

Checklist of the vascular plants of Black Rock Forest, Orange County, New York

Kerry Barringer and Steven Clemants

Brooklyn Botanic Garden, 1000 Washington Avenue, Brooklyn, NY 11225-1099

Methods

Field surveys for this project began in late 1990. All parts of the Forest as well as adjacent areas were collected at various times of the year. The first set of collections were filed in the Brooklyn Botanic Garden Herbarium (BKL) and the extra sets were sent to Black Rock Forest and to the New York State Museum Herbarium (NYS). After a break in 1994 and 1995, collections began again in 1996 along with quantitative surveys of vegetation. In addition, floristic lists for the West Point Military Reservation (Clemants and Barringer 19??) and for the Mineral Spring Tract () were used to identify additional species which might be expected in the Forest. Specimens in the herbaria of the Bailey Hortorium (BH & CU) the New York Botanical Garden (NY), New York State Museum (NYS), and the Smithsonian Institution (US) were examined to establish historical records and to check identifications.

The results of the surveys were constantly compared with the Raup's (1938) list. In addition, an internal report by Raup, on file at the Forest, on a series of vegetation transects made in the Forest proved invaluable in relocating certain species.

Results

Raup (1938) reported 586 species of vascular plants growing in the Forest. Of these, 65 species were non-native. During the current study, we found 571 species, including ## non-native species. Combining the results of the two studies, 679 species have been reported from the Forest. Raup found 108 species that were not found in the current study (Table 1), while we found 93 species not reported by Raup (Table 2). list ranked rare and endangered species

Annotated list of species

The names of species and their classification into families follows Mitchell & Tucker (1997). In cases where the names or species concepts have changed since Raup's (1938) publication, the names Raup used are cited in brackets after the currently accepted name.

In his original report, Raup (1930) cited each species as either "Abundant," "Common," "Occasional," or "Rare." We try to update these qualitative judgements, but we use the word "Uncommon" instead of "Rare" because we do not want to confuse our estimate of abundance within the Forest with the New York State Museum and Nature Conservancy rankings of rarity.

All references to Raup's work are based on his "Botanical studies in Black Rock Forest" (Raup 1938).

Lycopodiophyta

Lycopodiaceae

Huperzia lucidula (Michx.) Trev. [*Lycopodium lucidulum* Michx.]
Occasional. Grows in moist, rich woods of the lower slope and cove.

Lycopodium obscurum L.
Uncommon. Grows in rich woods.

Lycopodium dendroideum Michx.
Uncommon. Not reported by Raup. Grows along Goethel's trail near the ski slope.

Lycopodium digitatum Dill. [*Lycopodium complanatum* var. *flabelliforme* Fern.]
Raup (1938) found it in the moist rich woods southwest of Sutherland Pond, but it has not been found recently.

Selaginellaceae

Selaginella rupestris (L.) Spring
Uncommon. Grows on open, rocky hilltops.

Isoetaceae

Isoetes echinospora Durieu
Occasional. Not reported by Raup. Found in Arthur's Pond.

Equisetophyta

Equisetaceae

Equisetum arvense L.
Occasional. Grows in moist, disturbed sites.

Equisetum sylvaticum L.

Uncommon. Grows in a wet, disturbed site south of the Upper Reservoir.

Equisetum hyemale L. [*E. prealtum* Raf.]

Raup found it growing in a wet thicket near the upper reservoir, but it has not been found recently.

Polypodiophyta

Ophioglossaceae

Botrychium dissectum Spreng.

Uncommon. Open grassy area near Aleck Meadow Reservoir.

Botrychium virginianum (L.) Sw.

Raup found this species in rich, cove woods. It has not been found recently.

Osmundaceae

Osmunda cinnamomea L.

Uncommon. Not reported by Raup. Grows in swampy woods at low elevations.

Osmunda claytoniana L.

Occasional. Grows in the cove woods in swampy ground and near streams.

Osmunda regalis L.

Occasional. Grows in cove woods in swampy ground.

Pteridiaceae

Adiantum pedatum L.

Occasional in rich woods, especially in the cove along Black Rock Brook.

Dennstaedtiaceae

Dennstaedtia punctilobula (Michx.) Moore

Common on roadsides, in clearings and in openings throughout the lower slopes.

Pteridium aquilinum (L.) Kuhn

Raup found this species to be abundant in dry woods and thickets on the upper slopes. It is now occasionally found in disturbed sites along the roads and on heavily visited hilltops.

Thelypteridaceae

Phegopteris connectilis (Michx.) Watt [*Dryopteris phegopteris* (L.) C. Chr.]

Raup found it in the rich cove woods along Black Rock Brook, but it has not been found recently.

Phegopteris hexagonoptera (Michx.) Fee [*Dryopteris hexagonoptera* (Michx.) Nieuwl.]

Raup found this species at one site in slope woods. It has not been found recently.

Thelypteris noveboracensis (L.) Nieuwl. [*Dryopteris noveboracensis* (L.) A. Gray]

Occasional. In moist to wet, rich woods.

Thelypteris palustris Schott [*Dryopteris thelypteris* (L.) A. Gray]

Occasional. In wet woods.

Woodwardia virginica (L.) Sm.

Occasionally found in open areas of the swamp south of Sutherland Pond. It may also occur on the island in Tamarack Pond.

Aplesiaceae

Asplenium trichomanes L.

Uncommon. Raup found it near the limestone erratic in Canturbury Brook and it is still found only there.

Asplenium rhizophyllum L. [*Camptosorus rhizophyllum* (L.) Link]

Uncommon. Found only on or near limestone erratics.

Dryopteridaceae

Dryopteris campyloptera (Kunze) Clarkson

Occasional. Grows in rich, wet woods, especially near streams.

Dryopteris carthusiana (Vill.) Fuchs. [*Dryopteris spinulosa* (Mull.) Kuntze]

Common. In rich, wet woods, especially in the coves.

Dryopteris clintoniana (D. Eaton) Dowell

Not reported by Raup. One small population found in the marshy area northeast of Sphagnum Pond.

Dryopteris marginalis (L.) A. Gray

Common. Grows in the lower slope and cove woods.

Onoclea sensibilis L.

Occasional. Raup found it to be common, growing in wet meadows and along streams. It is much less common now.

Polystichum acrostichoides (Michx.) Schott

Common in rich woods of the lower slopes and coves.

Woodsia ilvensis (L.) R. Br.

Uncommon. Found only on undisturbed hilltops.

Polypodiaceae

Polypodium virginianum L.

Common on ledges and boulders in woods.

Pinophyta

Pinaceae

Larix decidua Mill.

Once planted in the Forest in large tracts near Arthur's Pond, it proved to be unsuitable for the forest. Only a few specimens remain.

Larix laricina (DuRoi) Koch

Once planted in the Forest near Arthur's and Tamarack Pond, a few trees remain and rarely a young plant is found.

Picea abies (L.) Karst.

A single cultivated tree, growing at the Stone House, was probably overlooked by Raup.

Picea glauca (Moench) Voss

In cultivated plantations along Continental road from the Stone House to Sphagnum Pond. Sometimes spreading in disturbed areas nearby.

Picea mariana (Mill.) BSP.

Reported by Raup from the island in Tamarack Pond. That tree is no longer alive and no other site is known for this species in the forest.

Pinus resinosa Soland.

Cultivated in plantations near the Stone House and sometimes spreading nearby.

Pinus rigida Mill.

Occasional. Grows on hilltops and rocky, exposed slopes.

Pinus strobus L.

There is one densely populated area of this species on the east side of Sutherland Pond. Otherwise, it is Uncommon in the forest.

Tsuga canadensis (L.) Carr.

Common to abundant. Characteristic of north facing coves.

Cupressaceae

Juniperus virginiana L.

Occasional. Found on exposed, rocky slopes and cliffs.

Magnoliophyta

Magnoliaceae

Liriodendron tulipifera L.

Occasional to common. Grows in rich woods, especially in the coves.

Lauraceae

Lindera benzoin (L.) Blume

Occasional to common. Grows in rich woods with partial sun, in the coves and lower slopes.

Sassafras albidum (Nutt.) Nees

Occasional. Grows in the rich woods of the coves.

Aristolochiaceae

Aristolochia serpentaria L.

An old report of this species from Cascade Brook may be from within forest boundaries. It has not been found since. State: Endangered. TNC G5S1

Asarum canadense L.

Occasional. Grows in rich woods, especially in areas enriched by limestone.

Nymphaeaceae

Nuphar variegata Engelm.

Uncommon. In Sutherland Pond and in Jim's Pond.

Nymphaea odorata Dryand.

Uncommon, though it can be abundant when present. In Sutherland Pond and in Jim's Pond.

Cabombaceae

Brasenia schreberi Gmel.

Uncommon. In Sutherland Pond.

Ranunculaceae

Actaea pachypoda Ell. [*Actaea alba* (L.) Mill.]

Uncommon. Only along the roadside near the lower stretch of Black Rock Brook.

Anemone quinquefolia L.

Uncommon. Grows in rich woods.

Anemone virginiana L. [incl. *Anemone riparia* Fern.]

Found by Raup in old clearings, but not found recently. Few old clearings remain in the forest, most have been overgrown.

Anemonella thalictroides (L.) Spach

Uncommon. Not reported by Raup. Grows in disturbed sites in rich cove woods.

Aquilegia canadensis L.

Uncommon. Grows in rocky disturbed sites and on cliffs.

Caltha palustris L.

Uncommon. Grows in swampy woods.

Clematis virginiana L.

Occasional. Grows in thickets, often found near the dams.

Hepatica nobilis Mill. [*Hepatica americana* (DC.) Ker.]

Occasional. Grows in the rich woods of the coves.

Ranunculus abortivus L.

Occasional to common. Grows on roadsides and in roadside ditches.

Ranunculus acris L.

Occasional. Grows along roadsides and in disturbed sites.

Ranunculus ambiguus S. Wats.

Raup found this species in the swampy channels of cove brooks. It has not been found recently, though it might be found in the western part of the forest along Mineral Spring brook.

Ranunculus bulbosus L.

Raup found this species growing as a weed. It has not been found recently, but should be expected along the roads and in disturbed sites.

Ranunculus recurvatus Poir.

Occasional. Grows along the roads in the moist, rich soil of the coves.

Thalictrum dioicum L.

Occasional. Grows along the roads in the coves and the lower slopes.

Thalictrum pubescens Pursh [*Thalictrum polygamum* Muhl.]

Uncommon. Grows along Continental Road.

Thalictrum thalictroides (L.) Eames and Boivin

Occasional. Grows in the rich woods of the coves.

Berberidaceae

Berberis thunbergii DC.

Common. A weed in disturbed sites, especially along the roads or in clearings.

Menispermaceae

Menispermum canadense L.

Raup and others found this in thickets and old clearings. It has not been found recently, probably because most of the sites have grown into forest.

Papaveraceae

Chelidonium majus L.

Uncommon. Not found by Raup. A weed in riprap and fill along Black Rock Brook.

Fumariaceae

Corydalis flavula (Raf.) DC.

Uncommon. Not Reported by Raup. An ephemeral on enriched, open, rocky slopes. Rarity Status: NYSM Threatened, TNC G5S2.

Corydalis sempervirens (L.) Pers.

Occasional. Grows on, open rocky slopes and rarely on dry roadsides.

