

Alien vascular plants in Massachusetts

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ALIEN VASCULAR PLANTS IN MASSACHUSETTS

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ABSTRACT. The non-native vascular flora of Massachusetts is listed with earliest and latest dates of occurrence. Each entry is annotated to indicate which taxa have become established members of the flora and which have not. Specimen data were compiled from over 25 herbaria, supplemented by reports from early floristic publications. A total of 1317 non-native taxa are documented; 737 are treated as established members of the state's flora (29% of the flora); 23 taxa persist at or near former human habitations (1%); 559 taxa are treated as non-established waifs (22%). The current figure of 30% alien taxa is similar to other New England states and is a significant reduction from the 45% tallied in the 1999 state flora. A revised statistical summary of the state's vascular flora is provided.

Key Words: Massachusetts, vascular flora, non-native, established, waif

With publication of *The Vascular Plants of Massachusetts: A County Checklist* (Sorrie and Somers 1999), the botanical community received a long-awaited and full accounting of the state's vascular flora. Despite a prolific history of collecting and publishing, the flora of the Bay State remained incompletely documented until nearly 400 years after its founding. Prior to 1999 there were three attempts to catalogue the state's flora. First, Dewey (1840) prepared a copiously annotated list of the herbaceous plants, soon followed by Emerson's publication on the woody plants (Emerson 1846). Second, a committee of botanists headed by Lyman Smith embarked on a complete annotated list, but produced only four installments (Committee on the Flora of Massachusetts 1928–1947). Third, Seymour published a manual of the New England flora (1969), which listed counties of occurrence for all taxa. For early works, the Dewey and Emerson publications are remarkably complete and taxonomically sound, but specimens cannot now be found to document some of the species. The Smith committee papers and Seymour's book are excellent contributions, but lack many records from a number of overlooked local and regional herbaria, especially of non-native taxa.

Since its publication, the *Checklist* has generated some concern regarding the high percentage of alien taxa included. Sorrie and Somers (1999) treated alien plants as those that are not native (indigenous) in Massachusetts and have arrived after European exploration and colonization, beginning about

1500 (for a lucid discussion of the history of alien plant introduction and documentation in the New England region, see Mehrhoff 2000). Some 45% of all full species and 43% of subspecific taxa are considered alien in the *Checklist*. Such numbers seemingly imply that the Commonwealth is overrun by foreign vegetation. While this may be the case locally, the percentage of alien taxa in the flora is comparable to that of other states on the eastern seaboard. For example, 37% of the Pennsylvania flora (Rhoads and Klein 1993), 35% of the Connecticut flora (Mehrhoff 2000), and 28% of the Delaware flora (McAvoy and Bennett 2001) are aliens. Comments received on the Massachusetts *Checklist* generally center around the large number of species found only once or twice and therefore not naturalized or established as part of the flora. While many floras include only native and fully established alien taxa, the *Checklist* clearly states (p. vii): “Such [alien] species are included if they are naturalized, occur spontaneously or sporadically as waifs, or have persisted from plantings in areas that have reverted to a more natural environment.” It was the authors’ intention from the outset to include all taxa supported by specimens, provided that such specimens clearly were not from roadside or yard plantings, botanical gardens, or otherwise cultivated plants. In practice, the specimens examined, which represent collections housed at more than 25 herbaria, made such decisions quite easy—collectors nearly always made clear the circumstances under which the plants were growing. For example, collectors used unambiguous descriptive terms such as “spontaneous in yard,” “garden weed,” “nursery weed,” “weed in sidewalk,” “former home site,” “escape from cultivation,” “persistent on roadside bank,” and “established along railroad.”

However, other collection data are problematic. Consider the following: “mill yard,” “dump,” “rubbish heap,” “in wool waste,” “henyard,” “cultivated ground,” “newly seeded highway,” “bird feeder,” and “South Boston Flats.” Some measure of interpretation is necessary to conclude that the plants in question were growing spontaneously, when collectors indicated nothing to the contrary. For example, *Ellisia nyctelea* was collected once in 1902 at a “newly seeded highway”; the *Ellisia* is presumed to have been a contaminant in grass seed. Many records of Massachusetts waifs come from dumps and other places where refuse was discarded. Some taxa seem to inhabit *only* dumps; for example, *Solanum citrullifolium* was collected several times from 1885 to 1949, all at dumps. Perhaps the strangest dump waif is the date palm (*Phoenix dactylifera*): from 1915–1926 seedlings appeared in six of 12 years. The label states that it was “. . . found on dumping ground of ashes and store refuse. Dump unused for several years. Naturally slow growth and retarded germination

are the probable causes for these recurrences" (Jackson 1927). Plants collected at mill and factory yards and on "cotton waste" and "wool waste" account for a considerable number of unique or very rare specimen records. Some of these waifs were indeed collected in mill yards (e.g., Collins 1901; Weatherby 1932), but most came from cultivated fields and vegetable gardens fertilized with waste material from woollen mills, as stated on many labels and as reported by Dame and Collins (1888), Fletcher (1912, 1913, 1915, 1916, 1917), Jackson (1927), Weatherby (1924), and others. One notable Massachusetts wool-waste plant represented a new species of a South American genus: *Perezia aletes*.

The point I make here is that collecting at dumps, wool-waste fields, railroad yards, vacant city lots, and the like was not only acceptable practice but an integral part of collecting during much of Massachusetts' botanical history. Even a casual perusal of herbarium sheets is sufficient to convince one that many botanists visited dumps and other waste ground over a long period of time. For example, the South Boston Flats (a filled saltmarsh and estuary) produced a large number of aliens from 1878–1912; on Nantucket Island and in Essex County the time span for waste ground and garden weed taxa ran from the 1880s to the 1960s. Dump collections contribute significantly to the high percentage of alien taxa found on Nantucket (Sorrie and Dunwiddie 1996) and in Essex County (Harris 1975). The novelties produced by dump and wool waste collections in Massachusetts provided much interest to botanists and many taxa now fully established in the state were originally documented from dumps or wool waste fields (e.g., *Matricaria discoidea*, *Panicum miliaceum*, *Verbena bracteata*). Moreover, taxa once thought to be represented by a single dump collection have turned up again many years later (e.g., *Amaranthus palmeri*, *Sisymbrium loeselii*, *Tagetes minuta*), indicating that these taxa are either locally established or continue to be introduced into Massachusetts.

The aim of this paper is to update all of the alien flora of Massachusetts, to document the earliest and latest dates of occurrence, and to designate which taxa have become established and which have not. A revised statistical summary of the state's vascular flora replaces the one in Sorrie and Somers (1999, Table III).

MATERIALS AND METHODS

During preparation of the *Checklist*, the earliest and the most recent specimen collection dates were noted for all alien taxa. I conducted additional herbarium research through 2002, made corrections to the

dates of aliens, and added taxa absent from the original list. Newly added taxa derive from the botanical literature (e.g., Ottley 1938) or from specimens found at the Harvard University Herbaria. A small number (less than 20) of alien taxa were deleted from the *Checklist*, based on more careful reading of specimen labels or based on false identification. For example, the sole collections of *Dendranthema arcticum* (L.) Tzelev in the Asteraceae, *Lupinus albus* L. in the Fabaceae, *Dicentra formosa* (Andr.) Walp. in the Fumariaceae, and *Echinochloa colona* (L.) Link in the Poaceae were made from cultivated plants. The sole collection of *Eryngium amethystinum* L. in the Apiaceae proves to be *E. planum*, the sole collection of *Bidens pilosa* L. in the Asteraceae actually is *B. alba* var. *radiata*, and the sole collection of *Lythrum vulgatum* L. in the Lythraceae actually is *L. salicaria*. *Acanthopanax sieboldianus* in the Araliaceae was first collected in 1922, but those specimens clearly state “cultivated”; thus, only later collections are admitted. In several cases, such as *Centaurea transalpina* Schleicher ex DC. in the Asteraceae, *Cerastium diffusum* Pers. in the Caryophyllaceae, *Platanus hybrida* Brot. in the Platanaceae, and *Diplachne uninervia* (Presl) Parodi in the Poaceae, specimens attributed to NEBC/GH could not be found in my recent search.

