHIA CANADENSIS (L.) Wood, smooth forked-chickweed. Dry open woods. RP. o.

P. FASTIGIATA (Raf.) Fernald, hairy forked-chickweed. Dry open woods. R. rare.

*SAPONARIA OFFICINALIS L., soapwort, bouncing bet. Roadsides and waste places. RP. c.

*SCLERANTHUS ANNUUS L., knawel. Waste ground. B. rare.

SILENE ANTIRRHINA L., sleepy catchfly. Dry soil, fields and waste places. R. c.

*S. CUCUBALUS Wibel., bladder campion. Fields and roadsides. R. o.

*S. DICHOTOMA Ehrh., forked catchfly. Roadsides. R. rare.

*S. NOCTIFLORA L., night-flowering catchfly. Waste places. B. rare.

S. PENSYLVANICA Michx., wild pink. Shale barrens. R. o.

S. STELLATA (L.) Ait. f., starry campion. Wooded banks. R. o.

S. VIRGINICA L., fire pink, catchfly. Dry open woods. R. o.

*STELLARIA MEDIA (L.) Cyrillo, common chickweed. Cultivated fields and waste places. R. o.

S. PUBERA Michx., great chickweed. Mesic woods. R. o.

NYMPHAEACEAE (Waterlily Family)

BRASENIA SCHREBERI Gmel., watershield. Ponds. LP. o.

NUPHAR ADVENA (Ait.) Ait. f., cowlily. Ditches. R. o.

RANUNCULACEAE (Crowfoot Family)

ANEMONE CANADENSIS L., Canada anemone. Low grounds. S. rare.

A. LANCIFOLIA Pursh, mountain anemone. Woods. R. rare.

A. QUINQUEFOLIA L., windflower, wood anemone. Wet woods, under hemlock. R. o.

A. VIRGINIANA L., thimbleweed. Woods and meadows. RLP. c.

AQUILEGIA CANADENSIS L., wild columbine. Woods and rocky banks. RL. o.

CALTHA PALUSTRIS L., marsh-marigold. Ditches. R. o.

CIMICIFUGA RACEMOSA (L.) Nutt., black snakeroot, black cohosh, rattletop. Mesic woods. R. c.

CLEMATIS VIRGINIANA L., virgin's bower. Fence rows and along streams. R. c.

DELPHINIUM EXALTATUM Ait., tall larkspur. Open limestone woods. RLP. o.

HEPATICA ACUTILOBA DC., sharplobe hepatica . Woods. R. o.

H. AMERICANA (DC.) Ker.,roundlobe hepatica, liverleaf. Woods. R.o.

RANUNCULUS ABORTIVUS L., kidneyleaf crowfoot. Woods and moist grounds. R. o.

R. ALLEGHENIENSIS Britton, Allegheny crowfoot. Mesic woods. R.o.

*R. BULBOSUS L., bulbous buttercup. Fields and roadsides. RL. o.

R. HISPIDUS Michx., hispid buttercup. Dry woods and thickets.R.o.

R. MICRANTHUS Nutt., small-flowered crowfoot. Mesic woods. R.rare.

R. RECURVATUS Poir., hooked crowfoot. Mesic woods. RL. o.

*R. REPENS L., creeping buttercup. Fields and roadsides. R.o.

THALICTRUM DIOICUM L., early meadowrue. Rocky woods. R. o.

T. POLYGAMUM Muhl., tall or late meadowrue. Fields and meadows.RP.o.

T. REVOLUTUM DC., revolute meadowrue. Rocky woods and thickets.R.o.

TRAUTVETTERIA CAROLINIENSIS (Walt.) Vail, tasselrue. Woods, near streams. R. rare.

BERBERIDACEAE (Barberry Family)

BERBERIS CANADENSIS Mill., American barberry. Fields on limestone. RLP. o.

*B. VULGARIS L., common barberry. Thickets and waste grounds. S.rare.

CAULOPHYLLUM THALICTROIDES (L.) Michx., blue cohosh, pappooseroot. Mesic woods. R. o.

JEFFERSONIA DIPHYLLA (L.) Pers., twinleaf. Mesic woods. RLP. o.

PODOPHYLLUM PELTATUM L., May-apple. Mesic woods and old pastures. RP. c.

MENISPERMACEAE (Moonseed Family)

MENISPERMUM CANADENSE L., Canada moonseed. Fence rows. RP. o.

MAGNOLIACEAE (Magnolia Family)

LIRIODENDRON TULIPIFERA L., tuliptree, yellow-poplar. Mesic woods. R. c.

MAGNOLIA ACUMINATA L., cucumber tree. Mesic woods. R. o.

ANONACEAE (Custard Apple Family)

ASIMINA TRILOBA (L.) Dunal., pawpaw, West Virginia banana. Near streams. P. rare.

LAURACEAE (Laurel Family)

LINDERA BENZOIN (L.) Blume, spicebush, Benjamin-bush. Damp woods. R. o.

SASSAFRAS ALBIDUM (Nutt.) Nees, white sassafras. Woods and thickets. R. o.

PAPAVERACEAE (Poppy Family)

*CHELIDONIUM MAJUS L., celandine. Roadsides and waste places. R. o.

*PAPAVER DUBIUM L., poppy. Roadsides, fields and waste places. R.o.

SANGUINARIA CANADENSIS L., bloodroot, puccoon. Mesic woods. RP.c.

FUMARIACEAE (Fumitory Family)

CORYDALIS FLAVULA (Raf.) D.C., yellow corydalis. Rocky banks. R. rare.

CRUCIFERAE (Mustard Family)

*ALYSSUM ALYSSOIDES L., yellow alyssum. Roadsides. R. o.

ARABIS CANADENSIS L., sicklepod. Mesic woods. RP. o.

A. GLABRA (L.) Bernh., tower mustard. Roadsides. R. rare.

A. LAEVIGATA (Muhl.) Poir., smooth rockcress. Rocky woods and shale slopes. R. o.

*BARBAREA VULGARIS R. Br., winter cress, yellow rocket. Roadsides and waste places. R. o.

*BRASSICA KABER (DC.) L.C. Wheeler, charlock. Waste places. R.rare.

*CAPSELLA BURSA-PASTORIS (L.) Medic., shepherd's purse. Roadsides and waste places. R. o.

CARDAMINE ROTUNDIFOLIA Michx., mountain watercress. On rocks in streams. R. o.

DENTARIA HETEROPHYLLA Nutt., slender toothwort. Mesic woods. S.rare.

D. LACINIATA Muhl., cutleaf toothwort. Mesic woods. R.o.

DRABA RAMOSISSIMA Desv., rocktwist. Shale barrens. R. rare.

*ERUCASTRUM GALLICUM (Willd.) O.E. Schultz, garden rocket. Waste places. B. rare.

*HESPERIS MATRONALIS L., dame's rocket. Roadsides. R. o.

*LEPIDIUM CAMPESTRE (L.) R. Br., field cress. Roadsides and waste places. R. o.

*L. DENSIFLORUM Schrad., dense-flowered peppergrass. Dry waste places. B. rare.

L. VIRGINICUM L., wild peppergrass. Roadsides and waste places. R.o.

*NASTURTIUM OFFICINALE R. Br., watercress. Edge of streams. RL.o.

*RORIPPA SYLVESTRIS (L.) Bess., creeping yellow cress. Roadsides and near streams. R. rare.

*SISYMBRIUM OFFICINALE (L.) Scop., hedge mustard. Roadsides and waste places. R. o.

CRASSULACEAE (Orpine Family)

SEDUM GLAUCOPHYLLUM R.T. Clausen, cliff stonecrop. Rocks, especially shale. R. o.

S. TERNATUM Michx., wild stonecrop. Damp rocky places. R. o.

SAXIFRAGACEAE (Saxifrage Family)

BOYKINIA ACONITIFOLIA Nutt., aconite saxifrage. Among rocks in mesic woods. R. rare.

HEUCHERA AMERICANA L., alumroot. Dry rocky woods. R. o.

H. VILLOSA Michx., var INTERMEDIA Rosend. Butt. & Lak. Rocky places. S. rare.

HYDRANGEA ARBORESCENS L., wild hydrangea. Woods and rocky slopes. R. o.

MITELLA DIPHYLLA L., miterwort, bishop's-cap. Mesic woods. R. o.

PARNASSIA ASARIFOLIA Vent., kidneyleaf grass of Parnassus. Swamps. R. rare.

PENTHORUM SEDOIDES L., ditch stonecrop. Ditches and wet meadows. RLP. o.

RIBES CYNOSBATI L., prickly gooseberry. Rocky woods. R. o.

R. ROTUNDIFOLIUM Michx., smooth gooseberry. Rocky woods. R. o.

SAXIFRAGA MICHAUXII Britton, Michaux's saxifrage. Moist cliffs. R rare.

S. MICRANTHIDIFOLIA (Haw.) Britton, lettucs saxifrage. On rocks in streams. R. o.

TIARELLA CORDIFOLIA L., foamflower, false miterwort. Moist woods. R. o.

HAMAMELIDACEAE (Witch-hazel Family)

HAMAMELIS VIRGINIANA L., witch-hazel. Woods and thickets. R. c.