Dicentra cucullaria (L.) Bernh.

Uncommon. Not reported by Raup. Grows on rocky slopes.

Platanaceae

Platanus occidentalis L.

Uncommon. Grows in rich woods, especially in the north-facing coves.

Hamamelidaceae

Hamamelis virginiana L.

Common to abundant. The common understory tree in the forest, especially on the slopes and in the coves.

Ulmaceae

Ulmus americana L.

Raup reported this as common, growing in the coves and lower slopes. It has not been found recently, probably due to blight.

Ulmus rubra Muhl.

Uncommon. Not reported by Raup. In the swamps near Jim's Pond.

Moraceae

Morus rubra L.

Uncommon. Not reported by Raup. Recently introduced to the Forest along the entry road.

Urticaceae

Laportea canadensis (L.) Wedd.

Uncommon. Found along the lower stretches of Black Rock Brook.

Pilea pumila (L.) A. Gray

Common. Found in roadside ditches.

Juglandaceae

Carya cordiformis (Wang.) Koch

Occasional. Grows in swampy woods.

Carya glabra (Mill.) Sweet.

Common. Grows on the hilltops and upper slopes where it is often dominant.

Carya ovata (Mill.) Koch

Occasional. Grows in swampy woods.

Juglans cinerea L.

Uncommon. In rich woods, usually on the lower slopes.

Myricaceae

Comptonia peregrina (L.) Coult.

Uncommon. Dry, open, disturbed sites, especially on the hilltops.

Fagaceae

Castanea dentata (Marsh.) Borkh.

Occasional. Grows as root sprouts in the slope woods.

Fagus grandifolia Ehrh.

Common. Grows in the slope woods, especially in the lower slopes.

Quercus alba L.

Occasional. Grows throughout the Forest but is common as a low tree on the hilltops.

Quercus bicolor Willd.

Uncommon. Grows in swampy woods.

Quercus coccinea Muenchh.

Common. Grows on hilltops and in upper slope woods.

Quercus ilicifolia Wang.

Common. Grows in thickets on hilltops.

Quercus montana Willd.

Common. Usually the dominant tree in upper slope woods.

Quercus rubra L. [*Q. borealis* Michx.f.]

Common. Grows throughout the woods but is most common in the lower slopes and coves.

Quercus velutina Lam.

Common. Grows throughout the woods but is most common on the slopes.

Betulaceae

Alnus incana (L.) Moench [*A. rugosa* (DuRoi) Spreng.]

Occasional. Grows in moist, open or disturbed sites.

Alnus serrulata (Dryand) Willd. [*A. rugosa* sensu Raup]

Occasional. Grows in swampy woods and along streams.

Betula alleghaniensis Britt. [*B. lutea* Michx. f.]

Common. Grows in the lower slopes and coves where it can predominate.

Betula lenta L.

Common. Grows on the slopes and hilltops.

Betula papyrifera Marsh.

Raup found one tree growing southwest of Arthur's Pond. It has not been found recently.

Betula populifolia Marsh.

Occasional to Uncommon, much more common in Raup's reports. Grows on disturbed sites.

Carpinus caroliniana Walt.

Occasional. Grows in rich woods, especially in the coves.

Corylus cornuta Marsh.

Reported by Raup but not found recently. Usually found in open disturbed sites.

Ostrya virginiana (Mill.) Koch

Occasional. Grows in rich woods, especially in the coves.

Phytolaccaceae

Phytolacca americana L.

Occasional. Grows in disturbed sites and roadsides.

Chenopodiaceae

Chenopodium album L.

Uncommon. Not reported by Raup. A weed along the roads.

Caryophyllaceae

Cerastium arvense L.

Reported by Raup but not found recently. To be expected in dry, disturbed sites and on the commonly visited hilltops.

Cerastium fontanum Baug. [*C. vulgatum* sensu Raup]

Occasional. Grows in moist, open, disturbed sites.

Cerastium semidecandrum L.

Uncommon. Not reported by Raup. Grows in open, disturbed ground near Aleck Meadow Reservoir.

Phlox armeria L.

Uncommon, much more common in Raup's reports. Grows in moist disturbed sites.

Paronychia canadensis (L.) Wood

Occasional. Grows on dry roadsides.

Paronychia fastigiata (Raf.) Fern.

Reported by Raup. Recent plants have all been reported as the above species.

Sagina procumbens L.

Reported by Raup as occurring in wet spots along the upland trails. This weedy species has not been found recently.

Scleranthus annuus L.

Uncommon. Not reported by Raup. Grows in open, disturbed ground near Aleck Meadow Reservoir.

Silene antirrhina L.

Reported by Raup as growing on the hilltops but not found recently.

Silene latifolia Poir.

Occasional, more common in Raup's reports. Grows on roadsides and disturbed sites.

Silene nivea (Nutt.) Oth.

Uncommon. Not reported by Raup. Grows in open, disturbed ground near Aleck Meadow Reservoir.

Silene stellata (L.) Ait. f.

Raup reported it as rare to occasional on rocky slopes. It has not been found recently.

Stellaria graminea L.

Reported by Raup, this weedy species has not been seen in the Forest recently.

Polygonaceae

Polygonum aviculare L.

Reported by Raup, this weedy species has not been seen recently. It should be expected along the road, trails, and other heavily used sites.

Polygonum cespitosum Blume

Common. Not reported by Raup. Grows in disturbed sites, especially along the roads.

Polygonum cuspidatum Sieb. & Zucc.

Uncommon. Not reported by Raup. Grows in a disturbed site at the lower end of Hulse road.

Polygonum hydropiper L.

Common. Grows in and along streams.

Polygonum hydropiperoides Michx.

Common. Not reported by Raup. Grows in moist disturbed sites and along the streams.

Polygonum pensylvanicum L.

Occasional. Grows on pond edges and along streams.

Polygonum persicaria L.

Occasional. Grows in moist disturbed sites and at the edges of the ponds.

Polygonum punctatum Ell.

Occasional. Growing along the edges of ponds and streams.

Polygonum sagittatum L.

Common. Grows in marshy and wet places, especially at the edges of the reservoirs.

Polygonum scandens L. [incl. *P. dumetorum* L.]

Occasional. Grows in thickets and disturbed sites.

Polygonum virginianum L.

Uncommon. Not reported by Raup. Grows along the lower stretch of Black Rock Brook and along lower Hulse Road.

Rumex acetosella L.

Occasional. Grows along the roads.

Rumex crispus L.

Occasional. Grows along the roads and in disturbed sites.

Rumex obtusifolius L.

Reported by Raup, this weedy species has not been found recently.

Rumex orbiculatus A. Gray [*R. brittanica* sensu Raup]

Reported by Raup from the island in Tamarack Pond, it has not been found in the Forest recently.

Clusiaceae

Hypericum canadense L.

Common. Not reported by Raup, but he probably included individuals of this species under *H. mutilum*. Grows along the edges of the reservoirs.

Hypericum gentianoides (L.) BSP

Uncommon. Grows on the hilltops.

Hypericum mutilum L.

Common. Grows along the edges of the reservoirs.

Hypericum perforatum L.

Occasional. Grows as a weed along the road and in clearings.

Hypericum punctatum Lam.

Occasional. Grows as a weed in damp, disturbed sites.

Triadenum virginicum (L.) Raf. [*Hypericum virginicum* L.]

Common. Grows at the edges of the reservoirs.

Tiliaceae

Tilia americana L.

Uncommon. Grows in the rich woods of the coves.

Sarraceniaceae

Sarracenia purpurea L.

Uncommon. Known from the swampy area south of Sutherland Pond.

Droseraceae

Drosera intermedia Hayne

Not reported by Raup. Known from the swampy area south of Sutherland Pond.

Drosera rotundifolia L.

Uncommon. Known from the swampy area south of Sutherland Pond.

Cistaceae

Helianthemum bicknellii Fern.

Reported by Raup but not found recently. Recent material may have been identified as the following.

Helianthemum canadense (L.) Michx.

Uncommon. Grows on hilltops.

Lechea villosa Ell.

Reported by Raup but not found recently. It is likely to be found along trails and on the hilltops.

Lechea intermedia Leggett.

Reported by Raup but not found recently. It is likely to be found along trails and on the hilltops.

Violaceae

Viola affinis LeConte [*V. latiuscula* Greene]

Reported by Raup from the ravines, but not found recently.

Viola blanda Willd.

Common. Grows in swampy ground.

Viola conspersa Reichb.

Common. Grows in dry woods and thickets.

Viola cucullata Aiton

Occasional. Grows in swampy ground.

Viola macloskeyi Lloyd [*V. pallens* (Banks) Brainerd]

Occasional. Grows in rich, cove woods.

Viola palmata L.

Uncommon. Grows in the upper slope woods.

Viola pubescens Aiton

Common. Grows in swampy areas.

Viola sagittata Aiton [*V. fimbriatula* J. E. Sm.]

Uncommon. Grows on open, disturbed slopes and on roadsides.

Viola sororia Willd.

Uncommon. Grows in disturbed sites especially roadsides.

Salicaceae

Populus alba L.

Uncommon. Grows near Route 9W in an area that was not part of the Forest when Raup collected.

Populus deltoides Bartr.

Uncommon. Once common in old fields and clearing, now found only in wet, disturbed sites.

Populus grandidentata Michx.

Occasional to uncommon. Grows in disturbed sites of cove and lower slope woods.

Populus tremuloides Michx.

Raup reported this species as common, but it is now very uncommon in the Forest, found only in disturbed sites.

Salix cinerea L. [*S. bebbiana* sensu Raup p. p.]

Uncommon. Formerly more widespread in damp, disturbed sites. Now known from a single plant growing in a disturbed site near Aleck Meadow Reservoir.

Salix cordata Michx.

Reported by Raup, but not found in the Forest recently. This species is to be expected in wet, disturbed sites.

Salix discolor Muhl.

Uncommon. Formerly more widespread in damp, disturbed sites along the roads. Now known from disturbed ground near the parking lot and near Route 9W,

Salix humilis Marsh.

Reported by Raup, but not found in the Forest recently. This species is to be expected in wet, disturbed sites.

Salix lucida Muhl.

Uncommon. Raup found this species only in a damp thicket at Aleck Meadow reservoir. It is not found there now, but is found along the Sphagnum pond dam.

Salix nigra Marsh.

Reported by Raup, but not found in the Forest recently. This species is to be expected in wet, disturbed sites.

Salix sericea Marsh.

Reported by Raup, but not found in the Forest recently. This species is to be expected in wet, disturbed sites.

Brassicaceae

Alliaria petiolata (Bieb.) Vav. & Grande [*A. officinalis* Andr.]

Occasional. Grows in disturbed sites.

Arabis canadensis L.

Uncommon. Raup found a small population on Sackett Hill. It has since been found on other hilltops.

Arabis laevigata (Muhl.) Poir.

Occasional to common. Grows in dry upland woods.

Arabis lyrata L.

Uncommon. Usually associated with limestone boulders.

Barbarea vulgaris R. Br.

Occasional. Grows in damp disturbed sites.

Brassica arvensis (L.) Kuntze

Occasional. Grows in disturbed sites.

Brassica nigra (L.) Koch

Uncommon. Grows in disturbed sites, usually along the roads.

Barbarea vulgaris R. Br.

Occasional. Grows in disturbed sites, usually in the rich coves.