In addition, I gathered data from the early floristic literature of the state. Massachusetts was permanently settled by Europeans beginning in 1620 and a number of alien plants became established very soon after, as reported by early observers. However, many of these long-established plants weren’t actually vouchered by specimens until the mid to late 1800s. To address this time gap I include data from selected written works by Cutler (1785), Hitchcock (1829), Dewey (1840), and Oakes (1841a, 1841b, 1847). Cutler’s book, the first floristic publication treating plants of Massachusetts, covers much of the eastern part of the state. Hitchcock treated plants of the Connecticut River Valley region. Dewey included primarily herbaceous native plants of the state, but also included many cultivated plants. It is usually obvious from his text which species had become established away from gardens and crop fields. Oakes collected widely and reported important finds in early journal articles. Bigelow’s early work (1824) on the flora of Boston is not included in this paper because he seldom distinguished between native and non-native species.

For this paper, each taxon was assigned to a category that distinguishes short-term and sporadic adventive taxa from those truly established and reproducing over longer periods. In a very few instances, a taxon has been assigned to two categories, due to inadequate data on status. Nesom

(2000) provided simple and straightforward terminology for categorizing alien plants as treated in floristic works:

1. Cultivated. "Plants of native and non-native species, across various categories of duration and habit, that are deliberately planted, actively maintained, and grown for ornament, interest, consumption, or other use." No species of this category were included in Sorrie and Somers (1999), nor in the present paper.
2. Persisting. "Perennial plants (woody, suffrutescent, and herbaceous) cultivated for ornament or interest and remaining in place at old home sites, roadsides, etc., without human assistance after the site has returned to a more natural state." Many persistent taxa were excluded from this paper and from Sorrie and Somers (1999), because the locations appeared to be active or recently abandoned home sites. Assigning a status of persistent versus some other category is not straightforward in the absence of information on collecting labels. For example, the specimen label for *Gymnocladus dioica* does not state whether the plant was a sapling (which would suggest reproduction and a status as waif) or whether the plant was an adult growing near/at a former cultivation site (suggesting a persisting individual). Similarly, other woody perennials, such as members of the family Hydrangeaceae, are considered naturalized (or waifs) unless label data indicate that they are merely persisting.
3. Waif. "Plants of non-native species growing outside of cultivation but not maintaining a viable population for more than one or a few seasons."
4. Naturalized. "Plants of non-native species accidentally or deliberately introduced into the flora, now reproducing and maintaining viable populations from year to year . . . and dispersing without deliberate human assistance beyond the population or populations of original establishment." Naturalized taxa are not limited to those which are found today; many taxa were vouchered by numerous specimens over a long period of time, but have not been collected recently. Although the reasons for their possible demise are unknown, there is no doubt that they successfully colonized Massachusetts for a significant period of time. Taxa recently documented for the Commonwealth can be particularly difficult to categorize and I have used specimen label data and current knowledge of these populations to decide between "N, few" and "W" in the Appendix.

Table 1. Total numbers and percentages of native and non-native species, additional infraspecific taxa, and named hybrids of vascular plants in Massachusetts. Non-established waifs (559 taxa) are excluded.

Plant Group	Native	Non-native	Total No.
	No. (%)	No. (%)	
Species	1538 (68)	725 (32)	2263
Subspecies	29 (71)	12 (29)	41
Varieties	123 (95)	6 (5)	129
Hybrids	80 (84)	15 (16)	95
TOTAL	1770 (70)	758 (30)	2528

Nomenclature follows that used in Sorrie and Somers (1999), updated with treatments in *Flora of North America* (Flora of North America Editorial Committee, eds. 1993–present). Habitat is given, where available, for each short-term adventive or waif. Herbaria consulted are the following: A, AMES, Cape Cod Museum of Natural History, CONN, CUW, GH, MASS (including AC), MO, Mount Holyoke College, NASC, NEBC, NHA, NMMA, NY, PM, SCHN, SPR, SPWH, University of Massachusetts at Boston, US, VT, WELC (now at NY and GH), Westfield State College, Wheaton College, Worcester Science Museum, and the personal herbaria of Robert Bertin and Bruce Sorrie.

RESULTS

A total of 1317 alien taxa are documented in this paper (Appendix), out of a state flora of 2528 taxa. Using the categories defined by Nesom (2000; see Methods section in this paper), 23 taxa (1% of the state flora) persist at or near former homesites, 559 (22%) are waifs, and 737 (29%) are naturalized. Of the 559 waifs, 274 are known only as single collections or as single populations collected over short periods of time. Of the 737 naturalized taxa, 518 appear to be fully established in Massachusetts; they are designated “N” in the Appendix. Some taxa designated as “N” have not been collected recently; nonetheless they warrant “N” status due to frequent collection over a long period of time. An additional 219 taxa appear to be naturalized and reproducing on their own, but have been collected relatively few times (six or less) and their status as fully established members of the flora is less certain; they are designated “N, few” in the Appendix.

Numbers and percentages of the alien flora of Massachusetts are given in Table 1. Note that persisting and naturalized aliens (total = 758)

are included together, to conform with Table III of the *Checklist*, while waifs are omitted. Thus, 559 taxa, all non-established waifs, significantly reduce the number of aliens tallied in Sorrie and Somers (1999). The number of alien species in Sorrie and Somers is reduced from 1276 to 725, alien subspecies from 17 to 12, alien varieties from 25 to 6, and alien hybrids from 28 to 15. In tallying numbers in Table 1, subspecies and varieties are treated in two ways. If an infraspecific taxon is the sole representative of a species occurring in Massachusetts, it is counted as a full species for the purposes of the tally of the state's flora. If there are two or more infraspecific taxa within a species, then one is tallied in the species row and the rest are tallied as subspecies or varieties.

DISCUSSION

Deletion of waifs from the tally of non-native flora in Massachusetts has reduced the percentage of aliens from 43% to 30%. Remarkably, 30% is the percentage of alien plants calculated by Rollins (1953), based on a literature search of the state's flora 50 years ago. This percent is similar to those compiled by Mehrhoff (2000) for New England (31%), Connecticut (35%), Rhode Island (24%), and Maine (30%). Mitchell and Tucker (1997) tallied 29% aliens for New York. Rhoads and Klein (1993) tallied 37% aliens for Pennsylvania, including waifs as well as established taxa. Thus, in the northeastern United States, established non-native plants represent a quarter to a third of state floras.

The absence of pre-1820 specimens from Massachusetts necessitated the inclusion of data from four early authors of floristic works (Cutler 1785; Dewey 1840; Hitchcock 1829; Oakes 1841a, 1841b, 1847). These authors provide a more accurate assessment of the initial appearance or permanent establishment of many non-native plants than the specimen record. Unfortunately, there is still a 150-year gap between European colonization and the first comprehensive botanical publications, which underscores the difficulty of tracing the history of plant introductions, even in a small and well-botanized state.

