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Roberts, Edith Adelaide

The Ecology of the Plants
Native to Dutchess County,
New York

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NATIVE PLANTS of DUTCHESS COUNTY

by
EDITH A. ROBERTS AND MARGARET F. SHAW

"Nor yet has Time's dull footstep worn
To common dust that path of flowers."

—Whittier

PUBLISHED BY
THE CONSERVATION COMMITTEE OF
THE GARDEN CLUB OF AMERICA

THIS book is the result of the Graduate Scholarship established in the Botany Department of Vassar College by the Conservation Committee of the Garden Club of America.

It is the hope of the Committee that this published report will demonstrate the value of the work accomplished.

The plants are listed as they are found in their ecological association.

THE ECOLOGY
OF THE
PLANTS NATIVE
TO DUTCHESS COUNTY
NEW YORK

By

EDITH A. ROBERTS
MARGARET F. SHAW

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FOREWORD

"NATIVE PLANTS" is a term familiar to all. Native plants have been and are being used in gardens in many ways, some as isolated plants because of some intrinsic quality of the plant itself, others in groups for the purpose of producing a desirable naturalistic effect. In both these ways and many others it has meant an appreciation of the plants which have grown up about us through no effort on our part. About these there is much to learn.

The main purpose of this study is to add to that phase of our knowledge, which will tend toward the conservation of these plants. Conservation means greater utilization through wiser utilization. It is to increase the enjoyment of our native plants, and to increase their value by contributing to a greater understanding of nature's creations. We need to know more about what to plant, and where to plant in order that the trees, shrubs, and herbs may be placed in their proper environment. Correct environmental planting will insure greater success and lessen the destruction of plants. Also it will insure greater accuracy in the character of naturalistic effects.

The term "plant ecology" may be unfamiliar to some. To those we may say it is the term applied to the study of plant forms in relation to their environment. Environment includes atmospheric conditions, soils, water, and other plants,—for plants too are a part of the environment.

In motoring through any country one is conscious of exposed rocky hillsides, of moist ravines, swamps filled with cat-tails and forests of evergreen or deciduous trees. If one stops to analyze nature's planting, it is found that the plants are arranged in definite groups, that is certain plants are associ-

ated together. These groups are made up of plants that have adapted themselves to the same environmental conditions, producing what is called a "plant association." This association of plants is determined to a great extent by the influence of the environment. Only those plants that can propagate naturally in dry open places will be found upon dry exposed hillsides. Plants requiring a great deal of moisture will be found only in shady ravines. Once the plants have become established, however, their very establishment creates a change in environmental conditions. Thus they pave the way for an association of plants requiring other conditions than they themselves required,—other conditions of soil, atmosphere, moisture and shade. These new conditions tend to eliminate the plants first occupying the area.

In other words one association of plants will occupy an area only so long as the environment is favorable to its development. Each association will be followed by an association of a different type. This series of associations produces what is called a "plant succession." Thus in the ecology of plants there is found this dynamic phenomenon in which no association is static, and plant associations merge one into another in a succession.

To determine the plant associations in any area, as for example, Dutchess County, one must select the outstanding types as unit associations, and study the content of these types in detail. The associations in Dutchess County group themselves into an Upland Succession and Lowland Successions. The latter are subdivided into the successions found in Lakes and Ponds, Bogs, Rivers and Streams, and Ravines.

The following are the associations of plants found in the Upland Succession.

The Ecology of the Plants Native to Dutchess County, New York

I. THE UPLAND SUCCESSION.

I. THE ASSOCIATION OF HERBACEOUS PLANTS

FOUND IN OPEN FIELDS.

Alfalfa.....	<i>Medicago sativa</i>	Cinquefoil.....	<i>Potentilla arguta</i>
No common name.....	<i>Medicago falcata</i>	Cinquefoil.....	<i>Potentilla pumila</i>
Asparagus.....	<i>Asparagus officinalis</i>	Cinquefoil, Five Fingers	
<i>Asperula galioides</i>	<i>Asperula galioides</i>		<i>Potentilla canadensis</i>
Aster, Calico.....	<i>Aster lateriflorus</i>	Cinquefoil, Rough-fruited	
Aster, Heart-leaved.....	<i>Aster cordifolius</i>		<i>Potentilla recta</i>
Aster, New England ..	<i>Aster novæ-angliæ</i>	Cinquefoil, Silvery.....	<i>Potentilla argentea</i>
No common name.....	<i>Aster ptarmicoides</i>	No common name.....	<i>Potentilla intermedia</i>
Aster, Purple.....	<i>Aster patens</i>	Clover, Alsike.....	<i>Trifolium hybridum</i>
Aster, Small White.....	<i>Aster vimineus</i>	Clover, Bush.....	<i>Lespedeza capitata</i>
Aster, Smooth.....	<i>Aster levis</i>	Clover, Bush.....	<i>Lespedeza simulata</i>
Aster, White Heath.....	<i>Aster ericoides</i>	Clover, Low Hop.....	<i>Trifolium procumbens</i>
Basil.....	<i>Satureja vulgaris</i>	Clover, Rabbit-foot...	<i>Trifolium arvense</i>
Beard-tongue.....	<i>Pentstemon hirsutus</i>	Clover, Red.....	<i>Trifolium pratense</i>
Bedstraw.....	<i>Galium Mollugo</i>	Clover, White.....	<i>Trifolium repens</i>
Bellflower.....	<i>Campanula rapunculoides</i>	Clover, Yellow Hop.....	<i>Trifolium agrarium</i>
Bergamot, Wild.....	<i>Monarda fistulosa</i>	Crowfoot, Early.....	<i>Ranunculus fascicularis</i>
Bindweed.....	<i>Convolvulus spithameus</i>	Cudweed.....	<i>Gnaphalium polycephalum</i>
Black-eyed Susan.....	<i>Rudbeckia hirta</i>	Cudweed.....	<i>Gnaphalium uliginosum</i>
Blephilia, Downy.....	<i>Blephilia ciliata</i>	Cuphea, Clammy.....	<i>Cuphea petiolata</i>
Bluets.....	<i>Houstonia cerulea</i>	Daisy, Ox-eye	
Bouncing Bet.....	<i>Saponaria officinalis</i>		<i>Chrysanthemum Leucanthemum</i>
Butter and Eggs.....	<i>Linaria vulgaris</i>	Dandelion, Common	
Buttercup, Bulbous.....	<i>Ranunculus bulbosus</i>		<i>Taraxacum officinale</i>
Butterfly Weed.....	<i>Asclepias tuberosa</i>	Dandelion, Red-seeded	
Campion, Bladder.....	<i>Silene latifolia</i>		<i>Taraxacum erythrospermum</i>
Campion, White.....	<i>Lychnis alba</i>	Deptford Pink.....	<i>Dianthus Armeria</i>
Catchfly, Night-flowering		Devil's Paint Brush	
.....	<i>Silene noctiflora</i>		<i>Hieracium aurantiacum</i>
Chicory.....	<i>Cichorium Intybus</i>	Everlasting.....	<i>Antennaria Parlinii</i>
Chickweed.....	<i>Stellaria longifolia</i>	Everlasting, Pearly	
Chickweed, Common.....	<i>Stellaria media</i>		<i>Anaphalis margaritacea</i>
Chickweed, Common.....	<i>Cerastium vulgatum</i>	Everlasting, or Pussy's Toes	
Chickweed, Field Mouse			<i>Antennaria plantaginifolia</i>
.....	<i>Cerastium arvense</i>	No common name...	<i>Antennaria neglecta</i>

Plants Native to Dutchess County, New York

No Common Name, <i>Antennaria neodioica</i>	Pennyroyal, American
Fern, Hay-scented	 <i>Hedeoma pulegioides</i>
..... <i>Dicksonia punctilobula</i>	Pennyroyal, Bastard
Fireweed..... <i>Epilobium angustifolium</i>	 <i>Trichostema dichotomum</i>
Fleabane, Daisy..... <i>Erigeron annuus</i>	Plantain..... <i>Plantago major</i>
Goat's Beard..... <i>Tragopogon pratensis</i>	Plantain, Poor Robin's
Golden-rod..... <i>Solidago altissima</i>	 <i>Erigeron pulchellus</i>
Golden-rod, Canada..... <i>Solidago canadensis</i>	No common name... <i>Polygala sanguinea</i>
Golden-rod, Gray..... <i>Solidago nemoralis</i>	Primrose..... <i>Oenothera pumila</i>
Golden-rod, Hard-leaved, <i>Solidago rigida</i>	Primrose, Evening... <i>Oenothera biennis</i>
Golden-rod, Lance-leaved	Queen Anne's Lace... <i>Daucus Carota</i>
..... <i>Solidago graminifolia</i>	Self-heal..... <i>Prunella vulgaris</i>
Golden-rod, Rough-stemmed	Silver-rod..... <i>Solidago bicolor</i>
..... <i>Solidago rugosa</i>	Sorrel..... <i>Oxalis stricta</i>
No common name	Sorrel..... <i>Oxalis filipes</i>
..... <i>Solidago rugosa</i> var. <i>villosa</i>	Sorrel, Sheep..... <i>Rumex Acetosella</i>
Grass, Rib..... <i>Plantago lanceolata</i>	Spanish Buttons..... <i>Centaurea nigra</i>
Gronovii. f..... <i>Hieracium Gronovii</i>	St. John's-wort... <i>Hypericum canadense</i>
Hemp, Indian... <i>Apocynum cannabinum</i>	St. John's-wort, Common
Hypericum Canadense	 <i>Hypericum perforatum</i>
..... <i>Hypericum canadense</i>	Strawberry..... <i>Fragaria virginiana</i>
King Devil..... <i>Hieracium florentinum</i>	Strawberry, Barren
Lobelia, Pale Spiked..... <i>Lobelia spicata</i>	 <i>Waldsteinia fragarioides</i>
Lupine, Wild..... <i>Lupinus perennis</i>	Sundrops..... <i>Oenothera fruticosa</i>
No common name... <i>Medicago falcata</i>	Sunflower..... <i>Helianthus divaricatus</i>
Melilot, Yellow..... <i>Melilotus officinalis</i>	Tansy..... <i>Tanacetum vulgare</i>
Milkwort, Whorled... <i>Polygala verticillata</i>	Teasel..... <i>Dipsacus sylvestris</i>
Mint, Mountain	Thistle, Bull..... <i>Cirsium lanceolatum</i>
..... <i>Pycnanthemum flexuosum</i>	Tobacco, Indian..... <i>Lobelia inflata</i>
Mint, Mountain	Tomato, Strawberry... <i>Physalis pruinosa</i>
..... <i>Pycnanthemum virginianum</i>	Venus' Looking Glass
Mouse-ear..... <i>Hieracium Pilosella</i>	 <i>Specularia perfoliata</i>
Mullein, Common... <i>Verbascum Thapsus</i>	Vetch, Crown..... <i>Coronilla varia</i>
Mullein, Moth.... <i>Verbascum Blattaria</i>	Vetch, Winter..... <i>Vicia villosa</i>
Nettle, Hedge..... <i>Stachys arenicola</i>	Viola..... <i>Viola fimbriatula</i>
Nightshade, Common... <i>Solanum nigra</i>	Viper's Bugloss..... <i>Echium vulgare</i>
Painted Cup..... <i>Castilleja coccinea</i>	Yarrow..... <i>Achillea millefolium</i>
Pear, Prickly..... <i>Opuntia vulgaris</i>	Yellow Rocket..... <i>Barbaria vulgaris</i>