Cardamine pensylvanica Muhl.

Occasional. Grows in damp disturbed sites and in damp sites in the rich cove woods.

Hesperis matronalis L.

Occasional. Not reported by Raup.

Lepidium virginianum L.

Occasional. Grows in dry, disturbed sites.

Rorippa palustris (L.) Besser

Uncommon. Raup found this species in wet areas around the reservoirs. It has not been found there recently, but is sometimes found in slow-moving streams.

Clethraceae

Clethra alnifolia L.

Common. Grows in thickets near the ponds and reservoirs and in the swampy site south of Sutherland Pond.

Ericaceae [incl. Pyrolaceae]

Andromeda glaucophylla Link.

Uncommon. Not reported by Raup. Grows on the boggy island in Tamarack Pond.

Arctostaphylos uva-ursi (L.) Spreng.

Not found in the Forest but found in immediately adjacent woods near Round Pond.

Chamaedaphne calyculata (L.) Moench

Common. Grows along the edges of the ponds and on the island in Tamarack Pond. It is Uncommon on the shores of the reservoirs where the water level drops in the summer.

Chimaphila maculata (L.) Pursh

Occasional. Grows in slope woods and is usually found on sites with a northern exposure.

Epigaea repens L.

Uncommon. Grows in open sites in the slope woods.

Gaultheria procumbens L.

Occasional to uncommon. Grows in the rich woods of the lower slopes and coves.

Gaylussacia baccata (Wang.) Koch

Abundant. Grows in the slope woods and on hilltops and is often the dominant shrub in upper slope woods.

Kalmia angustifolia L.

Occasional. Grows on swampy woods, especially those south and west of Sutherland Pond.

Kalmia latifolia L.

Occasional to common. Grows throughout the Forest except for cliffs and hilltops. Often forms dense thickets on north to northeast facing slopes.

Kalmia polifolia Wang.

Uncommon. Not reported by Raup. Grows in open, boggy sites especially on the island in Tamarack Pond and in the open swamp south of Sutherland Pond.

Leucothoe racemosa (L.) A. Gray

Not found in the Forest, but found on the immediately adjacent ridge of Crow's Nest.

Lyonia ligustrina (L.) DC

Reported by Raup as occasional in clearings and along fences. It has not been found recently and has probably been eliminated by growth of the forest.

Monotropa hypopithys L.

Occasional. Grows in the upper slope woods. Known to Raup from a single site on Sackett, this species is now more widespread.

Monotropa uniflora L.

Common. Grows throughout the slope and cove woods.

Pyrola americana Sweet [P. *rotundifolia* L.]

Reported as rare by Raup on the basis of a single population that has not been found recently.

Pyrola elliptica Nutt.

Occasional. Grows in lower slope woods.

Rhododendron maximum L.

Uncommon. Grows in slope woods usually on sites with a northern exposure especially in the Canterbury Brook cove.

Rhododendron periclymenoides (Michx.) Shinnery [R. *nudiflorum* (L.) Torrey]

Occasional. Grows in damp thickets. Raup's collections sometimes mix this species and the following.

Rhododendron prinophyllum (Small) Millais [R. *roseum* (Loisel.) Rehder]

Occasional. Grows in slope woods on Mount Misery.

Rhododendron viscosum (L.) Torrey

Common. Grows at the edges of ponds and reservoirs and in open swampy ground.

Vaccinium angustifolium Ait. [V. *pensylvanicum* Lam.]

Abundant. Grows in hilltop and slope woods, especially the upper slopes and in disturbed sites where it can form thickets.

Vaccinium corymbosum L.

Abundant. Grows in swampy ground and damp woods.

Vaccinium macrocarpon Ait.

Uncommon. Grows in open, *Sphagnum* dominated sites. Raup also found plants growing on the island in Tamarack Pond, but it has not been seen there recently.

Vaccinium pallidum Ait. [incl. *V. vacillans* Kalm]

Uncommon. Grows in upper slope and hilltop woods.

Vaccinium stamineum L.

Occasional to common. Grows in upper slope and hilltop woods.

Primulaceae

Lysimachia ciliata L. [*Steironema ciliatum* (L.) Raf.]

Uncommon. Grows in wet disturbed sites and open sites along streams in the central part of the Forest.

Lysimachia nummularia L.

Uncommon. Known only from the sawmill pond along Black Rock Brook.

Lysimachia quadrifolia L.

Occasional. Grows throughout the Forest in woods.

Lysimachia terrestris (L.) BSP.

Occasional. Grows in open, wet sites at the edges of ponds, reservoirs, and streams.

Trientalis borealis Raf.

Uncommon. Grows in rich cove woods.

Grossulariaceae

Ribes rotundifolium Michx.

Uncommon. Usually found in woods associated with limestone erratics or enriched soil, but also found in thickets along the entry road.

Crassulaceae

Penthorum sedoides L.

Raup found this species growing in swampy ground near Aleck Meadow Reservoir. It has not been found there recently.

Sedum telephium L. [*S. triphyllum* (Haw.) S. Gray]

Saxifragaceae

Chrysosplenium americanum Schwein.

Occasional. Grows in slow moving streams and wet places in swampy woods.

Heuchera americana L.

Raup found this species growing among loose rock on the west slope of Mt. Misery. It has not been found there recently.

Mitella diphylla L.

Occasional. Grows in the rich woods of the lower slopes and coves.

Saxifraga virginensis Michx.

Occasional to common. Grows in rocky, slope woods.

Rosaceae

Agrimonia gryposepala Wallr.

Occasional. Grows in dry, disturbed sites.

Amelanchier canadensis (L.) Medik.

Common. Grows throughout the Forest, but is most common on wooded slopes.

Aronia arbutifolia (L.) Pers.

Occasional. Grows along the edge of some reservoirs and occasionally in open, upland sites.

Aronia melanocarpa (Michx.) Ell.

Occasional. Grows in partially open, rocky, upland woods and at the edge of ponds. Raup cites it as growing on the island in Tamarack Pond.

Crataegus macrosperma Ashe

Uncommon. Grows in dry upland woods, especially on hilltops.

Fragaria virginiana Dcne.

Uncommon. Grows in dry, open, disturbed sites.

Geum canadense Jacq.

Geum laciniatum Murr.

Malus pumila Mill.

Uncommon. Grows in abandoned orchard and occasionally near old house sites.

Physocarpus opulifolius (L.) Maxim.

Occasional. Grows in upper slope woods.

Potentilla argentea L.

Raup found this growing in rocks at the edge of Sutherland Pond. It is weedy, but has not been found recently.

Potentilla arguta Pursh

Raup found this species on open hilltops. It has not been found recently.

Potentilla canadensis L.

Occasional. Grows in damp, disturbed sites.

Potentilla norvegica L.

Raup found this weedy species in damp thickets. It has not been found recently.

Potentilla recta L.

Uncommon. Grows in open, disturbed sites.

Potentilla simplex Michx.

Uncommon. Grows in dry clearing. Raup also found it in open, upland woods.

Prunus pensylvanica L.f.

Occasional to common. Grows in successional sites and on hilltops.

Prunus pumila L.

Occasional to common. Grows in dry, upper slope woods, especially in hilltop thickets.

Prunus serotina Ehrh.

Occasional. Grows in successional sites and may persist in slope woods.

Prunus virginiana L.

Uncommon. Grows in dry, disturbed sites and successional sites.

Pyrus communis L.

Uncommon. Grows near old house sites.

Rosa carolina L.

Uncommon. Grows in thickets along roadsides.

Rosa multiflora Thunb.

Occasional. Not reported by Raup. This invasive species is becoming more common in damp, disturbed sites.

Rosa palustris Marsh.

Occasional to uncommon. Grows in open, swampy sites south of Sutherland Pond.

Rubus allegheniensis Porter

Common. Grows in thickets at the edge of woods.

Rubus flagellaris Willd.

Occasional. Not reported by Raup. Found in disturbed sites.

Rubus hispidus L.

Common. Grows in open, disturbed sites.

Rubus idaeus L.

Common. Grows in thickets at the edge of woods.

Rubus occidentalis L.

Occasional. Grows in damp thickets. Often browsed

Rubus odoratus L.

Occasional. Grows in thickets at the edge of woods.

Rubus phoenicolasius Maxim.

Occasional. Not reported by Raup. Grows in disturbed sites in rich cove woods and seems to be spreading in the Forest.

Spiraea alba DuRoi [S. latifolia (Ait.) Borkh.]

Occasional to common. Grows in wet disturbed sites, especially near the ponds and reservoirs.

Spiraea tomentosa L.

Uncommon. Grows in wet disturbed sites near the reservoirs.

Fabaceae

Amphicarpa bracteata (L.) Rickett & Stafleau

Occasional to common. Grows on roadsides in rich cove woods.

Apios americana Medik. [A. tuberosa Moench.]

Uncommon. Found in swampy woods near Sutherland Pond and along Mineral Spring Brook.

Baptisia tinctoria (L.) R. Br.

Reported by Raup as growing along dry upland roadsides. This species has not been found recently.

Desmodium cuspidatum (Muhl.) DC. [*D. bracteosum* (Michx.) DC.]

Uncommon. Grows only on a few dry hilltop sites.

Desmodium glutinosum (Muhl.) Wood [*D. acuminatum* (Michx.) DC.]

Uncommon. Grows in rocky, slope woods.

Desmodium nudiflorum (L.) DC.

Occasional to common. Grows in woods and along roadsides

Desmodium paniculatum (L.) DC.

Uncommon. Grows in dry, upper slope woods.

Desmodium rotundifolium DC.

Uncommon. Grows in dry, upper slope woods.

Lespedeza capitata Michx.

Uncommon. Grows on open hilltops.

Lespedeza hirta (L.) Hornem.

Uncommon. Grows in upper slope woods.

Lespedeza intermedia (S. Wast.) Britt.

Uncommon. Grows in dry, upper slope woods. Raup also found this species along roads

Lespedeza violacea (L.) Pers.

Uncommon. Grows in upper slope woods.

Lotus corniculata L.

Uncommon. Grows in disturbed sites. Found along Continental Road.

Melilotus alba Desr.

Uncommon. Grows in disturbed sites. Found near Aleck Meadow Reservoir.

Melilotus officinalis (L.) Pallas

Uncommon. Grows in disturbed sites in rich cove woods along Black Rock Brook.

Robinia pseudo-acacia L.

Occasional. Grows on successional sites and along Route 9W.

Trifolium arvense L.

Uncommon. Not reported by Raup. Grows in disturbed sites. Found near Aleck Meadow Reservoir.

Trifolium aureum Pollich [*T. agrarium* L.]

Uncommon. Grows in damp, disturbed sites.

Trifolium campestre Schreb.

Uncommon. Grows in disturbed sites. Found near the parking lot.

Trifolium dubium Sibth.

Uncommon. Not reported by Raup. Grows in disturbed sites. Found near the Arthur's Pond Dam.

Trifolium hybridum L.

Uncommon. Raup found this species in old meadows. It is now known only from the disturbed ground near Aleck Meadow Reservoir.

Trifolium pratense L.

Uncommon. Grows in wet to damp disturbed sites.

Trifolium repens L.

Uncommon. Not reported by Raup. Known only from the disturbed ground below Sphagnum Pond Dam.

Vicia cracca L.

