

**ANNOTATED CHECKLIST OF VASCULAR PLANTS
IN THE VICINITY OF CEDAR CREEK AND
BREWSTER LAKE, PIERCE CEDAR CREEK INSTITUTE,
BARRY COUNTY, MICHIGAN**

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INTRODUCTION

The purpose of this study was to document the vascular flora and major plant community types present in the core area of the Pierce Cedar Creek Institute (portions of Sec 19 & 30, T2N, R8W) in Barry County, Michigan, north and south of Cloverdale Road, roughly 12 km south of Hastings and ca. 4 km west of highway M-37 at Dowling. This paper is a companion to Slaughter and Skean (2003), which presents a more detailed description of Institute property and its interesting relict conifer swamps.

METHODS

We made extensive herbarium collections in the vicinity of Cedar Creek and Brewster Lake from April–October 1999, and again from May–October 2001 in a contiguous area comprising ca. 125 ha of the 258 ha Institute property. Once identified, the first set of the 1999 collections was deposited at the herbarium of the Institute, hereafter abbreviated (unofficially) as PCCI. The second set, along with xerographic copies of unicates, was deposited at the herbarium of Albion College, which is known by the standardized acronym ALBC (Holmgren et al. 1990). The collections made in 2001, and a few additional collections made in 2002 and 2003, were deposited at ALBC. Based on these collections, field observations, and aerial photographs, the major plant community types of the collecting area were mapped and described qualitatively following the classification used by the Michigan Natural Features Inventory (Chapman 1986).

RESULTS

A total of 566 collections were made, yielding 394 species of vascular plants. Table 1 summarizes the species by major taxonomic group. Of these species, 72 (ca. 18%) are not native to the area. One hundred fifteen of the 376 native or naturalized species of seed plants collected in our study (ca. 30%) were not recorded from Barry County in Voss (1972, 1985, 1996). The three families with

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TABLE 1. Summary of vascular plant collections in the vicinity of Cedar Creek and Brewster Lake, Pierce Cedar Creek Institute.

Taxonomic Group	Families	Genera	Species		
			Native	Non-Native	Total
Horsetails	1	1	4	0	4
Ferns	6	9	12	0	12
Grape-Ferns	1	1	2	0	2
Conifers	3	6	4	5	9
Angiosperms	80	222	300	67	367
Totals	91	239	322	72	394

the largest numbers of species are Asteraceae (38), Poaceae (35) and Cyperaceae (29).

Figure 1 is an aerial photograph that delineates the area where herbarium collections were made and indicates major community types: relict conifer swamp, southern wet meadow, mesic southern forest, dry southern forest, dry-mesic southern forest, and prairie fen. Southern shrub-carr, which is commonly found as scattered patches in southern wet meadow, prairie fen, and relict conifer swamp, is not mapped. In some areas, relict conifer swamp intergrades with hardwood-conifer swamp. Likewise, these scattered areas are not indicated on the map. Areas indicated as “mixed wetlands” on the map harbor small areas of different wetland types.

DISCUSSION

Figure 1 should be compared to the topographic map and descriptions in Slaughter & Slean (2003) for additional site information. Although we collected throughout the mapped area shown in Figure 1, our main access point for collecting was a trail that extends roughly north and south of Cloverdale Road. The north trail passes through clearings, which include a barn and the Batts Cottage, and extends northeast along a sandy ridge of open areas and forest (dry southern forest) that drops to the wetlands east of Brewster Lake and rises to well-developed forest. The south trail extends through wetlands and rises along the ridge of an impressive esker harboring beech-maple forest (mesic southern forest).

A large portion of the property is covered with relict conifer swamp that intergrades with hardwood-conifer swamp (Chapman 1986). These communities are predominantly found on the south half of the property, concentrated in the floodplain of Cedar Creek. They are described in detail in Slaughter and Slean (2003). In the checklist below the term “swamps” is used to describe these habitats.

Another common community is southern wet meadow (Chapman 1986). This community type is characterized by sedge dominance. More specifically, Kost (2001) describes southern wet meadow as a *Carex stricta*-dominated, groundwater dependent community. *Carex stricta* was the most common sedge encoun-

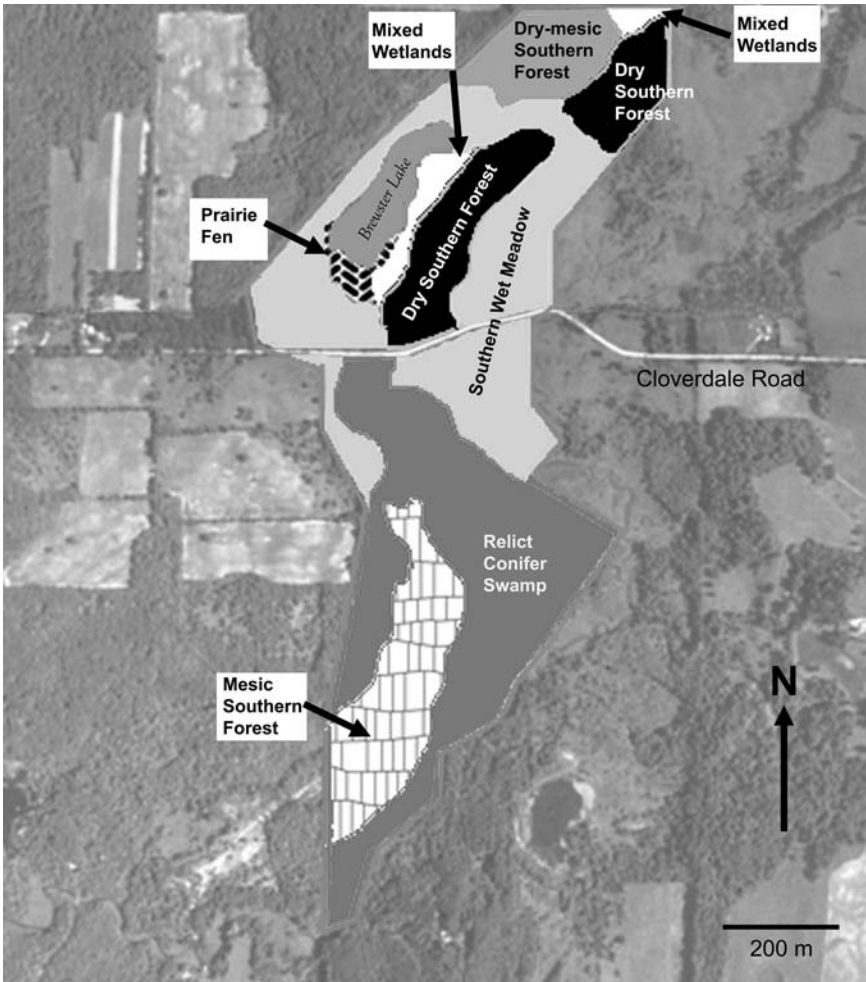


FIGURE 1. Major plant community types in the vicinity of Cedar Creek and Brewster Lake, Pierce Cedar Creek Institute.

tered in Institute examples of this community type. In the checklist below the term “sedge meadows” is used to describe these habitats.

A relatively large wet meadow is located in the immediate vicinity of Cedar Creek, on both sides of Cloverdale Road. The flats south of the road are disturbed and have an abundance of *Lythrum salicaria* (purple loosestrife). The meadow north of the road is less disturbed. Southern wet meadow is also found south of Brewster Lake, extending to Cloverdale Road, and south of Cloverdale Road on both sides of the main trail. These meadows are quite showy in the autumn when several members of the Asteraceae flower, including *Solidago canadensis* (Canada goldenrod), *S. gigantea* (tall goldenrod), *He-*

Helianthus giganteus (tall sunflower), *Cirsium muticum* (swamp thistle) and *Aster* spp. (asters). Of note in spring is the presence of *Cypripedium parviflorum* var. *pubescens* (large yellow lady-slipper), which is occasionally found in small colonies. *Cypripedium parviflorum* var. *makasin* (small yellow lady-slipper) is also present at the Institute, but is mostly restricted to shadier swamps and thickets. The transition areas between swamp and wet meadow are known as southern shrub-carr (Chapman 1986). Several species of the genus *Cornus* (dogwoods) are conspicuous in these areas. Because shrub-carr was commonly found as scattered patches in larger areas of other community types, it was not mapped for this study. Sedge meadows typically convert to shrub-carr in the absence of fire (Kost 2001), and the dense layer of dead, matted vegetation found in Institute southern wet meadows suggests there has been an absence of fire in recent times.

South of Cloverdale Road, surrounded by swamps, is an esker supporting mesic southern forest (Chapman 1986). This forest was disturbed in the past, and harbors an unexpectedly depauperate spring flora. Aerial photos from 1950 show several openings in the canopy, perhaps the result of fire and/or grazing. Evidence of these openings was found in this survey. Several of the larger trees in the forest have low branching, suggestive of a more open canopy in the past. Also, the forest floor is grassier than would be expected in an undisturbed forest. Common trees include *Fagus grandifolia* (American beech) and *Acer saccharum* (sugar maple). Several of these are quite large. Common herbaceous species include *Phlox divaricata* (wood phlox), *Viola rostrata* (long-spurred violet), *Viola pubescens* (yellow violet), and *Erythronium americanum* (yellow trout-lily). Of note is an abundance of *Floerkea proserpinacoides* (false mermaid) in the ground layer, especially along the trails.