2. THE OPEN FIELD SHRUB ASSOCIATION.

SHRUBS

Arrow-wood..... <i>Viburnum dentatum</i>
Arrow-wood, Downy
..... <i>Viburnum pubescens</i>
Ash, Prickly... <i>Zanthoxylum americanum</i>
Barberry, Common.... <i>Berberis vulgaris</i>
Bittersweet..... <i>Celastrus scandens</i>
Choke Cherry..... <i>Prunus virginiana</i>
Currant, Red..... <i>Ribes vulgare</i>

Dewberry..... <i>Rubus villosus</i>
Dogwood, Panicked... <i>Cornus paniculata</i>
Dogwood, Round-leaved, <i>Cornus circinata</i>
Fern, Sweet..... <i>Myrica asplenifolia</i>
Gooseberry, European. <i>Ribes Grossularia</i>
Grape, Northern Fox..... <i>Vitis labrusca</i>
Grape, Summer..... <i>Vitis aestivalis</i>
Haw, Black..... <i>Viburnum prunifolium</i>
Hazelnut..... <i>Corylus americana</i>

Plants Native to Dutchess County, New York

Honeysuckle, Trumpet *Lonicera sempervirens*
 Ivy, Poison *Rhus Toxicodendron*
 Juniper, Common *Juniperus communis*
 Male Berry *Lyonia ligustrina*
 Nannyberry *Viburnum Lentago*
 Oak, Scrub *Quercus ilicifolia*
 Plum, Canada *Prunus nigra*
 Plum, Dennison *Prunus instititia*
 No common name *Prunus cuneata*
 Raisin, Wild *Viburnum cassinoides*
 Raspberry *Rubus idæus*
 Rose, Acacia *Robinia hispida*
 Rose, Sweetbrier *Rosa rubiginosa*
 No common name *Rosa blanda*
 No common name *Rubus allegheniensis*
 No common name *Rubus recurvans*
 Sumach, Dwarf *Rhus copallina*
 Sumach, Smooth *Rhus glabra*
 Sumach, Staghorn *Rhus typhina*
 Tree of Heaven *Ailanthus glandulosa*
 Woodbine *Psedera quinquefolia*

HERBS

Anemone, Canada *Anemone canadensis*
 Anemone, Tall *Anemone virginiana*
 Aster, Heart-leaved *Aster cordifolius*
 Aster, New England *Aster nova-anglicæ*
 Aster, Small White *Aster vimineus*
 Aster, Smooth *Aster laevis*
 Aster, Spreading *Aster patens*
 Aster, White Heath *Aster ericoides*
 No common name *Aster ptarmicoides*
 Bean, Wild *Phaseolus polystachyus*
 Beggar's Lice *Lappula virginiana*
 Bergamot, Wild *Monarda fistulosa*
 Bindweed, Hedge *Convolvulus sepium*
 Black-eyed Susan *Rudbeckia hirta*
 Blephilia, Downy *Blephilia ciliata*
 Butter and Eggs *Linaria vulgaris*
 Buttercup, Bulbous, *Ranunculus bulbosus*
 Cinquefoil *Potentilla canadensis*
 Cinquefoil *Potentilla pumila*
 Cinquefoil, Silvery *Potentilla argentea*
 Clover, Alsike *Trifolium hybridum*
 Clover, Bush *Lespedeza capitata*
 Clover, Bush *Lespedeza simulata*
 Clover, Red *Trifolium pratense*
 Clover, White *Trifolium repens*
 Crowfoot, Early, *Ranunculus fascicularis*

Cudweed *Gnaphalium polycephalum*
 Cudweed *Gnaphalium uliginosum*
 Daisy, Ox-eye *Chrysanthemum Leucanthemum*
 Devil's Paint Brush
 Hieracum aurantiacum
 Dogbane, Spreading
 Apocynum androsæmifolium
 Everlasting *Antennaria neglecta*
 Everlasting *Antennaria neodioica*
 Everlasting *Antennaria Parlinii*
 Everlasting *Antennaria plantaginifolia*
 Everlasting, Pearly
 Anaphalis margaritacea
 Fern, Hay-scented, *Dicksonia punctilobula*
 Fleabane *Erigeron philadelphicus*
 Fleabane, Daisy *Erigeron annuus*
 Golden-rod *Solidago altissima*
 Golden-rod, Canada, *Solidago canadensis*
 Golden-rod, Gray *Solidago nemoralis*
 Golden-rod, Hard-leaved, *Solidago rigida*
 Golden-rod, Lance-leaved
 Solidago graminifolia
 Golden-rod, Rough-stemmed
 Solidago rugosa
 No common name
 Solidago rugosa var. villosa
 Grass, Rib *Plantago lanceolata*
 Hawkweed *Hieracum Gronovii*
 King Devil *Hieracum florentinum*
 Marjoram, Wild *Origanum vulgare*
 Mint, Mountain
 Pycnanthemum flexuosum
 Mint, Mountain
 Pycnanthemum virginianum
 Mouse-ear *Hieracum Pilosella*
 Mullein, Common *Verbascum Thapsus*
 Mullein, Moth *Verbascum Blattaria*
 Nettle, Hedge *Stachys arenicola*
 Pennyroyal, American
 Hedeoma pulegioides
 Plantain *Plantago major*
 Plantain, Poor Robin's
 Erigeron pulchellus
 Primrose, Evening *Oenothera biennis*
 Poke Berry *Phytolacca decandra*
 Queen Anne's Lace *Daucus Carota*
 Sandwort *Arenaria lateriflora*
 Self-heal *Prunella vulgaris*
 Silver-rod *Solidago bicolor*

Plants Native to Dutchess County, New York

Smartweed.....*Polygonum virginianum*
 Sorrel.....*Oxalis filipes*
 Sorrel.....*Oxalis stricta*
 Speedwell, Common...*Veronica officinalis*
 St. John's-wort, Canadian
 Hypericum canadense
 St. John's-wort, Common
 Hypericum perforatum

Strawberry.....*Fragaria virginiana*
 Thistle, Bull.....*Cirsium lanceolatum*
 Tobacco, Indian.....*Lobelia inflata*
 Vervain, White.....*Verbena urticifolia*
 Viola.....*Viola fimbriatula*
 Yam, Wild.....*Dioscorea villosa*
 Yarrow.....*Achillea millefolium*

3. THE JUNIPER ASSOCIATION.

TREES

Cedar, Red.....*Juniperus virginiana*
 Locust, Common...*Robinia Pseudo-Acacia*
 Tree of Heaven...*Ailanthus grandulosa*

SHRUBS

Ash, Prickly...*Zanthoxylum americanum*
 Arrow-wood.....*Viburnum dentatum*
 Arrow-wood, Downy
 Viburnum pubescens
 Barberry, Common....*Berberis vulgaris*
 Bittersweet.....*Celastrus scandens*
 Choke Cherry.....*Prunus virginiana*
 Currant, Red.....*Ribes vulgare*
 Dewberry.....*Rubus villosus*
 Dogwood, Panicked...*Cornus paniculata*
 Fern, Sweet.....*Myrica asplenifolia*
 Gooseberry, European. *Ribes Grossularia*
 Haw, Black.....*Viburnum prunifolium*
 Honeysuckle, Trumpet
 Lonicera sempervirens
 Ivy, Poison.....*Rhus Toxicodendron*
 Juniper, Common...*Juniperus communis*
 Nannyberry.....*Viburnum Lentago*
 Oak, Scrub.....*Quercus ilicifolia*
 Raspberry.....*Rubus allegheniensis*
 Raspberry.....*Rubus idaeus*
 Raspberry.....*Rubus recurvans*
 No common name.....*Rosa blanda*
 Rose, Sweetbrier.....*Rosa rubiginosa*
 Sumach, Dwarf.....*Rhus copallina*
 Sumach, Smooth.....*Rhus glabra*
 Sumach, Staghorn.....*Rhus typhina*
 Wild Raisin.....*Viburnum cassinoides*
 Woodbine.....*Pseuderacia quinquefolia*

HERBS

Aster, Heart-leaved....*Aster cordifolius*
 Aster, New England...*Aster novae angliae*

Aster.....*Aster prenanthoides*
 Aster, Small White.....*Aster vimineus*
 Aster, White Heath.....*Aster ericoides*
 Black-eyed Susan.....*Rudbeckia hirta*
 Blephilia, Downy.....*Blephilia ciliata*
 Butter and Eggs.....*Linaria vulgaris*
 Buttercup, Bulbous...*Ranunculus bulbosus*
 Buttercup, Tall.....*Ranunculus acris*
 Chickweed, Common....*Stellaria media*
 Chickweed, Mouse-ear
 Cerastium vulgatum
 Cinquefoil, Silvery...*Potentilla argentea*
 Cinquefoil.....*Potentilla pumila*
 Cinquefoil.....*Potentilla canadensis*
 Clover, Bush.....*Lespedeza capitata*
 Clover, Bush.....*Lespedeza simulata*
 Columbine.....*Aquilegia canadensis*
 Crowfoot, Early...*Ranunculus fascicularis*
 Cudweed.....*Gnaphalium polyccephalum*
 Cudweed.....*Gnaphalium uliginosum*
 Daisy, Ox-eye
 Chrysanthemum Leucanthemum
 Devil's Paint Brush
 Hieracium aurantiacum
 Everlasting.....*Antennaria neglecta*
 Everlasting.....*Antennaria neodioica*
 Everlasting.....*Antennaria Parlinii*
 Everlasting...*Antennaria plantaginifolia*
 Everlasting, Pearly
 Anaphalis margaritacea
 Fern, Christmas
 Polystichum acrostichoides
 Fern, Marginal Shield
 Aspidium marginale
 Golden-rod.....*Solidago graminifolia*
 Golden-rod.....*Solidago nemoralis*
 Golden-rod.....*Solidago rugosa*
 Golden-rod...*Solidago rugosa var. villosa*
 Grass, Rib.....*Plantago lanceolata*

Plants Native to Dutchess County, New York

Hawkweed.....*Hieracium Gronovii*
 King Devil.....*Hieracium florentinum*
 Mint, Mountain
 Pycnanthemum flexuosum
 Mint, Mountain
 Pycnanthemum virginianum
 Mouse-ear.....*Hieracium Pilosella*
 Mullein, Common...*Verbascum Thapsus*
 Mullein, Moth.....*Verbascum Blattaria*
 Pennyroyal, American
 Hedeoma pulegioides
 Plantain, Common.....*Plantago major*
 Plantain, Robin's.....*Erigeron pulchellus*
 Polypody, Common...*Polypodium vulgare*
 Primrose, Evening.....*Oenothera biennis*
 Queen Anne's Lace.....*Daucus Carota*
 Saxifrage, Early...*Saxifraga virginensis*
 Self-heal.....*Prunella vulgaris*

Silver-rod.....*Solidago bicolor*
 Sorrel.....*Oxalis stricta*
 Sorrel.....*Oxalis filipes*
 Sorrel, Sheep.....*Rumex Acetosella*
 Speedwell.....*Veronica officinalis*
 Spleenwort.....*Asplenium platyneuron*
 Spleenwort, Maidenhair
 Asplenium Trichomanes
 St. John's-wort, Canadian
 Hypericum canadense
 St. John's-wort, Common
 Hypericum perforatum
 Strawberry.....*Fragaria virginiana*
 Thistle, Bull.....*Cirsium lanceolatum*
 Tobacco, Indian.....*Lobelia inflata*
 Viola.....*Viola fimbriatula*
 Viper's Bugloss.....*Echium vulgare*
 Yarrow.....*Achillea millefolium*