Uncommon. Raup found this species in upland thickets. It is now known only from disturbed sites along the entry road and along Route 9W.

Lythraceae

Decodon verticillatus (L.) Ell.

Uncommon. Found only in the swampy ground south of Sutherland Pond and along the edge of that pond.

Lythrum salicaria L.

Uncommon. Reported by Raup as common to abundant. This invasive species is now known from only a few sites near the reservoirs.

Thymelaeaceae

Dirca palustris L.

Uncommon. Known from the lower cove along Black Rock and Canturbury Brooks. This species is to be expected from the woods along Mineral Spring Brook.

Onagraceae

Circea lutetiana L. [*C. latifolia* Hill]

Occasional. Grows in cove woods along the streams and on damp, disturbed sites.

Epilobium angustifolium L.

Uncommon. Raup found this species in old clearings. Recently it has only been found on the top of Mt. Rascal.

Epilobium ciliatum Raf. [*E. glandulosum* Lehm.]

Common. Grows in damp disturbed sites and along the edges or reservoirs.

Epilobium coloratum Muhl.

Uncommon. Grows in damp disturbed sites.

Ludwigia palustris (L.) Ell.

Occasional. In slow-moving streams and along the edges of ponds and reservoirs.

Oenothera biennis L.

Uncommon. Grows in dry, disturbed sites and clearings. Common just outside the Forest near the Upper Reservoir

Oenothera perennis L.

Uncommon. Grows along roadsides, prefers damp soil.

Melastomataceae

Rhexia virginica L.

Raup reported this species as growing at the edge of Sutherland Pond. It has not been found recently.

Nyssaceae

Nyssa sylvatica Marsh.

Occasional to common. Grows in moist, cove woods and swamps.

Cornaceae

Cornus amomum Mill.

Collected by Raup near Arthur's Pond, but not reported in his list. Not found recently.

Cornus florida L.

Occasional. Grows in lower slope and cove woods and along Route 9W near Black Rock Brook.

Cornus foemina Mill. [*C. racemosa* Lam.]

Reported by Raup as common in thickets, old clearings and hilltops. Now known only from disturbed sites along the roads.

Cornus rugosa Lam.

Reported by Raup as common in the rich, slope woods. Not found recently.

Cornus sericea L. [*C. stolonifera* Michx.]

Reported by Raup as occasional along streams. Not found recently.

Santalaceae

Comandra umbellata (L.) Nutt.

Celastraceae

Celastrus orbiculata Thunb.

Uncommon. Not reported by Raup. This invasive species grows in rich, disturbed sites.

Celastrus scandens L.

Raup found this species growing in thickets and fencerows. It has not been found in the Forest recently.

Euonymus alata (Thunb.) Sieb.

Uncommon. Not reported by Raup. Found along an old road near Route 9W.

Aquifoliaceae

Ilex verticillata (L.) A. Gray

Common. Grows in moist woods and swamps.

Nemopanthus mucronatus (L.) Loesener

Uncommon. Grows in the swampy woods near Sutherland Pond and near Tamarack Pond. It is to be expected in the woods along Mineral Spring Brook.

Euphorbiaceae

Acalypha virginica L.

Common. Grows along the roads in cove woods and occasionally in disturbed sites at the edge of ponds. Our var. *rhomboides* (Raf.) Cooperrider

Chamaesyce vermiculata (Raf.) House [*Euphorbia vermiculata* Raf.]

Raup found this species to be a common weed. It has not been found in the Forest recently, but is common just outside the Forest.

Euphorbia cyparissias L.

Occasional. Not reported by Raup. Grows in dry, open disturbed sites.

Euphorbia esula L.

Uncommon. Not reported by Raup. Grows at an old building site at the base of Hulse Road.

Rhamnaceae

Ceanothus americanus L.

Uncommon. Found only in openings in south-facing, upper slope woods.

Rhamnus cathartica L.

Uncommon now, this species was much more common in Raup's report. Grows in damp sites along roads.

Vitaceae

Parthenocissus quinquefolia (L.) Planch.

Occasional, this species was more common in Raup's report. Grows in rich cove woods.

Vitis aestivalis Michx.

Occasional. Grows in lower slope and cove woods.

Vitis labrusca L.

Occasional. Grows in lower slope and cove woods near openings.

Vitis riparia Michx.

Uncommon. Not reported by Raup. Grows in disturbed sites in the lower slope and cove woods.

Vitis vulpina L.

Uncommon. Grows in cove woods near openings, especially near Route 9W.

Linaceae

Linum virginianum L.

Raup found this species growing on dry roadsides. It has not been found recently.

Polygalaceae

Polygala sanguinea L.

Raup found this species on damp, disturbed sites. It has not been found recently.

Polygala verticillata L.

Occasional now, once rare. Grows in damp, disturbed sites.

Staphyleaceae

Staphylea trifolia L.

Raup found this species growing along old fencerows and in open, slope woods. It has not been found in the Forest recently.

Aceraceae

Acer pensylvanicum L.

Common. Grows in lower slope and cove woods especially along the streams.

Acer rubrum L.

Common. Grows throughout the Forest. Often dominant in swampy areas.

Acer saccharinum L.

Uncommon. Grows along the road to the Chlorinator near Black Rock Brook.

Acer saccharum Marsh.

Common. Grows in the lower slope and cove woods. Often dominant in the coves.

Acer spicatum Lam.

Uncommon. Raup found this species growing in the cove of Black Rock Brook. It has not been found there recently, but is found in the recently acquired Mineral Spring Tract.

Anacardiaceae

Rhus copallinum L.

Occasional now, once common. Grows on hilltops, cliffs, and open, disturbed slopes.

Rhus glabra L.

Uncommon, once common. Grows in disturbed sites.

Rhus hirta (L.) Sudworth [*R. typhina* L.]

Uncommon now, once common. Grows in open, disturbed sites.

Toxicodendron radicans (L.) Kuntze [*Rhus toxicodendron* L.]

Occasional now, Raup reports it as abundant. Grows in disturbed sites in rich woods.

Toxicodendron vernix (L.) Kuntze [*Rhus vernix* L.]

Uncommon. Growing in an open swampy site that may be just outside the Forest. This species is to be expected in the swamp south of Sutherland Pond.

Simaroubaceae

Ailanthus altissima (Mill.) Swingle

Uncommon. Not reported by Raup. A recent introduction in rip-rap near the Arthur's Pond dam.

Oxalidaceae

Oxalis corniculata L. [*O. europaea* sensu Raup p. p.]

Occasional. Grows along the roads.

Oxalis dillenii Jacq. [*O. filipes* Small]

Occasional. Grows along the roads, especially in the coves.

Oxalis stricta L. [*O. europaea* Jord.]

Occasional. Grows along the roads and in moist, disturbed sites.

Geraniaceae

Geranium bicknellii Britt.

Reported by Raup as growing on roadsides, but not found in the forest recently.

Geranium carolinianum L.

Uncommon. Not reported by Raup. Grows in a disturbed site along the road to the Chlorinator, in rich cove woods.

Geranium maculatum L.

Common. Grows in cove and lower slope woods, especially near openings.

Geranium robertianum L.

Uncommon. Not reported by Raup. Probably a recent introduction. Found at the base of Hulse road, near Black Rock Brook.

Balsaminaceae

Impatiens capensis Meerb. [*I. biflora* Walt.]

Common. Grows in damp, disturbed sites, around the reservoirs, and along streams.

Impatiens pallida Nutt.

Uncommon. Grows along the Hulse road near Route 9W.

Araliaceae

Aralia nudicaulis L.

Occasional, Raup reported it as common. Grows in cove and lower slope woods.

Aralia racemosa L.

Occasional. Grows in cove and slope woods.

Panax trifolius L.

Occasional to common. Grows in cove and lower slope woods.

Apiaceae

Angelica venenosa (Greenway) Fern. [*A. villosa* (Walt.) BSP.]

Raup found this species occasionally as a weed along the roads. It has not been found in the Forest recently.

Cicuta bulbifera L.

Raup found a single plant, growing beside Jim's Pond. The species has not been found in the Forest recently.

Cicuta maculata L.

Uncommon, once occasional. Grows in open, wet sites.

Cryptotaenia canadensis (L.) DC.

Common. Grows in cove woods.

Daucus carota L.

Uncommon. Not reported by Raup. Grows in open, disturbed sites. Very common just outside the Forest at the Upper Reservoir.

Heracleum lanatum Michx.

Uncommon. Not reported by Raup. Grows in open, moist, disturbed sites.

Hydrocotyle americana L.

Common. Grows in very wet soil and in slow-moving streams.

Osmorhiza claytonii (Michx.) Clarke

Uncommon. Grows in disturbed sites in cove woods.

Sanicula marilandica L.

Reported by Raup, but not found in the Forest recently.

Sium suave Walt.

Raup found one plant growing along Cascade Brook in Glycerine Hollow. It has not been found in the Forest recently.

Zizia aptera (A. Gray) Fern. [*Zizia cordata* (Walt.) Koch]

Raup found this species occasionally, growing in old clearings and roads. It has not been found recently.

Zizia aurea (L.) Koch

Raup found this species in upper slope woods. It has not been found in the Forest recently.

Gentianaceae

Bartonia virginica (L.) BSP.

Uncommon. Growing in dry, upland woods and open disturbed sites.

Gentiana clausa Raf.

Raup found this species in damp, disturbed sites. It has not been found in the Forest recently.

Gentianopsis crinita (Froel.) Ma. [*Gentiana crinita* Froel.]

Raup found this species in damp, disturbed sites. It has not been found in the Forest recently.

Apocynaceae

Apocynum androsaemifolium L.

Uncommon. Grows on hilltops and in dry, disturbed sites.

Apocynum cannabinum L.

Uncommon. Grows in disturbed sites.

Asclepiadaceae

Asclepias exaltata L. [*A. phytolaccoides* Pursh]

Uncommon. Grows in damp, disturbed sites.

Asclepias incarnata L.

Uncommon. Grows in wet, disturbed sites. Raup also found it along the edges of the reservoirs.

Asclepias quadrifolia Jacq.

Uncommon. Grows in dry, upper slope woods.

Cynanchum louiseae Kartesz & Gandhi

Uncommon. Grows in rich woods near Route 9W.

Solanaceae

Solanum dulcamara L.

Uncommon. Grows in damp, disturbed sites.

Solanum nigrum L.

Uncommon. Grows along the roads.

Convolvulaceae [see also Cuscutaceae]

Calystegia sepium (L.) R. Br. [*Convolvulus sepium* L.]

Uncommon. Grows along disturbed roadsides in cove woods.

Cuscutaceae

Cuscuta gronovii Willd.

Uncommon to occasional. Grows in damp, disturbed sites.

Menyanthaceae

Nymphoides cordata (Ell.) Fern. [*N. lacunosa* (Vent.) Kuntze]

Uncommon. Grows in Sutherland Pond.

Boraginaceae

Echium vulgare L.

Uncommon, formerly common. Grows in disturbed roadsides.

Myosotis laxa Lehm.

Common. Grows along streams and at the edge of reservoirs.

Myosotis scorpioides L.

Occasional. Grows at the edge of reservoirs.

Verbenaceae

Verbena hastata L.

Uncommon, once occasional to common. Grows in damp disturbed sites.

Verbena urticifolia L.