PLATANACEAE (Plane Tree Family)

PLATANUS OCCIDENTALIS L., sycamore. Along streams. R. o.

ROSACEAE (Rose Family)

AGRIMONIA PARVIFLORA Ait., smallflowered agrimony. Sandy soil. R. o.

AMELANCHIER ARBOREA (Michx. f.) Fernald, common serviceberry. Dry woods. R. o.

ARUNCUS DIOICUS (Walt.) Fernald, goatsbeard. Mesic woods. R. o.

CRATAEGUS RUGOSA Ashe. Thickets. R. o.

FRAGARIA VIRGINIANA Duchesne, Virginia strawberry. Roadsides. R. o.

GEUM CANADENSE Jacq., white avens. Edge of woods. RL. o.

G. VIRGINIANUM L., Virginia avens. Dry woods. R. o.

GILLENIA TRIFOLIATA (L.) Moench., Bowman's root, Indian physic. Mesic woods. R. o.

PHYSOCARPUS OPULIFOLIUS (L.) Maxim., ninebark. Along streams. R. o.

POTENTILLA NORVEGICA L., rough cinquefoil. Dry soil. R. o.

*P. RECTA L., upright cinquefoil. Fields, roadsides and waste places. RL. o.

P. SIMPLEX Michx., common cinquefoil. Dry sandy soil. R. o.

PRUNUS ALLEGHANIENSIS Porter, Allegheny sloe. Dry mountainsides. Scare.

P. AMERICANA Marsh., wild plum. Banks of streams and borders of woods. R. rare.

P. PENSYLVANICA L. f., bird, fire, or pin cherry. Rocky woods and clearings. B. rare.

*P. PERSICA (L.) Batsch., peach. Roadsides and waste places. R. rare.

P. SEROTINA Ehrh., wild black cherry. Mesic woods. RL. c.

P. VIRGINIANA L., choke cherry. Woods and open places. RL. o.

PYRUS MELANOCARPA (Michx.) Willd., black chokeberry. Moist woods. B. rare.

*ROSA CANINA L., dog rose. Roadsides. R. rare.

R. CAROLINA L., pasture rose. Dry sandy or rocky places. R. o.

*R. EGLANTERIA L., sweetbrier, eglantine. Thickets, rocky pastures and roadsides. R. rare.

R. PALUSTRIS Marsh., swamp rose. Swamps and wet thickets. R. o.

RUBUS ALLEGHENIENSIS Porter, Allegheny blackberry. Roadsides, old fields, fence rows. R. o.

R. ENSLENII Trattinick, dewberry. Dry woods. R. rare.

R. FLAGELLARIS Willd., dewberry. Roadsides and fields. R. o.

R. HISPIDUS L., groundberry. Boggy places. R. rare.

*R. LACINIATUS Willd., laciniate blackberry. Fields.P.rare.

R. LAUDATUS Berger, blackberry. Old fields and brushy areas. S.rare.

R. MULTIFER Bailey, dewberry. Dry open soil. S. rare.

R. OCCIDENTALIS L., black raspberry. Woods, fields, fence rows and thickets. RL. o.

R. ODORATUS L., flowering raspberry. Woods and banks. R. o.

SPIRAEA ALBA DuRoi, meadowsweet, pipestem. Wet soil. LP. o.

S. TOMENTOSA L., hardhack,steeplebush. Swamps. R. o.

LEGUMINOSAE (Pulse Family)

AMORPHA FRUTICOSA L., false indigo. Rich thickets.S. rare.

AMPHICARPA BRACTEATA (L.) Fernald, hog-peanut. Mesic woods and swamps. R. o.

APIOS AMERICANA Medic., groundnut, wild bean. Moist ground. RP.o.

ASTRAGALUS CANADENSIS L., milkvetch. Thickets and banks. RP. o.

BAPTISIA TINCTORIA (L.) R. Br., wild indigo. Dry woods. R. c.

CASSIA HEBECARPA Fernald, wild senna. Alluvial soil. R. o.

C. MARILANDICA L., wild senna. Dry, gravelly soil. RP. o.

C. NICTITANS L., wild sensitive plant. Sandy fields. P. rare.

CERCIS CANADENSIS L., redbud. Rich soil. RP. o.

CLITORIA MARIANA L., butterflypea. Dry soil S. rare.

*CORONILLA VARIA L., crown vetch. Roadsides. L. o.

DESMODIUM CILIARE (Muhl.) DC. Dry hills. R. o.

D. CUSPIDATUM (Muhl.) Loud. Thickets. S. rare.

D. MARILANDICUM (L.) DC. Dry woods and thickets. R. o.

D. NUDIFLORUM (L.) DC. Dry woods. R. o.

D. ROTUNDIFOLIUM DC. Dry woods. R. o.

*LATHYRUS LATIFOLIUS L., everlasting or perennial pea. Roadsides and waste places. RP. o.

L. VENOSUS Muhl., including var. INTONSUS Butt. & St. John, veiny peavine. Shady banks. R. o.

LESPEDEZA HIRTA (L.) Hornem., hairy bushclover. Dry hillsides. R. o.

L. INTERMEDIA (S. Wats.) Britton. Open rocky woods. P. rare.

L. REPENS (L.) Bart., creeping bushclover. Sandy or rocky soil. RP. o.

L. VIOLACEA (L.) Pers. Dry thickets. R. rare.

*MEDICAGO LUPULINA L., black medic Roadsides and waste places. RL. o.

*M. SATIVA L., alfalfa. Fields and waste places. RP. o.

*MELILOTUS ALBA Desr., white sweetclover. Roadsides and waste places. RL. c.

*M. OFFICINALIS (L.) Lam., yellow sweetclover. Roadsides and waste places. R. c.

*ROBINIA HISPIDA L., rosa acacia. Escaped from cultivation. R.rare.

R. PSEUDO-ACACIA L., black locust. Woods. R. o.

TEPHROSIA VIRGINIANA (L.) Pers., goat's rue, catgut, hoary pea. Dry woods. R. o.

*TRIFOLIUM AGRARIUM L., yellow hop clover. Sandy fields and roadsides. R. o.

*T. ARVENSE L., rabbitfoot clover. Dry sandy or gravelly soil. R.o.

*T. HYBRIDUM L., alsike clover. Fields, meadows and roadsides. R.o.

*T. PRATENSE L., red clover. Fields and roadsides. R. c.

T. REPENS L., white clover. Fields and thickets. R. c.

T. VIRGINICUM Small, Kates Mountain clover. Shale barrens.R.rare.

VICIA VILLOSA Roth, hairy vetch. Fields. R. rare.

LINACEAE (Flax Family)

LINUM MEDIUM (Planch.) Tre., stiff yellow flax. Dry or sandy sterile soil. R. o.

L. STRIATUM Walt., ridged yellow flax. Wet places. RP. o.

OXALIDACEAE (Wood Sorrel Family)

OXALIS EUROPAEA Jord., European yellow wood sorrel. Waste places. RL. o.

O. GRANDIS Small, great yellow wood sorrel. Sandy woods. R. rare.

O. STRICTA L., upright yellow wood sorrel. Dry open woods and fields. R. rare.

GERANIACEAE (Geranium Family)

*GERANIUM COLUMBINUM L., long-stalked crane's- bill. Roadsides and fields. RL. o.

G. MACULATUM L., wild cranesbill. Woods, thickets, and fields.R.o.

RUTACEAE (Rue Family)

PTELEA TRIFOLIATA L., hoptree, wafer-ash. Woods and rocky places. P. rare.

POLYGALACEAE (Milkwort Family)

POLYGALA INCARNATA L. Old fields. R. rare.

P. PAUCIFOLIA Willd., flowering wintergreen, gay wings. Woods, on sterile soil. R. rare.

P. POLYGAMA Walt., racemed milkwort. Dry woods and banks. RL.o.

P. SANGUINEA L., rose polygala. Fields and meadows. RP. o.

P. SENEGA L., Seneca snakeroot. Dry rocky soil. B. rare.

P. VERTICILLATA L., whorled milkwort. Fields and thickets.RLP. o.

EUPHORBIACEAE (Spurge Family)

ACALYPHA GRACILENS Gray, slender three-seeded mercury. Fields and roadsides. P. rare.

EUPHORBIA COROLLATA L., flowering spurge. Dry open woods and fields. RP. o.

E. DENTATA Michx., toothed spurge. Dry open soil, waste places. S.rare.

*E. LATHYRUS L., caper spurge, mole plant, wolf's milk. Roadsides. R. rare.

E. MACULATA L., spotted spurge. Roadsides. RP. o.

CALLITRICHACEAE (Water Starwort Family)

CALLITRICHE DEFLEXA A. Br., Austin's water starwort. Muddy places in woods. R. rare.

C. HETEROPHYLLA Pursh, larger water starwort. Ponds. L. rare.

ANACARDIACEAE (Cashew Family)

RHUS AROMATICA Ait., fragrant sumac. Rocky woods and banks. RP. o.

