

**AN ANNOTATED BIBLIOGRAPHY OF VEGETATION RESEARCH FROM
NORTHEASTERN UNITED STATES**

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CONNECTICUT

- Collins, S. 1962. Three decades of change in an unmanaged Connecticut woodland. Conn. Agr. Expt. Stn. Bull 653.

The trees and shrubs (distribution, change and causes of change) in an unmanaged forest were studied. Over the three decades of the study, tree density decreased and shrub and sapling densities decreased. Sprouting was important in increasing numbers of stems of certain tree species. Diversity also decreased as mortality of understory trees (saplings) increased over time. Overall, however, little change in the appearance or composition of the forest took place during the three decades of the study.

SOURCE: Cary Library: Veg. file, New York State Library
Egler, F. E. and W. A. Niering. 1965. The vegetation of Connecticut Natural Areas. Conn. Geol. Nat. Hist. Survey 1, 22pp.

SOURCE: M. J. McDonnell

Egler, F. E. and W. A. Niering. 1965. The vegetation of Connecticut natural areas. Conn. Geol. Nat. Hist. Survey 3, 36 pp.

SOURCE: Requested through Inter-library loan. 9/84

Hawes and Hawley. 1909. Forest survey of Litchfield and New Haven Counties, Conn. Conn. Agr. Exp. Sta. Bull. 162.

SOURCE: Requested through Inter-library loan. 9/84

X Hickock, Morgan, Lutz, Bull and Lunt. The relation of forest composition and rate of growth to certain soil characters. Conn. Agr. Exp. Sta. Bull. 330.

SOURCE: Requested through Inter-library loan. 9/84

X Kershner, B. and A. W. H. Damman. 1977. Floristic composition and topographical distribution of the forest communities of the gneiss areas of western Connecticut. Naturaliste Can. 104:23-45.

Forest communities were characterized based on floristics. Four major units within the forests were recognized: 1) Fraxinus americana-Carya forests, 2) Acer rubrum-Quercus forests, 3) Fraxinus americana-Acer saccharum forest and 4) Symplocarpus foetidus-Acer rubrum forests. These units were described in terms of soil, site characteristics and vegetation communities. Topography and its influences on species distributions was also discussed. Finally, the above-mentioned factors, history of disturbance and moisture regimes were discussed to describe the ecological relationships and stability of the plant communities.

SOURCE: M .J. McDonnell, NYBG library

Nichols, G. E. 1913. The vegetation of Connecticut I.

Phytogeographical aspects. Torrey 13:89-112.

The vegetation of Connecticut was discussed. First, from a geological-time point of view, and then from a geographical point of view. Distinct local flora (such as persimmon) was also discussed.

SOURCE: Cary library: Veg. file, NYBG library

Nichols, G. E. 1913. The vegetation of Connecticut II. Virgin forests. Torrey 13:199-215.

The vegetation of the remaining virgin forests of Connecticut, in terms of species composition, abundance, size, etc. was discussed.

SOURCE: Cary library: Veg. file, NYBG library

Nichols, G. E. 1914. The vegetation of Connecticut III. Plant societies on uplands. Torrey 14:167-194

The vegetation of the upland plant communities of Connecticut was discussed. Successional (both primary and secondary) changes in the vegetation were considered.

SOURCE: Cary library: Veg. file, NYBG library

Nichols, G. E. 1915. The vegetation of Connecticut IV. Plant societies in lowlands. Bull. Torrey Bot. Club 42:169-217.

Definitions of terms used in describing the lowlands were given and geologic explanation for their existence were cited. Succession in lakes and swamps was described in great detail and species lists of each successive stage/zone and ecological explanation for the transitions were given. The

vegetation and characteristics of floating mats and bogs were also discussed.

SOURCE: Cary library: Veg. file, NYBG library

Nichols, G. E. 1916. The vegetation of Connecticut V. Plant societies along rivers and streams. Bull. Torrey Bot. Club 43:235-264

The vegetation associated with the rivers and streams of Connecticut was discussed in great detail. Vegetation types were recognized and include those associated with flood plains, rock ravines, ravines in unconsolidated rocks and river and stream bluffs. Species lists for each vegetation type were also given. Succession associated with geological/topographical change (topographical succession) was also discussed.

SOURCE: Cary library: Veg. file, NYBG library

Niering, W. A. and R. H. Goodwin. 1962. Ecological studies in the Connecticut Arboretum natural area I. Introduction and a survey of vegetation types. Ecol. 43:41-54.