North of Cloverdale Road, east of Brewster Lake, is a sandy esker supporting disturbed open areas and, in some places, development of a dry southern forest community (Chapman 1986). Aerial photos from 1950 showed that the ridge was open at that time. Young forest growth on much of the esker was noted in this survey. Common trees include *Quercus alba* (white oak), *Quercus velutina* (black oak), and occasionally *Quercus muehlenbergii* (chinquapin oak). This forest growth is especially dense on the north end of the ridge, where most trees were roughly eight to ten meters in height.

To the north and west of this dry southern forest is a large hill supporting mature dry-mesic southern forest (Chapman 1986). The forest is notable for several very large specimens of *Quercus rubra* (red oak), *Fraxinus americana* (white ash), and *Carya cordiformis* (bitternut hickory). There were also a few large specimens of *Fagus grandifolia* (American beech) at the top of the hill. This forest appears less disturbed than others on the property, and supports several common spring wildflowers, including *Arisaema triphyllum* (Jack-in-the-pulpit), *Claytonia virginiana* (spring beauty), and *Viola canadensis* (Canada violet). Summer species include *Hackelia virginiana* (stickseed), *Polygonum virginianum* (jumpseed), *Laportea canadensis* (wood nettle), and *Campanula americana* (American bellflower). A few individuals of the orchid *Corallorhiza maculata* (spotted coral-root) are also present. Notable was the scarcity of blooming *Trillium grandiflorum* (large white trillium) in Institute forests. There were few

mature specimens of trillium on the property, and this may be due to deer grazing pressure (Gary Pierce, pers. comm.).

The shore of Brewster Lake harbors a prairie fen, which is especially well developed on the east and south shores. Several of the common plants found are those of the southern wet meadow, with the addition of *Potentilla fruticosa* (shrubby cinquefoil), *Parnassia glauca* (grass-of-parnassus), *Spiranthes cernua* (nodding ladies'-tresses), *Scirpus acutus* (hardstem bulrush), *Solidago uliginosa* (bog goldenrod), and *Cypripedium reginae* (showy lady-slipper). The seldom-noticed spring-flowering orchid *Spiranthes lucida* (shining ladies'-tresses) was observed in this fen in low numbers. No classic prairie grasses were encountered in this area. Much of the eastern shore of Brewster Lake is composed of sedge flats, an area of seepages dominated by sedges and *Eleocharis* spp. (spike-rushes). Bordering these flats is a shrub-tree fringe of *Larix laricina* (tamarack), *Toxicodendron vernix* (poison sumac), and *Vaccinium corymbosum* (blueberry). Prairie fen grades into southern wet meadow south of the lake. The shore north of the lake is marshier, with an abundance of *Typha latifolia* (common cat-tail). *Sistrurus catenatus catenatus* (eastern massasauga rattlesnake), a state-listed "special concern" species (Michigan Natural Features Inventory 1999b) was encountered in these wetlands, and also occasionally elsewhere on Institute property.

Much of the upland property was used for agriculture before 1952. Many of these areas were found to support young forest growth in 1999. There are several introduced species in old fields, along trails, and along the roadside. Most of the invasive species collected, such as *Lonicera* spp. (honeysuckles), were found in disturbed sites. Two exceptions are *Lythrum salicaria* (purple loosestrife), and *Stellaria media* (chickweed), which are spreading into southern wet meadow and mesic southern forest respectively.

No state-listed threatened, endangered, or special concern plant species (Michigan Natural Features Inventory 1999a) were encountered in this study. The Southwest Michigan Land Conservancy (1998) reported three state-listed species known historically from this area: *Cypripedium candidum* (small white lady-slipper), which is listed as "threatened," and *Agrimonia rostellata* (beaked agrimony), and *Amorpha canescens* (leadplant), which are listed as "special concern" species. If extant at the site, likely habitat for *C. candidum* is the prairie fen along Brewster Lake. Correspondingly one should look for *Agrimonia rostellata* in forested or open sandy areas, and *Amorpha canescens* in open sandy areas, which are becoming increasingly rare due to succession and the introduction of autumn-olive (*Elaeagnus umbellata*).

ANNOTATED CHECKLIST OF VASCULAR PLANTS

The following checklist is arranged phylogenetically by major taxonomic group (Division) and then alphabetically by family, genus and species. Family circumscriptions for free-sporing tracheophytes (pteridophytes) and conifers follow Flora of North America Editorial Committee (1993). Angiosperm family

circumscriptions follow those given in Gleason & Cronquist (1991) for comparison with similar studies that use this format.

A typical checklist entry is as follows: scientific name, common name—collection number (herbarium or herbaria where specimen is deposited), presence in the relict conifer swamp cedar (C) or tamarack (T) study plots or both (CT) from Slaughter and Skean (2003), and a general statement that indicates where the species is found and general frequency of occurrence, if noted by us. Frequency of occurrence is highly subjective and roughly follows the system outlined by Voss (1972). Collection numbers are those of Slaughter unless indicated otherwise. An asterisk (*) indicates a native or naturalized species not recorded from Barry County in Voss (1972, 1985, 1996). Non-native species, including those native elsewhere in Michigan, are indicated in bold. Scientific names for seed plants generally follow Voss (1972, 1985, 1996). Where this is not the case, the scientific name used in Voss is indicated in brackets.

EQUISETOPHYTA (Horsetails & Scouring Rushes)

EQUISETACEAE

- Equisetum arvense* L., Field horsetail—63, 105 (PCCI, ALBC), disturbed areas throughout.
E. fluviatile L., Water horsetail—329 (ALBC), CT, common in open tamarack swamp, usually in standing water.
E. palustre L., Marsh horsetail—89 (PCCI, ALBC), 333 (ALBC), in moist, sedgy thicket S of Cloverdale Rd.
E. pratense Ehrh., Meadow horsetail—99 (PCCI, ALBC), T, common in swamps S of Cloverdale Rd.

POLYPODIOPHYTA (Ferns)

ASPLENIACEAE

- Asplenium platyneuron* (L.) Oakes, Ebony spleenwort—Skean 4085 (PCCI, ALBC), lightly wooded ridge E of Brewster Lake.

DENNSTAEDTIACEAE

- Pteridium aquilinum* (L.) Kuhn var. *latiusculum* (Desvaux) L. Underwood, Bracken—Skean 4084 (PCCI, ALBC), dry, lightly wooded ridge E of Brewster Lake.

DRYOPTERIDACEAE

- Athyrium filix-femina* (L.) Mertens var. *angustum* (Willd.) G. Lawson, Lady fern—406, 474 (ALBC), C, occasional in moist thickets and swamps.
Dryopteris cristata (L.) A. Gray, Crested wood fern—299 (PCCI, ALBC), 475 (ALBC), C, occasional in swamps.
D. intermedia (Muhl.) A. Gray, Fancy wood-fern—343, 426 (ALBC), CT, common on mossy hummocks in swamps.

OSMUNDACEAE

- Osmunda cinnamomea* L., Cinnamon fern—81 (PCCI, ALBC), 340 (ALBC), CT, in sedge meadows, moist thickets, and swamps throughout.
O. claytoniana L., Interrupted fern—160 (PCCI, ALBC), small sedgy opening along N side of Cloverdale Rd.
O. regalis L., Royal fern—298 (PCCI, ALBC), CT, occasional in swamps.

PTERIDACEAE

- Adiantum pedatum* L., Maidenhair fern—278 (PCCI, ALBC), CT, common in conifer swamps.

THELYPTERIDACEAE

Thelypteris palustris Schott, Marsh-fern—65, 265 (PCCI, ALBC), CT, common in wetlands throughout.

Onoclea sensibilis L., Sensitive fern—57 (PCCI, ALBC), CT, wetlands throughout.

Polystichum acrostichoides (Michaux) Schott, Christmas fern—293 (PCCI, ALBC), common in woods on sloping sides of esker S of Cloverdale Rd.

OPHIOGLOSSOPHYTA (Grape-ferns and Adder's-tongues)

OPHIOGLOSSACEAE

Botrychium dissectum Sprengel, Grape-fern—318 (PCCI, ALBC), lightly wooded ridge E of Brewster Lake.

B. virginianum (L.) Swartz, grape-fern, Rattlesnake-fern—331, 338, 342 (ALBC), CT, hummocks in conifer swamps S of Cloverdale Rd.

PINOPHYTA (Conifers)

CUPRESSACEAE

Juniperus communis L., Common juniper—313 (PCCI, ALBC), uncommon in disturbed areas, planted on N side of Batts Cottage.

J. virginiana L., Red-cedar—Skean 4040 (PCCI, ALBC), small trees on ridge N of Batts Cottage.

**Thuja occidentalis* L., Northern white-cedar—Skean 4080 (PCCI, ALBC), CT, very common (sometimes dominant) in swamps around periphery of esker S of Cloverdale Rd. Also occasional near Brewster Lake.

PINACEAE

Larix laricina (DuRoi) K. Koch, Tamarack—104 (PCCI, ALBC), CT, dominant in swamps throughout. Also in wetlands around Brewster Lake.

Picea pungens Engelm., Blue Spruce—Skean 4240 (ALBC), planted SW of Batts Cottage.

Pinus resinosa Aiton, Red pine—Skean 4046 (PCCI, ALBC), planted on ridge N of Batts Cottage.

P. strobus L., White pine—Skean 4235 (ALBC), planted in clearing just S of Batts Cottage.

P. sylvestris L., Scots pine—Skean 4045 (PCCI, ALBC), planted on ridge N of Batts Cottage.

TAXACEAE

Taxus baccata L., English yew—311 (PCCI, ALBC), planted in lawn of Batts Cottage.