4. THE GRAY BIRCH ASSOCIATION.

TREES

Birch, Gray.....*Betula populifolia*

SHRUBS

Raspberry.....*Rubus allegheniensis*
 Dewberry.....*Rubus villosus*

HERBS

Agrimony.....*Agrimonia gryposepala*
 Agrimony.....*Agrimonia mollis*
 Aster.....*Aster prenanthoides*
 Aster, Heart-leaved.....*Aster cordifolius*
 Aster, Small White.....*Aster vimineus*
 Avens, White.....*Geum canadense*
 Buttercup, Bulbous, *Ranunculus bulbosus*
 Buttercup, Tall.....*Ranunculus acris*
 Cinquefoil.....*Potentilla pumila*
 Cinquefoil.....*Potentilla canadensis*

Clover, Bush.....*Lespedeza capitata*
 Clover, Bush.....*Lespedeza simulata*
 Everlasting, Pearly
 Anaphalis margaritacea
 Fern, Christmas
 Polystichum acrostichoides
 Fern, Marginal Shield
 Aspidium marginale
 Polypod, Common...*Polypodium vulgare*
 Self-heal.....*Prunella vulgaris*
 Silver-rod.....*Solidago bicolor*
 Sorrel.....*Oxalis filipes*
 Sorrel.....*Oxalis stricta*
 Speedwell.....*Veronica officinalis*
 Spleenwort.....*Asplenium platyneuron*
 Spleenwort, Maidenhair
 Asplenium Trichomanes
 Strawberry.....*Fragaria virginiana*

5. THE PINE ASSOCIATION.

TREES

Pine, Pitch.....*Pinus rigida*
 Pine, Red.....*Pinus resinosa*
 Pine, White.....*Pinus strobus*

HERBS

Clover, Bush.....*Lespedeza capitata*
 Clover, Bush.....*Lespedeza simulata*

Fern, Christmas *Polystichum acrostichoides*
 Fern, Marginal Shield
 Aspidium marginale
 Fern, Spinulose Wood
 Aspidium spinulosum
 Golden-rod.....*Solidago canadensis*
 Moss
 Lycopodium clavatum var. dendroideum

Plants Native to Dutchess County, New York

Moss.....	<i>Lycopodium complanatum</i>	Silver-rod.....	<i>Solidago bicolor</i>
Moss, Common Club		Shin Leaf.....	<i>Pyrola chlorantha</i>
.....	<i>Lycopodium clavatum</i>	Shin Leaf.....	<i>Pyrola elliptica</i>
Pipsissewa.....	<i>Chimaphila umbellata</i>		

6. THE XEROPHYTIC OAK ASSOCIATION.

(That is an association in which are found the oaks which can grow in an environment with little moisture.)

TREES

Cherry, Pin.....	<i>Prunus pennsylvanica</i>
Hickory, Pignut.....	<i>Carya glabra</i>
Mulberry, White.....	<i>Morus alba</i>
Oak, Chestnut.....	<i>Quercus Muhlenbergii</i>
Oak, Chestnut.....	<i>Quercus Prinus</i>
Oak, Black.....	<i>Quercus velutina</i>
Oak, Post.....	<i>Quercus stellata</i>

SHRUBS

Bittersweet.....	<i>Celastrus scandens</i>
Blueberry, late, low.....	<i>Vaccinium vacillans</i>
Blueberry, low, sweet	
.....	<i>Vaccinium pennsylvanicum</i>
Buckthorn.....	<i>Rhamnus cathartica</i>
Clematis.....	<i>Clematis verticillaris</i>
Gooseberry.....	<i>Ribes rotundifolium</i>
Gooseberry, Prickly.....	<i>Ribes cynosbatis</i>
Honeysuckle, Bush....	<i>Diervilla</i>
Honeysuckle, Trumpet	
.....	<i>Lonicera sempervirens</i>
Huckleberry.....	<i>Gaylussacia frondosa</i>
Huckleberry, Squaw	
.....	<i>Vaccinium stamineum</i>
Rose, Climbing.....	<i>Rosa setigera</i>
Tea, New Jersey....	<i>Ceanothus americanus</i>
Winterberry.....	<i>Ilex verticillata</i>

HERBS

Agrimony.....	<i>Agrimonia mollis</i>
Alum Root.....	<i>Heuchera americana</i>
Anemone, Rue....	<i>Anemonella thalictroides</i>
Anemone, Tall.....	<i>Anemone virginiana</i>
Anemone, Wood....	<i>Anemone quinquefolia</i>
Arbutus, Trailing.....	<i>Epigaea repens</i>
Aster.....	<i>Aster cordifolius</i>
Aster.....	<i>Aster linariifolius</i>
Aster.....	<i>Aster prenanthoides</i>
Aster, Wood.....	<i>Aster divaricatus</i>
Beard-tongue....	<i>Pentstemon</i> var. <i>Digitalis</i>
Betony, Wood....	<i>Pedicularis canadensis</i>

Bishop's Cap.....	<i>Mitella diphylla</i>
Brake.....	<i>Pteris aquilina</i>
Brake, Purple Cliff.....	<i>Pellaea atropurpurea</i>
Checkerberry.....	<i>Gaultheria procumbens</i>
Cicely, Sweet.....	<i>Osmorhiza Claytoni</i>
Cinquefoil.....	<i>Potentilla canadensis</i>
Cinquefoil.....	<i>Potentilla pumila</i>
Cleavers.....	<i>Galium Aparine</i>
Clover, Bush.....	<i>Lespedeza capitata</i>
Clover, Bush.....	<i>Lespedeza simulata</i>
Columbine.....	<i>Aquilegia canadensis</i>
Comfrey, Wild, <i>Cynoglossum virginianum</i>	
Cress, Rock.....	<i>Arabis lyrata</i>
Everlasting.....	<i>Antennaria neglecta</i>
Everlasting.....	<i>Antennaria neodioica</i>
Everlasting.....	<i>Antennaria plantaginifolia</i>
Everlasting, Pearly	
.....	<i>Anaphalis margaritacea</i>
Fern, Christmas, <i>Polystichum acrostichoides</i>	
Fern, Christmas	
.....	<i>Polystichum acrostichoides</i> var. <i>Schweinitzii</i>
Fern, Marginal Shield	
.....	<i>Aspidium marginale</i>
Fern, New York, <i>Aspidium noveboracense</i>	
Fern, Spinulose Wood	
.....	<i>Aspidium spinulosum</i>
Fern, Walking....	<i>Campitosorus rhizophyllus</i>
Figwort.....	<i>Scrophularia leporella</i>
Foxglove, Downy, False....	<i>Gerardia flavia</i>
Foxglove, Smooth, False, <i>Gerardia virginica</i>	
Gentian, Horse....	<i>Triostium aurantiacum</i>
Golden-rod.....	<i>Solidago latifolia</i>
Golden-rod.....	<i>Solidago squarrosa</i>
Golden-rod, Wood.....	<i>Solidago casia</i>
Grass, Star.....	<i>Hypoxis hirsuta</i>
Hepatica.....	<i>Hepatica triloba</i>
Indigo, Wild.....	<i>Baptisia tinctoria</i>
Milkweed.....	<i>Asclepias variegata</i>
Moss, Club.....	<i>Lycopodium clavatum</i>
Moss, Club.....	<i>Lycopodium lucidulum</i>

Plants Native to Dutchess County, New York

Moss, Club, *Lycopodium* var. *dendroideum*
 Partridgeberry..... *Mitchella repens*
 Pipsissewa..... *Chimaphila umbellata*
 Polygala, Fringed.... *Polygala paucifolia*
 Polypod, Common... *Polypodium vulgare*
 Rue, Anemone.. *Anemonella thalictroides*
 Rue, Early Meadow
 Thalictrum dioicum
 Rue, Wall.... *Asplenium Ruta-muraria*
 Saxifrage, Early... *Saxifraga virginensis*
 Self-heal..... *Prunella vulgaris*
 Shin Leaf..... *Pyrola chlorantha*
 Shin Leaf..... *Pyrola elliptica*
 Silver-rod..... *Solidago bicolor*
 Solomon's Seal, False, *Smilacena racemosa*

Solomon's Seal, True
 Polygonatum biflorum
 Sorrel..... *Oxalis filipes*
 Sorrel..... *Oxalis stricta*
 Speedwell..... *Veronica officinalis*
 Spleenwort..... *Asplenium platyneuron*
 Spleenwort, Maidenhair
 Asplenium Trichomanes
 Tick Trefoil.... *Desmodium nudiflorum*
 Toad-flax, Bastard.. *Comandra umbellata*
 Violet, Downy Yellow... *Viola pubescens*
 Violet..... *Viola latiuscula*
 Wintergreen, Spotted
 Chimaphila maculata
 Wood Rush..... *Luzula parviflora*

7. THE MESOPHYTIC OAK ASSOCIATION.

(That is an association in which are found the oaks which
 require more moisture.)

TREES

Ash, Mountain..... *Pyrus americana*
 Basswood..... *Tilia americana*
 Cherry, Wild Black.... *Prunus serotina*
 Dogwood, Alternate-leaved
 Cornus alternifolia
 Dogwood, Flowering..... *Cornus florida*
 Hickory, Pignut..... *Carya glabra*
 Hickory, Shagbark..... *Carya ovata*
 Hop Horn Beam..... *Ostrya virginiana*
 Mocker Nut..... *Carya alba*
 Oak, Black..... *Quercus velutina*
 Oak, Chestnut.... *Quercus Muhlenbergii*
 Oak, Chestnut..... *Quercus Prinus*
 Oak, Red..... *Quercus rubra*
 Oak, Scarlet..... *Quercus coccinea*
 Oak, White..... *Quercus alba*
 Sassafras..... *Sassafras Variifolium*
 Witch-hazel..... *Hamamelis virginiana*

SHRUBS

Arrow-wood..... *Viburnum acerifolium*
 Bladdernut..... *Staphylea trifolia*
 Honeysuckle, Bush... *Diervilla Lonicera*
 Huckleberry..... *Gaylussacia frondosa*
 Huckleberry, Squaw
 Vaccinium stamineum
 Laurel, Mountain..... *Kalmia latifolia*
 Pinxter Flower
 Rhododendron nudiflorum

Raspberry, Purple-flowering
 Rubus odoratus
 Shad Bush..... *Amelanchier canadensis*

HERBS

Alum Root..... *Heuchera americana*
 Anemone, Rue.. *Anemonella thalictroides*
 Anemone, Wood... *Anemone quinquefolia*
 Arbutus, Trailing..... *Epigaea repens*
 Aster..... *Aster acuminatus*
 Aster..... *Aster cordifolius*
 Aster..... *Aster divaricatus*
 Aster..... *Aster infirmus*
 Aster..... *Aster macrophyllus*
 Aster..... *Aster prenanthoides*
 Bellwort..... *Uvularia perfoliata*
 Bellwort, Great.... *Uvularia grandiflora*
 Bishop's Cap..... *Mitella diphylla*
 Bloodroot..... *Sanguinaria canadensis*
 Brake..... *Pteris aquilina*
 Brake, Purple Cliff.. *Pellaea atropurpurea*
 Cicely, Sweet..... *Osmorhiza Claytoni*
 Cicely, Sweet..... *Osmorhiza longistylis*
 Cleavers..... *Galium aparine*
 Corydalis, Pale... *Corydalis sempervirens*
 Cow-wheat..... *Melampyrum lineare*
 Everlasting..... *Antennaria neodioica*
 Everlasting... *Antennaria plantaginifolia*
 Fern, Christmas
 Polystichum acrostichoides

