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## Bulletin No. 15: The Flora of Connecticut Arboretum

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# THE FLORA OF THE CONNECTICUT ARBORETUM



THE CONNECTICUT ARBORETUM  
CONNECTICUT COLLEGE

BULLETIN No. 15  
NEW LONDON, CONNECTICUT

Cover drawing is from *The Appalachians*  
by Maurice Brooks, illustrated by Lois and  
Louis Darling (Houghton-Mifflin, 1965)

# THE CONNECTICUT ARBORETUM

BULLETIN NO. 15

DECEMBER 1965

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## ARBORETUM STAFF

*Director, WILLIAM A. NIERING, Technical Advisor, RICHARD H. GOODWIN  
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## THE CONNECTICUT ARBORETUM ASSOCIATION

Association membership comprises organizations and individuals interested in supporting the Arboretum and its program. Members receive Arboretum publications and enjoy other privileges, including notices of special field trips and lectures, and the use of the Arboretum facilities.

Individual memberships: annual, \$5; sustaining, \$10

Organization memberships: annual, \$10; sustaining, \$25; supporting, \$100

Checks should be made payable to the Connecticut Arboretum and sent to the Director, Dr. William A. Niering, Connecticut College, New London, Conn.



*With gratitude and affection  
this bulletin is dedicated to*

KALEB P. JANSSON

1878-1960

*An enthusiastic student of the  
local flora, he contributed many  
hours to the development of the  
Connecticut Arboretum and its  
collections.*

## Foreword

THE 340 acres presently included within the boundaries of the Connecticut Arboretum serve Connecticut College, the local community and the people of the state as an educational and research resource. Here can be found an extensive collection of native trees, shrubs and wild flowers, as well as a number of plant communities typical of southern New England. Some of the latter are being preserved in two natural areas which are being protected as far as possible from disturbance by man.

The establishment and maintenance of the plantings have been in progress for about a third of a century, while the natural plant communities have been under more intensive study by the staff and students of the College during the past twelve years. The time has come when this information should be brought together in published form.

A local flora may be thought of as an inventory of the various kinds of plants growing within an area. As such it provides historical documentation for conditions prevailing at the time the inventory is made. Such records are of great scientific value in our ever-changing world.

The first article presents brief descriptions of the various plant communities found within the Arboretum. Students and visitors will find the cover-type map on pages 32 and 33 particularly helpful in locating these plant associations. Approximately fifteen per cent of the total list of vascular plants growing in the Arboretum are mentioned here, either because of their importance in the association or because of their especial interest.

The second article lists the more than 850 species and varieties of vascular plants of the Arboretum, together with their location or ecological association. An especial effort has been made to give quantitative estimates of the present abundance of these plants.

The authors wish to acknowledge the contributions of the late Mr. Kaleb P. Jansson, of Miss Elizabeth Haines and of Miss Carol Price in collecting material upon which this flora is based. They would like to thank Mr. Leonard J. Bradley for his assistance in the identification of specimens. The maps have been drawn by Mrs. Dorothy de Fontaine to whom the authors are most grateful. For the beautiful design on the front cover we are indebted to Lois and Louis Darling.

*William A. Niering*

*Director*



# The Vegetation of the Connecticut Arboretum

WILLIAM A. NIERING AND RICHARD H. GOODWIN

THE CONNECTICUT ARBORETUM was established in 1931 on a 64-acre tract situated on the west side of the Connecticut College campus. Since then it has been enlarged by some fourteen additional parcels so that at present it comprises approximately 340 acres (See map on back cover). Immediately to the south lies a nine-acre State Wildlife Sanctuary, which is under the jurisdiction of the State Board of Fisheries and Game.

Since early colonial settlement, most of the land involved has been cleared at one time or another for agriculture, except for some of the rough ledgy terrain and some of the marshes and other wetlands. Grazing by cattle has been intensive on the cleared areas, and the wooded sections have also been subjected to this use to some extent, even through the first third of the present century. It is likely that grazing has been an important factor responsible for the present scarcity of wild flowers. A general account of the vegetational history of the Arboretum has recently been published (Niering and Goodwin, 1962).

The old fields in the original Arboretum tract, to the north and east of the pond, have been developed as the Arboretum plantings. These are currently exhibited as a collection of trees and shrubs native to the northeastern United States. In 1950 a check-list of woody plants growing in the Arboretum at that time was published (Goodwin, Heinig and Jansson, 1950). A three-acre section, including a wooded slope and wetland southeast of the pond (area 4 in map on pages 32 and 33), was established in 1956 as the Edgerton Wildflower Area in memory of the late Mrs. Edna Edgerton, for many years a generous friend of the Arboretum, and is being developed as a garden of native wild flowers.

The Arboretum pond antedates the founding of the Arboretum by some seven years. It was created by clearing and excavating a red maple swamp and then building a small dam. It is entirely spring fed and its level is subject to considerable fluctuation. The aquatic vegetation now found there has developed during the past forty years.

Various open areas are being reforested with conifers (Areas marked EP in map on pages 32 and 33). The earliest of these was the red pine (*Pinus resinosa*) grove just southeast of the pond, planted in 1928. White pine (*P. strobus*), jack pine (*P. banksiana*), European larch (*Larix decidua*), and hemlock (*Tsuga canadensis*) have been planted elsewhere.

The Bolleswood Natural Area, established in 1952 (Anon., 1952) and augmented by additions in 1956 and 1960, now comprises about 160 acres, while the Mamacoke Natural Area acquired in 1955 (Goodwin, 1955),



FIG 1. *Oak forest on the ledges of the Bolleswood Natural Area. The larger tree is a white oak; to the right is a black birch infected with nectria canker, a fungus which frequently attacks this tree.*

is 41 acres in extent (See map on back cover). These tracts have been set aside by the Trustees of Connecticut College as samples of the natural environment, where the vegetation and associated animals will be maintained as nearly as possible in an undisturbed condition.

A cover type map of the entire Arboretum has been prepared (Map on pages 32 and 33). The natural plant communities shown on this map are described briefly below. The map and descriptions are based on previous studies (Niering and Goodwin, 1962).

#### UPLAND FOREST TYPES

The oak and oak-hemlock types occupy the dry ledgy terrain in the Bolleswood Natural Area, east of the ravine. The oak type also occurs in similar sites north of Gallows Lane, on Mamacoke and on the Avery Tract. Here the major disturbances have been fire, cutting and severe storms, especially hurricanes. As a result of the 1938 hurricane, scattered windthrows have occurred within the oak type, whereas in the oak-hemlock, many large shallow-rooted hemlock were blown down. Both areas are recovering from this catastrophe. Although these two types occur on similar sites, fire history appears to account for the difference. In the ravine, a more mesic situation, somewhat protected from fires and storms, a more mature hemlock-hardwoods forest is found. Throughout these 3 vegetation types no cutting has occurred since 1911, except for the removal of some young black birch in the ravine.





FIG. 2. *Large open-grown white oaks on the west slope of the Mamacoke Natural Area with rocky ledges in the background*

## Oak Forest

The oak forest occupies undulating ledgy terrain with a relatively thin soil mantle lying deep in depressions between the rocky outcrops. This is the most extensive forest type within the area and is typical of similar sites in southeastern Connecticut. In general it is a relatively young forest, primarily of sprout origin, dominated by black (*Quercus velutina*), white (*Q. alba*) and red oak (*Q. rubra*), with scarlet (*Q. coccinea*) and chestnut oak (*Q. prinus*) increasing in importance in the more open, rocky situations (Fig. 1). As a result of past disturbances, openings have been produced in the forest canopy which have favored such trees as gray birch (*Betula populifolia*), sassafras (*Sassafras albidum*) and black birch (*Betula lenta*), the latter especially conspicuous on the rocky slopes. Less common are red maple (*Acer rubrum*), beech (*Fagus grandifolia*) and hemlock (*Tsuga canadensis*). Scattered through the area are larger oaks up to two feet in diameter, many with their tops badly damaged from storms. In the shrub stratum mountain laurel (*Kalmia latifolia*) often forms a dense layer four to ten feet high. Herbaceous cover is sparse; the species most frequently encountered include pink ladyslipper (*Cypripedium acaule*), wild lily-of-the-valley (*Maianthemum canadense*), wild sarsaparilla (*Aralia nudicaulis*) and checkerberry (*Gaultheria procumbens*). The xeric nature of the area, past fires, grazing, and heavy leaf litter all may contribute to this paucity.

In the future, with fire protection, one can expect an increase in the fire sensitive and relatively shade tolerant hemlock and a corresponding decrease in species such as gray birch and sassafras that cannot grow in deep shade.

On Mamacoke oak and hickory are the conspicuous trees; hemlock is absent. Large oaks, often open grown, as indicated by the low spreading branches, are scattered throughout the forest (Fig. 2). The presence of large chestnut snags indicates that this species was a former member of the forest community prior to the introduction of the chestnut blight disease. Mountain laurel and the lower-growing members of the heath family—huckleberry and low blueberries—make up the shrubby undergrowth. The trees now present will probably continue to be the dominants, except for a possible decrease in black birch, which is especially conspicuous in the openings created by past hurricanes. However, with periodic hurricanes occurring, black birch will probably continue to persist locally.

On the drier rocky ledges at the southeast end of Mamacoke is an interesting scrub oak (*Quercus ilicifolia*) stand. This shrubby oak covers extensive areas on Cape Cod and in the Pine Barrens of New Jersey, where periodic fires have tended to favor the species. Here the thin soils and droughty habitat will probably allow this community to persist for a long time. Scattered specimens of scarlet and black oak occur, but there is no evidence that these species will crowd out the scrub oak.





FIG. 3. *Mature hemlock forest on the ledges in the Bolleswood Natural Area prior to the 1938 hurricane. Mountain laurel is the dominant shrub in the opening. Along the ravine a few scattered large hemlocks still occur. Since the hurricane a mixed oak-hemlock community with an abundance of mountain laurel has developed. (Photo courtesy of Miss Edna Leighton Tyler.)*



### Oak-hemlock Forest

The oak-hemlock type has developed along the ledgy edges of the ravine on sites comparable to those in the contiguous oak forest. Its distribution corresponds closely to the area formerly dominated by a stand of large hemlock, 112 of which were blown down in the 1938 hurricane (Fig. 3). Twelve of the 18 remaining trees died the following summer and today only four hemlocks over two feet in diameter occur on the ledges. A study of the stumps of these trees (Avery *et al.*, 1940) indicates that they were from 106 to 171 years old. The area is now recovering from this storm. Young hemlocks are growing up under the larger oaks, and one can expect a mixed oak-hemlock forest in the future, if no severe fires occur.

In the shrub story mountain laurel, which has increased markedly since 1938, forms a tall, often continuous layer, averaging 4 to 10 feet in height but occasionally reaching 12 to 15 feet in the openings. Foot trails in certain sections literally tunnel beneath the laurel. However, due to dense shading from the hemlock, this species is now decreasing in abundance. Herbaceous cover is sparse and similar to that in the surrounding oak forest.

On the numerous rock outcrops typical shrubs are huckleberry (*Gaylussacia baccata*), low bush blueberry (*Vaccinium angustifolium*, *V. vacillans*) and sweet pepperbush (*Clethra alnifolia*). Herbaceous species include poverty grass (*Danthonia spicata*), little bluestem (*Andropogon scoparius*), and rock polypody (*Polypodium virginianum*). The pink lady slipper (*Cypripedium acaule*) is especially conspicuous around the open, moss-covered outcrops which are free of leaf litter.

### Hemlock-hardwoods Forest

The hemlock-hardwoods type is represented in the ravine and westward along the adjacent east-facing lower slope. The eastern boundary is abruptly demarcated by a complex of almost vertical ledges ranging from 30 to 50 feet in height. The terrain is irregular and rocky with a soil mantle of varying depth. Cutting, storm damage and some grazing have occurred in the ravine. The general aspect from the top of the ledges overlooking the area is that of a well-developed forest. Large trees 12 to 18 inches in diameter are frequent, but a greater number are less than 6 inches in diameter. A few old hemlock which withstood the storm, the largest reaching 2.5 feet in diameter, occur either along the bottom of the ravine or are precariously established on the steep rocky ledges above the stream. Although this area was not as severely disturbed as the ledges to the east, scattered blowdowns did occur. The openings thus created are now occupied by dense stands of hemlock and black birch saplings. In the ravine the principal hardwoods are black birch, red oak, beech, red maple and yellow birch (*Betula lutea*), the last restricted essentially to the margins of the stream. Associates of lesser importance are white ash (*Fraxinus americana*), white oak, tulip (*Liriodendron Tulipifera*), black oak and hickory (*Carya tomentosa*). Beech is localized, with an abundance of young root-suckers around the larger trees. In the southern section of the ravine where stone walls occur

within the forest, the aspect is primarily hardwoods with a marked increase in young black birch and only scattered hemlock saplings. To the north a few large open-grown oaks are rapidly being engulfed by young trees, primarily black birch.

The undergrowth includes flowering dogwood (*Cornus florida*), witch hazel (*Hamamelis virginiana*) and, along the stream margins, spicebush (*Lindera Benzoin*). Herbaceous cover, lusher than on the previously mentioned sites, includes Christmas fern (*Polystichum acrostichoides*), woodland aster (*Aster divaricatus*), lady fern (*Athyrium Felix-femina*), wild lily-of-the valley, wild geranium (*Geranium maculatum*) and the parasitic beech-drops (*Epifagus virginiana*). In the wetter areas along the stream skunk cabbage (*Symplocarpus foetidus*) and hellebore (*Veratrum viride*) are common. In one place yew (*Taxus canadensis*), introduced prior to the establishment of the Natural Area, still persists.

Although hemlock does not occur uniformly throughout the ravine, the trend is toward an increase in hemlock mixed with oak and other hardwoods.

#### POST-AGRICULTURAL TYPES

The post-agricultural types have developed on sites cleared for agriculture and since abandoned. The rocky ledges surrounding these lots, which have been subjected to grazing, fire and quarrying, have also been included. These types have been grouped under the following headings—open fields, thickets and transition forest, depending upon the stage of succession or vegetation development.

##### *Open Fields*

The fields on the west side of the Bolleswood Natural Area were cultivated up to about 1945 and were grazed by cattle until 1951, the date of acquisition by the Arboretum (Fig. 4). In March, 1954, a severe grass fire swept the fields just prior to the establishment of our long-range ecological studies. When surveyed in that year they were dominated by perennial grasses and herbs, including Rhode Island bent (*Agrostis tenuis*), Kentucky bluegrass (*Poa pratensis*), and goldenrod (*Solidago rugosa*). Other species occasionally present included velvet grass (*Holcus lanatus*), little bluestem (*Andropogon scoparius*), grass-leaved goldenrod (*Solidago graminifolia*), sheep-sorrel (*Rumex Acetosella*), dandelion (*Taraxacum officinale*), and English plantain (*Plantago lanceolata*).

Woody plants that had become established included bayberry (*Myrica pensylvanica*), black cherry (*Prunus serotina*), smooth sumac (*Rhus glabra*), apple (*Pyrus Malus*), and red cedar (*Juniperus virginiana*). Japanese honeysuckle (*Lonicera japonica*) had also started to invade the area from an adjoining fence row.

Fields on the Goodwin, Matthies and Avery Tracts are still more or less open, and some of them are now being maintained in this state by periodic treatment of invading woody species with herbicides. The field at the south-





FIG. 4. Open field of grasses and goldenrod in the western part of the Bolleswood Natural Area as it appeared in 1953. Since that time the shrub and tree cover has increased markedly.

east corner of the Matthies Tract was plowed as recently as 1961. And the field just to the north has been kept open by use as a ball field and by some grazing. On portions of the Avery and Matthies Tracts little bluestem forms the dominant vegetation on sterile sandy soils. The invasion of woody species is relatively slow. On the higher parts of Mamacoke scattered small patches of little bluestem still persist, probably maintained by periodic drought and past fires. Although woody plants are present within the dense grass cover, they are having dubious success competing with the grasses on such dry sites.

#### *Thicket*

Shrubby thickets with scattered early forest trees occur in many places throughout the Arboretum. The pioneer shrubs mentioned above frequently occur. Dense brier thickets, primarily greenbrier (*Smilax rotundifolia*), but also sawbrier (*S. glauca*), are found in many places, a notable example being the area north of Gallows Lane and just east of the Bolleswood Natural Area. Several species of sumac, especially *Rhus copallina*, also form dense thickets in formerly open fields and pastures. Saplings of black cherry, sweet birch, red maple, sassafras and various oaks are likely to be found in this association, but the establishment of such trees in the dense shrubby thickets is rare. Where trees occur, they will probably shade out the sumac and greenbrier as they grow up.



### Transition Forest

In this habitat the above-mentioned species of trees are asserting their dominance and the shrubs and brier are being shaded out. In some areas large, scattered, open-grown trees, primarily oaks, indicate only partial clearing in the past for pasture; they formerly probably presented a savanna-like landscape. When the tree canopy is sufficiently open brier patches of considerable density persist.

### WETLAND TYPES

The wetlands include the margin around the Arboretum Pond, a shallow semi-open bog just west of the pond, the Red Maple Swamp on Gallows Lane, wooded swampy areas in the Bolleswood Natural Area, a small open marsh at the head of the cove on the Avery Tract, and the salt marshes on Mamacoke.