The total of 559 taxa considered to be waifs in Massachusetts is not static and will change in three important ways. First, more alien plants will be detected in the future and some of them will fail to become established. Determining a plant's status as a waif or as established, however, will require documentation via observations and vouchers; many years may pass before a taxon's status can be determined with certainty. Yatskievych and Raveill (2001) documented the increasing proportion of alien species in Missouri; the same scenario is likely in

Massachusetts. Second, additional waifs will be found as herbaria and literature sources are searched more thoroughly. The *Species Exclusiae* in Sorrie and Somers (1999) listed many species reported in publications, but for which specimens have not yet been verified. Third, some taxa now categorized as naturalized, but with only a few documented collections, will eventually be relegated to waif status if no more collections are made. They will be seen, ultimately, as taxa that never became fully established.

In conclusion, I suggest that authors of floras and florulas should not ignore rare aliens, but instead include them. However, unlike in Sorrie and Somers (1999), these waifs should be clearly identified as such in the main body of the flora or they should be listed separately in an appendix. This practice would then make clear which taxa are established members of the flora and which are temporary.

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APPENDIX

ANNOTATED LIST OF MASSACHUSETTS ALIEN PLANTS

This list is derived from Sorrie and Somers (1999), updated through 2002. The list is complete except for about 20 taxa that have no dates on the specimen labels or are attributed to Massachusetts by Hitchcock (1950) or Gleason (1952) but without collection dates. For each taxon, first and last collection dates are given. The notation “1885-p” means that several to many vouchers exist from 1885 to the present; the taxon is an established member of the flora. A range of dates, such as “1885–1932”, does not necessarily imply many collections nor naturalization, since there may be only two specimens. “Cutler” means that the taxon was reported by Manesseh Cutler (1785) prior to the oldest extant herbarium specimen; “Hitchcock” means that the taxon was reported by Edward Hitchcock (1829); “Dewey” means that the taxon was reported by Chester Dewey (1840); “Oakes” means that the taxon was reported by William Oakes in papers published from 1841 to 1847; “pre 1848” means undated specimens collected by Oakes. Taxa with one or a few dates of occurrence, and those collected rarely and sporadically, are considered not established in the flora and are waifs, per Nesom (2000). For these waifs, habitat data are given as per specimen labels; however, many labels lack habitat descriptors. Abbreviations: N = naturalized (established) alien plants; N, few = probably naturalized, but collected six or fewer times; P = persistent at former house sites, etc.; W = waif, aliens appearing once or sporadically and not established; MV = Martha’s Vineyard; Nant = Nantucket Island; cult = cultivated; pop = population; rr = railroad; ww = wool waste used as fertilizer.

PTERIDOPHYTES**AZOLLACEAE**

Azolla caroliniana Willd. – 1883-p; N.

MARSILEACEAE

Marsilea quadrifolia L. – 1877-p; N.

SALVINIACEAE

Salvinia minima Baker – 1941; W, pond.

GYMNOSPERMS**CUPRESSACEAE**

Juniperus horizontalis Moench – 1895; W, hilltop.

PINACEAE

Abies concolor (Gordon & Glend.) Lindley *ex* Hildebr. – 1990; W, seedlings along road to ski area (where planted).

Larix decidua P. Mill. – 1883-p; N.

Picea abies (L.) Karsten – 1871-p; N.

P. glauca (Moench) Voss – 1883-p; N.

Pinus banksiana Lamb. – 1912-p; N.

P. mugo Turra – 1951; W, abandoned pasture, roadside hedgerow; perhaps merely *P.*

P. sylvestris L. – 1884-p; N.

P. thunbergiana Franco – 1943-p; N, few; originally planted 1895 Nant.

TAXACEAE

Taxus baccata L. – 1976-p; N, few.

T. cuspidata Siebold & Zucc. – 1979-p; N.

ANGIOSPERMS**DICOTYLEDONS****ACERACEAE**

Acer campestre L. – 1916-p; N, few.

A. ginnala Maxim. – 1938-p; N.

A. platanoides L. – 1875-p; N.

A. pseudoplatanus L. – 1875-p; N.

A. tataricum L. – 1962; W, roadside and meadow.

ACTINIDIACEAE

Actinidia arguta (Siebold & Zucc.) Planch. ex Moq. – 1991-p; N, few.

AIZOACEAE

Tetragonia tetragonioides (Pallas) Kuntze – 1899–1955; N, few.

AMARANTHACEAE

Amaranthus albus L. – Oakes-1873-p; N.

A. blitoides S. Wats. – Dewey-1878–1957; N.

A. blitum L. – 1883-p; N, few.

A. caudatus L. – 1886-p; N.

A. cruentus L. – 1864–1958; N.

A. deflexus L. – 1920; W, wool dump.

A. gracilis Desf. (= *viridis* L.) – 1878; W, dump.

A. hybridus L. – Cutler-1860-p; N.

A. hypochondriacus L. – 1841–1958; N.

A. macrocarpus Benth. – 1921; W, ww.

A. palmeri S. Wats. – 1886–1955; W, ww, cotton waste, waste ground.

A. powellii S. Wats. – 1897–1977; N.

A. retroflexus L. – 1839–1958; N.

A. rudis Sauer – 1885–1887; W, ww, dump.

A. spinosus L. – 1880-p; N.

A. tuberculatus (Moq. ex DC.) Sauer – 1881–1958; N.

Froelichia gracilis (Hooker) Moq. – 1959-p; N.

ANACARDIACEAE

Cotinus coggygria Scop. – 1886-p; N, few.

Rhus aromatica Aiton – 1979-p; N, few.

APIACEAE

Aegopodium podagraria L. – 1895-p; N.

Aethusa cynapium L. – Dewey-1862–1921; N.

Anethum graveolens L. – 1911-p; N, few.

Anthriscus sylvestris (L.) Hoffmann – 1919-p; N, few.

Apium graveolens L. – 1958; W, dump.

Bupleurum odontites L. – 1861; W, yard weed.

B. rotundifolium L. – 1884–1934; N, few.

Carum carvi L. – Oakes-1869-p; N.

Caucalis sp. – 1917; W, ww.

Conium maculatum L. – Hitchcock-1863-p; N.

Coriandrum sativum L. – 1893–1912; N, few.

Cuminum cymium L. – 1882; W, no habitat.

Daucus carota L. – Dewey-1863-p; N.

Eryngium planum L. – 1902–1943; W, waste ground, sandy moor.

Falcaria vulgaris Bernh. – 1989-p; N, few.

- Foeniculum vulgare* P. Mill. – 1882–1933; N, few.
Heracleum mantegazzianum Sommier & Levier – 2002; W, field; may be naturalizing (data from P. Somers, Mass. Natural Heritage & Endangered Species Program, pers. com.).
H. sphondylium L. subsp. *sibiricum* (L.) Simonkai – 1908–1918; W, no habitat.
Levisticum officinale W.D.J. Koch – 1875-p; N, few.
Pastinaca sativa L. – Hitchcock-1869-p; N.
Petroselinum crispum (P. Mill.) Nyman ex A.W. Hill – 1897; W, garden weed.
Peucedanum palustre (L.) Moench – 1958-p; N.
Pimpinella anisum L. – 1881–1923; W, waste areas.
P. saxifraga L. – 1935-p; N, few.
Scandix pecten-veneris L. – 1881–1953; W, waste ground, near bird feeder.
Torilis japonica (Houtt.) DC. – 1948-p; N, few.
T. leptophylla (L.) Reichenb. f. – 1902; W, waste land.

APOCYNACEAE

- Amsonia tabernaemontana* Walter – 1903–1911; W, roadsides.
Vinca herbacea Waldst. & Kit. – 1912; W, river terrace.
V. major L. – 1958; W, dump.
V. minor L. – 1902-p; P.

ARALIACEAE

- Acanthopanax sieboldianus* Makino – 1975-p; N, few.
Aralia spinosa L. – 1933-p; N.
Hedera helix L. – 1963-p; N.