Plants Native to Dutchess County, New York

Fern, Marginal Shield	<i>Aspidium marginale</i>	Pine, Ground.	<i>Lycopodium complanatum</i>
Fern, Rattlesnake	<i>Botrychium virginianum</i>	Pipsissewa.	<i>Chimaphila umbellata</i>
Fern, Spinulose Wood	<i>Aspidium spinulosum</i>	Plantain, Poor Robin's	<i>Hieracium venosum</i>
Fern, Walking.	<i>Camptosorus rhizophyllus</i>	Polypod, Common.	<i>Polypodium vulgare</i>
Geranium, Wild.	<i>Geranium maculatum</i>	Rue, Meadow.	<i>Thalictrum revolutum</i>
Ginger, Wild.	<i>Asarum canadense</i>	Rue, Wall.	<i>Asplenium Ruta-muraria</i>
Golden-rod.	<i>Solidago latifolia</i>	Sarsaparilla, Wild.	<i>Aralia nudicaulis</i>
Golden-rod.	<i>Solidago squarrosa</i>	Saxifrage, Early.	<i>Saxifraga virginensis</i>
Golden-rod, Wood.	<i>Solidago caesia</i>	Shin Leaf.	<i>Pyrola chlorantha</i>
Hepatica.	<i>Hepatica triloba</i>	Shin Leaf.	<i>Pyrola elliptica</i>
Lady's Slipper, Stemless	<i>Cypripedium acaule</i>	Silver-rod.	<i>Solidago bicolor</i>
Lily of the Valley, False	<i>Maianthemum canadense</i>	Snake Root, Black.	<i>Sanicula canadensis</i>
Liquorice, Wild.	<i>Galium circæzans</i>	Snake Root, Black, <i>Sanicula marilandica</i>	
Liquorice, Wild.	<i>Galium lanceolatum</i>	Solomon's Seal, False, <i>Smilacena racemosa</i>	
Loosestrife, Four-leaved	<i>Lysimachia quadrifolia</i>	Solomon's Seal, True	<i>Polygonatum biflorum</i>
Milkweed.	<i>Asclepias quadrifolia</i>	Spleenwort.	<i>Asplenium platyneuron</i>
Milkweed, Poke, <i>Asclepias phytolaccoides</i>		Spleenwort, Maidenhair	<i>Asplenium Trichomanes</i>
Moonwort	<i>Botrychium obliquum-var. dissectum</i>	Tick Trefoil.	<i>Desmodium grandiflorum</i>
Moonwort.	<i>Botrychium simplex</i>	Violet.	<i>Viola palmata</i>
Moonwort.	<i>Botrychium ternatum</i>	Violet.	<i>Viola triloba</i>
Nut, Ground.	<i>Panax trifolium</i>	Violet, Long-spurred.	<i>Viola rostrata</i>
Oakesia.	<i>Oakesia sessilifolia</i>	Violet, Wood Sorrel.	<i>Oxalis violacea</i>
Partridgeberry.	<i>Mitchella repens</i>	Wintergreen, Spotted	<i>Chimaphila maculata</i>
		Wood, Rush.	<i>Luzula parviflora</i>
		Woodsia.	<i>Woodsia obtusa</i>

8. THE PLANTS ASSOCIATED WITH THE DISAPPEARING CHESTNUTS.

(In this county the chestnut blight destroyed the chestnut trees and changed the natural development of environmental conditions, resulting in a retrogressive stage indicated by such forms as aspen, etc.)

TREES

Aspen, Large-toothed	<i>Populus grandidentata</i>	Sassafras.	<i>Sassafras variifolium</i>
Aspen, Trembling.	<i>Populus tremuloides</i>	Witch-hazel.	<i>Hamamelis virginiana</i>
Cherry, Pin.	<i>Prunus pennsylvanica</i>		
Cherry, Wild Black.	<i>Prunus serotina</i>		
Chestnut.	<i>Castanea dentata</i>		
Dogwood, Flowering.	<i>Cornus florida</i>		
Hop Horn Beam.	<i>Ostrya virginiana</i>		
Oak, Red.	<i>Quercus rubra</i>		
Oak, Scarlet.	<i>Quercus coccinea</i>		
Oak, White.	<i>Quercus alba</i>		

SHRUBS

Arrow-wood.	<i>Viburnum acerifolium</i>
Choke Cherry.	<i>Prunus virginiana</i>
Dogwood, Alternate-leaved	<i>Cornus alternifolia</i>
Laurel, Mountain.	<i>Kalmia latifolia</i>
Shad Bush.	<i>Amelanchier canadensis</i>
No common name	<i>Amelanchier oblongifolia</i>

HERBS

Alumroot.....*Heuchera americana*
 Anemone, Rue...*Anemone thalictroides*
 Anemone, Wood...*Anemone quinquefolia*
 Aster, Large-leaved...*Aster macrophyllus*
 Aster, Pale Violet...*Aster prenanthoides*
 Aster, Sharp-leaved Wood
 Aster acuminatus
 Aster, Wood.....*Aster divaricatus*
 No common name.....*Aster infirmus*
 Bellwort.....*Uvularia perfoliata*
 Bellwort, Great....*Uvularia grandiflora*
 Bishop's Cap.....*Mitella diphylla*
 Bloodroot.....*Sanguinaria canadensis*
 Brake, Purple Cliff...*Pellaea atropurpurea*
 Cicely, Sweet.....*Osmorhiza Claytoni*
 Cicely, Sweet.....*Osmorhiza longistylis*
 Cleavers.....*Galium aparine*
 Everlasting.....*Antennaria neodiocia*
 Everlasting...*Antennaria plantaginifolia*
 Fern, Christmas
 Polystichum acrostichoides
 Fern, Hay-scented
 Dicksonia punctilobula
 Fern, Lady.....*Asplenium Filix-femina*
 Fern, Marginal Shield
 Aspidium marginale
 Fern, New York...*Aspidium noveboracense*
 Fern, Rattlesnake
 Botrychium virginianum
 Fern, Spinulose Wood
 Aspidium spinulosum

Fern, Walking...*Camptosorus rhizophyllus*
 No common name.....*Woodsia obtusa*
 Ginger, Wild.....*Asarum canadense*
 Golden-rod, Wood.....*Solidago cæsia*
 Hepatica.....*Hepatica triloba*
 Loosestrife, Four-leaved
 Lysimachia quadrifolia
 Maidenhair, or Maidenhair Fern
 Adiantum pedatum
 Maidenhair, Spleenwort
 Asplenium Trichomanes
 Moonwort
 Botrychium obliquum var. dissectum
 Moonwort.....*Botrychium ternatum*
 Partridgeberry.....*Mitchella repens*
 Pipsissewa.....*Chimaphila umbellata*
 Plantain, Poor Robin's
 Hieracium venosum
 Polypody, Common...*Polypodium vulgare*
 Rue, Wall.....*Asplenium Ruta-muraria*
 Shin Leaf.....*Pyrola chlorantha*
 Shin Leaf.....*Pyrola elliptica*
 Silver-rod.....*Solidago bicolor*
 Solomon's Seal, False, *Smilacena racemosa*
 Solomon's Seal, True
 Polygonatum biflorum
 Spleenwort.....*Asplenium platyneuron*
 Spleenwort, Maidenhair
 Asplenium Trichomanes
 Wintergreen, Spotted
 Chimaphila maculata
 Wood Rush.....*Luzula parviflora*

9. THE ASSOCIATION OF BEECH, MAPLE AND HEMLOCK.

(This is termed the climax forest association, or that association of plants which occurs when all the factors in the environment are most advantageous for plant growth.)

TREES

Ash, American.....*Fraxinus americana*
 Basswood.....*Tilia americana*
 Beech.....*Fagus grandifolia*
 Birch, Black.....*Betula lenta*
 Birch, White.....*Betula alba*
 Birch, Yellow.....*Betula lutea*
 Chestnut.....*Castanea dentata*
 Dogwood, Flowering.....*Cornus florida*
 Hemlock.....*Tsuga canadensis*

Maple, Mountain.....*Acer spicatum*
 Maple, Striped....*Acer pennsylvanicum*
 Maple, Sugar.....*Acer saccharum*
 Tulip Tree.....*Liriodendron Tulipifera*
 Witch-hazel.....*Hamamelis virginiana*

SHRUBS

Dogwood, Alternate-leaved
 Cornus alternifolia
 Juneberry.....*Amelanchier oblongifolia*

Plants Native to Dutchess County, New York

Laurel, Mountain *Kalmia latifolia*
 Shad Bush *Amelanchier canadensis*
 Viburnum, Maple-leaved
 Viburnum acerifolium
 Yew, American *Taxus canadensis*

HERBS

Baneberry, Red *Actæa rubra*
 Baneberry, White *Actæa alba*
 Beech-drops *Epifagus virginiana*
 Bellwort *Uvularia perfoliata*
 Bellwort, Great *Uvularia grandiflora*
 Brake, Purple Cliff, *Pellaea atropurpurea*
 Bunchberry *Cornus canadensis*
 Cucumber-root, Indian
 Medeola virginiana
 Dutchman's Breeches, *Dicentra Cucullaria*
 Enchanter's Nightshade
 Circea intermedia
 Fern, Beech *Phegopteris hexagonoptera*
 Fern, Beech *Phegopteris polypodioides*
 Fern, Bladder *Cystopteris fragilis*
 Fern, Christmas
 Polystichum acrostichoides
 Fern, Hay-scented, *Dicksonia punctilobula*
 Fern, Maidenhair *Adiantum pedatum*
 Fern, Marginal Shield
 Aspidium marginale
 Fern, New York, *Aspidium noveboracense*
 Fern, Oak *Phegopteris Dryopteris*
 Fern, Rattlesnake
 Botrychium virginianum
 Fern, Spinulose Wood
 Aspidium spinulosum
 Fern, Walking *Camptosorus rhizophyllus*

Gall-of-the-earth *Prenanthes trifoliata*
 Herb Robert *Geranium Robertianum*
 Indian Pipe *Monotropa uniflora*
 Lady's Slipper, Stemless
 Cypripedium acaule
 Lily of the Valley, False
 Maianthemum canadense
 Partridgeberry *Mitchella repens*
 Polypod, Common *Polypodium vulgare*
 Rattlesnake Root *Prenanthes alba*
 Rue, Wall *Asplenium Ruta-muraria*
 Showy Orchis *Orchis spectabilis*
 Snakeroot, White
 Eupatorium urticæfolium
 Solomon's Seal, False, *Smilacena racemosa*
 Solomon's Seal, True
 Polygonatum biflorum
 Sorrel, Common Wood *Oxalis Acetosella*
 Spleenwort *Asplenium acrostichoides*
 Spleenwort *Asplenium platyneuron*
 Spleenwort, Maidenhair
 Asplenium Trichomanes
 Star Flower *Trientalis americana*
 Trillium *Trillium erectum*
 Trillium *Trillium grandiflorum*
 Violet *Viola blanda*
 Violet *Viola palmata*
 Violet *Viola triloba*
 Violet, Long-spurred *Viola rostrata*
 Woodsia *Woodsia obtusa*
 Wood Sorrel *Oxalis violacea*
 No common name *Luzula parviflora*
 No common name *Botrychium ternatum*
 No common name
 Botrychium obliquum, var. dissectum