R. COPALLINA L., dwarf sumac. Rocky hillsides. R. o.

R. GLABRA L., smooth sumac. Dry soil. R. o.

R. RADICANS L., poison ivy. Thickets and fence rows. RL. o.

R. TYPHINA L., staghorn sumac. Open hillsides. RL. o.

AQUIFOLIACEAE (Holly Family)

ILEX MONTANA T. & G., mountain holly. Moist woods. P. rare.

I. VERTICILLATA (L.) Gray, black alder, winterberry. Near streams in woods. R. o.

CELASTRACEAE (Stafftree Family)

CELASTRUS SCANDENS L., climbing bittersweet. Thickets and fence rows. R. o.

STAPHYLEACEAE (Bladdernut Family)

STAPHYLEA TRIFOLIA L., bladdernut. Moist woods. RP. o.

ACERACEAE (Maple Family)

ACER PENSYLVANICUM L., striped maple, moosewood. Mesic woods. R. o.

*A. PLATANOIDES L., Norway maple. Roadsides. R. rare.

A. RUBRUM L., red maple. Swamps and moist woods. R. c.

A. SACCHARINUM L., silver maple. Margins of rivers. S. o.

A. SACCHARUM Marsh., sugar maple, hard maple. Mesic woods. R. c.

A. SPICATUM Lam., mountain maple. Mesic woods. R. o.

HIPPOCASTANACEAE (Horse-chestnut Family)

AESCULUS OCTANDRA Marsh., yellow buckeye, sweet buckeye. Mesic woods. R. o.

BALSAMINACEAE (Jewelweed Family)

IMPATIENS CAPENSIS Meerb., spotted touch-me-not, jewelweed. Moist shady places. RP. o.

I. PALLIDA Nutt., pale touch-me-not, jewelweed. Moist shady places. RL. o.

RHAMNACEAE (Buckthorn Family)

CEANOTHUS AMERICANUS L., New Jersey tea, red-root. Dry hillsides. RP.c.

RHAMNUS LANCEOLATA Pursh, lance-leaved buckthorn. Thickets and river banks. S. rare.

VITACEAE (Vine Family)

PARTHENOCISSUS QUINQUEFOLIA (L.) Planch., Virginia creeper. Woods, thickets. R. o.

VITIS AESTIVALIS Michx., summer grape. Woods, thickets. R. o.

V. RIPARIA Michx., riverbank grape. Along streams. S. rare.

V. RUPESTRIS Scheele, sand grape. Shady banks. R. rare.

TILIACEAE (Linden Family)

TILIA HETEROPHYLLA Vent., white basswood. Mesic woods. R. o.

GUTTIFERAE (St. John's-wort Family)

ASCYRUM HYPERICOIDES L., St. Andrew's Cross. Dry sandy soil. R.o.

HYPERICUM GENTIANOIDES (L.) BSP, orangegrass, pineweed. Sandy open soil. R. rare.

H. MUTILUM L., dwarf St. John's-wort. Near streams. R. o.

H. PERFORATUM L., common St. John's-wort. Fields and waste places. RL. o.

H. PUNCTATUM Lam., dotted St. John's-wort. Thickets and damp places. R. o.

H. SPATHULATUM (Spach) Steud., shrubby St. John's-wort. Sandy or rocky soil. R. o.

H. VIRGINICUM L., marsh St. John's-wort. Swamps. B. rare.

CISTACEAE (Rockrose Family)

LECHEA RACEMULOSA Michx., pinweed. Dry and rocky soil. RL. o.

VIOLACEAE (Violet Family)

VIOLA BLANDA Willd., sweet white violet. Cool woods. S. rare.

V. FIMBRIATULA Sm., ovate-leaved violet. Dry sandy soil. R. o.

V. HASTATA Michx., halberd-leaf yellow violet. Dry woods. R. rare.

V. HIRSUTULA Brainerd, southern wood violet. Dry open woods. R. o.

V. PALMATA L., palmate-leaf violet. Dry woods. R. o.

V. PAPILIONACEA Pursh, common blue violet. Along streams. R. o.

V. PEDATA L., bird-foot violet. Shale slopes. R. o.

V. PRIMULIFOLIA L., primrose-leaf violet. Marshy situations. R. rare.

V. PUBESCENS Ait., downy yellow violet. Mesic woods. RP. o.

V. ROTUNDIFOLIA Michx., roundleaf violet. Damp woods, under hemlocks. R. rare.

V. SAGITTATA Ait., arrow-leaf violet. Moist and sandy places. R. rare.

V. SORORIA Willd., downy wood violet. Woods or shady places. S. o.

V. STRIATA Ait., striped violet. Along streams. L. rare.

V. TRILOBA Schwein., three-lobed violet. Dry open woods. S. rare.

PASSIFLORACEAE (Passion Flower Family)

PASSIFLORA LUTEA L., yellow passion flower. Thickets. P. rare.

CACTACEAE (Cactus Family)

OPUNTIA HUMIFUSA Raf., prickly-pear, devil's tongue. Dry soils. B. rare.

THYMELAEACEAE (Mezereum Family)

DIRCA PALUSTRIS L., leatherwood. Woods and Thickets. S. rare.

LYTHRACEAE (Loosestrife Family)

CUPHEA PETIOLATA (L.) Koehne, tarweed. Dry soil. P. o.

*LYTHRUM SALICARIA L., spiked loosestrife. Swamps and wet meadows. S. rare.

NYSSACEAE (Sour Gum Family)

NYSSA SYLVATICA Marsh., black gum. Dry woods. R. c.

MELASTOMACEAE (Meadow Beauty Family)

RHEXIA VIRGINICA L., meadow beauty. Moist sandy places. B. rare.

ONAGRACEAE (Evening-primrose Family)

CIRCAEA QUADRISULCATA (Maximowicz) Franchet & Savatier, enchanter's-nightshade. Dry open woods. RL. o.

EPILOBIUM ANGUSTIFOLIUM L., fireweed. Roadside banks. R. rare.

E. COLORATUM Biehler, purple-leaved willow-herb. Moist places. RP. o.

GAURA BIENNIS L., gaura. Roadsides. RLP. o.

LUDWIGIA ALTERNIFOLIA L., seedbox. Moist places. R. o.

L. PALUSTRIS (L.) Ell., marsh purslane. Ditches. RP. o.

OENOTHERA ARGILLICOLA Mackenzie, shale evening-primrose. Shale barrens. R. rare.

O. BIENNIS L., common evening-primrose, "wild beet." Roadsides and fields. R. o.

O. FRUTICOSA L., narrow-leaved sundrops. Damp meadows. RL. o.

O. PARVIFLORA L., northern evening-primrose. Sandy and gravelly soil. RLP. o.

O. PERENNIS L., sundrops. Open fields. RLP. o.

ARALIACEAE (Ginseng Family)

ARALIA NUDICAULIS L., wild sarsaparilla. Woods. R. o.

A. RACEMOSA L., American spikenard. Mesic woods. R. o.

A. SPINOSA L., Hercules' club, devil's walking stick. Mesic woods. S. rare.

PANAX QUINQUEFOLIUS L., ginseng, sang. Mesic woods. R. rare.

UMBELLIFERAE (Carrot Family)

ANGELICA VENENOSA (Greenway) Fernald, hairy angelica. Dry banks. R. o.

CICUTA MACULATA L., water hemlock, spotted cowbane, beaver poison. Swamps and meadows. RP. o.

*CONIUM MACULATUM L., poison hemlock. Waste places. R. rare.

CRYPTOTAENIA CANADENSIS (L.) DC., honewort. Thickets and mesic woods. RL.o.

*DAUCUS CAROTA L., wild carrot, Queen Anne's Lace. Fields, roadsides and waste places. R. c.

HYDROCOTYLE AMERICANA L., American water-pennywort. Near streams in woods. R. rare.

LIGUSTICUM CANADENSE (L.) Britton, nondo, angelico, American lovage. Mesic woods. R. o.

OSMORHIZA CLAYTONI (Michx.) Clarke, hairy sweet cicely. Open woods. R. o.

OXYPOLIS RIGIDIOR(L.) Coult. & Rose, cowbane, Swamps. RP.o.

*PASTINACA SATIVA L., parsnip. Roadsides and waste places. RL.o.

PSEUDOTAENIDIA MONTANA Mackenzie, mountain pimpernel. Shale barrens. R. rare.

SANICULA CANADENSIS L., black snakeroot. Dry woods. RL.o.

S. MARILANDICA L., sanicle. Mesic woods. R.rare.

S. TRIFOLIATA Bicknell, trifoliate snakeroot. Mesic woods. R.o.

TAENIDIA INTEGERRIMA (L.) Drude., yellow pimpernel. Dry shaly slopes. RP. o.

THASPIUM BARBINODE (Michx.) Nutt., hairy-jointed meadow-parsnip. Banks. R. o.

T. TRIFOLIATUM (L.) Gray, woodland meadow-parsnip. Thickets and woods. S. rare.

ZIZIA AUREA (L.) Koch., golden Alexanders. Mesic woods. B. rare.

Z. TRIFOLIATA (Michx.) Fernald. Mesic woods. R. o.

CORNACEAE (Dogwood Family)

CORNUS ALTERNIFOLIA L. f., alternate-leaved dogwood. Thickets and open woods. RP. o.