#### Pond Margin

The pond, comprising about four acres, is fed primarily by seepage and the water level fluctuates sufficiently to expose submerged, floating and emergent zones along the margin during dry periods. Much of the pond surface is now covered with water lily (*Nymphaea odorata*). Along the shoreline the rush, *Juncus pelocarpus*, is a dominant emergent, frequently nipped off to near the water line by muskrats. Pickerel weed (*Pontederia cordata*), bur-reed (*Sparganium* spp.) and cat-tail (*Typha latifolia*) are found in places. Shoreward on the exposed organic soil spike-rushes (*Eleocharis obtusa* and *E. acicularis*) are common. Other herbs include the lance-leaved violet (*Viola lanceolata*), St. John's-wort (*Hypericum mutilum*), swamp loosestrife (*Lysimachia terrestris*), meadow-beauty (*Rhexia virginica*), and dulichium (*Dulichium arundinaceum*). Along the shore button-bush (*Cephalanthus occidentalis*) is scattered in a continuous herb and sphagnum cover which includes swamp milkweed (*Asclepias incarnata*), swamp St. John's-wort (*Hypericum virginicum*), and the rush (*Juncus effusus*), among other species. Other shrubs include sweet pepperbush (*Clethra alnifolia*), staggerbush (*Lyonia ligustrina*), alder (*Alnus serrulata*), and willows (*Salix* spp.). A few specimens of southern white cedar (*Chamaecyparis thyoides*) and one of the bald cypress (*Taxodium distichum*) have been planted along the shores.

#### Semi-open Bog

West of the pond lies a small semi-open bog, completely closed except for a small open water eye in the southeast corner. The greatest depth of the peat in this bog is about three feet. It is surrounded by a shrub border of highbush blueberry (*Vaccinium corymbosum*), sweet pepperbush, swamp azalea (*Rhododendron viscosum*), leatherleaf (*Chamaedaphne calyculata*) and sheep laurel (*Kalmia angustifolia*). Scattered red maple, black gum (*Nyssa sylvatica*) and gray birch occur as marginal species. The more open eastern interior of the bog (Fig. 5), adjacent to the open water, is com-



FIG. 5. Small open bog west of the pond. The duck is within the sphagnum-sedge mat surrounded by soft rush and a shrub border of highbush blueberry, sweet pepperbush and swamp azalea. Red maples and other trees form the forest border.

prised of a sphagnum mat surrounded by a belt of soft rush (*Juncus effusus*). Cranberry (*Vaccinium macrocarpon*) forms continuous mats over the sphagnum in the more open area. Other typical bog species occasionally found are pitcher plant (*Sarracenia purpurea*) and sundew (*Drosera rotundifolia*). In the western sector the succession is further advanced with a herb-shrub complex of cranberry, steplebush (*Spiraea tomentosa*) and sweet pepperbush scattered within a matrix of *Juncus*, marsh fern (*Dryopteris Thelypteris*) and sphagnum. Red maple seedlings are frequent throughout, but seldom get beyond this stage before they die. In fact, even the occasional larger maple saplings have difficulty growing here as revealed by our 10-year resurvey of the vegetation across this area. Presumably water level fluctuations and the very acid boggy substrate are not too favorable to the survival of red maple. On the south side is another open area dominated by a sphagnum-sedge (*Carex canescens* var. *subloliacea*) mat surrounded by a zone of *Juncus*.

#### Red Maple Swamp

This area, bisected by Gallows Lane, lies in a 22-foot deep depression between two sets of ledges. Originally a bog lake, it is now completely filled with peat. To the south side of Gallows Lane the area is dominated by a red maple forest. A dense shrub layer of highbush blueberry, swamp



azalea, sweet pepperbush, and winterberry occurs. To the north of the road the red maple overstory was removed about 1948, and the shrub layer has had an even better opportunity to develop. Water willow (*Decodon verticillatus*), alder (*Alnus rugosa*, *A. serrulata*), staggerbush, and mountain holly (*Nemopanthis mucronata*) may be found.

#### *Other Wooded Wetlands*

These areas may be found in poorly drained depressions and along the stream in the ravine. Red maple is the dominant tree, with the above mentioned species of shrubs frequently present. In addition, spicebush (*Lindera Benzoin*) and poison sumac (*Rhus vernix*) may occur. Typical herbaceous cover includes skunk cabbage (*Symplocarpus foetidus*), cinnamon fern (*Osmunda cinnamomea*), and jewel weed (*Impatiens capensis*). Hellebore (*Veratrum viride*), cowslip (*Caltha palustris*), turtle head (*Chelone glabra*), and cardinal flower (*Lobelia cardinalis*) are found along the streams.

#### *Avery Tract Cove*

A small marsh at the head of the cove on the Avery Tract (Fig. 6) is traversed by a small spring-fed stream. The cove itself is flooded by the estuary through a culvert at high tide and is slightly brackish. There are stands of cat-tails and sedges. Arrowhead (*Sagittaria latifolia*), forget-me-not (*Myosotis laxa*) and other species grow in this marsh.

FIG. 6. Brackish cove along the Avery Tract near Mamacoke. Two species of cattails and various grasses comprise the conspicuous marsh vegetation. A beech stand (right) borders the cove.







FIG. 7. South edge of the Mamacoke tidal marsh showing zonation of salt marsh grasses. Along the water's edge is the salt water cord grass (*Spartina alterniflora*) which is replaced by the finer, somewhat matted salt meadow grass (*S. patens*). A belt of black grass (*Juncus Gerardi*) occurs between the zones mentioned but is not readily discernible in the photograph.

#### Salt Marshes

The Mamacoke Island marshes are part of the Mamacoke Natural Area. They are of especial interest because they have never been disturbed by ditching. Being situated about four miles up the Thames River estuary, the water is more brackish here than it is on the Sound. The zonation on the main marsh that connects Mamacoke to the western shore of the Thames River has been carefully mapped (Niering, 1961). This zonation is primarily a response to varying salinities across the marsh (Fig. 7). Salt-water cord grass (*Spartina alterniflora*) occurs as a narrow strip along the water's edge where the salinity is relatively high. Back from the margin this species is replaced by black grass (*Juncus Gerardi*), along with a mixture of colorful species, including sea-lavender (*Limonium carolinianum*), saltwort (*Salicornia europaea*), purple gerardia (*Gerardia maritima*), aster (*Aster tenuifolius*), and seaside goldenrod (*Solidago sempervirens*). On the more extensive higher and drier, less saline portions of the marsh, salt meadow grass (*Spartina patens*) is found in pure stands, with the interior depressions occupied either by stunted salt-water cord grass or by spike grass (*Distichlis spicata*), the latter tending to preempt the wetter and deeper depressions. With evaporation, the salinity increases in these

lower areas, presumably resulting in stunting the growth of the salt-water cord grass, which grows tall along the water's edge. Arrow-grass (*Triglochin maritima*) is sometimes found in this zone. Skirting the upper borders of the marsh is a narrow band of switchgrass (*Panicum virgatum*), marsh-elder (*Iva frutescens*), and, more locally, sea myrtle (*Baccharis halimifolia*), and marsh mallow (*Hibiscus palustris*). The goldenrod, *Solidago asperula*, a hybrid between *S. sempervirens* and *S. rugosa*, has been found in this association.

#### LITERATURE CITED

- ANONYMOUS. 1952. The Connecticut Arboretum Natural Area. Conn. Arboretum Bull. 7:8-9.
- AVERY, G. S., JR., HARRIET B. CREIGHTON, and C. W. HOCK. 1940. Annual rings in hemlocks and their relation to environmental factors. Amer. Jour. Botany, 27:825-831.
- GOODWIN, R. H. 1955. Mamacoke Island: The latest addition to the Arboretum. Conn. Arboretum Bull. 8:2-7.
- GOODWIN, R. H., KATHERINE H. HEINIG, AND K. P. JANSSON, 1950. Check list of woody plants growing in the Connecticut Arboretum and guide to the Arboretum. Conn. Arboretum Bull. 6:1-32.
- NIERING, W. A. 1961. Tidal Marshes: their use in scientific research. Conn. Arboretum Bull. 12:3-7.
- NIERING, W. A., AND R. H. GOODWIN. 1962. Ecological studies in the Connecticut Arboretum Natural Area. I. Introduction and a survey of vegetation types. Ecology 43(1):41-54.



# The Vascular Plants of the Connecticut Arboretum

SARA C. MANWELL, RICHARD H. GOODWIN  
WILLIAM A. NIERING

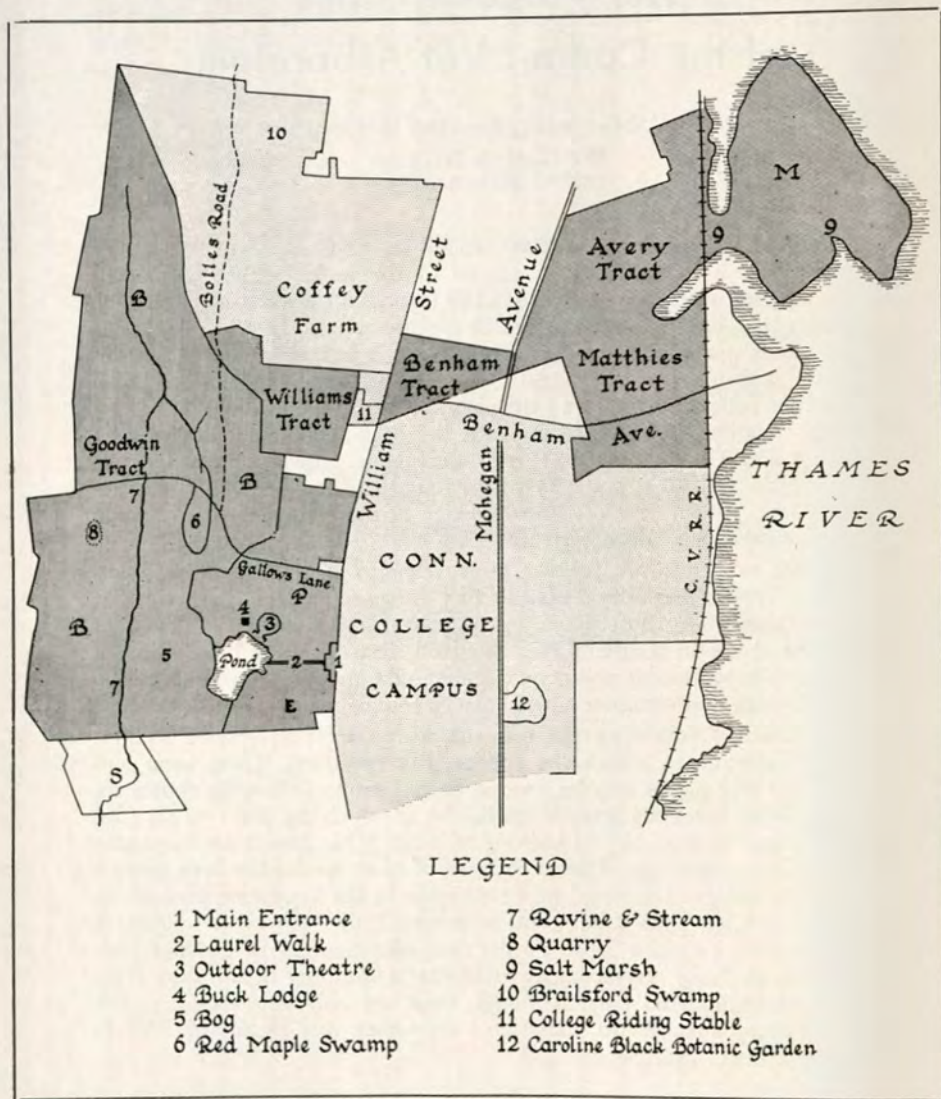
THIS FLORA of the vascular plants found in the Connecticut Arboretum has been based upon a thesis prepared by the senior author (Manwell, 1963). Species which have been found or identified since the completion of this study have been added. Most of the species included in the check-list of woody plants growing in the Arboretum (Goodwin *et al*, 1950) have been rechecked within the past year and have been included, if still present; also those in the following lists: (1) the plants found in the Bolleswood Natural Area compiled in conjunction with the long-range vegetation studies (Niering and Goodwin, 1962); (2) the plants growing on Mamacoke Island (Haines, 1962); and (3) plants found in the State Wildlife Sanctuary (Platz, 1963). Species for which one or more specimens are on file in the Connecticut College Herbarium are marked with an asterisk.

Scientific nomenclature follows *Gray's Manual of Botany*, 8th edition (Fernald, 1950), or *Bailey's Manual of Cultivated Plants* (Bailey, 1938). Common names are those given in the above mentioned manuals and in most general use in southern New England. Families have been listed in the *Gray's Manual* order and genera and species are alphabetical under the family. Genera and common names may be found in the index.

Capital letters following the common names refer to specific sections of the Arboretum in which the species may be found. These areas and other tracts and places may be located by referring to the map shown on page 18. Brief notes characterize the habitat in which the plant occurs (See map on pages 32 and 33) or indicate whether it has been introduced into the Arboretum plantings. The importance of most species has been given a quantitative designation based on its coverage in the vegetation type where it occurs: rare less than 1 per cent; occasional 1 to 5 per cent; frequent 5 to 50 per cent; common 50 to 75 per cent; abundant 75 to 100 per cent. Thus the term "rare" has a somewhat different meaning in this flora from that in most annotated lists. Although these are only estimates, it is felt that this more quantitative analysis of frequency may be useful later in detecting floristic changes.



## TRACTS OF THE CONNECTICUT ARBORETUM



## ANNOTATED LIST OF SPECIES

### EQUISETACEAE HORSETAIL FAMILY

*Equisetum arvense* L. COMMON HORSETAIL. \* P, near Pond; on Gallows Lane; Avery Tract. Damp open woods and thickets, occasional.

### LYCOPODIACEAE CLUB-MOSS FAMILY

*Lycopodium annotinum* L. STIFF OR BRISTLY CLUB-MOSS. E. Introd.

*Lycopodium clavatum* L. RUNNING CLUB-MOSS. \* Sizable colony along Gallows Lane roadside.

*Lycopodium complanatum* L. var. *flabelliforme* Fern. GROUND-PINE. B, P. Colonies in open forest on formerly agricultural land, occasional.

*Lycopodium inundatum* L. \* B. In damp clearing where top soil had been removed, rare.

*Lycopodium lucidulum* Michx. SHINING CLUB-MOSS. B. Local colonies on moist lower slopes, rare. E. Introd.

*Lycopodium obscurum* L. GROUND-PINE. \* B, P. Avery Tract. Colonies in open forest, formerly agricultural land, occasional.

*Lycopodium tristachyum* Pursh. B, northern sector. Lower forest slope in colonies, rare.

### SELAGINELLACEAE SPIKEMOSS FAMILY

*Selaginella apoda* (L.) Fern. \* P, near Pond. Damp fields and lawns, rare.

*Selaginella rupestris* (L.) Spring. B, Goodwin Tract. Dry rocky outcrops, rare.

### OPHIOGLOSSACEAE ADDER'S-TONGUE FAMILY

*Botrychium dissectum* Spreng. GRAPE FERN. \* B. Damp clearings and lower wooded slopes, rare.

*Botrychium dissectum* Spreng. forma *elongatum* (Gilbert & Haberer) Weath. \* Damp open woods, rare.

*Botrychium dissectum* Spreng. forma *obliquum* (Muhl.) Fern. \* Damp woods, rare.

*Botrychium virginianum* (L.) Sw. RATTLESNAKE FERN. \* B. Moist woods, rare.

### OSMUNDACEAE FLOWERING FERN FAMILY

*Osmunda cinnamomea* L. CINNAMON FERN. B, P. Large fern at borders of wetlands and within, on hummocks, frequent.

*Osmunda Claptoniana* L. INTERRUPTED FERN. B, P. Lower wooded slopes and wetlands, occasional to rare.

*Osmunda regalis* L. var. *spectabilis* (Willd.) Gray. ROYAL FERN. B. Wet depressions and along streams, occasional.



POLYPODIACEAE FERN FAMILY

- Adiantum pedatum* L. MAIDENHAIR FERN. \* B, E. Damp woods, rare.
- Asplenium platyneuron* (L.) Oakes. EBONY SPLEENWORT. \* M. Open woods, rare.
- Athyrium Filix-femina* (L.) Roth var. *Michauxii* (Spreng.) Farw. forma *rubellum* (Gilbert) Farw. LADY FERN. \* B. Lower forested slopes along the ravine, occasional to locally frequent.
- Athyrium thelypteroides* (Michx.) Desv. SILVERY SPLEENWORT. B. Damp woods, rare.
- Cystopteris fragilis* (L.) Bernh. FRAGILE BLADDER-FERN. \* Avery Tract. Moist ledge, rare.
- Dennstaedtia punctilobula* (Michx.) Moore. HAY-SCENTED FERN. \* B, E, P. Wooded openings and thickets, locally frequent.
- Dryopteris cristata* (L.) Gray. CRESTED WOOD-FERN. \* B. Moist slopes of the ravine.
- Dryopteris hexagonoptera* (Michx.) Christens. BROAD BEECH-FERN. B. Ravine, rare.
- Dryopteris marginalis* (L.) Gray. MARGINAL SHIELD-FERN. \* B. Rocky wooded slopes, occasional.
- Dryopteris noveboracensis* (L.) Gray. NEW YORK FERN. B, E. Lower forested slopes, especially along the ravine, occasional to locally frequent.
- Dryopteris Pbegopteris* (L.) C. Chr. LONG BEECH-FERN. E. Introd.
- Dryopteris spinulosa* (O. F. Müll.) Kuntze. SPINULOSE WOOD-FERN. \* B. Damp woods, occasional.
- Dryopteris Thelypteris* (L.) Gray. MARSH FERN. \* B. Open bog and damp clearings, frequent.
- Onoclea sensibilis* L. SENSITIVE FERN. \* B, E, P. Damp open woods and thickets, occasional to frequent.
- Polypodium virginianum* L. COMMON POLYPODY. \* B. Rocks and ledges, locally frequent.
- Polystichum acrostichoides* (Michx.) Schott. CHRISTMAS FERN. B, E, Avery Tract. Lower wooded slopes, especially along the ravine, occasional.
- Pteridium aquilinum* (L.) Kuhn var. *latiusculum* (Desv.) Underw. BRAKE, BRACKEN. B, M, P. Dry open woods and clearings, occasional to rare.
- Woodwardia areolata* (L.) MOORE. NETTED CHAIN-FERN. \* Brailsford Swamp, rare. Formerly collected near Gallows Lane.
- Woodwardia virginica* (L.) Sm. VIRGINIA CHAIN-FERN. B, north sector. Temporary water hole, rare.