II. THE LOWLAND SUCCESSIONS.

A. Lakes and Ponds.

10. THE ASSOCIATION OF SUBMERGED AQUATIC PLANTS.

Bladderwort, Greater, *Utricularia vulgaris*
 Bladderwort, Smaller *Utricularia minor*
 Crowfoot, Common White
 Ranunculus aquatilis
 Crowfoot, Stiff Water
 Ranunculus circinatus
 Crowfoot, Yellow
 Ranunculus delphinifolius

Hornwort *Ceratophyllum demersum*
 Milfoil, Water *Myriophyllum Farwellii*
 Milfoil, Water *Myriophyllum spicatum*
 Naiad *Najas flexilis*
 Pondweed *Potamogeton alpinus*
 Pondweed *Potamogeton americanus*
 Pondweed *Potamogeton heterophyllum*
 Pondweed *Potamogeton Hillii*

Plants Native to Dutchess County, New York

Pondweed.....	<i>Potamogeton lucens</i>	Pondweed.....	<i>Potamogeton Robbinsii</i>
Pondweed.....	<i>Potamogeton natans</i>	Pondweed.....	<i>Potamogeton zosterifolius</i>
Pondweed.....	<i>Potamogeton pectinatus</i>	Tape Grass.....	<i>Vallisneria spiralis</i>
Pondweed.....	<i>Potamogeton perfoliatus</i>	Water Weed.....	<i>Elodea canadensis</i>

II. THE ASSOCIATION OF FLOATING AQUATIC PLANTS.

Duckweed.....	<i>Lemna minor</i>	Lily, Cow.....	<i>Nymphaea advena</i>
Duckweed.....	<i>Lemna trisulca</i>	Water Lily, Sweet-scented	 <i>Castalia odorata</i>
Duckweed.....	<i>Spirodela polyrrhiza</i>	Water Shield.....	<i>Brasenia Schreberi</i>
Duckweed.....	<i>Wolffia columbiana</i>		
Knot-weed.....	<i>Polygonum amphibium</i>		

12. THE ASSOCIATION OF EMERGENT AQUATIC PLANTS.

Arrow Arum.....	<i>Peltandra virginica</i>	Cat-tail, Common.....	<i>Typha latifolia</i>
Arrow-head.....	<i>Sagittaria latifolia</i>	Cat-tail, Narrow-leaved	 <i>Typha angustifolia</i>
Bur-reed.....	<i>Sparganium eurycarpum</i>	Cinquefoil, Marsh....	<i>Potentilla palustris</i>
Bur-reed.....	<i>Sparganium lucidum</i>	Golden Club.....	<i>Orontium aquaticum</i>
Bur-reed.....	<i>Sparganium minimum</i>	Lily, Cow.....	<i>Nymphaea advena</i>
No common name	 <i>Sparganium americanum</i>	Pickereel Weed.....	<i>Pontederia cordata</i>
No common name	 <i>Sparganium americanum</i> var.	Plantain, Water, <i>Alisma</i>	<i>Plantago-aquatica</i>
	<i>androcladum</i>	Rush, Common.....	<i>Juncus effusus</i>
		Rush, Common.....	<i>Juncus marginatus</i>

13. THE SEDGE ASSOCIATION.

Aster.....	<i>Aster lateriflorus</i>	Grass, Curly.....	<i>Schizæa pusilla</i>
Aster.....	<i>Aster paniculatus</i>	Hemlock, Water.....	<i>Cicuta bulbifera</i>
Aster.....	<i>Aster puniceus</i>	Hemlock, Water.....	<i>Cicuta maculata</i>
Aster.....	<i>Aster vimineus</i>	Horsetail.....	<i>Equisetum palustre</i>
Aster, New England....	<i>Aster novæ-angliæ</i>	No common name.....	<i>Selaginella apus</i>
Balmoney.....	<i>Chelone glabra</i>	Ironweed.....	<i>Vernonia noveboracensis</i>
Beggar's Ticks.....	<i>Bidens frondosa</i>	Joe-Pye-Weed... ..	<i>Eupatorium purpureum</i>
Beggar's Ticks.....	<i>Bidens vulgata</i>	Lady's Thumb....	<i>Polygonum Persicaria</i>
Bluebell, Marsh.	<i>Campanula aparinoides</i>	Loosestrife.....	<i>Lythrum alatum</i>
Blue Flag, Larger	<i>Iris versicolor</i>	Loosestrife, Spiked....	<i>Lythrum Salicaria</i>
Blue Flag, Slender	<i>Iris prismatica</i>	Marigold, Marsh.....	<i>Caltha palustris</i>
Boneset.....	<i>Eupatorium perfoliatum</i>	Mermaid Weed....	<i>Proserpinaca palustris</i>
Chickweed.....	<i>Cerastium nutans</i>	Milkweed, Swamp... ..	<i>Asclepias incarnata</i>
Fern, Chain.....	<i>Woodwardia virginica</i>	Monkey Flower.....	<i>Mimulus ringens</i>
Fern, Crested Shield..	<i>Aspidium cristatum</i>	Parsley, Hemlock..	<i>Conioselinum chinense</i>
Fern, Marsh.....	<i>Aspidium Thelypteris</i>	Parsnip, Cow.....	<i>Heracleum lanatum</i>
Fern, Sensitive.....	<i>Onoclea sensibilis</i>	Parsnip, Golden.....	<i>Thaspium aureum</i>
Flag, Sweet.....	<i>Acorus Calamus</i>	Pennywort, Water, <i>Hydrocotyle</i>	<i>americana</i>
Gentian, Closed....	<i>Gentiana Andrewsii</i>	Pipewort.....	<i>Eriocaulon articulatum</i>
Gentian, Fringed.....	<i>Gentiana crinita</i>	Rocket, Yellow.....	<i>Barbarea vulgaris</i>
Golden-rod.....	<i>Solidago Elliotii</i>	Seedbox.....	<i>Ludvigia alternifolia</i>
Grass, Cotton.....	<i>Eriophorum gracile</i>	Sedge.....	<i>Carex sp.</i>

Plants Native to Dutchess County, New York

Skunk Cabbage....*Symplocarpus foetidus*
 Smartweed, Common
 Polygonum Hydropiper
 Smartweed, Water.....*Polygonum acre*
 No common name
 Polygonum pennsylvanicum
 No common name *Polygonum Muhlenbergii*
 Sneezeweed.....*Helenium autumnale*
 Speedwell, Thyme-leaved
 Veronica serpyllifolia
 St. John's-wort.....*Hypericum boreale*
 St. John's-wort...*Hypericum punctatum*
 St. John's-wort, Marsh
 Hypericum virginicum

Stick-tight.....*Bidens cernua*
 Stonecrop, Ditch.....*Penthorum sedoides*
 Tear Thumb, Arrow-leaved
 Polygonum sagittatum
 Tear Thumb, Halberd-leaved
 Polygonum arifolium
 Vervain, Blue.....*Verbena hastata*
 Vervain, White.....*Verbena urticifolia*
 Violet.....*Viola cucullata*
 Violet.....*Viola pallens*
 Violet, Common.....*Viola papilionacea*
 Violet, Dog.....*Viola conspersa*
 Willow-herb.....*Epilobium molle*

14. THE SWAMP SHRUB ASSOCIATION.

SHRUBS

Alder, Hoary.....*Alnus incana*
 Alder, Smooth.....*Alnus rugosa*
 Alder, White.....*Clethra alnifolia*
 Arrow-wood.....*Viburnum dentatum*
 Azalea, Clammy...*Rhododendron viscosum*
 Blueberry, High Swamp
 Vaccinium corymbosum
 Brier, Green.....*Smilax rotundifolia*
 Buttonbush....*Cephalanthus occidentalis*
 Chokeberry
 Pyrus arbutifolia var. *atropurpurea*
 Chokeberry, Black...*Pyrus melanocarpa*
 Cinquefoil, Shrubby...*Potentilla fruticosa*
 Clematis.....*Clematis virginiana*
 Dogwood, Red-osier...*Cornus stolonifera*
 Elder, Common....*Sambucus canadensis*
 Gale, Sweet.....*Myrica Gale*
 Gooseberry, Smooth
 Ribes oxycanthoides var. *calicola*
 Hawthorn.....*Crataegus Crus-galli*
 Hawthorn.....*Crataegus fecunda*
 Huckleberry.....*Gaylussacia baccata*
 Huckleberry.....*Gaylussacia dumosa*
 Ivy, Poison.....*Rhus Toxicodendron*
 Kinnikinnik.....*Cornus Amomum*
 Meadow-sweet.....*Spiraea latifolia*
 Nightshade, Climbing
 Solanum Dulcamara
 Oak, Scrub.....*Quercus ilicifolia*
 Raspberry.....*Rubus hispidus*
 Rose, Carolina.....*Rosa carolina*
 Rose, Virginia.....*Rosa virginiana*

Rose, Wild.....*Rosa nitida*
 Spice Bush.....*Benzoin aestivale*
 Steeple Bush.....*Spiraea tomentosa*
 Willow, Autumn.....*Salix serissima*
 Willow, Glaucous.....*Salix discolor*
 Willow, Hoary.....*Salix candida*
 Willow, Shining.....*Salix lucida*
 Willow, Silky.....*Salix serica*
 No common name.....*Salix petiolaris*
 No common name....*Salix balsamifera*
 No common name.....*Salix cordata*
 No common name....*Salix glaucophyllia*
 Winterberry.....*Ilex verticillata*
 Winterberry, Smooth.....*Ilex laevigata*

HERBS

Avens.....*Geum virginianum*
 Avens.....*Geum strictum*
 Blue Flag.....*Iris versicolor*
 Blue Flag, Slender.....*Iris prismatica*
 Boneset.....*Eupatorium perfoliatum*
 Bugle Weed.....*Lycopus virginicus*
 Buttercup, Hooked
 Ranunculus recurvatus
 Buttercup, Small-flowered
 Ranunculus abortivus
 Buttercup, Swamp
 Ranunculus septentrionalis
 Cardinal Flower.....*Lobelia cardinalis*
 Carrion Flower.....*Smilax herbacea*
 Cowslip.....*Caltha palustris*
 Cress, Lake.....*Radicula aquatica*
 Dodder.....*Cuscuta arvensis*

Fern, Chain.....*Woodwardia virginica*
 Fern, Cinnamon...*Osmunda cinnamomea*
 Fern, Crested.....*Aspidium cristatum*
 Fern, Flowering or Royal
Osmunda regalis
 Fern, Interrupted...*Osmunda Claytoniana*
 Fern, Marsh.....*Aspidium Thelypteris*
 Fern, Sensitive.....*Onoclea sensibilis*
 Flag, Blue.....*Iris versicolor*
 Flag, Blue, Slender.....*Iris prismatica*
 Hemlock, Water.....*Cicuta bulbifera*
 Hemlock, Water.....*Cicuta maculata*
 Hemp-weed, Climbing. *Mikania scandens*
 Horsetail.....*Equisetum palustre*
 Jack-in-the-pulpit...*Arisema triphyllum*
 Lobelia, Great.....*Lobelia siphilitica*
 Loosestrife.....*Lysimachia producta*