C. FLORIDA L., flowering dogwood. Dry woods. R. c.

C. RACEMOSA Lam., panicled dogwood. Moist soil. R. o.

PYROLACEAE (Wintergreen Family)

CHIMAPHILA MACULATA (L.) Pursh., spotted wintergreen. Dry woods. R. o.

MONOTROPA HYPOPITHYS L., pinesap. Moist woods. R. o.

M. UNIFLORA L., Indian pipe, corpse plant. Mesic woods. R. o.

PYROLA ROTUNDIFOLIA L., round-leaved American wintergreen. Open sandy woods. R. o.

ERICACEAE (Heath Family)

EPIGAEA REPENS L., trailing arbutus. Dry woods. R. o.

GAULTHERIA PROCUMBENS L., teaberry, wintergreen, mountain tea. Dry woods. R. o.

GAYLUSSACIA BACCATA (Wang.) K. Koch., black huckleberry. Dry woods. R. o.

G. BRACHYCERA (Michx) Gray, box huckleberry. Dry woods. S. rare.

KALMIA LATIFOLIA L., mountain laurel. Dry woods. R. c.

LYONIA LIGUSTRINA (L.) DC., maleberry, seedy buckberry, "he-huckleberry." Swamps, moist banks. R. o.

MENZIESIA PILOSA (Michx.) Juss., Allegheny menziesia, minnie-bush. Dry woods. R. o.

OXYDENDRUM ARBOREUM (L.) DC., sourwood. Dry woods. R. o.

RHODODENDRON CALENDULACEUM (Michx.) Torr., flame azalea. Dry woods. R. o.

R. MAXIMUM L., great laurel. Damp woods. R. o.

VACCINIUM ANGUSTIFOLIUM Ait., early low blueberry, lowbush blueberry. Dry woods. R. c.

V. ERYTHROCARPUM Michx., southern mountain cranberry. Dry woods. R. o.

V. STAMINEUM L., squaw huckleberry, buckberry, deerberry. Dry woods. R. c.

V. VACILLANS Torr., late low blueberry. Dry woods. R. c.

DIAPENSIACEAE (Diapensia Family)

GALAX APHYLLA L., galax. Dry woods. R. o.

PRIMULACEAE (Primrose Family)

DODECATHEON MEADIA L., shooting star. Moist hillsides, mostly in the mountains. S. rare.

LYSIMACHIA CILIATA L., fringed loosestrife. Wet thickets. RP. o.

L. LANCEOLATA Walt., lance-leaved loosestrife. Dry open woods and thickets. RLP. o.

*L. NUMMULARIA L., moneywort. Near streams in meadows. RLP. o.

L. QUADRIFOLIA L., whorled loosestrife. Roadsides and dry thickets. R. c.

SAMOLUS PARVIFLORUS Raf., water pimpernel. Wet meadows. RP. o.

TRIENTALIS BOREALIS Raf., star flower. Moist woods. R. rare.

OLEACEAE (Olive Family)

CHIONANTHUS VIRGINICA L., fringetree. Moist thickets and riverbanks in the New River valley. S. rare.

FRAXINUS AMERICANA L., white ash. Mesic woods. R. o.

*LIGUSTRUM SINENSE Lour., privet. Roadsides, persistant after cultivation. R. rare.

*L. VULGARE L., privet. Roadsides, persistant after cultivation. R. rare.

GENTIANACEAE (Gentian Family)

GENTIANA ANDREWSII Griseb., bottle gentian. Meadows, thickets. R. o.

G. QUINQUEFOLIA L., five-flowered gentian. Dry or moist soil. S. rare.

SABATIA ANGULARIS (L.) Pursh, rose pink. Fields and thickets. RP. o.

APOCYNACEAE (Dogbane Family)

APOCYNUM ANDROSAEMIFOLIUM L., spreading dogbane. Dry thickets and edges of woods. R. o.

A. CANNABINUM L., Indian hemp. Open fields, roadsides and thickets. RLP. c.

A. MEDIUM Greene, intermediate dogbane. Woods and waste places. R. rare.

*VINCA MAJOR L., greater periwinkle. Persistent after cultivation. R. rare.

*V. MINOR L., periwinkle, "myrtle." Cemeteries, roadsides. R. o.

ASCLEPIADACEAE (Milkweed Family)

ASCLEPIAS EXALTATA L., poke milkweed. Dry woods and thickets. R. o.

A. INCARNATA L., swamp milkweed. Marshes and along streams. RP. o.

A. QUADRIFOLIA Jacq., four-leaved milkweed. Dry banks and thickets. R. o.

A. SYRIACA L., common milkweed. Fields and waste places. R. c.

A. TUBEROSA L., butterfly weed. Dry fields, roadsides. RP. o.

A. VARIEGATA L., white milkweed. Dry banks. R. rare.

A. VERTICILLATA L., whorled milkweed. Dry banks, shale. R. rare.

GONOLOBUS CAROLINENSIS (Jacq.) Schultes, anglepod. Dry banks. P. rare.

CONVOLVULACEAE (Morning-glory Family)

CONVOLVULUS PURSHIANUS Wherry, shale bindweed. Shale barrens. R. rare.

C. SEPIUM L., hedge bindweed. Roadsides and thickets. RP. o.

CUSCUTA GRONOVII Willd., Gronovius' dodder, common dodder. Low wet areas. RP. o.

POLEMONIACEAE (Polemonium Family)

PHLOX MACULATA L., wild sweet William. Moist woods and along streams. R. rare.

P. OVATA L., mountain phlox. Open woods and thickets. RL. o.

P. PANICULATA L., fall phlox. Open woods and thickets. R. rare.

P. STOLONIFERA Sims, creeping phlox. Damp woods. R. o.

P. SUBULATA L., moss pink. Shale barrens. R. rare.

HYDROPHYLLACEAE (Waterleaf Family)

HYDROPHYLLUM CANADENSE L., broad-leaved waterleaf. Mesic woods. RL. o.

H. VIRGINIANUM L., including var. ATRANTHUM (Alexander) Constance, Virginia waterleaf. Mesic woods. R. o.

BORAGINACEAE (Borage Family)

*CYNOGLOSSUM OFFICINALE L., hounds-tongue. Roadsides and waste places. R. o.

C. VIRGINIANUM L., wild comfrey. Open woods. RP. o.

*ECHIUM VULGARE L., bluethistle, viper's bugloss, bluedevil. Fields and waste places. RP. c.

HACKELIA VIRGINIANA (L.) I.M. Johnston, beggar's-lice. Dry woods and thickets. RP. o.

LITHOSPERMUM CANESCENS (Michx.) Lehm., puccoon. Open dry fields.RP.o.

*MYOSOTIS ARVENSIS (L.) Hill., field scorpion-grass. Mesic woods.R.rae.

ONOSMODIUM HISPIDISSIMUM Mackenzie, false gromwell. Dry calcareous fields. RLP. o.

VERBENACEAE (Vervain Family)

VERBENA X ENGELMANNII Moldenke. Roadsides. R. rare.

V. HASTATA L., blue vervain. Fields, meadows and waste places.P.o.

V. SIMPLEX Lehm., narrow-leaved vervain. Dry calcareous soils.RLP.o.

V. URTICAEFOLIA L., white vervain. Woods, thickets, roadsides.RP.o.

LABIATAE (Mint Family)

AGASTACHE NEPETOIDES (L.) Ktze., yellow gianthyssop. Woodland borders. B. rare.

COLLINSONIA CANADENSIS L., richweed, horse-balm. Mesic woods.R.o.

CUNILA ORIGANOIDES (L.) Britton, dittany. Dry woods and banks.R.o.

DRACOCEPHALUM VIRGINIANUM L., dragon head. Wet thickets. R. rare.

*GLECHOMA HEDERACEA L., ground-ivy. Waste places. R. o.

HEDEOMA PULEGIOIDES (L.) Pers., American pennyroyal. Dry fields and banks. RP. o.

ISANTHUS BRACHIATUS (L.) BSP., false pennyroyal. Dry shaly banks. P. o.

*LEONURUS CARDIACA L., motherwort. Waste places. RL. o.

L. UNIFLORUS Michx. Northern bugleweed. Wet soil. RP. o.

LYCOPUS VIRGINICUS L., bugleweed. Wet soil. RP. o.

MENTHA ARVENSIS L., field mint, wild mint. Moist soil. P. o.

*M. CARDIACA Baker, small-leaved mint. Moist soil. P. rare.

*M. PIPERITA L., peppermint. Wet soil, along streams. P. o.

MONARDA CLINOPODIA L., basil balm. Mesic woods and thickets. R.o.

M. FISTULOSA L., wild bergamot. Dry hills and in thickets. R. o.

*NEPETA CATARIA L., catnip. Waste places. RLP. o.

*PRUNELLA VULGARIS L., European selfheal, bumblebee weed. Fields and waste places. R. o.

PYCNANTHEMUM FLEXUOSUM (Walt.) BSP., narrowleaf mountain-mint. Dry fields and thickets. RP. o.