A history of the area was presented including the practices of Indians and early settlers. Natural disturbances and logging were discussed as factors influencing the present vegetation. Nine major cover types were recognized: 1) upland forests, 2) oak forests, 3) oak-hemlock forests, 4) hemlock-hardwoods forests, 5) open fields, 6) thickets, 7) transition forests, 8) marginal lake vegetation, and 9) semi-open wetlands. The vegetation of each of these cover types was described. Wind damage and

fire were suggested as the two major influences in forest character. An overall trend towards hemlock was observed with fire protection. Red maple was found to dominate the wetlands and successional forests were found to have developed into mixed hardwoods.

SOURCE: Cary library, NYBG library

Niering, W. A. and R. H. Goodwin. 1974. Creation of relatively stable shrublands with herbicides arresting "succession" on rights-of-way and pastureland. Ecol. 55:784-795.

SOURCE: Cary library, NYBG library

Olson, A. R. 1965. Natural changes in some Connecticut woodlands during 30 years. Conn. Agr. Expt. Stn. Bull. No. 669.

Changes in the vegetation in some Connecticut woodlands were measured over a thirty year period. During this time, the number of all tree species was found to decrease, but the number of a few species increased. Basal area was also found to increase of this time and the increase was greatest on the dry sites. Mortality was greatest in the first decade of the study. Species composition at differing soil moistures was also discussed. Mortality did not differ in proportion among moist and dry sites. Ingrowth of stems and the total number of trees of minor species increased with increasing soil moisture. Forty-seven percent of single canopy trees showed some physical defects, while 34% of sprouts were in similar condition. Thus it was concluded that trees originating from seedlings were as susceptible to the defects noted as trees from sprouts. In addition, the characteristics of 36 major

tree species were described in great detail. Finally, the effects of fire on one of the burned sites was discussed. Following the fire, the number of trees decreased and changes in the proportion of species changes. Mortality from the fire was greatest among small trees.

SOURCE: Cary library: Veg. file

MASSACHUSETTS

Cook, H. O. 1929. A forest survey of Massachusetts. J. For. 27:518-522.

The state of Massachusetts was divided into 5 land classes (forest, transition, agricultural, residential and business, and water and marsh) and sampled by county along 1 mile strips. Acreage and percent of land in each land class was presented in a table. Forests were then classified by 12 forest types and divided into age classes. Acreage and percent land in each class was given.

SOURCE: Cary library: Veg. file, NYBG library

Egler, F. E. 1940. Berkshire Plateau vegetation, Massachusetts. Ecol. Monogr. 10:145-192.

The vegetation of the Berkshire plateau was surveyed. The physiographic, climactic, edaphic, anthropic (historical), floristic, and vegetational features were described. Bray's zones of New York state were recognized and the communities of vegetation of each zone were described. The distribution of the various communities was explained via the above-mentioned features.

SOURCE: Cary library, NYBG library

NEW JERSEY

Bard, G. E. 1952. Secondary succession on the piedmont of New Jersey. Ecol. Monogr. 22:195-215.

The successional pattern on the upland sites in the piedmont of New Jersey were studied. Species dominance over time was discussed. Soil properties, roots and causation of succession were also discussed.

SOURCE: Cary library, NYBG library

Buell, M. F., H. F. Buell, J. A. Small, and C. D. Monk. 1961. Drought effects on radial growth of trees in the William L Hutcheson Memorial Forest. Bull. Torrey Bot. Club 88:176-187.

The period of rapid radial expansion in spring and early

summer ("grand period of growth") extended from May to July. A change in the photoperiod or water balance were suggested as influencing the termination of the grand period of growth.

SOURCE: Cary library, NYBG library

Buell, M. F., Langform, Davidson and Ohmann. 1966. The upland forest continuum in northern New Jersey. *Ecol.* 47:416-432.

SOURCE: Cary library.

Buell, M. F. and W. A. Wistendahl. 1955. Flood plain forests of the Raritan River. *Bull. Torrey Bot. Club* 82:463-472.

The composition of flood plain forests in New Jersey was recorded. The forests of the terrace (above flood level) was composed of Acer saccharum and Tilia americana in all size classes. The canopy was practically closed with only 7% unoccupied space. The forest of the inner flood plain had a slightly less closed canopy (11% unoccupied space) and Quercus rubra and Carya cordiformis occurred in all size classes. The forest of the outer plain had only Acer negundo occur in all size classes. Interaction among species was also discussed.

Source: Cary library

Buell, M. F. 1957. The mature oak forest of Mettler's woods.