ARISTOLOCHIACEAE

- Aristolochia clematitis* L. – 1924–1945; W, no habitat.
A. macrophylla Lam. – 1997-p; N, few (Burk and Zebryk 2002).
A. tomentosa Sims – 1967-p; N, few.

ASCLEPIADACEAE

- Cynanchum louiseae* Kartesz & Gandhi – 1854-p; N.
C. rossicum (Kleopov) Borhidi – 1977-p; N, few.

ASTERACEAE

- Acanthospermum australe* (Loefl.) Kuntze – 1907–1918; W, wool dump, waste ground.
Achillea millefolium L. var. *millefolium* – Cutler-1859-p; N.
A. ptarmica L. – 1859-p; N.
Ageratum houstonianum P. Mill. – 1880; W, no habitat.
Ambrosia coronopifolia Torr. & A. Gray – 1853–1974; N, few.
Anthemis arvensis L. var. *agrestis* (Wallr.) DC. – 1820–1958; N.
A. arvensis var. *arvensis* – 1880–1968; N.

- A. cotula* L. – Cutler-1839-p; N.
A. tinctoria L. – 1913-p; N.
Arctium lappa L. – 1881-p; N.
A. minus Bernh. – 1850-p; N.
A. tomentosum P. Mill. – 1902–1962; W, roadsides, pastures.
A. vulgare (Hill) Evans – 1873–1917; N.
Artemisia abrotanum L. – 1904; W, no habitat.
A. absinthium L. – Dewey-1875-p; N.
A. annua L. – 1879-p; N.
A. biennis Willd. – 1877-p; N.
A. dracunculus L. – 1904–1918; W, dry ground, waste ground.
A. frigida Willd. – 1918–1945; W, wool dump, fallow field.
A. ludoviciana Nutt. – 1899-p; N.
A. pontica L. – 1899–1956; N, few.
A. stelleriana Besser – 1879-p; N.
A. tridentata Nutt. – 1934; W, fallow field.
A. vulgaris L. – Hitchcock-1876-p; N.
Aster tataricus L. f. – 1912; W, dump.
Balsamita major Desf. – 1877–1919; W, roadsides, fallow fields.
Bellis perennis L. – Dewey-1886-p; N.
Bidens alba (L.) DC. var. *radiata* (Schultz-Bip.) Ballard ex T.E. Melchert – 1913–1917; W, clay pit, ww.
B. aristosa (Michx.) Britton – 1870–1903; W, no habitat.
B. bipinnata L. – 1877–1909; N, few.
B. tenuisecta A. Gray – 1921; W, ww.
B. tripartita L. – 1879–1966; N.
Boltonia asteroides (L.) L'Her. var. *latisquama* (A. Gray) Cronq. – 1925–1971; W, no habitat.
Boltonia asteroides var. *recognita* (Fernald & Grisc.) Cronq. – 1915–1944; N, few.
Calendula officinalis L. – 1925–1958; W, no habitat.
Calotis cuneifolia R. Br. – 1917; W, ww.
Carduus nutans L. – 1910-p; N.
Carthamus lanatus L. – 1958; W, nursery.
C. tinctorius L. – 1919; W, dump.
Centaurea biebersteinii DC. – 1884-p; N.
C. cyanus L. – Dewey-1879–1971; N.
C. debeauxii Gren. & Godr. – 1878-p; N.
C. diffusa Lam. – 1909–1956; N, few.
C. jacea L. – ca. 1888-p; N.
C. melitensis L. – 1880–1928; W, waste ground.
C. nigra L. – Oakes-1850-p; N.
C. nigrescens Willd. – 1903–1913; N, few.
C. solstitialis L. – 1892–1945; W, waste ground.
Centipeda minima (L.) A. Braun & Aschers. – 1937; W, weed in strawberry bed (Ottley 1938).
Chaenactis grabriuscula DC. – 1878; W, ww.
Chrysanthemum coronarium L. – 1920–1955; W, no habitat.
C. segetum L. – 1898; W, roadside.
Cichorium intybus L. – Cutler-1857-p; N.

- Cirsium arvense* (L.) Scop. var. *arvense* – Hitchcock-1840-p; N.
C. arvense var. *integrifolia* Wimm. & Grab. – 1920–1922; W, road fill, low field.
C. arvense var. *mite* Wimm. & Grab. – 1908–1925; W, vacant lot, roadside.
C. palustre (L.) Scop. – 1908–1909; W, vacant lot.
C. vulgare (Savi) Tenore – Cutler-1842-p; N.
Cnicus benedictus L. – 1885–1888; W, rubbish heap, garden weed.
Coreopsis lanceolata L. – 1895-p; N.
C. major Walter – 1945–1953; W, waste ground.
C. pubescens Elliott var. *pubescens* – 1915; W, grassland.
C. pubescens var. *robusta* A. Gray ex Eames – 1919; W, fallow field.
C. tinctoria Nutt. – 1877–1931; N.
C. tripteris L. – 1903–1926; W, no habitat.
C. verticillata L. – 1983; P, roadbank.
Cosmos bipinnatus Cav. – 1919–1958; W, mostly dumps.
C. parviflorus (Jacq.) Pers. – 1902–1935; W, garden escape.
Cotula coronopifolia L. – 1879; W, no habitat.
Crepis capillaris (L.) Wallr. – 1904-p; N.
C. foetida L. – 1883; W, wool mill yard.
C. tectorum L. – 1909; W, lawns.
Crupina vulgaris Cass. – 1877–1879; W, fill land.
Dendranthema morifolium (Ramat.) Tzvelev – 1976; W, roadside.
Doronicum pardalianches L. – 1937-p; N, few.
Dyssodia papposa (Vent.) Hitchc. – 1930; W, no habitat.
Echinacea pallida (Nutt.) Nutt. – 1889–1895; W, fields.
Echinops sphaerocephalus L. – 1886–1972; N, few.
Eclipta prostrata (L.) L. – 1879–1932; W, fill land, waste ground near mill.
Euchiton involucratus (G. Forster) Holub – 1900; W, garden weed.
Eupatorium altissimum L. – 1979-p; N, few.
E. serotinum Michx. – 1933-p; W, rr, roadsides.
Flaveria trinervia (Spreng.) C. Mohr – 1913; W, ww.
Gaillardia aristata Pursh – 1916–1975; W, dump, roadside.
G. pulchella Foug. – 1918; W, ww.
Galinsoga parviflora Cav. – 1879-p; N.
G. quadriradiata Ruiz & Pavon – 1891-p; N.
Grindelia squarrosa (Pursh) Dunal – 1885–1945; W, fill land, waste land.
Guizotia abyssinica (L. f.) Cass. – 1955–1977; W, dump, bird feeder.
Helenium amarum (Raf.) Rock – 1879–1905; N, few.
H. flexuosum Raf. – 1902-p; N.
Helianthus annuus L. – 1884-p; N.
H. debilis Nutt. subsp. *cucumerifolius* (Torr. & A. Gray) Heiser – 1899–1974; W, waste lot, fallow field, rr.
H. giganteus L. – 1885; W, no habitat.
H. grosseserratus Martens – 1901–1924; N, few.
H. ×kellermanii Britton – 1919–1944; W, no habitat.
H. ×laetiflorus Pers. – 1911–1962; N.
H. maximilianii Schrader – 1909-12; W, field.
H. mollis Lam. – 1891-p; N.
H. pauciflorus Nutt. subsp. *pauciflorus* – 1878–1958; W, ww, roadside.