Uncommon. Grows in dry, disturbed sites. This species is common just outside the Forest at the Upper Reservoir.

Lamiaceae

Ajuga reptans L.

Occasional. Grows in damp, disturbed sites in the coves.

Clinopodium vulgare L. [*Satureja vulgaris* (L.) Fritsch.]

Occasional. Grows in disturbed sites in coves and lower slope. Raup also reported it from south-facing slope woods.

Collinsonia canadensis L.

Common. Grows in cove woods along streams and in damp, disturbed sites.

Cunila origanoides (L.) Britt.

Occasional. Grows on hilltops.

State Threatened; TNC G5S3

Hedeoma pulegioides (L.) Pers.

Occasional. Grows on roadsides.

Leonurus cardaica L.

Uncommon. Grows in disturbed sites near old houses and barns.

Lycopus uniflorus Michx.

Common. Grows along streams, at the edge of reservoirs, and in damp, disturbed sites.

Lycopus virginicus L.

Uncommon. Not reported by Raup. Found along Jim's Pond.

Mentha arvensis L.

Occasional. Grows in disturbed sites, especially along roads.

Nepeta cataria L.

Uncommon. Grows in disturbed sites near old building sites.

Origanum vulgare L.

Reported by Raup from roadsides, but not found in the Forest recently.

Prunella vulgaris L.

Common. Grows on roadsides and in damp, disturbed sites.

Pycnanthemum tenuifolium Schrad. [*P. flexuosum* (Walt.) BSP.]

Uncommon. Grows in open, disturbed sites. Currently found near Aleck Meadow Reservoir.

Scutellaria lateriflora L.

Common. Grows in swamps and at the edges of ponds and reservoirs.

Callitrichaceae

Callitriche palustris L.

Common. Grows in slow-moving streams and small ponds.

Plantaginaceae

Plantago lanceolata L.

Uncommon. Grows on roads and roadsides.

Plantago major L.

Occasional. Grows on roads and roadsides.

Plantago rugelii Dcne.

Occasional. Grows on roadsides.

Oleaceae

Fraxinus americana L.

Common. Grows throughout the forest, but is most common in the coves.

Fraxinus nigra Marsh.

Uncommon. Grows in cove woods and swampy sites.

Fraxinus pensylvanica Marsh.

Uncommon. Grows in cove woods.

Syringa vulgaris L.

Uncommon. Found near old house sites.

Scrophulariaceae

Agalinis tenuifolia (Vahl) Raf. [*Gerardia tenuifolia* Vahl]

Uncommon. Grows in dry, open sites along the roads, usually with grasses.

Aureolaria flava (L.) Farwell

Uncommon. Occasionally found along roads or in open slope woods.

Aureolaria pedicularia (L.) Raf.

Raup found this species growing along roads and in open, dry woods. It has not been found in the Forest recently.

Aureolaria virginica (L.) Pennell

Raup found this species growing in open woods. It has not been found recently.

Chelone glabra L.

Occasional. Grows along streams and in damp disturbed sites.

Gratiola neglecta Torrey

Occasional. Grows in damp, disturbed sites, especially along the edge of Arthur's Pond where the water level drops in the summer.

Linaria vulgaris Mill.

Occasional. Grows in disturbed sites especially along the road.

Melampyrum lineare Desv.

Occasional to common. Grows in dry, slope woods and along the upland roads.

Mimulus ringens L.

Occasional. Grows along streams and occasionally at the edges of the ponds and reservoirs.

Pedicularis canadensis L.

Occasional. Grows in the dry, slope woods.

Penstemon digitalis Nutt.

Uncommon. Not reported by Raup. Found along the road that leads to the Chlorinator.

Verbascum blattaria L.

Uncommon. Grows in open, disturbed sites.

Verbascum thapsus L.

Occasional. Grows in the roads and in disturbed sites.

Veronica americana (Raf.) Schwein.

Uncommon. Grows in open, swampy ground.

Veronica arvensis L.

Occasional. Grows in disturbed sites.

Veronica officinalis L.

Occasional. Grows in disturbed sites.

Veronica scutellata L.

Occasional. Grows along the edge of ponds.

Veronica serpyllifolia L.

Occasional. Grows in disturbed sites along the road and is one of the few plants that will grow in shade of the spruce and pine plantations.

Bignoniaceae

Catalpa bignonioides Walt.

Uncommon. A recent introduction near the parking lot.

Orobanchaceae

Conopholis americana (L.) Wallr.

Uncommon. Grows in rich cove woods along lower Black Rock Brook.

Epifagus virginiana (L.) Bartr.

Uncommon. Grows in rich cove and lower slope woods on roots of *Fagus grandifolia*.

Orobanche uniflora L.

Uncommon. Grows on the disturbed roadside in Glycerine Hollow.

Lentibulariaceae

Utricularia minor L.

Occasional. Grows in Reservoirs. The determination is by Raup, based on fragmentary material. The recently collected material was not fertile. It may be *U. macrorhiza* LeConte. State: T TNC G5S3

Campanulaceae

Campanula rotundifolia L.

Uncommon. Grows on the hilltops and cliffs.

Lobelia cardinalis L.

Uncommon. Grows along the streams in the coves.

Lobelia dortmanna L.

Uncommon. Grows in Sutherland Pond.

Lobelia inflata L.

Common. Grows in dry clearing and along the roads.

Lobelia siphilitica L.

Uncommon. Not reported by Raup. Grows in clearings near Black Rock Brook.

Lobelia spicata Lam.

Occasional. Grows in damp disturbed sites especially along the roads.

Rubiaceae

Cephalanthus occidentalis L.

Common. Grows along the edges of the reservoirs and ponds.

Galium asprellum Michx.

Occasional. Grows in disturbed sites near Black Rock Brook.

Galium mollugo L.

Occasional. Grows in disturbed sites and along the roads.

Galium obtusum Bigel.

Uncommon. Not reported by Raup. Grows on disturbed ground near Aleck Meadow Reservoir.

Galium tinctorum L.

Reported by Raup as growing along the edges of ponds, but not found recently.

Galium trifidum L.

Uncommon. Grows in swampy areas.

Galium triflorum Michx.

Common. Grows in damp to wet, disturbed ground.

Mitchella repens L.

Occasional. Grows in slope woods.

Caprifoliaceae

Diervilla lonicera Mill.

Occasional. Grows in upper slope wood, on hilltops and on cliffs.

Lonicera dioica L.

Uncommon. Grows in thickets and disturbed sites.

Lonicera japonica Thunb.

Uncommon. Not reported by Raup. A highly invasive species collected in the disturbed ground near Aleck Meadow Reservoir.

Sambucus canadensis L.

Uncommon. Grows in disturbed sites.

Sambucus racemosa L. [*S. pubens* Michx.]

Reported by Raup as growing in thickets, but not found recently.

Viburnum acerifolium L.

Common. Grows as an understory shrub in the lower slope and cove woods.

Viburnum dentatum L.

Uncommon. Grows in wet clearings and along roadsides.

Viburnum lentago L.

Uncommon. Grows in swampy woods.

Viburnum nudum L. [*V. cassinoides* L.]

Occasional. Grows in open or partially open, wet or swampy sites.

Viburnum prunifolium L.

Occasional. Growing in damp clearings.

Viburnum rafinesquianum Schultes [*V. affine* Bush]

Occasional to common. Usually grows on hilltops but is sometimes found in opening of the slope woods.

Asteraceae

Achillea millefolium L.

Occasional. Grows in disturbed sites.

Ambrosia artemisiifolia L.

Occasional. Grows in disturbed sites.

Anaphalis margaritacea (L.) Benth. & Hook. f.

Occasional. Grows along the roadsides.

Antennaria neglecta Greene [incl. *A. neodioica* Greene]

Occasional. Grows along roadsides and in damp, disturbed sites.

Antennaria plantaginifolia (L.) Rich.

Occasional to common. Grows along the roads. Raup also found it in the slope woods, but it has not been found there recently.

Arctium minus (Hill.) Bernh.

Reported by Raup but not found recently. This weedy species is to be expected in disturbed sites.

Aster acuminatus Michx.

Occasional. Grows in rich woods of the lower slopes and coves.

Aster cordifolius L.

Occasional. Grows in open woods, especially near roads. Not reported by Raup, but it can be difficult to distinguish from *A. lowrieianus*, so that some of Raup's reports of that species may be *A. cordifolius*.

Aster divaricatus L.

Common. Prefers disturbed sites in rich woods, but can be widespread in disturbed sites.

Aster lanceolatus Willd. [*Aster paniculatus* Lam.]

Uncommon. Grows in damp, disturbed sites.

Aster lateriflorus (L.) Britt.

Uncommon. Grows in damp, disturbed sites.

Aster linariifolius L.

Occasional. Grows in dry disturbed sites along the roads and is sometimes found on hilltops.

Aster lowrieianus Porter

Uncommon. Grows in dry, disturbed sites.

Aster macrophyllus L.

Occasional. Grows on damp roadsides and sometimes in damp, disturbed sites in the coves.

Aster novae-angliae L.

Uncommon. Grows in dry, disturbed sites.

Aster patens Ait.

Uncommon. Grows in dry, disturbed sites.

Aster paternus Cronq. [*Seriocarpus asteroides* (L.) BSP]

Uncommon. Grows in upper slope woods and occasionally along the roads.

Aster pilosus Willd.

Occasional to common. Grows in disturbed sites, often along the edges of the reservoirs. Ours is var. *pringlei* (A. Gray) Blake. State Endangered. TNC G5S1

Aster puniceus L.

Uncommon. Grows in damp disturbed sites and at the edges of the reservoirs.

Aster racemosus Ell. [*Aster lateriflorus* sensu Raup]

Uncommon. Grows on hilltops and in open areas in the upper slope woods. Some of Raup's *A. lateriflorus* specimens are this species. State Threatened TNC G5 S2

Aster sagittifolius Wedem.

Uncommon. Grows along the roads in rich woods. Ours specimens may be *A. cordifolius* or *A. lowrieanus*.

Aster schreberi Nees.

Occasional. Grows in disturbed sites.

Aster umbellatus Mill.

Occasional. Grows in damp disturbed sites.

Bidens cernua L.

Common. Grows along the edges of the reservoirs and at disturbed sites along the streams.

Bidens connata Muhl.

Occasional. Grows along the edges of the reservoirs.

Bidens coronata (L.) Britt.

Uncommon. Not reported by Raup. Grows in damp, disturbed sites.

Bidens frondosa L.

Occasional. Grows along the edges of the reservoirs.

Centaurea nigra L.

Occasional. Not reported by Raup. Grows in open, disturbed sites.

Cichorium intybus L.

Uncommon. Not reported by Raup. This weedy species is found on roadsides at the edge of the Forest.

Cirsium arvense (L.) Scopoli

Uncommon. Grows in damp disturbed sites, especially roadside ditches.

Cirsium discolor (Muhl.) Spreng.

Uncommon. Grows in moist, open, disturbed sites.

Cirsium vulgare (Sav.) Tenore [*C. lanceolatum* sensu Raup]

Reported by Raup as a weed in old fields and clearing, this species has not been found recently.

Conyza canadensis (L.) Cronq. [*Erigeron canadensis* L.]

Common. Grows in and along the roads.

Erectites hieracifolia (L.) Raf.

Occasional. Grows in disturbed sites, especially along the roads.

