

Flora Conservanda: New England.

Flora Conservanda: New England.  
 The New England Plant Conservation Program (NEPCoP)  
 List of Plants in Need of Conservation.

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Abstract. The New England Plant Conservation Program (NEPCoP) regional rare plant list, "Flora Conservanda: New England," identifies vascular plant taxa in need of regional conservation. In 1993, NEPCoP established a Listing Committee consisting of representatives of each of the six state Natural Heritage Programs (NHPs) and additional scientists. The most current information on the rare vascular flora of each state, stored at the respective NHPs, was used as the basis of the NEPCoP List. The List comprises 576 taxa in five divisions: Division 1—Globally Rare Taxa (57 taxa); Division 2—Regionally Rare Taxa (273 taxa); Division 3—Locally Rare Taxa (75 taxa); Division 4—Historic Taxa (55 taxa); and Division Indeterminate (IND.)—116 taxa.

Key Words: NEPCoP, New England, conservation, endangered species, plants, regional plant program, Flora Conservanda, regional conservation list

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The New England Plant Conservation Program (NEPCoP), a voluntary collaboration of botanists, state and federal agencies, and conservation organizations in each of the New England states, was initiated by the New England Wild Flower Society (NEWFS) in 1991. The goals of NEPCoP are to prevent the extirpation and promote the recovery of the endangered flora of New England (New England Wild Flower Society 1992). The Program provides regional coordination for state-based plant conservation efforts to make best use of limited resources. NEPCoP was initiated for several reasons: 1) on a global and regional scale, plant species are under extreme threat; 2) a lack of public awareness concerning the importance of plants has contributed to plant endangerment; and 3) there is inadequate support for plant conservation activities from both the public and private sector.

The Program is administered by a Regional Advisory Council, Task Forces in the six New England states, and NEWFS. The Council, consisting of representatives from each state Task Force, members of the Board of Trustees at NEWFS, and other representatives from other conservation organizations, convenes as necessary to monitor and advise the overall Program. The Council sets policy for regional plant conservation, oversees development of the “Flora Conservanda: New England,” and selects priority species for conservation action throughout the region.

State Task Forces are the heart of the program. Each Task Force, comprised of individuals knowledgeable of the state's flora, selects populations of priority species to be surveyed and directs conservation actions. The Task Forces meet at least once annually to discuss progress and set conservation agendas.

NEPCoP integrates in situ with ex situ conservation methods.

1) In situ methods. The best method for conserving plants is to protect the habitats where wild populations occur. Protection of land in itself, however, may not ensure the perpetuation of plant populations. Changes in habitats over time may necessitate management in order to preserve rare species. Members of each state's Task Force survey occurrences of rare plants, identify threats, and make suggestions for future management.

2) Ex situ methods. As a complement to protection and management of wild plant populations, plant propagules are collected from selected populations for seed banking, research, and public education. A seed bank of endangered species has been established at Garden in the Woods, the botanic garden of the New England Wild Flower Society in Framingham, Massachusetts, as a backup in the event of catastrophic loss in the wild. Seeds are collected from vulnerable populations of priority species as determined by each state Task Force. The number of populations sampled depends on many factors including the size and number of occurrences within each state, the type of land ownership, and each species' potential for successful seed banking.

An important part of the seed banking process is research on the propagation and cultivation of rare plant species. As seeds are tested for banking, the optimal propagation methods for each species are researched, and any plants produced can be made available for research. Most importantly, this propagation research provides information that can be applied to management of wild populations as well as propagules for reintroduction if deemed necessary. In addition, plants obtained through propagation research become part of the collection of the New England Garden of Rare and Endangered Plants, also maintained at the Garden in the Woods. This collection is an educational display for the public and a genetic resource for conservation and research.

Realizing that continual monitoring of all regional rare plant populations will not be accomplished by the currently limited number of professionals, NEPCoP has instituted a pilot program of Volunteer Rare Plant Monitors. This program, at present in Massachusetts only, trains volunteers to survey rare plant occurrences. The initial results have been impressive and the expansion of this program both within Massachusetts and throughout the region is anticipated.

New England states have had a strong interest in conservation of the native flora for many years. Connecticut passed a law in 1868 to protect the Hartford Fern, Lygodium palmatum (Mehrhoff 1980), which may be the earliest legal attempt at conservation of plants for aesthetic interest rather than for utilitarian reasons.

The New England Botanical Club (NEBC) formed its first conservation committee, the Natural Areas Criteria Committee, in 1971. The Endangered Species Committee was an offshoot of this initiative and in 1975 began the preparation of individual state reports of rare and endangered vascular plants with the support of the U. S. Fish and Wildlife Service. These reports included: Maine (Eastman 1978), New Hampshire (Storks and Crow

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1978), Vermont (Countryman 1978), Massachusetts (Coddington and Field 1978), Rhode Island (Church and Champlin 1978), and Connecticut (Mehrhoff 1978).

These state lists served as a basis for the NEBC regional list (Crow et al. 1981). This regional list included 479 taxa, the majority of which were either “E/T” (Endangered/Threatened - 337 taxa) or “R” (Rare - 133 taxa). Taxa designated as “E/T” were documented from 10 or fewer towns and “R” were documented from 10 to 20 towns. In addition, other designations, such as federal status or consideration, were included. Occurrences for each taxon within each state were noted by a variety of designations.

The 1981 list was “based, in large part, on historical records documented by specimens in herbaria” (Crow et al. 1981). Prior to this publication there had been little concerted effort to collect or document regionally rare taxa, and the NEBC committee was faced with the daunting task of determining which taxa were rare throughout the region. This was accomplished using the first-hand knowledge of state experts, information culled from the literature, and selective checking of herbarium records. Often, there was no way to ascertain the current status of a taxon with only specimens and literature.

Beginning in 1978, The Nature Conservancy facilitated the establishment of state Natural Heritage Programs (or their equivalent) in each of the New England states. Similar programs already existed in some states. These Programs undertook and encouraged intensive field work in their respective states, resulting in many new or updated records for rare taxa. Because of this field work, many individual state lists were refined to reflect the more current status information. Some taxa remained elusive or showed a decline while others were shown to be more common and were removed from state lists. During the 1980s, most New England states formulated state laws regarding rare or endangered plants (see Appendix I for current state laws).

DEVELOPMENT OF THE NEPCoP “FLORA CONSERVANDA: NEW ENGLAND”

**Purposes.** In order to guide regional efforts, NEPCoP first needed to identify species and populations of regional conservation concern. Towards this end, a Listing Committee of the Regional Advisory Council was formed to develop and maintain a regional list of plants known as “Flora Conservanda: New England” (often referred to as the NEPCoP List).

In addition to identifying taxa and populations of regional conservation concern, the NEPCoP List is intended to promote the resolution of nomenclatural and taxonomic vagaries or problems and to suggest priorities for protection at both the species and population levels. It is hoped that it will aid the development of priorities for research, protection, and recovery on a regional basis, and help states to coordinate their individual species conservation efforts. The NEPCoP List differs from state and federal lists in two ways: first, it provides a regional (New England) perspective on the conservation status of each taxon; second, it has no legal standing. (Legal protection or status, however, may be afforded a taxon within an individual state or through the federal government.)

The NEPCoP List focuses on taxa that are globally and regionally rare (Divisions 1 and 2). It also identifies taxa that may be common throughout a significant portion of the region, but that have occurrences of conservation importance owing to their biological, ecological or (potential) genetic significance (Division 3). It further identifies taxa which are considered historic in the region (Division 4) as well as those which may be rare throughout New England, but for which taxonomic or distributional information is insufficient to determine status (Division IND.).

The List is intended to be useful to the following: 1) NEPCoP State Task Forces in selecting species for conservation; 2) scientists in focusing efforts on critical species; 3) federal, state, and local government agencies and private land conservation organizations in identifying the most important taxa to protect and manage within the region; and 4) the public in supporting conservation efforts.

**Methods.** “Flora Conservanda: New England” was developed by a Listing Committee consisting of representatives of each of the six state Natural Heritage Programs (NHPs), and several other botanists familiar with the regional flora. The most current information regarding the distribution and status of the rare vascular plants of

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each state is stored in their respective NHPs in a comprehensive Biological and Conservation Database (BCD) developed by The Nature Conservancy. The records maintained in the state databases constituted the basis for developing "Flora Conservanda: New England."

Each NHP monitors (tracks) a large number of species considered to be rare within its state. The initial compilation of the six state lists combined with the NEBC list (Crow et al. 1981) resulted in the identification of more than 1100 taxa. Approximately 200 additional taxa were reviewed by the Committee, as well. By developing strict definitions for the inclusion of a taxon within one of the five Divisions of "Flora Conservanda: New England," the Committee succeeded in identifying 576 taxa of highest regional concern out of a total of approximately 3024 indigenous or partly indigenous taxa in New England (Seymour 1969).

Determination for listing is based on the number of Element Occurrences (EO) within each state. The term was devised by The Nature Conservancy and is used in conservation as an alternative to "population." Populations of organisms often are difficult to delineate without intensive research, and use of the term "population" often implies that its limits are known. Somewhat broader in scope, an occurrence is defined as follows: "For species.... element occurrences represent the full occupied habitat (or previously occupied habitat) that contributes, or potentially contributes, to the persistence of the species at that location. EOs are separated from each other by substantial barriers to movement or dispersal, or by specific distances defined for each element across either unsuitable, or suitable but apparently unoccupied habitat." (The Nature Conservancy, Conservation Science Division, in association with the Network of Natural Heritage Programs and Conservation Data Centers 1997).

The state NHPs have made every attempt to verify the records included in the NEPCoP List. In some cases, certain occurrences were revisited during the development of the List with the intent of assessing current status and updating existing NHP files.

Herbarium specimens have been crucial to the preparation of "Flora Conservanda: New England" as vouchered records of occurrences included in the List. An herbarium specimen collected in New England exists for every taxon included in the NEPCoP List. These specimens have helped clarify taxonomic and distributional issues, and they exist as a permanent record of a plant's existence at a particular site and time.

All data included within "Flora Conservanda: New England" are current as of December 1995; in some cases, discoveries made during the 1996 field season are included. Occurrence numbers included in Divisions 1, 2, and 3 and IND. are for occurrences verified as extant since 1970. The database used for "Flora Conservanda: New England" was developed by BG-BASE, Inc., Holden Arboretum, Kirtland, Ohio.

The List is dynamic, and it is the intent of the Regional Advisory Council to update it every five years. To facilitate this process, the state NHPs are actively seeking information on the status of listed taxa. Corrections, comments, and additional information pertaining to any taxon already listed, or warranting listing, are solicited by the NHPs and NEPCoP.

**Nomenclature.** Precise nomenclature for each taxon was of paramount concern for the Listing Committee because of the diverse audience of anticipated users and the plethora of potential identification manuals and field guides. No single reference is used by botanists, conservationists, government officials, and wildflower enthusiasts throughout New England. The late Arthur Cronquist's recent manual (Gleason and Cronquist 1991) likely will become a standard reference, but nomenclature in this manual does not in all instances match names used in some recent state checklists, i.e., "Checklist of the Vascular Plants of Maine" (Campbell et al. 1995). Furthermore, some state Natural Heritage Programs use names suggested by the national office of The Nature Conservancy which follows Kartesz (1994).

NEPCoP's Regional Advisory Committee adopted the following policy for nomenclature (New England Wild Flower Society 1992):

1) The primary source is to be the Flora of North America (FNA), a multi-year, multi-volume endeavor. As of this writing, only the volume covering the Pteridophyta and Pinophyta has been published (Flora of North America Editorial Committee 1993). A second volume, covering the Magnoliidae and Hamamelidae of Cronquist (1981), is in press.

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2) Secondary sources are to be the authors of taxonomic treatments for future volumes of FNA. Although changes in nomenclature are possible through the editing and review phases of the preparation of each volume, it is expected that most of these names are likely to pass the rigorous review of the FNA Editorial Committee and their reviewers. Consequently, for difficult taxonomic groups, every effort was made to contact authors of future treatments of FNA (see Acknowledgments). In some instances, however, authors have not yet been selected by the FNA editorial committee. When the nomenclature to be used in future FNA treatments coincided with that of a published source, the existing publication is cited as the primary source of the name.

3) The tertiary source for nomenclature is Gleason and Cronquist (1991), the most recent floristic manual available for New England. Although most of this work provides an acceptable taxonomic reference, treatments such as those for Viola and Scirpus (sensu lato) pose problems. Viola novae-angliae and Scirpus ancistrochaetus, acknowledged by other sources including the U.S. Fish and Wildlife Service, have been included in other wide-ranging, polymorphic taxa in this manual. Similarly, other treatments do not follow current thought: e.g., the use of Lycopodium instead of the separate genera Lycopodium, Diphasiastrium, Huperzia, Lycopodiella, and Pseudolycopodiella (as cited by Flora of North America Editorial Committee 1993) or Habenaria as opposed to the currently widely accepted Platanthera.

Three important references were not chosen as standards for nomenclature, although they are often cited in the NEPCoP List. Merritt Lyndon Fernald's Gray's Manual of Botany (Fernald 1950), although still used by many field botanists because of its thoroughness, is not current in nomenclature, taxonomy, or descriptions of plant distribution. The Flora of New England (Seymour 1969) was derived primarily from the study of herbarium specimens, and although it is extremely helpful in visualizing plant distribution, it essentially follows the taxonomic treatments found in Gray's Manual of Botany (Fernald 1950). A Synonymized Checklist of the Vascular Flora of the United States, Canada, and Greenland (Kartesz 1994) had not been published at the time this project was started. Moreover, most of the intended audience for the NEPCoP List is not likely to have easy access to this work, which does not contain keys to aid in field identification. Fortunately, many of the names used in the NEPCoP List are the same as in Kartesz (1994), which is an especially valuable reference because of its nomenclatural accuracy.

To increase the utility of "Flora Conservanda: New England," identification manuals and widely reviewed regional floristic treatments are cited either as the primary name or in synonymy in order to facilitate field identification. Either the primary name or its synonym(s) usually can be found in at least one manual that contains a key. Each entry includes preferred synonyms used by one or more of the six New England states. The synonymy is not intended to be complete. An Index to all names and synonyms used in the NEPCoP List follows the Appendices.

#### FORMAT OF THE NEPCoP LIST

**Divisions of the List.** "Flora Conservanda: New England" is divided into five divisions:

Division 1: Globally Rare Taxa occurring in New England. Taxa included in this Division are listed as Globally Rare (G1 through G3 or T1 through T3) by The Nature Conservancy (adapted from Master 1991 and The Nature Conservancy 1996; see Global Rank -GRank -explanations under Notes below or in Appendix II). Usually only a few occurrences of these taxa exist within our region, but New England does contain the majority of occurrences for a few of these highly ranked taxa. In some cases, taxa with GRanks that normally would place them in this division have taxonomic or other issues that make their current status in New England unclear, and the majority of these taxa have been placed in other divisions. GRanks for taxa in this division appear in the Notes section under each taxon in the list.

Division 2: Regionally Rare Taxa. These taxa have fewer than 20 current occurrences (seen since 1970) within New England. This division includes taxa which are rare throughout their range in all of New England as well as taxa that reach the edge of their distributional range in our region. It is important to conserve these edge-of-range occurrences as part of New England's natural heritage as well as to avoid further shrinkage of these species' entire ranges. A taxon with more than 20 occurrences in New England might also be included in Division 2 if a substantial number of occurrences contain small numbers of individuals making them more vulnerable to extirpation. These taxa are denoted as 2(a). All taxa in Division 2 have GRanks of G4 or G5 (see Appendix II for definitions).

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Division 3: Locally Rare Taxa. These taxa may be common in part of New England, but have one or more occurrences of biological, ecological, or possible genetic significance. For this division, only selected occurrences in a particular state are listed, not the entire taxon's occurrences throughout New England. A taxon may be listed as Division 3 in one or more states (designated by an \*), but is not considered to be regionally rare. An occurrence could be designated as Division 3 in a state if:

- 1) The occurrence is disjunct to such a degree that genetic isolation is likely (i.e., separated from other populations by more than 50 miles).
- 2) An occurrence represents an ecological anomaly for the taxon within the New England region (for example, an acid bog occurrence of a species that normally grows under calcareous conditions).
- 3) A significant number of a taxon's occurrences have demonstrably declined within the state (in which case the entire state's occurrences are considered to be in Division 3).

Note: The current distribution immediately outside New England, i. e., New York state and the Canadian provinces of Quebec and New Brunswick, was also considered in determination of disjunction. For example, an occurrence of a taxon in northern Maine that is disjunct from southern New England occurrences would not qualify for Division 3 if it was within 50 miles of an occurrence in New Brunswick or Quebec.

Division 4: Historic Taxa. Taxa that once existed in New England, but that have not been seen since 1970. The purpose of this division is to generate interest in re-locating these taxa if they still exist and to illustrate the level at which species have been lost from the region.

Division Indeterminate (IND.): Indeterminate Taxa. These taxa are under review for inclusion in one of the above divisions, but issues of taxonomy (at least for New England occurrences), nomenclature, or status in the wild are not clearly understood. The purpose of this division is to stimulate interest in taxonomic research and/or field surveys for these taxa.

**Structure of the List.** The NEPCoP List is divided into 8 columns. Taxa are listed alphabetically by family, alphabetically by genus within each family, and alphabetically by species within each genus.

Column 1 contains the name of the taxon, the author, and source of the name (number in parentheses). Synonyms are listed in italics below the taxon with the source of the name (number in parentheses) and the state using the synonym [in brackets]. For example:

**ALISMATACEAE**

*Echinodorus tenellus* (Martius) Buchenau (11)

*Echinodorus parvulus* (15) [MA]

*Echinodorus tenellus* var. *parvulus* (14) [CT]

Column 2, with the heading DIV, contains the NEPCoP Division. This may be 1,2,3\*,4, or IND. (see Divisions of the List above).

Columns 3-8 contain State Data (next six columns under abbreviated names of the states). Under each state are three blocks separated by vertical bars. If no data are present in any of the three blocks the taxon is not known to occur in that state. An asterisk is used when a state has occurrences of a taxon listed in Division 3.

The first block contains the number of currently extant (seen since 1970) occurrences of the taxon in that state. If the number of occurrences is more than 20, but not precisely known, a "+" is placed in this block. Typically, taxa with a "+" are considered common in the state and thus are not tracked by the NHP. Occurrences discovered or known prior to 1970, but not verified since 1970, are not considered current (but could possibly still be extant). If

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the taxon once was native in a state, but is not currently considered extant (not seen since 1970), it is designated with "H."

The second block contains the official State endangerment status of the taxon, (Endangered, Threatened, etc...). Depending on the state, this status may have a legal designation. Since the same code may have different meanings in different states, refer to the State status codes in Appendix I for the definition of these terms in each state. Please note that the codes used by some states have been modified in this List for consistency and clarity.

The third block contains the State Rank (SRank) as defined by The Nature Conservancy (adapted from Master 1991 and The Nature Conservancy 1996). This generalized ranking is based on the number of individuals, number of occurrences, and other factors contributing to the vulnerability of a taxon within each state. The SRank codes used in this List are cited in Appendix III, but the most commonly used codes are:

S1 = generally 1-5 occurrences in the state.

S2 = generally 6-20 occurrences in the state.

S3 = generally 21-100 occurrences in the state.

S4 = generally 101-1000 occurrences in the state.

SE = an exotic (non-native) species in the state.

SH = Historic - occurred historically (as a native species) in the state, but is not currently known to be extant in the state.

SU = State Unrankable -the status of the taxon is not known. In many instances where a taxon is ranked "SU," the number of occurrences of the taxon (if any) is not known.

SX = taxon is presumed extirpated in the state.

Notes under a taxon. Explanatory notes and additional information are added where necessary beneath the state data blocks. Included in this section is the taxon's Global Ranking or GRank. A species is given a Global Rank identified by a G followed by a number or symbol, and a subspecies or variety has a T followed by a number or symbol. (For example, Eupatorium leucolepis var. novae-angliae has a GRank of G5T1, which means that the species is secure globally, G5, but that the variety is critically imperiled globally, T1). In this List, GRanks are given only for those taxa with a GRank containing G1, G2, G3 or T1, T2, T3 (or a combination thereof). If no GRank is given, the taxon has a GRank of G4 or G5. See Appendix II for a complete list of GRank codes used in this List. Most commonly used ranks are:

G1= Critically imperiled globally (typically 5 or fewer occurrences globally).

G2 = Imperiled globally (typically 6 to 20 occurrences globally).

G3 = rare or uncommon but not imperiled globally (typically 21 to 100 occurrences globally).

G#G# = Numeric range rank: A range spanning two or more of the numeric ranks. Denotes range of uncertainty about the exact rarity (for example - G2G3).

G? = Unranked, Element is not yet ranked globally.

G#T# = for infraspecific taxa: the GRank applies to the full species. T = Taxonomic subdivision and the rank applies to the subspecies or variety.

T1, or T2, or T3 = same definitions as G1, G2, G3, but refers to a subspecies or variety.

T#T# = Numeric range rank: A range spanning two or more of the numeric ranks for a variety or subspecies. Denotes range of uncertainty about the exact rarity of variety or subspecies (for example - G5T2T3).

? = Inexact or uncertain (for example G3? or G5T3? means that the numeric ranking is uncertain).

Q = Questionable taxonomy: taxonomic status is questionable; numeric rank may change with taxonomy (for example, G4T3Q means that the taxonomy, in this case of the subspecies or variety, is questionable).

Also contained in the Notes section are codes used by the U.S. Fish and Wildlife Service (USFWS) under the provisions of the U.S. Endangered Species Act of 1973 (the Act), as amended. If a taxon is listed as Endangered or Threatened under the Act, LE (Listed Endangered) or LT (Listed Threatened) will appear in this column. Other designations include C2 for taxa that formerly were considered as candidate species for listing under the Act. This category has been discontinued under a notice of final decision published in 1996 (U.S. Fish and Wildlife Service 1996). Also included are codes for taxa no longer under consideration by the USFWS. These

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designations (3A, 3B, and 3C) have been discontinued also. See Appendix IV for a complete listing of Federal codes used in this List.

DISCUSSION

Lists of this nature frequently point to the need for additional work. The process of compiling "Flora Conservanda: New England" demonstrated to the Listing Committee the obvious need for protection and management for many taxa and their occurrences. The process also emphasized the need for additional field work to gather data on occurrence sizes and distributions. Unfortunately there are too few knowledgeable field botanists to cover the full extent of rare plants in New England. Volunteers must be sought and trained to help with this task. Basic botanical inventory is essential for an accurate understanding of the true rarity of listed taxa as well as for interpreting population trends over time.

Two areas where additional work is needed became apparent as the Listing Committee worked on "Flora Conservanda: New England." First, many taxonomic questions concerning the New England flora remain unanswered; many of these center on infraspecific taxa. Entities observable in the field (and often named by New England's most famous student of its flora - Merritt L. Fernald) should be studied using current tools and methodologies in order to resolve taxonomic issues. For example, is Eupatorium perfoliatum var. colpophilum a "good" variety or an ecomorph? Is Cardamine longii a "good" species? A particularly perplexing taxonomic issue involves Bidens heterodoxa. Cronquist (Gleason and Cronquist 1991) mentions this taxon (under B. connata), but does not include it as a distinct species as he does for B. eatonii or B. hyperborea (which are present on the NEPCoP List). He states that B. heterodoxa consists of a series of rare and local populations. Should B. heterodoxa be afforded the same protection as listed taxa? The resolution of these questions is not merely an academic exercise but helps to assure the best use of limited conservation resources.

Similarly, hybrids and the hybrid nature of some taxa need clarification. Is a hybrid sterile or fertile? Do both sterile and fertile hybrids deserve protection? Some scientists argue for protection of sterile hybrids because of the possibility of ploidy shift that will allow a polyploid to become fertile. In the NEPCoP List we have included hybrid taxa considered to be nothotaxa (a nomenclatural term that defines species of hybrid origin whose names include all the offspring including backcrosses). We also have listed sterile hybrids in some instances in order to raise the issue of their protection.

Equally important is the need for nomenclatural study. Often, the Committee was faced with a choice of names for a given taxon. Frequently exacerbating this problem was the issue of unclear synonymy. Moreover, different manuals and reference works sometimes use different names for what appears to be the same taxon.

Occasionally, both taxonomy and nomenclature were unclear. For example, the taxon called Puccinellia tenella var. alascana is an extreme example of a taxon that was placed in the Division IND. (Indeterminate) because of unclear nomenclature and taxonomic circumscriptions. Equally confusing are some taxa in the genera Panicum and Viola.

The Listing Committee hopes that by focusing attention on these issues, clarification by the scientific community will follow. Ideally, many of the issues regarding field status, taxonomy, and nomenclature that are highlighted by the publication of "Flora Conservanda: New England" will have been addressed by scientists before the next iteration of the List, anticipated in the year 2002. The ongoing publication of Flora of North America also will provide guidance.

The NEPCoP List contains 576 taxa in the following divisions: Div. 1 - Globally rare = 57 taxa; Div. 2 - Regionally rare = 273 taxa; Div. 3 - Locally rare = 75 taxa; Div. 4 - Historic = 55 taxa; and Div. IND. - Indeterminate = 116 taxa.

In comparison, the NEBC regional list (Crow et al. 1981) included 479 taxa, the majority of which were designated "E/T" (Endangered/Threatened - 337 taxa) or "R" (Rare - 133 taxa). Taxa designated as "E/T" were documented from 10 or fewer **towns** and "R" were documented from 10 to 20 **towns**. Because different criteria were used to create the 1981 NEBC list and the NEPCoP List, comparisons are difficult. The two major differences are:



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1) The NEBC list used **towns** as a criterion in contrast with current **occurrences** in the NEPCoP List. Theoretically, a taxon could appear on the NEBC list because it was found in fewer than 20 towns in New England, but since there could be more than one occurrence in a town it theoretically might not appear on the NEPCoP List in Division 1 or Division 2. The taxon could, however, still appear in another NEPCoP division (i. e., Division 3 or Division IND.).

2) The NEPCoP List uses **current** occurrence data. Since 1970 was used as the cutoff date for current occurrences in the NEPCoP List, only occurrences actually verified since that date have been included. In contrast, the NEBC list used herbarium specimens as the primary source for deriving the list (Crow et al. 1981). Although some field investigations were conducted, many of the specimens which counted towards the inclusion (or exclusion) of a taxon in the NEBC list were collected prior to 1970. These historic (by NEPCoP standards) occurrences were not considered as currently extant in the NEPCoP evaluation of the region's rare flora. These occurrences either have been re-located (and thus are considered current) or considered not to be extant .

Discounting synonymy, as well as taxonomic and nomenclatural changes, there are 221 taxa on the NEPCoP List that did not appear on the NEBC list. Seventy-three of these appear in Division 1 or Division 2, indicating that these taxa currently appear to be more rare than previously thought. Seventy-eight taxa on the NEPCoP List as Division IND. (Indeterminate) did not appear on the NEBC list. This shows, perhaps, that as our knowledge about the rarity of the New England flora has increased, so has the realization that there are many taxa whose field status or taxonomy (at least in New England) is still unclear. Also, there are 14 taxa on the NEPCoP List in Division 4 as Historic in New England that did not appear on the NEBC list. Their appearance on the NEPCoP List is partly a function of the 1970 cutoff date, but also reflects our increased knowledge of the flora through field work of the state Heritage Programs, The Nature Conservancy, NEPCoP, NEBC, and other organizations. On the other hand, discounting synonymy as well as nomenclatural and taxonomic changes, there are 38 taxa on the NEBC list that do not appear on the NEPCoP List. Considered more common by NEPCoP standards, their exclusion is again the result of increased field work and data collection.

#### RECOMMENDATIONS

Because of differences in the criteria used to create the NEPCoP and NEBC lists, we cannot state with certainty that rare plant species have declined in New England in the interim between the publication of the two lists. While comparisons are difficult, anecdotal information and field observations suggest a decline in the number of current occurrences for many taxa. This trend is substantiated by a number of occurrences that have not been re-located despite intensive field searches.

The publication of "Flora Conservanda: New England" provides baseline data to judge the future status of rare species. In order to protect New England's flora the cooperation of many individuals and organizations will be necessary. The NEPCoP List is a good example of such cooperation that combines institutional resources and interests to further conservation goals. NEPCoP recommends that the rare taxa (or occurrences, in the case of Division 3 taxa) be monitored at regular intervals as part of a regional conservation plan. Such a plan would also include habitat protection, management of existing occurrences, seedbanking, and enhancement, reintroduction, or introduction if deemed necessary. Field investigations and/or taxonomic study of Indeterminate taxa (Division IND.) are needed to determine the conservation status of more than 100 taxa in this Division. It is hoped that the NEPCoP List will focus research attention on these problematic taxa.

Flora Conservanda: New England.