P. VIRIDIFOLIUM (Fernald) Grant & Epling, green-leaved mountain-mint. Dry banks. R. o.

SALVIA LYRATA L., wild sage. Dry sandy woods and thickets. RLP.o.

SATUREJA VULGARIS (L.) Fritsch, field basil. Old fields and thickets. RLP. o.

SCUTELLARIA ELLIPTICA Muhl., hairy skullcap. Dry woods and thickets. RP. o.

S. LATERIFLORA L., mad-dog skullcap. Moist shaded places. RLP. o.

S. OVATA Hill var. PSEUDOARGUTA (Epling) Core, heart-leaved skullcap. Shale barrens. R. rare.

S. SERRATA Andr., showy skullcap. Mesic woods. R. rare.

TEUCRIUM CANADENSE L., American germander. Rich low grounds. RLP o.

TRICHOSTEMA DICHOTOMUM L., blue curls. Dry fields. R. rare.

SOLANACEAE (Nightshade Family)

*DATURA STRAMONIUM L., jimson weed. Cultivated fields. RP. o.

PHYSALIS AMBIGUA (Gray) Britton, villous ground-cherry. Roadsides and fields. RL. o.

P. HETEROPHYLLA Nees, common ground-cherry. Rich sandy soil. P. rare.

P. SUBGLABRATA Mackenzie & Bush, smooth ground-cherry. Fertile soil. LP. o.

SOLANUM CAROLINENSE L., horse-nettle. Dry fields and waste places. RL. o.

SCROPHULARIACEAE (Figwort Family)

CASTILLEJA COCCINEA (L.) Spreng., Indian paint brush, painted cup. Dry woods. S. rare.

CHELONE GLABRA L., turtlehead. Along streams in woods. R. o.

GERARDIA LAEVIGATA Raf., entire-leaved yellow foxglove. Rocky woods. R. o.

G. PEDICULARIA L., fern-leaved yellow foxglove. Dry woods. R. o.

G. TENUIFOLIA Vahl, slender gerardia. Dry woods and thickets. S. rare.

G. VIRGINICA (L.) BSP., downy yellow foxglove. Dry woods. R. o.

GRATIOLA NEGLECTA Torr., clammy hedge-hyssop. Wet muddy places. RL. o.

*LINARIA VULGARIS Hill., toadflax, butter-and-eggs. Roadsides, fields and waste places. R. o.

MIMULUS ALATUS Ait., winged monkey-flower. Wet places. P. rare.

M. RINGENS L., common monkey-flower. Wet places. RP. o.

PEDICULARIS CANADENSIS L., common lousewort, wood betony. Dry woods and thickets. R. o.

P. LANCEOLATA Michx., swamp lousewort. Swampy places. S. rare.

PENSTEMON CANESCENS Britton, gray beardtongue. Dry rocky banks. RP. o.

SCROPHULARIA LANCEOLATA Pursh, hare figwort. Open woods and roadsides. R. o.

S. MARILANDICA L., giant figwort. Open woods, roadsides and old fields. P. rare.

*VERBASCUM BLATTARIA L., moth mullein. Fields and waste places. R. o.

*V. THAPSUS L., great mullein. Fields and waste places. RL. o.

VERONICA AMERICANA (Raf.) Schwein., American brooklime. Streams and swampy places. R. o.

V. ANAGALLIS-AQUATICA L., water speedwell. Streams and swampy places. RL. o.

*V. ARVENSIS L., corn speedwell. Waste places and cultivated soil. R. o.

V. OFFICINALIS L., common speedwell, gypsyweed. Fields, roadsides and waste places. R. o.

V. PEREGRINA L., purslane speedwell, neckweed. Roadsides and waste places. R. o.

VERONICASTRUM VIRGINICUM (L.) Farwell, culver's root. Moist meadows. R. rare.

BIGNONIACEAE (Bignonia Family)

CAMPSIS RADICANS (L.) Seeman, trumpet-creeper. Moist soil, fence rows. S. rare.

*CATALPA BIGNONIOIDES Walt., common catalpa, Indian bean, cigartree. Roadsides. RL. rare.

*C. SPECIOSA Warder, catawba tree, western catalpa. Roadsides. B. rare.

OROBANCHACEAE (Broomrape Family)

CONOPHOLIS AMERICANA (L. f.) Wallr., cancerroot. Mesic woods.R.o.

EPIFAGUS VIRGINIANA (L.) Bart., beechdrops. Mesic woods under beech trees. P. o.

OROBANCHE UNIFLORA L., one-flowered broomrape. Dry woods. R. rare.

PHRYMACEAE (Lopseed Family)

PHRYMA LEPTOSTACHYA L., lopseed. Mesic woods. R. o.

PLANTAGINACEAE (Plantain Family)

*PLANTAGO ARISTATA Michx., bracted plantain. Sterile soil, shale barrens. RP. o.

*P. LANCEOLATA L., buckhorn plantain, English plantain, narrow-leaf plantain. Fields, roadsides and waste places. R. c.

*P. MAJOR L., great plantain. Waste places. S. rare.

P. RUGELII Dcne., common plantain. Fields and waste places. RLP. c.

P. VIRGINICA L., dwarf plantain. Limestone pastures. L. rare.

RUBIACEAE (Madder Family)

CEPHALANTHUS OCCIDENTALIS L., buttonbush. Swamps and stream margins. P. o.

DIODIA TERES Walt., rough buttonweed. Dry, poor sandy soils. RP.o.

GALIUM ASPRELLUM Michx., rough bedstraw. Wet meadows. L. rare.

G. CIRCAEZANS Michx., wild liquorice. Dry woods. R. o.

G. CONCINNUM T. & G., shining bedstraw. Dry woods. RLP.o.

G. LANCEOLATUM Torr., lanceleaf wild liquorice. Dry and mesic woods. R. o.

G. LATIFOLIUM Michx., purple bedstraw. Dry and mesic woods. R.o.

*G. PEDEMONTANUM All., piedmont bedstraw. Fields and pastures.L. o.

G. PILOSUM Ait., hairy bedstraw. Dry woods and thickets. R.o.

G. TINCTORIUM L., Clayton's bedstraw. Wet meadows. RLP. o.

G. TRIFLORUM Michx., sweet-scented bedstraw. Mesic woods. R.o.

HOUSTONIA CAERULEA L., bluets, Quaker ladies, innocence. Open grassy places. R. o.

H. LONGIFOLIA Gaertn., long-leaved summer bluets. Dry open places. R. o.

H. TENUIFOLIA Nutt., slender-leaved summer bluets. Dry shaly banks. R. rare.

MITCHELLA REPENS L., partridge berry. Moist woods, under hemlocks. R. o.

CAPRIFOLIACEAE (Honeysuckle Family)

DIERVILLA LONICERA Mill., bush honeysuckle. Dry woods and rocky places.R. rare.

*LONICERA JAPONICA Thunb., Japanese honeysuckle. Woods and thickets. L. o.

SAMBUCUS CANADENSIS L., common elder, black elderberry. Rich moist soil. R. o.

SYMPHORICARPOS ORBICULATUS Moench., Indian currant, coralberry. Rocky banks. RL. o.

TRIOSTEUM PERFOLIATUM L., tinker's weed. Hillsides and banks. R. o.

VIBURNUM ACERIFOLIUM L., dockmackie, maple leaf arrowwood. Mesic woods. R. o.

V. DENTATUM L., roughish arrowwood. Woods and stream banks. B.rare.

V. LENTAGO L., sheepberry, nannyberry. Woods and stream banks.L.rare.

V. PRUNIFOLIUM L., black haw. Old pastures. R. o.

V. RECOGNITUM Fernald, smooth arrowwood. Along streams. L. rare.

DIPSACACEAE (Teasel Family)

*DIPSACUS SYLVESTRIS Huds., common teasel. Roadsides and waste places. RLP. c.

CAMPANULACEAE (Bluebell Family)

CAMPANULA AMERICANA L., tall bellflower. Moist thickets and woods. RP. o.

C. APARINOIDES Pursh., marsh bellflower. Wet meadows. L. rare.

C. DIVARICATA Michx., panicled bellflower. Dry banks. R. o.

*C. RAPUNCULOIDES L., European bellflower. Roadsides. R. o.

SPECULARIA PERFOLIATA (L.) A. DC., Venus' looking glass. Dry woods and fields. R. o.

LOBELIACEAE (Lobelia Family)

LOBELIA CARDINALIS L., cardinal-flower. Along streams. RP.o.

L. INFLATA L., Indian tobacco. Open fields and thickets. R.o.

L. SIPHILITICA L., great blue lobelia. Along streams. RLP. o.

L. SPICATA Lam., spiked lobelia. Sandy soil. L.rare.

COMPOSITAE (Composite Family)

*ACHILLEA MILLEFOLIUM L., yarrow, milfoil. Roadsides and waste places. R. c.

ACTINOMERIS ALTERNIFOLIA (L.) D.C., yellow ironweed, wing-stem. Rich soil. RP. o.

AMBROSIA ARTEMISIIFOLIA L., common ragweed. Fields and waste places. RP. c.