William L. Hutcheson *Forest Bull.* 1:16-19.

SOURCE: Requested through Inter-library loan. 9/84

Cantlon, J. E. 1953. Vegetation and microclimates on north and south slopes of Cushetunk Mountain, New Jersey. Ecol. Monogr. 23:241-270.

The vegetation on the north and south facing slopes of Cushetunk Mt. were sampled. Microclimates of the two slopes were studied. Differences in insolation, temperature, atmospheric moisture and wind were observed. The tree, shrub, herb and bryophyte layers were studied and differences in densities and frequency were observed. Generally, air temperature, soil temperature and vapor pressure deficits were higher on the south side. The magnitude of the differences between north and south increased towards the ground. Few species were found to be exclusive to either slope. Rather, shifts in density, frequency, and cover of species were observed.

SOURCE: Cary library, NYBG library

Ennis, B. 1928. The life forms of plants and their significance in relation to climate. Conn. State Geol. and Nat. Hist. Survey 43:1-100.

SOURCE: Requested through Inter-library loan, 9/84

McDonough, W. T. and M. F. Buell. 1956. The vegetation of Voorhees State Park, New Jersey. Amer. Midl. Nat. 56:473-490.

A brief history of the Voorhees State Park was given, followed by a description of the results of a vegetation survey. The park's vegetation was divided into several categories: 1) conifer plantations, 2) oak woods, 3) northern hardwoods forest, 4) hemlock forest and 5) fields. The tree,

shrub, sapling and herb layers of each vegetation type was described. Discussion on succession, disturbance and stability of the forests was included, as well as suggestions for the land use and management of the park.

SOURCE: Carolyn J. Wilczynski, NYBG library

Monk, C. D. 1957. Plant communities of Hutcheson Memorial Forest based on shrub distribution. Bull. Torrey Bot. Club 84:198-206.

Shrubs at Hutcheson Memorial Forest (HMF) were samples and 8 distinct shrub types were recognized. The other vegetation associated with the shrubs was described in each of the shrub types. It was suggested that shrubs may be useful as indicators at HMF because they are more sensitive than trees to variations within the habitat and they are conspicuous (unlike herbs).

SOURCE: Cary library

Monk, C. D. 1961. The vegetation of William L. Hutcheson Memorial Forest, New Jersey. Bull. Torrey Bot. Club 88:156-166.

The vegetation of an upland forest of HMF on the N. J. Piedmont was surveyed. This forest dates back the Indian period. The canopy, shrub, herb and understory species were given and the forest was characterized as a "variant of the oak-hickory forest type complexes . . . but it does not have the climax status". Openings in the forest are characteristic and result from severe windstorms or other catastrophe.

SOURCE: Cary library, NYBG library

Monk, C. D. 1961. Past and present influences on reproduction in the William L Hutcheson Memorial Forest, New Jersey. Bull. Torrey Bot. Club 88:167-175.

Trees, saplings and seedlings within the HMF forest were censused. Oaks (black and white) dominated the canopy and were common as seedlings, though saplings were rare. Sugar and Norway maple trees were common. It was suggested that pre-colonial fires favored the oaks while excluding maple. Upon cessation of fire, after settlement, maples were able to seed in.

SOURCE: Cary library, NYBG library

Montgomery, J. D. and D. E. Fairbrothers. 1963. A floristic comparison of the vascular plants of two sphagnum wetlands of New Jersey. Bull. Torrey Bot. Club 90:87-99.

Two bogs in New Jersey (one northern, one southern) were studied. Both were undrained depressions with acid soil and sphagnum moss. Floral lists for both sites were included and great differences in the numbers of species at each site were found (149 species at the southern site, 43 in the northern site; only 9 species were found in common at both sites). It was concluded that there were plants with southern geographic affinity reaching their northern limits in sphagnum wetlands of southern N. J. and species with northern geographic affinity reaching their southern limits in northern bog in northern N. J.

SOURCE: Cary library, NYBG library

Niering, W. A. 1953. The past and present vegetation of High Point State Park. Ecol. Monogr. 23:127-185.

The vegetation of High Point State Park was sampled and described, including a brief history of the park and geological history of the area. Different community types were described and their composition explained. Pollen analysis gives a basis for comparison of present forests to those of previous times in the area. It is suggested that a spruce-pine-fir forest was predominant initially, followed by a brief period of pine dominance, and finally by a prolonged deciduous complex in which oaks predominate. The community under investigation was described as a chestnut oak community with an associated continuous ericaceous shrub layer. It is concluded that the present vegetational pattern was a result of man's activity superimposed upon climactic, edaphic and physiographic conditions.