FLORA CONSERVANDA: NEW ENGLAND

| NAME   | Div  | ME   | NH          | VT      | MA       | RI           | CT      |
|--|------|--|-------------|---------|----------|--------------|---------|
| <b>ACANTHACEAE</b>   |      |  |             |         |          |              |         |
| <i>Justicia americana</i> L.) M.Vahl (14)  | 4    |  |             | [H]  SH |          |              |         |
| <b>ADIANTACEAE</b>   |      |  |             |         |          |              |         |
| <i>Adiantum aleuticum</i> (Ruprecht)<br>Paris (12)   | 2    | 1 E S1   |             | 3   S1  |          |              |         |
| <i>Adiantum viridimontanum</i><br>Paris (12)   | 1    |  |             | 7 T S2  |          |              |         |
|  |      | GRank = G1.  |             |         |          |              |         |
| <b>ALISMATACEAE</b>  |      |  |             |         |          |              |         |
| <i>Echinodorus tenellus</i> (Martius)<br>Buchenau (11)<br><i>Echinodorus parvulus</i> (15) [MA]<br><i>Echinodorus tenellus</i> var. <i>parvulus</i><br>(14) [CT] | 1    |  |             |         | [H]  SX  |              | 1 E S1  |
|  |      | GRank = G3. GRank is based on synonym, <i>E. parvulus</i> .  |             |         |          |              |         |
| <i>Sagittaria rigida</i> Pursh (14)  | 3*   | 3 E S1 *   | SU          | +   S3  | 6+ WL S2 | SU           | SU      |
|  |      | Disjunct occurrences in Sagadahoc County, Maine.   |             |         |          |              |         |
| <i>Sagittaria subulata</i> (L.) Buchenau<br>(14)   | 2    |  |             |         | 2 E S1   |              |         |
|  |      | 14 SC S3   |             |         |          |              |         |
| <i>Sagittaria teres</i> S. Watson (14)   | 1    |  |             |         | 54 SC S3 | 3 E S1       |         |
|  |      | GRank = G3.  |             |         |          |              |         |
| <b>AMARANTHACEAE</b>   |      |  |             |         |          |              |         |
| <i>Amaranthus pumilus</i> Raf. (14)<br>* SH  | 4    |  |             |         | [H]  SH  | [H]  SH   SH | [H]  SC |
|  |      | GRank = G2; Fed. code = LT.  |             |         |          |              |         |
| <i>Amaranthus tuberculatus</i> (Moq.)<br>Sauer (14)  | 2    | SE   | SU          | 6   S2  | SE       |              | SE      |
|  |      | Considered adventive in most of New England, but apparently native in Vermont and perhaps New Hampshire. |             |         |          |              |         |
| <b>APIACEAE</b>  |      |  |             |         |          |              |         |
| <i>Angelica lucida</i> L. (14)<br><i>Coelopleurum lucidum</i> (11) [CT]  | IND. | [?]  SU  | [?]  SU     |         | 9 WL S2  | 2 T S1       | 3 E S1  |
|  |      | More field work needed. Not currently tracked in northern states.  |             |         |          |              |         |
| <i>Angelica venenosa</i> (Greenway)<br>Fern. 14)   | 4    |  |             |         | [H]  SX  |              | SU      |
| <i>Hydrocotyle verticillata</i> Thunb.<br>(14)   | 2    |  |             |         | 14 SC S2 | [H]  H   SH  | [H]  SH |
| <i>Lilaeopsis chinensis</i> (L.) Kuntze.<br>(14)   | 3*   | 5 T S1 *   | 6 T S2      |         | 9 WL S2  |              |         |
|  |      | 10 SC S3 <br>Disjunct occurrences in Sagadahoc and York counties, Maine.                                 |             |         |          |              |         |
| <i>Osmorhiza chilensis</i> Hook. &<br>Arn. (14)<br><i>Osmorhiza berteroi</i> (1) [ME]  | 2    | 11+ T S2   | [H]  E   SH | [H]  SH |          |              |         |
| <i>Osmorhiza depauperata</i> (14)<br><i>Osmorhiza obtusa</i> (11) [VT]   | 4    |  |             | [H]  SH |          |              |         |
| <i>Sanicula canadensis</i> L. (14)   | 2    |  | [H]  SH     | 9 T S2  | 8 T S2   |              | SU      |
| <i>Taenidia integerrima</i> (L.) Drude<br>(14)   | 2    |  |             | 7 T S2  | [H?]  S? | [H]  H   SH  | 1 SC S1 |
|  |      | Reported in 1913 from Massachusetts, but no specimen has been seen.                                      |             |         |          |              |         |
| <i>Zizia aptera</i> (Gray) Fern. (14)  | 2    |  |             |         |          | [H]  H   SH  | 3 E S1  |

| NAME  | Div  | ME       | NH     | VT     | MA        | RI      | CT     |
|---|------|----------|--------|--------|-----------|---------|--------|
| <b>AQUIFOLIACEAE</b>  |      |          |        |        |           |         |        |
| <i>Ilex ambigua</i> Torr. var. <i>montana</i><br>Ahles (13)<br><i>Ilex montana</i> (11) [MA]  | 2    |          |        |        | 3 T S2    |         |        |
| <i>Ilex glabra</i> (L.) Gray (14)   | 3*   | 1 E S1 * | H E SH |        | + S4      | + S3    | 3 T S1 |
| One disjunct occurrence in Knox County, Maine.  |      |          |        |        |           |         |        |
| <b>ARISTOLOCHIACEAE</b>   |      |          |        |        |           |         |        |
| <i>Aristolochia serpentaria</i> L. (14)   | 2    |          |        |        |           |         | 6 T S2 |
| <b>ASCLEPIADACEAE</b>   |      |          |        |        |           |         |        |
| <i>Asclepias purpurascens</i> L. (14)   | 2    |          | H SH   |        | 2 T S1    | H SH    | H SH   |
| <i>Asclepias tuberosa</i> L. (14)   | 3*   | H SX     | H E SH | H T SH | + WL S3 * | 8 C S2  | + S4   |
| Documented decline of native stands in Massachusetts and possibly other states.<br>May be subject to overcollection in some areas.  |      |          |        |        |           |         |        |
| <i>Asclepias variegata</i> L. (14)  | 2    |          |        |        |           |         | 1 E S1 |
| <i>Asclepias viridiflora</i> Raf. (14)  | 4    |          |        |        |           |         | H SC   |
| * SH  |      |          |        |        |           |         |        |
| <b>ASPENIACEAE</b>  |      |          |        |        |           |         |        |
| <i>Asplenium montanum</i> Willd. (11)   | 2    |          |        | 1 T S1 | 3 E S1    | 1 E S1  | 6 T S2 |
| <i>Asplenium trichomanes-ramosum</i> L.<br>(12)<br><i>Asplenium viride</i> (14) [VT]  | 2    | 1 E S1   |        | 4 T S1 |           |         |        |
| <b>ASTERACEAE</b>   |      |          |        |        |           |         |        |
| <i>Achillea borealis</i> Bong. (11)<br><i>Achillea millefolium</i> var.<br><i>nigrescens</i> (14)[ME]<br><i>Achillea millefolium</i> var.<br><i>borealis</i> (15) [MA]    | IND. | 1 ? SH   | 1 SU   |        | SE?       |         |        |
| Considered introduced in Massachusetts, but not currently known to be extant.<br>Taxonomic and nomenclatural confusion with certain varieties of <i>A. millefolium</i> .  |      |          |        |        |           |         |        |
| <i>Arnica lanceolata</i> Nutt. (14)<br><i>Arnica mollis</i> (11) [VT]   | 1    | <6 S2    | 2 T S1 | H SH   |           |         |        |
| GRank = G3.   |      |          |        |        |           |         |        |
| <i>Artemisia campestris</i> L.<br>ssp. <i>borealis</i> (Pallas) Hall & Clem.<br>(13)<br><i>Artemisia campestris</i> var.<br><i>canadensis</i> (14)                        | 2    | H SH     |        | 3 S1   | 1 E S1    |         |        |
| <i>Artemisia campestris</i> L. ssp.<br><i>caudata</i> (Michx.) Hall & Clem. (14)  | 3*   | + SU     | 8 T S2 | 2 S1 * | + S4      | 3 C S1  | + S4   |
| Disjunct occurrences in Grand Isle County, Vermont.   |      |          |        |        |           |         |        |
| <i>Aster anticostensis</i> Fern. (14)   | 4    | H SX     |        |        |           |         |        |
| GRank = G2Q. Cronquist (Gleason and Cronquist, 1991) mentions this taxon, but does not formally include it in his treatment. The northeastern Maine locality is historic. |      |          |        |        |           |         |        |
| <i>Aster concolor</i> L. (14)   | 2    |          |        |        | 9 E S2    | H SH SH |        |
| <i>Aster dumosus</i> L. (14)  | 3*   | 2 E S1 * | SU     |        | + S4      | + S4    | + S5   |
| Disjunct occurrences in York and Oxford counties, Maine.  |      |          |        |        |           |         |        |
| <i>Aster infirmus</i> Michx. (14)   | 2    |          |        |        | 3 E S1    | H SH SH | H SH   |
| <i>Aster praealtus</i> Poirlet (14)   | IND. | H ? SU   | ? SU   |        | H SX      | H SH    | SU     |
| Difficult to distinguish from other closely related taxa; more field work needed.   |      |          |        |        |           |         |        |

| NAME   | Div  | ME        | NH     | VT       | MA        | RI      | CT      |
|--|------|-----------|--------|----------|-----------|---------|---------|
| Aster prenanthoides Muhl. (14)<br>* SH   | 2    |           |        |          | 8 SC S2   |         | H SC    |
| Aster sagittifolius Willd. (14)  | 2    |           |        | 1   S1   |           |         |         |
| Bidens eatonii Fern. (14)  | 1    | 5 T S1    |        |          | 2 T S2?   |         | 3 SC S1 |
| Bidens heterodoxa (Fern.) Fern.<br>& St. John (11)   | IND. |           |        |          |           |         | H   SH  |
| Bidens hyperborea Greene (15)<br><i>Bidens hyperborea</i> var.<br><i>colpophila</i> (11) [MA]                            | 2    | 11 T S1S2 |        |          | 2 E S1    |         |         |
| Bidens hyperborea Greene var.<br>svensonii Fassett (1)<br><i>Bidens hyperborea</i> var.<br><i>cathancensis</i> (11)      | IND. | ?   SU    |        |          |           |         |         |
| Cacalia suaveolens L. (14)<br>* SH <br><i>Synosoma suaveolens</i> (15) [MA]  | 4    |           |        |          | SE        | H SH SH | H SC    |
| Chrysopsis mariana (L.) Elliott<br>(14)  | 2    |           |        |          |           | 2 T S1  |         |
| Cirsium horridulum Michx. (14)   | IND. |           | 2 E S1 |          | 8 WL S2S3 | 1 T S1  | 3   S1  |
| Coreopsis rosea Nutt. (14)   | 1    |           |        |          | +   S3    | 7 C S2  |         |
| Erigeron acris L. var. kamtschaticus<br>(DC.) Herder (14)<br><i>Trimorpha acris</i> var.<br><i>kamtschatica</i> (1) [ME] | 4    | H   SH    |        |          |           |         |         |
| Eupatorium album L. (14)   | 2    |           |        |          |           |         | 2 E S1  |
| Eupatorium aromaticum L.   | 2    |           |        |          | 2 E S1    | H SH SH | 2 E S1  |
| Eupatorium leucolepis (DC.)<br>T. & G. var. novae-angliae Fern.<br>(14)  | 1    |           |        |          | 9 E S2    | 6 E S1  |         |
| Eupatorium perfoliatum L. var.<br>colpophilum Fern.& Grisc. (14)   | IND. | 1?   S1   |        |          |           |         |         |
| Eupatorium rotundifolium L. var.<br>rotundifolium (14)   | IND. |           |        |          |           |         | 2   SU  |
| Eupatorium sessilifolium L. (14)   | 3*   |           | 1 E S1 | 5 E S1 * | +   S4    | +   S3  | +   S3  |
| Euthamia galetorum Greene (14)<br><i>Euthamia tenuifolia</i> var.<br><i>pycnocephala</i> (73) [ME]                       | IND. | 1?   SR   | SU     |          |           |         |         |

GRank = G2Q. Cronquist (Gleason and Cronquist, 1991) says that the proper taxonomic status is uncertain.

GRank = G3. GRank is for synonym, *Synosoma suaveolens*.

More field work needed to clarify status in our region, especially on the islands off Massachusetts.

GRank = G3.

Taxonomic and distributional status of this variety in New England is unclear.

Difficult to distinguish from closely related taxa. More field work needed to assess current status

Vermont occurrences in Rutland County are disjunct.

GRank = G3Q. Presence in New England is questionable.

| NAME   | Div  | ME         | NH        | VT         | MA         | RI        | CT           |
|--|------|------------|-----------|------------|------------|-----------|--------------|
| Gnaphalium helleri Britton (14)<br><i>Gnaphalium helleri</i> var.<br><i>micradenium</i> (15) [MA,ME]   | IND. | [?] SU     | [?] SU    |            | [H] SH     |           |              |
| Gleason and Cronquist (1991) note that this species is in New England, but we have not seen any specimens.   |      |            |           |            |            |           |              |
| Gnaphalium purpureum L. (14)<br><i>Gamochoeta purpurea</i> (1)<br>[MA,ME]  | 2    | [H] SX     |           |            | [2?] E S1  | [H] SH SH | [H] SH       |
| Gnaphalium supinum L. (14)<br><i>Omalotheca supina</i> (15) [ME]   | 2    | [2] E S1   | [1] E S1  |            |            |           |              |
| Gnaphalium sylvaticum L. (14)<br><i>Omalotheca sylvatica</i> (15) [ME]   | IND. | [4+] SU    | [1] SU    | [1] E S1   |            |           |              |
| More field work needed to determine current status.  |      |            |           |            |            |           |              |
| Hieracium robinsonii (Zahn)<br>Fern. (14)  | 1    | [H] SH     | [1] E S1  |            |            |           |              |
| GRank = G1G2; Fed. code = C2.  |      |            |           |            |            |           |              |
| Hieracium umbellatum L. (14)   | 2    |            | [1] E S1  |            |            |           |              |
| Iva frutescens L. var. oraria<br>(Bartlett) Fern. & Griscom (14)<br><i>Iva frutescens</i> ssp. <i>oraria</i> (1)<br>[CT,MA,ME,NH,RI]   | 3*   | [3] T S1 * | [7+] T S2 |            | [+] S5     | [+] S3    | [+] S4       |
| Disjunct occurrences in Sagadahoc and Cumberland counties.   |      |            |           |            |            |           |              |
| Krigia biflora (Walter) S. F. Blake<br>(14)  | 4    |            |           |            |            |           | [H] SH       |
| Lactuca hirsuta Muhl. (14)<br><i>Lactuca hirsuta</i> var. <i>sanguinea</i><br>(11) [CT,MA,ME,NH]   | 3*   | [H?] SU    | SU        | [8] T S2 * | [ WL SU    | [ SU      | [H] SH       |
| Disjunct occurrences in Chittenden County, Vermont. More field work needed to determine current range in New England.  |      |            |           |            |            |           |              |
| Liatris scariosa (L.) Willd. var.<br>novae-angliae Lunell (14)<br><i>Liatris borealis</i> (11) [CT,NH]   | 1    | [4] T S1   | [6] E S1  |            | [33] SC S3 | [4] T S1  | [11] SC S2S3 |
| GRank = G5?T3; Fed. code = C2. Former Federal candidate Category 2 status is for synonym <i>L. borealis</i> .  |      |            |           |            |            |           |              |
| Pityopsis falcata (Pursh) Nutt. (14)<br><i>Chrysopsis falcata</i> (14) [CT,RI]   | 1    |            |           |            | [+] S3S4   | [8] C S2  | [3] E S1     |
| GRank = G3G4.  |      |            |           |            |            |           |              |
| Polymnia canadensis L. (14)  | 2    |            |           | [2] E S1   |            |           | [1] E S1     |
| Prenanthes boottii (DC.) A. Gray<br>(14)   | 1    | [3] T S1   | [4] T S1  | [2] E S1   |            |           |              |
| GRank = G2; Fed. code = C2.  |      |            |           |            |            |           |              |
| Prenanthes x mainensis Gray (11)   | IND. | [ SU       |           |            |            |           |              |
| Possibly seen recently, but verification needed. Gleason and Cronquist (1991) note that this as an apparent hybrid of <i>P. racemosa</i> x <i>trifoliolata</i> .   |      |            |           |            |            |           |              |
| Prenanthes racemosa Michx. (14)  | 2    | [15] S2    |           |            |            |           |              |
| Cronquist (Gleason and Cronquist, 1991) suggests that our plants are var. <i>multiflora</i> .  |      |            |           |            |            |           |              |
| Prenanthes serpentaria Pursh (14)  | 2    |            | [H] SH    |            | [5] E S1   | [H] SH SH | [3] S1       |
| Sclerolepis uniflora (Walter) BSP.<br>(14)   | 2    |            | [1] E S1  |            | [1] E S1   | [1] E S1  |              |
| Massachusetts and Rhode Island occurrences cross state boundaries and represent the same population.   |      |            |           |            |            |           |              |
| Solidago x calcicola Fern. (13)<br><i>Solidago calcicola</i> (14) [ME,NH]  | 4    | [H] SH     | [H] SH    |            |            |           |              |
| Hybrid between <i>S. macrophylla</i> and another species, possibly <i>S. canadensis</i> .  |      |            |           |            |            |           |              |
| Solidago canadensis L. var.<br>subserrata (DC.) Cronq. (1)<br><i>Solidago lepida</i> var. <i>molina</i> (11)   | IND. | [?] SH     |           |            |            |           |              |
| <i>Solidago canadensis</i> var. <i>subserrata</i> is authored by Cronquist but does not appear in Gleason and Cronquist (1991). Fernald (1950) lists this taxon from Maine as <i>S. lepida</i> var. <i>molina</i> . State rank of "SH" is based on a 20-year cutoff date by the Maine Natural Areas Program. |      |            |           |            |            |           |              |

| NAME   | Div  | ME      | NH      | VT       | MA       | RI     | CT     |
|--|------|---------|---------|----------|----------|--------|--------|
| Solidago cutleri Fern. (14)<br><i>Solidago multiradiata</i> var.<br><i>arctica</i> (1) [ME]  | 2    | 6  S1S2 | 9 T S3  | 1   S1   |          |        |        |
| Solidago ptarmicoides (Nees)<br>B. Boivin (14)<br><i>Aster ptarmicoides</i> (11) [NH,VT]   | 2    |         | 2 E S1  | 11  S2S3 | 4 T S1S2 |        | 1 E S1 |
| Solidago rigida L. (11)  | 2    |         |         |          | H   SX   | H   SH | 4 E S1 |
| Solidago simplex HBK ssp. randii<br>(Porter) Ringius var. monticola<br>(Porter) Ringius (14)<br><i>Solidago simplex</i> var. <i>randii</i><br>(1) [ME]<br><i>Solidago glutinosa</i> ssp. <i>randii</i><br>(31) [MA,NH] | 3*   | +  S4   | +  S4 * |          | 4 E S1 * |        |        |
| Tanacetum bipinnatum (L.)<br>Schultz-Bip. ssp. huronense<br>(Nutt.) Breitung (1)<br><i>Tanacetum huronense</i> (14)  | 2(a) | 30   S2 |         |          |          |        |        |
| Taraxacum ceratophorum (Ledeb.)<br>DC. (14)<br><i>Taraxacum latilobum</i> (11) [ME]  | IND. | H?  SU  |         |          |          |        |        |

#### BERBERIDACEAE

|                              |   |   |         |        |    |    |    |
|------------------------------|---|---|---------|--------|----|----|----|
| Podophyllum peltatum L. (14) | 2 | SE  | 1?   SU | 2   S1 | SE | SE | SU |
|                              |   | This taxon has been introduced into all New England states. Although probably native in some states (CT, NH, and VT), determining if an occurrence is native or introduced is often difficult. It is considered native at some locations in New York state. |         |        |    |    |    |

#### BETULACEAE

|   |    |   |          |         |          |  |         |
|---|----|---|----------|---------|----------|--|---------|
| Betula glandulosa Michx. (14)<br><i>Betula nana</i> (1) [M]   | 2  | 1 E S1  | 11 T S1  |         |          |  |         |
| Betula minor (Tuckerm.) Fern.<br>(13)<br><i>Betula borealis</i> (11) [VT]<br><i>Betula x minor</i> (1) [ME] | 1  | 1 E S1  | 9   S2   | H  SH ' |          |  |         |
|   |    | GRank = G3G4Q. Noted as a hybrid of <i>B. papyrifera</i> x <i>pumila</i> in Gleason and Cronquist (1991).   |          |         |          |  |         |
| Betula nigra L. (14)  | 2  |   | 6 T S2   |         | 3? WL S1 |  | SU      |
|   |    | Native and introduced populations occur in New England; it is often difficult to determine which occurrences are native and which are introduced. |          |         |          |  |         |
| Betula pumila L. (14)   | 3* | +   S3  | 1 E S1 * | 1 E S1  | 4 T S2   |  | 8 SC S2 |
|   |    | Ecological anomaly at a New Hampshire acidic fen.   |          |         |          |  |         |

#### BORAGINACEAE

|  |   |   |        |        |       |  |      |
|--|---|---|--------|--------|-------|--|------|
| Cynoglossum virginianum L.<br>* SH <br>var. boreale (Fern.) Cooperrider (14)<br>and<br><i>Cynoglossum boreale</i> (11)<br>[MA,NH,VT].<br><i>Cynoglossum virginianum</i> [CT] | 1 | ?   SH  | 1 E S1 | 2 T S1 | H  SX |  | H SC |
|  |   | GRank = G5T3?. The Connecticut endangered species list includes var. <i>boreale</i> and var. <i>virginianum</i> . under <i>C. virginianum</i> . |        |        |       |  |      |
| Cynoglossum virginianum L.<br>* SH <br>var. virginianum (14)<br><i>boreale</i>   | 4 |   |        |        |       |  | H SC |
|  |   | The Connecticut endangered species list includes var. <i>virginianum</i> and var. <i>boreale</i> .  |        |        |       |  |      |

| NAME  | Div  | ME                            | NH       | VT       | MA       | RI      | CT      |
|---|------|-------------------------------|----------|----------|----------|---------|---------|
| <i>Cynoglossum virginianum</i> [CT]   |      | under <i>C. virginianum</i> . |          |          |          |         |         |
| Hackelia deflexa (Wahlenb.) Opiz.<br>var americana (A. Gray) Fern.<br>& I.M. Johnston (14)<br><i>Hackelia americana</i> (40) [VT]   | 2    | 1 E S1                        | 1 E S1   | 16 T S2  |          |         |         |
| Mertensia maritima (L.)<br>S. F. Gray (14)  | 3*   | + S3S4                        |          |          | 6 E S1 * |         |         |
| Disjunct in Barnstable and Nantucket counties, Massachusetts.   |      |                               |          |          |          |         |         |
| Onosmodium virginianum (L.)<br>A. DC. (14)  | 2    |                               |          |          | H SX     | H SH SH | 1 E S1  |
| <b>BRASSICACEAE</b>   |      |                               |          |          |          |         |         |
| Arabis drummondii A. Gray (14)  | 3*   | + S4                          | +? S3?   | 2 E S1 * | 2 WL S1  | H SH SH | SU      |
| Vermont occurrences in Rutland and Addison counties are disjunct.   |      |                               |          |          |          |         |         |
| Arabis laevigata (Muhl.) Poiret (14)  | 3*   | 2 E S1 *                      | H S1     | + S4     | 10 T S2  | SU      | + S3    |
| Disjunct in Franklin, Aroostook, and Piscataquis counties in Maine.   |      |                               |          |          |          |         |         |
| Arabis missouriensis Greene (14)  | IND. | 4 T S1                        | 3 T S1S2 | 2 S1     | 9 T S2   | SU      | SU      |
| Taxonomic question and difficulty in distinguishing this taxon from <i>A. laevigata</i> into which one author (see Mulligan, 1995) has recently placed this taxon.  |      |                               |          |          |          |         |         |
| Barbarea orthoceras Ledeb. (14)   | 2    | H SH                          | 1 E S1   |          |          |         |         |
| Braya humilis B. L. Robinson (14)   | 2    |                               |          | 2 T S1   |          |         |         |
| Cardamine bellidifolia L. (14)  | 2    | 1 E S1                        | 3 E S1   |          |          |         |         |
| Cardamine concatenata (Michx.)<br>O. Schwarz (14)<br><i>Dentaria laciniata</i> (11)<br>[CT,MA,NH,VT]  | 3*   | 1 E S1 *                      | 2 E S1   | + S3     | + S3     |         | + S3    |
| Aroostook County, Maine, occurrence is disjunct.  |      |                               |          |          |          |         |         |
| Cardamine douglassii Britt. (11)  | 2    |                               |          |          | 1 E S1   |         | 7 SC S2 |
| Cardamine x incisa K. Schum.<br>( <i>pro. sp.</i> ) (15)<br><i>Dentaria x incisifolia</i> (11) [MA]   | IND. |                               |          |          | SU       |         | 2 SU    |
| Fernald (1950) suggests that this is hybrid of <i>Dentaria laciniata</i> ( <i>C. concatenata</i> ) and <i>Dentaria maxima</i> ( <i>C. x maxima</i> ). Gleason and Cronquist (1991) mention this taxon under <i>C. angustata</i> (as <i>D. incisifolia</i> ), but do not formally include this taxon in their treatment. |      |                               |          |          |          |         |         |
| Cardamine longii Fern. (14)   | 1    | 9 T S2                        | H T SH   |          | 2 E S1   | 1 E S1  | H SH    |
| GRank = G3Q; Fed. code = 3C.  |      |                               |          |          |          |         |         |
| Cardamine x maxima (Nutt.)<br>A. Wood (14)<br><i>Cardamine maxima</i> (15) [ME]<br><i>Dentaria maxima</i> (14)<br>[CT,MA,NH]  | IND. | H SH                          | H SH     |          | 2 WL S1  |         | H SH    |
| Taxonomic status unclear. Gleason and Cronquist (1991) suggest this as possibly a sterile hybrid between <i>C. diphylla</i> and <i>C. concatenata</i> .   |      |                               |          |          |          |         |         |
| Cardamine pratensis L. var.<br>palustris Wimmer & Graebner (14)   | 2    |                               | 1 E S1   | 3 S1     | 3 T S1   |         | SU      |
| Descurainia pinnata (Walter)<br>Britton var. brachycarpa (Richardson)<br>Fern. (14)   | 2    |                               | H SX     | 2 S1     | SE       |         |         |
| Descurainia richardsonii (Sweet.)<br>O. E. Schulz. (14)<br><i>Descurainia incana</i> (15) [ME]  | 4    | H SH                          |          |          |          |         |         |
| Draba arabisans Michx. (14)   | 2    | 3 T S1                        |          | 10 S2S3  |          |         |         |
| Tracking of this taxon was only recently begun in Vermont. It may be more abundant than is now known (which is reflected in the S2S3 ranking).  |      |                               |          |          |          |         |         |



| NAME  | Div  | ME       | NH     | VT     | MA       | RI      | CT      |
|---|------|----------|--------|--------|----------|---------|---------|
| Draba cana Rydb. (14)<br><i>Draba lanceolata</i> (11)<br>[ME,NH,VT]   | 2    | 1 E S1   | 1 E S1 | 3 T S1 |          |         |         |
| Draba glabella Pursh (14)   | 2    |          |        | 5 S1   |          |         |         |
| Draba reptans (Lam.) Fern. (14)   | 2    |          |        |        | H SX     | H SH SH | 4 SC S2 |
| Neobeckia aquatica (Eaton)<br>Greene (18)<br><i>Armoracia lacustris</i> (14)<br>[MA,ME,VT]  | 2    | H? SH?   |        | 4 T S1 | H SH?    |         |         |
| Type locality for this taxon is in western Massachusetts, but no specimens have been seen from Massachusetts or Maine.                              |      |          |        |        |          |         |         |
| Subularia aquatica L. (14)  | 2    | 9 S2     | SU     | H SH   |          |         |         |
| <b>CAESALPINIACEAE</b>  |      |          |        |        |          |         |         |
| Cercis canadensis L. (14)<br>* SH   | 4    |          |        |        |          |         | H SC    |
| Literature reports indicate that this was native at one site in Connecticut, but it is no longer extant there. Only naturalized occurrences remain. |      |          |        |        |          |         |         |
| Senna hebecarpa (Fern.)<br>Irwin & Barneby (14)<br><i>Cassia hebecarpa</i> (11)<br>[CT,NH,VT]   | 2    |          | H E SH | H T SH | 2 E S1   | 1 T S1  | 2 SC S1 |
| <b>CALLITRICHACEAE</b>  |      |          |        |        |          |         |         |
| Callitriche hermaphroditica L. (14)   | 4    |          |        | H SH   |          |         |         |
| Callitriche terrestris Raf. (14)  | 4    |          |        |        | H SH     |         | H SH    |
| <b>CAMPANULACEAE</b>  |      |          |        |        |          |         |         |
| Lobelia spicata Lam. var. hirtella<br>A. Gray (14)  | IND. | SU       | H SH   |        |          |         |         |
| Current status and distribution of this variety is unclear.   |      |          |        |        |          |         |         |
| <b>CAPRIFOLIACEAE</b>   |      |          |        |        |          |         |         |
| Lonicera dioica L. (14)   | 3*   | 1 E S1 * | SU     | + S4   | + S4     | 3 C S1  | + S3    |
| Cumberland County, Maine occurrence is disjunct.  |      |          |        |        |          |         |         |
| Lonicera hirsuta Eaton (14)   | 2    |          |        | 12 S2  | 3 E S1   |         |         |
| Lonicera sempervirens L. (14)   | IND. | 2 E S1   | SU     | SE     | SE       | SE      | SU      |
| Difficult to determine which populations are native. Introduced occurrences in Vermont are no longer extant.  |      |          |        |        |          |         |         |
| Symphoricarpos albus (L.)<br>S.F. Blake var. albus (14)   | 3*   |          |        | + S3   | 1 E S1 * |         |         |
| Occurrence in Franklin County, Massachusetts is disjunct from western Vermont occurrences.  |      |          |        |        |          |         |         |
| Triosteum angustifolium L. (14)<br>* SH   | 4    |          |        |        |          |         | H SC    |
| Gleason and Cronquist (1991) distinguish two varieties, but both are historic in New England.   |      |          |        |        |          |         |         |
| Triosteum aurantiacum<br>E. Bickn. (14)   | 3*   | 2 T S1 * | 2 E S1 | + S3   | + S4     | 4 T S1  | + S3    |
| Aroostook County, Maine occurrence is disjunct.   |      |          |        |        |          |         |         |
| Triosteum perfoliatum L. (14)   | 2    |          |        |        | 4-5 E S1 | 4 C S1  | SU      |
| Viburnum nudum L. var. nudum<br>* SH  | 2    |          |        |        |          | 1 T S1  | H SC    |

| NAME<br>(14)   | Div  | ME        | NH       | VT       | MA       | RI      | CT  |
|--|------|-----------|----------|----------|----------|---------|---|
| <i>Viburnum nudum</i> (11) [CT,RI]   |      |           |          |          |          |         |   |
| <i>Viburnum prunifolium</i> L. (14)  | 2    |           |          |          |          |         | 8 SC S2   |
| <i>Viburnum rafinesquianum</i><br>Schultes (14)  | 3*   |           | 5 E SE * | +   S3   | 4 T S2   |         | +   S3 <br>Southern Rockingham County, New Hampshire occurrences are disjunct.  |
| <b>CARYOPHYLLACEAE</b>   |      |           |          |          |          |         |   |
| <i>Arenaria caroliniana</i> Walter (14)<br><i>Minuartia caroliniana</i> (15)   | 4    |           |          |          |          | H SH SH |   |
| <i>Cerastium nutans</i> Raf. (14)  | 2    |           |          | ?   S2   | 1 E S1   |         | SU  |
| <i>Minuartia glabra</i> (Michx.)<br>Mattf. (15)<br><i>Arenaria glabra</i> (8) [CT,RI]<br><i>Arenaria groenlandica</i> var. <i>glabra</i><br>(14) | 2(a) | 8   S1S2  | 4 T S2   |          |          | 2 E S1  | 7 T S2 <br>Small population sizes of some occurrences are cause for concern.  |
| <i>Minuartia groenlandica</i> (Retz.)<br>Ostenf. (15)<br><i>Arenaria groenlandica</i> var.<br><i>groenlandica</i> (14)                           | 3*   | 24   S3   | +   S4   | 2   S1 * |          |         | <br>High peak occurrences in Chittenden, Lamoille, and Washington counties in Vermont are disjunct.   |
| <i>Minuartia marcescens</i> (Fern.)<br>House (15)<br><i>Arenaria marcescens</i> (11)   | 1    |           |          | 1 T S1   |          |         | <br>GRank = G2; Fed. code = C2. Not included in Gleason and Cronquist (1991).   |
| <i>Minuartia rubella</i> (Wahlenb.)<br>Heirn (15)<br><i>Arenaria rubella</i> (14)  | 2    | 1 E S1    |          | 1 T S1   |          |         |   |
| <i>Moehringia macrophylla</i> (Hook.)<br>Fenzl (15)<br><i>Arenaria macrophylla</i> (14) [CT]   | 2    |           |          | 9   S2   | 4 T S1S2 |         | 2 E S1  |
| <i>Paronychia argyrocoma</i> (Michx.)<br>Nutt. (14)<br><i>Paronychia argyrocoma</i> var.<br><i>albimontana</i> (11) [NH]                         | 2(a) | 8   S1S2  | 16 T S3  |          | 1 E S1   |         | <br>Small population sizes of some occurrences are cause for concern.   |
| <i>Paronychia canadensis</i> (L.)<br>A. Wood (14)  | 3*   |           | 7 T S1   | 3   S1 * | +   S4   | SU      | +   S4 <br>One occurrence on Lake Champlain in Franklin County, Vermont is disjunct.  |
| <i>Paronychia fastigiata</i> (Raf.)<br>Fern. (14)  | IND. |           |          |          | SE ?     |         | SU <br>Massachusetts occurrences may be adventive.  |
| <i>Sagina decumbens</i> (Ell.)<br>T. & G. (14)   | IND. |           |          | H   SH   | 1 WL SU  |         | SU <br>More study needed to clarify status. Is the Massachusetts occurrence truly native?   |
| <i>Sagina nodosa</i> (L.) Fenzl<br>ssp. <i>borealis</i> Crow (15)<br><i>Sagina nodosa</i> var. <i>borealis</i> (14)                              | 2    | 10   S2 ? |          |          | SU       |         |   |
| <i>Sagina nodosa</i> (L.) Fenzl.<br>ssp. <i>nodosa</i> (14)  | IND. | SE        | H   SH   |          | 3 T S2   |         | <br>This taxon is considered introduced by most botanists, but there are some questions about the Massachusetts occurrences. Gleason and Cronquist (1991) consider this to be a glandular-hairy variety introduced from Europe. |
| <i>Silene acaulis</i> (L.) Jacq. (13)<br><i>Silene acaulis</i> var. <i>exscapa</i><br>(11) [ME,NH]   | 2    | H SH      | 2 T S1   |          |          |         |   |
| <i>Silene stellata</i> (L.) Aiton f. (14)  | 2    |           |          | H   SH   |          | H SH SH | 3   S1  |