A. TRIFIDA L., giant ragweed. Along streams. RP. o.

A. ARTEMISIIFOLIA L. X A. TRIFIDA L. Roadsides. P. rare.

ANTENNARIA FALLAX Greene, false plantainleaf everlasting. Rich open woods and fields. B. rare.

A. PLANTAGINIFOLIA (L.) Richards, plantainleaf everlasting, pussytoes. Dry soil of open woods and fields. R. rare.

*ARCTIUM MINUS (Hill) Bernh., common burdock. Wasteplaces. R.o.

*ARTEMISIA VULGARIS L., common mugwort. Roadsides and waste places. R. rare.

ASTER CORDIFOLIUS L., blue wood aster. Woods, fence rows, and borders of fields. R. o.

A. DIVARICATUS L., white wood aster, Dry open woods. R. o.

A. INFIRMUS Michx., white aster. Dry woods. R. o.

A. LATERIFLORUS (L.) Britton var. PENDULUS (Ait.) Burgess, calico aster, starved aster. In dry or damp woods, in fields and open ground. S. rare.

A. LINARIIFOLIUS L., stiff aster. Dry banks. R. o.

A. MACROPHYLLUS L., bigleaf aster. Dry open woods. R. o.

A. PILOSUS Willd., white heath aster, steelweed, nailrod, Michaelmas daisy. Roadsides, pastures and wasteplaces.R.c.

A. PRENANTHOIDES Muhl., crooked-stem aster. Woods, along streams.R.o.

A. PUNICEUS L., purplestem aster. Swamps and riverbanks. RP.o.

A. SHORTII Lindl., Short's aster, Open woods and woodland borders. S. rare.

A. UMBELLATUS Mill., flat-top white aster. Damp thickets. R.rare.

A. UNDULATUS L., wavy-leaf aster. Dry open woods. R. o.

A. VIMINEUS Lam., small white aster. Dry or damp ground. R. o.

BIDENS BIPINNATA L., Spanish-needles. Roadsides and waste places. P. o.

B. CERNUA L. Swamps. L. o.

B. COMOSA (Gray) Wieg. Ditches and roadsides. R. o.

B. FRONDOSA L. Ditches, roadsides and waste places. R. rare.

B. VULGATA Greene, common beggar-ticks. Roadsides and waste places. RP o.

CACALIA ATRIPLICIFOLIA L., pale Indian plantain. Rich woods and open places. R. o.

CENTAUREA MACULOSA Lam., spotted knapweed. Dry banks and waste places. P. o.

*CHRYSANTHEMUM LEUCANTHEMUM L., ox-eye daisy, sheriff-pink. Fields and waste places. R. c.

CHRYSOGONUM VIRGINIANUM L., golden-knees. Rich woods. S. rare.

CHRYSOPSIS MARIANA (L.) Ell., golden aster. Dry soil. R. rare.

*CICHORIUM INTYBUS L., chicory, blue sailors. Roadsides and fields. LP. c.

CIRSIUM DISCOLOR (Muhl.) Spreng., field thistle. Thickets and flood plains. R. o.

*C. VULGARE (Savi) Tenore, common thistle. Fields and waste places. L. o.

COREOPSIS AURICULATA L., running tickseed. In moist woods and thickets, mostly on limestone soil. S, rare.

C. MAJOR Walt., wood tickseed. Dry woods and clearings. R. c.

CREPIS CAPILLARIS (L.) Wallr., smooth hawksbeard. Fields and waste places. RP. o.

ERECHTITES HIERACIFOLIA (L.) Raf., fireweed, pilewort. Thickets and waste places. R. o.

ERIGERON ANNUUS (L.) Pers., white-top. Fields and waste places. RL. c.

E. CANADENSIS L., horseweed, coltstail, butter-weed. Fields and waste places. R. o.

E. PHILADELPHICUS L., Philadelphia fleabane. Fields and woods. R. o.

E. PULCHELLUS Michx., robin's plantain. Thickets and moist banks. R. o.

E. STRIGOSUS Muhl., daisy fleabane, white-top. Open fields. RL. c.

EUPATORIUM COELESTINUM L., mistflower. Stream banks, fields and clearings. P. o.

E. FISTULOSUM Barratt, common Joe-Pye weed, queen-of-the-meadow. Slopes and bottom lands. RP. c.

E. PERFOLIATUM L., boneset. Wet places. RP. c.

E. PUBESCENS Muhl., hairy thoroughwort. Woods and thickets. R. o.

E. PURPUREUM L., wide-leaved Joe-Pye weed. Open fields and brushy clearings. R. o.

E. RUGOSUM Houtt., white snakeroot. Thickets and clearings. R. o.

E. SESSILIFOLIUM L., including var. VASEYI (Porter) Fernald & Griscom, upland boneset. Rich woods and thickets. R. o.

*FILAGO GERMANICA (L.) Huds., herva impia. In dry fields. S. rare.

*GALINSOGA CILIATA (Raf.) Blake, raceweed. Roadsides and waste places. R. c.

GNAPHALIUM OBTUSIFOLIUM L., cutweed, old field balsam, rabbit-tobacco. Fields and open places. RLP. o.

HELENIUM AUTUMNALE L., yellow sneezeweed. Wet meadows. RP. o.

HELIANTHUS DECAPETALUS L., thinleaved sunflower. Along streams. RP. o.

H. DIVARICATUS L., woodland sunflower. Dry woods and banks. RP. o.

H. GIGANTEUS L., giant sunflower. Wet meadows. Rp. o.

H. GROSSESERRATUS Martens., sawtooth sunflower. Dry soil. P. o.

H. LAEVIGATUS T. & G., smooth sunflower. Dry banks. R. o.

H. STRUMOSUS L., pale-leaved sunflower. Dry woods. P. rare.

HIERACIUM PANICULATUM L., panicled hawkweed. Open woods. R. o.

*H. PILOSELLA L., mouse-ear hawkweed. Sterile soil, roadsides and waste places. R. o.

*H. PRATENSE Tausch., king devil, field hawkweed. Fields, roadsides and waste places. R. o.

H. SCABRUM Michx., rough hawkweed. Dry woods. R. rare.

H. TRAILLII Greene, Green's hawkweed. Shale barrens. R. rare.

H. VENOSUM L., rattlesnake-weed. Dry woods. R. c.

KUHNIA EUPATORIOIDES L., false boneset. Woods near streams. R. rare.

LACTUCA BIENNIS (Moench.) Fernald, tall blue lettuce. Old fields. R. o.

L. CANADENSIS L., wild lettuce, horse-weed, devil-weed. Moist open places and thickets. R. o.

L. FLORIDANA (L.) Gaertn., Florida blue lettuce. Woods and thickets. P. o.

*L. SALIGNA L., willowlettuce. Roadsides and waste places. P. rare.

*L. SCARIOLA L., prickly lettuce, compass plant. Fields and waste places. R. o.

*LAPSANA COMMUNIS L., nipplewort. Roadsides. R. rare.

LIATRIS ASPERA Michx., rough blazing star. Dry sandy soil. B. rare.

L. GRAMINIFOLIA (Walt.) Willd., grass-leaved blazing star. Shale barrens. R. rare.

L. SCARIOSA (L.) Willd., large blazing star. Dry woods and fields. S. rare.

L. SPICATA (L.) Willd., gay feathers. Moist meadows. R. o.

L. TURGIDA Gaiser, robust blazing star. Dry rocky woods. S. rare.

*MATRICARIA MATRICARIOIDES (Less.) Porter, pineapple weed.
Roadsides and waste places. RL. o.

PARTHENIUM INTEGRIFOLIUM L., American feverfew. Dry soil,
shale barrens. R. ra re.

POLYMNIA UVEDALIA L., yellow-flowered leafcup. Mesic woods. P. rare.

PRENANTHES ALBA L., white lettuce. Rich woods and thickets. R. o.

P. ALTISSIMA L., tall white lettuce. Mesic woods. R. o.

P. SERPENTARIA Pursh, rattlesnake-root, gall-of-the-earth.
Thickets and open woods. S. rare.

P. TRIFOLIATA (Cass.) Fernald, lion's foot. Woods and thickets.B.rare.

RUDBECKIA HIRTA L., black-eyed Susan. Roadsides and fields. RLP. o.

R. LACINIATA L., tall coneflower. Wet thickets, along straams.R. o.

R. SPECIOSA Wenderoth, showy coneflower. Woods and bottomlands.R.rare.

R. TRILOBA L., three-lobed coneflower. Open woods and roadsides.RP.o.

SENECIO ANTENNARIIFOLIUS Britton, pussytoes ragwort. Shale
barrens. R. rare.

S. AUREUS L., golden ragwort. Swamps and wet meadows. R. o.

S. OBOVATUS Muhl., squaw-weed. Moist soil on banks and in
woods. R. o.

S. SMALLII Britton, Small's ragwort. Meadows and thickets.R. o.

SERICOCARPUS ASTEROIDES (L.) BSP., toothed white-topped aster.
Dry open woods. R.o.

SILPHIUM TRIFOLIATUM L. Dry banks. R. o.

SOLIDAGO ARGUTA Ait., cutleaf goldenrod. Open woods and thickets.RP.o.