- H. pauciflorus* subsp. *subrhomboideus* (Rydb.) O. Spring & E. Schilling – 1915–1918; W, roadside.
- H. petiolaris* Nutt. – 1911–1930; N, few.
- H. tuberosus* L. – Hitchcock-1852-p; N.
- Helichrysum bracteatum* (Vent.) Andr. – 1932; W, dump.
- Heliopsis helianthoides* (L.) Sweet var. *helianthoides* – 1859–1910; W, field, waste land.
- H. helianthoides* var. *scabra* (Dunal) Fernald – 1903-p; N.
- Hemizonia fasciculata* (DC.) Torr. & A. Gray – 1878–1879; W, ww.
- Heterosperma pinnatum* Cav. – 1922; W, ww.
- Hieracium aurantiacum* L. – 1886-p; N.
- H. caespitosum* Dumort. – 1913-p; N.
- H. ×flagellare* Willd. – 1895-p; N.
- H. ×floribundum* Wimm. & Grab. – 1934-p; N.
- H. lachenalii* K.C. Gmel. – 1901-p; N.
- H. murorum* L. – 1905–1963; N, few.
- H. pilosella* L. – 1894-p; N.
- H. piloselloides* Vill. – 1912-p; N.
- H. praealtum* Vill. ex Gochnat var. *decipiens* W.D.J. Koch – 1901–1962; W.
- H. sabaudum* L. – 1928–1964; N, few.
- Hypochaeris glabra* L. – 1878; W, ww.
- H. radicata* L. – 1898-p; N.
- Inula helenium* L. – Cutler-1869-p; N.
- Iva annua* L. – 1878; W, fill land.
- I. xanthifolia* Nutt. – 1880–1954; N, few.
- Lactuca sativa* L. – 1875-p; W, dumps, yard, waste ground.
- L. serriola* L. – 1863-p; N.
- Lapsana communis* L. – 1877-p; N.
- Lasthenia californica* DC. ex Lindley – 1878; W, ww.
- L. minor* (DC.) Ornduff – 1879; W, ww.
- Layia platyglossa* (Fischer & C.A. Meyer) A. Gray – 1879; W, ww.
- Leontodon autumnalis* L. – Hitchcock-1853-p; N.
- L. taraxacoides* (Vill.) Merat – 1904–1977; N, few.
- Leucanthemum vulgare* Lam. – Cutler-1839-p; N.
- Liatris pycnostachya* Michx. – 1920-p; N, few.
- L. spicata* (L.) Willd. – 1877–1932; W, mill site.
- Madia sativa* Molina – 1927–1940; W, vacant lot, waste ground.
- Matricaria discoidea* DC. – 1878-p; N.
- M. maritima* L. – 1879–1932; W, fill land, dump.
- M. perforata* Merat – 1890–1910; W, field, waste place.
- M. recutita* L. – 1881–1966; N, few.
- Microseris douglasii* (DC.) Schultz-Bip. – 1878; W, ww.
- Mycelis muralis* (L.) Dumort. – 1984-p; N, few.
- Onopordum acanthium* L. – Hitchcock-1883–1945; N.
- Palafoxia texana* DC. – 1896; W, riverbank.
- Parthenium hysterophorus* L. – 1884–1890; W, dumps.
- P. integrifolium* L. – 1913–1934; W, two pops, one collected yearly 1915–1934.
- Perezia aletes* J.F. Macbr. – 1918; W, type collection from garden manured with ww.

- Petasites hybridus* (L.) Gaertn., B. Meyer & Scherb. – 1905–1913; W, waste ground, fill.
- Picris echioides* L. – 1894; W, lawn.
- P. hieracioides* L. – 1894-p; N, few.
- Ratibida pinnata* (Vent.) Barnh. – 1886–1911; W, rubbish heap, roadside.
- Rudbeckia bicolor* Nutt. – 1932–1958; W, waste places.
- R. hirta* L. var. *pulcherrima* Farw. – 1858-p; N.
- R. laciniata* L. var. *hortensis* Bailey – 1911–1920; W, roadside, old field.
- R. subtomentosa* Pursh – 1919; W, roadside.
- R. triloba* L. var. *triloba* – 1909–1973; N, few.
- Santolina chamaecyparissus* L. – 1916-p; N, few.
- Schkuhria pinnata* (Lam.) Kuntze – 1929; W, garden weed.
- Senecio jacobaea* L. – 1903-p; N, few.
- S. viscosus* L. – 1879–1905; W, fill land, rr, waste ground.
- S. vulgaris* L. – Cutler-1874-p; N.
- Silphium perfoliatum* L. – 1880-p; N.
- Sonchus arvensis* L. subsp. *arvensis* – 1854-p; N.
- S. arvensis* subsp. *uliginosus* (Bieber) Nyman – 1912-p; N.
- S. asper* (L.) Hill – Hitchcock-1843-p; N.
- S. oleraceus* L. – Hitchcock-1878-p; N.
- Synosma suaveolens* (L.) Raf. ex Britton – 1895; W, no habitat.
- Tagetes erecta* L. – 1975; W, roadside.
- T. minuta* L. – 1916–1945; W, dump, garden weed.
- Tanacetum parthenium* (L.) Schultz-Bip. – 1875–1974; N.
- T. vulgare* L. – Cutler-1843-p; N.
- Taraxacum laevigatum* (Willd.) DC. – 1890-p; N.
- T. officinale* G.H. Weber ex Wiggers subsp. *officinale* – Cutler-1840-p; N.
- T. officinale* subsp. *vulgare* (Lam.) Schinz & R. Keller – 1913; W, no habitat.
- Thymophylla tenuiloba* (DC.) Small – 1882–1883; W, fill land.
- Tragopogon dubius* Scop. – 1946-p; N.
- T. porrifolius* L. – 1901–1958; N, few.
- T. pratensis* L. – 1885-p; N.
- Tussilago farfara* L. – Cutler-1840-p; N.
- Verbesina encelioides* (Cav.) Benth. & Hooker f. ex A. Gray subsp. *exauriculata* (B.L. Robinson & Greenm.) J.R. Coleman – 1896–1932; W, ww, waste ground.
- Vernonia fasciculata* Michx. – 1886–1934; W, ww.
- V. missurica* Raf. – 1957; W, ww.
- Xanthium spinosum* L. – 1878–1945; N.
- X. strumarium* L. var. *strumarium* – 1909–1912; W, rubbish at ocean beach, filled land.

BALSAMINACEAE

- Impatiens glandulifera* Royle – 1919-p; N.

BERBERIDACEAE

- Berberis thunbergii* DC. – 1910-p; N.
- B. vulgaris* L. – Cutler-pre 1848-p; N.

Epimedium ×youngianum Fischer & C.A. Meyer – 1948-p; W, garden weed, lawn weed.

Podophyllum peltatum L. – Hitchcock-1872-p; N.

BETULACEAE

Alnus glutinosa (L.) Gaertn. – 1899-p; N.

Betula ×caerulea Blanch. – 1977; W, rr.

B. pendula Roth – 1881-p; N.

B. platyphylla Sukatshev – 1944; W, riverbank.

B. pubescens Ehrh. – 1918–1927; W, roadsides.

BIGNONIACEAE

Campsis radicans (L.) Seemann *ex* Bureau – 1858-p; N.

Catalpa bignonioides Walter – 1882-p; N.

C. ovata G. Don – 1973-p; N, few.

C. speciosa (Warder) Warder *ex* Engelm. – 1916-p; N.

BORAGINACEAE

Amsinckia douglasiana A. DC. – 1878–1918; W, ww, pasture.

A. intermedia Fischer & C.A. Meyer – 1919; W, henyard.

A. lycopsoides Lehman – 1880–1948; W, barnyard, pasture.

A. spectabilis Fischer & C.A. Meyer – 1878; W, ww.

Anchusa arvensis (L.) Bieb. – Hitchcock-1882–1919; W, sandy field, waste place, ww.