| NAME   | Div  | ME       | NH      | VT       | MA        | RI     | CT     |
|--|------|----------|---------|----------|-----------|--------|--------|
| <b>CERATOPHYLLACEAE</b>  |      |          |         |          |           |        |        |
| Ceratophyllum echinatum<br>A. Gray (14)  | 3*   | 2 SH *   | 2-3 SU  | 6 S2     | + S3?     | SU     | + S3   |
| Occurrences in Penobscot and Waldo counties, Maine, are disjunct, but were last recorded in 1971 and 1975. State rank of "SH" for Maine is based on a 20-year cutoff date used by the Maine Natural Areas Program.   |      |          |         |          |           |        |        |
| <b>CHENOPODIACEAE</b>  |      |          |         |          |           |        |        |
| Chenopodium foggii H. A. Wahl<br>(15)<br><i>Chenopodium pratericola</i> (14)<br>[VT]   | IND. |          | ? SU    | H SH     | H WL SH   |        |        |
| GRank = G3?Q. Gleason and Cronquist (1991) place this taxon under <i>C. pratericola</i> and consider it introduced from the west. Massachusetts considers it native and historic. Vermont does not separate <i>C. foggii</i> from <i>C. pratericola</i> (which is historic there). More field work needed. |      |          |         |          |           |        |        |
| Chenopodium leptophyllum Nutt.<br>(14)   | IND. | SU       |         |          |           | 2 C S1 |        |
| More field study needed to assess status. Most authors consider the eastern U.S. populations of this taxon to be introductions. Some authors have included the taxon under <i>C. pratericola</i> .   |      |          |         |          |           |        |        |
| Chenopodium rubrum L. (14)   | 3*   | 4 T S1 * | 1 T S2  |          | + S4      | SU     | SU     |
| Lincoln and Washington county, Maine occurrences are disjunct.   |      |          |         |          |           |        |        |
| Chenopodium standleyanum<br>Allen (14)<br><i>Chenopodium berlanderi</i> var.<br><i>boscianum</i> (15) [ME]<br><i>Chenopodium boscianum</i> (11) [NH]   | IND. | 1? SU    | 1 E S2  |          | WL SE?    |        | SU     |
| Difficult to distinguish. More field study needed. <i>C. standleyanum</i> is considered native and <i>C. boscianum</i> may be introduced.  |      |          |         |          |           |        |        |
| Suaeda americana (Pers.) Fern.<br>(14)<br><i>Suaeda calceoliformis</i> (1) [ME]  | IND. | H SH     |         |          | 12 SC S3  |        | SU     |
| Suaeda maritima (L.) Dumort. (11)<br><i>Suaeda maritima</i> ssp. <i>richii</i><br>(1) [MA,ME]  | IND. | 1 E S1   |         |          | 7 WL S3?  | SU     | SU     |
| GRank = G5T3?.   |      |          |         |          |           |        |        |
| <b>CISTACEAE</b>   |      |          |         |          |           |        |        |
| Helianthemum dumosum<br>* SH <br>(E. Bickn.) Fern. (14)<br>occurrences   | 1    |          |         |          | 92 SC S3  | 5 E S1 | H SC   |
| GRank = G3; Fed. code = C2. Massachusetts has the largest number of globally, but small population sizes and diminishing habitat of many occurrences are cause for concern.  |      |          |         |          |           |        |        |
| Hudsonia tomentosa Nutt. (14)<br><br>York<br><br>in  | 3*   | + S3S4   | 14 T S1 | 4 E S1 * | + S4      | 10 S2  | 5 T S2 |
| Occurrences in Chittenden and Grand Isle counties, Vermont, as well as New occurrences on Lake Champlain, are disjunct from the rest of this species' range in New England.  |      |          |         |          |           |        |        |
| Lechea minor L. (14)   | IND. |          |         | H SH     | 10 WL S2? | SU     | SU     |
| Current status in most New England states is unknown.  |      |          |         |          |           |        |        |
| <b>CLUSIACEAE</b>  |      |          |         |          |           |        |        |
| Hypericum adpressum Barton (14)<br>* SH  | 1    |          |         |          | 8 T S2    | 5 T S1 | H SC   |
| GRank = G2G3; Fed. code = C2.  |      |          |         |          |           |        |        |
| Hypericum stragalum P. Adams &<br>Robson (14)<br><i>Hypericum hypericoides</i> ssp.<br><i>multicaule</i> (15) [MA]   | 2    |          |         |          | 8 E S2    |        |        |

| NAME  | Div  | ME  | NH       | VT       | MA      | RI     | CT        |
|---|------|---|----------|----------|---------|--------|-----------|
| <b>CONVOLVULACEAE</b>   |      |   |          |          |         |        |           |
| Calystegia spithamea (L.) Pursh (14)<br><i>Convolvulus spithameus</i> (11)<br>[NH]  | 2    | 3 T S1  | 2 T S2   | 8 T S2   | 2 E S1  |        | H   SH    |
| <b>CORNACEAE</b>  |      |   |          |          |         |        |           |
| Cornus florida L. (14)  | 3*   | 3 E S1  | + SC S3  | 5 T S1 * | +   S4  | +   S4 | +   S4    |
|   |      | Strongly declining in Vermont due to an anthracnose fungus ( <i>Discula</i> sp.).   |          |          |         |        |           |
| <b>CRASSULACEAE</b>   |      |   |          |          |         |        |           |
| Sedum rosea (L.) Scop. (14)   | 3*   | +   S3  |          | 2 T S1 * |         |        |           |
|   |      | High mountain occurrences in Bennington and Windsor counties, Vermont are disjunct. |          |          |         |        |           |
| <b>CUPRESSACEAE</b>   |      |   |          |          |         |        |           |
| Juniperus horizontalis Moench. (14)   | 3*   | +   S3S4  | 2 E S1 * | 2 T S1 * | SE      |        |           |
|   |      | Taxon disjunct in Grafton County, New Hampshire, and in Bennington County, Vermont. |          |          |         |        |           |
| <b>CUSCUTACEAE</b>  |      |   |          |          |         |        |           |
| Cuscuta coryli Engelm. (14)<br>* SH   | 2    |   |          |          | 6 WL S2 | H   SH | H SC      |
|   |      | Difficult to distinguish. May be overlooked.  |          |          |         |        |           |
| Cuscuta pentagona Engelm. (14)  | IND. |   | H E SH   |          | +?   S3 | H   SH | H   SH    |
|   |      | Difficult to distinguish. May be overlooked.  |          |          |         |        |           |
| <b>CYPERACEAE</b>   |      |   |          |          |         |        |           |
| Bolboschoenus maritimus (L.) Palla (1)<br><i>Scirpus maritimus</i> (14)<br>[MA,NH,RI,VT]<br><i>Scirpus paludosus</i> var. <i>atlanticus</i> (11) [CT] | 3*   | +   S4?   | +   S3S4 | 1   S1 * | +   S4  | 4 C S1 | 9 SC S2   |
|   |      | Disjunct in Addison County, Vermont.  |          |          |         |        |           |
| Bolboschoenus novae-angliae (Britt.) S.G.Smith (1)<br><i>Scirpus cylindricus</i> (14) [CT,MA]   | 2    | H?   SU   |          |          | 6 WL S2 |        | 8 SC S2S3 |
| Carex adusta F. Boott (14)  | 2    | 4 E S1  | SU       |          |         |        |           |
| Carex albicans Willd. var. emmonsii (Dewey) Rettig (14)<br><i>Carex emmonsii</i> (11)<br>[CT,NH,RI,VT]  | 3*   | +   S4  | 1   S1   | 1   S1 * | +   S4  | 3   S1 | +   S3    |
|   |      | Disjunct in Chittenden County, Vermont.   |          |          |         |        |           |
| Carex alopecoidea Tuckerm. (14)<br>* SH   | 2    | 1 E S1  |          | 4   S1   | 6 T S2  |        | H SC      |
| Carex arcta F. Boott (14)   | 3*   | +   S4?   | SU       | 2 E S1 * |         |        |           |
|   |      | Disjunct occurrences in Grand Isle and Franklin counties, Vermont.                  |          |          |         |        |           |
| Carex atherodes Sprengel (14)   | 4    | H   SH  |          |          |         |        |           |
| Carex atratiformis Britt. (14)  | 2    | 10-15   S2  | H   SH   | 1 T S1   |         |        |           |
| Carex backii F. Boott (14)  | 3*   | 2   S1 *  | SU       | +   S3   |         |        | 1   S1    |
|   |      | Disjunct occurrences in Penobscot County, Maine.                                    |          |          |         |        |           |

| NAME   | Div  | ME  | NH                 | VT       | MA       | RI      | CT      |
|--|------|---|--------------------|----------|----------|---------|---------|
| <i>Carex baileyi</i> Britt. (14)<br>* SH   | 3*   | 1   S1? *   | 3-5? T S1S2 +   SU |          | 5 E S1   |         | H SC    |
|  |      | Disjunct occurrence in Oxford County, Maine.  |                    |          |          |         |         |
| <i>Carex barrattii</i> Schwein. & Torr. (14)   | 2    |   |                    |          |          |         | 2 SC S1 |
| <i>Carex bicknellii</i> Britt. (14)  | IND. | H   SH  |                    | H   SH   | +?   S3? | SU      | SU      |
|  |      | More field study needed.  |                    |          |          |         |         |
| <i>Carex bigelowii</i> Torr. (14)  | 3*   | 13   S2   | +   S3             | 4   S1 * |          |         |         |
|  |      | High peak occurrences in Chittenden, Addison, Lamoille, and Washington counties,            |                    |          |          |         |         |
|  |      | Vermont are disjunct.   |                    |          |          |         |         |
| <i>Carex bushii</i> Mackenzie (14)   | 2    | H   SX  |                    | H   SH   | 3 E S1   | H   SH  | 2   S1  |
| <i>Carex buxbaumii</i> Wahlenb. (14)   | 3*   | +   S4  | H E SH             | 1 E S1 * | 11 WL S2 | H SH SH | 2 E S1  |
|  |      | Disjunct occurrence near Lake Champlain in Addison County, Vermont.                         |                    |          |          |         |         |
| <i>Carex capillaris</i> L. (14)<br><i>Carex capillaris</i> ssp. <i>capillaris</i> (27)               | 2    | 6   S1  | 1 T S1             | 1 T S1   |          |         |         |
| <i>Carex capitata</i> L. (14)<br><i>Carex capitata</i> ssp. <i>arctogena</i> (15) [NH]               | 2    |   | 3   S1             |          |          |         |         |
| <i>Carex chordorrhiza</i> L. f. (14)   | 3*   | +   S4?   |                    | 2 E S1 * | 1 E S1 * |         |         |
|  |      | Disjunct in Bennington County, Vermont and in Berkshire County in Massachusetts.            |                    |          |          |         |         |
| <i>Carex collinsii</i> Nutt. (14)<br>* SH  | 2    |   |                    |          |          | 1 E S1  | H SC    |
|  |      | Last seen in 1979. This taxon has not been relocated in recent searches.                    |                    |          |          |         |         |
| <i>Carex crawei</i> Dewey (14)   | 2    | 1   S1  |                    |          |          |         |         |
|  |      | 5 E S1S2  |                    |          |          |         |         |
| <i>Carex davisii</i> Schwein. & Torr. (14)   | 2    |   |                    | 1   S1   | 1 E S1   |         | 2 E S1  |
| <i>Carex eburnea</i> F. Boott (14)   | 3*   | 2 T S1 *  | 1 E S1             | +   S4   | +   S3   |         | +   S3  |
|  |      | Disjunct in Oxford County, Maine.   |                    |          |          |         |         |
| <i>Carex garberi</i> Fern. (15)<br><i>Carex garberi</i> var. <i>bifaria</i> (11) [NH]                | 1    | 14?   S2  | 6 E S1             | 4 T S1   |          |         |         |
|  |      | GRank = G4T3Q; Fed. code = C2. GRank is for synonym <i>C. garberi</i> var. <i>bifaria</i> . |                    |          |          |         |         |
| <i>Carex glaucoidea</i> Tuckerm. (13)<br><i>Carex flaccosperma</i> var. <i>glaucoidea</i> (14)       | 2    |   | H E SH             |          | 4 E S1   |         | 1   S1  |
| <i>Carex gracilescens</i> Steudel (14)   | 2    |   | H   SH             | H   SH   | 1 E S1   |         | 5   S2  |
| <i>Carex gynocrates</i> Drej. (1)<br><i>Carex dioica</i> var. <i>gynocrates</i> (14)                 | IND. | 10+   S2S3  |                    |          |          |         |         |
|  |      | Possibly overlooked.  |                    |          |          |         |         |
| <i>Carex livida</i> (Wahlenb.) Willd. (14)<br><i>Carex livida</i> var. <i>radicaulis</i> (1) [MA,ME] | 2    | 5 T S1S2  |                    | 1 T S1   | 1 E S1   |         |         |
| <i>Carex lupuliformis</i> Sartwell (14)  | 1    |   |                    | 6   S2   |          |         | 2 SC S1 |
|  |      | GRank = G3?.  |                    |          |          |         |         |
| <i>Carex mitchelliana</i> M. A. Curtis (14)  | 1    |   |                    |          | 5 WL S2  | SU      |         |
|  |      | GRank = G3G4.   |                    |          |          |         |         |

| NAME  | Div                | ME   | NH     | VT       | MA       | RI      | CT      |
|---|--------------------|--|--------|----------|----------|---------|---------|
| Carex muhlenbergii Schk. (14)   | 3*                 | H   SH   | SU     | 6 T S2 * | +   S4S5 | SU      | +   S3  |
| Maine   |                    | Disjunct occurrences in Chittenden County, Vermont. Reportedly extant in<br>in 1996.   |        |          |          |         |         |
| Carex nigromarginata Schwein.<br>* SH <br>(14)                        | 4                  |  |        |          |          |         | H SC    |
| Carex norvegica Retz. (14)  | 2                  | 1 E S1   |        |          |          |         |         |
|   |                    | Taxonomy of this and closely related species is currently being studied.   |        |          |          |         |         |
| Carex oligocarpa Schk. (14)   | 2                  |  |        | 4 E S1   | H   SH   |         | 1 E S1  |
| Carex oronensis Fern. (14)  | 1                  | 5 E S2   |        |          |          |         |         |
|   |                    | GRank = G2; Fed. code = C2. All records are from the Penobscot River watershed.  |        |          |          |         |         |
| Carex polymorpha Muhl. (14)   | 1                  | 5 T S1   | 1 T S1 |          | 2 E S1   | 1 E S1  | 3 E S1  |
|   |                    | GRank = G2G3; Fed. code = C2.  |        |          |          |         |         |
| Carex prairea Dewey (14)  | 3*                 | 5 T S1 *   |        | +   S4   | ~8 WL S2 |         | 7 T S2  |
|   |                    | Maine occurrences are disjunct in Aroostook County.  |        |          |          |         |         |
| Carex praticola Rydb. (14)  | 4                  | H   SX   |        |          |          |         |         |
| Carex rariflora (Wahlenb.)<br>J.E. Smith (14)                         | 4                  | H   SH   |        |          |          |         |         |
| Carex recta Boott (15)  | IND.               | 1 E S1   |        |          | 1 E S1   |         |         |
|   |                    | This taxon is listed in Gleason and Cronquist (1991) as a synonym under <i>C. salina</i> , but FNA may treat this as a separate species. Thought to be a stabilized hybrid between <i>C. aquatilis</i> and <i>C. pallacea</i> . More study needed. |        |          |          |         |         |
| Carex richardsonii R. Br. (14)  | 2                  |  |        | 2 E S1   |          |         |         |
| Carex saxatilis L. (14)   | 2                  | 2 E S1   |        |          |          |         |         |
| Carex schweinitzii Dewey (14)   | 1                  |  |        | 14   S2  | 3 E S1   | H SH SH | 3 T S1  |
|   |                    | GRank = G3; Fed. code = C2.  |        |          |          |         |         |
| Carex scirpoidea Michx. (14)  | 2                  | 2 T S1   | 6 T S1 | 11   S2  |          |         |         |
| Carex siccata Dewey (14)<br><i>Carex foenea</i> (11)<br>[CT,MA,NH,VT] | 3*                 | H?   SU  | SU     | 2 E S1 * | +   S3?  | SU      | H SH    |
|   |                    | One occurrence in Chittenden County, Vermont, is disjunct. Note: the taxon formerly known as <i>Carex foena</i> is now <i>Carex siccata</i> , and what was formerly known as <i>Carex aenea</i> is now known as <i>Carex foenea</i> .              |        |          |          |         |         |
| Carex sparganioides Muhl. (14)  | 3*                 | 1 E S1 *   | 1 E S1 | +   S4   | +   S4   | 1 C S1  | +   S3  |
|   |                    | Disjunct in Oxford County, Maine, but varieties in New England need examination.   |        |          |          |         |         |
| Carex sterilis Willd. (14)  | 2                  | 3 T S1   |        |          | 7 T S2   | H   SH  | 9 SC S2 |
| Carex striata Michx. var. brevis<br>L. Bailey (14)                    | 2                  |  | 1   S1 |          | 5 E S1   | 1 E S1  |         |
| Carex striatula Michx. (14)   | 2                  |  |        |          |          |         | 2   S1  |
| Carex tenuiflora Wahlenb. (14)  | 2                  | 8   S2   |        | 4   S1   |          |         |         |
| Carex tetanica Schk. (14)   | 2(a)<br> 7 SC S2S3 |  |        |          | 14 SC S3 |         |         |
|   |                    | Small population sizes of some occurrences are cause for concern.  |        |          |          |         |         |
| Carex trichocarpa Muhl. (14)  | 2                  |  | 1 E S1 | 7   S2   | 8 T S2   |         | 1   S1  |

| NAME   | Div  | ME                   | NH       | VT      | MA         | RI      | CT   |
|--|------|----------------------|----------|---------|------------|---------|--|
| <i>Carex vaginata</i> Tausch. (14)   | 2    | 3 T S1               |          | 3 E S1  |            |         |  |
| <i>Carex wiegandii</i> Mackenzie (14)  | 1    | 7 S2 <br>GRank = G3. | 4 T S1S2 | H SH    | H SH       |         |  |
| <i>Carex willdenowii</i> Schk. (14)<br>* SH  | 4    |                      |          | H SH    | H SH       |         | H SC   |
| <i>Carex woodii</i> Dewey (14)<br>* SH   | 4    |                      | H SX     |         |            |         | H SC   |
| <i>Cyperus engelmannii</i> Steud. (14)   | IND. |                      |          | H SH    | 6 SC S3?   |         | SU <br>Taxonomic confusion. A future Flora North America treatment will probably combine <i>C. engelmannii</i> and <i>C. odoratus</i> , but Massachusetts separates the two species. These taxa are here separated pending further review. |
| <i>Cyperus houghtonii</i> Torr. (14)   | 2    | H SH                 | 2 T S1   | 14 T S2 | 3 E S1     |         | <br>Some populations small and threatened.   |
| <i>Cyperus odoratus</i> L. (14)  | IND. |                      |          | H SH    | 4 WL S3?   | H SH    | SU <br>Taxonomic confusion. A future Flora North America treatment will probably combine <i>C. engelmannii</i> and <i>C. odoratus</i> , but Massachusetts separates the two species. These taxa are here separated pending further review. |
| <i>Eleocharis equisetoides</i> (Elliott.) Torr. (14)   | 2    |                      |          |         | H SX       | 8 C S2  | 1 E S1   |
| <i>Eleocharis fallax</i> Weatherby (14)  | 2    |                      |          |         | H SH       | SU      | 1 SU   |
| <i>Eleocharis microcarpa</i> Torr. var.<br>* SH <br><i>filiculmis</i> Torr. (11)<br><i>Eleocharis microcarpa</i> (14) [RI]   | 2    |                      |          |         | 1 E S1     | 1 E S1  | H SC   |
| <i>Eleocharis nitida</i> Fernald (11)  | IND. | SR                   | H SH     | H SH    |            |         | <br>GRank = G3G4. Possible occurrence in Maine needs verification.   |
| <i>Eleocharis ovata</i> (Roth) Roemer & Schultes (14)<br><i>Eleocharis obtusa</i> var. <i>ovata</i> (14)<br>[CT,MA,ME,VT]<br><i>Eleocharis ovata</i> var. <i>heuseri</i> (13)<br>[ME,NH] | IND. | +                    | SU       | 5  S1   | 3 E S1     | SU      | +  SU <br>Taxonomic confusion surrounds this taxon in New England; it is included within the common and widespread <i>E. obtusa</i> by some authors.   |
| <i>Eleocharis pauciflora</i> (Lightf.) Link var. <i>fernaldii</i> Svens. (11)<br><i>Eleocharis pauciflora</i> (14) [VT]<br><i>Eleocharis quinqueflora</i> (15) [ME]                      | 2    | 2 E S1               | 2 E S1   | 3 T S1  | 1 E S1     |         |  |
| <i>Eleocharis quadrangulata</i> (Michx.) Roemer & Schultes (14)  | 2    |                      |          |         | H SX       |         | 2 E S1   |
| <i>Eleocharis rostellata</i> (Torr.) Torr. (14)  | IND. | H SH                 |          |         | 10+ WL S3  | 2 C S1  | SU <br>More field study needed to determine status in New England.   |
| <i>Eleocharis tricostata</i> Torr. (14)  | 2    |                      |          |         | 2 E S1     | H SH SH |  |
| <i>Eleocharis tuberculosa</i> (Michx.) Roemer & Schultes (14)  | 3*   | 1 E S1 *             | H E SH   |         | + S4       | 3+ S2   | + S3 <br>Since New Hampshire occurrences are now historic, the Oxford County, Maine occurrence is disjunct.  |
| <i>Fuirena pumila</i> (Torr.) Sprengel (14)  | 3*   |                      |          |         | 34 WL S3 * | 2 SE S1 | H SH <br>The Hampden County, Massachusetts occurrence is disjunct.   |
| <i>Rhynchospora capillacea</i> Torr. (14)  | 2    | 2 E S1               | 1 E S1   | 2 T S1  | 2 E S1     |         | 2 E S1   |
| <i>Rhynchospora inundata</i> (Oakes)   | 2    |                      |          |         | 6 T S2     | 4 E S1  |  |

| NAME<br>Fern. (14)   | Div  | ME       | NH     | VT       | MA  | RI     | CT     |
|--|------|----------|--------|----------|---|--------|--------|
| Rhynchospora nitens (Vahl)<br>A. Gray (14)<br><i>Psilocarya nitens</i> (11)                        | 2    |          |        |          | 11 T S2   |        |        |
| Rhynchospora torreyana A. Gray<br>(14)   | 2    |          |        |          | 10 E S2   | 1 E S1 |        |
| Schoenoplectus etuberculatus<br>(Stud.) Sojak (13)<br><i>Scirpus etuberculatus</i> (14) [RI]       | 1    |          |        |          |   | 1 E S1 |        |
| Schoenoplectus hallii (A.Gray)<br>S.G. Smith (30)<br><i>Scirpus hallii</i> (11) [MA]               | 4    |          |        |          | H  SX   |        |        |
|  |      |          |        |          | GRank = G2; Fed. code = C2. GRanks and Federal codes are for synonym, <i>Scirpus hallii</i> . Future Flora North America editions will probably use the name <i>Schoenoplectus hallii</i> . |        |        |
|  |      |          |        |          |   |        |        |
| Schoenoplectus heterochaetus<br>(Chase) Sojak (28)<br><i>Scirpus heterochaetus</i> (14)<br>[MA,VT] | IND. |          |        | ? S2S3   | WL SU   |        |        |
|  |      |          |        |          | May be more common in Vermont than current records indicate, hence the S2S3 ranking. Populations are difficult to deliniate.  |        |        |
| Schoenoplectus x steinmetzii<br>(Fern.) S.G.Smith & A.E. Schuyler (1)                              | IND. | 1  S1    |        |          |   |        |        |
|  |      |          |        |          | GRank = G1Q. Sterile hybrid of <i>S. heterochaetus</i> x <i>tabernaemontani</i> . One isolated population persisting via vegetative reproduction.   |        |        |
| Scirpus ancistrochaetus Schuyler (13)  | 1    |          | 5-7 S1 | 9 E S2   | 1 E S1  |        |        |
|  |      |          |        |          | GRank = G3; Fed. code = LE.   |        |        |
| Scirpus longii Fern. (14)<br>* SH  | 1    | 9 E S1   | 1 S1   |          | 4 E S1  | 1 E S1 | H SC   |
|  |      |          |        |          | GRank = G2; Fed. code = C2.   |        |        |
| Scirpus pendulus Muhl. (14)  | 3*   | 3 E S1 * | 3 T S2 | + S3     | 26 WL S3  |        | + S3   |
|  |      |          |        |          | Disjunct in Penobscot County, Maine.  |        |        |
| Scirpus polyphyllus Vahl. (14)   | 2    |          | H E SH | 2 E S1   | 5 WL S1   |        | H SH   |
| Scleria pauciflora Muhl. (14)<br>* SH  | 2    |          | H SH   |          | 14 E S2   | 3 T S1 | H SC   |
|  |      |          |        |          | Massachusetts has one occurrence of <i>S. pauciflora</i> var. <i>pauciflora</i> in the state and considers this taxon as distinct from <i>S. pauciflora</i> var. <i>caroliniana</i> .       |        |        |
| Scleria reticularis Michx. (14)  | 1    |          | 1 S1   |          | 60 WL S4  | 3 T S1 | 1 E S1 |
|  |      |          |        |          | GRank = G3G4. Species concept used here does not include the more southern <i>S. mühlenbergii</i> .   |        |        |
| Scleria triglomerata Michx. (14)   | 2    |          |        |          | 1 E S1  | 2 T S1 | 1 E S1 |
| Scleria verticillata Muhl. (14)<br>* SH  | 4    |          |        |          |   |        | H SC   |
| Tricophorum clintonii (Gray)<br>S.G. Smith (1)<br><i>Scirpus clintonii</i> (14)                    | 2    | 5-10 S2  |        |          |   |        |        |
| <b>DIAPENSIACEAE</b>   |      |          |        |          |   |        |        |
| Diapensia lapponica L. (14)  | 3*   | 13 S2    | + T S3 | 1 E S1 * |   |        |        |
|  |      |          |        |          | Disjunct on high peaks in Chittenden County, Vermont.   |        |        |
| <b>DROSERACEAE</b>   |      |          |        |          |   |        |        |
| Drosera anglica Hudson (14)  | 2    | 3 E S1   |        |          |   |        |        |



| NAME   | Div  | ME   | NH      | VT       | MA     | RI      | CT      |
|--|------|--|---------|----------|--------|---------|---------|
| <i>Drosera linearis</i> Goldie (14)  | 2    | 1 E S1   |         |          |        |         |         |
| <b>DRYOPTERIDACEAE</b>   |      |  |         |          |        |         |         |
| <i>Dryopteris filix-mas</i> Schott (12)  | 2    | 2 E S1   |         | 7 T S2   |        |         |         |
| <i>Gymnocarpium jessoense</i> (Koidzumi)<br><i>Koidzumi</i> ssp. <i>parvulum</i> Sarvela (12)  | 4    |  |         | H   SH   |        |         | SE      |
| Probably introduced in Connecticut, but currently not extant there.  |      |  |         |          |        |         |         |
| <i>Woodsia alpina</i> (Bolton) Gray (12)   | 2    | 3 T S1   |         | 4 E S1   |        |         |         |
| <b>EBENACEAE</b>   |      |  |         |          |        |         |         |
| <i>Diospyros virginiana</i> L. (14)  | 2    |  |         |          | SE     |         | 1 SC S1 |
| There is some question as to whether Connecticut's single occurrence is native. The point is moot, however, because only a single individual is extant and the species is dioecious. |      |  |         |          |        |         |         |
| <b>ELAEAGNACEAE</b>  |      |  |         |          |        |         |         |
| <i>Shepherdia canadensis</i> (L.) Nutt. (14)   | 3*   | 1 E S1 *   |         | + S3     |        |         |         |
| Disjunct in Somerset County, Maine.  |      |  |         |          |        |         |         |
| <b>ELATINACEAE</b>   |      |  |         |          |        |         |         |
| <i>Elatine americana</i> (Pursh) Arn. (11)   | IND. | SU   |         |          | 2 E S1 | 2 T S1  | H   SH  |
| More field work needed to determine status. There is taxonomic confusion regarding the New England specimens.  |      |  |         |          |        |         |         |
| <b>EMPETRACEAE</b>   |      |  |         |          |        |         |         |
| <i>Empetrum nigrum</i> L. (14)   | 3*   | + S4   | + T S3  | 4 S1 *   |        |         |         |
| Disjunct on high peaks in Chittenden, Orleans, and Washington counties, Vermont.   |      |  |         |          |        |         |         |
| <b>EQUISETACEAE</b>  |      |  |         |          |        |         |         |
| <i>Equisetum x mackaii</i> (Newman)<br> SU <br>Brichan (12)  | IND. | H   SH?  | SU      | SU       |        |         | 10+     |
| Taxon  |      | More field study needed. Flora North America (1993) cites this taxon in CT, ME, NH, and VT, but says that specimens from CT and NH have not been seen. |         |          |        |         |         |
|  |      | is a hybrid between <i>E. hymale</i> ssp. <i>affine</i> and <i>E. variegatum</i> . May be more common than previously thought.                         |         |          |        |         |         |
| <b>ERICACEAE</b>   |      |  |         |          |        |         |         |
| <i>Arctostaphylos alpina</i> (L.) Sprengel (14)  | 2    | 1 T S1   | 4 T S1  |          |        |         |         |
| <i>Harrimanella hypnoides</i> (L.) Coville (14)<br><i>Cassiope hypnoides</i> (11) [NH]   | 2    | 2 E S1   | 4 T S2  |          |        |         |         |
| <i>Loiseleuria procumbens</i> (L.) Desvaux (14)  | 2    | 1 E S1   | 10 T S2 |          |        |         |         |
| <i>Lyonia mariana</i> (L.) D. Don (14)<br>* SH   | 4    |  |         |          |        | H SH SH | H SC    |
| <i>Phyllodoce caerulea</i> (L.) Bab. (14)  | 2    | 2 E S1   | 8 T S2  |          |        |         |         |
| <i>Rhododendron lapponicum</i> (L.)<br>Wahlenb. (14)   | 2    | 2 E S1   | 7 SC S3 |          |        |         |         |
| <i>Rhododendron maximum</i> L. (14)  | 3*   | 6 T S1 *   | 5 T S2  | 7 T S2 * | 7 T S2 | 10+ S3  | 10 S3   |

| NAME  | Div  | ME  | NH       | VT     | MA       | RI     | CT      |
|---|------|---|----------|--------|----------|--------|---------|
| Rhododendron viscosum (L.)<br>Torr. (14)  | 3*   | 1 T S1 *  | + T S3   | H   SH | +   S5   | +   S4 | +   S4  |
|   |      | Disjunct in Caledonia and Orleans counties, Vermont. Documented decline of some occurrences in Maine.                           |          |        |          |        |         |
| Vaccinium boreale I.V. Hall &<br>Aald. (14)   | 1    | 3 E S1  | 11   S3  | 3   S1 |          |        |         |
|   |      | GRank = G3.   |          |        |          |        |         |
| Vaccinium vitis-idaea L. var..<br>* SH <br>minus Lodd (11)<br><i>Vaccinium vitis-idaea</i> ssp.<br><i>minus</i> (15) [MA] | 3*   | +   S4  | +   S4 * | 4   S1 | 2 E S1 * |        | H SC    |
|   |      | Disjunct in Berkshire County, Massachusetts and in Cheshire County, New Hampshire.  |          |        |          |        |         |
| <b>ERIOCAULACEAE</b>  |      |   |          |        |          |        |         |
| Eriocaulon parkeri Robinson (14)  | 1    | 25   S3   |          |        | <4 E S1  |        | 6 E S1  |
|   |      | GRank = G3; Fed. code = 3C.   |          |        |          |        |         |
| <b>EUPHORBIACEAE</b>  |      |   |          |        |          |        |         |
| Crotonopsis elliptica Willd. (14)<br>* SH   | 4    |   |          |        |          |        | H SC    |
| Euphorbia glyptosperma Engelm. (14)<br><i>Chamaesyce glyptosperma</i><br>(15) [MA]  | IND. | SU  | SU       | ?   S1 | SE       |        |         |
|   |      | Considered introduced into several states; tracking as a native species in Vermont only recently begun.                         |          |        |          |        |         |
| <b>FABACEAE</b>   |      |   |          |        |          |        |         |
| Astragalus alpinus L. var. brunetianus<br>Fern. (14)  | 1    | 27   S2   | H   SH   | H   SX |          |        |         |
|   |      | GRank = G5T2T3.   |          |        |          |        |         |
| Astragalus canadensis L. (14)   | 2    |   |          | 9 T S2 |          |        |         |
| Astragalus eucosmus B. L. Robinson<br>(14)  | 4    | H   SX  |          |        |          |        |         |
| Astragalus robbinsii (Oakes) A. Gray<br>var. jesupii Eggleston (14)   | 1    |   | 2 E S1   | 1 E S1 |          |        |         |
|   |      | GRank = G5T1; Fed. code = LE.   |          |        |          |        |         |
| Astragalus robbinsii (Oakes) A. Gray<br>var. minor (Hook.) Barneby (14)   | 2    | H   SX  |          | 7   S2 |          |        |         |
| Astragalus robbinsii (Oakes) A. Gray<br>var. robbinsii (14)   | 4    |   |          | H   SX |          |        |         |
|   |      | GRank = G5TX; Fed. code = 3A.   |          |        |          |        |         |
| Desmodium canescens (L.) DC. (14)   | 2    |   |          |        | 5 WL S1  |        | 8   S3  |
| Desmodium cuspidatum (Muhl.)<br>Loudon (14)   | 2    |   | H   SH   | 3 E S1 | 3 WL S1  |        | SU      |
| Desmodium glabellum (Michx.) DC.<br>(14)  | 2    |   |          |        |          |        | 5 SC S1 |
| Desmodium humifusum (Muhl.)<br>Beck (14)<br>hybrid  | 1    |   |          |        | 2 E S1   |        | 2 E S1  |
|   |      | GRank = G1G2Q; Fed. code = C2. Recent research suggests this taxon is a hybrid of <i>D. paniculata</i> x <i>rotundifolium</i> . |          |        |          |        |         |
| Desmodium sessilifolium (Torr.)<br>* SH <br>T. & G. (14)  | 2    |   |          |        |          | 1 E S1 | H SC    |
| Lathyrus ochroleucus Hook. (14)   | 2    |   |          | 8   S2 |          |        |         |