Moneywort, or Myrtle
Lysimachia Nummularia
 Parsnip, Meadow...*Thaspium aureum*
 Ragwort, Golden.....*Senecio aureus*
 Rue, Tall Meadow, *Thalictrum polygamum*
 Saxifrage, Golden
Chrysosplenium americanum
 Saxifrage, Swamp
Saxifraga pennsylvanica
 Scullcap.....*Scutellaria galericulata*
 Scullcap, Mad-dog. *Scutellaria lateriflora*
 Skunk Cabbage...*Symplocarpus foetidus*
 Violet.....*Viola conspersa*
 Violet.....*Viola cucullata*
 Violet.....*Viola pallens*
 Violet.....*Viola sororia*
 Violet, Common.....*Viola papilionacea*

15. THE PIONEER SWAMP FOREST ASSOCIATION.

TREES

Ash, Black.....*Fraxinus nigra*
 Aspen, Large-toothed
Populus grandidentata
 Aspen, Trembling...*Populus tremuloides*
 Birch, Grey.....*Betula populifolia*
 Elm, American.....*Ulmus americana*
 Gum, Sour.....*Nyssa sylvatica*
 Maple, Red.....*Acer rubrum*
 Oak, Pin.....*Quercus palustris*
 Oak, Swamp White.....*Quercus bicolor*

SHRUBS

Arrow-wood.....*Viburnum dentatum*
 Azalea, Clammy...*Rhododendron viscosum*
 Blueberry, High Swamp
Vaccinium corymbosum
 Chokeberry
Pyrus arbutifolia var. *atropurpurea*
 Chokeberry.....*Pyrus melanocarpa*
 Clematis.....*Clematis virginiana*
 Hawthorn.....*Crataegus Crus-galli*
 Hawthorn.....*Crataegus fecunda*
 Huckleberry.....*Gaylussacia baccata*
 Ivy, Poison.....*Rhus Toxicodendron*
 Nightshade, Climbing
Solanum dulcamara
 Nine-bark.....*Physocarpus opulifolius*
 Shad Bush.....*Amelanchier canadensis*
 Spice Bush.....*Benzoin aestivale*

Winterberry.....*Ilex verticillata*
 Woodbine.....*Pseuderia quinquefolia*

HERBS

Avens.....*Geum strictum*
 Avens.....*Geum virginianum*
 Buttercup.....*Ranunculus hispidus*
 Buttercup, Swamp
Ranunculus septentrionalis
 Cress, Lake.....*Radicula aquatica*
 Cress, Marsh
Radicula palustris var. *hispida*
 Cress, Spring.....*Cardamine bulbosa*
 No common name, *Cardamine Douglassii*
 Crowfoot, Hooked, *Ranunculus recurvatus*
 Crowfoot, Small-flowered
Ranunculus abortivus
 Dragon, Green....*Arisema Dracontium*
 Fern, Chain.....*Woodwardia virginica*
 Fern, Cinnamon...*Osmunda cinnamomea*
 Fern, Crested Shield. *Aspidium cristatum*
 Fern, Interrupted...*Osmunda Claytoniana*
 Fern, Marsh.....*Aspidium Thelypteris*
 Fern, Royal.....*Osmunda regalis*
 Horsetail.....*Equisetum palustre*
 Horsetail.....*Equisetum sylvaticum*
 Jack-in-the-pulpit...*Arisema triphyllum*
 Loosestrife.....*Steironema ciliatum*
 Moneywort, or Myrtle
Lysimachia Nummularia

Plants Native to Dutchess County, New York

Ragwort, Golden *Senecio aureus*
 Saxifrage, Golden
 Chrysosplenium americanum
 Saxifrage, Swamp
 Saxifraga pennsylvanica
 Touch-me-not, Pale . . . *Impatiens pallida*

Touch-me-not, Spotted . . *Impatiens biflora*
 Violet *Viola cucullata*
 Violet *Viola pallens*
 Violet *Viola sororia*
 Violet, Dog *Viola conspersa*
 Yam, Wild *Dioscorea villosa*

16. THE MATURE SWAMP FOREST ASSOCIATION.

TREES

Ash, Red *Fraxinus pennsylvanica*
 Ash, White *Fraxinus americana*
 Elm, American *Ulmus americana*
 Hickory, Bitter Nut . . *Carya cordiformis*
 Hickory, Pignut *Carya glabra*
 Ironwood *Carpinus caroliniana*
 Maple, Red *Acer rubrum*
 Oak Bur *Quercus macrocarpa*
 Oak, Swamp White *Quercus bicolor*

SHRUBS

Azalea, Clammy . . *Rhododendron viscosum*
 Blueberry, High Swamp
 Vaccinium corymbosum
 Chekeberry
 . . . *Pyrus arbutifolia* var. *atropurpurea*
 Chokeberry *Pyrus melanocarpa*
 Huckleberry *Gaylussacia baccata*
 Ivy, Poison *Rhus Toxicodendron*
 Spice Bush *Benzoin æstivale*
 Woodbine *Psedera quinquefolia*

HERBS

Avens *Geum macrophyllum*
 Buttercup, Hooked
 Ranunculus recurvatus
 Buttercup, Swamp
 Ranunculus septentrionalis

Cinquefoil, Marsh . . . *Potentilla palustris*
 Clearweed *Pilea pumila*
 Cohosh, Blue . . *Caulophyllum thalictroides*
 Crowfoot, Small-flowered
 Ranunculus abortivus
 Dragon, Green . . . *Arisæma Dracontium*
 Fern, Chain *Woodwardia virginica*
 Fern, Cinnamon . . *Osmunda cinnamomea*
 Fern, Crested Shield, *Aspidium cristatum*
 Fern, Interrupted, *Osmunda Claytoniana*
 Fern, Lady . . . *Asplenium Filix-femina*
 Fern, Royal *Osmunda regalis*
 Fern, Spinulose Wood
 Aspidium spinulosum
 Fumitory, Climbing . . *Adlumia fungosa*
 Geranium, Wild . . . *Geranium maculatum*
 Horsetail *Equisetum palustre*
 Horsetail *Equisetum sylvaticum*
 Jack-in-the-pulpit . . *Arisæma triphyllum*
 Lily of the Valley, Wild
 Maianthemum canadense
 May Apple *Podophyllum peltatum*
 Nettle, Wood *Laportea canadensis*
 Trillium, Nodding . . . *Trillium cernuum*
 Violet *Viola conspersa*
 Violet *Viola sororia*
 Violet, Smooth Yellow, *Viola scabriuscula*
 Wake Robin *Trillium erectum*
 Yam, Wild *Dioscorea villosa*

17. THE MESOPHYTIC OAK ASSOCIATION.

B. Bogs.

18. THE FLOATING MAT ASSOCIATION.

SHRUBS

Cranberry, Large, *Vaccinium macrocarpon*
 Cranberry, Small . . *Vaccinium Oxycoccus*
 Leather Leaf . . . *Chamædaphne calyculata*

HERBS

Buckbean *Menyanthes trifoliata*
 Cat-tail *Typha latifolia*
 Cinquefoil, Marsh . . . *Potentilla palustris*

Plants Native to Dutchess County, New York

Fern, Marsh.....*Aspidium Thelypteris*
 Golden Club.....*Orontium aquaticum*
 Grass, Cotton.....*Eriophorum callitrix*
 Grass, Cotton.....*Eriophorum tenellum*

Pitcher Plant.....*Sarracenia purpurea*
 Sundew.....*Drosera rotundifolia*
 Willow, Water.....*Decodon verticillatus*

19. THE BOG SHRUB ASSOCIATION.

SHRUBS

Azalea, Clammy...*Rhododendron viscosum*
 Birch, Swamp.....*Betula pumila*
 Blueberry, High or Swamp
 Vaccinium corymbosum
 Cranberry, Large,*Vaccinium macrocarpon*
 Cranberry, Small...*Vaccinium Oxycoccus*
 No common name
 Vaccinium corymbosum var. *pallidum*
 Huckleberry.....*Gaylussacia baccata*
 Laurel, Pale.....*Kalmia polifolia*
 Laurel, Sheep.....*Kalmia angustifolia*
 Leather Leaf...*Chamaedaphne calyculata*

Male Berry.....*Lyonia ligustrina*
 Rosemary, Bog...*Andromeda glaucophylla*
 Sumach, Poison or Dogwood,*Rhus Vernix*
 Willow, Hoary.....*Salix candida*

HERBS

Fern, Marsh.....*Aspidium Thelypteris*
 Fern, Shield.....*Aspidium cristatum*
 Hemlock, Water.....*Cicuta bulbifera*
 Parsnip, Water.....*Sium cicutefolium*
 Snake Mouth...*Pogonia ophioglossoides*
 Violet.....*Viola conspersa*
 Violet.....*Viola pallens*

20. THE BOG FOREST ASSOCIATION.

TREES

Birch, Gray.....*Betula populifolia*
 Elm, American.....*Ulmus americana*
 Larch, American.....*Larix laricina*
 Maple, Red.....*Acer rubrum*
 Oak, Pin.....*Quercus palustris*

SHRUBS

Arrow-wood.....*Viburnum dentatum*
 Azalea, Clammy
 Rhododendron viscosum
 Blueberry, High or Swamp
 Vaccinium corymbosum
 Huckleberry.....*Gaylussacia baccata*
 Laurel, Pale.....*Kalmia polifolia*
 Laurel, Sheep.....*Kalmia angustifolia*
 Male Berry.....*Lyonia ligustrina*
 Raspberry, Dwarf.....*Rubus triflorus*
 Rosemary, Bog...*Andromeda glaucophylla*
 Shad Bush.....*Amelanchier spicata*
 Sumach, Poison or Dogwood
 Rhus Vernix
 Willow, Glaucus.....*Salix discolor*

HERBS

Avens, Purple.....*Geum rivale*
 Bedstraw, Swamp.....*Galium palustre*
 Bedstraw, Sweet-scented,*Galium triflorum*
 Fern, Crested Shield...*Aspidium cristatum*
 Fern, Marsh.....*Aspidium Thelypteris*
 Fern, Royal.....*Osmunda regalis*
 Fern, Sensitive.....*Onoclea sensibilis*
 Fern, Spinulose Wood
 Aspidium spinulosum
 Hemlock, Water.....*Cicuta bulbifera*
 Horsetail.....*Equisetum palustre*
 Jack-in-the-pulpit...*Arisaema triphyllum*
 Lady Slipper, Stemless
 Cypripedium acaule
 Lily of the Valley, Wild
 Maianthemum canadense
 Loosetrife.....*Lysimachia terrestris*
 Loosetrife, Tufted,*Lysimachia thyriflora*
 Parsnip, Water.....*Sium cicutefolium*
 Rue, Meadow.....*Thalictrum dioicum*
 Violet.....*Viola conspersa*
 Violet.....*Viola pallens*