A. officinalis L. – 1895–1911; W, no habitat.

Asperugo procumbens L. – 1859–1896; W, waste places.

Borago officinalis L. – 1904–1935; W, fallow field, escape from cult.

Buglossoides arvensis (L.) I.M. Johnston – 1879–1916; N.

Cryptantha ambigua (A. Gray) Greene 1878; W, ww.

Cynoglossum amabile Stapf & Drummond – 1925–1932; W, sandy waste ground.

C. microglochin Benth. – 1884–1902; W, rubbish heaps.

C. officinale L. – Cutler-1850–1915; N.

Echium creticum L. – 1884–1913; W, rubbish heap, dump.

E. plantagineum L. – 1890–1955; W, waste places.

E. pustulatum Sibth. & J.E. Sm. – 1894–1957; W, ocean beach, ww.

E. vulgare L. – 1838-p; N.

Heliotropium amplexicaule Vahl – 1910–1921; W, no habitat.

H. europaeum L. – 1884; W, rubbish heap.

H. indicum L. – 1884; W, rubbish heap.

Lappula squarrosa (Retz.) Dumort. – 1876–1944; N.

Lithospermum officinale L. – Hitchcock-1901-p; N.

Mertensia virginica (L.) Pers. *ex* Link – 1921; W, rubbish heap.

Myosotis arvensis (L.) Hill – Hitchcock-1880-p; N.

M. scorpioides L. – 1879-p; N.

M. stricta Link *ex* Roemer & J.A. Schultes – 1897-p; N.

M. sylvatica Ehrh. *ex* Hoffm. – 1903-p; N, few.

- Plagiobothrys scouleri* (Hooker & Arn.) I.M. Johnston – 1901; W, ww.
P. trachycarpus (A. Gray) I.M. Johnston – 1973; W, lawn.
Symphytum asperum Lepechin – 1861–1919; N, few.
S. officinale L. – Cutler-1854-p; N.
S. tuberosum L. – 1896; W, brookside in meadow.

BRASSICACEAE

- Alliaria petiolata* (Bieb.) Cavara & Grande – 1938-p; N.
Alyssum alyssoides (L.) L. – 1875–1915; N, few.
Arabidopsis thaliana (L.) Heynh. – 1907-p; N.
Arabis procurrens Waldst. & Kit. – 1957; W, garden weed.
Armoracia rusticana Gaertn., B. Meyer & Scherb. – Cutler-pre 1848–1974; N.
Barbarea verna (P. Mill.) Aschers. – 1892-p; N.
B. vulgaris R. Br. – Hitchcock-pre 1848-p; N.
Berteroa incana (L.) DC. – 1894-p; N.
B. mutabilis (Vent.) DC. – 1894–1897; W, poor field.
Brassica juncea (L.) Czern. – 1883-p; N.
B. napus L. – 1928–1973; W, dump, rr yard, college campus.
B. nigra (L.) W.D.J. Koch – pre 1848-p; N.
B. oleracea L. – 1886-p; N.
B. rapa L. – Dewey-1858-p; N.
Bunias orientalis L. – 1948–1973; W, waste ground, college campus.
Camelina microcarpa Andr. ex DC. – 1883–1948; N.
C. sativa (L.) Crantz – Dewey-1866–1931; N.
Capsella bursa-pastoris (L.) Medik. – 1849-p; N.
Cardamine hirsuta L. – 1986-p; N, few.
C. impatiens L. – 1993; W, rocky river ledge.
C. pratensis L. var. *pratensis* – 1886-p; N.
Chorispora tenella (Pallas) DC. – 1914–1945; W, ww, roadside.
Conringia orientalis (L.) Andr. – 1897–1948; N.
Coronopus didymus (L.) J.E. Sm. – 1878–1916; N, few.
C. squamatus (Forsk.) Aschers. – 1881; W, fill land.
Descurainia pinnata (Walter) Britton subsp. *brachycarpa* (Richardson) Detling – 1878; W, ww.
D. sophia (L.) Webb ex Prantl – 1882–1973; N.
Diplotaxis muralis (L.) DC. – 1879-p; N, few.
D. tenuifolia (L.) DC. – 1879–1880; W, ballast ground.
Draba verna L. – Dewey-pre 1848-p; N.
Eruca vesicaria (L.) Cav. – 1878–1989; W, fill land, dry sterile field.
Erucastrum gallicum (Willd.) O.E. Schulz – 1910-p; N, few.
Erysimum cheiranthoides L. – 1866-p; N.
E. hieracifolium L. – 1999; W, roadside (Zebryk 2002).
E. inconspicuum (S. Wats.) MacMillan – 1958–1998; W.
E. odoratum Ehrh. – 1883; W, wool mill yard.
E. repandum L. – 1928–1952; W, waste ground.
Euclidium syriacum (L.) Aiton f. – 1907; W, henyard.
Hesperis matronalis L. – 1876-p; N.
Iberis amara L. – 1880–1915; W, dumps, rr.

- Lepidium campestre* (L.) Aiton f. – Hitchcock-1878-p; N.
L. densiflorum Schrader – 1883-p; N.
L. latifolium L. – 1924-p; N.
L. perfoliatum L. – 1883-p; N, few.
L. ruderale L. – 1879–1935; N.
L. sativum L. – ca. 1903–1931; W, pondshore.
Lobularia maritima (L.) Desv. – 1877-p; N.
Lunaria annua L. – 1903-p; N, few.
Neslia paniculata (L.) Desv. – 1883–1919; W, no habitat.
Raphanus raphanistrum L. – Cutler-1858-p; N.
R. sativus L. – 1878–1917; N.
Rapistrum rugosum (L.) All. – 1873–1958; W, fill land, waste ground.
Rorippa amphibia (L.) Besser – 1936–1956; W, shallow water of two lakes.
R. austriaca (Crantz) Besser – 1979; W, meadow.
R. globosa (Turcz. ex Fischer & C.A. Meyer) Hayek – 1884; W, rubbish heap.
R. microphylla (Boenn. ex Reichenb.) Hyl. ex A. & D. Löve – 1861–1940; N.
R. nasturtium-aquaticum (L.) Hayek – Hitchcock-1855-p; N.
R. palustris (L.) Besser subsp. *palustris* – 1878–1944; W, rr, new lawn, roadside.
R. sessiliflora (Nutt.) Hitchc. – ca. 1856; W, yard: “a weed noticed for many years.”
R. sylvestris (L.) Besser – 1881-p; N.
Sinapis alba L. – 1878–1913; N.
S. arvensis L. – Hitchcock-1879-p; N.
Sisymbrium altissimum L. – 1883-p; N.
S. irio L. – 1945; W, garden weed.
S. loeselii L. – 1883–1935; W, wool mill yard, waste ground.
S. officinale (L.) Scop. – Hitchcock-1853-p; N.
S. orientale L. – 1931–1948; W, no habitat.
Teesdalia nudicaulis (L.) Aiton f. – 1916-p; N.
Thlaspi arvense L. – Hitchcock-1858-p; N.
Tropidocarpum gracile Hooker – 1878; W, ww.

BUDDLEJACEAE

- Buddleja davidii* Franchet – 1965–1984; P or W, Nant: grove of planted pines, dump, roadside.

BUXACEAE

- Pachysandra terminalis* Siebold & Zucc. – 1980-p; N, few; perhaps merely P.

CABOMBACEAE

- Cabomba caroliniana* A. Gray – 1930-p; N.

CAESALPINIACEAE

- Cercis canadensis* L. – 1935–1975; W, spontaneous in lawn, roadside.
Gleditsia triacanthos L. – 1879-p; N.
Gymnocladus dioica (L.) K. Koch – 1979; W, woodland border; perhaps merely P.
Senna obtusifolia (L.) Irwin & Barneby – 1956–1973; W, rr yard, dump.