| NAME  | Div  | ME  | NH        | VT       | MA        | RI       | CT      |
|---|------|---|-----------|----------|-----------|----------|---------|
| <i>Lespedeza repens</i> (L.) Barton (14)  | 2    |   |           |          | 1? S2     |          | 1 SC S1 |
| <i>Lespedeza stuevei</i> Nutt. (14)   | IND. |   |           | H SH     | 19 S3?    | SU       | SU      |
|   |      | Current status uncertain.   |           |          |           |          |         |
| <i>Lupinus perennis</i> L. (14)   | 3*   | H SX  | 21 T S1 * | 2 T S1 * | + WL S3 * | 8 C S2 * | 12 S2 * |
|   |      | Documented decline in Connecticut, Rhode Island, Massachusetts, New Hampshire, and Vermont. Note: most New Hampshire occurrences are small and isolated, primarily on roadsides and powerlines. |           |          |           |          |         |
| <i>Oxytropis campestris</i> (L.) DC. var. <i>johannensis</i> Fern. (14)   | 1    | 8 T S1S2  |           |          |           |          |         |
|   |      | GRank = G5?T3; Fed. code = 3C.  |           |          |           |          |         |
| <i>Phaseolus polystachios</i> (L.) BSP. (14)<br>* SH <br><i>Phaseolus polystachios</i> var. <i>aquilonius</i> (11) [CT] | 4    |   |           |          |           |          | H SC    |
|   |      | Reported from all of New England in Gleason and Cronquist (1991), but we have only seen specimens from Connecticut.   |           |          |           |          |         |
| <i>Strophostyles umbellata</i> (Muhl.) Britton (14)   | 4    |   |           |          |           | H SH SH  |         |
| <b>FUMARIACEAE</b>  |      |   |           |          |           |          |         |
| <i>Corydalis aurea</i> Willd. (14)  | 2    |   | H SX      | 6 T S2   |           |          |         |
| <i>Corydalis flavula</i> (Raf.) DC. (14)  | 2    |   |           |          |           |          | 4 T S1  |
| <i>Dicentra canadensis</i> (Goldie) Walp. (14)  | 3*   | 3 T S1 *  | 11 T S2S3 | + S4     | + S4      |          | 6 T S2  |
|   |      | Disjunct in Franklin and Penobscot counties, Maine.   |           |          |           |          |         |
| <b>GENTIANACEAE</b>   |      |   |           |          |           |          |         |
| <i>Gentiana andrewsii</i> Griseb. (14)  | 2    |   | 2 T S1    | 5 T S1   | 2 T S1    | H SH SH  | SU      |
|   |      | Specimens of this taxon and <i>G. clausa</i> should be examined closely due to similarity.  |           |          |           |          |         |
| <i>Gentianella amarella</i> (L.) Boerner (14)<br><i>Gentiana amarella</i> (40) [VT]                                     | 2    | 1 E S1  |           | H T SH   |           |          |         |
| <i>Gentianella quinquefolia</i> (L.) Small (14)   | 2    | H SH  | H SH      | 2 T S1   | 12+ WL S2 |          | 2 E S1  |
| <i>Lomatogonium rotatum</i> (L.) Fries (14)   | 2    | 9 S1S2  |           |          |           |          |         |
| <i>Sabatia campanulata</i> (L.) Torr. (14)  | 2    |   |           |          | 5 E S1    |          |         |
| <i>Sabatia dodecandra</i> (L.) BSP. (14)<br>* SH  | 4    |   |           |          |           |          | H SC    |
| <i>Sabatia kennedyana</i> Fern. (14)  | 1    |   |           |          | 140 SC S3 | 4 E S1   |         |
|   |      | GRank = G3. Massachusetts has the largest number of occurrences globally.   |           |          |           |          |         |
| <i>Sabatia stellaris</i> Pursh (14)   | 2    |   |           |          | 1 E S1    | 4 T S1   | 2 S1    |
|   |      | Taxon has not been seen in Massachusetts in recent years.   |           |          |           |          |         |
| <b>GROSSULARIACEAE</b>  |      |   |           |          |           |          |         |
| <i>Ribes rotundifolium</i> Michx. (37)<br>* SH  | IND. |   |           |          | 1 WL S1   |          | H SC    |
|   |      | Specimen from Massachusetts appears valid, but it is unknown whether this taxon is truly native there.  |           |          |           |          |         |
| <b>HALORAGACEAE</b>   |      |   |           |          |           |          |         |
| <i>Myriophyllum pinnatum</i> (Walter) BSP.<br>* SH  | IND. |   |           |          | 6 SC S2?  | 1 T S1   | H SC    |

| NAME<br>(14)  | Div  | ME        | NH     | VT     | MA     | RI     | CT      |
|---|------|-----------|--------|--------|--------|--------|---------|
| Myriophyllum verticillatum L. (14)  | IND. | +? SU     | SU     | 5 S1   | 1 T S1 |        | SU      |
| More field study needed to determine status.  |      |           |        |        |        |        |         |
| <b>HAMAMELIDACEAE</b>   |      |           |        |        |        |        |         |
| Liquidambar styraciflua L. (14)   | 2    |           |        |        |        |        |         |
| 8 SC S2S3 <br>Taxon has been introduced into some states. It is difficult to determine which Connecticut occurrences are native and which are introduced.   |      |           |        |        |        |        |         |
| <b>HIPPURIDACEAE</b>  |      |           |        |        |        |        |         |
| Hippuris vulgaris L. (14)   | 2    | SU        | 2 T S3 | 2 E S1 |        |        |         |
| <b>HYDROPHYLLACEAE</b>  |      |           |        |        |        |        |         |
| Hydrophyllum canadense L. (14)  | 2    |           |        | 1 T S1 | 2 E S1 |        |         |
| <b>HYMENOPHYLLACEAE</b>   |      |           |        |        |        |        |         |
| Trichomanes intricatum Farrar (12)  | 1    |           | 1 S1   | SU     | 3 T S1 |        | 3 SC S1 |
| GRank = G3G4.   |      |           |        |        |        |        |         |
| <b>IRIDACEAE</b>  |      |           |        |        |        |        |         |
| Sisyrinchium mucronatum Michx.<br>(14)  | 2    | <5? S1?   | H SH   | H SH   | 3 T S1 |        | SU      |
| Not tracked by the Connecticut Natural Diversity Data Base. The Maine Natural Areas Program began tracking this taxon in 1996.  |      |           |        |        |        |        |         |
| <b>ISOETACEAE</b>   |      |           |        |        |        |        |         |
| Isoetes acadensis Kott (12)   | 1    | 1 S1      | 1 S1   |        | 3 E S1 |        |         |
| GRank = G3?.  |      |           |        |        |        |        |         |
| Isoetes x eatonii Dodge (12)<br><i>Isoetes eatonii</i> (13) [NH]  | IND. |           | H SH   |        | 1 SU   |        | 4 S1    |
| GRank = G2Q; Fed. code = 3B. GRank is for synonym, <i>I. eatonii</i> . Sterile hybrid of <i>I. engelmannii</i> with <i>I. echinospora</i> .   |      |           |        |        |        |        |         |
| Isoetes x foveolata A.A. Eaton<br>* SH <br>ex Dodge (12)  | IND. |           |        |        | H SH   |        | H SC    |
| Current status unknown; hybrid of <i>I. engelmannii</i> x <i>I. tuckermanii</i> .   |      |           |        |        |        |        |         |
| Isoetes lacustris L. (12)<br><i>Isoetes macrospora</i> (11)<br>[CT,MA,ME,NH,VT]   | IND. | +? SU     | 1 T S1 | ? S2?  | 1 E S1 | SU     | 1 SU    |
| More field study needed. Flora North America (1993) says that North American plants of <i>I. lacustris</i> have been segregated as <i>I. macrospora</i> by some authors, but that the two taxa cannot reliably be distinguished from each other except on the basis of geography. |      |           |        |        |        |        |         |
| Isoetes prototypus D.M. Britton<br>(12)   | 1    | 1 S1      |        |        |        |        |         |
| GRank = G2G3.   |      |           |        |        |        |        |         |
| Isoetes riparia Engelmann ex<br>A. Braun (12)<br><i>Isoetes riparia</i> var. <i>canadensis</i><br>(11) [RI]   | 2    | H SH      | 2 T S2 | 2 S1   | H SH   | 4 C S1 | SU      |
| <b>JUGLANDACEAE</b>   |      |           |        |        |        |        |         |
| Juglans cinerea L. (14)   | IND. | + SU      | + S3?  | + S4   | + S4   | + SU   | + SU    |
| Fed. code = C2. Declining in some New England states because of the fungus, <i>Sirococcus clavigignenti-juglandacearum</i> , and therefore should be monitored.   |      |           |        |        |        |        |         |
| <b>JUNCACEAE</b>  |      |           |        |        |        |        |         |
| Juncus alpinus auct non Vill. (13)  | 2    | 7-10 T S2 | 1 S1   | 8 S2   |        |        |         |

| NAME   | Div  | ME   | NH       | VT       | MA     | RI     | CT      |
|--|------|--|----------|----------|--------|--------|---------|
| <i>Juncus alpinoarticulatus</i><br>(14) [ME,NH]                            |      |  |          |          |        |        |         |
| <i>Juncus biflorus</i> Ell. (14)   | 2    |  |          |          | 8 E S2 |        |         |
| <i>Juncus debilis</i> A. Gray (14)<br>* SH                                 | 2    |  |          |          | 1 E S1 | 3 C S1 | H SC    |
| <i>Juncus x oronensis</i> Fern. (14)<br><i>Juncus oronensis</i> (11)       | IND. | H   SH?  |          |          |        |        |         |
|  |      | Name is based on two historic specimens occurring with the parents ( <i>J. tenuis x vaseyi</i> ). Status uncertain. Not tracked by the Maine Natural Areas Program.        |          |          |        |        |         |
| <i>Juncus pervetus</i> Fern. (11)  | IND. |  |          |          | H   SX |        |         |
|  |      | Taxonomic status unclear. Fernald (1950) says native at one site in MA, but Gleason and Cronquist (1991) include the taxon under the European <i>Juncus subnodulosus</i> . |          |          |        |        |         |
| <i>Juncus stygius</i> L. var. <i>americanus</i><br>Buch. (14)              | 2    | 9   S2   |          |          |        |        |         |
| <i>Juncus subtilis</i> E. Meyer (14)                                       | IND. | H   SU   |          |          |        |        |         |
| <i>Juncus torreyi</i> Cov. (14)  | 2    | SU   |          | 2 E S1   | SE     |        |         |
| <i>Juncus trifidus</i> L. (14)   | 3*   | +   S3S4   | +   S3S4 | 5   S1 * |        |        |         |
|  |      | Disjunct occurrences on high peaks in Chittenden, Windsor, Washington, and Lamoille counties, Vermont.   |          |          |        |        |         |
| <i>Juncus vaseyi</i> Engelm. (14)  | 2    | 1   S1   |          | 1   S1   |        |        |         |
| <i>Luzula confusa</i> Lindeberg (14)                                       | 2    | 1 E S1   | H E SH   |          |        |        |         |
| <i>Luzula spicata</i> (L.) DC. (14)  | 2    | 1 E S1   | 7 T S3   | 1   S1   |        |        |         |
| <b>JUNCAGINACEAE</b>   |      |  |          |          |        |        |         |
| <i>Triglochin gaspense</i> Leith &<br>D. Löve (15)                         | 4    | H   SH   |          |          |        |        |         |
|  |      | GRank = G2; Fed. code = C2. This taxon has been separated from <i>T. maritimum</i> . (See Löve, D. and H. Leith, 1961).  |          |          |        |        |         |
| <b>LAMIACEAE</b>   |      |  |          |          |        |        |         |
| <i>Agastache nepetoides</i> (L.) Kuntze<br>(14)                            | 2    |  |          | 1 T S1   |        |        | 1 SC S1 |
| <i>Agastache scrophulariifolia</i> (Willd.) 2<br>Kuntze (14)               |      |  |          | 1 T S1   | H   SH |        | 2 SC S1 |
| <i>Blephilia ciliata</i> (L.) Benth. (14)                                  | 2    |  |          | H   SH   | 1 E S1 |        | H   SH  |
| <i>Blephilia hirsuta</i> (Pursh) Benth. (14)                               | 2    |  |          | 2 T S1   | 7 E S1 |        | 1 SC S1 |
| <i>Blephilia hirsuta</i> (Pursh) Benth. var.<br><i>glabrata</i> Fern. (11) | IND. |  |          | H   SH   |        |        |         |
|  |      | GRank = G4?T1Q. This taxon is a Vermont endemic described by Fernald. It has never been recollected.   |          |          |        |        |         |
| <i>Dracocephalum parviflorum</i> Nutt. (14)                                | 2    | SE   |          | 1 T S1   | SE     | SE     | SE      |
|  |      | Recent searches have not relocated the Vermont occurrence. It was last seen in 1983.   |          |          |        |        |         |
| <i>Lycopus rubellus</i> Moench (14)  | 2    |  | H   SH   | 1   S1   | 2 T S1 | 1   SU | 2   SU  |
| <i>Monarda punctata</i> L. var. <i>villicaulis</i><br>Pennell (14)         | 2    |  |          | 2   S1   | SE     |        | SU      |
| <i>Pycnanthemum clinopodioides</i><br>T. & G. (14)                         | IND. |  |          |          | 1 E S1 |        | 3 E S1  |
|  |      | GRank = G2. Taxonomic confusion. Difficult to distinguish and suspected by   |          |          |        |        |         |

| NAME  | Div  | ME  | NH     | VT     | MA        | RI     | CT       |
|---|------|---|--------|--------|-----------|--------|----------|
|   |      | some botanists to be of hybrid origin. More field and laboratory work needed.   |        |        |           |        |          |
| <i>Pycnanthemum torrei</i> Benth. (14)  | IND. |   | 1 E S1 |        |           |        | 2 E S1   |
|   |      | GRank = G2. Taxonomic confusion. Difficult to distinguish and suspected by some botanists to be of hybrid origin. More field and laboratory work needed.  |        |        |           |        |          |
| <i>Scutellaria integrifolia</i> L. (14)   | 2    |   |        |        | H S X     |        | 1 S C S1 |
| <i>Scutellaria leonardii</i> Epling (14)<br><i>Scutellaria parvula</i> var. <i>leonardi</i> (11)<br>[MA,ME]       | 2    | H S H   |        |        | W L S U   |        | 1 E S1   |
| <i>Scutellaria parvula</i> Michx. var. <i>parvula</i> (14)  | 2    | S U   |        | 11 S2  |           |        |          |
| <i>Stachys hyssopifolia</i> Michx. (14)   | 3*   |   |        |        | 59 W L S4 | 1 E S1 | 2 E S1 * |
|   |      | Disjunct in Hartford County, Connecticut.   |        |        |           |        |          |
| <i>Stachys pilosa</i> Nutt. (13)<br><i>Stachys palustris</i> ssp. <i>pilosa</i><br>(1) [MA,ME]                    | IND. | S E   | S U    | S U    | S U       |        |          |
|   |      | Status unclear for this taxon and closely related taxa.   |        |        |           |        |          |
| <i>Stachys tenuifolia</i> Willd. (14)<br>* S H <br><i>Stachys tenuifolia</i> var. <i>platyphylla</i><br>(11) [NH] | IND. | S E   | S U    |        | S U       | H S H  | H S C    |
|   |      | More field study needed. Recorded for New England in Seymour (1969) and the Maine checklist (Campbell et al., 1995), but Gleason and Cronquist(1991) give a more western range for this and closely related taxa. |        |        |           |        |          |
| <i>Trichostema brachiatum</i> L. (15)<br>* S H <br><i>Isanthus brachiatus</i> (14) [CT]                           | 2    |   |        | H S H  | 3 E S1    |        | H S C    |
| <b>LEMNACEAE</b>  |      |   |        |        |           |        |          |
| <i>Lemna valdiviana</i> Philippi (14)   | IND. |   | 1 E S2 |        | S U       |        | S U      |
|   |      | Not enough information on extant occurrences. Identity of plants in certain reports has been questioned. More field work needed.  |        |        |           |        |          |
| <i>Wolffiella gladiata</i> (Hegelm.)<br>Hegelm. (17)<br>in<br><i>Wolffiella floridana</i> (14)                    | 2    |   |        |        | 1 S1      |        |          |
|   |      | Taxon is being recommended for state endangered species list in Massachusetts in 1997.  |        |        |           |        |          |
| <b>LENTIBULARIACEAE</b>   |      |   |        |        |           |        |          |
| <i>Pinguicula vulgaris</i> L. (14)  | 2    | 1 S1  | 2 E S2 | 1 S1   |           |        |          |
|   |      | Unknown from Maine until 1996.  |        |        |           |        |          |
| <i>Utricularia biflora</i> Lam. (14)<br>* S H   | 2    |   |        |        | 7 T S2    | 2 T S1 | H S C    |
|   |      | Treated as a synonym of <i>U. gibba</i> in Kartesz (1994).  |        |        |           |        |          |
| <i>Utricularia fibrosa</i> Walter (14)<br>* S H   | 2    |   |        |        | 6 T S2    |        | H S C    |
| <i>Utricularia inflata</i> Walter (14)  | IND. |   |        |        | 2 S1      |        |          |
|   |      | Indigenous status in Massachusetts is uncertain.  |        |        |           |        |          |
| <i>Utricularia resupinata</i> B. D. Greene (14)   | 2(a) | 2 T S1  | S U    | 5 T S1 | ~8 W L S2 | 4 T S1 | 1 S C S1 |
|   |      | Some occurrences contain small numbers of plants.   |        |        |           |        |          |
| <i>Utricularia subulata</i> L. (14)   | 2    |   |        |        | 10 S C S3 | 4 C S1 |          |
| <b>LILIACEAE</b>  |      |   |        |        |           |        |          |
| <i>Chamaelirium luteum</i> (L.) A. Gray (14)  | 2    |   |        |        | 3-4 E S1  |        | 5 E S1   |

| NAME  | Div               | ME       | NH       | VT       | MA       | RI     | CT      |
|---|-------------------|----------|----------|----------|----------|--------|---------|
| Melanthium hybridum Walter (14)<br>* SH   | 4                 |          |          |          |          |        | H SC    |
| Tofieldia glutinosa (Michx.) Pers.<br>(14)  | 3*                | +   S3S4 | 4 T S1 * | 4 T S1 * |          |        |         |
| Disjunct in Cheshire, Sullivan, and Grafton counties, New Hampshire and in Windsor and Caledonia counties, Vermont.   |                   |          |          |          |          |        |         |
| Zigadenus elegans Pursh var.<br>glaucus (Nutt.) Preece (14)<br><i>Zigadenus glaucus</i> (11) [VT]   | 4                 |          |          | H  SH    |          |        |         |
| <b>LIMNANTHACEAE</b>  |                   |          |          |          |          |        |         |
| Floerkea proserpinacoides Willd. (14)   | 2                 |          |          | H   SH   | H   SX   |        | 4 E S1  |
| <b>LINACEAE</b>   |                   |          |          |          |          |        |         |
| Linum medium (Planchon) Britton<br>var. texanum (Planchon) Fern. (14)<br><i>Linum medium</i> [ME,VT]  | 2                 | SU       |          | H  SH    | 4 T S1   | SU     | SU      |
| Linum sulcatum Riddell (14)   | 2                 |          |          | H   SH   | H   SX   | 1 E S1 | 1 SC S1 |
| <b>LYCOPODIACEAE</b>  |                   |          |          |          |          |        |         |
| Diphasiastrum x sabinifolium<br>(Willd.) Holub (12)<br><i>Lycopodium sabinifolium</i> (14)<br>[NH,VT]   | 2                 | 5 T S1   | SU       | 3  S1    |          |        |         |
| According to Flora North America (FNA Editorial Committee, 1993) this hybrid between <i>D. sitchense</i> and <i>D. trichystachum</i> is highly variable.  |                   |          |          |          |          |        |         |
| Diphasiastrum sitchense<br>(Rupr.) Holub (12)<br><i>Lycopodium sitchense</i> (14) [NH,VT]   | 2                 | 1 E S1   | SU       | H T SH   |          |        |         |
| Huperzia appalachiana Beitel<br>& Mickel (12)   | IND.              | 7   S2   | SU       | ?   S1   | 1 ? E S1 |        |         |
| GRank = G3. Recent Flora North America (FNA Editorial Committee, 1993) treatment suggests high-elevation alpine occurrences are this taxon, but not all occurrences have been verified. Massachusetts' only known occurrence is suspected to be a hybrid ( <i>H. appalachiana</i> x <i>lucidulum</i> ). |                   |          |          |          |          |        |         |
| Huperzia selago (L.) Berhardi ex<br>* SH <br>Schränk & Martius (12)<br>suggests<br><i>Lycopodium selago</i> (14)<br>[CT,NH,VT]  | IND.              | 1   S1   | ?   SU   | ?   S1   | 1 E S1   |        | H SC    |
| Recent Flora North America (FNA Editorial Committee, 1993) treatment suggests lower elevation plants are this taxon, but all occurrences have not been verified.  |                   |          |          |          |          |        |         |
| Lycopodiella alopecuroides (L.)<br>* SH <br>Cranfill (12)<br><i>Lycopodium alopecuroides</i> (14)<br>[CT,MA,RI]   | 2                 |          |          |          | 1 E S1   | 1 E S1 | H SC    |
| Pseudolycopodiella caroliniana<br>(L.) Holub (12)<br><i>Lycopodium carolinianum</i><br>(14) [MA]  | 4                 |          |          |          | H  SX    |        |         |
| This taxon was last seen in New England on Mt. Toby in Massachusetts in 1976, but is believed to be extirpated from this site.  |                   |          |          |          |          |        |         |
| Lygodium palmatum (Bernh.)<br>Swartz (14)   | 3*<br> 11 SC S2 * |          | H   SX   | 1 E S1 * | 22 SC S3 | 6 C S1 |         |
| Documented decline in Connecticut. Disjunct occurrence in Lamoille County, Vermont.   |                   |          |          |          |          |        |         |
| <b>LYTHRACEAE</b>   |                   |          |          |          |          |        |         |
| Cuphea viscosissima Jacq. (14)  | 4                 |          |          |          | H   SX   | H   SH | H   SH  |

| NAME  | Div  | ME  | NH     | VT     | MA     | RI     | CT      |
|---|------|---|--------|--------|--------|--------|---------|
|   |      | Sorrie (1991) considers this taxon "doubtfully native" in Massachusetts.  |        |        |        |        |         |
| <i>Lythrum alatum</i> Pursh var. <i>alatum</i> (14)   | IND. | SE  | SU     | SE     | SE     | SU     | H SH    |
|   |      | Some occurrences in southern New England are thought to be native, but the species is adventive northward. Vermont occurrences are introduced and no longer extant. |        |        |        |        |         |
| <i>Rotala ramosior</i> (L.) Koehne (14)   | 2    |   |        |        | 1 E S1 | 1 E S1 | 5 E S1  |
| <b>MAGNOLIACEAE</b>   |      |   |        |        |        |        |         |
| <i>Magnolia virginiana</i> L. (14)  | 2    |   |        |        | 3 E S1 |        |         |
| <b>MELASTOMATACEAE</b>  |      |   |        |        |        |        |         |
| <i>Rhexia mariana</i> L. (14)   | 2    |   |        |        | 8 E S1 |        |         |
| <b>MORACEAE</b>   |      |   |        |        |        |        |         |
| <i>Morus rubra</i> L. (14)  | 2    |   |        | 2 T S1 | 3 E S1 |        | 3 E S1  |
|   |      | Some introduced populations occur in Vermont and other New England states.  |        |        |        |        |         |
| <b>NAJADACEAE</b>   |      |   |        |        |        |        |         |
| <i>Najas guadalupensis</i> (Sprengel) Magnus (14)   | IND. | H SH  | SU     | 5 S1   | WL SE  | 2 T S1 | 1 SC S1 |
|   |      | More field study needed. Considered introduced into at least one state (Massachusetts). May be more common than previously recorded.                                |        |        |        |        |         |
| <b>NYMPHAEACEAE</b>   |      |   |        |        |        |        |         |
| <i>Nuphar lutea</i> (L.) Sm. ssp. <i>advena</i> (Ait.) Kartesz & Gandhi (1)<br><i>Nuphar advena</i> (14) [CT,NH,VT]   | IND. | 1-5 S2?   | 1 S1   | H SH   |        |        | H SH    |
|   |      | Relatively few occurrences of this taxon, but some occurrences include entire estuaries.  |        |        |        |        |         |
| <i>Nymphaea leibergii</i> Morong (13)<br><i>Nymphaea tetragona</i> (14)   | 2    | 6 S1  |        |        |        |        |         |
| <i>Nymphaea odorata</i> Aiton ssp. <i>tuberosa</i> * SH  (Paine) Wiersema & Hellquist (13)<br><i>Nymphaea odorata</i> var. <i>tuberosa</i> [VT]<br><i>Nymphaea tuberosa</i> (11) [MA] | IND. |   |        | ? SU   | SE     |        | H SC    |
|   |      | More field study needed.  |        |        |        |        |         |
| <b>ONAGRACEAE</b>   |      |   |        |        |        |        |         |
| <i>Epilobium anagallidifolium</i> Lam. (13)<br><i>Epilobium alpinum</i> (14)  | 2    | 2 T S1  | 1 S1   |        |        |        |         |
| <i>Epilobium hornemannii</i> Reichb. (14)<br><i>Epilobium hornemanni</i> (11) [ME,NH]   | 2    | 3 T S1  | 6 T S2 |        |        |        |         |
| <i>Ludwigia polycarpa</i> Short & Peter (14)<br>* SH  | 2    |   |        | 2 E S1 | 7 T S2 |        | H SC    |
| <i>Ludwigia sphaerocarpa</i> Elliott (14)   | 2    |   |        |        | 2 T S1 | 1 E S1 | 2 E S1  |
| <i>Oenothera fruticosa</i> L. (14)<br>* SH  | IND. | SE  |        |        | SE?    | 1+ S1  | H SC    |
|   |      | More field study needed to determine status in New England. Uncertainty exists regarding its status as a native species.  |        |        |        |        |         |
| <b>OPHIOGLOSSACEAE</b>  |      |   |        |        |        |        |         |
| <i>Botrychium lunaria</i> (L.) Swartz (12)  | 2    | 3 E S1  | H SH   | H E SH | SR     |        |         |
|   |      | Flora North America (FNA Editorial Committee, 1993) reports this taxon from Massachusetts, but we have not seen specimens.  |        |        |        |        |         |



| NAME  | Div  | ME   | NH      | VT      | MA        | RI      | CT      |
|---|------|--|---------|---------|-----------|---------|---------|
| Botrychium minganense Victorin (12)   | IND. | H? SH?   | SR      | SR      |           |         |         |
|   |      | Flora North America (FNA Editorial Committee, 1993) reports this taxon from New Hampshire and Vermont, but we have not seen specimens.   |         |         |           |         |         |
| Botrychium oneidense (Gilbert) House (12)   | IND. | SU   | SU      | SU      | SU        | SU      | SU      |
|   |      | Difficult taxon to distinguish. Flora North America (FNA Editorial Committee,  |         |         |           |         |         |
| Botrychium rugulosum W. H. Wagner (12)  | IND. |  |         | SU      |           |         | SU      |
|   |      | GRank = G3. Many older Vermont collections of this taxon exist. Taxon is not in Flora North America (FNA Editorial Committee, 1993) for Connecticut, but one specimen exists from that state. Difficult to distinguish from <i>B. multifidum</i> or <i>B. dissectum</i> . More field work is needed. |         |         |           |         |         |
| Ophioglossum pusillum Raf. (12)<br><i>Ophioglossum vulgatum</i> (14) [CT]   | 3*   | +? S3?   | SU      | + S3    | 6T S2 *   | 1E S1 * | 3T S1 * |
|   |      | Documented decline in Massachusetts, Connecticut and Rhode Island.   |         |         |           |         |         |
| <b>ORCHIDACEAE</b>  |      |  |         |         |           |         |         |
| Amerorchis rotundifolia Banks (13)<br><i>Orchis rotundifolia</i> (14)   | 2    | 6T S1 '  |         | H SH    |           |         |         |
| Aplectrum hyemale (Muhl.) Torr. (14)<br>* SH  | 2    |  |         | 1T S1   | 3E S1     |         | H SC    |
| Arethusa bulbosa L. (14)  | 3*   | + S3S4   | 4E S1   | 6T S2 * | 16T S2 *  | 5E S1 * | 1E S1 * |
|   |      | Documented decline in Connecticut, Massachusetts, Rhode Island, and Vermont.   |         |         |           |         |         |
| Calypso bulbosa (L.) Oakes (14)   | 3*   | + S3S4   | H E SX  | 7T S2 * |           |         |         |
|   |      | Documented decline in Vermont.   |         |         |           |         |         |
| Corallorhiza odorhiza (Willd.) Nutt. (14)   | 3*   | 2E S1 *  | 3E S1 * | 6T S2   | 13SC 54   | 3T S1   | 10 S3   |
|   |      | Disjunct occurrences in Strafford and Carroll counties, New Hampshire and in York and Oxford counties, Maine.  |         |         |           |         |         |
| Cypripedium arietinum R. Br. (14)<br>* SH   | 1    | 5T S1  | 2E S1   | 18T S2  | 1E S1     |         | H SC    |
|   |      | GRank = G3; Fed. code = 3C.  |         |         |           |         |         |
| Cypripedium parviflorum Salisb. var. makasin (Farwell) Sheviak (13)   | IND. |  | SU      | SU      | 2? SU     | SU      | SU      |
|   |      | Difficult to distinguish. Recent taxonomic work splits yellow lady's slippers into three taxa; the disposition of this taxon in New England is unclear.  |         |         |           |         |         |
| Cypripedium parviflorum Salisb. var. parviflorum (13)<br><i>Cypripedium calceolus</i> var. <i>parviflorum</i> (14) [CT,MA]<br><i>Cypripedium parviflorum</i> (15) [ME,NH,RI,VT]           | IND. | +? S3?   | 2E S1   | S3      | 2? E S1   | SU      |         |
|   |      | Difficult to distinguish. Recent taxonomic work splits yellow lady's slippers into three taxa; the disposition of this taxon in New England is unclear.  |         |         |           |         |         |
| Cypripedium parviflorum Salisb. var. pubescens (Willd.) Knight (13)<br><i>Cypripedium calceolus</i> var. <i>pubescens</i> (14) [CT]<br><i>Cypripedium pubescens</i> (15) [MA,ME,NH,RI,VT] | IND. | +? S3?   | 6T S2   | + S3    | +? WL S3  | 4T S1   | SU      |
|   |      | Difficult to distinguish. Recent taxonomic work splits yellow lady's slippers into three taxa; the disposition of this taxon in New England is unclear.  |         |         |           |         |         |
| Cypripedium reginae Walter (14)   | 3*   | 26 S2S3  | 5SE S1  | + S3    | 18SC S3 * |         | 3E S1 * |
|   |      | Documented decline in Connecticut and Massachusetts.   |         |         |           |         |         |
| Galearis spectabilis (L.) Raf. (15)<br><i>Orchis spectabilis</i> (14) [RI,VT]   | 3*   | 2T S1 *  | 4T S2   | + S4    | + S3      | 1SE S1  | + S3    |
|   |      | Disjunct in Oxford and Somerset counties, Maine. Recent field work seems to indicate a decline in southern New England occurrences.  |         |         |           |         |         |
| Goodyera oblongifolia Raf. (14)   | 2    | 5E S1  |         |         |           |         |         |
| Isotria medeoloides (Pursh) Raf. (14)   | 1    | 17E S2   | +E S2   | H E SH  | 3E S1     | 1E S1   | 1E S1   |
|   |      | GRank = G2G3; Fed. code = LT. The majority of occurrences of this globally   |         |         |           |         |         |