GINKGOACEAE GINKGO FAMILY

- Ginkgo biloba* L. GINKGO OR MAIDENHAIR TREE. P. Introd. from Asia.

TAXACEAE YEW FAMILY

- Taxus canadensis* Marsh. AMERICAN YEW. \* B, P. Introd. Still persisting in the ravine, where it was introduced about 1948.

*Taxus cuspidata* Sieb. & Zucc. JAPANESE YEW. P, Outdoor Theatre. Introd.

#### PINACEAE PINE FAMILY

*Abies balsamea* (L.) Mill. BALSAM FIR. B, P. Introd.

*Chamaecyparis pisifera* Sieb. & Zucc. SARAWA CYPRESS. P. Introd.

*Chamaecyparis pisifera* Sieb. & Zucc. var. *plumosa* Otto. P. Introd.

*Chamaecyparis thyoides* (L.) BSP. WHITE CEDAR. B, edge of Pond. Introd.

*Juniperus communis* L. COMMON JUNIPER. P.

*Juniperus communis* L. var. *depressa* Pursh. PROSTRATE JUNIPER. B, P, Coffey Farm. Dry rocky soil and old fields, occasional.

*Juniperus virginiana* L. RED CEDAR. B, P, Avery Tract. Open woods and old fields where fire has not killed them, occasional.

*Larix decidua* Mill. EUROPEAN LARCH. P, Benham Ext. Introd.

*Larix laricina* (DuRoi) K. Koch. AMERICAN LARCH, TAMARACK. P. Introd.

*Picea Abies* (L.) Karst. NORWAY SPRUCE. P. Introd.

*Picea glauca* (Moench) Voss. WHITE SPRUCE. P. Introd.

*Picea rubens* Sarg. RED SPRUCE. P. Introd.

*Pinus Banksiana* Lamb. JACK-PINE. P. Introd.

*Pinus nigra* Arnold. AUSTRIAN PINE. P. Introd.

*Pinus resinosa* Ait. RED OR NORWAY PINE. P, Benham Ext., Williams Tract, Evergreen plantations. Introd.

*Pinus rigida* Mill. PITCH PINE. P. Old fields, rare.

*Pinus Strobus* L. WHITE PINE. B, P, Evergreen plantations. As a native tree, rare.

*Pinus sylvestris* L. SCOTCH PINE. P. Introd.

*Pseudotsuga Menziesii* (Mirb.) Franca. DOUGLAS FIR. P. Introd.

*Taxodium distichum* (L.) Richard. BALD CYPRESS. P, edge of Pond. Introd.

*Thuja occidentalis* L. AMERICAN ARBOR VITAE. P. Introd. in the Outdoor Theatre.

*Tsuga canadensis* (L.) Carr. HEMLOCK. B, P, Benham Ext. Ravine and ledges, young trees locally frequent. The 1938 hurricane destroyed all but a few of the large trees.

#### TYPHACEAE CAT-TAIL FAMILY

*Typha angustifolia* L. NARROW-LEAVED CATTAIL. Avery Tract, head of Cove.

*Typha latifolia* L. COMMON CATTAIL. B, Avery Tract. Marshy edge of Pond and Cove on Avery Tract.

#### SPARGANIACEAE BUR-REED FAMILY

*Sparganium americanum* Nutt. BUR-REED. \* B. Margin of Pond and Red Maple Swamp, occasional.

*Sparganium chlorocarpum* Rydb. BUR-REED. \* Wet soil and shallow water at edge of Pond.



### ZOSTERACEAE PONDWEED FAMILY

- Potamogeton capillaceus* Poir. PONDWEED. \* Pond and in stream on Williams Tract.  
*Potamogeton epiphydrus* Raf. var. *Nuttallii* (C. & S.) Fern. PONDWEED.  
 \* Quiet water.

### NAJADACEAE NAIAD FAMILY

- Najas flexilis* (Willd.) Rostk. & Schmidt. NAIAD. Pond. Shallow water at margin, frequent as the submerged form.  
*Ruppia maritima* L. var. *rostrata* Agardh. DITCH GRASS. \* Avery Tract. Aquatic along shore of cove, frequent.

### JUNCAGINACEAE ARROW-GRASS FAMILY

- Triglochin maritima* L. ARROW-GRASS. M. Mamacoke marsh, rare.

### ALISMATACEAE WATER PLANTAIN FAMILY

- Sagittaria Engelmanniana* J. G. Sm. ARROWHEAD. \* Margin of Pond.  
*Sagittaria latifolia* Willd. ARROWHEAD. Avery Tract marsh, occasional.

### HYDROCHARITACEAE FROG'S BIT FAMILY

- Elodea canadensis* Michx. WATERWEED. \* Pond.

### GRAMINEAE GRASS FAMILY

- Agropyron repens* (L.) Beauv. WITCH-GRASS. B. Open fields, rare.  
*Agrostis alba* L. REDTOP. \* B. Old fields, frequent to locally abundant.  
*Agrostis alba* L. var. *palustris* (Huds.) Pers. CREEPING OR CARPET-BENT. B. Damp shores and shallow water.  
*Agrostis perennans* (Walt.) Tuckerm. UPLAND BENT. \* B. Fields and open woods, occasional to rare.  
*Agrostis perennans* (Walt.) Tuckerm. var. *aestivalis* Vasey. \* B. Damp soil in ravine.  
*Agrostis scabra* Willd. \* B. Open woods.  
*Agrostis tenuis* Sibth. RHODE ISLAND BENT. \* B. Dry field.  
*Andropogon Gerardi* Vitman. \* Avery Tract. Gravelly soil along RR tracks, locally frequent.  
*Andropogon scoparius* Michx. BROOM BEARDGRASS, LITTLE BLUESTEM. \* B, M, P, Avery and Matthies Tracts. Dry open woods, occasional; old fields, especially on sandy or gravelly soil, frequent to abundant.  
*Andropogon scoparius* Michx. var. *littoralis* (Nash.) Hitchc. \* Williams Tract. Old field.  
*Andropogon virginicus* L. BROOM-SEDGE. \* Dry open woods and clearings.  
*Anthoxanthum odoratum* L. SWEET VERNAL GRASS. \* P. Lawns and grassy clearings, frequent.  
*Aristida dichotoma* Michx. POVERTY GRASS. \* Dry sterile soil.  
*Aristida longespica* Poir. var. *geniculata* (Raf.) Fern. \* Sandy soil.  
*Arrhenatherum elatius* (L.) Mert. & Koch. TALL OAT-GRASS. \* P. Open field, locally frequent.

- Calamagrostis canadensis* (Michx.) Nutt. BLUEJOINT-GRASS. B. Wet meadows and thickets.
- Cinna arundinacea* L. WOOD REEDGRASS. \* B. Damp woods in ravine.
- Dactylis glomerata* L. ORCHARD GRASS. \* B. Old fields and roadsides, occasional.
- Danthonia spicata* (L.) Beauv. POVERTY-GRASS, WILD OAT-GRASS. \* B. Rocky outcrops and clearings, locally frequent.
- Deschampsia flexuosa* (L.) Trin. COMMON HAIRGRASS. \* M. Open rocky ledges, locally frequent.
- Digitaria filiformis* L. SLENDER CRABGRASS. \* P. Sandy openings.
- Digitaria ischaemum* (Schreb.) Muhl. CRABGRASS. B. Frequent.
- Digitaria sanguinalis* (L.) Scop. CRABGRASS. P. Lawns and waste places, frequent.
- Distichlis spicata* (L.) Greene. SPIKE GRASS. \* M. Mamacoke salt marsh, locally abundant.
- Echinochloa crusgalli* (L.) Beauv. BARNYARD-GRASS. \* B. Clearing near quarry.
- Elymus virginicus* L. TERRELL GRASS. \* M. Thicket west of Mamacoke marsh.
- Eragrostis capillaris* (L.) Nees. LACE GRASS. \* Avery Tract. Gravelly area near RR tracks.
- Eragrostis megastachya* (Koel.) Link. SNAKE GRASS. Avery Tract. Sandy soil.
- Eragrostis spectabilis* (Pursh.) Nees. TUMBLE-GRASS. \* Dry sandy clearing.
- Festuca capillata* Lam. \* B. Dry open soil, locally frequent.
- Festuca elatior* L. MEADOW FESCUE. \* Gallows Lane. Roadside.
- Festuca rubra* L. FESCUE. B. Sandy soil.
- Glyceria canadensis* (Michx.) Trin. RATTLESNAKE-GRASS. B. Damp thickets.
- Glyceria striata* (Lam.) Hitchc. FOWL-MEADOW GRASS. \* B. Swamp.
- Holcus lanatus* L. VELVET GRASS. B. Open fields, rare.
- Leersia oryzoides* (L.) Sw. RICE CUTGRASS. \* B. Avery Tract. Swamp and edge of Pond, rare.
- Lolium perenne* L. COMMON DARNEL. B. Fields and roadsides.
- Muhlenbergia frondosa* (Poir.) Fern. \* B. Woodlands north of Gallows Lane.
- Muhlenbergia Schreberi* J. F. Gmel. DROP-SEED. \* B. Bolles Road.
- Muhlenbergia mexicana* (L.) Trin. \* P. Moist ground.
- Panicum agrostoides* Spreng. PANIC-GRASS. \* B. Damp field.
- Panicum capillare* L. Avery Tract. Sandy soil.
- Panicum clandestinum* L. \* Moist thickets.
- Panicum columbianum* Scribn. B. Dry open ground.
- Panicum columbianum* Scribn. var. *oricola* (Hitch. & Chase) Fern. B. Open sandy soil.
- Panicum depauperatum* Muhl. B. Dry open soil.



- Panicum dichotomiflorum* Michx. var. *geniculatum* (Wood.) Fern. \* B.  
Clearing near quarry.
- Panicum dichotomum* L. \* B. Dry woods.
- Panicum lanuginosum* Ell. var. *fasciculatum* (Torr.) Fern. \* M. Grassy opening.
- Panicum lanuginosum* Ell. var. *implicatum* (Scribn.) Fern. B. Dry open soil.
- Panicum lanuginosum* Ell. var. *Lindheimeri* (Nash.) Fern. \* M. Grassy clearing.
- Panicum lanuginosum* Ell. var. *septentrionale* Fern. \* B.
- Panicum linearifolium* Scribn. var. *Wernerii* (Scribn.) Fern. B. Open woodland.
- Panicum meridionale* Ashe. \* B.
- Panicum oligosanthos* Schultes var. *Scribnerianum* (Nash.) Fern. \* B. Old field.
- Panicum sphaerocarpon* Ell. \* Gallows Lane. Sandy roadside.
- Panicum virgatum* L. SWITCHGRASS. \* M. Upper edge of salt marsh, common.
- Paspalum ciliatifolium* Michx. var. *Muhlenbergii* (Nash.) Fern. \* Gallows Lane. Sandy roadside.
- Phragmites communis* Trin. REED GRASS. Wet lowland.
- Poa annua* L. ANNUAL BLUEGRASS. \* P. Lawns.
- Poa compressa* L. CANADA BLUEGRASS. \* B. Dry soil, fields and roadsides, frequent.
- Poa pratensis* L. KENTUCKY BLUEGRASS, SPEARGRASS. \* B. Open fields, occasional.
- Setaria glauca* (L.) Beauv. FOXTAIL. \* Roadsides.
- Sorghastrum nutans* (L.) Nash. INDIAN GRASS. \* M, Avery Tract. Rocky outcrops and openings on alluvial gravels, locally frequent.
- Spartina alterniflora* Loisel. SALT-WATER CORD GRASS. \* M. Narrow belt at the water's edge, Mamacoke salt marsh, abundant.
- Spartina patens* (Ait.) Muhl. SALT-MEADOW GRASS. \* M. Higher portions of the salt marsh, abundant.
- Vulpia octaflora* (Walt.) Rydb. SIXWEEKS FESCUE. \* M. Dry open soil.

#### CYPERACEAE SEDGE FAMILY

- Bulbostylis capillaris* (L.) C. B. Clarke var. *capillaris* (L.) Britt. \* M. Clearing in woods.
- Bulbostylis capillaris* (L.) C. B. Clarke var. *crebra* Fern. \* B, Avery Tract. Dry open soil and edge of RR tracks.
- Carex abscondita* Mackenz. SEDGE. \* B. Moist woods northwest of quarry.
- Carex arctata* Boott. \* Open woods.
- Carex blanda* Dew. \* B.
- Carex brevior* (Dew.) Mackenz. \* B. Old field.
- Carex canescens* L. \* Edge of Pond.
- Carex canescens* L. var. *subloliacea* Laestad. B. Open bog, locally frequent.

- Carex crinita* Lam. \* B. Damp woods by stream and Pond.  
*Carex digitalis* Willd. B. Dry woods.  
*Carex interior* Bailey. B. Edge of Pond, rare.  
*Carex intumescens* Rudge. \* B. Swampy ground along Gallows Lane.  
*Carex laxiculmis* Schwein. B. Damp open woods, occasional.  
*Carex laxiflora* Lam. \* Matthies Tract. Edge of path.  
*Carex Longii* Mackenz. \* B. Dry rocky clearing at quarry.  
*Carex lurida* Wahlenb. \* B. Wet woods around edge of Pond and swamp.  
*Carex pennsylvanica* Lam. \* B, M. Around rocky outcrops, open woods and clearings, occasional.  
*Carex retroflexa* Muhl. \* B. Bog west of Pond.  
*Carex scoparia* Schkuhr. \* Fields.  
*Carex stipata* Muhl. Avery Tract. Marsh, frequent.  
*Carex Swanii* (Fern.) Mackenz. \* B. Dry woods.  
*Carex tribuloides* Wahlenb. \* B. Edge of swamp.  
*Carex virescens* Muhl. \* Woods and clearings.  
*Carex vulpinoidea* Michx. \* B. Old field.  
*Cyperus dentatus* Torr. UMBRELLA-SEDGE. Edge of Pond.  
*Cyperus filiculmis* Vahl. var. *macilentus* Fern. \* B. Fields and roadsides.  
*Cyperus rivularis* Kunth. Avery Tract. Marsh.  
*Cyperus strigosus* L. \* B. Swamp.  
*Dulichium arundinaceum* (L.) Britt. THREE-WAY-SEDGE. \* B. Swamp and margin of Pond, occasional.  
*Eleocharis acicularis* (L.) R. & S. SPIKE RUSH. \* B, M. Damp clearings, margin of Pond, occasional.  
*Eleocharis calva* Torr. SPIKE RUSH. \* Avery Tract Marsh.  
*Eleocharis obtusa* (Willd.) Schultes. SPIKE RUSH. \* B. Edge of Pond and stream.  
*Eleocharis ovata* (Roth.) R. & S. SPIKE RUSH. \* B. Bog west of Pond.  
*Eleocharis palustris* (L.) R. & S. SPIKE RUSH. B. Shallow water and margins of Pond and stream, abundant.  
*Eleocharis Smallii* Britt. SPIKE RUSH. \* B. Edge of Pond.  
*Eleocharis tenuis* (Willd.) Schultes. SPIKE RUSH. Margin of Pond.  
*Fimbristylis autumnalis* (L.) R. & S. \* B. Damp soil by stream.  
*Rhynchospora capitellata* (Michx.) Vahl. BEAK RUSH. \* B. Bog and wet clearings.  
*Scirpus americanus* Pers. BULRUSH, THREE-SQUARE. Avery Tract. Marsh.  
*Scirpus atrovirens* Willd. var. *georgianus* (Harper) Fern. BULRUSH. \* B. Swampy woods.  
*Scirpus cyperinus* (L.) Kunth. WOOL GRASS. \* B. Swamp and edge of Pond, occasional.  
*Scirpus Purshianus* Fern. BULRUSH. \* Edge of Pond.  
*Scirpus robustus* Pursh. BULRUSH. \* M. Mamacoke salt marsh.  
*Scirpus rubrotinctus* Fern. BULRUSH. \* Avery Tract. Marsh.



### ARACEAE ARUM FAMILY

- Arisaema atrorubens* (Ait.) Blume. JACK-IN-THE-PULPIT. \* B, E, Avery Tract. Wet woods, occasional. Both forma *zebrinum* (Sims) Fern. and forma *viride* (Engler) Fern. occur.
- Arisaema Dracontium* (L.) Schott. GREEN DRAGON. E. Introd. Swampy woods.
- Orontium aquaticum* L. GOLDEN CLUB. Edge of Pond. Introd.
- Symplocarpus foetidus* (L.) Nutt. SKUNK-CABBAGE. \* B, E, S. Swampy woods, common.

### LEMNACEAE DUCKWEED FAMILY

- Lemna minor* L. DUCKWEED. B. Bog.

### XYRIDACEAE YELLOW-EYED GRASS FAMILY

- Xyris caroliniana* Walt. YELLOW-EYED GRASS. B. Damp clearings.

### COMMELINACEAE SPIDERWORT FAMILY

- Commelina communis* L. COMMON DAYFLOWER. E. Roadsides and disturbed ground.
- Tradescantia ohioensis* Raf. SPIDERWORT. Bolles Road. Roadside.

### PONTEDERIACEAE PICKERELWEED FAMILY

- Pontederia cordata* L. PICKERELWEED. \* B. Muddy shore of Pond, occasional.