CALLITRICHACEAE

Callitriche stagnalis Scop. – 1928-p; N.

CALYCANTHACEAE

Calycanthus floridus L. var. *floridus* – 1971; W, semi-wild along stream on MV.

CAMPANULACEAE

Campanula glomerata L. – 1838–1917; W, roadsides, old fields.

C. lanata Friv. – 1932 – W, garden weed.

C. persicifolia L. – 1961–1978; P.

C. rapunculoides L. – 1873-p; N.

C. trachelium L. – 1905–1919; W, “waif,” dump.

Jasione montana L. – 1891-p; N.

CANNABACEAE

Cannabis sativa L. – Dewey-1875-p; N.

Humulus japonicus Siebold & Zucc. – 1904-p; N.

H. lupulus L. – Hitchcock-1868-p; N.

CAPPARACEAE

Cleome hassleriana Chodat – Dewey-1907–1977; N, few.

C. serrulata Pursh – 1903–1941; W, field, saline fill.

Polanisia dodecandra (L.) DC. subsp. *dodecandra* – 1973-p; W, rr yard, rr ballast, waste ground.

P. dodecandra subsp. *trachysperma* (Torr. & A. Gray) Iltis – 1944–1966; W, garden weed, roadside.

CAPRIFOLIACEAE

Kolkwitzia amabilis Graebn. – 1990; W, floodplain forest.

Lonicera ×bella Zabel – 1910-p; N.

L. japonica Thunb. – 1911-p; N.

L. maackii (Rupr.) Maxim. – 1958-p; N, few.

L. morrowii A. Gray – 1884-p; N.

L. reticulata Raf. – 1928–1974; W, roadsides.

L. sempervirens L. – 1878-p; N.

L. tatarica L. – 1880-p; N.

L. xylostereum L. – 1884-p; N, few.

Symphoricarpos albus (L.) S.F. Blake var. *laevigatus* (Fernald) S.F. Blake – 1877-p; N.

S. occidentalis Hooker – 1884–1925; W, dump, roadside.

S. orbiculatus Moench – 1889-p; N, few.

Viburnum lantana L. – 1916–1984; W, rich woods, rocky slope.

V. opulus L. var. *opulus* – 1914-p; N.

V. plicatum Thunb. – 1968; W, roadside.

- V. sieboldii* Miq. – 1979–1987; N, few.
Weigela floribunda (Siebold & Zucc.) K. Koch – 1913-p; W, roadsides.

CARYOPHYLLACEAE

- Agrostemma githago* L. – Hitchcock-1871-p; N.
Arenaria serpyllifolia L. – 1848-p; N.
Cerastium fontanum Baumg. subsp. *vulgare* (Hartman) Greuter & Burdet – Dewey-1881-p; N.
C. glomeratum Thuill. – 1870–1972; W, rr, dooryard, lawn weed.
C. pumilum W. Curtis – 1901-p; N.
C. semidecandrum L. – Dewey-1904-p; N.
C. tomentosum L. – 1959-p; N, few.
Corrigiola litoralis L. – ca. 1935; W, garden weed.
Dianthus armeria L. – Hitchcock-pre 1848-p; N.
D. barbatus L. – 1878-p; N.
D. deltoides L. – 1879-p; N.
D. plumarius L. – 1907-p; N, few.
Gypsophila elegans Bieb. – 1927; W, dump.
G. muralis L. – 1882-p; N.
G. paniculata L. – 1923–1934; W, disused garden on Penikese Island, waste ground.
Herniaria hirsuta L. – 1983; W, yard.
Holosteum umbellatum L. – 1932–1942; W, cultivated ground, waste area.
Lychnis chalconica L. – 1898–1956; N.
L. coronaria (L.) Desr. – 1879-p; N.
L. flos-cuculi L. – 1901-p; N.
L. viscaria L. – 1946–1954; W, lawn weed, roadside.
Myosoton aquaticum (L.) Moench – 1922-p; N.
Petrorhagia prolifera (L.) Ball & Heywood – 1912–1989; N, few.
P. saxifraga (L.) Ser. ex Link – 1943; W, dooryard.
Sagina japonica (Sw.) Ohwi – 1990-p; N, few.
S. maxima A. Gray subsp. *maxima* – 1951; W, specimen at WTU cited without habitat (Crow 1978).
S. procumbens L. – Hitchcock-1845-p; N.
Saponaria ocymoides L. – 1930; W, dry wooded hill.
S. officinalis L. – Hitchcock-1882-p; N.
Scleranthus annuus L. – Hitchcock-1847-p; N.
S. perennis L. – 1910–1939; W, sunny hillside, dry roadside.
Silene armeria L. – 1882–1958; N.
S. coeli-rosa (L.) Godron – 1913; W, garden weed.
S. conica L. – 1904–1911; N, few.
S. csereii Baumg. – 1955; W, waste place.
S. dichotoma Ehrh. – 1894–1968; N.
S. dioica (L.) Clairville – 1884-p; N.
S. gallica L. – 1882–1911; W, waste ground, roadside.
S. latifolia Poir. subsp. *alba* (P. Mill.) Greuter & Burdet; pre 1850-p; N.
S. noctiflora L. – Oakes-1863-p; N.
S. vulgaris (Moench) Garcke – Cutler-1846-p; N.
Spergula arvensis L. – Cutler-pre 1848-p; N.

- S. pentandra* L. – 2000; W (T. Rawinski, Massachusetts Audubon Society, pers. com.).
Spergularia purpurea (Pers.) G. Don – 1912; W, Patuisset Island on Cape Cod.
S. rubra (L.) J. & C. Presl – Dewey-1861-p; N.
Stellaria graminea L. – Cutler-1854-p; N.
S. holostea L. – 1910–1921; W, waste ground, field.
S. media (L.) Vill. – Cutler-1853-p; N.
S. pubera Michx. – 1928; W, nursery weed.
Vaccaria hispanica (P. Mill.) Rausch. – 1877–1914; N.

CELASTRACEAE

- Celastrus orbiculata* Thunb. – 1919-p; N.
Euonymus alata (Thunb.) Siebold – 1958-p; N.
E. atropurpurea Jacq. – 1865–1922; W, open woods, riverbank, fill land.
E. europaea L. – 1896-p; N.
E. fortunei (Turcz.) Handel-Maz. var. *radicans* (Siebold ex Miq.) Rehd. – 1975-p; N, few.
E. fortunei var. *vegeta* (Rehd.) Rehd. – 1975-p; N, few.
E. phellomana Loesel – 1900; W, no habitat.

CERCIDIPHYLLACEAE

- Cercidiphyllum japonicum* Siebold & Zucc. – 1988; W, disturbed moist ground.

CHENOPODIACEAE

- Atriplex patula* L. – Dewey-1871-p; N.
A. rosea L. – 1881–1936; W, ww, saltmarsh.
Axyris amaranthoides L. – 1932; W, dump.
Bassia hirsuta (L.) Aschers. – 1905-p; N.
B. hyssopifolia (Pallas) Volk – 1900–1936; W, meadow.
Beta vulgaris L. – 1879–1964; W, escapes from cult.
Chenopodium album L. – Hitchcock-1853-p; N.
C. ambrosioides L. – 1877-p; N.
C. berlandieri Moq. subsp. *zschackei* (J. Murr) Zobel – 1932; W, rr.
C. bonus-henricus L. – 1840–1957; N, few.
C. botrys L. – Hitchcock-1875-p; N.
C. bushianum Aellen – 1858–1966; N.
C. capitatum (L.) Aschers. – Hitchcock-1877–1940; N, few.
C. foliosum (Moench) Aschers. – 1885; W, roadside.
C. glaucum L. – 1874-p; N.
C. graveolens Willd. – 1885–1934; W, field, ww.
C. multifidum L. – 1881–1912; W, waste ground.
C. murale L. – 1843–1949; N.
C. polyspermum L. – 1966–1975; W, disturbed land, garden weed.
C. pumilio R. Br. – 1910-p; N.
C. strictum Roth var. *glaucophyllum* (Aellen) Wahl – 1905–1963; N.
C. urbicum L. – 1847–1948; N.
Cycloloma atriplicifolium (Sprengel) Coulter – 1900–1980; N, few.