| NAME   | Div  | ME   | NH     | VT       | MA       | RI      | CT      |
|--|------|--|--------|----------|----------|---------|---------|
| Calamagrostis canadensis (Michx.)<br>Beauv. var. langsdorfii (Link)<br>Inman (13)<br><i>Calamagrostis nubila</i> (11) [NH]   | 4    |  | H  SX  |          |          |         |         |
|  |      | GRank = GHQ. GRank applies to synonym <i>C. nubila</i> . Last collection at Lake of the Clouds by Boott in 1862.   |        |          |          |         |         |
| Calamagrostis pickeringii A. Gray (14)   | 2    | 2 E S1   | 9 T S3 | H   SH   | H   SX   |         |         |
| Calamagrostis stricta (Timm) Koel. ssp.<br>inexpansa (Gray) C. W. Greene (15)<br><i>Calamagrostis stricta</i> var. <i>inexpansa</i><br>[NH,VT]<br><i>Calamagrostis lacustris</i> (14) [NH] | 2    | 3 T S1   | 7 E SU | 2 E S1   |          |         | 1 SC S1 |
|  |      | GRank = G3Q. GRank is for <i>C. lacustris</i> .  |        |          |          |         |         |
| Calamagrostis stricta (Timm) Koeler<br>ssp. stricta (14)<br><i>Calamagrostis neglecta</i> (11) [NH]  | 2    | 5 E S1   | 5 T S1 |          |          |         |         |
| Deschampsia atropurpurea (Wahlenb.)<br>Scheele (14)<br><i>Vahlodea atropurpurea</i> (1) [ME]   | 2    | H   SH   | 3   S2 | H   SH   |          |         |         |
| Elymus villosus Muhl. (14)   | 2    |  |        | 3   S1   | 3 T S2   | SU      | SU      |
| Eragrostis capillaris (L.) Nees (14)   | IND. | 1 E S1   | SU     | ?   S2S3 | 4 WL SU  | SU      | SU      |
|  |      | Adventive in gardens, roadsides, and railroads; difficult to determine which occurrences are native.   |        |          |          |         |         |
| Hierochloa alpina (Swartz) Roemer. &<br>Schultes (14)  | 2    | 5 T S1   | 7   S2 | 2 T S1   |          |         |         |
| Leptochloa fascicularis (Lam.) A. Gray<br>var. maritima (Bicknell) Gleason (14)<br><i>Diplachne maritima</i> (11)<br>[CT,MA,NH]  | 1    |  | H   SH |          | 6 T S2   | H H SH  | 2 E S1  |
|  |      | GRank = G5T3T4.  |        |          |          |         |         |
| Leymus mollis (Trin.) Pilger var. mollis<br>(14)<br><i>Elymus mollis</i> [MA,NH]   | IND. | +   S4   | H   SX |          | 2 E S1   |         |         |
|  |      | Confusion with the introduced <i>Leymus arenarius</i> makes this taxon's status unclear.   |        |          |          |         |         |
| Muhlenbergia capillaris (Lam.)<br>Trin. (11)   | 2    |  |        |          | H   SX   |         | 2 E S1  |
| Muhlenbergia richardsonis (Trin.)<br>Rydb. (14)  | 2    | 2   S1   |        |          |          |         |         |
| Muhlenbergia sobolifera (Muhl.)<br>Trin. (14)  | 3*   | 1 E SH *   | 2 T S1 | +   S3   | +   S4   | SU      | +   S3  |
|  |      | The occurrence in Oxford County, Maine, is disjunct. State rank of "SH" for Maine is based on a 20-year cutoff date used by the Maine Natural Areas Program. |        |          |          |         |         |
| Oryzopsis canadensis (Poiret)<br>Trin. (14)  | 4    | H?   SH?   | H E SH |          |          |         |         |
| Panicum amarum Ell. (14)   | 2    |  |        |          | SE       | 1+   SU | 7 T S2  |
|  |      | Massachusetts notes <i>Panicum amarum</i> var. <i>amarulum</i> as introduced in the state.   |        |          |          |         |         |
| Panicum flexile (Gattinger)<br>Scribn. (14)  | 2    |  |        | 2 E S1   |          |         | H   SH  |
| Panicum gattingeri Nash (11)   | 2    |  |        |          | 7 SC S2? |         | H   SH  |
| Panicum mattamuskeetense Ashe (11)<br><i>Panicum dichotomum</i> ssp.<br><i>mattamuskeetense</i> (13)<br><i>Dichantherium mattamuskeetense</i> (31)<br>[MA]                                 | IND. |  |        |          | 7? E SU? | H   SH  |         |
|  |      | May be overlooked on Cape Cod and the islands off the coast of Massachusetts. More field work needed.  |        |          |          |         |         |

| NAME  | Div  | ME   | NH       | VT     | MA      | RI      | CT     |
|---|------|--|----------|--------|---------|---------|--------|
| Panicum polyanthes Schultes (14)<br>* SH <br><i>Dichantheium sphaerocarpon</i> var.<br>field<br><i>isophyllum</i> (15) CT]<br><i>Dichantheium polyanthes</i> [MA]   | IND. |  |          |        | SU      |         | H SC   |
|   |      | There is some confusion with this taxon and <i>Panicum sphaerocarpon</i> . More work needed.   |          |        |         |         |        |
| Panicum rigidulum Bosc. var. pubescens<br>(Vasey) Lelong (13)<br><i>Panicum longifolium</i> (11) [CT,MA,NH]   | 2    |  | H  SH    |        | 6 T S2  | SU      | H  SH  |
| Panicum scabriusculum Elliott (14)<br><i>Dichantheium scabriusculum</i> (15)<br>[CT,MA]   | 2    |  |          |        | 2 T S1  |         | 1 E S1 |
| Panicum sphaerocarpon Elliot (14)<br><i>Dichantheium sphaerocarpon</i> (1)<br>[MA,ME]   | IND. | SU   | H E SH   | 4 S1   | +  SU   | SU      | SU     |
|   |      | Taxonomic confusion between this taxon and <i>P. polyanthes</i> . Further taxonomic and field work needed.   |          |        |         |         |        |
| Panicum stipitatum Nash (11)  | 4    |  |          |        |         |         | H   SH |
|   |      | State of Connecticut endangered species list cites <i>Panicum rigidulum</i> var. <i>elongatum</i> as this taxon.   |          |        |         |         |        |
| Paspalum laeve Michx. (14)  | 2    |  |          |        | H   SX  |         | 2 E S1 |
| Paspalum setaceum Michx. var.<br>* SH <br>psammophilum (Nash) D. Banks (14)   | 2    |  |          |        | 7 WL S2 | SU      | H SC   |
| Phleum alpinum L. (14)  | 2    | 8 T S1   | 2 T S2   |        |         |         |        |
| Poa glauca Vahl (14)  | 2    | <10 SU   | H T SH   | 1 S1   |         |         |        |
| Poa laxa Haenke ssp. fernaldiana<br>(Nannf.) Hylander (13)<br><i>Poa fernaldiana</i> (14) [ME,NH,VT]  | 1    | 1 E S1   | 2 E S2S3 | 1  S1  |         |         |        |
|   |      | GRank = G2G3. Global rank is for synonym <i>P. fernaldiana</i> .   |          |        |         |         |        |
| Poa pratensis (Fries ex Blytt) Hiitonen<br>ssp. alpigena (13)<br><i>Poa arctica</i> (14)  | IND. | SU   | H E SH   |        |         |         |        |
|   |      | In the Maine checklist (Campbell et al., 1995) this taxon is included under <i>Poa pratensis</i> which is considered common in Maine.                          |          |        |         |         |        |
| Puccinellia tenella (Lange) Holm. ssp.<br>langeana (Berlin) Tzelev (15)   | IND. |  |          |        | SU      |         |        |
|   |      | GRank = G4?T3T4. Cited by one source as historic in Massachusetts, but recent manuals do not list a taxon with this name for that state. Investigation needed. |          |        |         |         |        |
| Puccinellia tenella (Lange) Holmb. ssp.<br>* SH <br>alascana (Scribn. & Merr.) Tzelev (15)<br><i>Puccinellia langeana</i> ssp. <i>alascana</i><br>(16) [CT,MA]<br><i>Puccinellia paupercula</i> var. <i>alaskana</i><br>(11) [NH] | IND. | ? SU   | SE       |        | H  SH   |         | H SC   |
|   |      | Taxonomy and nomenclature confusing. More study needed in New England to determine status. May not be rare in Maine.   |          |        |         |         |        |
| Sorghastrum nutans (L.) Nash (14)   | 3*   | 2 S1 *   | SU       | + S3   | + S4    | 5 C S1  | + S4   |
|   |      | Disjunct in Somerset and Androscoggin counties in Maine.   |          |        |         |         |        |
| Spartina cynosuroides (L.) Roth (14)  | 2    |  |          |        | 8 SC S2 | 3 C S1  | <10 S2 |
| Sphenopholis nitida (Biehler) Scribn.<br>(14)   | 2    |  |          | 1 E S1 | 3 T S1  | H SH SH | H   SH |
| Sphenopholis obtusata (Michx.)<br>Scribn. (14)  | IND. | H   SH   | H E SH   | 1 E S1 | SU      | H   SH  | H   SH |
|   |      | May be more common than previously thought; more field study needed to determine status.   |          |        |         |         |        |

| NAME   | Div  | ME     | NH     | VT        | MA        | RI      | CT      |
|--|------|--------|--------|-----------|-----------|---------|---------|
| <i>Sphenopholis pensylvanica</i> (L.)<br>A. Hitchc. (14)   | 2    |        |        |           | 4 T S1    | SU      | H   SH  |
| <i>Sporobolus clandestinus</i> (Biehler)<br>* SH <br>A. Hitchc. (14)   | 4    |        |        |           |           |         | H SC    |
| <i>Sporobolus compositus</i> (Poir.)<br>Merr. var. <i>compositus</i> (15)<br><i>Sporobolus asper</i> (14)<br>[CT,ME,RI,VT]   | 2    | 1 E S1 |        | 3 E S1    | 3 WL SE?  | H C SH  | 5 SC S2 |
| <i>Sporobolus heterolepis</i> A. Gray (14)   | 2    |        |        |           | H   SX    |         | 5 E S1  |
| <i>Sporobolus neglectus</i> Nash (14)<br>* SH  | 2    | H   SH | 1 E S1 | 1   S1    | 2 E S1    |         | H SC    |
| <i>Tripsacum dactyloides</i> L. (14)   | 2    |        |        |           | 1 E S1    | 6 T S1  | 5   S2  |
| <i>Trisetum melicoides</i> (Michx.) Scribn.<br>(14)  | 2    | 2 E S1 | H   SH | H   SH    |           |         |         |
| <b>POLEMONIACEAE</b>   |      |        |        |           |           |         |         |
| <i>Polemonium van-bruntiae</i> Britton (14)  | 1    | 1 E S1 |        | 8 T S2    |           |         |         |
| GRank = G3; Fed. code = 3C.  |      |        |        |           |           |         |         |
| <b>POLYGALACEAE</b>  |      |        |        |           |           |         |         |
| <i>Polygala senega</i> L. (14)   | 2    | 2 T S1 |        | 12   S2S3 | H   SX    |         | 2 E S1  |
| <i>Polygala verticillata</i> L. (11)<br><i>Polygala verticillata</i> var. <i>ambigua</i><br>(11) [CT,ME,NH,RI]   | IND. | +? SU  | SU     | ?   S2    | + WL S3S4 | 2 C S1  | SU      |
| This taxon includes var. <i>ambigua</i> ( <i>Polygala ambigua</i> of Gleason and Cronquist, 1991) and var. <i>isocycla</i> . Most states have not differentiated between the varieties.  |      |        |        |           |           |         |         |
| More field study needed.   |      |        |        |           |           |         |         |
| <b>POLYGONACEAE</b>  |      |        |        |           |           |         |         |
| <i>Oxyria digyna</i> (L.) Hill (14)  | 2    |        | 3 T S1 |           |           |         |         |
| <i>Polygonum douglasii</i> Greene (14)   | 2    | 4 T S1 | 5 T S1 | 3 E S1    |           |         |         |
| <i>Polygonum erectum</i> L. (14)   | IND. | +? SU  | H E SH | 1   S1    | +   S3?   |         | H   SH  |
| Although historically widespread, this taxon appears to be declining in New England. Current status unknown.   |      |        |        |           |           |         |         |
| <i>Polygonum glaucum</i> Nutt. (14)<br>* SH  | 1    |        |        |           | ~40 WL S3 | 3 T S1  | H SC    |
| GRank = G3. Massachusetts has the majority of New England occurrences.   |      |        |        |           |           |         |         |
| <i>Polygonum puritanorum</i> Fern. (11)  | IND. | ?   SE |        |           | 50 SC S3  | H   SH  |         |
| GRank = G3Q. Many current treatments place this under <i>P. persicaria</i> (as do Gleason and Cronquist, 1991) which is common and non-native. Treated as <i>Persicaria maculosa</i> in Maine checklist (Campbell et al., 1995) and considered non-native. |      |        |        |           |           |         |         |
| <i>Polygonum setaceum</i> Baldw. var. <i>interjectum</i> Fern. (11)<br><i>Polygonum hydropiperoides</i><br>var. <i>setaceum</i> (14)   | IND. |        |        |           | 6 SC S2   | H SH SH |         |
| Not always distinguishable from <i>P. hydropiperoides</i> according to Gleason and Cronquist (1991). More field study needed.  |      |        |        |           |           |         |         |
| <i>Polygonum tenue</i> Michx. (14)   | 3*   | H   SH | H E SH | 1   S1 *  | 10+ WL S2 | SU      | +   S3  |
| Disjunct occurrence in Chittenden County, Vermont.   |      |        |        |           |           |         |         |
| <i>Polygonum viviparum</i> L. (14)<br><i>Persicaria vivipara</i> (1) [ME]  | 2    | 1 E S1 | 1 T S1 | H   SH    |           |         |         |

| NAME  | Div  | ME  | NH         | VT  | MA         | RI     | CT     |
|---|------|---|------------|---|------------|--------|--------|
| Rumex occidentalis S. Wats. (14)<br><i>Rumex fenestratus</i> (11) [MA]  | 4    |   |            | H   SH  | SE         |        |        |
|   |      |   |            | Introduced in Massachusetts, but native populations are historic in Vermont. Reported in Gleason and Cronquist (1991) from Maine, but the specimen was misidentified. |            |        |        |
| <b>POLYPODIACEAE</b>  |      |   |            |   |            |        |        |
| Cheilanthes lanosa (Michx.)<br>D. C. Eaton (12)   | 2    |   |            |   |            |        | 1 E S1 |
| <b>PONTEDERIACEAE</b>   |      |   |            |   |            |        |        |
| Heteranthera reniformis Ruiz &<br>Pavon (14)  | 4    |   |            |   |            |        | H   SH |
|   |      | Recent reports unverified and not relocated.  |            |   |            |        |        |
| Zosterella dubia (Jacq.) Small (14)<br><i>Heteranthera dubia</i> (11)<br>[CT,MA,ME,NH,VT]   | 3*   | 4 E S1 *  | 1 E S1     | + S3  | 3+ WL S2S3 |        | + S3   |
|   |      | Disjunct in Penobscot and Hancock counties, Maine. Reported to be more common than records show in Berkshire County, Massachusetts. |            |   |            |        |        |
| <b>PORTULACACEAE</b>  |      |   |            |   |            |        |        |
| Montia fontana L. (14)  | 2    | 12   S2   |            |   |            |        |        |
| <b>POTAMOGETONACEAE</b>   |      |   |            |   |            |        |        |
| Coleogeton filiformis (C.H. Persoon)<br>Les and Haynes ssp. alpinus<br>(M.N. Blytt) Les and Haynes (13)<br><i>Potamogeton filiformis</i> var. <i>alpinus</i><br>(1) [MA,ME,NH]<br><i>Potamogeton filiformis</i> var. <i>borealis</i><br>(14) [VT] | 2    | 9   S2  | 1 E S1     | 3   S1  | H   SX     |        |        |
| Coleogeton filiformis (C.H. Persoon)<br>Les & Haynes ssp. occidentalis<br>(J.W. Robbins) Les & Haynes (13)<br><i>Potamogeton filiformis</i> var.<br><i>occidentalis</i> (1) [ME]  | 2    | 6   S2  |            |   |            |        |        |
| Potamogeton confervoides Reichb. (14)<br>* SH   | 1    | 14 T S2   | 10+   S2S4 | 13   S2   | 5+   SU    | H   SH | H SC   |
|   |      | GRank = G3G4; Fed. code = C2.   |            |   |            |        |        |
| Potamogeton diversifolius Raf. (14)<br>* SH   | IND. | ?   SU  |            |   |            |        | H SC   |
|   |      | Status uncertain.   |            |   |            |        |        |
| Potamogeton hillii Morong (14)  | 1    |   |            | 30   S3   | 22 SC S3   |        | 1 E S1 |
|   |      | GRank = G3.   |            |   |            |        |        |
| Potamogeton ogdenii Hellquist &<br>Hilton (14)  | 1    |   |            | 2   S1  | 1   S1     |        | SU     |
|   |      | GRank = G1.   |            |   |            |        |        |
| Potamogeton pusillus L. ssp.<br>* SH <br>gemmiparus Robbins (14)  | IND. | 10   SU   | 6 T S2     |   | 19   S3S4? | H   SH | H SC   |
|   |      | GRank = G5T3T4. More field work needed to determine current status.   |            |   |            |        |        |
| Potamogeton strictifolius Ar.<br>Benn. (14)<br>certain  | IND. | H   SH  |            | ?   SU  | 1?   S1    |        | 1 E S1 |
|   |      | Similar to closely related species. Questions remain on the identification of populations.  |            |   |            |        |        |
| Potamogeton vaseyi Robbins (14)<br>* SH   | 2    | 2 E S1  | 3 T S2     | 6   S2  | 1 WL S1    |        | H SC   |
| <b>PRIMULACEAE</b>  |      |   |            |   |            |        |        |
| Primula laurentiana Fern. (14)  | 2    | 14   S2   |            |   |            |        |        |

| NAME  | Div  | ME  | NH     | VT       | MA       | RI     | CT       |
|---|------|---|--------|----------|----------|--------|----------|
| <i>Primula mistassinica</i> Michx. (14)   | 3*   | +   S3  |        | 5 T S1 * |          |        |          |
|   |      | Disjunct occurrences in Caledonia and Orleans counties, Vermont.  |        |          |          |        |          |
| <b>PTERIDACEAE</b>  |      |   |        |          |          |        |          |
| <i>Cryptogramma stelleri</i> (S. G. Gmelin) Prantl (14)   | 3*   | 2 T S1 *  | 6 T S1 | +   S3   | 5 T S2   |        | 2 E S1   |
|   |      | Disjunct in Somerset, Piscataquis and Oxford counties, Maine.   |        |          |          |        |          |
| <b>PYROLACEAE</b>   |      |   |        |          |          |        |          |
| <i>Pterospora andromedea</i> Nutt. (14)   | 2    |   | H   SX | 2 E S1   |          |        |          |
| <i>Pyrola minor</i> L. (14)   | 3*   | S3?   | SU     | 1 E S1 * |          |        |          |
|   |      | Occurrences in Chittenden County, Vermont as well as those in eastern New York state are disjunct from the rest of this taxon's range.  |        |          |          |        |          |
| <b>RANUNCULACEAE</b>  |      |   |        |          |          |        |          |
| <i>Anemone multifida</i> Poiret (14)  | 2    | 7 T S1  |        | 1 E S1   |          |        |          |
| <i>Hydrastis canadensis</i> L. (14)   | 2    |   |        | 2 E S1   | 2 E S1   |        | 2 E S1   |
| <i>Ranunculus allegheniensis</i> Britton (14)   | 2    |   |        | 8 T S2   | 1 WL S1  | SU     | 7   S2   |
| <i>Ranunculus ambigens</i> S. Wats. (14)  | 2    | H   SH  | H E SH |          | H   SH   | H   SH | 1 E S1   |
| <i>Ranunculus gmelinii</i> DC. var. <i>hookeri</i> (D. Don) L. Benson (14)<br><i>Ranunculus gmelinii</i> var. <i>purshii</i> (1) [ME]         | 2    | 4 T S1  |        |          |          |        |          |
| <i>Ranunculus hispidus</i> Michx. (14)  | IND. |   |        | 2   S1   | SU       |        |          |
|   |      | Future editions of FNA will likely show that var. <i>hispidus</i> and var. <i>caricetorum</i> are in New England. Gleason and Cronquist (1991) show only var. <i>caricetorum</i> here. The Maine checklist (Campbell et al., 1995) shows var. <i>nitidus</i> as existing statewide. Clarification needed. |        |          |          |        |          |
| <i>Ranunculus lapponicus</i> L. (14)  | 2    | 6 T S1S2  |        |          |          |        |          |
| <i>Ranunculus micranthus</i> Nutt. (14)   | 2    |   |        |          | 4 T S1   | 1 T S1 | 6   S2S3 |
| <i>Trollius laxus</i> Salisb. (14)<br><i>Trollius laxus</i> ssp. <i>laxus</i> (15) [CT]   | 1    |   |        |          |          |        | 5 E S1   |
|   |      | GRank = G4T3Q. GRank is for synonym <i>T. laxus</i> ssp. <i>laxus</i> .   |        |          |          |        |          |
| <b>RHAMNACEAE</b>   |      |   |        |          |          |        |          |
| <i>Ceanothus herbaceus</i> Raf. (14)  | 2    |   |        | 1 E S1   | SE       |        |          |
| <b>ROSACEAE</b>   |      |   |        |          |          |        |          |
| <i>Agrimonia parviflora</i> Aiton (14)  | 2    |   |        |          | 3 E S1   |        | 6 SC S3  |
| <i>Amelanchier nantucketensis</i> Bickn. (11)   | 1    | 11   S2   |        |          | 50 SC S3 |        | SU       |
|   |      | GRank = G3Q; Fed. code = C2. Reported from Connecticut, but no specimens seen. Massachusetts has the majority of occurrences globally.  |        |          |          |        |          |
| <i>Crataegus mollis</i> (T. & G) Scheele (14)   | IND. | H?   SU   |        | H   SH   | SU       |        |          |
|   |      | Difficult taxonomic group. The identity of New England records for this species needs verification.   |        |          |          |        |          |
| <i>Crataegus x silvestris</i> Sarg. (14)<br><i>Crataegus bicknellii</i> (31) [MA]<br><i>Crataegus chrysocarpa</i> var. <i>bicknellii</i> (11) | IND. |   |        |          | 1 E S1   |        |          |
|   |      | GRank = G1Q. GRank is for synonym <i>C. bicknellii</i> . Difficult taxonomic group; status unclear. Listed as a hybrid of <i>C. pruinosa x punctata</i> in Gleason and Cronquist (1991).  |        |          |          |        |          |
| <i>Geum peckii</i> Pursh (14)   | 1    |   | + T S2 |          |          |        |          |
|   |      | GRank = G2Q. Cronquist (Gleason and Cronquist, 1991) reports this for Maine, but we have not seen specimens, nor is it in the Maine checklist (Campbell et  |        |          |          |        |          |

| NAME  | Div  | ME<br>al., 1995). | NH     | VT       | MA         | RI     | CT      |
|---|------|-------------------|--------|----------|------------|--------|---------|
| <i>Geum vernum</i> (Raf.) T. & G. (14)  | 4    |                   |        | H SH     |            |        |         |
| <i>Potentilla pensylvanica</i> L. var.<br><i>bipinnatifida</i> (Douglas) T.&G. (14)<br><i>Potentilla pensylvanica</i> var.<br><i>pectinata</i> (1) [ME,VT]<br><i>Potentilla pectinata</i> (11) [NH]         | IND. | +  S4             | SU     | 1E S1    |            |        |         |
| Current status in New England is unclear. Some Vermont occurrences may be disjunct. Further field work needed.  |      |                   |        |          |            |        |         |
| <i>Potentilla robbinsiana</i> Oakes (14)  | 1    |                   | 2E S1  |          |            |        |         |
| GRank = G1; Fed. code = LE.   |      |                   |        |          |            |        |         |
| <i>Prunus alleghaniensis</i> T.C. Porter (14)<br>* SH   | 4    |                   |        |          | SE         |        | H SC    |
| Fed. code = C2. Introduced in Massachusetts, but historic occurrences in Connecticut are thought to have been native.   |      |                   |        |          |            |        |         |
| <i>Prunus maritima</i> Marsh. var. <i>gravesii</i><br>(Small) G. J. Anderson (15)   | IND. |                   |        |          |            |        | 1E S1   |
| GRank = G4T1Q. Correct status of this taxon is uncertain.   |      |                   |        |          |            |        |         |
| <i>Rosa acicularis</i> Lindley ssp. <i>sayi</i><br>(Schwein.) W. H. Lewis (14)<br><i>Rosa acicularis</i> (14) [MA,NH,VT]  | 2    | H? SU             | H E SH | 2E S1    | 1E S1      |        |         |
| <i>Rosa blanda</i> Aiton var. <i>glabra</i><br>Crépin (15)<br><i>Rosa johannensis</i> (14)  | IND. | ? S2+             |        |          |            |        |         |
| GRank = G5T3Q. Present on list because of GRank, but most authors now combine this taxon under <i>R. blanda</i> which is more common. Not tracked by Maine Natural Areas Program.                           |      |                   |        |          |            |        |         |
| <i>Rubus aculiferus</i> Bailey (15)<br><i>Rubus x aculiferus</i> (14)   | IND. |                   | SU     |          |            |        |         |
| GRank = G2?. Listed as a putative hybrid of <i>R. alleghniensis</i> x <i>setosa</i> in Gleason and Cronquist (1991). Current status in New England is unknown. Appears on this list because of global rank. |      |                   |        |          |            |        |         |
| <i>Rubus cuneifolius</i> Pursh (14)   | 2    |                   | 1E S1  |          | SU         |        | 7 SC S2 |
| Possibly adventive in New Hampshire and Massachusetts.  |      |                   |        |          |            |        |         |
| <i>Sibbaldia procumbens</i> L. (14)   | 2    |                   | 1E S1  |          |            |        |         |
| <i>Waldsteinia fragarioides</i> (Michx.)<br>Tratt. (14)   | 3*   | 2 T S1 *          | 3 T S1 | + S4     | 24 SC S3   |        | 1E S1   |
| Disjunct in Kennebec County, Maine.   |      |                   |        |          |            |        |         |
| <b>RUBIACEAE</b>  |      |                   |        |          |            |        |         |
| <i>Galium kamtschaticum</i> Steller (14)  | IND. | <3 SU             | 2 SU   | ? S2S3   |            |        |         |
| Distributional status in New England is unclear.  |      |                   |        |          |            |        |         |
| <i>Galium labradoricum</i> (Wieg.) Wieg.<br>* SH <br>(14)   | 3*   | SU                | H E S1 | 2 T S1 * | 9+ SC S3 * |        | H SC    |
| Taxon is disjunct in Bennington County, Vermont, and in southern Berkshire County, Massachusetts.   |      |                   |        |          |            |        |         |
| <i>Galium trifidum</i> L. var. <i>trifidum</i> (14)<br><i>Galium brevipes</i> (11) [ME,NH,VT]   | 4    | H  SU             | SU     | H  SH    |            |        |         |
| <b>SALICACEAE</b>   |      |                   |        |          |            |        |         |
| <i>Populus heterophylla</i> L. (14)   | 2    |                   |        |          |            | 1 C S1 | 4E S1   |
| <i>Salix arctophila</i> Cockerell (14)  | 2    | 1E S1             |        |          |            |        |         |
| <i>Salix argyrocarpa</i> Andersson (14)   | 2    | 1E S1             | 5 T S1 |          |            |        |         |
| <i>Salix candida</i> Fluegge (14)   | 3*   | 1 T S1 *          |        | + S3     | 35 WL S4   |        | 15 S3   |
| Disjunct in Aroostook County, Maine.  |      |                   |        |          |            |        |         |



| NAME   | Div  | ME  | NH         | VT     | MA       | RI     | CT     |
|--|------|---|------------|--------|----------|--------|--------|
| Salix cordata Michx. (14)  | IND. | H   SH  | 1   S1     |        | SU       |        |        |
|  |      | Gleason and Cronquist (1991) range for this taxon does not include Massachusetts, but the taxon is included in Sorrie's (1991) draft county checklist for Massachusetts. This taxon is distinct from <i>S. eriocephala</i> . Distributional status in New England is unclear. |            |        |          |        |        |
| Salix exigua Nutt. ssp. interior<br>(Rowlee) Cronquist (14)<br><i>Salix interior</i> (11) [ME]<br><i>Salix exigua</i> (15) [CT,MA,NH,VT] | 3*   | 2 T S1 *  | SU         | +   S3 | 10 SC S3 |        | 4 T S1 |
|  |      | Disjunct in Kennebec County, Maine.   |            |        |          |        |        |
| Salix herbacea L. (14)   | 2    | 1 E S1  | 5 T S1S2   |        |          |        |        |
| Salix myricoides (Muhl.) J. Carey<br>(14)  | 2    | 2   S1  |            |        |          |        |        |
| Salix planifolia Pursh (14)  | 2    | 1 E S1  | 4 T S2     | 1 T S1 |          |        |        |
| Salix uva-ursi Pursh (14)  | 2    | 2 T S1  | 10+   S2S3 | 2 E S1 |          |        |        |
| <b>SANTALACEAE</b>   |      |   |            |        |          |        |        |
| Geocaulon lividum (Richardson)<br>Fern. (14)   | 2    | 10   S2   | 4 T S2     | H   SX |          |        |        |
| <b>SAURURACEAE</b>   |      |   |            |        |          |        |        |
| Saururus cernuus L. (14)   | 2    |   |            |        | H   SX   | 1 E S1 | 3 E S1 |
| <b>GROSSULARIACEAE</b>   |      |   |            |        |          |        |        |
| Ribes rotundifolium Michx. (14)<br>* SH  | IND. |   |            |        | 1 WL S1  |        | H SC   |
|  |      | Specimen from Massachusetts appears valid, but it is unknown whether this taxon is truly native there.  |            |        |          |        |        |

| NAME   | Div  | ME  | NH     | VT       | MA       | RI          | CT     |
|--|------|---|--------|----------|----------|-------------|--------|
| <b>SAXIFRAGACEAE</b>   |      |   |        |          |          |             |        |
| <i>Saxifraga aizoides</i> L. (14)  | 2    |   |        | 2   S1   |          |             |        |
| <i>Saxifraga cernua</i> L. (14)  | 2    |   | 1 E S1 |          |          |             |        |
| <i>Saxifraga foliolosa</i> R. Br. (14)<br><i>Saxifraga stellaris</i> var. <i>comosa</i> (11)       | 2    | 1 E S1  |        |          |          |             |        |
| <i>Saxifraga oppositifolia</i> L. (14)   | 2    |   |        | 5   S1   |          |             |        |
| <i>Saxifraga paniculata</i> Mill. (13)<br><i>Saxifraga aizoon</i> var. <i>neogaea</i> (11) [NH,VT] | 2    | 2 T S1  | 2 E S1 | 5  S1    |          |             |        |
| <i>Saxifraga rivularis</i> L. (14)   | 2    |   | 3 E S1 |          |          |             |        |
| <b>SCROPHULARIACEAE</b>  |      |   |        |          |          |             |        |
| <i>Agalinis acuta</i> Pennell (14)   | 1    |   |        |          | 3 E S1   | 1 E S1      | 1 E S1 |
|  |      | GRank = G1; Fed. code = LE.   |        |          |          |             |        |
| <i>Agalinis neoscotica</i> Greene (11)<br><i>Agalinis purpurea</i> var. <i>neoscotica</i> (14)     | 1    | 4 E S1  |        |          |          |             |        |
|  |      | GRank = G2?.  |        |          |          |             |        |
| <i>Aureolaria virginica</i> (L.) Pennell (14)  | 3*   |   | 4 T S2 | 2   S1 * | +   S4 ? | 12   S2     | +   S3 |
|  |      | Occurrence in Franklin County, Vermont is disjunct.   |        |          |          |             |        |
| <i>Castilleja coccinea</i> (L.) Sprengel (14)  | 2    | H   SX  | H   SX |          | H   SX   | H   SH   SH | 4 E S1 |
| <i>Castilleja septentrionalis</i> Lindl. (14)  | 2(a) | 25   S3   | 2 T S1 | 1 T S1   |          |             |        |
|  |      | Small numbers of plants at most occurrences are cause for concern.  |        |          |          |             |        |
| <i>Collinsia parviflora</i> Dougl. (14)  | 4    |   |        | H   SH   | SE       |             |        |
|  |      | Native occurrences are historic. Introduced occurrence in Massachusetts is also not extant.                         |        |          |          |             |        |
| <i>Euphrasia disjuncta</i> Fern. & Wieg. (14)  | 4    | H   SX  |        |          |          |             |        |
| <i>Euphrasia oakesii</i> Wettst. (14)  | 2    | 1 E S1  | 1 E S1 |          |          |             |        |
| <i>Gratiola virginiana</i> L. (14)   | 2    |   |        |          |          | 2 C S1      |        |
| <i>Melampyrum lineare</i> Desr. var. <i>latifolium</i> Barton (14)                                 | IND. | SU  | H   SH |          | SU       |             | ?   SU |
|  |      | Most specimens not identified to the varietal level. Field work and specimen annotation needed.                     |        |          |          |             |        |
| <i>Melampyrum lineare</i> Desr. var. <i>lineare</i> (14)   | IND. | SU  | SU     | SU       |          |             |        |
|  |      | Most specimens not identified to the varietal level. Field work and specimen annotation needed.                     |        |          |          |             |        |
| <i>Melampyrum lineare</i> Desr. var. <i>pectinata</i> (Pennell) Fern. (14)                         | IND. |   | SU     |          | SU       | SU          | SU     |
|  |      | Most specimens not identified to the varietal level. Field work and specimen annotation needed.                     |        |          |          |             |        |
| <i>Mimulus alatus</i> Aiton (14)   | 2    |   |        |          | 3 E S1   |             | 1   S1 |
| <i>Mimulus moschatus</i> Douglas (14)  | 2    | SE  | 3 E S1 | 6   S2   | 4 T S1   |             | H   SH |
|  |      | This taxon is introduced into some New England states; determining which occurrences are native is often difficult. |        |          |          |             |        |
| <i>Mimulus ringens</i> L. var. <i>colpophilus</i> Fern. (11)                                       | IND. | 12   S2   |        |          |          |             |        |
|  |      | GRank = G5T2Q; Fed. code = C2. Taxonomic status unclear.  |        |          |          |             |        |
| <i>Pedicularis furbishiae</i> S. Wats. (14)  | 1    | 26 E S2   |        |          |          |             |        |
|  |      | GRank = G2; Fed. code = LE.   |        |          |          |             |        |

| NAME   | Div  | ME     | NH     | VT      | MA       | RI   | CT   |
|--|------|--------|--------|---------|----------|------|------|
| <i>Pedicularis lanceolata</i> Michx. (14)  | 2    |        |        |         | 2 E S1   |      | 3 S1 |
| <i>Rhinanthus crista-galli</i> L. (14)<br><i>Rhinanthus minor</i> (15) [MA]  | IND. | ? SU   | 1 S3   | SU      | SE       |      | SE   |
| <i>Schwalbea americana</i> L. (14)<br>* SH   | 4    |        |        |         | H SX     |      | H SC |
| <i>Veronica catenata</i> Pennell (14)<br><i>Veronica anagallis-aquatica</i> (1)<br>[ME]  | IND. | SE     |        | 1 S1    | 2 E S1   |      |      |
| <i>Veronica wormsjoldii</i> Roemer & Schultes (14)   | 2    | 1 E S1 | 2 E S1 |         |          |      |      |
| <i>Veronicastrum virginicum</i> (L.) Farw. (14)  | IND. | SE     |        | 1 E S1  | 10 SC S2 |      | 9 SU |
| <b>SELAGINELLACEAE</b><br><i>Selaginella eclipes</i> W. R. Buck (12)   | IND. |        |        |         |          |      | 2 SU |
| <b>SMLACACEAE</b><br><i>Smilax tamnoides</i> L. (15)<br>* SH <br><i>Smilax tamnoides</i> var. <i>hispida</i> (11) [CT]<br><i>Smilax hispida</i> (14) | 4    |        |        |         |          |      | H SC |
| <b>SOLANACEAE</b><br><i>Leucophysalis grandiflora</i> (Hook.) Rydb. (14)<br><i>Physalis grandiflora</i> (15) [VT]                                    | 4    |        |        | H SH    |          |      |      |
| <i>Physalis longifolia</i> Nutt. var. <i>subglabrata</i> (Mackenzie & Bush) Cronquist (14)<br><i>Physalis subglabrata</i> (11)<br>[CT,NH,RI,VT]      | IND. | SE     | SU     | H SH    | SE       | H SH | H SH |
| <b>SPARGANIACEAE</b><br><i>Sparganium minimum</i> (Hartm.)<br>* SH <br>Fries (14)<br><i>Sparganium natans</i> (15) [MA]                              | 3*   | ? SU   | SU     | 13 T S2 | 4 T S1 * |      | H SC |
| <b>ULMACEAE</b><br><i>Ulmus thomasi</i> Sarg. (14)   | 4    |        |        | H SH    |          |      |      |

Difficult to determine which occurrences are native and which are introduced. Gleason and Cronquist (1991) state that our lowland plants are introduced and the alpine plants are native.