S. BICOLOR L., silverrod. Dry banks. RP.o.

S. CAESIA L., wreath goldenrod. Mesic woods. R.o.

S. CANADENSIS L., Canada goldenrod. Fields and thickets. R.o.

S. CURTISII T. & G., Curtis' goldenrod. Mesic woods. R. o.

S. FLEXICAULIS L., broadleaf goldenrod. Mesic woods. R. rare.

S. GRAMINIFOLIA (L.) Salisb., grass-leaved goldenrod. Fields and roadsides. R. o.

S. HARRISII Steele, shalebarren goldenrod. Shale barrens. R. rare.

S. JUNCEA Ait., early goldenrod, yellow-top. Dry fields. RP.o.

S. NEMORALIS Ait., oldfield goldenrod. Dry fields. RP. c.

S. RUGOSA Ait., wrinkle-leaf goldenrod. Fields, roadsides, thickets. R. c.

*SONCHUS ASPER (L.) Hill., spiny sow thistle. Roadsides and waste places. RP.o.

*TARAXACUM OFFICINALE Weber., common dandelion. Fields, lawns and waste places. RL. c.

*TRAGOPOGON MAJOR Jacq. Roadsides. R. o.

*T. PRATENSIS L., yellow goat's beard. Fields and waste places. B.rare.

*TUSSILAGO FARFARA L., coltsfoot. Roadbanks. R.o.

VERBESINA OCCIDENTALIS (L.) Walt., small yellow crownbeard. Hillsides and dry thickets. RLP. o.

VERNONIA NOVEBORACENSIS (L.) Michx., New York ironweed. Moist soil in fields. RP. o.

SUMMARY OF THE VASCULAR FLORA

FAMILIES	GENERA	SPECIES NATIVE	SPECIES NATURALIZED	TOTAL SPECIES
Equisetaceae	1	2	0	2
Lycopodiaceae	1	4	0	4
Selaginellaceae	1	1	0	1
Isoëtaceae	1	1	0	1
Ophioglossaceae	1	2	0	2
Osmundaceae	1	3	0	3
Hymenophyllaceae	1	1	0	1
Pteridaceae	5	5	0	5
Aspidiaceae	7	18	0	18
Aspleniaceae	1	9	0	9
Polypodiaceae	1	2	0	2
TOTAL PTERIDOPHYTA	21	48	0	48
Pinaceae	2	5	0	5
Cupressaceae	1	1	0	1
TOTAL GYMNOSPERMAE	3	6	0	6
Typhaceae	1	1	0	1
Sparganiaceae	1	1	0	1
Zosteraceae	1	2	0	2
Alismataceae	2	2	0	2
Hydrocharitaceae	1	1	0	1

FAMILIES	GENERA	SPECIES NATIVE	SPECIES NATURALIZED	TOTAL SPECIES
Gramineae	28	35	15	50
Cyperaceae	5	34	0	34
Araceae	3	4	0	4
Commelinaceae	2	1	1	2
Pontederiaceae	1	1	0	1
Juncaceae	2	8	0	8
Liliaceae	20	32	4	36
Dioscoreaceae	1	1	0	1
Amaryllidaceae	1	1	0	1
Iridaceae	2	2	0	2
Orchidaceae	10	20	0	20
TOTAL MONOCOTYLEDONEAE	81	146	20	166
Salicaceae	2	5	0	5
Juglandaceae	2	4	0	4
Corylaceae	4	6	0	6
Fagaceae	3	10	0	10
Ulmaceae	2	4	0	4
Moraceae	2	1	2	3
Urticaceae	4	4	0	4
Santalaceae	1	1	0	1
Aristolochiaceae	2	5	0	5
Polygonaceae	5	12	6	18
Chenopodiaceae	1	0	1	1
Amaranthaceae	1	1	0	1

FAMILIES	GENERA	SPECIES		TOTAL SPECIES
		NATIVE	NATURALIZED	
Phytolaccaceae	1	1	0	1
Aizoaceae	1	0	1	1
Portulacaceae	1	0	1	1
Caryophyllaceae	10	9	11	20
Nymphaeaceae	2	2	0	2
Ranunculaceae	10	20	2	22
Berberidaceae	4	4	1	5
Menispermaceae	1	1	0	1
Magnoliaceae	2	2	0	2
Anonaceae	1	1	0	1
Lauraceae	2	2	0	2
Papaveraceae	3	1	2	3
Fumariaceae	1	1	0	1
Cruciferae	14	8	11	19
Crassulaceae	1	2	0	2
Saxifragaceae	9	12	0	12
Hamamelidaceae	1	1	0	1
Platanaceae	1	1	0	1
Rosaceae	14	29	5	34
Leguminosae	18	24	12	36
Linaceae	1	2	0	2
Oxalidaceae	1	3	0	3
Geraniaceae	1	1	1	2
Rutaceae	1	1	0	1
Polygalaceae	1	6	0	6
Euphorbiaceae	2	4	1	5

FAMILIES	GENERA	SPECIES		TOTAL SPECIES
		NATIVE	NATURALIZED	
Callitrichaceae	1	2	0	2
Anacardiaceae	1	5	0	5
Aquifoliaceae	1	2	0	2
Celastraceae	1	1	0	1
Staphyleaceae	1	1	0	1
Aceraceae	1	5	1	6
Hippocastanaceae	1	1	0	1
Balsaminaceae	1	2	0	2
Rhamnaceae	2	2	0	2
Vitaceae	2	4	0	4
Tiliaceae	1	1	0	1
Guttiferae	2	7	0	7
Cistaceae	1	1	0	1
Violaceae	1	14	0	14
Passifloraceae	1	1	0	1
Cactaceae	1	1	0	1
Thymelaeaceae	1	1	0	1
Lythraceae	2	1	1	2
Nyssaceae	1	1	0	1
Melastomaceae	1	1	0	1
Onagraceae	5	11	0	11
Araliaceae	2	4	0	4
Umbelliferae	15	16	3	19
Cornaceae	1	3	0	3
Pyrolaceae	3	4	0	4
Ericaceae	9	14	0	14

FAMILIES	GENERA	SPECIES		TOTAL SPECIES
		NATIVE	NATURALIZED	
Diapensiaceae	1	1	0	1
Primulaceae	4	6	1	7
Oleaceae	3	2	2	4
Gentianaceae	2	3	0	3
Apocynaceae	2	3	2	5
Asclepiadaceae	2	8	0	8
Convolvulaceae	2	3	0	3
Polemoniaceae	1	5	0	5
Hydrophyllaceae	1	2	0	2
Boraginaceae	6	4	3	7
Verbenaceae	1	3	0	3
Labiatae	19	21	6	27
Solanaceae	3	4	1	5
Scrophulariaceae	12	19	4	23
Bignoniaceae	2	1	2	3
Orobanchaceae	3	3	0	3
Phrymaceae	1	1	0	1
Plantaginaceae	1	2	3	5
Rubiaceae	5	14	1	15
Caprifoliaceae	6	9	1	10
Dipsacaceae	1	0	1	1
Campanulaceae	2	4	1	5
Lobeliaceae	1	4	0	4
Compositae	45	97	17	114
TOTAL DICOTYLEDONEAE	318	516	107	623

COMPONENTS OF THE FLORA OF MONROE COUNTY, WEST VIRGINIA

MAJOR GROUPS	FAMILIES	GENERA	SPECIES		
			NATIVE	NATURALIZED	TOTAL
Pteridophyta	11	21	48	0	48
Gymnospermae	2	3	6	0	6
Monocotyledoneae	16	81	146	20	166
Dicotyledoneae	88	318	516	107	623
Total	117	423	716	127	843

FAMILIES REPRESENTED BY 18 OR MORE SPECIES:

Compositae	114 species
Gramineae	50
Leguminosae	36
Liliaceae	36
Cyperaceae	34
Rosaceae	34
Labiatae	27
Scrophulariaceae	23
Ranunculaceae	22
Caryophyllaceae	20
Orchidaceae	20
Cruciferae	19
Umbelliferae	19
Polygonaceae	18
Aspidiaceae	18

SPECIES LISTS FOR PRINCIPAL HABITAT TYPES

MESIC FOREST

This is a rich, well-watered forest, as on the northwest-facing slopes of Peters Mountain.