### JUNCACEAE RUSH FAMILY

- Juncus acuminatus* Michx. RUSH. B. Pond margin.
- Juncus canadensis* J. Gay. RUSH. \* B. Swamp and edge of Pond, occasional to rare.
- Juncus effusus* L. SOFT RUSH. \* B. Bog, common around the floating mat.
- Juncus effusus* L. var. *solutus* Fern. & Wieg. \* B. Swamp, wet clearings, and edge of Pond.
- Juncus Gerardi* Loisel. BLACK GRASS. \* M. Salt marsh, forming a belt above high tide mark, abundant.
- Juncus Greenei* Oakes & Tuckerm. \* M, Avery Tract. Dry open woods and clearings.
- Juncus marginatus* Rostk. \* B. Moist field near quarry.
- Juncus pelocarpus* Mey. \* B. Swamp and edge of Pond, occasional to frequent.
- Juncus secundus* Beauv. \* B. In rock crevices of quarry, local.
- Juncus tenuis* Willd. \* B. Old fields and exposed soil, occasional.
- Luzula multiflora* (Retz.) Lejeune. WOODRUSH. \* B. Open woods, rare.

### LILIACEAE LILY FAMILY

- Allium canadense* L. WILD GARLIC. \* B, M. Damp thickets and grassy clearings.

- Allium tricoccum* Ait. WILD LEEK. \* B, E. One colony on wooded slope in the ravine.
- Allium vineale* L. FIELD GARLIC. \* P. Weed in lawn.
- Asparagus officinalis* L. GARDEN ASPARAGUS. \* B. Old field, escaped from cultivation, rare.
- Clintonia borealis* (Ait.) Raf. BLUEBEAD-LILY. E. Introd.
- Erythronium americanum* Ker. YELLOW ADDER'S-TONGUE, TROUT-LILY. E. Introd.
- Hemerocallis fulva* L. COMMON ORANGE DAY-LILY. \* B. Edge of swamp along Gallows Lane, naturalized, rare.
- Lilium superbum* L. TURK'S-CAP LILY. \* P. Damp openings.
- Lilium philadelphicum* L. WILD ORANGE-RED LILY, WOOD LILY. \* B. Open woods near quarry, rare.
- Maianthemum canadense* Desf. WILD LILY-OF-THE-VALLEY. \* B, E, M, P, S, Avery Tract, Matthies Tract. Woods and clearings, frequent to common.
- Medeola virginiana* L. INDIAN CUCUMBER-ROOT. \* B, E. Damp woods, rare.
- Ornithogalum umbellatum* L. STAR-OF-BETHLEHEM. \* B. Old field.
- Polygonatum biflorum* (Walt.) Ell. SOLOMON'S-SEAL. \* B, E, M, S, Avery Tract. Moist woods and thickets, occasional.
- Polygonatum canaliculatum* (Muhl.) Pursh. SOLOMON'S-SEAL. E. Introd.
- Polygonatum pubescens* (Willd.) Pursh. SOLOMON'S-SEAL. B. Woodland.
- Smilacina racemosa* (L.) Desf. FALSE SPIKENARD, FALSE SOLOMON'S-SEAL. \* B, E, Avery Tract. Moist woods, occasional.
- Smilax glauca* Walt. SAWBRIER. \* B, M, P, S, Avery Tract. Woods and thickets, occasional to locally abundant.
- Smilax herbacea* L. CARRION-FLOWER. B, P. Thickets, rare.
- Smilax rotundifolia* L. BULLBRIER, CATBRIER. \* B, M, P, S, Avery, Matthies and Williams Tracts. Thickets, abundant; wooded openings, occasional.
- Streptopus roseus* Michx. TWISTED-STALK. E. Introd.
- Trillium cernuum* L. NODDING TRILLIUM. E. Damp woods, rare.
- Trillium erectum* L. PURPLE TRILLIUM. E. Rich woods, rare.
- Trillium sessile* L. TOADSHADE. E. Introd.
- Uvularia perfoliata* L. BELLWORT. \* M. Open woods, rare.
- Uvularia sessilifolia* L. BELLWORT, WILD-OATS. \* B. Damp woods, occasional.
- Veratrum viride* Ait. WHITE HELLEBORE. B, S. Swamps and edge of stream, occasional.
- Yucca filamentosa* L. SILKGRASS or SPOONLEAF-YUCCA. P, Avery Tract. Near Buck Lodge and along RR tracks. Introd.

#### DIOSCOREACEAE YAM FAMILY

- Dioscorea villosa* L. YAM. \* B, M, Avery Tract. Old fields and open woods, rare.



AMARYLLIDACEAE *AMARYLLIS* FAMILY

- Hypoxis hirsuta* (L.) Coville. STARGRASS. \* B. Clearings and open woods, occasional.  
*Narcissus* sp. DAFFODIL. P. Introd.

IRIDACEAE *IRIS* FAMILY

- Crocus vernus* Wulfen. CROCUS. P. Escaped from cultivation.  
*Iris cristata* Ait. CRESTED DWARF IRIS. E. Introd.  
*Iris versicolor* L. BLUE FLAG. M. Damp open areas, occasional.  
*Sisyrinchium angustifolium* Mill. BLUE-EYED GRASS. \* B. Damp clearings and old fields, rare to occasional.

ORCHIDACEAE *ORCHIS* FAMILY

- Cypripedium acaule* Ait. STEMLESS LADY'S-SLIPPER. \* B, M. Woodlands in eastern section of Bolleswood, occasional.  
*Cypripedium Calceolus* L. var. *pubescens* (Willd.) Correl. LARGE YELLOW LADY'S-SLIPPER. E. Introd.  
*Goodyera pubescens* (Willd.) R. Br. DOWNY RATTLESNAKE-PLANTAIN. B. Upland woods, rare.  
*Pogonia ophioglossoides* (L.) Ker. ROSE POGONIA, BEARD-FLOWER. B. Clearing where top-soil was removed, rare.  
*Spiranthes cernua* (L.) Richard. COMMON OR NODDING LADIES'-TRESSES. \* B. Fields and grassy thickets, rare.

SALICACEAE *WILLOW* FAMILY

- Populus alba* L. WHITE POPLAR. P. Naturalized.  
*Populus balsamifera* L. BALSAM-POPLAR. P. Introd.  
*Populus deltoides* Marsh. COTTONWOOD. B, P. Moist woods, rare.  
*Populus gileadensis* Rouleau. BALM OF GILEAD. Gravel pit near RR. Introd.  
*Populus grandidentata* Michx. LARGE-TOOTHED ASPEN. \* P. Thickets and young forest, occasional clones.  
*Populus heterophylla* L. SWAMP OR BLACK COTTONWOOD. P.  
*Populus nigra* L. BLACK POPLAR. P.  
*Populus tremuloides* Marsh. QUAKING ASPEN. \* B, P. Thickets and young forest, occasional clones.  
*Salix alba* L. WHITE WILLOW. P. Introd.  
*Salix Bebbiana* Sarg. LONG-BEAKED WILLOW. \* P. Moist open woods.  
*Salix cordata* Michx. B. Wet depression, excavated area.  
*Salix discolor* Muhl. LARGE PUSSY-WILLOW. \* P. Pond, west side.  
*Salix discolor* Muhl. var. *latifolia* Anderss. \* P. Moist woods.  
*Salix fragilis* L. CRACK WILLOW. B. Wet area along Gallows Lane.  
*Salix humilis* Marsh. SMALL PUSSY-WILLOW. \* P. Dry open woods.  
*Salix nigra* Marsh. BLACK WILLOW. \* P. Wet woods.  
*Salix pentandra* L. BAY WILLOW. P. Introd.  
*Salix rigida* Muhl. \* P. Moist woods.  
*Salix sericea* Marsh. SILKY WILLOW. \* P. Damp thickets.

### MYRICACEAE WAX-MYRTLE FAMILY

- Comptonia peregrina* (L.) Coult. SWEET-FERN. \* B, P, Matthies Tract.  
Open woods, clearings, old pastures and roadsides, occasional.
- Myrica Gale* L. SWEET GALE. \* P. Edge of Pond.
- Myrica pennsylvanica* Loisel. BAYBERRY. \* B, M, P, Avery Tract, Matthies Tract. Old fields and thickets, frequent.

### JUGLANDACEAE WALNUT FAMILY

- Carya cordiformis* (Wang.) K. Koch. BITTERNUT, SWAMP HICKORY. P. Introd.
- Carya glabra* (Mill.) Sweet. PIGNUT. \* B, P. Dry woods, occasional.
- Carya ovata* (Mill.) K. Koch. SHAGBARK HICKORY. B. Dry oak woodlands, rare.
- Carya tomentosa* Nutt. MOCKERNUT. \* B, P. Oak woodlands, the hickory most frequently associated with the oaks, occasional.
- Juglans cinerea* L. BUTTERNUT. B, field on Goodwin Tract, P.
- Juglans cordiformis* Maxim. var. *ailanthifolia* Rehd. JAPANESE WALNUT. P. Introd.
- Juglans nigra* L. BLACK WALNUT. P. Introd.

### CORYLACEAE HAZEL FAMILY

- Alnus crispa* (Ait.) Pursh. AMERICAN GREEN OR MOUNTAIN ALDER. P. Introd.
- Alnus rugosa* (Du Roi) Spreng. SPECKLED ALDER. \* B. Damp woods, swamps and stream margins, frequent.
- Alnus serrulata* (Ait.) Willd. COMMON ALDER. \* B, P. Swamps and edge of Pond.
- Alnus serrulata* (Ait.) Willd. var. *subelliptica* Fern. \* B. Damp woods.
- Betula lenta* L. BLACK OR SWEET BIRCH. \* B, M, P, S, Avery Tract. Woods and thickets, frequent.
- Betula lutea* Michx. f. YELLOW BIRCH. \* B. Stream margins in ravine, occasional.
- Betula lutea* Michx. f. var. *macrolepis* Fern. B, P. Native in damp woods.
- Betula papyrifera* Marsh. PAPER OR WHITE BIRCH. P. Introd.
- Betula pendula* Blanch. var. *viscosa* (Bean) Rehder. EUROPEAN BIRCH. P. Introd.
- Betula populifolia* Marsh. GRAY BIRCH. \* B. Old fields and thickets, occasional to frequent.
- Carpinus caroliniana* Walt. AMERICAN HORNBEAM, IRONWOOD, BLUE BEECH. \* B, P. Moist open woodlands, occasional.
- Corylus americana* Walt. AMERICAN HAZELNUT. \* M, P. Upland woods, occasional to rare.
- Corylus cornuta* Marsh. BEAKED HAZELNUT. P. Introd.
- Ostrya virginiana* (Mill.) K. Koch. AMERICAN HOP-HORNBEAM. P.



### FAGACEAE BEECH FAMILY

- Castanea dentata* (Marsh.) Borkh. AMERICAN CHESTNUT. \* B, P. Oak woodlands as occasional stump sprouts. Prior to the introduction of the chestnut blight in the early 1900's this species was codominant with the oaks.
- Castanea dentata* (Marsh.) Borkh. x *C. mollissima* Blume. P. Introd.
- Castanea mollissima* Blume. CHINESE CHESTNUT. P. Introd.
- Fagus grandifolia* Ehrh. AMERICAN BEECH. \* B, P, Avery Tract. Upland forest, occasional. A large pure stand occurs along the margin of the cove on the Avery Tract.
- Fagus sylvatica* L. \* P. Introd.
- Quercus alba* L. WHITE OAK. \* B, M, P, S, Avery Tract. Dry woodlands, frequent.
- Quercus bicolor* Willd. SWAMP WHITE OAK. P. Introd.
- Quercus coccinea* Muenchh. SCARLET OAK. \* B, P. Dry upland woods, frequent.
- Quercus ilicifolia* Wang. BEAR OR BLACK SCRUB OAK. M, P. Rocky ledges on Mamacoke, locally frequent.
- Quercus macrocarpa* Michx. BURR OR MOSSY-CUP OAK. P. Introd.
- Quercus palustris* Muenchh. PIN OAK. P. Introd.
- Quercus phellos* L. WILLOW OAK. P. Introd.
- Quercus prinoides* Willd. CHINQUAPIN OAK. P. Introd.
- Quercus prinus* L. CHESTNUT OAK. \* B. Dry wooded ledges, locally common.
- Quercus Robur* L. ENGLISH OAK. P. Introd.
- Quercus rubra* L. RED OAK. B, M, P, S, Avery Tract. Upland forest and ravine, frequent.
- Quercus velutina* Lam. BLACK OAK. B, M, P, S. Upland forest, frequent.

### ULMACEAE ELM FAMILY

- Celtis occidentalis* L. HACKBERRY. M, P. Mamacoke woodlands, rare.
- Celtis occidentalis* L. var. *pumila* (Pursh) Gray. DWARF HACKBERRY. P.
- Ulmus alata* Michx. WAHOO, WINGED ELM. P. Introd.
- Ulmus americana* L. AMERICAN ELM. \* P. Moist woodlands, occasional. Some trees succumbing to the Dutch elm disease.
- Ulmus rubra* Muhl. SLIPPERY ELM. P. Introd.

### MORACEAE MULBERRY FAMILY

- Morus alba* L. WHITE MULBERRY. \* P.

### URTICACEAE NETTLE FAMILY

- Boehmeria cylindrica* (L.) Sw. FALSE NETTLE. \* B. Damp woods in ravine, rare.
- Pilea pumila* (L.) Gray. RICHWEED, CLEARWEED. \* B. Edge of stream in ravine, rare.
- Urtica urens* L. BURNING NETTLE. Avery Tract. Damp clearings.

SANTALACEAE SANDALWOOD FAMILY

*Comandra umbellata* (L.) Nutt. BASTARD TOADFLAX. \* B, M. Dry rocky openings and Mamacoke terrace, rare.

ARISTOLOCHIACEAE BIRTHWORT FAMILY

*Asarum canadense* L. WILD GINGER. E. Introd.

*Asarum Shuttleworthii* Britten & Baker. WILD GINGER. E. Introd.

POLYGONACEAE BUCKWHEAT FAMILY

*Polygonella articulata* (L.) Meisn. JOINTWEED. Avery Tract. Disturbed sandy soil along R. R. tracks, rare.

*Polygonum aviculare* L. KNOTWEED. \* P. Lawn.

*Polygonum cespitosum* Blume, var. *longisetum* (DeBruyn) Stewart. COMMON SMARTWEED. \* P. Disturbed ground.

*Polygonum Convolvulus* L. BLACK BINDWEED. \* B, M. Open woods, occasional.

*Polygonum dubium* Stein. \* Edge of Pond.

*Polygonum hydropperoides* Michx. MILD WATER-PEPPER. \* Edge of Pond.

*Polygonum hydropper* L. COMMON SMARTWEED. B. Swampy areas and Pond margin, occasional.

*Polygonum lapathifolium* L. \* Damp clearing.

*Polygonum pennsylvanicum* L. PINKWEED. \* Edge of Pond.

*Polygonum Persicaria* L. LADY'S-THUMB. \* Damp open woods and thickets.

*Polygonum punctatum* Ell. WATER-SMARTWEED. \* Wet soil bordering the Pond.

*Polygonum punctatum* Ell. var. *Leptostachyum* (Meisn.) Small. \* B. Swamp.

*Polygonum ramosissimum* Michx. BUSHY KNOTWEED. M. Edge of salt marsh, rare.

*Polygonum sagittatum* L. ARROW-LEAVED TEARTHUMB. \* Avery Tract. Wet woods, thickets and open marshes, occasional to frequent.

*Polygonum scandens* L. CLIMBING FALSE BUCKWHEAT. \* B. Damp open woods near the quarry.

*Rumex Acetosella* L. SHEEP-SORREL. \* B, P. Fields, lawns and clearings, occasional.

*Rumex crispus* L. YELLOW DOCK. \* Old fields and roadsides, rare to occasional.

CHENOPODIACEAE GOOSEFOOT FAMILY

*Atriplex patula* L. var. *bastata* (L.) Gray. \* M. Salt marsh.

*Chenopodium album* L. PIGWEED, LAMB'S-QUARTERS. \* Roadsides and dry clearings, occasional.

*Chenopodium ambrosioides* L. MEXICAN TEA. \* Avery Tract. Along R.R. tracks.

*Salicornia europaea* L. SALTWORT. \* M. On bare soil or pannes on the salt marsh, locally frequent.