SOURCE: Cary library, NYBG library

Pearson, P. R. 1962. Increasing importance of sugar maple on two calcareous formations in New Jersey. Ecol. 43:711-718.

Three communities were recognized on the Kittatinny Limestone and Franklin Marble of northern New Jersey. These were: hemlock-sugar maple, sugar maple-oak, and oak-sugar maple. The hemlock-sugar maple community was best developed on the cool, moist, northwest-facing slopes. Overall, the abundance of sugar maple increased in each successively smaller size (diameter) class.

SOURCE: Cary library

NEW YORK

Blizzard, A. W. 1931. Plant sociology and vegetational change on High Hills, Long Island, New York. Ecol. 12:208-231.

The stages of secondary succession leading from and Andropogonetum sparii stage to that of mixed oak forest was discussed. Ideas of succession are like that of the facilitation model proposed by Connell and Slayter (1977).

SOURCE: Cary library, NYBG library

Bray, W. L. 1915. The development of the vegetation of New York State. Tech. Pub. No. 3. N. Y. State College of Forestry, Syracuse, 189 pp.

SOURCE: Cary library

Britton. 1906. The hemlock grove on the banks of the Bronx River and what it signifies. Trans. Bronx Soc. Arts Sci. 1:5-15.

SOURCE: Requested through Inter-library loan. 9/84

Charney, J. D. 1980. Hemlock-hardwood community relationships in the Highlands of southeastern New York. Bull. Torrey Bot. Club 107:249-257

Forested communities in the Highlands of southeastern N. Y. (Sterling Forest) were sampled. Tsuga canadensis dominated in sapling and tree size classes while Quercus spp. dominated in seedling size classes. Environmental factors such as moisture, cool temperatures, shallow podzolic soils or acidic rocky soils were cited as factors affecting the development of hemlock. However, regional physiography was

cited as being the most important factor affecting the success of hemlock.

SOURCE: Cary library, NYBG library

Conard, H. S. 1935. The plant associations of central Long Island. A study in descriptive plant sociology. Amer. Midl. Nat. 16:433-516.

The geology, geography, climate and soils of central Long Island were discussed. The vegetation (plant associations) were described in great detail in conjunction with the above-mentioned environmental variables. A total 71 plant associations were recognized. The successional trends associated with the various plant associations were discussed (8 seres were recognized). Finally, an attempt was made to classify the associations according to the species that compose them. This was rejected in favor of classifying the associations on the basis of sociological simplicity or complexity.

SOURCE: NYBG library

Frankel, E. 1978. A floristic survey of the vascular plants of the Bronx Park in Westchester County, New York. Bull. Torrey Bot. Club 105:147-155.

The flora of the Bronx River Park, N. Y. was surveyed. A brief botanical history of the area was given. The greatest number of species found were in the Compositae, Gramineae, Leguminosae, Rosaceae, Cruciferae, Liliaceae and Scrophulariaceae families. An increased number of species overall, as well as an increase in the number of non-native

species were found in comparison to previous studies. An extensive flora list was also included.

SOURCE: Cary library, NYBG library

Frankel, E. 1979. A floristic survey of the vascular plants of the Bronx River Park in Westchester County, New York. Supplement, 1977-1978. Bull. Torrey Bot. Club 106:46.

A short flora list to update that of the Frankel 1978 study. Included are many wetland species.

SOURCE: Cary library, NYBG library

Gager. 1907. The absence of undergrowth in the hemlock forest. J. NYBG 8:237-240.

SOURCE: Cary library: Veg. file, NYBG library

Gleason. 1924. Ecological investigations in the hemlock forest. J. NYBG 25:313-316.

SOURCE: Cary library: Veg. file, NYBG library

X Gordon. 1940. The primeval forest types of southwestern New York. N.Y. State Bull. 321.

SOURCE: Requested through Inter-library loan. 9/84

Greller, A. M. 1972. Observations on the forests of northern Queens County, Long Island, from colonial times to the present. Bull. Torrey Bot. Club 99:202-206.

Using old surveyors records and deeds, the vegetation (trees) from 1685 to 1764 was compared to that of 1972 natural vegetation. It was concluded that the forests of northern Queens have changed very little since colonial times in composition and percent abundance. The correlation between Quercus rubra and morainal topography is also pointed

out.