21. THE MATURE SWAMP FOREST ASSOCIATION.

C. Rivers and Streams.

22. THE ASSOCIATION OF AQUATIC PLANTS.

HERBS

Arrow Arum.....*Peltandra virginica*
 Arrow-head.....*Sagittaria latifolia*
 Brooklime, American,*Veronica americana*
 Brooklime, European
Veronica Beccabunga
 Flag, Larger Blue.....*Iris versicolor*
 Flag, Smaller Blue.....*Iris prismatica*
 Flag, Sweet.....*Acorus Calamus*
 Forget-me-not, True
Myosotis scorpioides
 Forget-me-not.....*Myosotis laxa*
 Grass, Tape.....*Vallisneria spiralis*

Marigold, Marsh.....*Caltha palustris*
 Parsnip, Water.....*Sium cicutifolium*
 Peppermint.....*Mentha piperita*
 Pickerel Weed.....*Pontederia cordata*
 Pipes.....*Equisetum fluviatile*
 Plantain, Water,*Alisma Plantago-aquatica*
 Saxifrage, Golden
Chrysosplenium americanum
 Skunk Cabbage...*Symplocarpus foetidus*
 Spearmint.....*Mentha spicata*
 Speedwell, Water
Veronica anagallis-aquatica
 Water Weed.....*Eloдея canadensis*

23. THE ASSOCIATION OF MARGINAL PLANTS.

TREES

Ash, Black.....*Fraxinus nigra*
 Ash, Red.....*Fraxinus pennsylvanica*
 Ash, White.....*Fraxinus americana*
 Elder, Box.....*Acer Negundo*
 Elm, American.....*Ulmus americana*
 Elm, Slippery.....*Ulmus fulva*
 Hackberry.....*Celtis occidentalis*
 Ironwood.....*Carpinus caroliniana*
 Maple, Red.....*Acer rubrum*
 Maple, Silver.....*Acer saccharinum*
 Mulberry, Red.....*Morus rubra*
 Plum, Canada.....*Prunus nigra*
 Poplar, Balsam....*Populus balsamifera*
 Sycamore.....*Platanus occidentalis*
 Willow, Black.....*Salix nigra*
 Willow, Weeping.....*Salix babylonica*
 Witch-hazel.....*Hamamelis virginiana*

Nightshade, Climbing
Solanum Dulcamara
 Nine-bark.....*Physocarpus opulifolius*
 Shad Bush.....*Amelanchier canadensis*
 Spice Bush.....*Benzoïn æstivale*
 Willow.....*Salix cordata*
 Willow.....*Salix discolor*
 Willow, Shining.....*Salix lucida*

HERBS

Apple, Wild Balsam...*Echinocystis lobata*
 Bindweed, Black,*Polygonum convolvulus*
 Bindweed, Hedge...*Convolvulus sepium*
 Boneset.....*Eupatorium perfoliatum*
 Buckwheat, Climbing False
Polygonum scandens
 Bur Cucumber, One-seeded
Sicyos angulatus
 Burdock, Common.....*Arctium minus*
 Burdock, Great.....*Arctium Lappa*
 Clematis.....*Clematis virginiana*
 Fern, Sensitive.....*Onoclea sensibilis*
 Cardinal Flower.....*Lobelia cardinalis*
 Hemp-weed, Climbing,*Mikania scandens*
 Hellebore, False, or Indian Poke
Veratrum viride
 Indigo, False.....*Amorpha fruticosa*
 Joe-Pye-Weed...*Eupatorium purpureum*

SHRUBS

Alder, Hoary.....*Alnus incana*
 Alder, Smooth.....*Alnus rugosa*
 Arrow-wood.....*Viburnum dentatum*
 Bladdernut.....*Staphylea trifolia*
 Dogwood, Red-osier...*Cornus stolonifera*
 Grape, Frost.....*Vitis cordifolia*
 Grape, River Bank.....*Vitis vulpina*
 Nannyberry.....*Viburnum Lentago*

Lobelia, Great.....*Lobelia siphilitica*
 Milkweed, Swamp....*Asclepias incarnata*
 Moneywort.....*Lysimachia Nummularia*
 Parsnip, Cow.....*Heracleum lanatum*
 Senna, Wild.....*Cassia marilandica*
 St. John's-wort, Great,*Hypericum Ascyron*

Toothwort.....*Dentaria diphylla*
 Toothwort.....*Dentaria laciniata*
 Turtlehead.....*Chelone glabra*
 Violet.....*Viola cucullata*
 Violet.....*Viola pallens*

24. THE ASSOCIATION OF MOIST MEADOW PLANTS.

HERBS

Aster, Panicked White...*Aster paniculatus*
 Aster, Purple-stemmed...*Aster puniceus*
 Avena.....*Geum canadense*
 Avena.....*Geum vernum*
 Bloodroot.....*Sanguinaria canadensis*
 Burdock.....*Arctium Lappa*
 Buttercup, Small-flowered
Ranunculus abortivus
 Buttercup, Swamp
Ranunculus septentrionalis
 Buttercup, Tall.....*Ranunculus acris*
 Cancer-root.....*Orobanche uniflora*
 Carrion Flower.....*Smilax herbacea*
 Coltsfoot, Sweet.....*Petasites palmatus*
 Culver's Root.....*Veronica virginica*
 Dock, Patience.....*Rumex patientia*
 Elecampane.....*Inula Helenium*
 Fern, Marsh.....*Aspidium Thelypteris*
 Fern, Sensitive.....*Onoclea sensibilis*
 Garlic, Wild.....*Allium canadense*
 Grass, Blue-eyed
Sisyrinchium angustifolia
 Grass, Stout Blue-eyed
Sisyrinchium gramineum

Hellebore, False, or Indian Poke
Veratrum viride
 Hound's Tongue, Common
Cynoglossum officinale
 Horsetail.....*Equisetum arvense*
 Horsetail.....*Equisetum hyemale*
 Horsetail.....*Equisetum pratense*
 Knotweed...*Polygonum pennsylvanicum*
 Ladies' Tresses,*Spiranthes Romanzoffiana*
 Leek, Wild.....*Allium tricoccum*
 Lily, Wild Yellow....*Lilium canadense*
 Lily, Wood.....*Lilium philadelphicum*
 Marsh-Marigold.....*Caltha palustris*
 Milkweed, Common...*Asclepias syriaca*
 Onion, Wild.....*Allium cernuum*
 Orchis.....*Habenaria pycnodes*
 Orchis, Ragged-fringed,*Habenaria lacera*
 Parsnip, Golden.....*Thaspium aureum*
 Rue, Tall Meadow,*Thalictrum polygamum*
 Rue, Early Meadow,*Thalictrum dioicum*
 Spring Beauty.....*Claytonia virginica*
 Thistle, Canada.....*Cirsium arvense*
 Violet.....*Viola cucullata*
 Violet.....*Viola pallens*
 Violet.....*Viola sororia*

25. THE ASSOCIATION OF PLANTS OF THE LOW FOOD PLAIN.

TREES

Ash, Black.....*Fraxinus nigra*
 Ash, Red.....*Fraxinus pennsylvanica*
 Ash, White.....*Fraxinus americana*
 Bitternut.....*Carya cordiformis*
 Butternut.....*Juglans cinerea*
 Elm, American.....*Ulmus americana*
 Elm, Slippery.....*Ulmus fulva*
 Hackberry.....*Celtis occidentalis*
 Ironwood.....*Carpinus caroliniana*

Maple, Red.....*Acer rubrum*
 Maple, Silver.....*Acer saccharinum*
 Mulberry, Red.....*Morus rubra*
 Oak, Pin.....*Quercus palustris*
 Oak, Swamp White....*Quercus bicolor*
 Sycamore.....*Platanus occidentalis*
 Walnut, Black.....*Juglans nigra*

SHRUBS

Arrow-wood.....*Viburnum dentatum*

Bladdernut..... *Staphylea trifolia*
 Grape, Frost..... *Vitis cordifolia*
 Grape, River Bank..... *Vitis vulpina*
 Hawthorn..... *Crataegus Crus-galli*
 Hawthorn..... *Crataegus fecunda*
 Ivy, Poison..... *Rhus Toxicodendron*
 Moonseed..... *Menispermum canadense*
 Shad Bush..... *Amelanchier canadensis*
 Spice Bush..... *Benzoin aestivale*
 Woodbine..... *Psedera quinquefolia*

HERBS

Agrimony..... *Agrimonia striata*
 Anemone, Wood..... *Anemone quinquefolia*
 Beggar's Lice..... *Lappula virginiana*
 Bloodroot..... *Sanguinaria canadensis*
 Carrion Flower..... *Smilax herbacea*
 Cocklebur..... *Xanthium canadense*
 Comfrey, Common, *Symphytum officinalis*
 Cone-flower..... *Rudbeckia laciniata*
 Dutchman's Breeches, *Dicentra cucullaria*
 Dame's Violet..... *Hesperis matronalis*
 Fern, Ostrich..... *Onoclea struthiopteris*
 Fern, Sensitive..... *Onoclea sensibilis*
 Garlic, Wild..... *Allium canadense*
 Geranium, Wild..... *Geranium maculatum*
 Gill-over-the-ground... *Nepeta hederacea*
 Ginger, Wild..... *Asarum canadense*

Green Brier..... *Smilax rotundifolia*
 Hellebore, False, or Indian Poke
 Veratrum viride
 Hop, Common..... *Humulus Lupulus*
 Horsetail..... *Equisetum pratense*
 Leek, Wild..... *Allium tricoccum*
 Lily, Yellow June... *Steironema ciliatum*
 Mint..... *Mentha arvensis* var. *canadensis*
 Nettle..... *Urtica gracilis*
 Nettle, Stinging..... *Urtica dioica*
 Nightshade, Enchanter's, *Circæa lutetiana*
 Onion, Wild..... *Allium cernuum*
 Parsnip, Golden..... *Thaspium aureum*
 No common name, *Angelica atropurpurea*
 Rush, Scouring..... *Equisetum hyemale*
 No common name... *Tenidia integerrima*
 Solomon's Seal, False, *Smilacena stellata*
 Spring Beauty..... *Claytonia virginica*
 Toothwort..... *Dentaria diphylla*
 Toothwort, Cut-leaved, *Dentaria laciniata*
 Touch-me-not, Pale... *Impatiens pallida*
 Touch-me-not, Spotted, *Impatiens biflora*
 Violet..... *Viola cucullata*
 Violet..... *Viola pallens*
 Violet..... *Viola sororia*
 Erythronium americanum
 Yam, Wild..... *Dioscorea villosa*

26. THE ASSOCIATION OF PLANTS OF THE HIGH FOOD PLAIN.

TREES

Ash, Red..... *Fraxinus pennsylvanica*
 Ash, White..... *Fraxinus americana*
 Basswood..... *Tilia americana*
 Butternut..... *Juglans cinerea*
 Elm, American..... *Ulmus americana*
 Elm, Slippery..... *Ulmus fulva*
 Hickory, Bitternut... *Carya cordiformis*
 Hickory, Pignut..... *Carya glabra*
 Hickory, Shell-bark... *Carya ovata*
 Hackberry..... *Celtis occidentalis*
 Hop Hornbeam..... *Ostrya virginiana*
 Ironwood..... *Carpinus caroliniana*
 Maple, Red..... *Acer rubrum*
 Maple, Silver..... *Acer saccharinum*
 Mulberry, Red..... *Morus rubra*
 Oak, Bur..... *Quercus macrocarpa*

Oak, Swamp White..... *Quercus bicolor*
 Sycamore..... *Platanus occidentalis*
 Walnut, Black..... *Juglans nigra*
 Witch-hazel..... *Hamamelis virginiana*