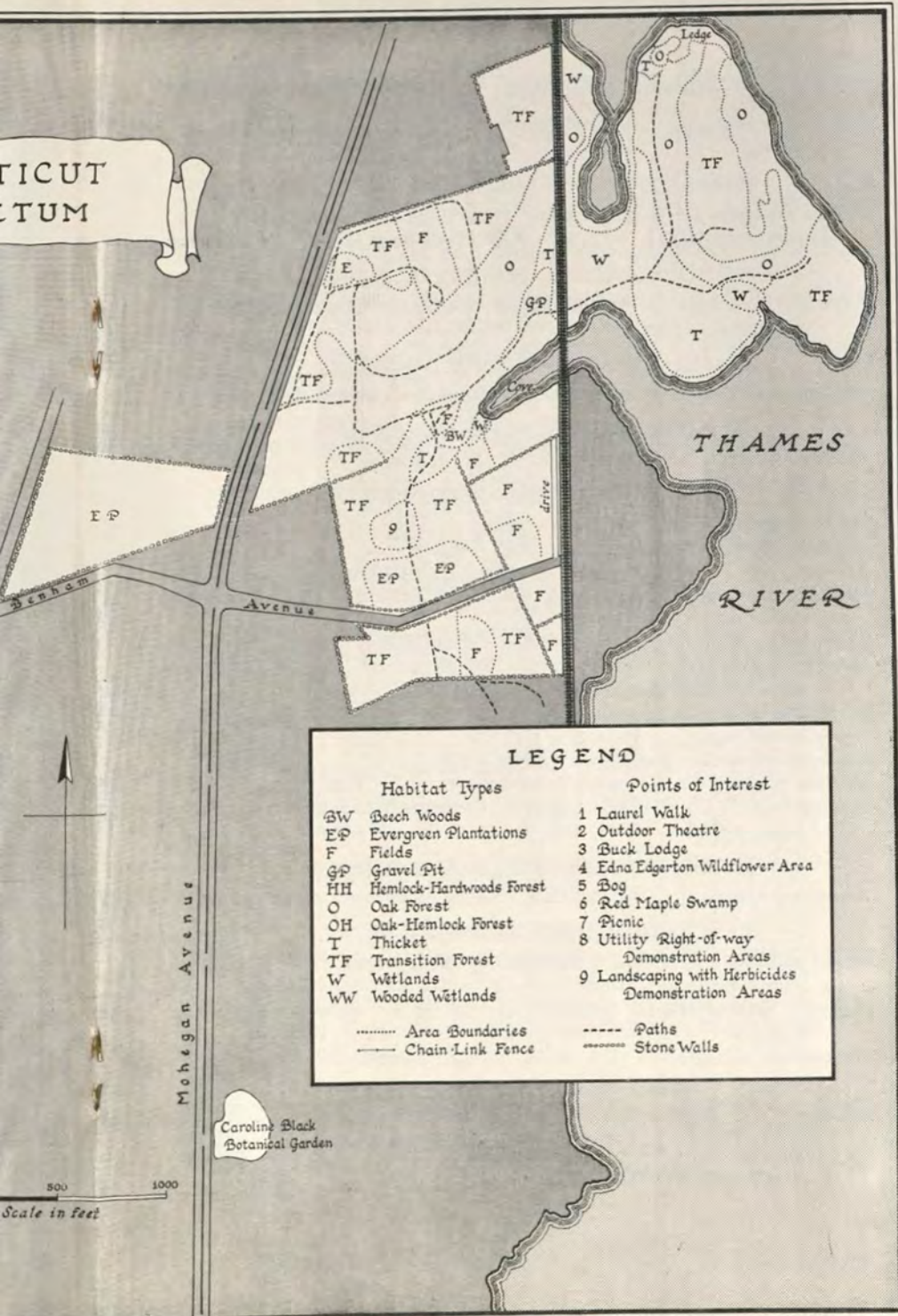


# CONNECTICUT ARBORETUM



Caroline Blodgett  
Botanical Garden

CTICUT  
LTUM



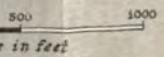
THAMES  
RIVER

LEGEND

Habitat Types	Points of Interest
BW Beech Woods	1 Laurel Walk
EP Evergreen Plantations	2 Outdoor Theatre
F Fields	3 Buck Lodge
GP Gravel Pit	4 Edna Edgerton Wildflower Area
HH Hemlock-Hardwoods Forest	5 Bog
O Oak Forest	6 Red Maple Swamp
OH Oak-Hemlock Forest	7 Picnic
T Thicket	8 Utility Right-of-way Demonstration Areas
TF Transition Forest	9 Landscaping with Herbicides Demonstration Areas
W Wetlands	
WW Wooded Wetlands	
..... Area Boundaries	----- Paths
—— Chain-Link Fence	-·-·-· Stone Walls

Mohegan Avenue

Caroliny Black  
Botanical Garden





- Suaeda linearis* (Ell.) Moq. SEA-BLITE. \*M. Sandy shore of the Thames River.  
*Suaeda maritima* (L.) Dumort. SEA-BLITE. \*M. Tidal marsh, occasional.

AMARANTHACEAE AMARANTH FAMILY

- Acnida cannabina* L. WATER-HEMP. \*M. Edge of salt marsh, rare.  
*Amaranthus retroflexus* L. PIGWEED. \*Williams Tract. Disturbed ground.

PHYTOLACCACEAE POKEWEEED FAMILY

- Phytolacca americana* L. POKEWEEED. B. Damp clearings and roadsides, occasional to rare.

AIZOACEAE CARPET-WEED FAMILY

- Mollugo verticillata* L. CARPETWEED. \*Roadsides and disturbed ground.

PORTULACACEAE PURSLANE FAMILY

- Claytonia virginica* L. SPRING-BEAUTY. E. Intro.

CARYOPHYLLACEAE PINK FAMILY

- Arabis canadensis* L. SICKLEPOD. \*E.  
*Arenaria lateriflora* L. SANDWORT. \*P. Thicket.  
*Cerastium vulgatum* L. COMMON MOUSE-EAR CHICKWEED. \*P. Lawns.  
*Dianthus Armeria* L. DEPTFORD PINK. \*Clearings and roadsides, occasional.  
*Lychnis alba* Mill. WHITE CAMPION. \*P. Disturbed ground.  
*Saponaria officinalis* L. BOUNCING-BET, SOAPWORT. \*Roadsides, Gallows Lane, occasional to locally abundant.  
*Scleranthus annuus* L. KNAWEEL. B, Goodwin Tract. Old field on disturbed soil.  
*Silene antirrhina* L. SLEEPY CATCHFLY. \*M.  
*Stellaria graminea* L. COMMON STITCHWORT. \*B. Field, rare.  
*Stellaria media* (L.) Cyrillo. COMMON CHICKWEED. \*B. Lawns and waste places.

NYPHAEACEAE WATER-LILY FAMILY

- Nymphaea odorata* Ait. WATER-LILY. \*Pond, abundant.

RANUNCULACEAE CROWFOOT FAMILY

- Actaea pachypoda* Ell. WHITE BANEERRY, DOLL'S-EYES. \*B, E. Moist woods, occasional to rare.  
*Anemone quinquefolia* L. WOOD-ANEMONE. B, P. Open woods, occasional.  
*Anemonella thalictroides* (L.) Spach. RUE-ANEMONE. B. Open woods, rare.  
*Aquilegia canadensis* L. WILD COLUMBINE. \*B, P. Open rocky woods, rare.  
*Caltha palustris* L. COWSLIP, MARSH-MARIGOLD. B, E. Swamps and stream margins, occasional.

- Cimicifuga racemosa* (L.) Nutt. BLACK SNAKEROOT, BLACK COHOSH.  
P. Introd.
- Clematis virginianum* L. WILD CLEMATIS. B, P. Openings and damp thickets, occasional.
- Coptis groenlandica* (Oeder) Fern. GOLDTHREAD. E. Introd.
- Hepatica americana* (DC.) Ker. HEPATICA, LIVERLEAF. B, E. Dry woods, rare.
- Ranunculus acris* L. TALL OR COMMON BUTTERCUP. B. Open fields, occasional.
- Ranunculus abortivus* L. KIDNEY-LEAF BUTTERCUP. \* B. Damp open woods and clearings, occasional.
- Ranunculus bulbosus* L. BULBOUS BUTTERCUP. \* P. Lawns, fields and thickets, occasional.
- Thalictrum dioicum* L. EARLY MEADOW-RUE. \* Damp open woods, occasional.
- Thalictrum polygamum* Muhl. TALL MEADOW-RUE. \* M. Edge of salt marsh.
- Xanthorhiza simplicissima* Marsh. SHRUB YELLOWROOT. P. Introd.

#### BERBERIDACEAE BARBERRY FAMILY

- Berberis Thunbergii* (DC.) JAPANESE BARBERRY. \* P, Avery Tract, Matthies Tract. Clearings and thickets as an escape, rare.
- Berberis vulgaris* L. COMMON BARBERRY. \* P, Avery Tract, Matthies Tract. Old fields, clearings and thickets, occasional.
- Podophyllum peltatum* L. MAY-APPLE, WILD JALAP. E. Introd.

#### MAGNOLIACEAE MAGNOLIA FAMILY

- Liriodendron Tulipifera* L. TULIP-TREE, TULIP-POPLAR. \* B, P, S. Wooded lower slopes and ravine bottom, occasional.
- Magnolia virginiana* L. SWEET BAY. P. Introd.

#### CALYCANTHACEAE CALYCANTHUS FAMILY

- Calycanthus floridus* L. CAROLINA ALLSPICE. P. Introd.

#### ANNONACEAE CUSTARD-APPLE FAMILY

- Asimina triloba* (L.) Dunal. PAWPAW. P. Introd.

#### LAURACEAE LAUREL FAMILY

- Lindera Benzoin* (L.) Blume. SPICEBUSH. \* B, E, P, S. Swampy areas and damp woods, occasional to frequent.
- Sassafras albidum* (Nutt.) Nees. SASSAFRAS. \* B, M, P, S, Avery Tract, Matthies Tract. Open upland forest and early stages of old field succession, frequent.

#### PAPAVERACEAE POPPY FAMILY

- Chelidonium majus* L. CELANDINE. E. A weed in disturbed shady places.
- Dicentra Cucullaria* (L.) Bernh. DUTCHMAN'S-BREECHES. E. Introd.
- Sanguinaria canadensis* L. BLOODROOT. E, Avery Tract. Upland forest, rare.



### CRUCIFERAE *MUSTARD FAMILY*

- Barbarea vulgaris* R. Br. YELLOW ROCKET. E, Williams Tract. Moist open woods, occasional.
- Brassica juncea* (L.) Coss. CHINESE MUSTARD. \* P. Trail near Pond, locally frequent.
- Brassica Kaber* (DC.) L. C. Wheeler var. *pinnatifida* (Stokes) L. C. Wheeler. CRUNCHWEED. \* P. Edge of pond and old fields.
- Brassica nigra* (L.) Koch. BLACK MUSTARD. \* Old fields.
- Brassica Rapa* L. BIRD'S RAPE. B. Disturbed soil.
- Cakile edentula* (Bigel.) Hook. SEA-ROCKET. M. Salt marsh.
- Cardamine pensylvanica* Muhl. BITTER CRESS. \* B. Stream in ravine, occasional.
- Lepidium densiflorum* Schrad. PEPPERGRASS. \* Avery Tract. Sandy soil along R.R. tracks.
- Lepidium virginicum* L. POOR-MAN'S PEPPER. \* Gallows Lane. Roadside.
- Raphanus Raphanistrum* L. WILD RADISH. \* Avery Tract. Disturbed ground.
- Sisymbrium officinale* (L.) Scop. HEDGE MUSTARD. \* Williams Tract. Disturbed ground.

### SARRACENIACEAE *PITCHER-PLANT FAMILY*

- Sarracenia purpurea* L. PITCHER-PLANT. B. Bog, rare.

### DROSERACEAE *SUNDEW FAMILY*

- Drosera rotundifolia* L. ROUND-LEAVED SUNDEW. \* B. Moist clearing where top soil was removed, occasional to rare.

### CRASSULACEAE *ORPINE FAMILY*

- Sedum purpureum* (L.) Link. LIVE-FOREVER, GARDEN-ORPINE. \* Old fields and moist clearings, rare.

### SAXIFRAGACEAE *SAXIFRAGE FAMILY*

- Chrysosplenium americanum* Schwein. GOLDEN SAXIFRAGE, WATER-MAT. B. Quiet water, occasional.
- Hydrangea arborescens* L. WILD HYDRANGEA. P. Introd.
- Hydrangea paniculata* Sieb. HYDRANGEA. P. Escaped from cult.
- Penthorum sedoides* L. DITCH-STONECROP. \* Avery Tract. Marsh.
- Philadelphus inodorus* L. MOCK-ORANGE. P. Introd.
- Philadelphus inodorus* L. var. *grandiflorus* (Willd.) Gray. P. Introd.
- Saxifraga virginiana* Michx. EARLY SAXIFRAGE. \* B, E. Gravelly clearing, Goodwin Tract, rare.
- Tiarella cordifolia* L. FALSE MITERWORT, FOAMFLOWER. E. Introd.

### HAMAMELIDACEAE *WITCH-HAZEL FAMILY*

- Hamamelis virginiana* L. WITCH-HAZEL. \* B, P. Understory shrub in moist woodland, frequent.
- Liquidambar styraciflua* L. SWEET GUM. P. Introd.

PLATANACEAE PLANE-TREE FAMILY

*Platanus occidentalis* L. SYCAMORE, BUTTONWOOD. P. Introd.

ROSACEAE ROSE FAMILY

- Agrimonia pubescens* Wallr. COCKLEBUR. \*B. Damp woods.  
*Agrimonia gryposepala* Wallr. AGRIMONY. \*M. Gravel terrace.  
*Amelanchier alnifolia* Nutt. SHADBUSH, JUNE BERRY. P. Introd.  
*Amelanchier canadensis* (L.) Medic. SHADBUSH, JUNE BERRY. \*B, P.  
 Open woods, occasional.  
*Amelanchier intermedia* Spach. P. Introd.  
*Amelanchier laevis* Wieg. \*B, P. Moist open woods, occasional.  
*Amelanchier obovalis* (Michx.) Ashe. P. Introd.  
*Amelanchier sanguinea* (Pursh) DC. P. Introd.  
*Amelanchier stolonifera* Wieg. P. Introd.  
*Chaenomeles lagenaria* Koidz. JAPANESE QUINCE. P. Introd.  
*Crataegus Arnoldiana* Sarg. ARNOLD'S THORN. P. Introd.  
*Crataegus Canbyi* Sarg. P. Introd.  
*Crataegus chrysoarpa* Ashe. P. Introd.  
*Crataegus chrysoarpa* Ashe. var. *phoenicea* Palmer. P. Introd.  
*Crataegus coccinioides* Ashe. P. Introd.  
*Crataegus crus-galli* L. COCKSPUR THORN. P. Introd.  
*Crataegus dilatata* Sarg. P. Introd.  
*Crataegus Douglasii* Lindl. P. Introd.  
*Crataegus Holmesiana* Ashe. P. Introd.  
*Crataegus macrosperma* Ashe. P. Introd.  
*Crataegus macrosperma* Ashe. var. *acutiloba* (Sarg.) Egglest. P. Introd.  
*Crataegus mollis* (T. & G.) Scheele. RED HAW. P. Introd.  
*Crataegus monogyna* Jacq. ENGLISH HAWTHORN. P. Introd.  
*Crataegus Phenopyrum* (L. f.) Medic. WASHINGTON THORN. P. Introd.  
*Crataegus pruinosa* (Wendl.) K. Koch. P. Introd.  
*Crataegus punctata* Jacq. P. Introd.  
*Crataegus uniflora* Muenchh. P. Introd.  
*Crataegus viridis* L. P. Introd.  
*Fragaria vesca* L. WOODLAND STRAWBERRY. \* Open woods, rare.  
*Fragaria virginiana* Duchesne. WILD STRAWBERRY. B. Fields, occasional.  
*Geum canadense* Jacq. AVENS. B. Damp thickets, occasional.  
*Geum rivale* L. PURPLE AVENS. E. Introd.  
*Physocarpus opulifolius* (L.) Maxim. NINEBARK. P. Introd.  
*Potentilla canadensis* L. CINQUEFOIL. \* Dry open woods and fields,  
 occasional.  
*Potentilla fruticosa* L. SHRUBBY CINQUEFOIL. P. Introd.  
*Potentilla norvegica* L. ROUGH CINQUEFOIL. \* Williams Tract. Disturbed  
 ground.  
*Potentilla simplex* Michx. OLD-FIELD CINQUEFOIL. \* P. Fields and open  
 woods, occasional.  
*Potentilla recta* L. M. Dry fields and clearings, occasional.  
*Prunus alleghaniensis* Porter. SLOE OR ALLEGHANY PLUM. P. Introd.



- Prunus americana* Marsh. WILD PLUM. P. Introd.  
*Prunus Avium* L. SWEET CHERRY, MAZZARD. \* P.  
*Prunus Gravesii* Small. GRAVES BEACH PLUM. P. Introd.  
*Prunus Mahaleb* L. MAHALEB CHERRY. P. Introd.  
*Prunus maritima* Marsh. BEACH PLUM. P. Introd.  
*Prunus nigra* Ait. WILD OR CANADA PLUM. P.  
*Prunus pennsylvanica* L. f. WILD RED OR FIRE CHERRY. M, P.  
*Prunus pumila* L. DWARF SAND CHERRY. P. Introd.  
*Prunus serotina* Ehrh. WILD BLACK CHERRY. B, M, P, Avery, Matthies  
 and Williams Tracts. Old fields, thickets and young woodlands,  
 frequent.  
*Prunus susquehanae* Willd. SAND CHERRY. P. Introd.  
*Prunus virginiana* L. CHOKE CHERRY. P.  
*Pyrus americana* (Marsh) DC. AMERICAN MOUNTAIN ASH. P. Introd.  
*Pyrus arbutifolia* (L.) L. f. RED CHOKEBERRY. \* M, P. Open woods,  
 occasional.  
*Pyrus communis* L. PEAR. B. Overgrown pasture.  
*Pyrus floribunda* Lindl. PURPLE CHOKEBERRY. \* P. Moist open woods.  
*Pyrus Malus* L. APPLE. \* P, Matthies Tract. Overgrown orchards and  
 pastures.  
*Pyrus melanocarpa* (Michx.) Willd. BLACK CHOKEBERRY. \* B, P.  
 Swamps and thickets, occasional.  
*Rosa carolina* L. WILD ROSE. \* P. Dry clearings, occasional.  
*Rosa multiflora* Thunb. MULTIFLORA ROSE. \* P, Williams Tract.  
 Thickets, roadsides and moist woods, occasional.  
*Rosa nitida* Willd. WILD ROSE. \*.  
*Rosa palustris* Marsh. WILD ROSE. \* B, P. Wet thickets and swamps,  
 occasional.  
*Rosa virginiana* Mill. WILD ROSE. \* B. Swamp on Gallows Lane.  
*Rubus alleghaniensis* Porter. BLACKBERRY. \* M, P. Thickets and old  
 fields, frequent.  
*Rubus alumnus* Bailey. BLACKBERRY. P.  
*Rubus Enslenii* Tratt. \* Old field.  
*Rubus flagellaris* Willd. DEWBERRY. \* M, P. Thickets and old fields,  
 occasional to frequent.  
*Rubus hispidus* L. TRAILING BLACKBERRY. P. Swamps and wet woods,  
 occasional.  
*Rubus multispinus* Blanch. BLACKBERRY. P.  
*Rubus pennsylvanicus* Poir. BLACKBERRY. \* P. Old field.  
*Rubus phoenicolasius* Maxim. WINEBERRY. P. Introd.  
*Sanguisorba canadensis* L. CANADIAN BURNET. \* P. Margin of Pond.  
*Spiraea latifolia* (Ait.) Burkh. MEADOW-SWEET. \* B, P, Avery Tract.  
 Open woods and clearings, occasional.  
*Spiraea tomentosa* L. STEEPLE-BUSH. \* B, P. Fields and thickets, occa-  
 sional.