MAGNOLIOPHYTA (Angiosperms)

ACERACEAE

**Acer negundo* L., Box-elder—8 (PCCI, ALBC), common in disturbed upland thickets.

**A. nigrum* Michaux f., [*A. saccharum* Marshall, as given in Voss (1985)], Black maple—463 (ALBC), T, one tree found at edge of tamarack swamp S of Cloverdale Rd., in moist thicket.

A. platanoides L., Norway maple—Skean 4069 (PCCI, ALBC), planted in lawn of Batts Cottage.

A. rubrum L., Red maple—34, 296 (PCCI, ALBC), CT, common in swamps and at edges of esker S of Cloverdale Rd.

A. saccharinum L., Silver maple—310 (PCCI, ALBC), uncommon in swamps, planted in lawn of Batts Cottage.

**A. saccharum* Marsh., Sugar maple—301 (PCCI, ALBC), C, common in forest on esker S of Cloverdale Rd., and in woods elsewhere.

ALISMATACEAE

Sagittaria latifolia Willd., Wapato—186, 266 (PCCI, ALBC), Skean 4075 (PCCI, ALBC), marshy areas around Brewster Lake.

ANACARDIACEAE

- Rhus hirta* (L.) Sudworth [*R. typhina* L., as given in Voss (1985)], Staghorn sumac—279 (PCCI, ALBC), in disturbed upland thickets.
- Toxicodendron radicans* (L.) Kuntze, Poison-ivy—*Skean 4041* (PCCI, ALBC), CT, common vine in uplands and swamps.
- T. vernix* (L.) Kuntze, Poison sumac—198 (PCCI, ALBC), CT, common in open tamarack swamps and around Brewster Lake.

APIACEAE (UMBELLIFERAE)

- Angelica atropurpurea* L., Purplestem angelica—141 (PCCI, ALBC), locally common in sedge meadows.
- Cicuta bulbifera* L., Water-hemlock—195 (PCCI, ALBC), uncommon in streamlet S of Brewster Lake.
- C. maculata* L., Water-hemlock—170 (PCCI, ALBC), 407 (ALBC), common in sedge meadows and moist thickets.
- Cryptotaenia canadensis* (L.) DC., Honewort—410 (PCCI, ALBC), CT, common in swamps.
- Daucus carota* L., Queen-Anne's-lace—183 (PCCI, ALBC), weed along Cloverdale Rd. and in disturbed dry ground.
- Osmorhiza claytonii* (Michaux) C. B. Clarke, Sweet cicely—90b (PCCI, ALBC), open thicket along Cedar Creek, S of Cloverdale Rd.
- O. longistylis* (Torrey) DC., Sweet cicely—90a (PCCI, ALBC), open thicket along Cedar Creek, S of Cloverdale Rd.
- **Oxypolis rigidior* (L.) Raf., Cowbane—482 (ALBC), T, uncommon at edges of swamps and in sedge meadows.
- **Sanicula gregaria* Bickn., Black snakeroot—163 (PCCI, ALBC), 381, 424 (ALBC), *Skean 4086* (PCCI, ALBC), C, moist thickets.
- **Zizia aurea* (L.) Koch, Golden Alexanders—58 (PCCI, ALBC), sedge meadows and fens.

APOCYNACEAE

- Apocynum cannabinum* L., Indian-hemp—204a (PCCI, ALBC), common in sedge meadows, often under dogwoods.

ARACEAE

- **Acorus calamus* L., Sweet-flag—88 (PCCI, ALBC), occasional in moist sedgy thicket near tamarack swamp, S of Cloverdale Rd.
- Arisaema triphyllum* (L.) Schott, Jack-in-the-pulpit—28, 33 (PCCI, ALBC), CT, common in woods, abundant in conifer swamps.
- Symplocarpus foetidus* (L.) Nutt., Skunk-cabbage—86 (PCCI, ALBC), CT, abundant in conifer swamps. Also common in sedge meadows and moist thickets.

ARALIACEAE

- Aralia nudicaulis* L., Wild sarsaparilla—478 (ALBC), C, occasional at edge of cedar swamp.
- Panax trifolius* L., Dwarf ginseng—26 (PCCI, ALBC), common in woods throughout.

ARISTOLOCHIACEAE

- **Asarum canadense* L., Wild-ginger—24 (PCCI, ALBC), T, locally common in swamp borders and woods.

ASCLEPIADACEAE

- Asclepias incarnata* L., Swamp milkweed—199 (PCCI, ALBC), *Skean 4082* (PCCI, ALBC), common in marshes and sedge meadows throughout.
- A. syriaca* L., Common milkweed—144 (PCCI, ALBC), occasional along trail S of Cloverdale Rd.

ASTERACEAE (COMPOSITAE)

- Achillea millefolium* L., Yarrow—132 (PCCI, ALBC), disturbed area at trailhead S of Cloverdale Rd.
- Ambrosia artemisiifolia* L., Common ragweed—*Skean 4050* (PCCI, ALBC), common in disturbed soil on ridge N of Batts Cottage.
- **Aster cordifolius* L., Heart-leaved aster—289 (PCCI, ALBC), occasional in swamp dominated by *Carpinus*, at edge of tamarack swamp.

- A. lanceolatus* Willd., Panicked aster—253 (PCCI, ALBC), occasional in moist thickets.
- A. lateriflorus* (L.) Britton, Calico aster—235 (PCCI, ALBC), 476, 477 (ALBC), CT, along trails in disturbed soil. Common in swamps.
- A. novae-angliae* L., New England aster—277 (PCCI, ALBC), occasional in old fields/disturbed uplands S of Cloverdale Rd.
- A. pilosus* Willd., Frost aster—276 (PCCI, ALBC), near trailhead S of Cloverdale Rd.
- A. puniceus* L., Purple-stemmed aster—270 (PCCI, ALBC), common in lakeside fen and surrounding thickets. Occasional elsewhere in moist thickets.
- A. umbellatus* Miller, Flat-topped aster—231 (PCCI, ALBC), common in large sedge meadow N of Cloverdale Rd.
- Bidens cernuus* L., Nodding beggar-ticks—471 (ALBC), locally common in moist disturbed soil N of Cloverdale Rd.
- B. coronatus* (L.) Britton, Tickseed-sunflower—262, 271 (PCCI, ALBC), 387, 421 (ALBC), CT, common in sedge meadows, open conifer swamps, and lakeside fen.
- Centaurea maculosa* Lam., Spotted knapweed—214 (PCCI, ALBC), *Skean 4035* (PCCI, ALBC), common in disturbed sandy soil on ridge N of Batts Cottage.
- **Cichorium intybus* L., Chicory—178 (PCCI, ALBC), local along Cloverdale Rd.
- Cirsium arvense* (L.) Scop., Canada thistle—158 (PCCI, ALBC), common in barnyard N of Cloverdale Rd.
- C. muticum* Michaux, Swamp thistle—255 (PCCI, ALBC), T, common in moist thickets and edges of open sedge meadows.
- C. vulgare* (Savi) Tenore, Bull thistle—233 (PCCI, ALBC), occasional in barnyard N of Cloverdale Rd.
- Conyza canadensis* (L.) Cronquist, Horseweed—470 (ALBC), occasional in disturbed open areas N of Cloverdale Rd.
- Erigeron annuus* (L.) Pers., Daisy fleabane—472 (ALBC), disturbed moist thicket N of Cloverdale Rd.
- **E. philadelphicus* L., Common fleabane—103 (PCCI, ALBC), disturbed areas along trail on esker S of Cloverdale Rd.
- E. strigosus* Willd., Daisy fleabane—*Skean 4048* (PCCI, ALBC), common in disturbed sandy soil on ridge N of Batts Cottage.
- Eupatorium maculatum* L., Joe-pye-weed—228 (PCCI, ALBC), 446 (ALBC), T, abundant in sedge meadows and thickets.
- E. perfoliatum* L., Boneset—232 (PCCI, ALBC), T, common in sedge meadows throughout.
- **Euthamia graminifolia* (L.) Nutt., Flat-topped goldenrod—234, 243 (PCCI, ALBC), common in disturbed open areas.
- Gnaphalium obtusifolium* L., Fragrant cudweed—304 (PCCI, ALBC), common in sandy disturbed soil on ridge N of Batts Cottage.
- Helianthus giganteus* L., Tall sunflower—230 (PCCI, ALBC), common in open sedge meadows.
- **H. tuberosus* L., Jerusalem-artichoke—273 (PCCI, ALBC), occasional in moist roadside thicket.
- **Lactuca biennis* (Moench) Fern., Tall blue lettuce—267 (PCCI, ALBC), occasional in moist disturbed soil N of Brewster Lake.
- **Prenanthes racemosa* Michaux, Rattlesnake-root—257 (PCCI, ALBC), local in moist open roadside thicket.
- Rudbeckia hirta* L., Black-eyed Susan—149 (PCCI, ALBC), common in open thickets, sedge meadows, and fens.
- Senecio aureus* L., Golden ragwort—14 (PCCI, ALBC), CT, common in sedge meadows, mucky thickets, and swamps throughout.
- **Solidago altissima* L., Tall goldenrod—229 (PCCI, ALBC), very common in open areas.
- S. canadensis* L., Canada goldenrod—258 (PCCI, ALBC), disturbed uplands.
- **S. gigantea* Aiton, Late goldenrod—261 (PCCI, ALBC), common at periphery of sedge meadows.
- S. patula* Willd., Rough-leaved goldenrod—254 (PCCI, ALBC), common in moist thickets.
- S. rugosa* Miller, Rough-leaved goldenrod—247 (PCCI, ALBC), CT, common in wet areas throughout.