SOURCE: Cary library, NYBG library

Greller, A. M. 1975. Persisting natural vegetation in northern Queens County, New York, with proposals for its conservation. Environ. Conserv. 2:61-69.

A brief history of human activity/disturbance in Queens County, N. Y. and background in climate, geology, soil, flora and vegetation type was given. Species lists were given for the different vegetation types. Finally, recommendations as to the use and management of the area were made.

SOURCE: Cary library, NYBG library

Greller, A. M. 1977. A classification of mature forests on Long Island, New York. Bull Torrey Bot. Club 104:376-382.

'Forest types' of previous works in Long Island are reviewed and 12 mature forest types were recognized. The 12 types fall into 3 broad categories: 1) forests of well-drained soil, 2) forests of poorly drained soil and 3) strand or maritime forests. The trees shrubs and herbs of each of the 12 types were described.

SOURCE: Cary library, NYBG library

Greller, A. M. 1977. A vascular flora of the forested portion of Cunningham Park, Queens County, New York, with notes on the vegetation. Bull. Torrey Bot. Club 104:170-176.

The vascular flora of mature forests, young woods, kettle ponds, and clearings in Cunningham Park were surveyed. Phytosociological and phenological observations were made. A

flora list was included.

SOURCE: Cary library, NYBG library

Greller, A. M. 1979. A vascular flora of the forested portion of Cunningham Park, Queens County, New York: Corrections and additions. Bull. Torrey Bot. Club 106:45.

Several corrections and additions to the flora list of the Greller (1977) study were made.

SOURCE: Cary library, NYBG library

O Greller, A. M., R. E. Calhoon and E. Iglich. 1979. The upland, oak-dominated community of Forest Park, Queens County, New York. Bull Torrey Bot. Club 106:135-139.

Aboreal taxa were surveyed in Forest Park, Queens County. The effects of topography on the distribution of these taxa were considered. A richer, more developed shrub layer was found on the flat uplands than on the slopes. A flora list was also included.

SOURCE: Cary library

Harlow. Roots of hemlock. 1900. J. NYBG 1:100-101.

SOURCE: Cary library: Veg. file, NYBG library

X Harper, R. M. 1917. The natural vegetation of western Long Island, south of the terminal moraine. Bull. Torrey Bot. Club 106:135-139.

SOURCE: Cary library: Veg file, NYBG library.

X Harper, R. M. 1917. The native plant population of northern Queens Co. Long Island. Torrey 17:131-142.

SOURCE: Cary library: Veg. file, NYBG library

X Harshberger, J. W. 1905. The plant formations of the Catskills.
Plant World 8:276-281.

SOURCE: Cary library: Veg. file, NYBG library

Honkala, D. A. and J. B. McAninch. 1980. The New York Botanical
Garden Hemlock Forest Project. Unpublished report of the New
York Botanical Garden, Cary Arboretum.

The vegetation and edaphic factors of the NYBG hemlock
forest in Bronx N. Y. was surveyed and the results reported.
Recommendations on future land use and sampling were
presented and a management program proposed. A woody plant
species list is also included.

SOURCE: M. J. McDonnell

Honkala, D. E. and J. B. McAninch. 1981. The New York Botanical
Garden, Hemlock Forest Project. Part II. Unpublished report
of the New York Botanical Garden, Cary Arboretum.

The history of the hemlock forest in Bronx, N. Y. was
reviewed. The flora and fauna was surveyed and the results
presented. Both biotic and abiotic factors were discussed.
Additional recommendations for future studies in the forest
were made. A flora list (woody and herbaceous) was also
included.

SOURCE: M. J. McDonnell

X Hotchkiss. A botanical survey of the Tug Hill Plateau. N. Y. State
Bull. 287.

SOURCE: Requested through Inter-library loan. 9/84

Keating, S. 1967. History of Sterling Forest. Sarracenia 11:25-27.

A brief history of the Sterling Forest from 1630 to 1921 was given. Included are topics such as lumbering and mining of iron.

SOURCE: Cary library: Veg. file, NYBG library

Keating, S. 1967. The major plant communities of Sterling Forest. Sarracenia 11:51-61.

The geography, floristics and disturbances (disease and logging) of the Sterling Forest were discussed. The vegetation was described and 2 large groups were recognized: 1) Uplands: ravines, ridges and slopes and 2) Lowlands: lakes, ponds, swamps and bogs. Overall, 8 community types were surveyed and described. These included 1) the chestnut oak community, 2) the mixed oak-hickory community, 3) the hemlock community, 4) the mixed oak-hardwoods community, 5) the alder community, 6) the red maple-mixed hardwood swamp community, 7) the southern white cedar swamp forest community and 8) the bog community. (The latter 4 are classified as lowland). Within each community type, the vegetation as well as various environmental factors were described.