#### LEGUMINOSAE PEA FAMILY

- Amorpha fruticosa* L. FALSE INDIGO, INDIGO-BUSH. P.. Introd.

- Amphicarpa bracteata* (L.) Fern. HOG-PEANUT. \* B, P. Moist open woods, occasional.
- Apios americana* Medic. GROUNDNUT. \* B, P. Moist open woods, occasional.
- Baptisia tinctoria* (L.) R. Br. WILD INDIGO. \* B, P. Clearings and old fields, occasional.
- Cassia nictitans* L. WILD SENSITIVE PLANT. \* Sandy roadside, Gallows Lane, rare.
- Cercis canadensis* L. REDBUD. P. Introd.
- Desmodium canadense* (L.) DC. TICK-TREFOIL. B. Open woods.
- Desmodium glabellum* (Michx.) DC. \* B. Dry Woods.
- Desmodium perplexum* Schub. \* B. Dry woods.
- Gleditsia triacanthos* L. HONEY LOCUST. P. Introd.
- Gleditsia triacanthos* L. var. *inermis* Willd. THORNLESS HONEY LOCUST. P. Introd.
- Gymnocladus dioica* (L.) Koch. KENTUCKY COFFEE TREE. P. Introd.
- Lathyrus japonicus* Willd. var. *glaber* (Ser.) Fern. BEACH PEA. \* M, Avery Tract. Sandy beaches and edge of cove, rare.
- Lathyrus palustris* L. VETCHLING. \* Avery Tract. Clearing.
- Lespedeza capitata* Michx. BUSH-CLOVER. \* Sandy areas and roadsides, occasional.
- Lespedeza hirta* (L.) Hornem. BUSH-CLOVER. \* B. Dry woods and roadsides.
- Lespedeza intermedia* (S. Wats.) Britt. BUSH-CLOVER. \* B. Dry open woods.
- Lotus corniculatus* L. BIRDSFOOT-TREFOIL. \* Williams Tract. Clearing west of stable.
- Medicago sativa* L. ALFALFA. \* B. Old field.
- Melilotus alba* Desr. WHITE MELLILOT, SWEET CLOVER. \* Williams Tract. Clearing west of stable.
- Robinia Pseudo-Acacia* L. BLACK LOCUST. \* B, P. Established along Gallows Lane and on the Goodwin Tract.
- Robinia viscosa* Vent. CLAMMY LOCUST. P. Introd.
- Strophostyles helvola* (L.) Ell. WILD BEAN. M. Mamacoke upland, rare.
- Trifolium agrarium* L. YELLOW OR HOP-CLOVER. \* Fields.
- Trifolium arvense* L. RABBIT-FOOT CLOVER. B. Open fields, rare.
- Trifolium pratense* L. var. *sativum* (Mill.) Schreb. RED CLOVER. \* Old fields and roadsides, occasional.
- Trifolium repens* L. WHITE CLOVER. \* P. Lawns.
- Vicia Cracca* L. TUFTED VETCH. \* Williams Tract. Clearing west of stable.
- Wisteria sinensis* Sweet. CHINESE WISTERIA. P. Introd.

#### LINACEAE FLAX FAMILY

- Linum striatum* Walt. FLAX. \* Edge of Pond.
- Linum virginianum* L. FLAX. \* B. Dry open woods near quarry.



OXALIDACEAE WOOD-SORREL FAMILY

- Oxalis europaea* Jord. \* P. Trailside weed.  
*Oxalis stricta* L. WOOD-SORREL. \* Dry field.

GERANIACEAE GERANIUM FAMILY

- Geranium maculatum* L. WILD GERANIUM, CRANESBILL. B, P. Moist open woods, occasional.

RUTACEAE RUE FAMILY

- Ptelea trifoliata* L. HOP TREE, WAFER ASH. P. Introd.  
*Xanthoxylum americanum* Mill. NORTHERN PRICKLY ASH. P. Introd.

SIMAROUBACEAE QUASSIA FAMILY

- Ailanthus altissima* (Mill.) Swingle. TREE-OF-HEAVEN. \* M, P, Gal-  
lows Lane. Naturalized, locally frequent.

POLYGALACEAE MILKWORT FAMILY

- Polygala paucifolia* Willd. FRINGED POLYGALA. E. Introd.  
*Polygala polygama* Walt. MILKWORT. \* Avery Tract. Edge of path, rare.  
*Polygala sanguinea* L. MILKWORT. \* B. Grassy openings, rare to occa-  
sional.

EUPHORBIACEAE SPURGE FAMILY

- Acalypha gracilens* Gray. THREE-SEEDED MERCURY. \* B. Dry woods near  
quarry.  
*Acalypha rhomboidea* Raf. \* M, Avery Tract. Wet meadows.  
*Euphorbia Cyparissias* L. CYPRESS SPURGE. \* P.  
*Euphorbia maculata* L. EYEBANE. \* P. Weed in lawns.  
*Euphorbia polygonifolia* L. SEASIDE SPURGE. \* M. Gravelly shore of  
Thames River.  
*Euphorbia supina* Raf. MILK PURSLANE. \* Avery Tract. Edge of swamp,  
occasional to rare.

CALLITRICHACEAE WATER-STARWORT FAMILY

- Callitriche heterophylla* Pursh. WATER-STARWORT. B. Quiet water at  
edge of Pond, frequent.  
*Callitriche palustris* L. WATER-STARWORT. \* Avery Tract. Marsh.

EMPETRACEAE CROWBERRY FAMILY

- Corema Conradii* Torr. BROOM-CROWBERRY. P. Introd.

ANACARDIACEAE CASHEW FAMILY

- Rhus aromatica* Ait. FRAGRANT SUMAC. P.  
*Rhus copallina* L. SHINING SUMAC. \* B, P, Avery and Matthies Tracts.  
Old fields and thickets, frequent.  
*Rhus glabra* L. SMOOTH SUMAC. \* B, P, Avery and Matthies Tracts. Old  
fields and roadsides, occasional to frequent.  
*Rhus radicans* L. POISON IVY. B, M, P, S, Avery and Matthies Tracts.  
Open woods, thickets, stone walls and fields, occasional to common.

- Rhus typhina* L. STAGHORN SUMAC. \* P. Fields and thickets, occasional.  
*Rhus Vernix* L. POISON SUMAC. B, P, S. Wet thickets at edge of Pond  
 and in ravine, occasional to rare.

#### AQUIFOLIACEAE HOLLY FAMILY

- Ilex crenata* Thunb. var. *convexa* Makino. JAPANESE HOLLY. P. Introd.  
 Outdoor Theatre.  
*Ilex glabra* (L.) Gray. INKBERRY. P. Introd.  
*Ilex laevigata* (Pursh) Gray. WINTERBERRY. \* B, P. Edge of swamp.  
*Ilex opaca* Ait. AMERICAN HOLLY. P. Introd.  
*Ilex verticillata* (L.) Gray. BLACK ALDER, WINTERBERRY. B, P.  
 Swamps, occasional.  
*Ilex verticillata* (L.) Gray var. *fastigiata* (Pursh) Gray. P. Introd.  
*Ilex verticillata* (L.) Gray var. *padifolia* (Willd.) T. & G. \* B, P. Edge  
 of swamp, occasional.  
*Ilex verticillata* (L.) Gray var. *tenuifolia* (Torr.) S. Wats. P. Introd.  
*Nemopanthus mucronata* (L.) Trel. MOUNTAIN HOLLY. B, P. Edge of  
 Red Maple Swamp, rare.

#### CELASTRACEAE STAFF-TREE FAMILY

- Celastrus orbiculatus* Thunb. ORIENTAL BITTERSWEET. \* P. Moist open  
 woods and thickets, frequent in plantings and aggressively invading  
 the native vegetation.  
*Celastrus scandens* L. CLIMBING OR AMERICAN BITTERSWEET. \* B, M.  
 Open woods, rare.  
*Euonymus alatus* (Thunb.) Sieb. WINGED SPINDLE TREE. P. Introd.  
*Euonymus atropurpureus* Jacq. BURNING-BUSH, WAHOO. P. Introd.

#### ACERACEAE MAPLE FAMILY

- Acer Ginnala* Maxim. SIBERIAN MAPLE. P. Introd.  
*Acer Negundo* L. BOX ELDER. P.  
*Acer palmatum* Thunb. JAPANESE MAPLE. P. Introd.  
*Acer pensylvanicum* L. STRIPED MAPLE, MOOSEWOOD. P, E. Introd.  
*Acer platanoides* L. NORWAY MAPLE. P. Introd.  
*Acer Pseudo-Platanus* L. SYCAMORE MAPLE. P. Introd.  
*Acer rubrum* L. RED MAPLE. \* B, E, M, P, S, Avery and Matthies  
 Tracts. Wooded swamps, abundant to common; upland forest and  
 old fields, occasional to frequent.  
*Acer saccharinum* L. SILVER MAPLE. P. Introd.  
*Acer saccharum* Marsh. SUGAR OR ROCK MAPLE. P. Introd. Planted  
 along Gallows Lane.  
*Acer spicatum* Lam. MOUNTAIN MAPLE. P, E. Introd.

#### HIPPOCASTANACEAE BUCKEYE FAMILY

- Aesculus Hippocastanum* L. COMMON HORSE-CHESTNUT. P. Introd.  
*Aesculus octandra* Marsh. SWEET OR YELLOW BUCKEYE. P. Introd.



BALSAMINACEAE TOUCH-ME-NOT FAMILY

*Impatiens capensis* Meerb. JEWELWEED, SPOTTED TOUCH-ME-NOT. \* B, E, P, S. Wet swampy woods, occasional.

RHAMNACEAE BUCKTHORN FAMILY

*Ceanothus americanus* L. NEW JERSEY TEA. P. Introd.

*Rhamnus davurica* Pall. BUCKTHORN. P. Introd.

*Rhamnus Frangula* L. ALDER-BUCKTHORN. P. Introd.

VITACEAE VINE FAMILY

*Parthenocissus quinquefolia* (L.) Planch. VIRGINIA CREEPER. \* B, P. Fields and open woods, occasional.

*Parthenocissus tricuspidata* (Sieb. & Zucc.) Planch. BOSTON IVY. \* Avery Tract. Open woods, naturalized, occasional to rare.

*Vitis aestivalis* Michx. PIGEON-GRAPE. \* P. Dry open woods.

*Vitis Labrusca* L. FOX GRAPE. \* P, B. Open woods.

*Vitis vulpina* L. WINTER FOX GRAPE. P.

TILIACEAE LINDEN FAMILY

*Tilia americana* L. BASSWOOD. P. Introd.

*Tilia europaea* L. EUROPEAN LINDEN. P. Introd.

*Tilia heterophylla* Vent. WHITE BASSWOOD. P. Introd.

MALVACEAE MALLOW FAMILY

*Hibiscus palustris* L. MARSH-MALLOW. \* M. Swampy edge of south shore, occasional.

*Malva neglecta* Wallr. COMMON MALLOW. \* P. Disturbed ground.

GUTTIFERAE ST. JOHN'S-WORT FAMILY

*Hypericum boreale* (Britt.) Bickn. \* Margin of Pond.

*Hypericum boreale* (Britt.) Bickn. forma *callitrichoides* Fassett. \* Floating in Pond in shallow water.

*Hypericum canadense* L. \* B. Damp field and roadside in the Red Maple Swamp, occasional.

*Hypericum frondosum* Michx. P. Introd.

*Hypericum gentianoides* (L.) BSP. PINWEED. \* B, Avery Tract. Dry sandy clearings, rare.

*Hypericum Kalmianum* L. KALM'S ST. JOHN'S-WORT. P. Introd.

*Hypericum majus* (Gray) Britt. \* Margin of Pond.

*Hypericum mutilum* L. \* Damp woods and margin of Pond, occasional.

*Hypericum perforatum* L. COMMON ST. JOHN'S-WORT. \* B, Avery Tract. Dry fields, roadsides and along the R.R. tracks, occasional.

*Hypericum punctatum* Lam. \* B. Open woods.

*Hypericum virginicum* L. MARSH ST. JOHN'S-WORT. \* B. Swamps and edge of Pond, occasional.

CISTACEAE ROCKROSE FAMILY

*Helianthemum Bicknellii* Fern. FROSTWEED. \* Dry open woods.

*Helianthemum canadense* (L.) Michx. FROSTWEED. \* B, M. Dry open woods, occasional.

*Hudsonia ericoides* L. GOLDEN OR FALSE HEATHER. P. Introd.

*Lechea Leggettii* Britt. & Hollick. PINWEED. \* B. Dry open woods north of Gallows Lane.

*Lechea villosa* Ell. PINWEED. \* B. Dry open woods.

#### VIOLACEAE VIOLET FAMILY

*Viola blanda* Willd. WHITE VIOLET. \* B. Damp woods near stream.

*Viola canadensis* L. CANADA VIOLET. E. Introd.

*Viola cucullata* Ait. VIOLET. \* B. Edge of stream in ravine.

*Viola fimbriatula* Sm. PASTURE VIOLET. \* Avery Tract. Along path.

*Viola lanceolata* L. LANCE-LEAVED VIOLET. \* B, M. Moist places, margin of Pond and Mamacoke ledges, rare.

*Viola pallens* (Banks) Brainerd. WHITE VIOLET. \* B. Edge of stream in ravine.

*Viola papilionacea* Pursh. VIOLET. \* B. Moist woods.

*Viola pedata* L. BIRDSFOOT VIOLET. B. Dry ledges and openings, rare.

*Viola pennsylvanica* Michx. SMOOTH YELLOW VIOLET. E. Introd.

*Viola rotundifolia* Michx. ROUND-LEAVED OR EARLY YELLOW VIOLET. E. Introd.

#### THYMELAEACEAE MEZEREUM FAMILY

*Dirca palustris* L. LEATHERWOOD. P. Introd.

#### LYTHRACEAE LOOSESTRIFE FAMILY

*Decodon verticillatus* (L.) Ell. WATER-WILLOW. \* B. Pond and Red Maple Swamp, at edge of open water, locally frequent.

#### NYSSACEAE SOUR GUM FAMILY

*Nyssa sylvatica* Marsh. TUPELO, PEPPERIDGE, SOUR GUM. \* B, P, Benham Ext. Swamps, moist woods and old fields, occasional.

#### MELASTOMATACEAE MELASTOMA FAMILY

*Rhexia virginica* L. MEADOW-BEAUTY. \* B. Margin of Pond.

#### ONAGRACEAE EVENING-PRIMROSE FAMILY

*Circaea quadrisulcata* (Maxim.) Franch & Sav. var. *canadensis* (L.) Hara. \* E.

*Epilobium glandulosum* Lehm. var. *adenocaulon* (Hausk.) Fern. WILLOW-HERB. \* B. Wet woods, rare.

*Ludwigia palustris* (L.) Ell. var. *americana* (DC.) Fern. & Grisc. WATER-PURLANE. \* B. Margins of Pond and stream, occasional to rare.

*Oenothera biennis* L. EVENING PRIMROSE. \* Dry open soil.

*Oenothera biennis* L. var. *hirsutissima* Gray. \* M. Beach on the Thames River.

*Oenothera parviflora* L. \* B. Dry soil at edge of quarry.

*Oenothera perennis* L. \* M. Rock outcrop.

*Oenothera speciosa* Nutt. \* Williams Tract.



## HALORAGACEAE WATER-MILFOIL FAMILY

- Proserpinaca palustris* L. MERMAID-WEED. \* B. Margins of Pond, bog and stream.  
*Proserpinaca palustris* L. var. *crebra* Fern. & Grisc. \* B. Red Maple Swamp.

## ARALIACEAE GINSENG FAMILY

- Aralia nudicaulis* L. WILD SARSAPARILLA. B, M, S. Upland forest, occasional to frequent.  
*Aralia racemosa* L. SPIKENARD. B. Ravine, rare.  
*Hedera Helix* L. ENGLISH IVY. P. Introd. Outdoor Theatre.  
*Panax quinquefolius* L. GINSENG. \* B. Damp woods, rare.  
*Panax trifolius* L. DWARF GINSENG. B, E. Moist woods in ravine, occasional.

## UMBELLIFERAE PARSLEY FAMILY

- Cicuta maculata* L. SPOTTED COWBANE. M, Avery Tract. Upper border of marshes, rare.  
*Conium maculatum* L. POISON HEMLOCK. Moist roadsides and clearings, rare.  
*Daucus Carota* L. QUEEN ANNE'S LACE. \* Fields and roadsides, occasional to frequent.  
*Heracleum maximum* Bartr. COW-PARSNIP. \* M. Edge of salt marsh.  
*Hydrocotyle americanum* L. WATER-PENNYWORT. \* B. Margin of stream, occasional.  
*Osmorbiza Claytoni* (Michx.) C. B. Clarke. SWEET CICELY. E. Introd.  
*Sanicula marilandica* L. BLACK SNAKEROOT. B. Moist woods in ravine, occasional to rare.  
*Zizia aurea* (L.) W. D. J. Koch. GOLDEN ALEXANDERS. E. Introd.