**S. uliginosa* Nutt., Bog goldenrod—272 (PCCI, ALBC), common in lakeside fen.

Taraxacum officinale Wiggers, Common dandelion—5, 41 (PCCI, ALBC), C, especially common in disturbed, grassy areas. Also occasional in swamps.

Tragopogon dubius Scop., Goat's-beard—*Skean 4043* (PCCI, ALBC), occasional in disturbed ground on ridge N of Batts Cottage.

BALSAMINACEAE

**Impatiens capensis* Meerb., Spotted touch-me-not—218 (PCCI, ALBC), CT, very common in moist areas throughout.

**I. pallida* Nutt., Pale touch-me-not—217, 260 (PCCI, ALBC), local, one small colony in sedgy thicket along N side of Cloverdale Rd.

BERBERIDACEAE

**Berberis thunbergii* DC., Japanese barberry—312 (PCCI, ALBC), planted in cottage lawn. Also rarely escaped to moist thickets and swamps.

Podophyllum peltatum L., Mayapple—95 (PCCI, ALBC), common in upland woods.

BETULACEAE

Betula alleghaniensis Britton, Yellow birch—130 (PCCI, ALBC), CT, common in conifer swamps. A few trees along SW shore of Brewster Lake.

B. pendula Roth, European white birch—433 (ALBC), *Skean 4044* (PCCI, ALBC), planted on ridge N of Batts Cottage and near constructed pond S of Cloverdale Rd.

Carpinus caroliniana Walter, Hornbeam—94 (PCCI, ALBC), T, swamps S of Cloverdale Rd., usually in drier edges. Sometimes forming thickets.

**Ostrya virginiana* (Miller) K. Koch, Hop-hornbeam—294 (PCCI, ALBC), Occasional in upland woods.

BORAGINACEAE

Hackelia virginiana (L.) I. M. Johnston, Stickseed—*Skean 4089* (PCCI, ALBC), mature woods on hill N of Brewster Lake.

BRASSICACEAE (CRUCIFERAE)

Arabidopsis thaliana (L.) Heynh., Mouse-ear cress—46 (PCCI, ALBC), occasional along trail on esker S of Cloverdale Rd., in disturbed grassy areas.

Barbarea vulgaris R. Br., Yellow rocket—335 (ALBC), common in disturbed open areas.

Cardamine diphylla (Michaux) A. Wood [*Dentaria diphylla* Michaux, as given in Voss (1985)], Two-leaved toothwort—337 (ALBC), local at base of esker S of Cloverdale Rd. in mucky swamp border.

C. douglassii Britton, Pink spring cress—22 (PCCI, ALBC), *Skean 4022* (PCCI, ALBC), CT, abundant in wetlands and woods throughout.

**C. pensylvanica* Willd.—330 (ALBC), CT, occasional in conifer swamp openings, in standing water.

C. rhomboidea (Pers.) DC. [*C. bulbosa* (Muhl.) BSP., as given in Voss (1985)], Spring cress—*Skean 4231* (ALBC), CT, common in swamps and sedge meadows.

Lepidium campestre (L.) R. Br., Pepper-grass—*Skean 4047* (PCCI, ALBC), common in disturbed sandy soil on ridge N of Batts Cottage.

CAMPANULACEAE

**Campanula americana* L., American bellflower—206 (PCCI, ALBC), *Skean 4057* (PCCI, ALBC), common in woods and thickets, including disturbed ground.

C. aparinoides Pursh, Marsh bellflower—184, 201 (PCCI, ALBC), common in sedge meadows.

Lobelia siphilitica L., Great blue lobelia—248 (PCCI, ALBC), occasional in sedge meadows and moist thickets.

CAPRIFOLIACEAE

Lonicera dioica L., Glaucous honeysuckle—50 (PCCI, ALBC), in large sedge meadow N of Cloverdale Rd., W of Cedar Creek.

***L. morrowii** A. Gray, Morrow honeysuckle—11 (PCCI, ALBC), shrub near trail N of Cloverdale Rd., disturbed thicket.

- L. tatarica* L., Tartarian honeysuckle—55 (PCCI, ALBC), uncommon along Cloverdale Rd., near N trail.
- Triosteum auranticum* E. P. Bicknell, Tinker's-weed—317 (PCCI, ALBC), uncommon in disturbed dry and moist thickets along trail N of Cloverdale Rd.
- Viburnum lentago* L., Nannyberry—59 (PCCI, ALBC), 480 (ALBC), *Skean 4081* (PCCI, ALBC), *Skean 4239* (ALBC), CT, common in moist thickets and swamps.
- V. rafinesquianum* Schultes, Downy arrow-wood—*Skean 4239* (ALBC), occasional in thickets along trail N of Cloverdale Rd.

CARYOPHYLLACEAE

- **Arenaria serpyllifolia* L., Sandwort—*Skean 4237* (ALBC), occasional in disturbed area at trailhead S of Cloverdale Rd.
- Cerastium fontanum* Baumg., Mouse-ear chickweed—17 (PCCI, ALBC), 363 (ALBC), disturbed open areas, often trailside.
- Dianthus armeria* L., Deptford pink—140 (PCCI, ALBC), *Skean 4034* (PCCI, ALBC), common on disturbed sandy ridge N of Batts Cottage along trail.
- Stellaria longifolia* Willd., Long-leaved stitchwort—76 (PCCI, ALBC), 362 (ALBC), CT, common in sedge meadows and moist thickets.
- **S. media* (L.) Vill., Chickweed—*Skean 4241* (ALBC), uncommon in woods on esker S of Cloverdale Rd.

CELASTRACEAE

- **Euonymus europaea* L., Spindle tree—309 (PCCI, ALBC), in barnyard N of Cloverdale Rd.
- E. obovata* Nutt., Running strawberry-bush—*Skean 4238* (ALBC), occasional in swamps.

CLUSIACEAE

- Hypericum perforatum* L., Common St. John's-wort—459 (ALBC), occasional weed along trail S of Cloverdale Rd, in moist soil.
- H. punctatum* Lam., Spotted St. John's-wort—460 (ALBC), occasional at edge of swampy ironwood thicket, S of Cloverdale Rd., near trail.

CORNACEAE

- Cornus alternifolia* L. f., Alternate-leaved dogwood—80 (PCCI, ALBC), C, in seepy sedge meadow W of trails, S of Cloverdale Rd.
- C. amomum* Miller, Pale dogwood—*Skean 4076* (PCCI, ALBC), uncommon shrub in moist thickets near Brewster Lake.
- C. foemina* Miller, Gray dogwood—287 (PCCI, ALBC), T, moist thickets at edge of tamarack swamp.
- C. florida* L., Flowering dogwood—92 (PCCI, ALBC), small tree in trailside woods S of Cloverdale Rd.
- C. sericea* L. [*C. stolonifera* Michaux, as given in Voss (1985)], Red-osier dogwood—78 (PCCI, ALBC), T, occasional in moist thickets and sedge meadows.

CUSCUTACEAE

- **Cuscuta gronovii* Schultes, Swamp dodder—469 (ALBC), swampy thicket S of Cloverdale Rd. Twining around *Impatiens capensis*.

CYPERACEAE

- **Carex alata* Torrey, Sedge—153 (PCCI, ALBC), common near boat landing on Brewster Lake, E shore, near Batts Cottage.
- C. bebbii* (Bailey) Fern., Sedge—435 (ALBC), occasional along trail near tamarack swamp, S of Cloverdale Rd.
- **C. blanda* Dewey, Sedge—12 (PCCI, ALBC), along trail in moist soil, 30 m from barn N of Cloverdale Rd.
- **C. bromoides* Willd., Sedge—328 (ALBC), common at edge of tamarack swamp.
- C. comosa* Boott, Sedge—115, 189 (PCCI, ALBC), T, in lakeside fen.
- **C. diandra* Schrank, Sedge—118 (PCCI, ALBC), on sedge hummock in lakeside fen. Common.
- **C. disperma* Dewey, Sedge—360 (ALBC), C, uncommon at edge of tamarack swamp.