SOURCE: Cary library: Veg. file, NYBG library

Lefkowitz, A. and A. M. Greller. 1973. The distribution of tree species on the uplands of Cunningham Park, New York. Bull. Torrey Bot. Club 100:313-318.

Trees were sampled in Cunningham Park, Long Island. Morainal uplands and adjacent flatlands were dominated by Quercus borealis, Liriodendron tulipifera, Cornus florida,

Acer rubrum, Prunus serotina, Quercus velutina and Betula lenta. The undisturbed forests of non-morainal uplands were dominated by Quercus velutina, Betula lenta, Cornus florida and Acer rubrum.

SOURCE: Cary library, NYBG library

Lynn, L. M. 1984. The vegetation of Little Cedar Bog, southeastern New York. Bull. Torrey Bot. Club 111:90-95.

Vegetation was surveyed in Little Cedar Pond, Sterling Forest in the Hudson Highlands of Orange Co. new York. Included in the site was a bog mat and a bog forest. Trees, saplings, shrubs, seedlings and herbaceous species were surveyed. Density, relative density, frequency, dominance and relative dominance were determined. Canopy, understory and herbaceous vegetation were also characterized.

SOURCE: Cary library, NYB library

McIntosh, R. P. 1962. The forest cover of the Catskill Mountain Region, New York, as indicated by land survey records. Amer. Midl. Nat. 68:402-423.

Using surveyors' records, the species composition of 18th century Catskill forests were extrapolated. Although there may be problems in interpreting such data (possible misidentification of tree species by early surveyors, surveyors preference for certain trees as reference points, estimations of distances by surveyors etc.), certain forest cover types were suggested. The principle tree components were beech, hemlock, sugar maple and birch spp.

SOURCE: Cary library, NYBG library

Profous, G. V. and R. E. Loeb. 1984. Vegetation and plant communities of Van Cortland Park, Bronx, New York. Bull. Torrey Bot. Club 111:80-89.

Vegetation was surveyed in Van Cortland Park. Plant communities were categorized into 7 basic types: 1) dry forest, 2) moist forest, 3) disturbed forest, 4) swamp forest, 5) marsh, 6) open field, 7) Vault Hill Fire Community. The vegetation of each of the types was described. A total floral list was also given. Additionally, findings were compared with those of previous studies undertaken in near-by sites.

SOURCE: Cary library, NYBG library

0 Raup, H. M. 1938. Botanical studies in the Black Rock Forest. The Black Rock Forest Bull. No. 7, 161 pp.

The vegetation of the Black Rock Forest was surveyed and the vegetation types described. Eight vegetation types were recognized: 1) scrub oak, 2) white oak-hickory, 3) chestnut oak, 4) red oak, 5) mixed hardwoods, 6) mixed hardwoods (wet phase), 7) hemlock-hardwoods, 8) beech-sugar maple-yellow birch. These forest associations were then arranged into 3 categories: hilltop, slope, and cove. The hilltop species included white oak, hickory, pitch pine and scrub oak. The slope species included chestnut oak and red oak (and formerly chestnut). The cove species were a mixture of hardwoods in which sugar maple, red oak, white ash, tulip tree, red maple and yellow birch were considered most prominent. It was suggested that the local arrangement and composition of the

vegetation types has persisted, with little modification, since pre-colonial times. Thus, recent human disturbances (cutting, fire) have shown to have little effect upon the composition of the forest types.

SOURCE: Cary library

Rechnagel, A. B. 1923. The forests of New York State. The Macmillan Co., New York. 167 pp.

SOURCE: Cary library. SD144 .N7 R4

Roberts, E. A. and H. W. Reynolds. 1938. The role of plant life in the history of Dutchess County. 44pp.

Various vegetation types in Dutchess Co. were described, although no formal survey was made. Ecological forces (such as succession) and environmental factors (soil, moisture, precipitation, light and temperature) were also described. Human influences on the vegetation were discussed (Indian and 'white man': farming and industry). The historical vegetational change (due to human intervention) in several Dutchess Co. towns was described (Millbrook was not included). Finally, flora lists of the 11 recognized association types were given. The 11 associations are: 1) streamside, 2) ravine, 3) bog, 4) lake and pond, 5) beech-maple-hemlock, 6) oak, 7) pine, 8) grey birch, 9) juniper, 10) shrub, and 11) open field. Aerial photographs of Dutchess Co. are also included.