GRank = G2; Fed. code = LE. In New England, this taxon was last seen in Massachusetts in 1963.

Difficult to determine which occurrences are native and which are introduced. Gleason and Cronquist (1991) state that *V. catenata* hybridizes with *V. anagallis-aquatica* and is included under the latter taxon by some authors.

Difficult to determine which occurrences are native and which are introduced.

Taxon is not included in New England in Flora North America (FNA Editorial Committee, 1993), but specimen from Connecticut was later annotated as this taxon by the author of the FNA Editorial Committee, 1993).

GRank = G3G4.

More field work needed to determine status. Difficult to determine which populations are native.

Disjunct in Berkshire County, Massachusetts.

Extant populations in Vermont are introduced. Native populations are historic.

| NAME  | Div  | ME  | NH     | VT     | MA      | RI     | CT     |
|---|------|---|--------|--------|---------|--------|--------|
| <b>URTICACEAE</b>   |      |   |        |        |         |        |        |
| <i>Pilea fontana</i> (Lunell) Rydb. (14)  | IND. |   |        |        | ?   S3? |        | 4   SU |
|   |      | More field study needed. Taxon has been overlooked in New England because of similarity with <i>P. pumila</i> .   |        |        |         |        |        |
| <b>VALERIANACEAE</b>  |      |   |        |        |         |        |        |
| <i>Valeriana uliginosa</i> (T. & G.) Rydb. (14)   | 2    | 10   S2   | 1 E S1 | 1 E S1 |         |        |        |
| <i>Valerianella radiata</i> (L.) Dufr. (14)<br>* SH <br><i>Valerianella radiata</i> var. <i>fernaldiana</i> (11) [CT] | 4    |   |        |        |         |        | H SC   |
| <b>VERBENACEAE</b>  |      |   |        |        |         |        |        |
| <i>Verbena simplex</i> Lehm. (14)   | 2    |   |        | H   SH | 1 E S1  |        | H   SH |
| <b>VIOLACEAE</b>  |      |   |        |        |         |        |        |
| <i>Hybanthus concolor</i> (T. Forster) Sprengel (14)<br>* SH  | 2    |   |        | 1   S1 |         |        | H SC   |
| <i>Viola brittoniana</i> Pollard (11)<br><i>Viola pedatifida</i> ssp. <i>brittoniana</i> (13)                         | 2    | H   SH  |        |        | 6 T S1  |        | 2 E S1 |
|   |      | Preliminary research indicates that one Massachusetts population of this taxon is known as <i>Viola brittoniana</i> var. <i>pectinata</i> (GRank of G4G5T3Q as <i>Viola brittoniana</i> ssp. <i>pectinata</i> ). It is genetically distinct from the other Massachusetts occurrences. |        |        |         |        |        |
| <i>Viola hirsutula</i> Brainerd (11)<br>* SH  | 4    |   |        |        |         |        | H SC   |
| <i>Viola novae-angliae</i> House (11)   | 2    | 15   S2   |        |        |         |        |        |
|   |      | Fed. code = 3C.   |        |        |         |        |        |
| <i>Viola palmata</i> L. (22)<br><i>Viola triloba</i> var. <i>dilatata</i> (11) [MA]                                   | IND. |   |        | SU     | SU      | SU     | SU     |
|   |      | The taxonomic relationship of violets within this complex is very uncertain. The nomenclature reflects this confusion. Further study needed.  |        |        |         |        |        |
| <i>Viola palustris</i> L. (14)  | 2    | 1 E S1  | 4 T S2 |        |         |        |        |
| <i>Viola striata</i> Aiton (14)<br>* SH   | IND. | SE  | SU     |        | SE      |        | H SC   |
|   |      | More field study needed to determine status. New England occurrences should be suspect since this species is cultivated and sometimes escapes.  |        |        |         |        |        |
| <i>Viola subsinuata</i> Greene (22)<br><i>palmata</i><br>desperately  | IND. |   |        | SU     | SU      |        | SU     |
|   |      | The nomenclature of this taxon in New England (which may involve <i>Viola</i> and its varieties as synonyms) is hopelessly confusing. Clarification is needed.  |        |        |         |        |        |
| <b>XYRIDACEAE</b>   |      |   |        |        |         |        |        |
| <i>Xyris smalliana</i> Nash (14)  | 3*   | 1 E S1 *  |        |        | +   SU  | +   S2 | 4 E S1 |
|   |      | Since the Essex County, Massachusetts occurrences are dated pre-1970, the York County, Maine occurrence is considered to be disjunct.   |        |        |         |        |        |

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## Appendix I. State Status codes.

Connecticut: (Connecticut Department of Environmental Protection 1993). Public Act 89-224. E = Endangered - any native species documented by biological research and inventory to be in danger of extirpation throughout all or a significant portion of its range within Connecticut and to have no more than five occurrences in the state, and any species determined to be an “endangered species” pursuant to the federal Endangered Species Act.

T = Threatened - any native species documented by biological research and inventory to be likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range within Connecticut and to have no more than nine occurrences in the state, and any species determined to be a “threatened species” pursuant to the federal Endangered Species Act, except for such species determined to be endangered by the Commissioner in accordance with section 4 of Public Act 89-224.

SC = Special Concern - any native plant species or any native nonharvested wildlife species documented by scientific research and inventory to have a naturally restricted range or habitat in the state, to be at a low population level, to be in such high demand by man that its unregulated taking would be detrimental to the conservation of its population.

SC \* = extirpated from the state.

Maine: Maine Revised Statutes Annotated 5 MSRA C,383, sub C. III, articles 1-A.

E = Endangered - any native plant that is in danger of extinction throughout all or a significant portion of its range within the State or any species determined to be an endangered species pursuant to the United States Endangered Species Act of 1973, Public Law 93-205, as amended.

T = Threatened - any species of native plant likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range or any species of plant determined to be a threatened species pursuant to the federal Endangered Species Act of 1973 as amended.

Massachusetts: (State of Massachusetts 1992). Massachusetts Endangered Species Act, MGL c.131A and its regulations, 321 CMR 10.00.

E = Endangered - any species of plant or animal in danger of extinction throughout all or a significant portion of its range and species of plants or animals in danger of extirpation as documented by biological research and inventory.

T = Threatened - any species of plant or animal likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range and any species declining or rare as determined by biological research and inventory and likely to become endangered in the foreseeable future.

SC = Special Concern - any species of plant or animal which has been documented by biological research and inventory to have suffered a decline that could threaten the species if allowed to continue unchecked or that occurs in such small numbers or with such a restricted distribution or specialized habitat requirements that it could easily become threatened within Massachusetts.

WL = Watch List - species with no legal standing, but considered by the state botanist to be sufficiently uncommon to be monitored in the field and studied further for possible listing (or relisting in some cases) under the Massachusetts ESA regulations.

New Hampshire: (New Hampshire Natural Heritage Inventory 1995). State law RSA 217-A:3, III, passed in 1987.

E = Endangered (Note: this state code is actually SE, State Endangered. It has been changed to E in this list for consistency.) - all species in New Hampshire determined to be endangered as defined by RSA 217-A:3, III, or native plants documented as having three or fewer occurrences in the state within the last 50 years, or plants with more than three occurrences which are, in the judgment of specialists, especially vulnerable to extirpation.

T = Threatened (Note: this state code is actually ST, State Threatened. It has been changed to T in this list for consistency.) - all species occurring in new Hampshire determined to be a threatened species as defined by RSA-A:3, XII or Federal candidate species as defined by Res-N 306.01 occurring in New Hampshire which are not listed on the endangered species listing as contained in Res-N 306.02 or native plants documented as having ten or fewer natural occurrences within the last 20 years or are otherwise threatened by extirpation due to habitat loss or other factors.

SC = Special Concern - plants species not threatened or endangered, but listed under state law as Special Concern Plant Species because they may be subject to commercial exploitation or overcollecting.



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Rhode Island: (Enser 1996). Rhode Island State Endangered Species Act, Title 20, Chapter 37-1 of the General Laws of the State of Rhode Island.

E = Endangered (Note: this state code is actually SE, State Endangered. It has been changed to E in this list for consistency. Federally Endangered taxa, given the code FE, and Federally Threatened taxa, given the code FT by Rhode Island, are also changed to E in this list.) - in addition to the preceding federally ranked taxa, native taxa in imminent danger of extirpation from Rhode Island. These taxa may meet one or more of the following criteria: taxa formerly considered by the U.S. Fish and Wildlife Service for listing as Federally endangered or threatened (former C2 category species); a taxon with one or two known or estimated total populations in the state; a taxon apparently globally rare or threatened, estimated to occur at approximately 100 or fewer sites range-wide.

T = Threatened (Note: this state code is actually ST, State Threatened. It has been changed to T in this list for consistency.) - native taxa which are likely to become State Endangered in the future if current trends in habitat loss or other detrimental factors remain unchanged. In general these taxa have three to five known or estimated populations and are especially vulnerable to habitat loss.

C = Concern - Native taxa which do not qualify under other categories but are additionally listed due to various factors of rarity and/or vulnerability.

SH = State Historical - native taxa which have been documented for Rhode Island during the last 150 years but for which there are no extant populations.

Vermont: State status as per the Vermont Endangered Species Law 10 V.S.A. Chapter 123 passed in 1991.

E = Endangered. An endangered species means any species whose continued existence as a viable component of the state's wild flora or fauna is determined to be in jeopardy. The term shall also include any species of wildlife or plant determined to be an endangered species pursuant to the Federal Endangered Species Act.

T = Threatened. A threatened species means any species of wild flora or fauna which appears likely within the foreseeable future to become endangered. That term shall also include any species of wildlife or plant determined to be a threatened species pursuant to the Federal Endangered Species Act.

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Appendix II. Global Ranks (GRanks; adapted from The Nature Conservancy 1996 and Master 1991).

Ranks issued by the Nature Conservancy's Biological Conservation Database. A species is given a Global Rank of G followed by a number or symbol, and a variety or subspecies has a T followed by a number or symbol. (For example, for Eupatorium leucolepis var. novae-angliae, the Global Rank G5T1 means that the species is secure globally, G5, but that the variety is critically imperiled globally, T1.)

G1= Critically imperiled globally because of extreme rarity or because of some factor(s) making it especially vulnerable to extinction. (typically 5 or fewer occurrences or very few remaining individuals or acres).

G2 = Imperiled globally because of rarity or because of some factor(s) making it very vulnerable to extinction throughout its range (typically 6 to 20 occurrences or few remaining individuals or acres).

G3 = Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range (e.g., a single state or a physiographic region in the East) or because of other factors making it vulnerable to extinction throughout its range (typically 21 to 100 occurrences).

G4 = Widespread, abundant, and apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery. Thus, the taxon is of long-term concern (usually 100 or more occurrences).

G5 = Demonstrably widespread, abundant, and secure globally, though it may be quite rare in parts of its range, especially at the periphery.

G#G# = Numeric range rank: A range spanning two or more of the numeric ranks. Denotes range of uncertainty about the exact rarity (for example - G2G3).

G? = Unranked, Element is not yet ranked globally.

G#T# = for infraspecific taxa: the GRank applies to the full species and the TRank applies to the infraspecific taxon.

#### Subrank

T = Taxonomic subdivision: rank applies to a subspecies or variety.

T#T# = Numeric range rank: A range spanning two or more of the numeric ranks for a variety or subspecies. Denotes range of uncertainty about the exact rarity of variety or subspecies (for example - G5T2T3).

#### Qualifiers

? = Inexact or uncertain. (For example, G3? or G5T3? means that the numeric ranking is uncertain.)

Q = Questionable taxonomy: taxonomic status is questionable; numeric rank may change with taxonomy. (For example, G4T3Q means that the taxonomy, in this case of the subspecies or variety, is questionable.)

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Appendix III. State Rank (SRanks; adapted from The Nature Conservancy 1996 and Master 1991).

S1= Critically imperiled in the state because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation from the state (typically 5 or fewer occurrences or very few remaining individuals).

S2 = Imperiled in the state because of rarity or because of some factor(s) making it very vulnerable to extirpation from the state (typically 6 to 20 occurrences or few remaining individuals).

S3 = Rare and uncommon in the state (typically 21 to 100 occurrences).

S4 = Widespread, abundant, and apparently secure in state, with many occurrences, but is of long-term concern (usually 100 or more occurrences).

S5 = Demonstrably widespread, abundant, and secure in the state, and essentially ineradicable under present conditions.

S#S# = Numeric range rank: A range spanning two or more of the numeric ranks. Denotes range of uncertainty about the exact rarity (for example - S2S3).

S? = Unranked: not yet ranked in the state.

SU = Unrankable: status uncertain; more information needed.

SE = Exotic: an exotic species established in the state.

SR = Reported in the state but without persuasive documentation to provide a basis for either accepting or rejecting (e.g., misidentified specimen) the report. Some of these are very recent discoveries for which first-hand information has yet to be received; others are old, obscure reports that are hard to dismiss because the habitat is now destroyed.

SH = Historical: occurred historically in the state.

SX = Extirpated: believed to be extirpated from the state.

#### Qualifier

? = Inexact or uncertain.

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## Appendix IV. Federal Listing Designations

Codes used by the U.S. Fish and Wildlife Service (USFWS) for plants in this list under the U.S. Endangered Species Act of 1973 (the Act) as amended.

## Listed Species

LE = Listed Endangered (Note: this Federal code is actually E, Endangered. It has been changed to LE in this list to distinguish from state endangerment status.) - taxa that are in danger of extinction throughout all or a significant portion of their range in the U.S.

LT = Listed Threatened (Note: this Federal code is actually T, Threatened. It has been changed to LT in this list to distinguish from state threatened status.) - taxa that may become endangered in the foreseeable future throughout all or a significant portion of their range in the U.S.

## Former Candidate Species

The U. S. Fish and Wildlife Service is required to identify species of wildlife and plants that are endangered or threatened based on the best available scientific and commercial information. As part of the program to identify species for possible listing, the USFWS has maintained a list of species regarded as candidates for listing. Prior to 1996, there were 18 plant taxa occurring in New England that were considered candidates for listing. These taxa, known as Category 2 taxa, were considered taxa for which some information indicated that they might be in danger, but insufficient data on biological vulnerability and threat were available to support listing.

In February 1996, the USFWS published a Proposed Rule which changed the definition of Candidate species, and narrowed the Candidate list to 182 taxa of plants and animals nationally. No plant taxa in New England now appear on this new Candidate list which was given a Notice of final decision on December 5, 1996 (U.S. Fish and Wildlife Service 1996). The Former Candidate species, designated here as 'C2,' technically are no longer monitored (tracked) by the USFWS, but are included in "Flora Conservanda: New England" where appropriate in order that their status can be followed.

C2 = Former Candidate species.

Taxa no longer under Consideration by the USFWS

Taxa that were once considered for listing as endangered but are no longer under such consideration were historically included in Category 3. Such taxa were subdivided further into three subcategories to indicate the reason for their removal from consideration. This designation of Category 3 has been discontinued under the Final Rule published in 1996 (U. S. Fish and Wildlife Service 1996).

3A = Taxa for which the USFWS has persuasive evidence of extinction . If rediscovered, such taxa might acquire high priority for listing. At this time, however, the best available information indicates that the taxa in this subcategory, or the habitats from which they were known, have been lost.

3B = Names that, on the basis of current taxonomic understanding (usually as represented in published revisions and monographs), do not represent distinct taxa meeting the Act's definition of "species." Such supposed taxa could be reevaluated in the future on the basis of new information.

3C = Taxa that have proven more abundant or widespread than previously believed as well as taxa that are not subject to any identifiable threat. If further research or changes in habitat indicate a significant decline in these taxa, they may be reevaluated for possible inclusion as candidates.

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## INDEX TO THE NEPCoP LIST

| NAME  | FAMILY           | NEPCOP<br>DIVISION |
|---|------------------|--------------------|
| <i>Achillea borealis</i>                              | ASTERACEAE       | IND.               |
| <i>Achillea millefolium</i> var. <i>borealis</i>      |                  |                    |
| - see <i>Achillea borealis</i>                        |                  |                    |
| <i>Achillea millefolium</i> var. <i>nigrescens</i>    |                  |                    |
| - see <i>Achillea borealis</i>                        |                  |                    |
| <i>Adiantum aleuticum</i>                             | ADIANTACEAE      | 2                  |
| <i>Adiantum viridimontanum</i>                        | ADIANTACEAE      | 1                  |
| <i>Agalinis acuta</i>                                 | SCROPHULARIACEAE | 1                  |
| <i>Agalinis neoscotica</i>                            | SCROPHULARIACEAE | 1                  |
| <i>Agalinis purpurea</i> var. <i>neoscotica</i>       |                  |                    |
| - see <i>Agalinis neoscotica</i>                      |                  |                    |
| <i>Agastache nepetoides</i>                           | LAMIACEAE        | 2                  |
| <i>Agastache scrophulariifolia</i>                    | LAMIACEAE        | 2                  |
| <i>Agrimonia parviflora</i>                           | ROSACEAE         | 2                  |
| <i>Agrostis borealis</i>                              |                  |                    |
| - see <i>Agrostis mertensii</i>                       |                  |                    |
| <i>Agrostis mertensii</i>                             | POACEAE          | 2                  |
| <i>Amaranthus pumilus</i>                             | AMARANTHACEAE    | 4                  |
| <i>Amaranthus tuberculatus</i>                        | AMARANTHACEAE    | 2                  |
| <i>Amelanchier nantucketensis</i>                     | ROSACEAE         | 1                  |
| <i>Amerorchis rotundifolia</i>                        | ORCHIDACEAE      | 2                  |
| <i>Ammophila champlainensis</i>                       | POACEAE          | IND.               |
| <i>Amphicarpum purshii</i>                            | POACEAE          | 2                  |
| <i>Anemone multifida</i>                              | RANUNCULACEAE    | 2                  |
| <i>Angelica lucida</i>                                | APIACEAE         | IND.               |
| <i>Angelica venenosa</i>                              | APIACEAE         | 4                  |
| <i>Aplectrum hyemale</i>                              | ORCHIDACEAE      | 2                  |
| <i>Arabis drummondii</i>                              | BRASSICACEAE     | 3:VT               |
| <i>Arabis laevigata</i>                               | BRASSICACEAE     | 3:ME               |
| <i>Arabis missouriensis</i>                           | BRASSICACEAE     | IND.               |
| <i>Arctostaphylos alpina</i>                          | ERICACEAE        | 2                  |
| <i>Arenaria caroliniana</i>                           | CARYOPHYLLACEAE  | 4                  |
| <i>Arenaria glabra</i>                                |                  |                    |
| - see <i>Minuartia glabra</i>                         |                  |                    |
| <i>Arenaria groenlandica</i> var. <i>glabra</i>       |                  |                    |
| - see <i>Minuartia glabra</i>                         |                  |                    |
| <i>Arenaria groenlandica</i> var. <i>groenlandica</i> |                  |                    |
| - see <i>Minuartia groenlandica</i>                   |                  |                    |
| <i>Arenaria macrophylla</i>                           |                  |                    |
| - see <i>Moehringia macrophylla</i>                   |                  |                    |
| <i>Arenaria marcescens</i>                            |                  |                    |
| - see <i>Minuartia marcescens</i>                     |                  |                    |
| <i>Arenaria rubella</i>                               |                  |                    |
| - see <i>Minuartia rubella</i>                        |                  |                    |
| <i>Arethusa bulbosa</i>                               | ORCHIDACEAE      | 3:CT,MA,RI,VT      |
| <i>Aristida basiramea</i>                             | POACEAE          | IND.               |
| <i>Aristida purpurascens</i>                          | POACEAE          | 2                  |
| <i>Aristida tuberculosa</i>                           | POACEAE          | 2                  |
| <i>Aristolochia serpentaria</i>                       | ARISTOLOCHIACEAE | 2                  |
| <i>Armoracia lacustris</i>                            |                  |                    |

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|  |                  |      |
|--|------------------|------|
| - see <i>Neobeckia aquatica</i>                        |                  |      |
| <i>Arnica lanceolata</i>                               | ASTERACEAE       | 1    |
| <i>Arnica mollis</i>                                   |                  |      |
| - see <i>Arnica lanceolata</i>                         |                  |      |
| <i>Artemisia campestris</i> ssp. <i>borealis</i>       | ASTERACEAE       | 2    |
| <i>Artemisia campestris</i> var. <i>canadensis</i>     |                  |      |
| - see <i>Artemisia campestris</i> ssp. <i>borealis</i> |                  |      |
| <i>Artemisia campestris</i> ssp. <i>caudata</i>        | ASTERACEAE       | 3:VT |
| <i>Asclepias purpurascens</i>                          | ASCLEPIADACEAE   | 2    |
| <i>Asclepias tuberosa</i>                              | ASCLEPIADACEAE   | 3:MA |
| <i>Asclepias variegata</i>                             | ASCLEPIADACEAE   | 2    |
| <i>Asclepias viridiflora</i>                           | ASCLEPIADACEAE   | 4    |
| <i>Asplenium montanum</i>                              | ASPLENIACEAE     | 2    |
| <i>Asplenium trichomanes-ramosum</i>                   | ASPLENIACEAE     | 2    |
| <i>Asplenium viride</i>                                |                  |      |
| - see <i>Asplenium trichomanes-ramosum</i>             |                  |      |
| <i>Aster anticosensis</i>                              | ASTERACEAE       | 4    |
| <i>Aster concolor</i>                                  | ASTERACEAE       | 2    |
| <i>Aster dumosus</i>                                   | ASTERACEAE       | 3:ME |
| <i>Aster infirmus</i>                                  | ASTERACEAE       | 2    |
| <i>Aster praealtus</i>                                 | ASTERACEAE       | IND. |
| <i>Aster prenanthoides</i>                             | ASTERACEAE       | 2    |
| <i>Aster ptarmicoides</i>                              |                  |      |
| - see <i>Solidago ptarmicoides</i>                     |                  |      |
| <i>Aster sagittifolius</i>                             | ASTERACEAE       | 2    |
| <i>Astragalus alpinus</i> var. <i>brunetianus</i>      | FABACEAE         | 1    |
| <i>Astragalus canadensis</i>                           | FABACEAE         | 2    |
| <i>Astragalus eucosmus</i>                             | FABACEAE         | 4    |
| <i>Astragalus robbinsii</i> var. <i>jesupii</i>        | FABACEAE         | 1    |
| <i>Astragalus robbinsii</i> var. <i>minor</i>          | FABACEAE         | 2    |
| <i>Astragalus robbinsii</i> var. <i>robbinsii</i>      | FABACEAE         | 4    |
| <i>Aureolaria virginica</i>                            | SCROPHULARIACEAE | 3:VT |
| <i>Barbarea orthoceras</i>                             | BRASSICACEAE     | 2    |
| <i>Betula borealis</i>                                 |                  |      |
| - see <i>Betula minor</i>                              |                  |      |
| <i>Betula glandulosa</i>                               | BETULACEAE       | 2    |
| <i>Betula minor</i>                                    | BETULACEAE       | 1    |
| <i>Betula</i> × <i>minor</i>                           |                  |      |
| - see <i>Betula minor</i>                              |                  |      |
| <i>Betula nana</i>                                     |                  |      |
| - see <i>Betula glandulosa</i>                         |                  |      |
| <i>Betula nigra</i>                                    | BETULACEAE       | 2    |
| <i>Betula pumila</i>                                   | BETULACEAE       | 3:NH |
| <i>Bidens eatonii</i>                                  | ASTERACEAE       | 1    |
| <i>Bidens heterodoxa</i>                               | ASTERACEAE       | IND. |
| <i>Bidens hyperborea</i>                               | ASTERACEAE       | 2    |
| <i>Bidens hyperborea</i> var. <i>cathancensis</i>      |                  |      |
| - see <i>B. hyperborea</i> var. <i>svensonii</i>       |                  |      |
| <i>Bidens hyperborea</i> var. <i>colpophila</i>        |                  |      |
| - see <i>Bidens hyperborea</i>                         |                  |      |
| <i>Bidens hyperborea</i> var. <i>svensonii</i>         | ASTERACEAE       | IND. |
| <i>Blephilia ciliata</i>                               | LAMIACEAE        | 2    |
| <i>Blephilia hirsuta</i>                               | LAMIACEAE        | 2    |
| <i>Blephilia hirsuta</i> var. <i>glabrata</i>          | LAMIACEAE        | IND. |
| <i>Bolboschoenus maritimus</i>                         | CYPERACEAE       | 3:VT |

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|---|-----------------|---------|-----------|
| Bolboschoenus novae-angliae                                   | CYPERACEAE      | 2       |           |
| Botrychium lunaria  | OPHIOGLOSSACEAE | 2       |           |
| Botrychium minganense   | OPHIOGLOSSACEAE | IND.    |           |
| Botrychium oneidense  | OPHIOGLOSSACEAE | IND.    |           |
| Botrychium rugulosum  | OPHIOGLOSSACEAE | IND.    |           |
| Bouteloua curtipendula  | POACEAE         | 2       |           |
| Braya humilis   | BRASSICACEAE    | 2       |           |
| Cacalia suaveolens  | ASTERACEAE      | 4       |           |
| Calamagrostis canadensis var. langsdorfii                     | POACEAE         | 4       |           |
| <i>Calamagrostis lacustris</i>                                |                 |         |           |
| - see <i>Calamagrostis stricta</i> ssp. <i>inexpansa</i>      |                 |         |           |
| <i>Calamagrostis neglecta</i>                                 |                 |         |           |
| - see <i>Calamagrostis stricta</i> ssp. <i>stricta</i>        |                 |         |           |
| <i>Calamagrostis nubila</i>                                   |                 |         |           |
| - see <i>Calamagrostis canadensis</i> var. <i>langsdorfii</i> |                 |         |           |
| <i>Calamagrostis pickeringii</i>                              | POACEAE         | 2       |           |
| <i>Calamagrostis stricta</i> ssp. <i>inexpansa</i>            | POACEAE         | 2       |           |
| <i>Calamagrostis stricta</i> var. <i>inexpansa</i>            |                 |         |           |
| - see <i>Calamagrostis stricta</i> ssp. <i>inexpansa</i>      |                 |         |           |
| <i>Calamagrostis stricta</i> ssp. <i>stricta</i>              | POACEAE         | 2       |           |
| Callitriche hermaphroditica                                   | CALLITRICHACEAE | 4       |           |
| Callitriche terrestris  | CALLITRICHACEAE | 4       |           |
| Calypso bulbosa   | ORCHIDACEAE     | 3:VT    |           |
| Calystegia spithamea  | CONVOLVULACEAE  | 2       |           |
| Cardamine bellidifolia  | BRASSICACEAE    | 2       |           |
| Cardamine concatenata   | BRASSICACEAE    | 3: ME   |           |
| Cardamine douglassii  | BRASSICACEAE    | 2       |           |
| Cardamine × incisa  | BRASSICACEAE    | IND.    | Cardamine |
| longii  | BRASSICACEAE    | 1       |           |
| <i>Cardamine maxima</i>                                       |                 |         |           |
| - see <i>Cardamine</i> × <i>maxima</i>                        |                 |         |           |
| <i>Cardamine</i> × <i>maxima</i>                              | BRASSICACEAE    | IND.    |           |
| <i>Cardamine pratensis</i> var. <i>palustris</i>              | BRASSICACEAE    | 2       |           |
| Carex adusta  | CYPERACEAE      | 2       |           |
| Carex albicans var. <i>emmonsii</i>                           | CYPERACEAE      | 3:VT    |           |
| Carex alopecoidea   | CYPERACEAE      | 2       |           |
| Carex arcta   | CYPERACEAE      | 3:VT    |           |
| Carex atherodes   | CYPERACEAE      | 4       |           |
| Carex atratifomis   | CYPERACEAE      | 2       |           |
| Carex backii  | CYPERACEAE      | 3:ME    |           |
| Carex baileyi   | CYPERACEAE      | 3:ME    |           |
| Carex barrattii   | CYPERACEAE      | 2       |           |
| Carex bicknellii  | CYPERACEAE      | IND.    |           |
| Carex bigelowii   | CYPERACEAE      | 3:VT    |           |
| Carex bushii  | CYPERACEAE      | 2       |           |
| Carex buxbaumii   | CYPERACEAE      | 3:VT    |           |
| Carex capillaris  | CYPERACEAE      | 2       |           |
| <i>Carex capillaris</i> ssp. <i>capillaris</i>                |                 |         |           |
| - see <i>Carex capillaris</i>                                 |                 |         |           |
| <i>Carex capitata</i>   | CYPERACEAE      | 2       |           |
| <i>Carex capitata</i> ssp. <i>arctogena</i>                   |                 |         |           |
| - see <i>Carex capitata</i>                                   |                 |         |           |
| <i>Carex chordorrhiza</i>                                     | CYPERACEAE      | 3:MA,VT |           |
| <i>Carex collinsii</i>  | CYPERACEAE      | 2       |           |
| <i>Carex crawei</i>   | CYPERACEAE      | 2       |           |