- **C. gracillima* Schw., Sedge—69 (PCCI, ALBC), 326 (ALBC), in moist thickets and swamp borders.
- C. hystericina* Willd., Sedge—125, 169 (PCCI, ALBC), in moist areas throughout.
- **C. interior* Bailey, Sedge—116, 172, 174 (PCCI, ALBC), in lakeside fen, sedge meadows, and moist thickets.
- **C. lacustris* Willd., Sedge—190 (PCCI, ALBC), 368 (ALBC), T, S of Brewster Lake in marshy areas. Common in open tamarack swamp N of esker S of Cloverdale Rd.
- **C. laevivaginata* (Kuek.) Mack., Sedge—124 (PCCI, ALBC), in tamarack/poison sumac thicket near Brewster Lake.
- **C. lasiocarpa* Ehrh. [*C. lanuginosa* Michaux, as given in Voss (1972)], Sedge—67 (PCCI, ALBC), occasional in sedgey thicket N of Cloverdale Rd.
- **C. leptoneuria* Fern., Sedge—13 (PCCI, ALBC), along trail N of Cloverdale Rd. near barn, in moist soil.
- C. lurida* Wahl., Sedge—168 (PCCI, ALBC), moist ground near Cloverdale Rd.
- C. pennsylvanica* Lam., Pennsylvania sedge—Skean 4027 (PCCI, ALBC), common along trail in esker woods S of Cloverdale Rd.
- C. prairea* Dewey, Sedge—327 (ALBC), edge of tamarack swamp.
- **C. pseudo-cyperus* L., Sedge—334, 366 (ALBC), occasional in tamarack swamp S of Cloverdale Rd.
- **C. sparganoides* Willd., Sedge—432 (ALBC), common on esker S of Cloverdale Rd.
- **C. stricta* Lam., Sedge—224 (PCCI, ALBC), T, dominant in sedge meadows.
- Cyperus filiculmis* Vahl, Nut-grass—Skean 4051 (PCCI, ALBC), growing on trail N of Cloverdale Rd., on disturbed sandy ridge.
- C. rivularis* Kunth, Nut-grass—236 (PCCI, ALBC), occasional in wet ditches along Cloverdale Rd.
- C. strigosus* L., Nut-grass—237 (PCCI, ALBC), very common in wet ditches along Cloverdale Rd.
- Eleocharis erythropoda* Steudel, Spike-rush—119 (PCCI, ALBC), sedge tussock in lakeside fen.
- **E. palustris* L. [*E. smallii* Britton, as given in Voss (1972)], Spike-rush—123 (PCCI, ALBC), along a seepage near E shore of Brewster Lake.
- Scirpus acutus* Bigelow, Hardstem bulrush—135 (PCCI, ALBC), common in lakeside fen E of Brewster Lake.
- S. atroviens* Willd., Bulrush—137 (PCCI, ALBC), common in springy fen area S of Cloverdale Rd.
- S. cyperinus* (L.) Kunth, Wool-grass—454 (ALBC), occasional in moist thickets.
- **S. pendulus* Muhl., Bulrush—213 (PCCI, ALBC), disturbed open area N of Brewster Lake, near trail. Uncommon.

DIOSCOREACEAE

- Dioscorea villosa* L., Wild yam—405 (ALBC), common in swampy thicket S of Cloverdale Rd.

ELAEAGNACEAE

- **Elaeagnus angustifolia* L., Russian-olive—281 (PCCI, ALBC), weedy thicket S of Cloverdale Rd.
- **E. umbellata* Thunb., Autumn-olive—60 (PCCI, ALBC), common in disturbed thicket N of Cloverdale Rd.

ERICACEAE

- **Gaultheria hispidula* (L.) Bigelow, Creeping-snowberry—413 (ALBC), C, rare on mossy hummocks in cedar swamp.
- Vaccinium corymbosum* L., Highbush blueberry—126 (PCCI, ALBC), CT, conifer swamps and in swampy tamarack thickets near Brewster Lake.

EUPHORBIACEAE

- Acalypha rhomboidea* Raf., Three-seeded mercury—244 (PCCI, ALBC), uncommon in moist open thicket along Cloverdale Rd.

Euphorbia maculata L., Spurge—177 (PCCI, ALBC), mat-like plant in gravelly parking area at trail entrance S of Cloverdale Rd.

FABACEAE (LEGUMINOSAE)

**Amphicarpaea bracteata* (L.) Fern., Hog-peanut—165 (PCCI, ALBC), *Skean 4054* (PCCI, ALBC), CT, twining vine in sedge meadows and moist thickets.

**Apios americana* Medicus, Groundnut—*Skean 4055, 4083* (PCCI, ALBC), CT, sedge meadows and moist thickets.

**Coronilla varia* L., Crown vetch—133 (PCCI, ALBC), local patch near entrance to trail S of Cloverdale Rd., spreading into sedge meadow.

Desmodium glutinosum (Willd.) Wood, Tick-trefoil—227 (PCCI, ALBC), lightly wooded area on sandy ridge N of Batts Cottage.

D. paniculatum (L.) DC., Tick-trefoil—458 (ALBC), *Skean 4060* (PCCI, ALBC), along trails in moist soil.

Medicago lupulina L., Black medick—246 (PCCI, ALBC), patchy, in disturbed moist soil.

Melilotus alba Medicus, White sweet-clover—*Skean 4049* (PCCI, ALBC), occasional on ridge N of Batts Cottage.

Lathyrus palustris L., Marsh pea—188 (PCCI, ALBC), especially common in tangled vegetation along small streamlets in sedge meadows. Occasional in other wet areas.

Trifolium pratense L., Red clover—251 (PCCI, ALBC), *Skean 4031* (PCCI, ALBC), occasional in disturbed areas.

T. repens L., White clover—157 (PCCI, ALBC), common in barnyard N of Cloverdale Rd., and along trails.

Vicia americana Willd., American vetch—64 (PCCI, ALBC), occasional in moist, sedgy thicket N of Cloverdale Rd.

FAGACEAE

**Fagus grandifolia* Ehrh., Beech—290 (PCCI, ALBC), CT, common on esker S of Cloverdale Rd., and occasional in mature woods N of Brewster Lake. Several large specimens.

Quercus alba L., White oak—320 (PCCI, ALBC), common in young woods on ridge S of Pierce Lake.

Q. bicolor Willd., Swamp white oak—307 (PCCI, ALBC), one tree on slope of ridge N of Batts Cottage, dry soil.

**Q. macrocarpa* Michaux, Bur-oak—450 (ALBC), T, occasional in open swamps and moist thickets.

**Q. muehlenbergii* Engelm., Chinquapin oak—319 (PCCI, ALBC), uncommon on lightly wooded ridge N of Batts Cottage.

Q. rubra L., Red oak—305 (PCCI, ALBC), common in woods throughout.

Q. velutina Lam., Black oak—303 (PCCI, ALBC), *Skean 4039* (PCCI, ALBC), occasional on sandy ridge N of Batts Cottage.

FUMARIACEAE

Dicentra cucullaria (L.) Bernh., Dutchman's-breeches—*Skean 4020* (PCCI, ALBC), uncommon in moist grassy thicket near beginning of trail S of Cloverdale Rd.

GERANIACEAE

Geranium maculatum L., Wild geranium—56 (PCCI, ALBC), T, common in upland woods and in wetlands.

**G. robertianum* L., Herb Robert—97 (PCCI, ALBC), uncommon in cedar swamp near SW end of esker S of Cloverdale Rd.

GROSSULARIACEAE

Ribes hirtellum Michaux, Swamp gooseberry—51 (PCCI, ALBC), in large sedge meadow N of Cloverdale Rd., W of Cedar Creek.

HAMAMELIDACEAE

Hamamelis virginiana L., Witch-hazel—96 (PCCI, ALBC), edge of trail S of Cloverdale Rd. in young woods.

HYDROCHARITACEAE

Elodea nuttallii (Planchon) St. John, Elodea—*Skean 4071* (PCCI, ALBC), common submerged aquatic at shore of Brewster Lake.

IRIDACEAE

**Iris germanica* L., Flag—*106* (PCCI, ALBC), planted. Marshy area near gate and roadside, S of Cloverdale Rd.

I. virginica L., Southern blue flag—*110* (PCCI, ALBC), T, common in moist depressions in thickets and sedge meadows.

JUGLANDACEAE

**Carya cordiformis* (Wang.) K. Koch, Bitternut hickory—*322* (PCCI, ALBC), CT, woods NE of Brewster Lake, S of Pierce Lake.

C. ovata (Miller) K. Koch, Shagbark hickory—*71, 308* (PCCI, ALBC), occasional in thickets and upland woods.

**Juglans cinerea* L., Butternut—*302* (PCCI, ALBC), sandy ridge N of Batts Cottage.

J. nigra L., Black walnut—*467* (ALBC), most specimens along or near Cloverdale Rd., in disturbed thickets.

JUNCACEAE

Juncus acuminatus Michaux, Rush—*455* (ALBC), common in moist soil along trail S of Cloverdale Rd.

J. effusus L., Rush—*456* (ALBC), occasional in dogwood thicket near tamarack swamp, along trail S of Cloverdale Rd.

J. tenuis Willd., Path rush—*173, 238* (PCCI, ALBC), *Skean 4032* (PCCI, ALBC), moist disturbed ground throughout.

JUNCAGINACEAE

Triglochin palustre L., Arrow-grass—*196* (PCCI, ALBC), open sedgy area with exposed soil near Brewster Lake. Local.

LAMIACEAE

**Blephilia hirsuta* (Pursh) Benth., Downy wood mint—*408* (ALBC), locally common in swampy thicket N of esker, near trail S of Cloverdale Rd.

Glechoma hederacea L., Creeping Charlie—*336* (ALBC), local in disturbed open areas along trail S of Cloverdale Rd.

Lamium purpureum L., Dead-nettle—*18* (PCCI, ALBC), in weedy barnyard N of Cloverdale Rd.

Leonurus cardiaca L., Motherwort—*156* (PCCI, ALBC), common in patches in weedy barnyard N of Cloverdale Rd.

Lycopus americanus W. P. C. Barton, Water-horehound—*223* (PCCI, ALBC), sedge meadows.

L. uniflorus Michaux, Bugleweed—*437, 464* (ALBC), CT, common in tamarack swamp.

Mentha arvensis L., Wild mint—*221* (PCCI, ALBC), *461* (ALBC), common in moist thickets and sedge meadows.