SOURCE: Cary library QK941 .N7 R61

Roberts, E. A. and M. F. Shaw. 1923. The ecology of the plants native to Dutchess County, New York. A publication of the Conservation Committee of the Garden Club of America. 21 pp.

Flora lists of 30 plant associations in Dutchess County were given. The associations were categorized as upland or lowland successions.

SOURCE: Cary library QK941 .N7 R6

Ross, P. Microclimatic and vegetational studies in a cold-wet deciduous forest. Black Rock Forest Paper No. 24, 89 pp.

The vegetation of the Black Rock Forest (Cornwall, New York) was surveyed and environmental data collected. Mixed hardwood and hemlock-hardwood associations were found almost exclusively on the northern slopes. The Quercus rubra association was found principally on the lower slopes on the hills. The Quercus ilicifolia association was found principally on the western and northern sections of the hilltops and the Quercus alba-Carya glabra association was found on the eastern and southern sections. The Quercus prinus association was located mainly on steep, rocky upper slopes.

SOURCE: Cary library

Stalter, R. 1981. A thirty-nine year history of arborescent vegetation of Alley Park, Queens County, New York. Bull Torrey Bot. Club 108:485-487.

The arborescent vegetation of Alley Park was studied and data was compared to findings of previous studies in the area. The relative dominance values of different tree

species changed over time, however, the overall change from 1936 to 1975 was considered to be very little.

SOURCE: Cary library, NYBG library

X Taylor. 1915. The growth forms of the flora of New York and vicinity. Amer. J. Bot. 2:23-31.

SOURCE: Cary library: Veg. file, NYBG library

Whittaker, R. H. and G. M. Woodwell. 1969. Structure, production and diversity of the oak-pine forest at Brookhaven, New York. J. Ecol. 57:155-174.

The woody plants of an oak-pine forest at Brookhaven, N. Y. were studied. Net annual production was calculated. The forest was characterized as fire adapted because of low biomass accumulation and extensive root systems.

SOURCE: Cary library, NYBG library

NEW ENGLAND/NORTH AMERICA

6 Bromley, S. W. 1935. The original forest types of southern New England. Ecol. Monogr. 5:61-89.

Southern New England was divided into three regions 1) the oak region, 2) the white pine region and 3) the northern forest region. The flora of each type, as well as the factors and forces influencing the vegetation was discussed. A brief history of the forest types is also included. The

physiographic types in New England were described. Finally, land use of the 1930's was discussed.

SOURCE: Cary library, NYBG library

Day, G. M. 1953. The Indian as an ecological factor in the northeastern forest. Ecol. 34:329-346.

The history of Indians in the Northeast and their land use practices, which included clear cutting for agriculture, firewood and villages, was described. Fire, hunting practices and collection of plants for medicinal and food uses was also discussed. The general conclusion drawn was that the northeastern forests, at the time of the arrival of the 'white man' were not necessary primeval/virgin.

SOURCE: Cary library, NYBG library

X Korstian and Stickel. 1927. The natural replacement of blight-killed chestnut in the hardwoods forest of the Northeast. J. Agr. Res. 34:631-648.

SOURCE: Cary library: Veg. file, NYBG library

G Lutz, H. J. 1928. Trends and silvicultural significance of upland forest successions in southern New England. Yale University School of Forestry Bull. No. 22., New Haven.

SOURCE: Cary library, NYBG library. QK938 .F6 L85

Nichols, G. E. 1935. The hemlock-white pine-northern hardwoods region of eastern North America. Ecol. 16:403-422.

The geographical distribution of the mixed evergreen coniferous and deciduous broadleaf forests of eastern North America was discussed. Based on these geographical distributions, tree species were categorized into 4 major

groups: 1) species whose centers of N-S distribution lies north of the region and which were widely distributed Northward, being constituents of the northern coniferous climax, 2) species whose center of N-S distribution lie within the region and no other, 3) species whose centers of N-S distribution lie within the region of immediately south of it and 4) species whose centers of N-S distribution lie far to the south and which were widely distributed southward.

SOURCE: Cary library, NYBG library

X Raup, H. M. 1937. Recent changes of climate and vegetation in southern New England and adjacent New York. J. Arnold Arboretum 18:79-117.