Erigeron annuus (L.) Pers. [*E. ramosus* sensu Raup]

Occasional. Grows in disturbed sites.

Erigeron philadelphicus L. [*E. canadensis* sensu Raup]

Uncommon. Grows in disturbed sites.

Eupatorium perfoliatum L.

Uncommon. Grows in open, disturbed sites.

Eupatorium purpureum L.

Common. Grows in disturbed sites, especially along the roads.

Eupatorium rugosum Houtt. [*E. urticifolium* Reich.]

Occasional. Grows in disturbed sites in rich woods.

Eupatorium sessilifolium L.

Uncommon. Found only in open, upper slope woods.

Euthamia graminifolia (L.) Nutt.

Occasional. Grows in open, disturbed sites at the edge of the Forest.

Galinsoga quadriradiata Ruiz & Pavon [*G. ciliata* (Raf.) Blake]

Occasional. Grows in disturbed sites, especially in rich, recently disturbed soil.

Gnaphalium obtusifolium L.

Uncommon. Grows in disturbed sites.

Gnaphalium uliginosum L.

Uncommon. Grows in damp, disturbed sites.

Helianthus decapetalus L.

Occasional. Grows in damp, open sites.

Helianthus divaricatus L.

Uncommon. Grows on roadsides. To be expected in the upper slope woods and hilltops.

Heliopsis helianthoides (L.) Sweet

Uncommon. Grows just outside the Forest near the Upper Reservoir. Not reported by Raup.

Hieracium aurantiacum L.

Reported by Raup from old clearings, this old-field species has not been found in the Forest recently.

Hieracium caespitosum Dumort. [*H. pratense* Tausch]

Uncommon. Grows in open, disturbed sites.

Hieracium paniculatum L.

Occasional. Grows in dry, upper slope woods and along the roads.

Hieracium venosum L.

Reported by Raup from old clearings, this old-field species has not been found in the Forest recently.

Krigia biflora (Walt.) Blake

Reported by Raup as a rare occurrence in the Forest. It has not been found recently.

Krigia virginica (L.) Wild.

Reported by Raup as a rare occurrence in the Forest. It has not been found recently.

Lactuca canadensis L.

Reported by Raup, but not found recently. This species is to be expected in disturbed sites.

Lapsana communis L.

Occasional to common. Not reported by Raup. Grows in disturbed sites.

Leucanthemum vulgare Lam. [*Chrysanthemum leucanthemum* L.]

Occasional to uncommon. Grows in disturbed sites.

Prenanthes altissima L.

Uncommon. Not reported by Raup. Grows in damp, disturbed sites.

Prenanthes trifoliata (Cass.) Fern.

Reported by Raup, but not found recently. To be expected in disturbed sites.

Rudbeckia hirta L.

Uncommon. Grows along the roads. Ours is var. *pulcherrima* Farw.

Senecio obovatus Muhl.

Occasional. Grows in rich woods of the lower slopes and coves.

Solidago arguta Ait.

Reported by Raup as common to abundant along the roads and in the upper slope woods, this species has not been found in the Forest recently.

Solidago bicolor L.

Occasional. Grows on the upper slope wood and hilltops and, sometimes, along the roads.

Solidago caesia L.

Common. Grows in disturbed sites and in opening in the woods.

Solidago flexicaulis L.

Uncommon. Not reported by Raup. Grows in disturbed sites in the rich, cove woods and near limestone erratics.

Solidago juncea Ait.

Common. Grows in disturbed sites.

Solidago odora Ait.

Reported by Raup, but not found recently.

Solidago puberula Nutt.

Reported by Raup as common in dry thickets and meadows, this species has not been found recently.

Solidago rugosa Mill.

Occasional. Grows in disturbed sites. Ours is ssp. *rugosa* Mill. Common just outside the Forest at the Upper Reservoir.

Solidago squarrosa Muhl.

Uncommon. Not reported by Raup. Grows on hilltops.

Solidago ulmifolia Muhl.

Occasional. Grows just outside the Forest at the Upper Reservoir.

Taraxacum laevigatum (Wild) DC.

Occasional. Not reported by Raup. Grows along the roads.

Taraxacum palustre (Lyons) Symons

Reported by Raup, but this weedy species has not been found in the Forest recently.

Tussilago farfara L.

Occasional to common. Grows in recently disturbed sites, especially along roads.

Xanthium strumarium L.

Uncommon. Not reported by Raup. Grows in disturbed sites in rich woods.

Alismataceae

Alisma subcordatum Raf. [*A. plantago-aquatica* sensu Raup]

Raup found this species along the edge of some ponds. It has not been found in the Forest recently.

Sagittaria graminea Michx.

Uncommon. Grows in the swamp south of Sutherland Pond.

Sagittaria latifolia Willd.

Reported by Raup as rare, this species has not been found in the Forest recently.

Hydrocharitaceae

Elodea nuttallii (Planch) St. John

Uncommon. Not reported by Raup. Grows in the sawmill pond along Black Rock Brook.

Potamogetonaceae

Potamogeton natans L.

Reported by Raup from specimens collected in Sutherland Pond. Not found in the Forest recently.

Potamogeton spirillis Tuckerm.

Uncommon. Not reported by Raup. In the brook and fen below Sphagnum Pond dam.

Araceae

Arisaema triphyllum (L.) Schott

Common. Grows in rich, wet, cove and awampy woods.

Calla palustris L.

Reported by Raup, but not found in the Forest recently.

Peltandra virginica (L.) Schott

Uncommon. Found in the swamp south of Sutherland Pond.

Symplocarpus foetidus (L.) Salisb.

Uncommon. Not reported by Raup. Found only in swampy woods near Continental Road.

Lemnaceae

Lemna minor L.

Uncommon. Not reported by Raup. Grows in the pond at Annie's Cabin. The determination is tentative.

Commelinaceae

Commelina communis L.

Occasional. Not reported by Raup. Grows in damp, disturbed sites.

Eriocaulaceae

Eriocaulon aquaticum (Hill) Druce [*Eriocaulon septangulare* With.]

Common. Grows in shallow water of the ponds and reservoirs.

Juncaceae

Juncus acuminatus Michx.

Occasional. Found along the edges of the ponds and reservoirs.

Juncus brevicaudatus (Engelm.) Fern.

Raup reported this species from near Tamarack Pond. It has not been found in the forest recently.

Juncus canadensis Gay

Occasional. Found at the edges of the ponds and reservoirs.

Juncus debilis A. Gray

Reported by Raup from swampy thickets, but not found in the Forest recently.

Juncus dichotomus Ell.

Reported by Raup from swampy thickets, but not found in the Forest recently.

Juncus effusus L.

Common. Grows on damp roadsides and along the edge of the reservoirs and ponds.

Juncus marginatus Rostk.

Uncommon. Grows near Aleck Meadow Reservoir.

Juncus tenuis Willd.

Common. Grows on damp roadsides and along the edge of the reservoirs and ponds.

Luzula campestris (L.) DC.

Common. Grows along trails and roads and occasionally in other dry, disturbed sites.

Cyperaceae

Carex albicans [C. varia sensu Raup]

Uncommon, reported by Raup as occasional. Grows in upper slope woods.

Carex albursina Sheldon

Uncommon, reported by Raup as occasional. Grows in slope woods.

Carex argyrantha Tuckerm. [*C. foena* sensu Raup pro parte]

Occasional. Not reported by Raup. Grows in disturbed sites and open woods. NYSM: Threatened. TNC G5 S2

Carex atlantica Bailey

Occasional. Grows at the edge of ponds and reservoirs and in damp, disturbed sites in the coves.

Carex blanda Dewey

Uncommon. Not reported by Raup. Grows along Aleck Meadow Reservoir.

Carex bromoides Schkuhr

Occasional. Grows in swampy woods and along slow-moving streams.

Carex brunnescens (Pers.) Poir.

Uncommon. Not reported by Raup. Found in wet or swampy woods. These may be the species that Raup called *C. trisperma* Dewey.

Carex canescens L.

Uncommon, reported by Raup as occasional. Grows along the edge of ponds and reservoirs.

Carex cephalophora Muhl.

Occasional. Grows in dry, slope woods.

Carex communis Bailey

Occasional. Grows in dry, slope woods.

Carex comosa Boott

Occasional. Grows in the Glycerine Hollow swamp and along the edges of ponds and reservoirs.

Carex crinita Lam.

Occasional. Grows in the Glycerine Hollow swamp and along the edges of ponds and reservoirs.

Carex debilis Michx.

Uncommon. Grows in the Glycerine Hollow swamp.

Carex digitalis Willd.

Occasional. Grows in damp, disturbed sites, especially in the coves.

Carex disperma Dewey

Uncommon. Not reported by Raup. Found along Black Rock Brook.

Carex festucacea Schkuhr

Uncommon. Grows along the edges of ponds and reservoirs.

Carex foena Willd.

Reported by Raup, but not found in the Forest recently. At least some of Raup's collections are *C. argyrantha*.

Carex gracillima Schwein.

Occasional. Grows in lower slope and cove woods.

Carex granularis Muhl.

Raup found this species on pond margins. It has not been found in the Forest recently. This species is generally a calciphile and, if found in the Forest, would be quite rare.

Carex gynandra Schwein.

Occasional. Grows at the edges of ponds and reservoirs.

Carex hirsutella Mackz. [*C. triceps* Mackz.]

Reported by Raup, but not found in the Forest recently.

Carex interior Bailey

Uncommon. Not reported by Raup. Grows in the Glycerine Hollow swamp.

Carex intumescens Rudge

Occasional. Grows in open, wet sites, especially near the ponds and reservoirs.

Carex leptalea Wahl.

Reported by Raup as growing in wet places in the cove woods. This species has not been found in the Forest recently.

Carex lurida Wahl.

Common to abundant. Grows along the edge of ponds and reservoirs and in wet openings in the lower slope and cove woods.

Carex normalis Mackz.

Uncommon. Not reported by Raup. Grows around Aleck Meadow Reservoir.

Carex pallescens L.

Raup found this species growing on damp roadsides. It has not been found in the Forest recently.

Carex peckii Howe

Uncommon. Not reported by Raup. Grows in rich cove woods near Route 9W.

Carex pedunculata Muhl.

Occasional. Grows along the streams in the cove woods.

Carex pensylvanica Lam.

Common. Grows in dry, slope woods.

Carex platyphylla Carey

Occasional. Grows in the lower slope and cove woods.

Carex prasina Wahl.

Occasional. Grows near streams in the wet, cove woods.

Carex radiata (Wahl.) Small

Occasional. Grows in damp, cove woods.

Carex rosea Schk. [incl. *C. convoluta* Mackz.]

Common. Grows in damp sites in the cove and lower slope woods and along roads in the coves.

Carex scabrata Schwein.

Uncommon. Grows in swampy sites in the coves.

Carex scoparia Schkuhr

Common. Grows along the ponds and reservoirs and occanally on wet roadsides.

Carex sparganioides Muhl.

Reported by Raup from rocky slopes, but not found in the forest recently.

Carex stipata Muhl.

Common. Grows in swampy ground and along streams in the lower slope and cove woods.

Carex stricta Lam.

Common. Grows in open, swampy ground where it is the common tussock-forming sedge.

Carex swanii (Fern.) Mackz. [*Carex virescens* var. *swanii* Fern.]