Monarda fistulosa L., Wild-bergamot—*148* (PCCI, ALBC), common in old fields and disturbed thickets.

Prunella vulgaris L., Self-heal—*162* (PCCI, ALBC), *462* (ALBC), CT, occasional in disturbed thickets. Also locally common in cedar and tamarack swamps.

Scutellaria lateriflora L., Mad-dog skullcap—*451* (ALBC), T, common in open edge of tamarack swamp, among sedges.

LAURACEAE

Lindera benzoin (L.) Blume, Spicebush—*83, 286* (PCCI, ALBC), T, swamps and moist thickets throughout.

Sassafras albidum (Nutt.) Nees, Sassafras—*306* (PCCI, ALBC), *431* (ALBC), uncommon on sandy ridge N of Cloverdale Rd.; occasional on esker S of Cloverdale Rd.

LEMNACEAE

Lemna minor L., Duckweed—*79* (PCCI, ALBC), seepage pools S of Cloverdale Rd., in moist sedgy thicket.

LENTIBULARIACEAE

Utricularia vulgaris L., Common bladderwort—122 (PCCI, ALBC), in several cm water at shore of Brewster Lake.

LILIACEAE

**Allium canadense* L., Wild garlic—*Skean* 4233 (ALBC), occasional in moist areas along trails.

Erythronium americanum Ker Gawler, Yellow trout-lily—45 (PCCI, ALBC), on in woods on esker S of Cloverdale Rd.

***Hermerocallis fulva* (L.) L.**, Orange day-lily—175 (PCCI, ALBC), escaped along Cloverdale Rd.

Lilium michiganense Farw., Michigan lily—171 (PCCI, ALBC), locally common in sedge meadows, lakeside fen, and swampy thickets.

Maianthemum canadense Desf., Canada mayflower—100 (PCCI, ALBC), CT, common in swamps and upland woods.

***Narcissus pseudonarcissus* L.**, Daffodil—*Skean* 4030 (PCCI, ALBC), from planting near slab of old structure next to trail s of Cloverdale Rd.

Polygonatum pubescens (Willd.) Pursh, Small Solomon-seal—85 (PCCI, ALBC), T, occasional in conifer swamps.

Smilacina stellata (L.) Desf., Starry false solomon-seal—109 (PCCI, ALBC), local in moist sedge meadows.

Trillium grandiflorum (Michaux) Salisb., Common trillium—25 (PCCI, ALBC), CT, sporadic in woods and swamps throughout, mostly sterile plants.

LIMNANTHACEAE

Floerkea proserpinacoides Willd., False mermaid—35 (PCCI, ALBC), very common along trail in woods on esker S of Cloverdale Rd.

LYTHRACEAE

Decodon verticillatus (L.) Ell., Swamp loosestrife—*Skean* 4070 (PCCI, ALBC), shore of Brewster Lake. Also common in open marsh/young tamarack swamp S of Cloverdale Rd.

***Lythrum salicaria* L.**, Purple loosestrife—154 (PCCI, ALBC), large masses in disturbed marsh near Cedar Creek. Also scattered near shore of Brewster Lake, and in sedge meadows.

MAGNOLIACEAE

Liriodendron tulipifera L., Tulip-tree—297 (PCCI, ALBC), C, common in cedar swamp E of esker S of Cloverdale Rd.

MENISPERMACEAE

**Menispermum canadense* L., Moonseed—*Skean* 4242 (ALBC), occasional in swamps.

MENYANTHACEAE

**Menyanthes trifoliata* L., Buckbean—127 (PCCI, ALBC), local in springy fen area on NE edge of Brewster Lake.

NYMPHAEACEAE

Nuphar advena (Aiton) Aiton f., Pond-lily—120 (PCCI, ALBC), in shallow water at E shore of Brewster Lake. Common.

OLEACEAE

***Forsythia suspensa* (Thunb.) Vahl**, Forsythia—*Skean* 4150 (ALBC), planted at trailhead S of Cloverdale Rd.

**Fraxinus americana* L., White ash—285 (PCCI, ALBC), common in woods. Especially large specimens in woods N of Brewster Lake.

**F. nigra* Marshall, Black ash—70, 300 (PCCI, ALBC), 409, 411, 468 (ALBC), CT, very common in swamps, occasional in open wetlands.

***Syringa vulgaris* L.**, Common lilac—6 (PCCI, ALBC), planted shrubs along Cloverdale Rd.

ONAGRACEAE

**Circaea alpina* L., Dwarf enchanter's-nightshade—378, 422 (ALBC), C, common in conifer swamps.

- C. lutetiana* L., Enchanter's-nightshade—203, 207 (PCCI, ALBC), occasional in moist thicket S of Brewster Lake. Also in woods.
- Epilobium coloratum* Biehler, Willow-herb—256 (PCCI, ALBC), uncommon in moist thicket along Cloverdale Rd.
- **E. hirsutum* L., Great hairy willow-herb—194 (PCCI, ALBC), uncommon in streamlet S of Brewster Lake.
- E. leptophyllum* Raf., Willow-herb—Skean 4074 (PCCI, ALBC), occasional in lakeside fen.
- **E. strictum* Sprengel, Willow-herb—Skean 4077 (PCCI, ALBC), uncommon at edge of moist thicket near Brewster Lake.

ORCHIDACEAE

- Corallorhiza maculata* Raf., Spotted coralroot—Skean 4087 (PCCI, ALBC), rare in hilly, mature woods N of Brewster Lake.
- Cypripedium parviflorum* Salisb. var. *makasin* (Farw.) Sheviak [*Cypripedium calceolus* L. var. *parviflorum* (Salisb.) Fern., as given in Voss (1972)], Small yellow lady-slipper—66 (PCCI, ALBC), CT, common in moist thickets, swamps, and E shore of Brewster Lake.
- C. parviflorum* Salisb. var. *pubescens* (Willd.) O. W. Knight [*C. calceolus* L. var. *pubescens* (Willd.) Correll, as given in Voss (1972)], Large yellow lady-slipper—87 (PCCI, ALBC), clumps locally common in sedge meadows. Also found on E shore of Brewster Lake.
- C. reginae* Walter, Showy lady-slipper—136 (PCCI, ALBC), C, common in lakeside fen and sedge meadow, E and SE of Brewster Lake, under tamaracks and in the open. Also local in cedar swamp S of Cloverdale Rd.
- **Epipactis helleborine* (L.) Crantz, Helleborine—429 (ALBC), one plant observed in cedar swamp uphill from creek, W of esker S of Cloverdale Rd.
- **Platanthera clavellata* (Michx.) Luer [*Habenaria clavellata* (Michaux) Sprengel, as given in Voss (1972)], Club-spur orchid—465, 479 (ALBC), CT, occasional in conifer swamps on mossy logs/hummocks.
- P. psycodes* (L.) Lindl. [*H. psycodes* (L.) Sprengel, as given in Voss (1972)], Purple-fringed orchid—466 (ALBC), photographic documentation. One plant, in sedge hummock near trail S of Cloverdale Rd.
- Spiranthes cernua* (L.) Rich., Nodding ladies'-tresses—268 (PCCI, ALBC), common in sedge meadow/fen S of Brewster Lake.
- **S. lucida* (H. H. Eaton) Ames, Shining ladies'-tresses—108 (PCCI, ALBC), a few plants growing on moist, sedgy trail S of Cloverdale Rd. Also uncommon in disturbed, seepy fen S of Brewster Lake.

OROBANCHACEAE

- Conopholis americana* (L.) Wallr., Squaw-root—Skean 4090 (PCCI, ALBC), common in mature hilly woods N of Brewster Lake.
- Epifagus virginiana* (L.) W. P. C. Barton, Beech-drops—291 (PCCI, ALBC), very common on esker S of Cloverdale Rd., under beech trees.

OXALIDACEAE

- **Oxalis fontana* Bunge, Wood-sorrel—145 (PCCI, ALBC), uncommon in disturbed ground near trail S of Cloverdale Rd. and man-made wetland.

PAEONIACEAE

- Paeonia albiflora* Pall., Peony—Skean 4236 (ALBC), planted, persistent at slab near trail-head S of Cloverdale Rd.

PAPAVERACEAE

- Sanguinaria canadensis* L., Bloodroot—Skean 4026 (PCCI, ALBC), uncommon along trail S of Cloverdale Rd., in moist, sedgy thicket.

PLANTAGINACEAE

- Plantago lanceolata* L., English plantain—134 (PCCI, ALBC), common in gravelly entrance to trail S of Cloverdale Rd.
- P. rugelii* Decne., Rugel's plantain—176 (PCCI, ALBC), in gravelly entrance to trail S of Cloverdale Rd.