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|   |                  |      |
|---|------------------|------|
| <i>Carex davisii</i>  | CYPERACEAE       | 2    |
| <i>Carex dioica</i> var. <i>gynocrates</i><br>- see <i>Carex gynocrates</i>     |                  |      |
| <i>Carex eburnea</i>  | CYPERACEAE       | 3:ME |
| <i>Carex emmonsii</i><br>- see <i>Carex albicans</i> var. <i>emmonsii</i>       |                  |      |
| <i>Carex flaccosperma</i> var. <i>glaucodea</i><br>- see <i>Carex glaucodea</i> |                  |      |
| <i>Carex foenea</i><br>- see <i>Carex siccata</i>                               |                  |      |
| <i>Carex garberi</i>  | CYPERACEAE       | 1    |
| <i>Carex garberi</i> var. <i>bifaria</i><br>- see <i>Carex garberi</i>          |                  |      |
| <i>Carex glaucodea</i>  | CYPERACEAE       | 2    |
| <i>Carex gracilescens</i>   | CYPERACEAE       | 2    |
| <i>Carex gynocrates</i>   | CYPERACEAE       | IND. |
| <i>Carex livida</i>   | CYPERACEAE       | 2    |
| <i>Carex livida</i> var. <i>radicaulis</i><br>- see <i>Carex livida</i>         |                  |      |
| <i>Carex lupuliformis</i>   | CYPERACEAE       | 1    |
| <i>Carex mitchelliana</i>   | CYPERACEAE       | 1    |
| <i>Carex muhlenbergii</i>   | CYPERACEAE       | 3:VT |
| <i>Carex nigromarginata</i>   | CYPERACEAE       | 4    |
| <i>Carex norvegica</i>  | CYPERACEAE       | 2    |
| <i>Carex oligocarpa</i>   | CYPERACEAE       | 2    |
| <i>Carex oronensis</i>  | CYPERACEAE       | 1    |
| <i>Carex polymorpha</i>   | CYPERACEAE       | 1    |
| <i>Carex prairea</i>  | CYPERACEAE       | 3:ME |
| <i>Carex praticola</i>  | CYPERACEAE       | 4    |
| <i>Carex rariflora</i>  | CYPERACEAE       | 4    |
| <i>Carex recta</i>  | CYPERACEAE       | IND. |
| <i>Carex richardsonii</i>   | CYPERACEAE       | 2    |
| <i>Carex saxatilis</i>  | CYPERACEAE       | 2    |
| <i>Carex schweinitzii</i>   | CYPERACEAE       | 1    |
| <i>Carex scirpoidea</i>   | CYPERACEAE       | 2    |
| <i>Carex siccata</i>  | CYPERACEAE       | 3:VT |
| <i>Carex sparganioides</i>  | CYPERACEAE       | 3:ME |
| <i>Carex sterilis</i>   | CYPERACEAE       | 2    |
| <i>Carex striata</i> var. <i>brevis</i>   | CYPERACEAE       | 2    |
| <i>Carex striatula</i>  | CYPERACEAE       | 2    |
| <i>Carex tenuiflora</i>   | CYPERACEAE       | 2    |
| <i>Carex tetanica</i>   | CYPERACEAE       | 2(a) |
| <i>Carex trichocarpa</i>  | CYPERACEAE       | 2    |
| <i>Carex vaginata</i>   | CYPERACEAE       | 2    |
| <i>Carex wiegandii</i>  | CYPERACEAE       | 1    |
| <i>Carex willdenowii</i>  | CYPERACEAE       | 4    |
| <i>Carex woodii</i>   | CYPERACEAE       | 4    |
| <i>Cassia hebecarpa</i><br>- see <i>Senna hebecarpa</i>                         |                  |      |
| <i>Cassiope hypnoides</i><br>- see <i>Harrimanella hypnoides</i>                |                  |      |
| <i>Castilleja coccinea</i>  | SCROPHULARIACEAE | 2    |
| <i>Castilleja septentrionalis</i>   | SCROPHULARIACEAE | 2(a) |
| <i>Ceanothus herbaceus</i>  | RHAMNACEAE       | 2    |
| <i>Cerastium nutans</i>   | CARYOPHYLLACEAE  | 2    |



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| <i>Ceratophyllum echinatum</i>   | CERATOPHYLLACEAE | 3:ME    |
| <i>Cercis canadensis</i>   | CAESALPINIACEAE  | 4       |
| <i>Chamaelirium luteum</i>   | LILIACEAE        | 2       |
| <i>Chamaesyce glyptosperma</i>   |                  |         |
| - see <i>Euphorbia glyptosperma</i>  |                  |         |
| <i>Cheilanthes lanosa</i>  | POLYPODIACEAE    | 2       |
| <i>Chenopodium berlanderi</i> var. <i>boscianum</i>                                  |                  |         |
| - see <i>Chenopodium standleyanum</i>  |                  |         |
| <i>Chenopodium boscianum</i>   |                  |         |
| - see <i>Chenopodium standleyanum</i>  |                  |         |
| <i>Chenopodium foggii</i>  | CHENOPODIACEAE   | IND.    |
| <i>Chenopodium leptophyllum</i>  | CHENOPODIACEAE   | IND.    |
| <i>Chenopodium pratericola</i>   |                  |         |
| - see <i>Chenopodium foggii</i>  |                  |         |
| <i>Chenopodium rubrum</i>  | CHENOPODIACEAE   | 3:ME    |
| <i>Chenopodium standleyanum</i>  | CHENOPODIACEAE   | IND.    |
| <i>Chrysopsis falcata</i>  |                  |         |
| - see <i>Pityopsis falcata</i>   |                  |         |
| <i>Chrysopsis mariana</i>  | ASTERACEAE       | 2       |
| <i>Cirsium horridulum</i>  | ASTERACEAE       | IND.    |
| <i>Coelopleurum lucidum</i>  |                  |         |
| - see <i>Angelica lucida</i>   |                  |         |
| <i>Coleogeton filiformis</i> ssp. <i>alpinus</i>                                     | POTAMOGETONACEAE | 2       |
| <i>Coleogeton filiformis</i> ssp. <i>occidentalis</i>                                | POTAMOGETONACEAE | 2       |
| <i>Collinsia parviflora</i>  | SCROPHULARIACEAE | 4       |
| <i>Convolvulus spithameus</i>  |                  |         |
| - see <i>Calystegia spithamea</i>  |                  |         |
| <i>Corallorrhiza odontorhiza</i>   | ORCHIDACEAE      | 3:ME,NH |
| <i>Coreopsis rosea</i>   | ASTERACEAE       | 1       |
| <i>Cornus florida</i>  | CORNACEAE        | 3:VT    |
| <i>Corydalis aurea</i>   | FUMARIACEAE      | 2       |
| <i>Corydalis flavula</i>   | FUMARIACEAE      | 2       |
| <i>Crataegus bicknellii</i>  |                  |         |
| - see <i>Crataegus</i> × <i>silvestris</i>   |                  |         |
| <i>Crataegus chrysocarpa</i> var. <i>bicknellii</i>                                  |                  |         |
| - see <i>Crataegus</i> × <i>silvestris</i>   |                  |         |
| <i>Crataegus mollis</i>  | ROSACEAE         | IND.    |
| <i>Crataegus</i> × <i>silvestris</i>   | ROSACEAE         | IND.    |
| <i>Crotonopsis elliptica</i>   | EUPHORBIACEAE    | 4       |
| <i>Cryptogramma stelleri</i>   | PTERIDACEAE      | 3:ME    |
| <i>Cuphea viscosissima</i>   | LYTHRACEAE       | 4       |
| <i>Cuscuta coryli</i>  | CUSCUTACEAE      | 2       |
| <i>Cuscuta pentagona</i>   | CUSCUTACEAE      | IND.    |
| <i>Cynoglossum boreale</i>   |                  |         |
| - see <i>Cynoglossum virginianum</i> var. <i>boreale</i>                             |                  |         |
| <i>Cynoglossum virginianum</i>   |                  |         |
| - see <i>Cynoglossum virginianum</i> var. <i>boreale</i> and var. <i>virginianum</i> |                  |         |
| <i>Cynoglossum virginianum</i> var. <i>boreale</i>                                   | BORAGINACEAE     | 1       |
| <i>Cynoglossum virginianum</i> var. <i>virginianum</i>                               | BORAGINACEAE     | 4       |
| <i>Cyperus engelmannii</i>   | CYPERACEAE       | IND.    |
| <i>Cyperus houghtonii</i>  | CYPERACEAE       | 2       |
| <i>Cyperus odoratus</i>  | CYPERACEAE       | IND.    |
| <i>Cypripedium arietinum</i>   | ORCHIDACEAE      | 1       |
| <i>Cypripedium calceolus</i> var. <i>parviflorum</i>                                 |                  |         |
| - see <i>Cypripedium parviflorum</i> var. <i>parviflorum</i>                         |                  |         |

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| <i>Cypripedium calceolus</i> var. <i>pubescens</i>           |                 |         |
| - see <i>Cypripedium parviflorum</i> var. <i>pubescens</i>   |                 |         |
| <i>Cypripedium parviflorum</i>                               |                 |         |
| - see <i>Cypripedium parviflorum</i> var. <i>parviflorum</i> |                 |         |
| <i>Cypripedium parviflorum</i> var. <i>makasin</i>           | ORCHIDACEAE     | IND.    |
| <i>Cypripedium parviflorum</i> var. <i>parviflorum</i>       | ORCHIDACEAE     | IND.    |
| <i>Cypripedium parviflorum</i> var. <i>pubescens</i>         | ORCHIDACEAE     | IND.    |
| <i>Cypripedium pubescens</i>                                 |                 |         |
| - see <i>Cypripedium parviflorum</i> var. <i>pubescens</i>   |                 |         |
| <i>Cypripedium reginae</i>                                   | ORCHIDACEAE     | 3:CT,MA |
| <i>Dentaria</i> × <i>incisifolia</i>                         |                 |         |
| - see <i>Cardamine</i> × <i>incisa</i>                       |                 |         |
| <i>Dentaria laciniata</i>                                    |                 |         |
| - see <i>Cardamine concatenata</i>                           |                 |         |
| <i>Dentaria maxima</i>                                       |                 |         |
| - see <i>Cardamine</i> × <i>maxima</i>                       |                 |         |
| <i>Deschampsia atropurpurea</i>                              | POACEAE         | 2       |
| <i>Descurainia incana</i>                                    |                 |         |
| - see <i>Descurainia richardsonii</i>                        |                 |         |
| <i>Descurainia pinnata</i> var. <i>brachycarpa</i>           | BRASSICACEAE    | 2       |
| <i>Descurainia richardsonii</i>                              | BRASSICACEAE    | 4       |
| <i>Desmodium canescens</i>                                   | FABACEAE        | 2       |
| <i>Desmodium cuspidatum</i>                                  | FABACEAE        | 2       |
| <i>Desmodium glabellum</i>                                   | FABACEAE        | 2       |
| <i>Desmodium humifusum</i>                                   | FABACEAE        | 1       |
| <i>Desmodium sessilifolium</i>                               | FABACEAE        | 2       |
| <i>Diapensia lapponica</i>                                   | DIAPENSIACEAE   | 3:VT    |
| <i>Dicentra canadensis</i>                                   | FUMARIACEAE     | 3:ME    |
| <i>Dichanthelium mattamuskeetense</i>                        |                 |         |
| - see <i>Panicum mattamuskeetense</i>                        |                 |         |
| <i>Dichanthelium polyanthes</i>                              |                 |         |
| - see <i>Panicum polyanthes</i>                              |                 |         |
| <i>Dichanthelium scabriusculum</i>                           |                 |         |
| - see <i>Panicum scabriusculum</i>                           |                 |         |
| <i>Dichanthelium sphaerocarpon</i>                           |                 |         |
| - see <i>Panicum sphaerocarpon</i>                           |                 |         |
| <i>Dichanthelium sphaerocarpon</i> var. <i>isophyllum</i>    |                 |         |
| - see <i>Panicum polyanthes</i>                              |                 |         |
| <i>Diospyros virginiana</i>                                  | EBENACEAE       | 2       |
| <i>Diphasiastrum</i> × <i>sabinifolium</i>                   | LYCOPODIACEAE   | 2       |
| <i>Diphasiastrum sitchense</i>                               | LYCOPODIACEAE   | 2       |
| <i>Diplachne maritima</i>                                    |                 |         |
| - see <i>Leptochloa fascicularis</i> var. <i>maritima</i>    |                 |         |
| <i>Draba arabisans</i>                                       | BRASSICACEAE    | 2       |
| <i>Draba cana</i>  | BRASSICACEAE    | 2       |
| <i>Draba glabella</i>  | BRASSICACEAE    | 2       |
| <i>Draba lanceolata</i>                                      |                 |         |
| - see <i>Draba cana</i>                                      |                 |         |
| <i>Draba reptans</i>   | BRASSICACEAE    | 2       |
| <i>Dracocephalum parviflorum</i>                             | LAMIACEAE       | 2       |
| <i>Drosera anglica</i>                                       | DROSERACEAE     | 2       |
| <i>Drosera linearis</i>                                      | DROSERACEAE     | 2       |
| <i>Dryopteris filix-mas</i>                                  | DRYOPTERIDACEAE | 2       |
| <i>Echinodorus parvulus</i>                                  |                 |         |
| - see <i>Echinodorus tenellus</i>                            |                 |         |

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|   |                  |      |
|---|------------------|------|
| Echinodorus tenellus                                | ALISMATACEAE     | 1    |
| <i>Echinodorus tenellus</i> var. <i>parvulus</i>    |                  |      |
| - see Echinodorus tenellus                          |                  |      |
| Elatine americana                                   | ELATINACEAE      | IND. |
| Eleocharis equisetoides                             | CYPERACEAE       | 2    |
| Eleocharis fallax                                   | CYPERACEAE       | 2    |
| <i>Eleocharis microcarpa</i>                        |                  |      |
| - see Eleocharis microcarpa var. <i>filiculmis</i>  |                  |      |
| Eleocharis microcarpa var. <i>filiculmis</i>        | CYPERACEAE       | 2    |
| Eleocharis nitida                                   | CYPERACEAE       | IND. |
| <i>Eleocharis obtusa</i> var. <i>ovata</i>          |                  |      |
| - see Eleocharis ovata                              |                  |      |
| Eleocharis ovata                                    | CYPERACEAE       | IND. |
| <i>Eleocharis ovata</i> var. <i>heurseri</i>        |                  |      |
| - see Eleocharis ovata                              |                  |      |
| <i>Eleocharis pauciflora</i>                        |                  |      |
| - see Eleocharis pauciflora var. <i>fernaldii</i>   |                  |      |
| Eleocharis pauciflora var. <i>fernaldii</i>         | CYPERACEAE       | 2    |
| <i>Eleocharis quinqueflora</i>                      |                  |      |
| - see Eleocharis pauciflora var. <i>fernaldii</i>   |                  |      |
| Eleocharis quadrangulata                            | CYPERACEAE       | 2    |
| Eleocharis rostellata                               | CYPERACEAE       | IND. |
| Eleocharis tricostata                               | CYPERACEAE       | 2    |
| Eleocharis tuberculosa                              | CYPERACEAE       | 3:ME |
| <i>Elymus mollis</i>                                |                  |      |
| - see Leymus mollis var. <i>mollis</i>              |                  |      |
| Elymus villosus                                     | POACEAE          | 2    |
| Empetrum nigrum                                     | EMPETRACEAE      | 3:VT |
| <i>Epilobium alpinum</i>                            |                  |      |
| - see Epilobium anagallidifolium                    |                  |      |
| Epilobium anagallidifolium                          | ONAGRACEAE       | 2    |
| <i>Epilobium hornemanni</i>                         |                  |      |
| - see Epilobium hornemannii                         |                  |      |
| Epilobium hornemannii                               | ONAGRACEAE       | 2    |
| Equisetum × <i>mackaii</i>                          | EQUISETACEAE     | IND. |
| Eragrostis capillaris                               | POACEAE          | IND. |
| Erigeron acris var. <i>kamtschaticus</i>            | ASTERACEAE       | 4    |
| Eriocaulon parkeri                                  | ERIOCAULACEAE    | 1    |
| Eupatorium album                                    | ASTERACEAE       | 2    |
| Eupatorium aromaticum                               | ASTERACEAE       | 2    |
| Eupatorium leucolepis var. <i>novae-angliae</i>     | ASTERACEAE       | 1    |
| Eupatorium perfoliatum var. <i>colpophilum</i>      | ASTERACEAE       | IND. |
| Eupatorium rotundifolium var. <i>rotundifolium</i>  | ASTERACEAE       | IND. |
| Eupatorium sessilifolium                            | ASTERACEAE       | 3:VT |
| Euphorbia glyptosperma                              | EUPHORBIACEAE    | IND. |
| Euphrasia disjuncta                                 | SCROPHULARIACEAE | 4    |
| Euphrasia oakesii                                   | SCROPHULARIACEAE | 2    |
| Euthamia galetorum                                  | ASTERACEAE       | IND. |
| <i>Euthamia tenuifolia</i> var. <i>pycnocephala</i> |                  |      |
| - see Euthamia galetorum                            |                  |      |
| Floerkea proserpinacoides                           | LIMNANTHACEAE    | 2    |
| Fuirena pumila                                      | CYPERACEAE       | 3:MA |
| Galearis spectabilis                                | ORCHIDACEAE      | 3:ME |
| <i>Galium brevipes</i>                              |                  |      |
| - see Galium trifidum var. <i>trifidum</i>          |                  |      |

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| <i>Galium kamtschaticum</i>                                | RUBIACEAE        | IND.    |
| <i>Galium labradoricum</i>                                 | RUBIACEAE        | 3:MA,VT |
| <i>Galium trifidum</i> var. <i>trifidum</i>                | RUBIACEAE        | 4       |
| <i>Gamochaeta purpurea</i>                                 |                  |         |
| - see <i>Gnaphalium purpureum</i>                          |                  |         |
| <i>Gentiana amarella</i>                                   |                  |         |
| - see <i>Gentianella amarella</i>                          |                  |         |
| <i>Gentiana andrewsii</i>                                  | GENTIANACEAE     | 2       |
| <i>Gentiana quinquefolia</i>                               |                  |         |
| - see <i>Gentianella quinquefolia</i>                      |                  |         |
| <i>Gentianella amarella</i>                                | GENTIANACEAE     | 2       |
| <i>Gentianella quinquefolia</i>                            | GENTIANACEAE     | 2       |
| <i>Geocaulon lividum</i>                                   | SANTALACEAE      | 2       |
| <i>Geum peckii</i>   | ROSACEAE         | 1       |
| <i>Geum vernum</i>   | ROSACEAE         | 4       |
| <i>Gnaphalium helleri</i>                                  | ASTERACEAE       | IND.    |
| <i>Gnaphalium helleri</i> var. <i>micradenium</i>          |                  |         |
| - see <i>Gnaphalium helleri</i>                            |                  |         |
| <i>Gnaphalium purpureum</i>                                | ASTERACEAE       | 2       |
| <i>Gnaphalium supinum</i>                                  | ASTERACEAE       | 2       |
| <i>Gnaphalium sylvaticum</i>                               | ASTERACEAE       | IND.    |
| <i>Goodyera oblongifolia</i>                               | ORCHIDACEAE      | 2       |
| <i>Gratiola virginiana</i>                                 | SCROPHULARIACEAE | 2       |
| <i>Gymnocarpium jessoense</i> ssp. <i>parvulum</i>         | DRYOPTERIDACEAE  | 4       |
| <i>Habenaria ciliaris</i>                                  |                  |         |
| - see <i>Platanthera ciliaris</i>                          |                  |         |
| <i>Habenaria cristata</i>                                  |                  |         |
| - see <i>Platanthera cristata</i>                          |                  |         |
| <i>Habenaria leucophaea</i>                                |                  |         |
| - see <i>Platanthera leucophaea</i> var. <i>leucophaea</i> |                  |         |
| <i>Hackelia deflexa</i> var. <i>americana</i>              | BORAGINACEAE     | 2       |
| <i>Hackelia americana</i>                                  |                  |         |
| - see <i>Hackelia deflexa</i> var. <i>americana</i>        |                  |         |
| <i>Harrimanella hypnoides</i>                              | ERICACEAE        | 2       |
| <i>Helianthemum dumosum</i>                                | CISTACEAE        | 1       |
| <i>Heteranthera dubia</i>                                  |                  |         |
| - see <i>Zosterella dubia</i>                              |                  |         |
| <i>Heteranthera reniformis</i>                             | PONTEDERIACEAE   | 4       |
| <i>Hieracium robinsonii</i>                                | ASTERACEAE       | 1       |
| <i>Hieracium umbellatum</i>                                | ASTERACEAE       | 2       |
| <i>Hierochloa alpina</i>                                   | POACEAE          | 2       |
| <i>Hippuris vulgaris</i>                                   | HIPPURIDACEAE    | 2       |
| <i>Hudsonia tomentosa</i>                                  | CISTACEAE        | 3:VT    |
| <i>Huperzia appalachiana</i>                               | LYCOPODIACEAE    | IND.    |
| <i>Huperzia selago</i>                                     | LYCOPODIACEAE    | IND.    |
| <i>Hybanthus concolor</i>                                  | VIOLACEAE        | 2       |
| <i>Hydrastis canadensis</i>                                | RANUNCULACEAE    | 2       |
| <i>Hydrocotyle verticillata</i>                            | APIACEAE         | 2       |
| <i>Hydrophyllum canadense</i>                              | HYDROPHYLLACEAE  | 2       |
| <i>Hypericum adpressum</i>                                 | CLUSIACEAE       | 1       |
| <i>Hypericum stragulum</i>                                 | CLUSIACEAE       | 2       |
| <i>Hypericum hypericoides</i> ssp. <i>multicaule</i>       |                  |         |
| - see <i>Hypericum stragulum</i>                           |                  |         |
| <i>Ilex ambigua</i> var. <i>montana</i>                    | AQUIFOLIACEAE    | 2       |
| <i>Ilex glabra</i>   | AQUIFOLIACEAE    | 3:ME    |

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| <i>Ilex montana</i>                                     |              |         |
| - see <i>Ilex ambigua</i> var. <i>montana</i>           |              |         |
| <i>Isanthus brachiatus</i>                              |              |         |
| - see <i>Trichostema brachiatum</i>                     |              |         |
| <i>Isoetes acadiensis</i>                               | ISOETACEAE   | 1       |
| <i>Isoetes eatonii</i>                                  |              |         |
| - see <i>Isoetes</i> × <i>eatonii</i>                   |              |         |
| <i>Isoetes</i> × <i>eatonii</i>                         | ISOETACEAE   | IND.    |
| <i>Isoetes</i> × <i>foveolata</i>                       | ISOETACEAE   | IND.    |
| <i>Isoetes lacustris</i>                                | ISOETACEAE   | IND.    |
| <i>Isoetes macrospora</i>                               |              |         |
| - see <i>Isoetes lacustris</i>                          |              |         |
| <i>Isoetes prototypus</i>                               | ISOETACEAE   | 1       |
| <i>Isoetes riparia</i>                                  | ISOETACEAE   | 2       |
| <i>Isoetes riparia</i> var. <i>canadensis</i>           |              |         |
| - see <i>Isoetes riparia</i>                            |              |         |
| <i>Isotria medeoloides</i>                              | ORCHIDACEAE  | 1       |
| <i>Iva frutescens</i> ssp. <i>oraria</i>                |              |         |
| - see <i>Iva frutescens</i> var. <i>oraria</i>          |              |         |
| <i>Iva frutescens</i> var. <i>oraria</i>                | ASTERACEAE   | 3:ME    |
| <i>Juglans cinerea</i>                                  | JUGLANDACEAE | IND.    |
| <i>Juncus alpinus</i>                                   | JUNCACEAE    | 2       |
| <i>Juncus alpinoarticulatus</i>                         |              |         |
| - see <i>Juncus alpinus</i>                             |              |         |
| <i>Juncus biflorus</i>                                  | JUNCACEAE    | 2       |
| <i>Juncus debilis</i>                                   | JUNCACEAE    | 2       |
| <i>Juncus oronensis</i>                                 |              |         |
| - see <i>Juncus</i> × <i>oronensis</i>                  |              |         |
| <i>Juncus</i> × <i>oronensis</i>                        | JUNCACEAE    | IND.    |
| <i>Juncus pervetus</i>                                  | JUNCACEAE    | IND.    |
| <i>Juncus stygius</i> var. <i>americanus</i>            | JUNCACEAE    | 2       |
| <i>Juncus subtilis</i>                                  | JUNCACEAE    | IND.    |
| <i>Juncus torreyi</i>                                   | JUNCACEAE    | 2       |
| <i>Juncus trifidus</i>                                  | JUNCACEAE    | 3:VT    |
| <i>Juncus vaseyi</i>                                    | JUNCACEAE    | 2       |
| <i>Juniperus horizontalis</i>                           | CUPRESSACEAE | 3:NH,VT |
| <i>Justicia americana</i>                               | ACANTHACEAE  | 4       |
| <i>Krigia biflora</i>                                   | ASTERACEAE   | 4       |
| <i>Lactuca hirsuta</i>                                  | ASTERACEAE   | 3:VT    |
| <i>Lactuca hirsuta</i> var. <i>sanguinea</i>            |              |         |
| - see <i>Lactuca hirsuta</i>                            |              |         |
| <i>Lathyrus ochroleucus</i>                             | FABACEAE     | 2       |
| <i>Lechea minor</i>                                     | CISTACEAE    | IND.    |
| <i>Lemna valdiviana</i>                                 | LEMNACEAE    | IND.    |
| <i>Leptochloa fascicularis</i> var. <i>maritima</i>     | POACEAE      | 1       |
| <i>Lespedeza repens</i>                                 | FABACEAE     | 2       |
| <i>Lespedeza stuevei</i>                                | FABACEAE     | IND.    |
| <i>Leucophysalis grandiflora</i>                        | SOLANACEAE   | 4       |
| <i>Leymus mollis</i> var. <i>mollis</i>                 | POACEAE      | IND.    |
| <i>Liatris borealis</i>                                 |              |         |
| - see <i>Liatris scariosa</i> var. <i>novae-angliae</i> |              |         |
| <i>Liatris scariosa</i> var. <i>novae-angliae</i>       | ASTERACEAE   | 1       |
| <i>Lilaeopsis chinensis</i>                             | APIACEAE     | 3:ME    |
| <i>Linum medium</i>                                     |              |         |

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| - see <i>Linum medium</i> var. <i>texanum</i>    |                  |                  |
| <i>Linum medium</i> var. <i>texanum</i>          | LINACEAE         | 2                |
| <i>Linum sulcatum</i>                            | LINACEAE         | 2                |
| <i>Liparis liliifolia</i>                        | ORCHIDACEAE      | 2                |
| <i>Liquidambar styraciflua</i>                   | HAMAMELIDACEAE   | 2                |
| <i>Listera auriculata</i>                        | ORCHIDACEAE      | 1                |
| <i>Listera australis</i>                         | ORCHIDACEAE      | 2                |
| <i>Listera cordata</i>                           | ORCHIDACEAE      | 3:MA             |
| <i>Lobelia spicata</i> var. <i>hirtella</i>      | CAMPANULACEAE    | IND.             |
| <i>Loiseleuria procumbens</i>                    | ERICACEAE        | 2                |
| <i>Lomatogonium rotatum</i>                      | GENTIANACEAE     | 2                |
| <i>Lonicera dioica</i>                           | CAPRIFOLIACEAE   | 3:ME             |
| <i>Lonicera hirsuta</i>                          | CAPRIFOLIACEAE   | 2                |
| <i>Lonicera sempervirens</i>                     | CAPRIFOLIACEAE   | IND.             |
| <i>Ludwigia polycarpa</i>                        | ONAGRACEAE       | 2                |
| <i>Ludwigia sphaerocarpa</i>                     | ONAGRACEAE       | 2                |
| <i>Lupinus perennis</i>                          | FABACEAE         | 3:CT,MA,NH,RI,VT |
| <i>Luzula confusa</i>                            | JUNCACEAE        | 2                |
| <i>Luzula spicata</i>                            | JUNCACEAE        | 2                |
| <i>Lycopodiella alopecuroides</i>                | LYCOPODIACEAE    | 2                |
| <i>Lycopodium alopecuroides</i>                  |                  |                  |
| - see <i>Lycopodiella alopecuroides</i>          |                  |                  |
| <i>Lycopodium carolinianum</i>                   |                  |                  |
| - see <i>Pseudolycopodiella caroliniana</i>      |                  |                  |
| <i>Lycopodium sabinifolium</i>                   |                  |                  |
| - see <i>Diphasiastrum</i> × <i>sabinifolium</i> |                  |                  |
| <i>Lycopodium selago</i>                         |                  |                  |
| - see <i>Huperzia selago</i>                     |                  |                  |
| <i>Lycopodium sitchense</i>                      |                  |                  |
| - see <i>Diphasiastrum sitchense</i>             |                  |                  |
| <i>Lycopus rubellus</i>                          | LAMIACEAE        | 2                |
| <i>Lygodium palmatum</i>                         | LYGODIACEAE      | 3:CT,VT          |
| <i>Lyonia mariana</i>                            | ERICACEAE        | 4                |
| <i>Lythrum alatum</i> var. <i>alatum</i>         | LYTHRACEAE       | IND.             |
| <i>Magnolia virginiana</i>                       | MAGNOLIACEAE     | 2                |
| <i>Malaxis bayardii</i>                          | ORCHIDACEAE      | 1                |
| <i>Melampyrum lineare</i> var. <i>latifolium</i> | SCROPHULARIACEAE | IND.             |
| <i>Melampyrum lineare</i> var. <i>lineare</i>    | SCROPHULARIACEAE | IND.             |
| <i>Melampyrum lineare</i> var. <i>pectinata</i>  | SCROPHULARIACEAE | IND.             |
| <i>Melanthium hybridum</i>                       | LILIACEAE        | 4                |
| <i>Mertensia maritima</i>                        | BORAGINACEAE     | 3:MA             |
| <i>Mimulus alatus</i>                            | SCROPHULARIACEAE | 2                |
| <i>Mimulus moschatus</i>                         | SCROPHULARIACEAE | 2                |
| <i>Mimulus ringens</i> var. <i>colpophilus</i>   | SCROPHULARIACEAE | IND.             |
| <i>Minuartia caroliniana</i>                     |                  |                  |
| - see <i>Arenaria caroliniana</i>                |                  |                  |
| <i>Minuartia glabra</i>                          | CARYOPHYLLACEAE  | 2 (a)            |
| <i>Minuartia groenlandica</i>                    | CARYOPHYLLACEAE  | 3:VT             |
| <i>Minuartia marcescens</i>                      | CARYOPHYLLACEAE  | 1                |
| <i>Minuartia rubella</i>                         | CARYOPHYLLACEAE  | 2                |
| <i>Moehringia macrophylla</i>                    | CARYOPHYLLACEAE  | 2                |
| <i>Monarda punctata</i> var. <i>villicaulis</i>  | LAMIACEAE        | 2                |
| <i>Montia fontana</i>                            | PORTULACACEAE    | 2                |
| <i>Morus rubra</i>                               | MORACEAE         | 2                |
| <i>Muhlenbergia capillaris</i>                   | POACEAE          | 2                |