Uncommon. Grows in upland woods and along the ridges.

Carex torta Boott

Uncommon. Growing along streams in the cove woods.

Carex tribuloides Wahl.

Raup found this species growing along the ponds and reservoirs. It has not been found recently, but some of the specimens identified as *C. scoparia* Schk. May be this species.

Carex trisperma Dewey

Uncommon. Raup reported a single stand of this species from the island in Tamarack Pond. The species has not been found on the island recently, but plants can be found in boggy woods below Eagle Cliff and along lower Black Rock Brook.

Carex virescens Muhl.

Occasional. Grows in dry, slope woods.

Carex vulpinoidea Michx.

Common. Grows in wet, disturbed sites.

Cyperus strigosus L.

Common. Grows along the edge of ponds and reservoirs and in wet disturbed sites.

Dulichium arundinaceum (L.) Britt.

Uncommon. Not reported by Raup. Grows in the swamp south of Sutherland Pond.

Eleocharis acicularis (L.) R. & S.

Common. Grows along the edge of the reservoirs and ponds where the water level fluctuates.

Eleocharis elliptica Kunth [*E. capitata* (L.) R. Br.]

Reported by Raup as rare and growing on peaty shore margins. It has not been found in the Forest recently.

Eleocharis obtusa (Willd.) Schultes

Common. Grows along the edge of the reservoirs and ponds in shallow water.

Eleocharis palustris (L.) R. & S.

Reported by Raup as growing in shallow water of the ponds. This species has not been found recently.

Scirpus atrovirens Muhl.

Common. Grows along the edge of ponds and reservoirs.

Scirpus cyperinus (L.) Kunth

Common. Grows in wet, open sites, especially along the edge of ponds and reservoirs.

Poaceae

Agrostis capillaris L. [A. *tenuis* Sibth.]

Uncommon to occasional now, formerly common. Grows along roadsides and in disturbed sites.

Agrostis hiemalis (Walt.) BSP.

Uncommon. Not reported by Raup. Grows along Goethel's trail west of the ski slope.

Agrostis perennans (Walt.) Tuckerm.

Uncommon. Not reported by Raup. Grows in Glycerine Hollow.

Agrostis scabra Willd.

Occasional. Grows in moist disturbed sites and along the edge of some of the reservoirs.

Agrostis stolonifera L.

Occasional. Grows in moist disturbed sites and along the edge of some of the reservoirs.

Andropogon gerardii Vitm.

Uncommon. Not reported by Raup. Grows along Carpenter road overlooking Glycerine Hollow.

Anthoxanthum odoratum L.

Common. Grows in dry, disturbed sites, especially along roads and trails.

Arrhenatherum elatius (L.) Beauv.

Raup reported this species from old fields and roadsides. It has not been found in the Forest recently.

Avena sativa L.

Raup found this species growing along the roads. It has not been found recently.

Brachyeletrum erectum (Schreb.) Beauv.

Occasional to common. Grows in the cove and slope woods and in disturbed sites.

Bromus ciliatus L.

Raup found this species growing along the roads. It has not been found recently.

Bromus commutatus Schrader

Uncommon. Not reported by Raup. Grows in open, disturbed sites.

Bromus inermis Leyss.

Uncommon. Not reported by Raup. Grows in open, disturbed sites.

Bromus pubescens Muhl. [B. *purgans* sensu Raup]

Uncommon. Grows in the rocky, upper slope woods.

Calamagrostis canadensis (Michx.) Beauv.

Occasional. Grows in damp, disturbed sites and in damp openings in the slope woods.

Calamagrostis cinnoides (Muhl.) Barton

Uncommon. Grows in damp, disturbed sites in the cove woods.

Cinna arundinacea L.

Uncommon. Grows in damp, cove woods.

Dactylis glomerata L.

Uncommon. Grows in open, disturbed sites.

Danthonia compressa Austin

Uncommon. Grows in dry, disturbed sites. Some of the specimens placed here may be the following species.

Danthonia spicata (L.) Beauv.

Common. Grows on hilltops and in dry, open sites in the upper slope woods.

Deschampsia flexuosa (L.) Trin.

Common. Grows on hilltops and in opening in the upper slope woods. Occasionally found in dry, disturbed sites along the roads.

Digitaria ischaemum (Schreb.) Schreb.

Uncommon, formerly much more common. Grows in disturbed sites, especially along the roads.

Echinochloa crusgalli (L.) Beauv.

Uncommon. Not reported by Raup. Grows in damp to wet, open, disturbed sites.

Echinochloa muricata (Michx.) Fern.

Occasional. Grows in wet areas, especially near the reservoirs.

Elymus hystrix L. [*Asprella hystrix* (L.) Humb.]

Occasional. Grows in dry slope woods and in disturbed sites.

Elymus riparius Wieg.

Uncommon. Grows along the edge of the reservoirs.

Elymus villosus Muhl.

Uncommon. Not reported by Raup. Grows in open, disturbed sites.

Elytrigia repens (L.) Nevski [*Agropyron repens* (L.) Beauv.]

Raup found this species in waste places. It has not been found recently, but is to be expected.

Festuca rubra L.

Uncommon. Recently planted to cover construction and not expected to persist.

Festuca subverticillata (Pers.) Alexe'ev [*Festuca obtusa* Spreng.]

Uncommon. Found in damp to wet opening in the cove woods, especially near streams.

Glyceria canadensis (Michx.) Trin.

Common. Grows along the edges of ponds and reservoirs and in open swamps.

Glyceria melicaria (Michx.) Hubb.

Occasional. Grows along the streams in cove woods.

Glyceria striata (Lam.) Hitchc.

Reported by Raup as common, growing along streams and ponds. It has not been found recently, but some of the specimens here called *G. melicaria* (Michx.) Hubb. May be this species.

Leersia oryzoides (L.) Sw.

Uncommon. Grows on open, wet sites, especially near streams.

Leersia virginica Willd.

Occasional. Grows in wet woods and along the roads.

Lolium perenne L. [*L. multiflorum* Lam.]

Occasional, but once common. Found in open, damp, disturbed sites.

Lolium pratense (Hudson) S. Darbyshire [*Festuca elatior* L.]

Reported by Raup from old clearings and roadsides, but not found recently.

Muhlenbergia mexicana (L.) Trin.

Raup found this species growing on damp roadsides, but it has not been found recently.

Muhlenbergia tenuiflora (Willd.) BSP.

Uncommon. Grows in dry sites in the slope woods.

Oryzopsis asperifolia Michx.

Raup reported this species from the dry upland woods. It has not been found recently.

Oryzopsis racemosa (Sm.) Ricker

Raup reported this species from the dry upland woods. It has not been found recently.

Panicum acuminatum Sw. [*P. lindheimeri* Nash]

Common. Grows on the hilltops, in the upper slope woods, and along roadsides.

Panicum capillare L.

Raup found this species on roadsides, but it has not been found recently.

Panicum commutatum Schultes

Uncommon. Not reported by Raup. Grows on the ridges overlooking Glycerine Hollow.

Panicum dichotomum L.

Occasional. Grows in the slope woods and sometimes along the roads.

Panicum clandestinum L.

Uncommon. Not reported by Raup. Grows in wet, disturbed ground near the Arthur's Pond dam.

Panicum depauperatum Muhl.

Raup found this species growing on roadsides. It has not been found recently.

Panicum latifolium L.

Occasional to common. Grows in the upper slope woods and on hilltops.

Panicum linearifolium Scribn.

Occasional. Grows on dry roadsides.

Phleum pratense L.

Uncommon. Grows in open, disturbed sites.

Phragmites australis (Cav.) Trin.

Uncommon. Not reported by Raup. Grows along the edges of some reservoirs.

Poa compressa L.

Uncommon. Grows along the roads.

Poa palustris L.

Uncommon. Grows in damp sites along the roads and at the edge of reservoirs.

Poa pratensis L.

Uncommon. Grows in disturbed sites and is sometimes planted around constructions sites.

Schizachyrium scoparium (Michx.) Nash [*Andropogon scoparius* Michx.]

Common. Grows on the hilltops and in open, dry, disturbed sites.

Setaria pumila (Poir.) Schultes [*S. lutescens* (Weigel) Hubb.]

Occasional. Grows in disturbed sites, especially along the roads.

Sorghastrum nutans (L.) Nash

Uncommon. Not reported by Raup. Grows on ridges overlooking Glycerine Hollow.

Sphenopholis obtusata (Michx.) Scribn. [incl. *S. pallens* sensu Raup]

Reported by Raup from roadsides, this species has not been found recently.

Sparganiaceae

Sparganium americanum Nutt.

Occasional to uncommon. Grows along Sutherland and Jim's Pond and in the swamp south of Sutherland pond.

Typhaceae

Typha angustifolia L.

Uncommon. Grows in wet, open, disturbed sites.

Typha latifolia L.

Uncommon. Grow in wet, open, disturbed sites and along the edge of ponds and reservoirs.

Liliaceae [incl. Amaryllidaceae]

Allium tricoccum Ait.

Uncommon. Not reported by Raup. Grows at the old ski slope.

Allium vineale L.

Occasional. Grows in damp, disturbed sites, especially along Continental Road.

Erythronium americanum Ker

Occasional. Grows in the cove woods.

Hypoxis hirsuta (L.) Cov.

Occasional. Grows on damp roadsides in cove woods, sometimes found in open sites in the slope woods.

Lilium canadense L.

Raup found this species in old meadows. It has not been found in the forest recently.

Lilium philadelphicum L.

Uncommon. Raup found this species in thickets and rich woods. It has only been found recently in the old enclosure near Sutherland Pond.

Maianthemum canadense Desf.

Occasional. Grows in upper slope and lower slope woods.

Maianthemum racemosum L. [*Smilacina racemosa* (L.) Desf.]

Common to occasional. Grows in lower slope and cove woods.

Medeola virginiana L.

Occasional. Grows in rich cove and lower slope woods.

Ornithogalum umbellatum L.

Uncommon. Not reported by Raup. This recently introduced species is found near the Chlorinator.

Polygonatum biflorum (Walt.) Ell.

Occasional. Grows in upper slope and hilltop woods.

Polygonatum pubescens (Willd.) Pursh

Occasional to uncommon. Grows in upper slope and lower slope woods

Streptopus roseus Michx.

Uncommon and rarely found in bloom. Grows in damp to wet woods.

Trillium erectum L.

Uncommon. Grows in rich, moist soil of lower slope woods.

Uvularia perfoliata L.

Occasional. Grows in cove woods.

Uvularia sessilifolia (L.) Wats. [*Oakesiella sessilifolia* (L.) Small]

Occasional to uncommon. Grows in rich, moist sites throughout the Forest.

Veratrum viride Ait.

Occasional. Grows in swampy woods and along streams.

Iridaceae

Iris versicolor L.

Occasional to common. Grows near ponds and reservoirs and in swampy woods.

Sisyrinchium angustifolium Mill. [*Sisyrinchium graminoides* Bickn.]

Occasional. Grows in damp disturbed sites, especially along roads.

Smilacaceae

Smilax herbacea L.

Uncommon. Much more common in Raup's report. Grows in damp, disturbed sites in the coves.

Smilax rotundifolia L.

Uncommon. Grows on damp roadsides.

Dioscoreaceae

Dioscorea villosa L.

Raup found this species in damp, roadside thickets. It has not been found in the Forest recently.