POACEAE (GRAMINEAE)

- Agropyron repens* (L.) Beauv., Quack grass—146a (PCCI, ALBC), forming large mat in disturbed soil near man-made wetland, S of Cloverdale Rd.
- **A. trachycaulum* (Link) Malte, Wheatgrass—Skean 4053, 4059b (PCCI, ALBC), on ridge N of Batts Cottage.
- Agrostis gigantea* Roth, Redtop—164, 167, 219 (PCCI, ALBC), common along Cloverdale Rd.
- **A. stolonifera* L., Creeping bent—181 (PCCI, ALBC), growing in gravelly parking area at entrance to trail S of Cloverdale Rd.
- Andropogon scoparius* Michaux, Little bluestem—314 (PCCI, ALBC), local on disturbed sandy ridge N of Batts Cottage.
- Arrhenatherum elatius* (L.) Presl, Tall oatgrass—113 (PCCI, ALBC), along Cloverdale Rd.
- **Bromus ciliatus* L., Fringed brome—259 (PCCI, ALBC), Skean 4059a (PCCI, ALBC), occasional in moist thickets.
- B. inermis* Leysser, Smooth brome—112 (PCCI, ALBC), common along Cloverdale Rd.
- Calamagrostis canadensis* (Michaux) Beauv., Blue-joint—Skean 4063 (PCCI, ALBC), moist soil along Cloverdale Rd.
- **Dactylis glomerata* L., Orchard grass—111 (PCCI, ALBC), along Cloverdale Rd.
- **Danthonia spicata* (L.) P. Beauv. ex Roem. & Schult. Poverty grass—Skean 4032 (PCCI, ALBC), common along trail N of Cloverdale Rd. in disturbed soil.
- **Digitaria ischaemum* (Schreber) Muhl., Crab grass—241 (PCCI, ALBC), common along Cloverdale Rd.
- Echinochloa muricata* (P. Beauv.) Fern.—220 (PCCI, ALBC), common along Cloverdale Rd., growing with *S. pectinata*.
- **E. walteri* (Pursh) Heller—Skean 4065 (PCCI, ALBC), common along Cloverdale Rd.
- **Elymus villosus* Willd., Wild-rye—161 (PCCI, ALBC), moist sedgey thicket along Cloverdale Rd.
- **E. virginicus* L., Wild-rye—Skean 4067 (PCCI, ALBC), moist soil along Cloverdale Rd.
- **Eragrostis minor* Host [*E. poaeoides* Roem. & Schult., as given in Voss (1972)], Love grass—179 (PCCI, ALBC), gravelly parking area at entrance to trail S of Cloverdale Rd.
- Festuca obtusa* Biehler, Nodding fescue—212 (PCCI, ALBC), common in mature hilly woods N of Brewster Lake.
- **F. pratensis* Hudson, Meadow fescue—180 (PCCI, ALBC), along Cloverdale Rd.
- Glyceria striata* (Lam.) Hitchc., Fowl manna grass—439 (ALBC), T, occasional in tamarack swamp.
- **Hierochloë odorata* (L.) Beauv., Sweet grass—114 (PCCI, ALBC), moist sedgey area along Cloverdale Rd., W of trails.
- **Holcus lanatus* L., Velvet grass—Skean 4036 (PCCI, ALBC), occasional in disturbed sandy soil on ridge N of Batts Cottage.
- **Leersia oryzoides* (L.) Sw., Cut grass—264 (PCCI, ALBC), large patches under tamaracks near Brewster Lake.
- **Milium effusum* L.—346 (ALBC), C, occasional in cedar swamps.
- **Panicum capillare* L., Witch grass—239 (PCCI, ALBC), occasional in moist open thicket along Cloverdale Rd.
- P. dichotomiflorum* Michaux, Panic grass—240 (PCCI, ALBC), occasional in moist open thicket along Cloverdale Rd.
- Phleum pratense* L., Timothy—138 (PCCI, ALBC), common in old fields and occasional in nearby fen.
- Phragmites australis* (Cav.) Steudel, Reed—242 (PCCI, ALBC), locally common along Cloverdale Rd. in moist soil.
- **Poa alsodes* Gray, Bluegrass—84, 101 (PCCI, ALBC), in seepy thicket/sedge meadow S of Cloverdale Rd. Also in disturbed burn areas on esker S of Cloverdale Rd.
- P. compressa* L., Canada bluegrass—Skean 4038 (PCCI, ALBC), common in disturbed ground on ridge N of Batts Cottage.
- **P. pratensis* L., Kentucky bluegrass—62, 166 (PCCI, ALBC), disturbed areas throughout.
- **Setaria glauca* (L.) P. Beauv., Yellow foxtail—Skean 4064a (PCCI, ALBC), common along Cloverdale Rd.

S. viridis (L.) P. Beauv., Green foxtail—*Skean 4064b* (PCCI, ALBC), common along Cloverdale Rd.

Spartina pectinata Link, Cordgrass—216 (PCCI, ALBC), *Skean 4066* (PCCI, ALBC), locally common in moist ditches along Cloverdale Rd.

Vulpia octoflora (Walter) Rydb. [*Festuca octoflora* Walter, as given in Voss (1972)], Six-weeks fescue—*Skean 4037* (PCCI, ALBC), occasional in disturbed ground on ridge N of Batts Cottage.

POLEMONIACEAE

Phlox divaricata L., Wild blue phlox—21 (PCCI, ALBC), 361 (ALBC), T, common in woods and occasional in tamarack swamp edges.

***P. paniculata** L., Garden phlox—473 (ALBC), small colony near gate at entrance to S trail, in sedge meadow. Introduced.

POLYGONACEAE

**Polygonum arifolium* L., Halberd-leaved tearthumb—428 (ALBC), common in open, mucky areas near Cedar Creek.

***P. persicaria** L., Lady's-thumb—245, 252 (PCCI, ALBC), common in moist open thicket along Cloverdale Rd.

P. punctatum Ell., Smartweed—193 (PCCI, ALBC), growing in streamlet S of Brewster Lake.

P. sagittatum L., Tear-thumb—457 (ALBC), *Skean 4056* (PCCI, ALBC), moist thickets.

**P. virginianum* L., Jumpseed—209 (PCCI, ALBC), 423 (ALBC), *Skean 4058* (PCCI, ALBC), CT, common in woods and swamps.

Rumex crispus L., Curly dock—142 (PCCI, ALBC), common along trail S of Cloverdale Rd. in disturbed soil.

R. obtusifolius L., Bitter dock—143 (PCCI, ALBC), common in disturbed soil along trail S of Cloverdale Rd.

R. orbiculatus A. Gray, Great water dock—274 (PCCI, ALBC), T, uncommon in moist thicket along Cloverdale Rd.

PORTULACACEAE

Claytonia virginica L., Spring-beauty—29 (PCCI, ALBC), *Skean 4028* (PCCI, ALBC), common in woods throughout.

POTAMOGETONACEAE

Potamogeton illinoensis Morong, Pondweed—*Skean 4072* (PCCI, ALBC), common submerged aquatic in Brewster Lake.

PRIMULACEAE

Lysimachia ciliata L., Fringed loosestrife—151 (PCCI, ALBC), local in moist thicket S of Cloverdale Rd.

L. lanceolata Walter, Loosetrife—434 (ALBC), local along sedgy trailside near tamarack swamp.

L. thyrsiflora L., Tufted loosestrife—107 (PCCI, ALBC), common in large sedge meadow N of Cloverdale Rd., W of Cedar Creek. In low spots.

Trientalis borealis Raf., Star-flower—98 (PCCI, ALBC), CT, common in conifer swamps.

RANUNCULACEAE

Actaea alba (L.) Mill. Ell., [*A. pachypoda* Ell., as given in Voss (1985)], White baneberry—208 (PCCI, ALBC), uncommon in hilly woods N of Brewster Lake.

Anemone virginiana L., Thimbleweed—147 (PCCI, ALBC), occasional in moist sedgy thicket N of Cloverdale Rd.

**Anemonella thalictroides* (L.) Spach, Rue-anemone—*Skean 4025* (PCCI, ALBC), common along trail on esker S of Cloverdale Rd.

Aquilegia canadensis L., Wild columbine—82 (PCCI, ALBC), T, locally common under tamaracks, in drier edges of swamps, and in sedge meadows.

Caltha palustris L., Marsh-marigold—15 (PCCI, ALBC), *Skean 4029* (PCCI, ALBC), CT, throughout in wet areas.

- Clematis virginiana* L., Virgin's bower—182 (PCCI, ALBC), T, occasional in thickets and conifer swamps.
- Coptis trifolia* (L.) Salisb., Goldthread—38 (PCCI, ALBC), CT, common in conifer swamps.
- Hepatica americana* (DC.) Ker Gawler, Round-lobed hepatica—23 (PCCI, ALBC), *Skean 4024* (PCCI, ALBC), woods throughout.
- Ranunculus abortivus* L., Small-flowered buttercup—16, 39 (PCCI, ALBC), CT, common in swamps. Also found in weedy barnyard N of Cloverdale Rd.
- R. hispidus* Michaux, Swamp buttercup—44 (PCCI, ALBC), 358, 394 (ALBC), CT, common in swamps.
- R. recurvatus* Poiret, Hooked crowfoot—37 (PCCI, ALBC), 345 (ALBC), CT, conifer swamps S of Cloverdale Rd.
- Thalictrum dasycarpum* Fischer & Ave-Lall., Purple meadow-rue—152 (PCCI, ALBC), common in sedge meadow along Cloverdale Rd.
- T. dioicum* L., Early meadow-rue—27 (PCCI, ALBC), cutover woods area N of Cloverdale Rd., at E edge of large sedge meadow.

RHAMNACEAE

- Rhamnus alnifolia* L' Hér., Alder-leaved buckthorn—73 (PCCI, ALBC), shrub in seepy thicket S of Cloverdale Rd., at edge of tamarack swamp.