BOTRYCHIUM VIRGINIANUM
ADIANTUM PEDATUM
ATHYRIUM ASPLENIOIDES
DRYOPTERIS INTERMEDIA
D. MARGINALIS
POLYSTICHUM ACROSTICHOIDES
THELYPTERIS HEXAGONOPTERA
ARISAEMA TRIPHYLLUM
CLINTONIA UMBELLULATA
CONVALLARIA MONTANA
DISPORUM LANUGINOSUM
LILIUM CANADENSE
MEDEOLA VIRGINIANA
MELANTHIUM PARVIFLORUM
STREPTOPUS ROSEUS
TRILLIUM ERECTUM
UVULARIA PERFOLIATA
GOODYERA PUBESCENS
HABENARIA ORBICULATA
ORCHIS SPECTABILIS
BETULA LENTA
FAGUS GRANDIFOLIA
LAPORTEA CANADENSIS
ARISTOLOCHIA MACROPHYLLA
ASARUM CANADENSE
SILENE STELLATA
S. VIRGINICA
STELLARIA PUBERA
CIMICIFUGA RACEMOSA
HEPATICA ACUTILOBA
H. AMERICANA
CAULOPHYLLUM THALICTROIDES
JEFFERSONIA DIPHYLLA
PODOPHYLLUM PELTATUM
LIRIODENDRON TULIPIFERA
MAGNOLIA ACUMINATA
SANGUINARIA CANADENSIS
DENTARIA LACINIATA
BOYKINIA ACONITIFOLIA
HEUCHERA AMERICANA
HYDRANGEA ARBORESCENS
MITELLA DIPHYLLA
TIARELLA CORDIFOLIA
ARUNCUS DIOICUS
PRUNUS SEROTINA
RUBUS ODORATUS
GERANIUM MACULATUM
ACER PENSYLVANICUM

ACER SACCHARUM

A. SPICATUM

AESCULUS OCTANDRA

PARTHENOCISSUS QUINQUEFOLIA

TILIA HETEROPHYLLA

VIOLA FIMBRIATULA

V. PUBESCENS

CIRCAEA QUADRISULCATA

ARALIA RACEMOSA

CRYPTOTAENIA CANADENSIS

LIGUSTICUM CANADENSE

OSMORHIZA CLAYTONI

SANICULA CANADENSIS

S. TRIFOLIATA

FRAXINUS AMERICANA

PHLOX STOLONIFERA

HYDROPHYLLUM VIRGINIANUM

CYNOGLOSSUM VIRGINIANUM

COLLINSONIA CANADENSIS

PEDICULARIS CANADENSIS

SCROPHULARIA LANCEOLATA

CONOPHOLIS AMERICANA

GALIUM LATIFOLIUM

G. TRIFLORUM

SOLIDAGO FLEXICAULIS

DRY FOREST

This is an open forest dominated by oaks and heaths, as on the southeast-facing slopes of Peters Mountain.

LYCOPODIUM TRISTACHYUM
PTERIDIUM AQUILINUM
CHAMAELIRIUM LUTEUM
DIOSCAREA QUATERNATA
HYPOXIS HIRSUTA
CYPRIPEDIUM ACAULE
ISOTRIA VERTICILLATA
CARYA GLABRA
C. TOMENTOSA
CASTANEA DENTATA
C. PUMILA
QUERCUS ALBA
Q. PRINUS
Q. RUBRA
Q. VELUTINA
SASSAFRAS ALBIDUM
GILLENIA TRIFOLIATA
BAPTISIA TINCTORIA
DESMODIUM NUDIFLORUM
LESPEDEZA HIRTA
POLYGALA POLYGAMA
CEANOTHUS AMERICANUS
LECHEA RACEMULOSA
NYSSA SYLVATICA
ARALIA NUDICAULIS
ANGELICA VENENOSA
ZIZIA TRIFOLIATA
CORNUS FLORIDA
CHIMAPHILA MACULATA
PYROLA ROTUNDIFOLIA
EPIGAEA REPENS
GAULTHERIA PROCUMBENS
GAYLUSSACIA BACCATA
KALMIA LATIFOLIA
OXYDENDRUM ARBOREUM
RHODODENDRON CALENDULACEUM
VACCINIUM ANGUSTIFOLIUM
V. ERYTHROCARPUM
V. STAMINEUM
V. VACILLANS
GALAX APHYLLA
LYSIMACHIA QUADRIFOLIA
ASCLEPIAS EXALTATA
A. QUADRIFOLIA
CUNILA ORIGANOIDES
PYCNANTHEMUM VIRIDIFOLIUM
GERARDIA LAEVIGATA
G. PEDICULARIA
G. VIRGINICA
HOUSTONIA LONGIFOLIA

ASTER INFIRMUS

A. LINARIIFOLIUS

CHRYSOPSIS MARIANA

COREOPSIS MAJOR

HIERACIUM VENOSUM

SENECIO SMALLII

SERICOCARPUS ASTEROIDES

WET MEADOWS

These are marshy areas, as around Waiteville and south of Lindside.

SELAGINELLA APODA
OSMUNDA REGALIS
ONOCLEA SENSIBILIS
THELYPTERIS PALUSTRIS
CAREX FRANKII
C. GRANULARIS
C. HYSTRICINA
C. LURIDA
ELEOCHARIS ACICULARIS
SCIRPUS LINEATUS
ACORUS CALAMUS
JUNCUS ACUMINATUS
J. EFFUSUS
ALETRIS FARINOSA
HABENARIA FLAVA
H. LACERA
SPIRANTHES CERNUA
POLYGONUM HYDROPIPER
PENTHORUM SEDOIDES
APIOS AMERICANA
LUDWIGIA PALUSTRIS
OENOTHERA FRUTICOSA
O. PERENNIS
CICUTA MACULATA
OXYPOLIS RIGIDIOR
LYSIMACHIA LANCEOLATA
SAMOLUS PARVIFLORUS
ASCLEPIAS INCARNATA
PHLOX MACULATA
PYCNANTHEMUM FLEXUOSUM
VERONICA AMERICANA
V. ANAGALIS-AQUATICA
GALIUM TINCTORIUM
LIATRIS SPICATA

ROADSIDE WEEDS

This community consists of plants, including a high percentage of introduced species, found on (usually) poor soil at the edges of roads.

AGROSTIS ALBA
ARRHENATHERUM ELATIUS
BROMUS INERMIS
B. JAPONICUS
DACTYLIS GLOMERATA
DIGITARIA ISCHAEMUM
FESTUCA ELATIOR
F. OBTUSA
F. OVINA
HOLCUS LANATUS
PHLEUM PRATENSE
RUMEX ACETOSELLA
ARENARIA SERPYLLIFOLIA
LYCHNIS ALBA
SAPONARIA OFFICINALIS
SILENE ANTIRRHINA
S. CUCUBALUS
ALYSSUM ALYSSOIDES
BARBAREA VULGARIS
CAPSELLA BURSA-PASTORIS
LEPIDIUM CAMPESTRE
L. VIRGINICUM
SISYMBRIUM OFFICINALE
FRAGARIA VIRGINIANA
POTENTILLA RECTA
MEDICAGO LUPULINA
MELILOTUS ALBA
M. OFFICINALIS
TRIFOLIUM PRATENSE
T. REPENS
OXALIS EUROPAEA
EUPHORBIA LATHYRUS
E. MACULATA
OENOTHERA BIENNIS
DAUCUS CAROTA
PASTINACA SATIVA
APOCYNUM CANNABINUM
ASCLEPIAS SYRIACA
CONVOLVULUS SEPIUM
ECHIUM VULGARE
GLECHOMA HEDERACEA
LINARIA VULGARIS
VERONICA ARVENSIS
V. PEREGRINA
PLANTAGO LANCEOLATA
P. RUGELII
DIPSACUS SYLVESTRIS
ACHILLEA MILLEFOLIUM

AMBROSIA ARTEMISIIFOLIA

CHRYSANTHEMUM LEUCANTHEMUM

CICHORIUM INTYBUS

ERIGERON ANNUUS

E. STRIGOSUS

GALINSOGA CILIATA

HIERACIUM PILOSELLA

H. PRATENSE

MATRICARIA MATRICARIOIDES

TARAXACUM OFFICINALE

TRAGOPOGON MAJOR

TUSSILAGO FARFARA

SHALE BARREN

Shale barrens are unique ecosystems of sparsely scattered plants, several of which are strict endemics in this habitat, on steep south- or southwest-facing slopes of loose shale, experiencing extremes in heat and drought.

Slaty Mountain, 2 miles northwest of Sweet Springs:

CHEILANTHES LANOSA
WOODSIA SCOPULINA
PINUS PUNGENS
P. VIRGINIANA
DANTHONIA SPICATA
PANICUM LINEARIFOLIUM
QUERCUS ILICIFOLIA
Q. PRINUS
Q. RUBRA
CELTIS TENUIFOLIA
ERIOGONUM ALLENI
SILENE PENSYLVANICA
DRABA RAMOSISSIMA
SEDUM GLAUCOPHYLLUM
TEPHROSIA VIRGINIANA
TRIFOLIUM VIRGINICUM
RHUS AROMATICA
R. COPALLINA
R. GLABRA
R. RADICANS
R. TYPHINA
CEANOTHUS AMERICANUS
VIOLA PEDATA
OENOTHERA ARGILLICOLA
PSEUDOTAENIDIA MONTANA
THASPIUM BARBINODE
ASCLEPIAS TUBEROSA
A. VARIEGATA
A. VERTICILLATA
CONVOLVULUS PURSHIANUS
PHLOX SUBULATA
SCUTELLARIA OVATA
PENSTEMON CANESCENS
SCROPHULARIA LANCEOLATA
PLANTAGO ARISTATA
HOUSTONIA TENUIFOLIA
CAMPANULA DIVARICATA
HELIANTHUS DIVARICATUS
H. LAEVIGATUS
HIERACIUM TRAILLII
LIATRIS GRAMINIFOLIA
PARTHENIUM INTEGRIFOLIUM
SENECIO ANTENNARIIFOLIUS

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