SHRUBS

Arrow-wood..... *Viburnum dentatum*
 Bladdernut..... *Staphylea trifolia*
 Grape, Frost..... *Vitis cordifolia*
 Grape, River Bank..... *Vitis vulpina*
 Ivy, Poison..... *Rhus Toxicodendron*
 Moonseed..... *Menispermum canadense*
 Shad Bush..... *Amelanchier canadensis*
 Spice Bush..... *Benzoin aestivale*
 Viburnum, Maple-leaved
 Viburnum acerifolium
 Woodbine..... *Psedera quinquefolia*

HERBS

Adder's Tongue, Yellow
Erythronium americanum
 Anemone, Wood... *Anemone quinquefolia*
 Bedstraw, Rough... *Galium asprellum*
 Bellwort... *Uvularia perfoliata*
 Bellwort, Great... *Uvularia grandiflora*
 No common name... *Oakesia sessilifolia*
 Bloodroot... *Sanguinaria canadensis*
 Carrion Flower... *Smilax herbacea*
 Carrion Flower... *Smilax rotundifolia*
 Cleavers... *Galium Aparine*
 Cow Wheat... *Melampyrum lineare*
 Dragon, Green... *Arisema Dracontium*
 Dutchman's Breeches, *Dicentra Cucullaria*
 Fern, Bladder... *Cystopteris fragilis*
 Fern, Cinnamon... *Osmunda cinnamomea*
 Fern, Interrupted... *Osmunda Claytoniana*
 Fern, New York... *Aspidium noveboracense*
 Fern, Ostrich... *Onoclea Struthoepteris*
 Fern, Sensitive... *Onoclea sensibilis*
 Fern, Spinulose Wood
Aspidium spinulosum
 Fern, Wood... *Aspidium cristatum*
 Garlic, Wild... *Allium canadense*
 Geranium, Wild... *Geranium maculatum*

Ginger, Wild... *Asarum canadense*
 Green, Brier... *Smilax rotundifolia*
 Hellebore, False, or Indian Poke
Veratrum viride
 Horsetail... *Equisetum pratense*
 Jack-in-the-pulpit... *Arisema triphyllum*
 Leek, Wild... *Allium tricoccum*
 Onion, Wild... *Allium cernuum*
 Solomon's Seal, False, *Smilacena racemosa*
 Solomon's Seal, Great
Polygonatum commutatum
 Solomon's Seal, True
Polygonatum biflorum
 Spring Beauty... *Claytonia virginica*
 Sweet Cicely... *Osmorhiza Claytoni*
 Sweet Cicely... *Osmorhiza longistylis*
 Trillium, Large-flowering
Trillium grandiflorum
 Trillium, Nodding... *Trillium cernuum*
 Violet... *Viola cucullata*
 Violet... *Viola pallens*
 Violet... *Viola scabriuscula*
 Violet... *Viola sororia*
 Violet, Sweet White... *Viola blanda*
 Wake Robin... *Trillium erectum*
 Yam, Wild... *Dioscorea villosa*

27. THE MESOPHYTIC OAK ASSOCIATION.

D. Ravines.

28. THE ASSOCIATION OF PLANTS IN A YOUNG ROCK RAVINE.

TREES

Arbor Vitæ... *Thuja occidentalis*
 Hemlock... *Tsuga canadensis*

SHRUBS

Yew, American... *Taxus canadensis*

HERBS

Alumroot... *Heuchera americana*
 Bishop's Cap... *Mitella diphylla*
 Bluebell... *Campanula rotundifolia*
 Brake, Cliff... *Pellaea atropurpurea*
 Brake, Rock... *Cryptogramma Stelleri*
 Burnet... *Sanguisorba minor*
 Cinquefoil, Silvery... *Potentilla argentea*
 Cinquefoil, Silvery... *Potentilla tridentata*

Columbine... *Aquilegia canadensis*
 Corydalis, Pale... *Corydalis sempervirens*
 Cress, Rock... *Arabis lyrata*
 Dutchman's Breeches, *Dicentra Cucullaria*
 Fern... *Woodsia ilvensis*
 Fern... *Woodsia obtusa*
 Fern, Bladder... *Cystopteris fragilis*
 Fern, Christmas
Polystichum acrostichoides
 Fern, Marginal Shield
Aspidium marginale
 Fern, Spinulose, Wood
Aspidium spinulosum
 Fern, Walking... *Camptosorus rhizophyllum*
 No common name... *Selaginella rupestris*
 Grass of Parnassus, *Parnassia caroliniana*

Plants Native to Dutchess County, New York

Pearlwort.....	<i>Sagina nodosa</i>	Spleenwort....	<i>Asplenium Ruta-muraria</i>
Polypod, Common..	<i>Polypodium vulgare</i>	Spleenwort, Maidenhair	
Rue, Early Meadow..	<i>Thalictrum dioicum</i>		<i>Asplenium Trichomanes</i>
Saxifrage, Early....	<i>Saxifraga virginensis</i>	Stonecrop, Mossy.....	<i>Sedum acre</i>
Spleenwort.....	<i>Asplenium platyneuron</i>	Thalictrum.....	<i>Thalictrum revolutum</i>

29. THE ASSOCIATION OF PLANTS IN A YOUNG SOIL RAVINE.

TREES

Alder, Hoary.....	<i>Alnus incana</i>
Alder, Smooth.....	<i>Alnus rugosa</i>
Butternut.....	<i>Juglans cinerea</i>
Hickory, Bitternut....	<i>Carya cordiformis</i>
Ironwood.....	<i>Carpinus caroliniana</i>
Willow, Black.....	<i>Salix nigra</i>
Willow, Weeping.....	<i>Salix babylonica</i>

SHRUBS

Shad Bush.....	<i>Amelanchier canadensis</i>
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Willow.....	<i>Salix glaucophylla</i>
Willow, Glaucous.....	<i>Salix discolor</i>
Willow, Heart-leaved.....	<i>Salix cordata</i>
Willow, Shining.....	<i>Salix lucida</i>

HERBS

Boneset.....	<i>Eupatorium perfoliatum</i>
Fern, Sensitive.....	<i>Onoclea sensibilis</i>
Horsetail.....	<i>Equisetum pratense</i>
Joe-Pye-Weed....	<i>Eupatorium purpureum</i>
Milkweed.....	<i>Asclepias incarnata</i>

30. THE ASSOCIATION OF PLANTS IN A MATURE RAVINE.

TREES

Ash, White.....	<i>Fraxinus americana</i>
Basswood.....	<i>Tilia americana</i>
Beech.....	<i>Fagus grandifolia</i>
Birch, Black.....	<i>Betula lenta</i>
Birch, White.....	<i>Betula alba</i>
Birch, Yellow.....	<i>Betula lutea</i>
Dogwood, Flowering....	<i>Cornus florida</i>
Hemlock.....	<i>Tsuga canadensis</i>
Maple, Mountain.....	<i>Acer spicatum</i>
Maple, Striped.....	<i>Acer pennsylvanicum</i>
Maple, Sugar.....	<i>Acer saccharum</i>
Tulip Tree.....	<i>Liriodendron Tulipifera</i>
Witch-hazel.....	<i>Hamamelis virginiana</i>

SHRUBS

Hobble-bush.....	<i>Viburnum alnifolium</i>
Honeysuckle, American Fly	
.....	<i>Lonicera canadensis</i>
Laurel, Mountain.....	<i>Kalmia latifolia</i>

HERBS

Baneberry, Red.....	<i>Actea rubra</i>
Baneberry, White.....	<i>Actea alba</i>
Beech-drops.....	<i>Epifagus virginiana</i>

Bellwort.....	<i>Uvularia perfoliata</i>
Bellwort, Great....	<i>Uvularia grandiflora</i>
Brake, Purple Cliff, <i>Pellaea atropurpurea</i>	
Brake, Rock.....	<i>Cryptogamma Stelleri</i>
Bunchberry.....	<i>Cornus canadensis</i>
Clearweed.....	<i>Pilea pumila</i>
Cucumber-root, Indian	
.....	<i>Medeola virginiana</i>
Dragon, Green....	<i>Arisæma Dracontium</i>
Dutchman's Breeches	
.....	<i>Dicentra Cucullaria</i>
Fern, Beech..	<i>Phegopteris hexagonoptera</i>
Fern, Beech....	<i>Phegopteris polypodiodes</i>
Fern, Bladder....	<i>Cystopteris bulbifera</i>
Fern, Bladder.....	<i>Cystopteris fragilis</i>
Fern, Christmas	
.....	<i>Polystichum acrostichoides</i>
Fern, Christmas	
.....	<i>Polystichum acrostichoides</i> var.
.....	<i>Schweinitzii</i>
Fern, Maidenhair... <i>Adiantum pedatum</i>	
Fern, Marginal Shield	
.....	<i>Aspidium marginale</i>
Fern, Marginal Shield	
....	<i>Aspidium marginale</i> var. <i>elegans</i>

Plants Native to Dutchess County, New York

Fern, New York, <i>Aspidium noveboracense</i>	Solomon's Seal, True
Fern, Oak. <i>Phegopteris Dryopteris</i>	 <i>Polygonatum biflorum</i>
Fern, Rattlesnake	Sorrel, Common Wood, <i>Oxalis Acetosella</i>
..... <i>Botrychium virginianum</i>	Spleenwort, Maidenhair
Fern, Spinulose Wood	 <i>Asplenium Trichomanes</i>
..... <i>Aspidium spinulosum</i>	Spleenwort. <i>Asplenium acrostichoides</i>
Fern, Walking, <i>Camposorus rhizophyllum</i>	Spleenwort. <i>Asplenium platyneuron</i>
Ginger, Wild. <i>Asarum canadense</i>	Stalk, Twisted. <i>Streptopus roseus</i>
Jack-in-the-Pulpit. <i>Arisæma triphyllum</i>	Star Flower. <i>Trientalis americana</i>
Lady's Slipper, Stemless	Trillium. <i>Trillium erectum</i>
..... <i>Cypripedium acaule</i>	Trillium. <i>Trillium grandiflorum</i>
Lily of the Valley, False	Trillium, Nodding. . . <i>Trillium declinatum</i>
..... <i>Maianthemum canadense</i>	Trillium, Painted. . . <i>Trillium undulatum</i>
Nettle, Wood. <i>Laportea canadensis</i>	Violet. <i>Viola blanda</i>
Partridge Berry. <i>Mitchella repens</i>	Violet. <i>Viola palmata</i>
Polypod, Common. . . <i>Polypodium vulgare</i>	Violet. <i>Viola rotundifolia</i>
Rattlesnake Root. <i>Prenathes alba</i>	Violet, Dog-toothed
Rue, Wall. <i>Asplenium Ruta-muraria</i>	 <i>Erythronium americanum</i>
Saxifrage, Golden	Violet, Long-spurred. <i>Viola rostrata</i>
..... <i>Chrysosplenium americanum</i>	Woodsia. <i>Woodsia ilivensis</i>
Solomon's Seal, False, <i>Smilacena racemosa</i>	Woodsia. <i>Woodsia obtusa</i>
	Wood Sorrel, Violet. . . . <i>Oxalis violacea</i>

In making such an ecological study, photographs are made to illustrate the different associations. These together with the above lists give a working basis for the selection of such plants as will make a naturalistic planting based on a scientific as well as an esthetic study of plant groupings.

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