The vegetation of the Hudson Highlands (Black Rock Forest) was described and the types of environment where different tree species were found was described. The forests of pre-colonial times were described using early works. Replacement of these forests by the new/different forest types was described and possible reasons for such changes were given. Climactic and edaphic changes over the area (cooler and wetter), however, was the explanation for the changes. Botanical, zoological, paleontological and archaeological evidence was cited as support for this conclusion. It is also predicted that such a cooling trend, accompanied by moist conditions, should continue such as to further affect the distribution of the forest types.

SOURCE: Cary library: Veg. file

① Raup, H. M. 1940. Old field forests of southeastern New England.
J. Arnold Arboretum 21:266-273.

The forests of New England and New York were described with reference to the species composition and the boundaries of these forest types. Succession following logging was described and the existing forest compositions were attributed to this ecological factor.

SOURCE: Cary library, NYBG library

OTHERS

Bates, C. G. 1923. The transect of a mountain valley. Ecol.
4:54-62.

Discussion and results of a study done in the Fremont Experimental Station, Colorado, concerning soil and air temperatures of a mountain valley were presented. Evaporation was found to be the highest in Sept. and Oct. and greater on the north side of the slope (minimal in the bottom of the valley). Soil moisture was highest in the valley bottom and lowest on the south slope.

SOURCE: Cary library, NYBG library

Dix, R. L. 1957. Sugar maple in forest succession at Washington D. C. Ecol. 38:663-665.

The vegetation of Rock Creek Park, Maryland was

surveyed. Acer saccharum was found to be relatively common in the area and the stand was not classified as "climax" because changes in the species composition and abundances were still being observed.

SOURCE: Cary library, NYBG library

Pearson, P. R. 1963. Vegetation of a woodland near Philadelphia. Bull. Torrey Bot. Club. 90:171-177.

A vegetation survey near Philadelphia was made. The site was logged about 45 years previous and burned in 1959. The canopy was measured at 79 to 89 ft. and the trees were mostly of sprout origin. The subcanopy was poorly developed. A flora list of the trees and shrubs/vines was included.

SOURCE: Cary library, NYBG library

**ADDITIONAL SOURCES OF INFORMATION CONCERNING VEGETATION
RESEARCH FROM NORTHEASTERN UNITED
STATES**

American Midland Naturalist *, **
Black Rock Forest Bulletin *
Bulletin of the New York Botanical Garden **
Bulletin of the Torrey Botanical Club *, **
Connecticut Agriculture Experimental Station Bulletin @
Ecology *, **
Ecological Monographs *, **
Harvard Forest Papers **
Journal of the Arnold Arboretum *, **
Journal of the New York Botanical Garden **
New York State Museum Bulletin @
Sarracena **
Yale University: School of Forestry Bulletin **
William Hutcheson Memorial Bulletin **

* Available at the Cary library.

** Available at the NYBG library.

@ Available at the New York State Library, Albany.

GEOLOGIC AND SOILS REFERENCES

X Balk, R. 1936. Structure and petrologic studies of Dutchess County, New York. Part I. Geologic structure of sedimentary rocks. Bull. Geol Soc. Amer. 47:685-774.

SOURCE: Cary library

Berkey. 1907. Structural and stratigraphic features of the basal gneisses of the Highlands. N. Y. State Mus. Bull. 107.

Dwight. 1887. Recent explorations in the Wappingers Valley limestone of Dutchess Co., New York. Am. J. Sci. 34:27-32.

X Hicock et al. 1931. The relation of forest composition and rate of growth to certain soil characters. Conn. Agr. Exp. Sta. Bull. 330.

X Knopf, E. B. 1927. Some results of recent work in the southern Taconic area. Amer. J. Sci. 14: 429-45

A very intense geological survey of the Southern Taconic area.

SOURCE: Cary library: Veg. file, NYBG library

McCrone, A. W. 1967. An introduction to the geologic setting of the Newburgh-Hudson Highlands sector of the lower Hudson Valley. Sarracenia 11:7-23.

The geology of the 4 major physiographic regions of the Hudson Highlands region were discussed in great detail including discussion of the mineral make up and geologic events which took place. The economic geology (i.e. human impact due to geology) was also outlined. The geologic time

period encompassed Precambrian to Pleistocene.

SOURCE: Cary library: Veg. file

Mooney, C. N. AND H. L. Beldon. 1907. Soil survey of Dutchess

County, New York. Field survey of 1907. Washington, D. C.

Prindle and Knopf. 1932. Geology of the Taconic Quadrangle. Amer.

J. Sci. 24:257-302.