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| <i>Muhlenbergia richardsonis</i>                       | POACEAE         | 2          |
| <i>Muhlenbergia sobolifera</i>                         | POACEAE         | 3:ME       |
| <i>Myriophyllum pinnatum</i>                           | HALORAGACEAE    | IND.       |
| <i>Myriophyllum verticillatum</i>                      | HALORAGACEAE    | IND.       |
| <i>Najas guadalupensis</i>                             | NAJADACEAE      | IND.       |
| <i>Neobeckia aquatica</i>                              | BRASSICACEAE    | 2          |
| <i>Nuphar advena</i>                                   |                 |            |
| - see <i>Nuphar lutea</i> ssp. <i>advena</i>           |                 |            |
| <i>Nuphar lutea</i> ssp. <i>advena</i>                 | NYMPHAEACEAE    | IND.       |
| <i>Nymphaea leibergii</i>                              | NYMPHAEACEAE    | 2          |
| <i>Nymphaea odorata</i> ssp. <i>tuberosa</i>           | NYMPHAEACEAE    | IND.       |
| <i>Nymphaea odorata</i> var. <i>tuberosa</i>           |                 |            |
| - see <i>Nymphaea odorata</i> ssp. <i>tuberosa</i>     |                 |            |
| <i>Nymphaea tetragona</i>                              |                 |            |
| - see <i>Nymphaea leibergii</i>                        |                 |            |
| <i>Nymphaea tuberosa</i>                               |                 |            |
| - see <i>Nymphaea odoratum</i> spp. <i>tuberosa</i>    |                 |            |
| <i>Oenothera fruticosa</i>                             | ONAGRACEAE      | IND.       |
| <i>Omalotheca supina</i>                               |                 |            |
| - see <i>Gnaphalium supinum</i>                        |                 |            |
| <i>Omalotheca sylvatica</i>                            |                 |            |
| - see <i>Gnaphalium sylvaticum</i>                     |                 |            |
| <i>Onosmodium virginianum</i>                          | BORAGINACEAE    | 2          |
| <i>Ophioglossum pusillum</i>                           | OPHIOGLOSSACEAE | 3:MA,RI,CT |
| <i>Ophioglossum vulgatum</i>                           |                 |            |
| - see <i>Ophioglossum pusillum</i>                     |                 |            |
| <i>Orchis rotundifolia</i>                             |                 |            |
| - see <i>Amerorchis rotundifolia</i>                   |                 |            |
| <i>Orchis spectabilis</i>                              |                 |            |
| - see <i>Galearis spectabilis</i>                      |                 |            |
| <i>Oryzopsis canadensis</i>                            | POACEAE         | 4          |
| <i>Osmorhiza berteroi</i>                              |                 |            |
| - see <i>Osmorhiza chilensis</i>                       |                 |            |
| <i>Osmorhiza chilensis</i>                             | APIACEAE        | 2          |
| <i>Osmorhiza depauperata</i>                           | APIACEAE        | 4          |
| <i>Osmorhiza obtusa</i>                                |                 |            |
| - see <i>Osmorhiza depauperata</i>                     |                 |            |
| <i>Oxalis violacea</i>                                 | OXALIDACEAE     | 2          |
| <i>Oxyria digyna</i>                                   | POLYGONACEAE    | 2          |
| <i>Oxytropis campestris</i> var. <i>johannensis</i>    | FABACEAE        | 1          |
| <i>Panicum amarum</i>                                  | POACEAE         | 2          |
| <i>Panicum dichotomum</i> ssp. <i>mattamuskeetense</i> |                 |            |
| - see <i>Panicum mattamuskeetense</i>                  |                 |            |
| <i>Panicum flexile</i>                                 | POACEAE         | 2          |
| <i>Panicum gattingeri</i>                              | POACEAE         | 2          |
| <i>Panicum longifolium</i>                             |                 |            |
| - see <i>Panicum rigidulum</i> var. <i>pubescens</i>   |                 |            |
| <i>Panicum mattamuskeetense</i>                        | POACEAE         | IND.       |
| <i>Panicum polyanthes</i>                              | POACEAE         | IND.       |
| <i>Panicum rigidulum</i> var. <i>pubescens</i>         | POACEAE         | 2          |
| <i>Panicum scabriusculum</i>                           | POACEAE         | 2          |
| <i>Panicum sphaerocarpon</i>                           | POACEAE         | IND.       |
| <i>Panicum stipitatum</i>                              | POACEAE         | 4          |
| <i>Paronychia argyrocoma</i>                           | CARYOPHYLLACEAE | 2(a)       |
| <i>Paronychia argyrocoma</i> var. <i>albimontana</i>   |                 |            |

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| - see <i>Paronychia argyrocoma</i>                       |                  |      |
| <i>Paronychia canadensis</i>                             | CARYOPHYLLACEAE  | 3:VT |
| <i>Paronychia fastigiata</i>                             | CARYOPHYLLACEAE  | IND. |
| <i>Paspalum laeve</i>                                    | POACEAE          | 2    |
| <i>Paspalum setaceum</i> var. <i>psammophilum</i>        | POACEAE          | 2    |
| <i>Pedicularis furbishiae</i>                            | SCROPHULARIACEAE | 1    |
| <i>Pedicularis lanceolata</i>                            | SCROPHULARIACEAE | 2    |
| <i>Persicaria vivipara</i>                               |                  |      |
| - see <i>Polygonum viviparum</i>                         |                  |      |
| <i>Phaseolus polystachios</i>                            | FABACEAE         | 4    |
| <i>Phaseolus polystachios</i> var. <i>aquilonius</i>     |                  |      |
| - see <i>Phaseolus polystachios</i>                      |                  |      |
| <i>Phleum alpinum</i>                                    | POACEAE          | 2    |
| <i>Phyllodoce caerulea</i>                               | ERICACEAE        | 2    |
| <i>Physalis grandiflora</i>                              |                  |      |
| - see <i>Leucophysalis grandiflora</i>                   |                  |      |
| <i>Physalis longifolia</i> var. <i>subglabrata</i>       | SOLANACEAE       | IND. |
| <i>Physalis subglabrata</i>                              |                  |      |
| - see <i>Physalis longifolia</i> var. <i>subglabrata</i> |                  |      |
| <i>Pilea fontana</i>                                     | URTICACEAE       | IND. |
| <i>Pinguicula vulgaris</i>                               | LENTIBULARIACEAE | 2    |
| <i>Pityopsis falcata</i>                                 | ASTERACEAE       | 1    |
| <i>Platanthera ciliaris</i>                              | ORCHIDACEAE      | 2    |
| <i>Platanthera cristata</i>                              | ORCHIDACEAE      | 2    |
| <i>Platanthera leucophaea</i> var. <i>leucophaea</i>     | ORCHIDACEAE      | 1    |
| <i>Poa arctica</i>                                       |                  |      |
| - see <i>Poa pratensis</i> ssp. <i>alpigena</i>          |                  |      |
| <i>Poa fernaldiana</i>                                   |                  |      |
| - see <i>Poa laxa</i> ssp. <i>fernalidiana</i>           |                  |      |
| <i>Poa glauca</i>  | POACEAE          | 2    |
| <i>Poa laxa</i> ssp. <i>fernalidiana</i>                 | POACEAE          | 1    |
| <i>Poa pratensis</i> ssp. <i>alpigena</i>                | POACEAE          | IND. |
| <i>Podophyllum peltatum</i>                              | BERBERIDACEAE    | 2    |
| <i>Polemonium van-bruntiae</i>                           | POLEMONIACEAE    | 1    |
| <i>Polygala senega</i>                                   | POLYGALACEAE     | 2    |
| <i>Polygala verticillata</i>                             | POLYGALACEAE     | IND. |
| <i>Polygala verticillata</i> var. <i>ambigua</i>         |                  |      |
| - see <i>Polygala verticillata</i>                       |                  |      |
| <i>Polygonum douglasii</i>                               | POLYGONACEAE     | 2    |
| <i>Polygonum erectum</i>                                 | POLYGONACEAE     | IND. |
| <i>Polygonum glaucum</i>                                 | POLYGONACEAE     | 1    |
| <i>Polygonum hydropiperoides</i> var. <i>setaceum</i>    |                  |      |
| - see <i>Polygonum setaceum</i> var. <i>interjectum</i>  |                  |      |
| <i>Polygonum puritanorum</i>                             | POLYGONACEAE     | IND. |
| <i>Polygonum setaceum</i> var. <i>interjectum</i>        | POLYGONACEAE     | IND. |
| <i>Polygonum tenue</i>                                   | POLYGONACEAE     | 3:VT |
| <i>Polygonum viviparum</i>                               | POLYGONACEAE     | 2    |
| <i>Polymnia canadensis</i>                               | ASTERACEAE       | 2    |
| <i>Populus heterophylla</i>                              | SALICACEAE       | 2    |
| <i>Potamogeton confervoides</i>                          | POTAMOGETONACEAE | 1    |
| <i>Potamogeton diversifolius</i>                         | POTAMOGETONACEAE | IND. |
| <i>Potamogeton filiformis</i> var. <i>alpinus</i>        |                  |      |
| - see <i>Coleogeton filiformis</i> ssp. <i>alpinus</i>   |                  |      |
| <i>Potamogeton filiformis</i> var. <i>borealis</i>       |                  |      |
| - see <i>Coleogeton filiformis</i> ssp. <i>alpinus</i>   |                  |      |



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| <i>Potamogeton filiformis</i> var. <i>occidentalis</i>         |                  |         |
| - see <i>Coloegeton filiformis</i> ssp. <i>occidentalis</i>    |                  |         |
| <i>Potamogeton hillii</i>                                      | POTAMOGETONACEAE | 1       |
| <i>Potamogeton odenii</i>                                      | POTAMOGETONACEAE | 1       |
| <i>Potamogeton pusillus</i> ssp. <i>gemmaiparus</i>            | POTAMOGETONACEAE | IND.    |
| <i>Potamogeton strictifolius</i>                               | POTAMOGETONACEAE | IND.    |
| <i>Potamogeton vaseyi</i>                                      | POTAMOGETONACEAE | 2       |
| <i>Potentilla pectinata</i>                                    |                  |         |
| - see <i>Potentilla pensylvanica</i> var. <i>bipinnatifida</i> |                  |         |
| <i>Potentilla pensylvanica</i> var. <i>bipinnatifida</i>       | ROSACEAE         | IND.    |
| <i>Potentilla pensylvanica</i> var. <i>pectinata</i>           |                  |         |
| - see <i>Potentilla pensylvanica</i> var. <i>bipinnatifida</i> |                  |         |
| <i>Potentilla robbinsiana</i>                                  | ROSACEAE         | 1       |
| <i>Prenanthes boottii</i>                                      | ASTERACEAE       | 1       |
| <i>Prenanthes</i> × <i>mainensis</i>                           | ASTERACEAE       | IND.    |
| <i>Prenanthes racemosa</i>                                     | ASTERACEAE       | 2       |
| <i>Prenanthes serpentaria</i>                                  | ASTERACEAE       | 2       |
| <i>Primula laurentiana</i>                                     | PRIMULACEAE      | 2       |
| <i>Primula mistassinica</i>                                    | PRIMULACEAE      | 3:VT    |
| <i>Prunus alleghaniensis</i>                                   | ROSACEAE         | 4       |
| <i>Prunus maritima</i> var. <i>gravesii</i>                    | ROSACEAE         | IND.    |
| <i>Pseudolycopodiella caroliniana</i>                          | LYCOPODIACEAE    | 4       |
| <i>Psilocarya nitens</i>                                       |                  |         |
| - see <i>Rhynchospora nitens</i>                               |                  |         |
| <i>Pterospora andromedea</i>                                   | PYROLACEAE       | 2       |
| <i>Puccinellia langeana</i> ssp. <i>alascana</i>               |                  |         |
| - see <i>Puccinellia tenella</i> ssp. <i>alascana</i>          |                  |         |
| <i>Puccinellia paupercula</i> var. <i>alaskana</i>             |                  |         |
| - see <i>Puccinellia tenella</i> ssp. <i>alascana</i>          |                  |         |
| <i>Puccinellia tenella</i> ssp. <i>alascana</i>                | POACEAE          | IND.    |
| <i>Puccinellia tenella</i> ssp. <i>langeana</i>                | POACEAE          | IND.    |
| <i>Pycnanthemum clinopodioides</i>                             | LAMIACEAE        | IND.    |
| <i>Pycnanthemum torrei</i>                                     | LAMIACEAE        | IND.    |
| <i>Pyrola minor</i>  | PYROLACEAE       | IND.    |
| <i>Ranunculus allegheniensis</i>                               | RANUNCULACEAE    | 2       |
| <i>Ranunculus ambigens</i>                                     | RANUNCULACEAE    | 2       |
| <i>Ranunculus gmelinii</i> var. <i>hookeri</i>                 | RANUNCULACEAE    | 2       |
| <i>Ranunculus gmelinii</i> var. <i>purshii</i>                 |                  |         |
| - see <i>Ranunculus gmelinii</i> var. <i>hookeri</i>           |                  |         |
| <i>Ranunculus hispidus</i>                                     | RANUNCULACEAE    | IND.    |
| <i>Ranunculus lapponicus</i>                                   | RANUNCULACEAE    | 2       |
| <i>Ranunculus micranthus</i>                                   | RANUNCULACEAE    | 2       |
| <i>Rhexia mariana</i>  | MELASTOMATACEAE  | 2       |
| <i>Rhinanthus crista-galli</i>                                 | SCROPHULARIACEAE | IND.    |
| <i>Rhinanthus minor</i>  |                  |         |
| - see <i>Rhinanthus crista-galli</i>                           |                  |         |
| <i>Rhododendron lapponicum</i>                                 | ERICACEAE        | 2       |
| <i>Rhododendron maximum</i>                                    | ERICACEAE        | 3:ME,VT |
| <i>Rhododendron viscosum</i>                                   | ERICACEAE        | 3:ME    |
| <i>Rhynchospora capillacea</i>                                 | CYPERACEAE       | 2       |
| <i>Rhynchospora inundata</i>                                   | CYPERACEAE       | 2       |
| <i>Rhynchospora nitens</i>                                     | CYPERACEAE       | 2       |
| <i>Rhynchospora torreyana</i>                                  | CYPERACEAE       | 2       |
| <i>Ribes rotundifolium</i>                                     | GROSSULARIACEAE  | IND.    |
| <i>Rosa acicularis</i>   |                  |         |

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| - see <i>Rosa acicularis</i> ssp. <i>sayi</i>  |                  |      |
| <i>Rosa acicularis</i> ssp. <i>sayi</i>        | ROSACEAE         | 2    |
| <i>Rosa blanda</i> var. <i>glabra</i>          | ROSACEAE         | IND. |
| <i>Rosa johannensis</i>                        |                  |      |
| - see <i>Rosa blanda</i> var. <i>glabra</i>    |                  |      |
| <i>Rotala ramosior</i>                         | LYTHRACEAE       | 2    |
| <i>Rubus aculiferus</i>                        | ROSACEAE         | IND. |
| <i>Rubus</i> × <i>aculiferus</i>               |                  |      |
| - see <i>Rubus aculiferus</i>                  |                  |      |
| <i>Rubus cuneifolius</i>                       | ROSACEAE         | 2    |
| <i>Rumex fenestratus</i>                       |                  |      |
| - see <i>Rumex occidentalis</i>                |                  |      |
| <i>Rumex occidentalis</i>                      | POLYGONACEAE     | 4    |
| <i>Sabatia campanulata</i>                     | GENTIANACEAE     | 2    |
| <i>Sabatia dodecandra</i>                      | GENTIANACEAE     | 4    |
| <i>Sabatia kennedyana</i>                      | GENTIANACEAE     | 1    |
| <i>Sabatia stellaris</i>                       | GENTIANACEAE     | 2    |
| <i>Sagina decumbens</i>                        | CARYOPHYLLACEAE  | IND. |
| <i>Sagina nodosa</i> ssp. <i>borealis</i>      | CARYOPHYLLACEAE  | 2    |
| <i>Sagina nodosa</i> var. <i>borealis</i>      |                  |      |
| -see <i>Sagina nodosa</i> ssp. <i>borealis</i> |                  |      |
| <i>Sagina nodosa</i> ssp. <i>nodosa</i>        | CARYOPHYLLACEAE  | IND. |
| <i>Sagittaria rigida</i>                       | ALISMATACEAE     | 3:ME |
| <i>Sagittaria subulata</i>                     | ALISMATACEAE     | 2    |
| <i>Sagittaria teres</i>                        | ALISMATACEAE     | 1    |
| <i>Salix arctophila</i>                        | SALICACEAE       | 2    |
| <i>Salix argyrocarpa</i>                       | SALICACEAE       | 2    |
| <i>Salix candida</i>                           | SALICACEAE       | 3:ME |
| <i>Salix cordata</i>                           | SALICACEAE       | IND. |
| <i>Salix exigua</i>                            |                  |      |
| - see <i>Salix exigua</i> ssp. <i>interior</i> |                  |      |
| <i>Salix exigua</i> ssp. <i>interior</i>       | SALICACEAE       | 3:ME |
| <i>Salix herbacea</i>                          | SALICACEAE       | 2    |
| <i>Salix interior</i>                          |                  |      |
| - see <i>Salix exigua</i> ssp. <i>interior</i> |                  |      |
| <i>Salix myricoides</i>                        | SALICACEAE       | 2    |
| <i>Salix planifolia</i>                        | SALICACEAE       | 2    |
| <i>Salix uva-ursi</i>                          | SALICACEAE       | 2    |
| <i>Sanicula canadensis</i>                     | APIACEAE         | 2    |
| <i>Saururus cernuus</i>                        | SAURURACEAE      | 2    |
| <i>Saxifraga aizoides</i>                      | SAXIFRAGACEAE    | 2    |
| <i>Saxifraga aizoon</i> var. <i>neogaea</i>    |                  |      |
| - see <i>Saxifraga paniculata</i>              |                  |      |
| <i>Saxifraga cernua</i>                        | SAXIFRAGACEAE    | 2    |
| <i>Saxifraga foliolosa</i>                     | SAXIFRAGACEAE    | 2    |
| <i>Saxifraga oppositifolia</i>                 | SAXIFRAGACEAE    | 2    |
| <i>Saxifraga paniculata</i>                    | SAXIFRAGACEAE    | 2    |
| <i>Saxifraga rivularis</i>                     | SAXIFRAGACEAE    | 2    |
| <i>Saxifraga stellaris</i> var. <i>comosa</i>  |                  |      |
| - see <i>Saxifraga foliolosa</i>               |                  |      |
| <i>Schoenoplectus etuberculatus</i>            | CYPERACEAE       | 1    |
| <i>Schoenoplectus hallii</i>                   | CYPERACEAE       | 4    |
| <i>Schoenoplectus heterochaetus</i>            | CYPERACEAE       | IND. |
| <i>Schoenoplectus</i> × <i>steinmetzii</i>     | CYPERACEAE       | IND. |
| <i>Schwalbea americana</i>                     | SCROPHULARIACEAE | 4    |

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| <i>Scirpus ancistrochaetus</i>   | CYPERACEAE      | 1    |
| <i>Scirpus clintonii</i>   |                 |      |
| - see <i>Tricophorum clintonii</i>                                     |                 |      |
| <i>Scirpus cylindricus</i>   |                 |      |
| - see <i>Bolboschoenus novae-angliae</i>                               |                 |      |
| <i>Scirpus etuberculatus</i>   |                 |      |
| - see <i>Schoenoplectus etuberculatus</i>                              |                 |      |
| <i>Scirpus hallii</i>  |                 |      |
| - see <i>Schoenoplectus hallii</i>                                     |                 |      |
| <i>Scirpus heterochaetus</i>   |                 |      |
| - see <i>Schoenoplectus heterochaetus</i>                              |                 |      |
| <i>Scirpus longii</i>  | CYPERACEAE      | 1    |
| <i>Scirpus maritimus</i>   |                 |      |
| - see <i>Bolboschoenus maritimus</i>                                   |                 |      |
| <i>Scirpus paludosus</i> var. <i>atlanticus</i>                        |                 |      |
| - see <i>Bolboschoenus maritimus</i>                                   |                 |      |
| <i>Scirpus pendulus</i>  | CYPERACEAE      | 3:ME |
| <i>Scirpus steinmetzii</i>   |                 |      |
| - see <i>Schoenoplectus</i> × <i>steinmetzii</i>                       |                 |      |
| <i>Scirpus polyphyllus</i>   | CYPERACEAE      | 2    |
| <i>Scleria pauciflora</i>  | CYPERACEAE      | 2    |
| <i>Scleria pauciflora</i> var. <i>caroliniana</i>                      |                 |      |
| - see <i>Scleria pauciflora</i>  |                 |      |
| <i>Scleria reticularis</i>   | CYPERACEAE      | 1    |
| <i>Scleria triglomerata</i>  | CYPERACEAE      | 2    |
| <i>Scleria verticillata</i>  | CYPERACEAE      | 4    |
| <i>Sclerolepis uniflora</i>  | ASTERACEAE      | 2    |
| <i>Scutellaria integrifolia</i>  | LAMIACEAE       | 2    |
| <i>Scutellaria leonardii</i>   | LAMIACEAE       | 2    |
| <i>Scutellaria parvula</i> var. <i>leonardi</i>                        |                 |      |
| - see <i>Scutellaria leonardii</i>                                     |                 |      |
| <i>Scutellaria parvula</i> var. <i>parvula</i>                         | LAMIACEAE       | 2    |
| <i>Sedum rosea</i>   | CRASSULACEAE    | 3:VT |
| <i>Selaginella eclipes</i>   | SELAGINELLACEAE | IND. |
| <i>Senna hebecarpa</i>   | CAESALPINIACEAE | 2    |
| <i>Shepherdia canadensis</i>   | ELAEAGNACEAE    | 3:ME |
| <i>Sibbaldia procumbens</i>  | ROSACEAE        | 2    |
| <i>Silene acaulis</i>  | CARYOPHYLLACEAE | 2    |
| <i>Silene acaulis</i> var. <i>exscapa</i>                              |                 |      |
| - see <i>Silene acaulis</i>  |                 |      |
| <i>Silene stellata</i>   | CARYOPHYLLACEAE | 2    |
| <i>Sisyrinchium mucronatum</i>   | IRIDACEAE       | 2    |
| <i>Smilax hispida</i>  |                 |      |
| - see <i>Smilax tamnoides</i>  |                 |      |
| <i>Smilax tamnoides</i>  | SMILACACEAE     | 4    |
| <i>Smilax tamnoides</i> var. <i>hispida</i>                            |                 |      |
| - see <i>Smilax tamnoides</i>  |                 |      |
| <i>Solidago calcicola</i>  |                 |      |
| - see <i>Solidago</i> × <i>calcicola</i>                               |                 |      |
| <i>Solidago</i> × <i>calcicola</i>                                     | ASTERACEAE      | 4    |
| <i>Solidago canadensis</i> var. <i>subserata</i>                       | ASTERACEAE      | IND. |
| <i>Solidago cutleri</i>  | ASTERACEAE      | 2    |
| <i>Solidago glutinosa</i> ssp. <i>randii</i>                           |                 |      |
| - see <i>Solidago simplex</i> ssp. <i>randii</i> var. <i>monticola</i> |                 |      |
| <i>Solidago lepida</i> var. <i>molina</i>                              |                 |      |

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| - see <i>Solidago canadensis</i> var. <i>subserrata</i>                |                  |         |
| <i>Solidago multiradiata</i> var. <i>arctica</i>                       |                  |         |
| - see <i>Solidago cutleri</i>  |                  |         |
| <i>Solidago ptarmicoides</i>   | ASTERACEAE       | 2       |
| <i>Solidago rigida</i>   | ASTERACEAE       | 2       |
| <i>Solidago simplex</i> var. <i>randii</i>                             |                  |         |
| - see <i>Solidago simplex</i> ssp. <i>randii</i> var. <i>monticola</i> |                  |         |
| <i>Solidago simplex</i> ssp. <i>randii</i> var. <i>monticola</i>       | ASTERACEAE       | 3:MA,NH |
| <i>Sorghastrum nutans</i>  | POACEAE          | 3:ME    |
| <i>Sparganium minimum</i>  | SPARGANIACEAE    | 3:MA    |
| <i>Sparganium natans</i>   |                  |         |
| - see <i>Sparganium minimum</i>  |                  |         |
| <i>Spartina cynosuroides</i>   | POACEAE          | 2       |
| <i>Sphenopholis nitida</i>   | POACEAE          | 2       |
| <i>Sphenopholis obtusata</i>   | POACEAE          | IND.    |
| <i>Sphenopholis pensylvanica</i>                                       | POACEAE          | 2       |
| <i>Spiranthes casei</i>  | ORCHIDACEAE      | IND.    |
| <i>Spiranthes</i> × <i>intermedia</i>                                  | ORCHIDACEAE      | IND.    |
| <i>Sporobolus asper</i>  |                  |         |
| - see <i>Sporobolus compositus</i> var. <i>compositus</i>              |                  |         |
| <i>Sporobolus clandestinus</i>   | POACEAE          | 4       |
| <i>Sporobolus compositus</i> var. <i>compositus</i>                    | POACEAE          | 2       |
| <i>Sporobolus heterolepis</i>  | POACEAE          | 2       |
| <i>Sporobolus neglectus</i>  | POACEAE          | 2       |
| <i>Stachys hyssopifolia</i>  | LAMIACEAE        | 3:CT    |
| <i>Stachys palustris</i> ssp. <i>pilosa</i>                            |                  |         |
| - see <i>Stachys pilosa</i>  |                  |         |
| <i>Stachys pilosa</i>  | LAMIACEAE        | IND.    |
| <i>Stachys tenuifolia</i>  | LAMIACEAE        | IND.    |
| <i>Stachys tenuifolia</i> var. <i>platyphylla</i>                      |                  |         |
| - see <i>Stachys tenuifolia</i>  |                  |         |
| <i>Strophostyles umbellata</i>   | FABACEAE         | 4       |
| <i>Suaeda americana</i>  | CHENOPODIACEAE   | IND.    |
| <i>Suaeda calceoliformis</i>   |                  |         |
| - see <i>Suaeda americana</i>  |                  |         |
| <i>Suaeda maritima</i>   | CHENOPODIACEAE   | IND.    |
| <i>Suaeda maritima</i> ssp. <i>richii</i>                              |                  |         |
| - see <i>Suaeda maritima</i>   |                  |         |
| <i>Subularia aquatica</i>  | BRASSICACEAE     | 2       |
| <i>Symphoricarpos albus</i> var. <i>albus</i>                          | CAPRIFOLIACEAE   | 3:MA    |
| <i>Synosma suaveolens</i>  |                  |         |
| - see <i>Cacalia suaveolens</i>  |                  |         |
| <i>Taenidia integerrima</i>  | APIACEAE         | 2       |
| <i>Tanacetum bipinnatum</i> ssp. <i>huronense</i>                      | ASTERACEAE       | 2(a)    |
| <i>Tanacetum huronense</i>   |                  |         |
| - see <i>Tanacetum bipinnatum</i> ssp. <i>huronense</i>                |                  |         |
| <i>Taraxacum ceratophorum</i>  | ASTERACEAE       | IND.    |
| <i>Taraxacum latilobum</i>   |                  |         |
| - see <i>Taraxacum ceratophorum</i>                                    |                  |         |
| <i>Tipularia discolor</i>  | ORCHIDACEAE      | 2       |
| <i>Tofieldia glutinosa</i>   | LILIACEAE        | 3:NH,VT |
| <i>Trichomanes intricatum</i>  | HYMENOPHYLLACEAE | 1       |
| <i>Trichostema brachiatum</i>  | LAMIACEAE        | 2       |
| <i>Tricophorum clintonii</i>   | CYPERACEAE       | 2       |
| <i>Triglochin gaspense</i>   | JUNCAGINACEAE    | 4       |

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| <i>Trimorpha acris</i> var. <i>kamtschatica</i>       |                  |         |
| - see <i>Erigeron acris</i> var. <i>kamtschaticus</i> |                  |         |
| <i>Triosteum angustifolium</i>                        | CAPRIFOLIACEAE   | 4       |
| <i>Triosteum aurantiacum</i>                          | CAPRIFOLIACEAE   | 3:ME    |
| <i>Triosteum perfoliatum</i>                          | CAPRIFOLIACEAE   | 2       |
| <i>Triphora trianthophora</i>                         | ORCHIDACEAE      | 2(a)    |
| <i>Tripsacum dactyloides</i>                          | POACEAE          | 2       |
| <i>Trisetum melicoides</i>                            | POACEAE          | 2       |
| <i>Trollius laxus</i>                                 | RANUNCULACEAE    | 1       |
| <i>Trollius laxus</i> ssp. <i>laxus</i>               |                  |         |
| - see <i>Trollius laxus</i>                           |                  |         |
| <i>Ulmus thomasi</i>                                  | ULMACEAE         | 4       |
| <i>Utricularia biflora</i>                            | LENTIBULARIACEAE | 2       |
| <i>Utricularia fibrosa</i>                            | LENTIBULARIACEAE | 2       |
| <i>Utricularia inflata</i>                            | LENTIBULARIACEAE | IND.    |
| <i>Utricularia resupinata</i>                         | LENTIBULARIACEAE | 2(a)    |
| <i>Utricularia subulata</i>                           | LENTIBULARIACEAE | 2       |
| <i>Vaccinium boreale</i>                              | ERICACEAE        | 1       |
| <i>Vaccinium vitis-idaea</i> var. <i>minus</i>        | ERICACEAE        | 3:NH,MA |
| <i>Vaccinium vitis-idaea</i> ssp. <i>minus</i>        |                  |         |
| - see <i>Vaccinium vitis-idaea</i> var. <i>minus</i>  |                  |         |
| <i>Vahlodea atropurpurea</i>                          |                  |         |
| - see <i>Deschampsia atropurpurea</i>                 |                  |         |
| <i>Valeriana uliginosa</i>                            | VALERIANACEAE    | 2       |
| <i>Valerianella radiata</i>                           | VALERIANACEAE    | 4       |
| <i>Valerianella radiata</i> var. <i>fernaldiana</i>   |                  |         |
| - see <i>Valerianella radiata</i>                     |                  |         |
| <i>Verbena simplex</i>                                | VERBENACEAE      | 2       |
| <i>Veronica anagallis-aquatica</i>                    |                  |         |
| - see <i>Veronica catenata</i>                        |                  |         |
| <i>Veronica catenata</i>                              | SCROPHULARIACEAE | IND.    |
| <i>Veronica wormskjoldii</i>                          | SCROPHULARIACEAE | 2       |
| <i>Veronicastrum virginicum</i>                       | SCROPHULARIACEAE | IND.    |
| <i>Viburnum nudum</i>                                 |                  |         |
| - see <i>Viburnum nudum</i> var. <i>nudum</i>         |                  |         |
| <i>Viburnum nudum</i> var. <i>nudum</i>               | CAPRIFOLIACEAE   | 2       |
| <i>Viburnum prunifolium</i>                           | CAPRIFOLIACEAE   | 2       |
| <i>Viburnum rafinesquianum</i>                        | CAPRIFOLIACEAE   | 3:NH    |
| <i>Viola brittoniana</i>                              | VIOLACEAE        | 2       |
| <i>Viola pedatifida</i> ssp. <i>brittoniana</i>       |                  |         |
| - see <i>Viola brittoniana</i>                        |                  |         |
| <i>Viola hirsutula</i>                                | VIOLACEAE        | 4       |
| <i>Viola novae-angliae</i>                            | VIOLACEAE        | 2       |
| <i>Viola palmata</i>                                  | VIOLACEAE        | IND.    |
| <i>Viola palustris</i>                                | VIOLACEAE        | 2       |
| <i>Viola striata</i>                                  | VIOLACEAE        | IND.    |
| <i>Viola subsinuata</i>                               | VIOLACEAE        | IND.    |
| <i>Viola triloba</i> var. <i>dilatata</i>             |                  |         |
| - see <i>Viola palmata</i>                            |                  |         |
| <i>Waldsteinia fragarioides</i>                       | ROSACEAE         | 3:ME    |
| <i>Wolffiella floridana</i>                           |                  |         |
| - see <i>Wolffiella gladiata</i>                      |                  |         |
| <i>Wolffiella gladiata</i>                            | LEMNACEAE        | 2       |
| <i>Woodsia alpina</i>                                 | DRYOPTERIDACEAE  | 2       |
| <i>Xyris smalliana</i>                                | XYRIDACEAE       | 3:ME    |

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|  |                |      |
|--|----------------|------|
| Zigadenus elegans var. glaucus                     | LILIACEAE      | 4    |
| <i>Zigadenus glaucus</i>                           |                |      |
| - see <i>Zigadenus elegans</i> var. <i>glaucus</i> |                |      |
| Zizia aptera                                       | APIACEAE       | 2    |
| Zosterella dubia                                   | PONTEDERIACEAE | 3:ME |