ROSACEAE

- Agrimonia gryposepala* Wallr., Agrimony—150, 226 (PCCI, ALBC), common throughout, mostly in disturbed thickets.
- A. pubescens* Wallr., Agrimony—430 (ALBC), occasional along trail on esker S of Cloverdale Rd.
- **Amelanchier interior* Nielsen, Juneberry—72 (PCCI, ALBC), in sedgy thicket N of Cloverdale Rd.
- Crataegus fontanesiana* (Spach) Steudel, Hawthorn—53 (PCCI, ALBC), in disturbed thicket along trail N of Cloverdale Rd.
- Fragaria virginiana* Miller, Wild strawberry—10 (PCCI, ALBC), common in thicket near N trail entrance.
- Geum canadense* Jacq., Avens—155 (PCCI, ALBC), C, common in disturbed dry thicket near Batts Cottage. Also scattered throughout.
- G. rivale* L., Swamp avens—129 (PCCI, ALBC), CT, occasional in swamps and moist thickets.
- Malus pumila* Miller, Apple—19 (PCCI, ALBC), a few trees in overgrown barnyard N of Cloverdale Rd.
- Potentilla argentea* L., Silvery cinquefoil—*Skean 4052* (PCCI, ALBC), uncommon on disturbed ridge N of Batts Cottage.
- P. fruticosa* L., Shrubby cinquefoil—*Skean 4079* (PCCI, ALBC), occasional in lakeside fen and in nearby moist thickets.
- P. recta* L., Rough-fruited cinquefoil—204b (PCCI, ALBC), along Cloverdale Rd.
- P. simplex* Michaux, Common cinquefoil—61, 139 (PCCI, ALBC), occasional in disturbed thicket N of Cloverdale Rd.
- **Prunus americana* Marsh., Wild plum—20 (PCCI, ALBC), occasional in open sedge meadow near Cedar Creek, N of Cloverdale Rd.
- P. serotina* Ehrh., Wild black cherry—283 (PCCI, ALBC), T, common at periphery of swamps.
- P. virginiana* L., Choke cherry—54 (PCCI, ALBC), in disturbed thicket along trail just N of Cloverdale Rd.
- **Rosa multiflora* Murray, Multiflora rose—131 (PCCI, ALBC), near entrance to trail S of Cloverdale Rd. in disturbed parking area.
- R. palustris* Marsh., Swamp rose—197 (PCCI, ALBC), occasional in sedge meadows and swampy thickets S of Brewster Lake. Rare in conifer swamps.
- **Rubus alleghaniensis* Porter, Common blackberry—102 (PCCI, ALBC), trailside in esker woods S of Cloverdale Rd.
- **R. occidentalis* L., Black raspberry—159 (PCCI, ALBC), disturbed thicket near Cloverdale Rd.

R. pubescens Raf., Dwarf raspberry—77 (PCCI, ALBC), 332, 350 (ALBC), CT, common in conifer swamps.

**R. strigosus* Michaux, Wild red raspberry—202 (PCCI, ALBC), moist thickets S of Brewster Lake.

RUBIACEAE

Galium aparine L., Bedstraw—30, 43 (PCCI, ALBC), 440 (ALBC), CT, common in woods and swamps throughout.

G. asprellum Michaux, Rough bedstraw—185, 192 (PCCI, ALBC), common in sedge meadows and marshy areas.

G. circaezans Michaux, Bedstraw—321 (PCCI, ALBC), common in lightly wooded area S of Pierce Lake.

**G. labradoricum* (Wiegand) Wiegand, Bedstraw—117 (PCCI, ALBC), lakeside fen.

Mitchella repens L., Partridge-berry—292 (PCCI, ALBC), CT, common in upland woods and in swamps.

RUTACEAE

Zanthoxylum americanum Miller, Prickly-ash—7, 288 (PCCI, ALBC), thickets in moist areas throughout.

SALICACEAE

**Populus balsamifera* L., Balsam poplar—Skean 4068 (PCCI, ALBC), local in moist swales.

P. deltoides Marsh., Cottonwood—280 (PCCI, ALBC), common.

P. grandidentata Michaux, Bigtooth aspen—91 (PCCI, ALBC), colony near man-made wetland, S of Cloverdale Rd., near creek.

**Salix bebbiana* Sarg., Beaked willow—49, 284 (PCCI, ALBC), T, occasional shrub in large sedge meadow N of Cloverdale Rd., W of Cedar Creek. Also occasional in swamps.

S. discolor Muhl., Pussy willow—52, 93 (PCCI, ALBC), 481 (ALBC), common in sedge meadows, moist thickets, and swamps.

**S. exigua* Nutt., Sandbar willow—68 (PCCI, ALBC), common in moist thicket N of Cloverdale Rd.

SAXIFRAGACEAE

Mitella diphylla L., Bishop's-cap—42 (PCCI, ALBC), CT, common in conifer swamps S of Cloverdale Rd.

M. nuda L., Naked mitrewort—40 (PCCI, ALBC), CT, common in conifer swamps S of Cloverdale Rd.

Parnassia glauca Raf., Grass-of-parnassus—269 (PCCI, ALBC), occasional patches in lakeside fen N of Cloverdale Rd.

Saxifraga pensylvanica L., Swamp saxifrage—74 (PCCI, ALBC), occasional in seepy sedge meadows and thickets.

SCROPHULARIACEAE

Agalinis purpurea (L.) Pennel, Gerardia—263 (PCCI, ALBC), common in fen at Brewster Lake.

Chelone glabra L., Turtlehead—249 (PCCI, ALBC), common in moist thickets.

**Mimulus ringens* L., Monkey-flower—222 (PCCI, ALBC), uncommon in low spots in ditch along Cloverdale Rd., growing among sedges.

**Pedicularis canadensis* L., Lousewort—48 (PCCI, ALBC), local in woods on N edge of esker N of Cloverdale Rd.

P. lanceolata Michaux, Swamp lousewort—250 (PCCI, ALBC), common in moist thickets and fen near Brewster Lake.

Verbascum thapsus L., Mullein—215 (PCCI, ALBC), Skean 4042 (PCCI, ALBC), common in disturbed, sandy soil on ridge N of Batts Cottage.

**Veronica arvensis* L., Field speedwell—47 (PCCI, ALBC), in disturbed areas along trail on esker N of Cloverdale Rd.

**V. serpyllifolia* L., Thyme-leaved speedwell—339 (ALBC), C, uncommon creeping plant in cedar swamp.

SPARGANIACEAE

Sparganium eurycarpum Engelm., Bur-reed—191 (PCCI, ALBC), uncommon along small streamlet S of Brewster Lake.

TILIACEAE

**Tilia americana* L., Basswood—295 (PCCI, ALBC), CT, common in upland woods. Occasional in swamps.

TYPHACEAE

Typha latifolia L., Common cat-tail—200 (PCCI, ALBC), T, common around Brewster Lake. Also in tamarack swamp openings.

ULMACEAE

Ulmus americana L., American elm—282 (PCCI, ALBC), CT, small trees common in conifer swamps. Many trees dead/dying.

URTICACEAE

Boehmeria cylindrica (L.) Sw., False nettle—187 (PCCI, ALBC), T, common in sedge meadows. Occasional in open tamarack swamps.

**Laportea canadensis* (L.) Wedd., Wood nettle—210 (PCCI, ALBC), *Skean 4078* (PCCI, ALBC), CT, common in hilly woods N of Brewster Lake. Also in wetlands.

Pilea fontana (Lunell) Rydberg, Clearweed—*Skean 4073* (PCCI, ALBC), T, common on shore of Brewster Lake.

Urtica dioica L., Stinging nettle—211 (PCCI, ALBC), *Skean 4061* (PCCI, ALBC), uncommon in hilly woods N of Brewster Lake. Also in disturbed soil near barn.

VALERIANACEAE

**Valeriana uliginosa* (T. & G.) Rydb., Swamp valerian—128 (PCCI, ALBC), rare in springy open area on W shore of Brewster Lake.

VERBENACEAE

Phryma leptostachya L., Lopseed—205 (PCCI, ALBC), *Skean 4088* (PCCI, ALBC), common in mature hilly woods N of Brewster Lake.

Verbena hastata L., Blue vervain—225 (PCCI, ALBC), common in sedge meadows.

VIOLACEAE

Viola blanda Willd., Sweet white violet—1 (PCCI, ALBC), locally common in thicket near Brewster Lake, near trail.

V. canadensis L., Canada violet—32 (PCCI, ALBC), common in mature woods N of Brewster Lake.

V. conspersa Reichb., Dog violet—3 (PCCI, ALBC), *Skean 4021* (PCCI, ALBC), moist thickets.

V. cucullata Aiton, Marsh violet—75, 121 (PCCI, ALBC), common in sedge meadows and seepages.

V. pubescens Aiton, Yellow violet—9 (PCCI, ALBC), common in woods and thickets.

V. rostrata Pursh, Long-spurred violet—36 (PCCI, ALBC), *Skean 4023* (PCCI, ALBC), common in woods on esker S of Cloverdale Rd.

V. sororia Willd., Common blue violet—4 (PCCI, ALBC), large clumps in thicket near entrance trail N of Brewster Lake.

**V. striata* Aiton, Cream violet—2 (PCCI, ALBC), clumps in thickets near trail entrance N of Cloverdale Rd.

VITACEAE

**Parthenocissus quinquefolia* (L.) Planchon, Virginia creeper—364 (ALBC), CT, common in conifer swamps.

**Vitis labrusca* L., Fox grape—*Skean 4062* (PCCI, ALBC), occasional near N trail along Cloverdale Rd.

V. riparia Michaux, Grape—*Skean 4091* (PCCI, ALBC), near Brewster Lake at canoe landing.

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