## CORNACEAE DOGWOOD FAMILY

- Cornus alba* L. TARTARIAN DOGWOOD. P. Introd.  
*Cornus alternifolia* L. f. ALTERNATE-LEAVED DOGWOOD, PAGODA DOGWOOD. P.  
*Cornus Amomum* Mill. SILKY CORNEL. \* B, P. Open field and woods, occasional.  
*Cornus canadensis* L. DWARF CORNEL, BUNCHBERRY. E. Introd.  
*Cornus florida* L. FLOWERING DOGWOOD. \* B, M, P, Avery and Matthies Tracts. Upland woodlands as understory tree and old fields, occasional.  
*Cornus racemosa* Lam. GRAY DOGWOOD. P.  
*Cornus rugosa* Lam. ROUND-LEAVED DOGWOOD. P.  
*Cornus stolonifera* Michx. RED OSIER DOGWOOD. P.

## CLETHRACEAE WHITE ALDER FAMILY

- Clethra alnifolia* L. SWEET PEPPERBUSH. \* B, P, S. Upland forest, occasional, damp woods and swamps, frequent.

PYROLACEAE WINTERGREEN FAMILY

- Chimaphila maculata* (L.) Pursh. SPOTTED WINTERGREEN. \* B, E. Upland forest, occasional.
- Monotropa Hypopithys* L. PINESAP. \* B. Damp woodland humus, rare.
- Monotropa uniflora* L. INDIAN-PIPE. \* B. Damp woodland humus, occasional to rare.
- Pyrola rotundifolia* L. var. *americana* (Sweet) Fern. SHINLEAF, WINTERGREEN. \* B. Woods, occasional to rare.

ERICACEAE HEATH FAMILY

- Chamaedaphne calyculata* (L.) Moench. var. *angustifolia* (Ait.) Rehd. LEATHERLEAF. B. Edge of Pond and bog, occasional.
- Epigaea repens* L. TRAILING ARBUTUS. M, P. Open rocky slopes, rare.
- Gaultheria procumbens* L. CHECKERBERRY. \* B. Upland forest and ledges, occasional.
- Gaylussacia baccata* (Wang.) K. Koch. COMMON OR BLACK HUCKLEBERRY. \* B, P. Open woods, ledges and old fields, occasional to frequent.
- Gaylussacia dumosa* (Andr.) T. & G. DWARF HUCKLEBERRY. P.
- Gaylussacia frondosa* (L.) T. & G. DANGLEBERRY, BLUE HUCKLEBERRY. \* B. Dry open woods, rare.
- Kalmia angustifolia* L. SHEEP LAUREL. \* B, P. Old fields, thickets and upland woods, occasional.
- Kalmia latifolia* L. MOUNTAIN LAUREL. \* B, M, P. Open upland forest, common.
- Ledum groenlandicum* Oeder. LABRADOR-TEA. P. Introd.
- Leucothoë editorum* Fern. & Schub. LEUCOTHOE, DOG-HOBBLE. P. Introd.
- Lyonia ligustrina* (L.) DC. MALEBERRY. \* B, P. Margin of Pond and Red Maple Swamp, occasional to rare.
- Lyonia mariana* (L.) D. Don. STAGGER-BUSH. P. Introd.
- Pieris floribunda* (Pursh) B. & H. FETTER-BUSH. P. Introd.
- Pieris japonica* (Thunb.) D. Don. JAPANESE ANDROMEDA. P. Introd.
- Oxydendrum arboreum* (L.) DC. SOURWOOD, SORREL-TREE. P. Introd.
- Rhododendron calendulaceum* (Michx.) Torr. FLAME OR YELLOW AZALEA. P. Introd.
- Rhododendron carolinianum* Rehd. CAROLINA RHODODENDRON. P. Introd.
- Rhododendron catawbiense* Michx. MOUNTAIN ROSEBAY. P. Introd. Outdoor Theatre.
- Rhododendron maximum* L. GREAT LAUREL, ROSEBAY. P. Introd.
- Rhododendron nudiflorum* (L.) Torr. PINXTER FLOWER. \* B, M, S. Upland forest, occasional.
- Rhododendron roseum* (Loisel.) Rehd. EARLY AZALEA. P. Introd.
- Rhododendron viscosum* (L.) Torr. CLAMMY AZALEA, WHITE SWAMP HONEYSUCKLE. \* B. Edge of bog and swamps, occasional.
- Rhododendron viscosum* (L.) Torr. var. *nitidum* (Pursh) Gray. P. Introd.
- Vaccinium angustifolium* Ait. var. *nigrum* (Wood.) Dole. LOW SWEET BLUEBERRY. \* B, M. Open rocky woods, occasional.



- Vaccinium atrococcum* (Gray) Heller. BLACK Highbush-Blueberry.  
\* B. Open woods.  
*Vaccinium corymbosum* L. Highbush-Blueberry. \* B, P. Open woods,  
occasional; swamps, common.  
*Vaccinium macrocarpon* Ait. AMERICAN CRANBERRY. B. Bog, occa-  
sional.  
*Vaccinium vacillans* Torr. LOW BLUEBERRY. B, M. Open woods, occa-  
sional.

DIAPENSIACEAE *DIAPENSIA* FAMILY

- Galax aphylla* L. WANDFLOWER, BEETLEWEED. E. Introd.  
*Shortia galacifolia* Torr. & Gray. SHORTIA. E. Introd.

PRIMULACEAE *PRIMROSE* FAMILY

- Lysimachia quadrifolia* L. WHORLED LOOSESTRIFE. \* B. Open woods  
and clearings, occasional.  
*Lysimachia terrestris* (L.) BSP. SWAMP LOOSESTRIFE. \* B. Margins of  
Pond and Red Maple Swamp, occasional.  
*Trientalis americana* Raf. STAR-FLOWER. M. Rocky woods, rare.

PLUMBAGINACEAE *LEADWORT* FAMILY

- Limonium carolinianum* (Walt.) Britt. SEA-LAVENDER, MARSH ROSE-  
MARY. \* M. Open *Juncus* belt on salt marsh, occasional.

EBENACEAE *EBONY* FAMILY

- Diosypros virginiana* L. PERSIMMON. P. Introd.

STYRACACEAE *STORAX* FAMILY

- Halesia carolina* L. SILVERBELL-TREE. P. Introd.

OLEACEAE *OLIVE* FAMILY

- Fraxinus americana* L. WHITE ASH. \* B, P. Upland forest, occasional.  
*Fraxinus excelsior* L. EUROPEAN ASH. P. Introd.  
*Fraxinus nigra* Marsh. BLACK ASH. P.  
*Fraxinus pennsylvanica* Marsh. RED ASH. P.  
*Fraxinus pennsylvanica* Marsh var. *subintegerrima* (Vahl) Fern. GREEN  
ASH. P.  
*Fraxinus tomentosa* Michx. f. PUMPKIN ASH. P.  
*Ligustrum vulgare* L. PRIVET. \* B. Naturalized.  
*Syringa vulgaris* L. COMMON LILAC. P. Introd.

GENTIANACEAE *GENTIAN* FAMILY

- Bartonia virginica* (L.) BSP. \* Moist woods along Gallows Lane.

APOCYNACEAE *DOGBANE* FAMILY

- Apocynum androsaemifolium* L. SPREADING DOGBANE. B. Open woods,  
rare.  
*Apocynum cannabinum* L. INDIAN HEMP. \* P, Williams Tract. Open  
woods near Pond and west of stable.  
*Vinca minor* L. MYRTLE. P.

ASCLEPIADACEAE MILKWEED FAMILY

- Asclepias incarnata* L. var. *pulchra* (Ehrh.) Pers. SWAMP MILKWEED.  
\* B. Swamp and margin of Pond, occasional.  
*Asclepias syriaca* L. COMMON MILKWEED. \* Dry fields, occasional.  
*Asclepias tuberosa* L. BUTTERFLY-WEED. \* P. Open fields, occasional.

CONVOLVULACEAE CONVULVULUS FAMILY

- Convolvulus arvensis* L. FIELD BINDWEED. B. Old fields and thickets,  
occasional.  
*Convolvulus sepium* L. HEDGE BINDWEED, WILD MORNING-GLORY. \* P.  
South edge of Pond, occasional.  
*Cuscuta compacta* Juss. DODDER. \* B. Swamp.

POLEMONIACEAE POLEMONIUM FAMILY

- Pblox subulata* L. MOSS-PINK, MOSS-PHLOX. P. Introd.  
*Polemonium reptans* L. JACOB'S-LADDER. E. Introd.

BORAGINACEAE BORAGE FAMILY

- Myosotis arvensis* (L.) Hill. FORGET-ME-NOT. \* M. Rocky outcrop.  
*Myosotis laxa* Lehm. FORGET-ME-NOT. Avery Tract. Springy meadow at  
head of cove.

VERBENACEAE VERVAIN FAMILY

- Verbena hastata* L. BLUE VERVAIN. \* Gallows Lane. Roadside, occasional.  
*Verbena urticifolia* L. WHITE VERVAIN. \* B. Damp open woods, occa-  
sional.

LABIATAE MINT FAMILY

- Collinsonia canadensis* L. HORSE BALM, RICHWEED. \* B. Damp open  
woods, occasional.  
*Glechoma hederacea* L. GILL-OVER-THE-GROUND. \* P. Damp shaded  
lawns.  
*Hedeoma pulegioides* (L.) Pers. PENNYROYAL. \* B. Sandy clearing in  
quarry, occasional to rare.  
*Lycopus americanus* Muhl. BUGLEWEED, WATER-HOREHOUND. \* Damp  
woods.  
*Lycopus rubellus* Moench. BUGLEWEED, WATER-HOREHOUND. \* B.  
Edge of stream in ravine.  
*Lycopus uniflorus* Michx. BUGLEWEED, WATER-HOREHOUND. \* B.  
Damp open woods.  
*Lycopus virginicus* L. BUGLEWEED, WATER-HOREHOUND. \* B, Goodwin  
Tract. Moist open woods.  
*Mentha arvensis* L. FIELD MINT. \* Wet open areas, rare.  
*Mentha piperita* L. PEPPERMINT. Avery Tract. Marsh.  
*Monarda didyma* L. BEE-BALM. \* B. Field, escaped from cult., rare.  
*Prunella vulgaris* L. HEAL-ALL. \* Clearings, old fields and roadsides,  
occasional to frequent.  
*Pycnanthemum tenuifolium* Schrad. MOUNTAIN-MINT. \* Old fields and  
open woods, occasional.



- Pycnanthemum virginianum* (L.) Durand & Jackson. MOUNTAIN-MINT.  
\* B. Open woods.  
*Scutellaria lateriflora* L. MAD-DOG SKULLCAP. \* B. Ravine and edge of  
Pond, occasional.  
*Trichostema dichotomum* L. BLUECURLS, BASTARD PENNYROYAL. Avery  
Tract. Openings and along the R.R. tracks, occasional.

#### SOLANACEAE NIGHTSHADE FAMILY

- Solanum carolinense* L. HORSE-NETTLE. \* P. Clearing, rare.  
*Solanum Dulcamara* L. var. *villosissimum* Desv. NIGHTSHADE. \* P. Road-  
sides and thickets.  
*Solanum nigrum* L. COMMON NIGHTSHADE. \* Avery Tract. Disturbed  
ground.

#### SCROPHULARIACEAE FIGWORT FAMILY

- Cbelone glabra* L. TURTLEHEAD, BALMONY. B. Ravine, rare.  
*Gerardia maritima* Raf. PURPLE GERARDIA. \* M. Salt marsh in the  
*Juncus* belt, occasional.  
*Gerardia purpurea* L. GERARDIA. \* Williams Tract. Old field.  
*Gerardia tenuifolia* Vahl. \* B. Clearing in the woodland.  
*Gratiola neglecta* Torr. HEDGE-HYSSOP. \* B. Edge of stream in ravine,  
occasional.  
*Linaria canadensis* (L.) Dumont. OLD-FIELDS TOADFLAX. \* B. Dry open  
woods and roadsides, occasional to rare.  
*Linaria vulgaris* Hill. BUTTER-AND-EGGS. \* P. Old fields and roadsides,  
occasional.  
*Melampyrum lineare* Desr. var. *americanum* (Michx.) Beauverd. COW-  
WHEAT. \* B. Open woods, occasional to rare.  
*Mimulus ringens* L. MONKEY-FLOWER. \* Williams Tract. Damp clearing  
west of stable.  
*Pentstemon Digitalis* Nutt. BEARD-TONGUE. \* B. Roadside, Bolles Road.  
*Verbascum Thapsus* L. COMMON MULLEIN. Fields and roadsides, occa-  
sional.  
*Veronica arvensis* L. CORN-SPEEDWELL. B. Clearings.  
*Veronica officinalis* L. SPEEDWELL. \* B. Fields, occasional.  
*Veronica peregrina* L. NECKWEED, PURSLANE-SPEEDWELL. Avery Tract.  
Gravelly edge of marsh, rare.  
*Veronica serpyllifolia* L. THYME-LEAVED SPEEDWELL. \* P, Avery Tract.  
Grassy clearings and lawns, occasional.

#### BIGNONIACEAE BIGNONIA FAMILY

- Campsis radicans* (L.) Seem. TRUMPET-CREEPER. P. Introd.  
*Catalpa bignonioides* Walt. CATALPA TREE. P. Introd.

#### OROBANCHACEAE BROOM-RAPE FAMILY

- Epifagus virginiana* (L.) Bart. BEECH DROPS. B, Avery Tract. Beech  
woods, occasional.  
*Orobanche uniflora* L. ONE-FLOWERED CANCER-ROOT. \* P. Parasite,  
damp woods, rare.

LENTIBULARIACEAE BLADDERWORT FAMILY

- Utricularia gibba* L. BLADDERWORT. B. Sedge-rush belt at edge of Pond.  
*Utricularia inflata* Walt. BLADDERWORT. B. Shallow water in Pond, frequent.  
*Utricularia inflata* Walt. var. *minor* Chapm. BLADDERWORT. B. Pond.

PLANTAGINACEAE PLANTAIN FAMILY

- Plantago juncooides* Lam. var. *decipiens* (Barnéoud) Fern. SEASIDE PLANTAIN. \* M. Salt marsh.  
*Plantago lanceolata* L. ENGLISH PLANTAIN, RIBGRASS. P. Lawns, grassy clearings and roadsides, frequent.  
*Plantago lanceolata* L. var. *sphaerostachya* Mert. & Koch. \* Old field.  
*Plantago major* L. PLANTAIN. \* P. Lawn.  
*Plantago Rugelii* Domin. PLANTAIN. \* B. Bolles Road.

RUBIACEAE MADDER FAMILY

- Cephalanthus occidentalis* L. BUTTON BUSH. \* B, P. Swamp and margin of Pond, occasional.  
*Galium circaeazans* Michx. var. *hypomalacum* Fern. WILD LICORICE. \* M. Damp woods.  
*Galium obtusum* Bigel. \* B. Swamp.  
*Galium pilosum* Ait. \* B. Dry woods.  
*Galium tinctorium* L. \* Margin of Pond.  
*Galium trifidum* L. B. Margin of Pond, occasional to frequent.  
*Galium triflorum* Michx. SWEET-SCENTED BEDSTRAW. B. Open woods.  
*Galium verum* L. YELLOW BEDSTRAW. B. Fields and roadsides, occasional.  
*Houstonia caerulea* L. BLUETS. \* P. Old fields and paths, occasional.  
*Mitchella repens* L. PARTRIDGE BERRY. \* B, E. Upland oak woods, rare.

CAPRIFOLIACEAE HONEYSUCKLE FAMILY

- Diervilla Lonicera* Mill. BUSH HONEYSUCKLE. \* M, Avery Tract. Open woods, occasional.  
*Lonicera dioica* L. P. Introd.  
*Lonicera japonica* Thunb. JAPANESE HONEYSUCKLE. B, M, P, S, Avery and Matthies Tracts. Thickets and disturbed woods throughout the Arboretum, frequent as an aggressive weed.  
*Lonicera Morrowi* Gray. \* P. Old fields and roadsides, naturalized, occasional.  
*Lonicera sempervirens* L. TRUMPET HONEYSUCKLE. P. Introd.  
*Lonicera tatarica* L. TARTARIAN HONEYSUCKLE. \* P. Introd.  
*Lonicera villosa* (Michx.) R. & S. var. *Solonis* (Eat.) Fern. MOUNTAIN FLY HONEYSUCKLE. P. Introd.  
*Lonicera Xylosteum* L. FLY HONEYSUCKLE. Matthies Tract. Disturbed woods, frequent.  
*Sambucus canadensis* L. COMMON OR AMERICAN ELDER. \* B, P. Wet woods and thickets, occasional.  
*Symphoricarpos albus* (L.) Blake. SNOWBERRY. P. Introd.  
*Symphoricarpos orbiculatus* Moench. CORALBERRY. P. Introd.



- Viburnum acerifolium* L. MAPLE-LEAVED VIBURNUM. \* B, M, P, S.  
Upland forest, occasional.
- Viburnum alnifolium* Marsh. HOBBLEBUSH, WITCH-HOBBLE. P. Introd.
- Viburnum casinoides* L. WITHEROD. \* B, P. Damp open woods, occasional to rare.
- Viburnum Lentago* L. SHEEPBERRY, NANNYBERRY. P. Introd.
- Viburnum nudum* L. SMOOTH WITHEROD. P. Introd.
- Virburnum prunifolium* L. BLACK-HAW. P. Introd.
- Viburnum recognitum* Fern. ARROW-WOOD. \* B, P. Moist open woods, occasional.
- Viburnum trilobum* Marsh. CRANBERRY-TREE. P. Introd.