Orchidaceae

Corallorhiza maculata (Raf.) Raf.

Occasional. Grows in moist to wet, lower slope woods.

Cypripedium acaule Ait.

Uncommon, much more common in Raup's reports. Found in partially open sites in lower and upper slope woods.

Cypripedium parviflorum Salisb.

Raup reported this species as a rarity. It has not been found in the Forest recently. It is to be expected in rich, swampy woods.

Epipactis heleborine (L.) Crantz

Uncommon. Not reported by Raup. Grows on roads and roadsides.

Goodyera repens (L.) R. Br.

Uncommon. Not reported by Raup. Known only from a hemlock cove.

Malaxis unifolia Michx.

Reported by Raup as rare, this species has not been found recently.

Platanthera flava (L.) Lindl.

Reported by Raup as growing in damp thickets, this species has not been found recently.

Platanthera lacera (Michx.) G. Don

Uncommon. Not reported by Raup. Found in the old clearing across from the Stone House.

Platanthera psychodes (L.) Lindl. [*Habenaria psychodes* (L.) Sw.]

Reported by Raup as rare. It has not been found in the Forest recently.

Spiranthes cernua (L.) L. Rich.

Reported by Raup as occasional in thickets. This species has not been found in the Forest recently.

Acknowledgements.

This study was funded, in part, by a grant from the Black Rock Forest Consortium. We are grateful to the staff of Black Rock Forest, especially Director Emeritus Jack Karnig, Forest Director Dr. William Schuster, and the Forest Manager John Brady, for their help and support throughout this project. The work would not have been possible without their help. We are grateful to Dr. Patricia Holmgren who allowed us to study the Raup material in the New York Botanical Garden Herbarium. We are also grateful to Mr. Spider Barbour, Dr. Richard Mitchell, Dr. Gordon Tucker, and xxx who made their collections available to us and helped us with some of the determinations. We are also grateful to Rosetta Arrigo, Brian Barringer, Daniel Barringer, Marc Blain, Dr. Natalya Lunyova, James Karb, Kevin Warner, and those mentioned above, all of whom accompanied us in the field at one time or another.

References

- Mitchell, R. S. & G. C. Tucker. 1997. Revised checklist of New York State plants. New York State Museum Bulletin 490: 1-400.
- Raup, H. M. 1938. Botanical studies in the Black Rock Forest. Black Rock Forest Bulletin 7: 1-161.
- Reschke, C. 1990. Ecological communities of New York State. Latham, NY: New York Natural Heritage Program.
- Tryon, H. H. 1939. Black Rock Forest. Black Rock Forest Bulletin 1:

Table 1.

Numerical comparison of Raup (1938) and the current study

Native	Raup	current
ferns	29	
gymnosperms	5	
grasses	35	
sedges	48	
other angiosperms	404	
Non-native		
gymnosperms	4	
grasses	13	
other angiosperms	48	
Total	586	

Table 2.

Species found by Raup (1938) not found in this study

<i>Equisetum hyemale</i> L.	<i>Lyonia ligustrina</i> (L.) DC.
<i>Botrychium virginianum</i> (L.) Sw.	<i>Pyrola americana</i> Sweet
<i>Phegopteris connectilis</i> (Michx.) Watt	<i>Penthorum sedoides</i> L.
<i>Phegopteris hexagonoptera</i> (Michx.) Fee	<i>Heuchera americana</i> L.
<i>Picea mariana</i> (Mill.) BSP	<i>Potentilla argentea</i> L.
<i>Anemone virginiana</i> L.	<i>Potentilla arguta</i> Pursh
<i>Ranunculus ambiguus</i> S. Wats.	<i>Potentilla norvegica</i> L.
<i>Ranunculus bulbosus</i> L.	<i>Rosa carolina</i> L.
<i>Menispermum canadense</i> L.	<i>Baptisia tinctoria</i> (L.) R. Br.
<i>Ulmus americana</i> L.	<i>Rhexia virginica</i> L.
<i>Betula papyrifera</i> Marsh.	<i>Celastrus scandens</i> L.
<i>Corylus cornuta</i> Marsh.	<i>Chamaesyce vermiculata</i> (Raf.) House
<i>Cerastium arvense</i> L.	<i>Linum virginianum</i> L.
<i>Paronychia fastigiata</i> (Raf.) Fern.	<i>Polygala sanguinea</i> L.
<i>Sagina procumbens</i> L.	<i>Staphylea trifolia</i> L.
<i>Silene antirrhina</i> L.	<i>Geranium bicknellii</i> Britt.
<i>Silene stellata</i> (L.) Ait. f.	<i>Angelica venosa</i> (Greenway) Fern.
<i>Stellaria graminea</i> L.	<i>Cicuta bulbifera</i> L.
<i>Polygonum aviculare</i> L.	<i>Sanicula marilandica</i> L.
<i>Rumex obtusifolius</i> L.	<i>Sium suave</i> Walt.
<i>Rumex orbiculatus</i> A. Gray	<i>Zizia aptera</i> (A. Gray) Fern.
<i>Helianthemum bicknellii</i> Fern.	<i>Zizia aurea</i> (L.) Koch
<i>Lechea villosa</i> Ell.	<i>Gentiana clausa</i> Raf.
<i>Lechea intermedia</i> Leggett	<i>Gentianopsis crinita</i> (Froel.) Ma
<i>Viola affinis</i> LeConte	<i>Organum vulgare</i> L.
<i>Viola sagittata</i> Aiton	<i>Aureolaria pedicularia</i> (L.) Raf.
<i>Salix cordata</i> Michx.	<i>Aureolaria virginica</i> (L.) Pennell
<i>Salix humilis</i> Marsh.	<i>Verbascum blattaria</i> L.
<i>Salix nigra</i> Marsh.	<i>Galium tinctorium</i> L.

Sambucus racemosa L.
Arctium minus (Hill.) Bernh.
Cirsium vulgare (Sav.) Tenore
Hieracium aurantiacum L.
Hieracium venosum L.
Krigia biflora (Walt.) Blake
Krigia virginica (L.) Willd.
Lactuca canadensis L.
Prenanthes trifoliata (Cass.) Fern.
Solidago arguta Ait.
Solidago odora Ait.
Solidago puberula Nutt.
Taraxacum palustre (Lyons) Symons
Alisma subcordatum Raf.
Sagittaria latifolia Willd.
Potamogeton natans L.
Calla palustris L.
Juncus brevicaudatus (Engelm.) Fern.
Juncus debilis A. Gray
Juncus dichotomus Ell.
Carex foena Willd.?
Carex granularis Muhl.
Carex hirsutella Mackz.

Carex leptalea Wahl.
Carex pallescens L.
Carex tribuloides Wahl.
Eleocharis elliptica Kunth
Eleocharis palustris (L.) R. & S.
Arrhenatherum elatius (L.) Beauv.
Avena sativa L.
Bromus ciliatus L.
Elytrigia repens (L.) Nevski
Glyceria striata (Lam.) Hitchc.
Lolium pratense (Hudson) Darbyshire
Muhlenbergia mexicana (L.) Trin.
Oryzopsis asperifolia Michx.
Oryzopsis racemosa (Sm.) Ricker
Panicum capillare L.
Panicum depauperatum Muhl.
Sphenopholis obtusata (Michx.) Scribn.
Cypripedium parviflorum Salisb.
Malaxis unifolia Michx.
Platanthera flava (L.) Lindl.
Platanthera psychodes (L.) Lindl.
Spiranthes cernua (L.) L. Rich.

Table 3.

Species found in this study not found by Raup (1938)

Isoetes echinospora Durieu
Bortyichium dissectum Spreng.
Osmunda cinnamomea L.
Dryopteris clintoniana (D. Eaton) Dowell
Picea abies (L.) Karst.
Chelidonium majus L.
Corydalis flavula (Raf.) DC.
Dicentra cucullaria (L.) Bernh.
Ulmus rubra Muhl.
Morus rubra L.
Chenopodium album L.
Polygonum cespitosum Blume
Polygonum cuspidatum Sieb. & Zucc.
Polygonum hydropiperoides Michx.
Polygonum virginianum L.
Hypericum canadense L.
Drosera intermedia Hayne
Hesperis matronalis L.
Kalmia polifolia Wang.
Lysimachia nummularia L.
Rosa multiflora Thunb.
Rubus phoenocolasius Maxim.
Trifolium arvense L.
Trifolium dubium Sibth.
Trifolium repens L.
Celastrus orbiculata Thunb.
Eunoymus alata (Thunb.) Sieb.

Euphorbia cyparissias L.
Euphorbia esula L.
Ailanthus altissima (Mill.) Swingle
Geranium carolinianum L.
Geranium robertianum L.
Daucus carota L.
Cynanchum louiseae Kartez & Gandhi
Solanum nigrum L.
Vitis vulpina L.
Myosotis scorpioides L.
Penstemon digitalis Nutt.
Catalpa bignonioides Walt.
Orobancha uniflora L.
Lobelia siphilitica L.
Aster cordifolius L.
Centaruea nigra L.
Cichorium intybus L.
Lapsana communis L.
Prenanthes altissima L.
Solidago flexicaulis L.
Solidago squarrosa Muhl.
Xanthium strumarium L.
Elodea nuttallii (Planch.) St. John
Potamogeton spirallis Tuckerm.
Symplocarpus foetidus (L.) Salisb.
Lemna minor L.
Commelina communis L.

Carex brunnescens (Pers.) Poir.
Carex disperma Dewey
Carex normalis Mackz.
Carex interior Bailey
Carex staminea Willd.
Cares tribuloides Wahl.
Dulichium arundinaceum (L.) Britt.
Echinochloa crusgalli (L.) Beauv.
Panicum clandestinum L.
Phragmites australis (Cav.) Trin.
Ornithogalum umbellatum L.
Epipactis heleborine (L.) Crantz
Goodyera repens (L.) R. Br.
Platanthera lacera (Michx.) G. Don
Heracleum lanatum Michx.

Bidens coronata (L.) Britt.
Lonicera japonica Thunb.
Cerastium semidecandrum L.

Scleranthus annuus L.
Silene nivea (Nutt.) Oth.
Carex argyrantha Tuckerm.
Carex blanda Dewey
Carex peckii Howe
Andromeda glaucophylla Link
Lycopus virginicus L.
Agrostis hiemalis (Walt.) BSP.
Agrostis perennans (Walt.) Tuckerm.
Andropogon gerardii Vitm.
Bromus commutatus Schrad.
Bromus inermis Leyss.
Elymus villosus Muhl.
Panicum commutatum Schultes
Sorghastrum nutans (L.) Nash
Anemonella thalictroides (L.) Spach
Rubus flagellaris Willd.
Galium obtusum Bigel.
Vitis riparia Michx.

Table 4.

Rare species

Species	State Museum Rank	Nature Conservancy
<i>Aster pilosus</i> var. <i>pringlei</i>	Endangered	G4 S1
<i>Aster racemosus</i>	Threatened	G5 S2
<i>Corydalis flavula</i>	Threatened	G5 S2
<i>Cunila organoides</i>	Threatened	G5 S3
<i>Utricularia minor</i>	Threatened	G5 S3
? <i>Aristolochia serpentaria</i>	Endangered	G5 S1
<i>Carex argyrantha</i>	Threatened	G5 S2