#### CAMPANULACEAE BLUEBELL FAMILY

- Lobelia Cardinalis* L. CARDINAL FLOWER. \* B. Swamps and stream margin, occasional to rare.
- Lobelia inflata* L. INDIAN-TOBACCO. \* Fields and roadsides, occasional.
- Lobelia spicata* Lam. PALE-SPIKE LOBELIA. \* B. Old fields.

#### COMPOSITAE COMPOSITE FAMILY

- Achillea Millefolium* L. COMMON YARROW. \* B, P. Fields and roadsides, occasional.
- Ambrosia artemisiifolia* L. RAGWEED. \* B, P. Fields and roadsides on disturbed soil, occasional.
- Anaphalis margaritacea* (L.) C. B. Clarke var. *intercedens* Hara. PEARLY EVERLASTING. \* Fields and open woods, occasional to rare.
- Antennaria neglecta* Greene. EVERLASTING, PUSSY'S-TOES. \* Fields.
- Antennaria neodioica* Greene var. *chlorophylla* Fern. EVERLASTING, PUSSY'S-TOES. \* Dry open woods, occasional.
- Antennaria plantaginifolia* (L.) Hook. EVERLASTING, PUSSY'S-TOES. \* Open woods, occasional.
- Arctium minus* (Hill) Bernh. COMMON BURDOCK. Avery Tract. Clearing.
- Aster cordifolius* L. ASTER. \* Avery Tract. Open woods, occasional.
- Aster divaricatus* L. \* B. Damp open woods, occasional.
- Aster ericoides* L. \* Fields, occasional.
- Aster Herveyi* Gray. \* M. Open woods, rare.
- Aster laevis* L. \* Dry open woods, occasional.
- Aster lateriflorus* (L.) Britt. Moist open woods and clearings, occasional.
- Aster linariifolius* L. \* Dry open woods and clearings, occasional.
- Aster novi-belgii* L. B. Damp clearings.
- Aster patens* Ait. \* Dry open woods and clearings.
- Aster pilosus* Willd. \* M. Dry clearing.
- Aster pilosus* Willd. var. *demotus* Blake. \* B. Old field north of Gallows Lane.
- Aster puniceus* L. \* B, Avery Tract. Moist openings.
- Aster simplex* Willd. \* Damp open woods.
- Aster tenuifolius* L. \* M. Salt marsh, occasional.
- Aster umbellatus* Mill. \* B. Moist open woods, occasional.

- Aster undulatus* L. \* Fields and open woods, occasional.
- Aster vimineus* Lam. \* Fields and clearings.
- Baccharis halimifolia* L. SEA-MYRTLE. \* M. Upper border of the salt marsh, frequent.
- Bidens connata* Muhl. BEGGAR-TICKS, STICK-TIGHT. \* B. Edge of Pond and swamps, occasional.
- Bidens frondosa* L. BEGGAR-TICKS, STICK-TIGHT. \* B. Moist opening, rare.
- Bidens vulgata* Greene. BEGGAR-TICKS, STICK-TIGHT. \* Edge of Pond.
- Chrysanthemum Leucanthemum* L. var. *pinnatifidum* Lecoq. & Lamotte. WHITE OR OX-EYE DAISY. \* Fields and roadsides, occasional.
- Cichorium Intybus* L. COMMON CHICORY, BLUE SAILORS. \* Roadside, Gallows Lane.
- Cirsium discolor* (Muhl.) Spreng. THISTLE. B. Thickets.
- Cirsium vulgare* (Savi.) Tenore. COMMON OR BULL THISTLE. M. Clearing.
- Erechtites hieracifolia* (L.) Raf. PILEWORT. \* B. Damp exposed soil west of ravine, rare.
- Erigeron annuus* (L.) Pers. DAISY-FLEABANE. \* Fields and clearings, occasional.
- Erigeron canadensis* L. HORSE-WEED. \* B. Bolles Road.
- Erigeron pulchellus* Michx. ROBIN'S-PLANTAIN. \* P. Grassy clearings, occasional.
- Erigeron pusillus* Nutt. \* B. Clearing near quarry.
- Erigeron strigosus* Muhl. DAISY-FLEABANE. \* Avery Tract. Clearings.
- Eupatorium dubium* Willd. \* B.
- Eupatorium byssopifolium* L. var. *calcaratum* Fern. & Schub. \* Dry fields.
- Eupatorium maculatum* L. JOE-PYE-WEED. \* Damp open woods.
- Eupatorium perfoliatum* L. BONESET. \* B. Clearing near quarry.
- Eupatorium perfoliatum* L. forma *purpureum* Britt. B. Clearing near quarry.
- Eupatorium pubescens* Muhl. \* Open woods.
- Eupatorium purpureum* L. GREEN-STEMMED JOE-PYE-WEED. \* Fields.
- Galinsoga ciliata* (Raf.) Blake. B. Disturbed ground.
- Gnaphalium obtusifolium* L. CATFOOT. \* Fields.
- Gnaphalium uliginosum* L. LOW CUDWEED. \* B. Bolles Road.
- Helenium nudiflorum* Nutt. SNEEZEWEED. \* Damp field.
- Helianthus giganteus* L. \* Gallows Lane. Roadside.
- Helianthus tuberosus* L. JERUSALEM ARTICHOKE. \* Gallows Lane. Roadside.
- Hieracium canadense* Michx. HAWKWEED. \* M. Open woods; sandy R.R. embankment.
- Hieracium Gronovii* L. \* B. Avery Tract. Open woods.
- Hieracium paniculatum* L. \* Open woods.
- Hieracium Pilosella* L. MOUSE-EAR. B. Fields.
- Hieracium pratense* Tausch. KING DEVIL. \* Fields.
- Hieracium scabrum* Michx. \* Dry open woods.



- Hieracium venosum* L. RATTLESNAKE-WEED. \* B. Open woods, occasional.
- Iva frutescens* L. MARSH-ELDER. \* M. Edge of salt marsh, occasional to frequent.
- Krigia virginica* L. DWARF DANDELION. \* B, M. Grasslands, occasional.
- Lactuca canadensis* L. WILD LETTUCE. \* Open woods and clearings, occasional.
- Lactuca hirsuta* Muhl. var. *sanguinea* (Bigel.) Fern. \* B. Open woods.
- Prenanthes altissima* L. RATTLESNAKE-ROOT. S. Damp open woods.
- Prenanthes trifoliata* (Cass.) Fern. GALL-OF-THE-EARTH. \* Dry open woods and thickets, occasional.
- Rudbeckia hirta* L. CONEFLOWER. \* Open woods, rare.
- Rudbeckia serotina* Nutt. BLACK-EYED SUSAN. \* P. Fields and roadsides, occasional.
- Senecio aureus* L. GOLDEN RAGWORT. E. Introd.
- Sericocarpus asteroides* (L.) BSP. WHITE-TOPPED ASTER. \* B, M. Dry open woods, occasional.
- X *Solidago asperula* Desf. (*S. rugosa* X *S. sempervirens*). \* M. Edge of salt marsh, rare.
- Solidago bicolor* L. SILVER-ROD. \* B. Open woods and clearings, occasional.
- Solidago caesia* L. BLUE-STEM GOLDENROD. \* B. Open woods, occasional.
- Solidago caesia* L. X *Solidago rugosa* Ait. \* B. Field.
- Solidago graminifolia* (L.) Salisb. \* B, Avery Tract. Fields, frequent.
- Solidago graminifolia* (L.) Salisb. var. *polycephala* Fern. \* Fields and open woods.
- Solidago juncea* Ait. EARLY GOLDENROD. \* B, Avery Tract. Fields, frequent.
- Solidago nemoralis* Ait. \* Dry fields and clearings, frequent.
- Solidago odora* Ait. SWEET GOLDENROD. Dry open woods and clearings, occasional.
- Solidago rugosa* Ait. GOLDENROD. \* B, Avery and Matthies Tracts. Fields and open woods, common.
- Solidago rugosa* Ait. var. *aspera* (Ait.) Fern. \* Fields.
- Solidago rugosa* Ait. var. *celtidifolia* (Small) Fern. \* B. Open woods south of Pond.
- Solidago rugosa* Ait. var. *sphagnophila* Graves. \* Damp open woods.
- Solidago sempervirens* L. SEASIDE GOLDENROD. \* M. Salt marshes and beaches, occasional.
- Solidago speciosa* Nutt. \* B. Damp open woods south of Pond, rare.
- Solidago tenuifolia* Pursh. \* M. Edge of woods.
- Sonchus arvensis* L. FIELD SOW-THISTLE. \* Williams Tract. Disturbed ground.
- Taraxacum officinale* Weber. DANDELION. P. Lawns, grassy clearings and fields, occasional.
- Tussilago Farfara* L. COLTSFOOT. E. Introd.

#### LITERATURE CITED

- BAILEY, L. H. 1938. Manual of Cultivated Plants. The Macmillan Co., New York, pp. 851.
- FERNALD, M. L. 1950. Gray's Manual of Botany, Eighth Ed. American Book Co., New York, pp. 1632.
- GOODWIN, R. H., KATHERINE H. HEINIG, AND K. P. JANSSON, 1950. Check list of woody plants growing in the Connecticut Arboretum and guide to the Arboretum. Conn. Arboretum Bull. 6:1-32.
- HAINES, ELIZABETH. 1962. An ecological study of the vegetation and animals in the Mamacoke Island Natural Area. Honors Thesis, Conn. College, pp. 96.
- MANWELL, SARA C. 1963. The flora of vascular plants of the Connecticut Arboretum. Senior Thesis. Conn. College, pp. 42.
- NIERING, W. A. AND R. H. GOODWIN, 1962. Ecological studies in the Connecticut Arboretum Natural Area. I. Introduction and a survey of vegetation types. Ecology 43(1):41-54.
- PLATZ, BARBARA. 1962. Preliminary checklist of vascular plants found in the State Wildlife Sanctuary, New London, Connecticut. Mimeographed report, pp. 4.



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# Connecticut Arboretum Publications

## BULLETINS

- No. 1 The Connecticut Arboretum at Connecticut College. pp. 8. 1934. Questions and answers on the Arboretum. .10
- No. 2 The Connecticut Arboretum at Connecticut College. pp. 27. 1935. A series of articles concerning the Arboretum, including information on the propagation of our native trees and shrubs. .20
- No. 3 A Plant Handbook: Lists of Plants for Specific Landscape Uses. Harriet B. Creighton and Priscilla Pasco. pp. 94. 1940. (out of print)
- No. 4 The Connecticut Arboretum: Its Tenth Anniversary. pp. 16. 1941. .15
- No. 5 The Connecticut Arboretum: Recent Land Acquisitions. pp. 16. 1947. .10
- No. 6 Check List of Woody Plants growing in the Connecticut Arboretum and Guide to the Arboretum. Richard H. Goodwin, Katherine H. Heinig and Kaleb P. Jansson. pp. 32. 1950. .35
- No. 7 The Connecticut Arboretum: Its History and the Establishment of the Natural Area. pp. 16. 1952. .15
- No. 8 The Connecticut Arboretum: The Mamacoke Acquisition and Our Research Program. pp. 20. 1955. (out of print)
- No. 9 Six points of Especial Botanical Interest in Connecticut. pp. 32. 1956. The areas described are the Barn Island Marshes, the Connecticut Arboretum, the North Haven Sand Plains, Catlins Wood, the Cathedral Pines, and the Bigelow Pond Hemlocks. .40
- No. 10 Birds of the Connecticut Arboretum and the Connecticut College Campus, pp. 24. 1958. An annotated list with seasonal records and an account of the breeding bird census program. .40
- No. 11 A Roadside Crisis: the Use and Abuse of Herbicides. pp. 16. 1959. A proposed program for use of herbicides on town roads, to avoid present destructive practices. .10
- No. 12 Connecticut's Coastal Marshes: A Vanishing Resource. pp. 36. 1961. Testimony of various authorities as to the value of our tidal marshes and a suggested action program. (out of print)
- No. 13 What's Happening Along Our Roadsides? pp. 24. 1962. Series of three articles: Roadside spray practices in the National Forests; Recommended practices for Connecticut; Survey of what is actually happening. .25

- No. 14 Creating New Landscapes with Herbicides—A Homeowner's Guide. pp. 30. 1963. A how-to-do-it handbook describing the formulations and techniques to be used in eliminating unwanted plants such as poison ivy. The use of herbicides in naturalistic landscaping, wildlife and woodlot management are included. Also presented are the experimental results from studies at the Arboretum. 1.00
- No. 15 The Flora of the Connecticut Arboretum. pp. 64. 1966. 1.00

#### RESEARCH PAPERS

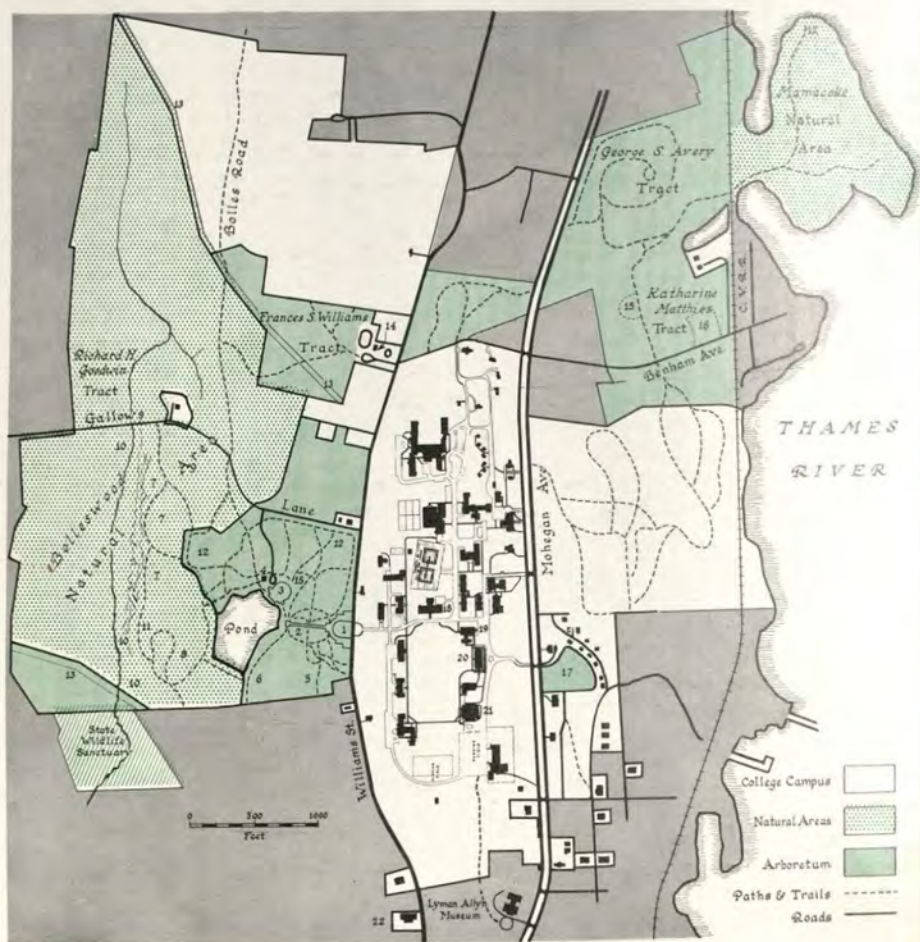
- Beetham, Nellie, and Niering, W. A. 1961. A pollen diagram from Southeastern Connecticut. *Amer. Jour. Sci.*, 259:69-75.
- Niering, W. A., and Goodwin, R. H. 1962. Ecological studies in the Connecticut Arboretum Natural Area. I. Introduction and a survey of vegetation types. *Ecology*, 43:41-54.
- Niering, W. A. 1955. Herbicide research at the Connecticut Arboretum. Proc. Ninth Annual Meeting Northeastern Weed Control Conference, pp. 459-462.
- Niering, W. A. 1957. The Connecticut Arboretum Right-of-Way Demonstration Area progress report. Proc. Eleventh Annual Meeting Northeastern Weed Control Conference, pp. 203-208.
- Niering, W. A. 1961. Natural landscaping with herbicides. Proc. Fifteenth Annual Meeting Northeastern Weed Control Conference, pp. 438-439.
- Niering, W. A. 1961. The Connecticut Arboretum Right-of-Way Demonstration Area—its role in commercial application. Proc. Fifteenth Annual Meeting Northeastern Weed Control Conference, pp. 424-433.

#### OTHER PUBLICATIONS

- The Connecticut Arboretum at Connecticut College. 30th Anniversary. 1961. A brochure outlining points of interest in the Arboretum accompanied by maps.
- The Connecticut Arboretum. An illustrated article describing the Arboretum program. Reprinted from the *Connecticut College Alumnae News*, May, 1965. pp. 9.
- A Checklist of Birds for Southeastern Connecticut. 1961.



# THE CONNECTICUT ARBORETUM AT CONNECTICUT COLLEGE



## LEGEND

- |                                    |   |
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| 1 Main Entrance                    | 12 Picnic Areas   |
| 2 Laurel Walk                      | 13 Utility Right-of-Way Demonstrations Areas              |
| 3 Outdoor Theatre                  | 14 College Riding Stable                                  |
| 4 Buck Lodge                       | 15 Landscaping with Herbicides Demonstration Area         |
| 5 Edna Edgerton Wildflower Area    | 16 Arboretum Field  |
| 6 Red Pine Grove                   | 17 Caroline Black Botanic Garden                          |
| 7 Bolleswood                       | 18 Palmer Library   |
| 8 The Bog                          | 19 New London Hall: Matthies Botanical Lab and Greenhouse |
| 9 Red Maple Swamp                  | 20 Fanning Hall: Administration                           |
| 10 The Ravine                      |   |
| 11 Open Ledge with Glacial Erratic |   |
|                                    | 21 Palmer Auditorium                                      |
|                                    | 22 Thames Science Center                                  |