- Kochia scoparia* (L.) Schrader – 1900-p; N.
Monolepis nuttalliana (J.A. Schultes) Greene – 1897; W, no habitat.
Salsola collina Pallas – 1973-p; N, few.
S. kali L. subsp. *tragus* (L.) Aellen – Dewey-1897-p; N.
Spinacia oleracea L. – 1882–1907; W, escapes from cult.

CLUSIACEAE

- Hypericum densiflorum* Pursh – 1934; W, ww.
H. frondosum Michx. – 1909–1939; W, roadsides, abandoned pasture.
H. perforatum L. – Cutler-1857-p; N.
H. prolificum L. – 1911-p; N, few; may be merely P.

CONVOLVULACEAE

- Calystegia pellita* (Ledeb.) G. Don – 1884–1923; W, old garden, roadside.
C. sepium (L.) R. Br. subsp. *sepium* – 1880-p; N, few.
Convolvulus arvensis L. – Cutler-1879-p; N.
Ipomoea coccinea L. – 1897–1957; W, waste ground, spontaneous in garden many years.
I. hederacea Jacq. – 1884–1973; W, rr yard, waste ground.
I. lacunosa L. – 1884–1973; W, vegetable garden, rr yard.
I. pandurata (L.) G.F.W. Meyer – 1943–1974; P.
I. purpurea (L.) Roth – Dewey-1877-p; N.
I. tricolor Cav. – 1920; W, dump.

CORNACEAE

- Cornus sanguinea* L. – 1975; W, bank by rr, damp thicket.

CRASSULACEAE

- Sedum acre* L. – 1858-p; N.
S. aizoon L. – 1882; W, no habitat.
S. alboroseum Baker – 1918–1922; W, no habitat.
S. hispanicum L. – 1955; W, garden weed.
S. rupestre L. – 1876–1912; W, rock ledges.
S. sarmentosum Bunge – 1955-p; N, few.
S. sexangulare L. – 1970–1973; W, old cellar hole.
S. spurium Bieb. – 1989; W, limestone knoll.
S. telephium L. – Dewey-1876-p; N.
S. ternatum Michx. – 1877-p; N, few.
Sempervivum tectorum L. – 1875–1914; P.

CUCURBITACEAE

- Citrullus colocynthis* (L.) Schrader – 1878-p; N, few.
Cucumis anguria L. – 1909–1917; W, waste ground.
C. melo L. – 1906–1974; N.

- C. sativus* L. – 1878–1956; N, few.
Cucurbita maxima Duchesne – 1894–1932; N.
C. pepo L. – 1910–1984; N, few.
Thladiantha dubia Bunge – 1958; P, long abandoned cellar hole.

CUSCUTACEAE

- Cuscuta epilinum* Weihe – 1826 (Oakes)–ca. 1875; W, flax fields (Oakes 1847; Robinson 1880).
C. epithymum L. – 1899–1931; N, few.
C. polygonorum Engelm. – 1930–p; N, few.

DIAPENSIACEAE

- Galax urceolata* (Poiret) Brummitt – 1918–1982; P.

DIPSACACEAE

- Dipsacus fullonum* L. – Hitchcock-1899-p; N.
D. laciniatus L. – 1886–1906; W, rubbish heap, college campus.
Knautia arvensis (L.) Coulter – 1914-p; N.
Scabiosa atropurpurea L. – 1880–1882; W, waste ground.
S. ochroleuca L. – 1914; W, gravel pit.
Succisa pratensis Moench – 1911; W, no habitat.
Succisella inflexa (Kluk) G. Beck – 1892-p; N, few.

EBENACEAE

- Diospyros virginiana* L. – 1915-p; N, few.

ELAEAGNACEAE

- Elaeagnus angustifolia* L. – 1935-p; N, few.
E. pungens Thunb. – 1980; W, dry field.
E. umbellata Thunb. – 1918-p; N.

ELATINACEAE

- Elatine triandra* Schkuhr – 1976-p; N, few.

ERICACEAE

- Calluna vulgaris* (L.) Hull – 1875-p; N.
Erica cinerea L. – 1878–1906; P, one site among planted pines Nant.
E. tetralix L. – 1895–1982; N, few.
E. vagans L. – 1915–1921; P, two sites among planted pines Nant.
Leucothoe fontanesiana (Steudel) Sleumer – 1964; P, depression in planted pine woods Nant.
Rhododendron catawbiense Michx. – 1978-p; W, spontaneous seedlings in yard.
R. vaseyi A. Gray – 1907; W, swamp near abandoned nursery.

EUPHORBIACEAE

- Chamaesyce glyptosperma* (Engelm.) Small – 1941–1966; W, rr yard.
C. prostrata (Aiton) Small – 1890; W, cotton waste.
Croton capitatus Michx. – 1879; W, fill land.
C. texensis (Klotsch) Müll.Arg. ex DC. – 1890; W, dump.
Euphorbia corollata L. – 1881-p; N, few.
E. cyparissias L. – 1858-p; N.
E. dentata Michx. – 1973-p; N, few.
E. esula L. – 1828 (Oakes)-1875-p; N.
E. helioscopia L. – Dewey-1882–1931; W, ruderal.
E. lathyris L. – 1932–1935; W, field, garden.
E. marginata Pursh – 1877-p; N, few.
E. peplus L. – 1903–1920; W, fallow field, waste land.
E. platyphyllos L. – 1885; W, rubbish heap.
Mercurialis annua L. – 1880–1903; W, ballast site, waste area.
Ricinus communis L. – Dewey-1897–1917; W, dump, rr, abandoned lot.

FABACEAE

- Amorpha fruticosa* L. – 1898-p; N.
Arachis hypogaea L. – 1878–1912; W, fill land, dump, roadside.
Astragalus contortuplicatus L. – 1911; W, ww.
A. glycyphyllos L. – 1901–1911; W, fill land.
Baptisia australis (L.) R. Br. ex Aiton f. – 1912-p; N, few.
B. bracteata Muhl. ex Elliott var. *leucophaea* (Nutt.) Kartesz & Gandhi – 1919–1927; W, one pop by rr.
Caragana arborescens Lam. – 1983; N, few, one pop, label says “established.”
Cicer arietinum L. – 1904–1917; W, dump, ww.
Cladrastis kentukea (Dum.-Cours.) Rudd – 1982-p; N, few.
Cohutea arborescens L. – 1898–1963; N.
Coronilla varia L. – 1884-p; N.
Cytisus ×praecox W.J. Bean – 1980; W, roadside bank.
C. scoparius (L.) Link – 1886-p; N.
Dalea leporina (Aiton) Bullock – 1881–1955; W, fill land, wildlife plot, roadside.
Galega officinalis L. – 1931–1950; W, college campus, roadside.
Genista tinctoria L. – Cutler-1839-p; N.
Glycine max (L.) Merr. – 1973; W, rr.
Glycyrrhiza lepidota Pursh – 1903–1941; W, no habitat.
Laburnum anagyroides Medik. – 1929–1960; P, one tree spontaneous at planted larches Nant.
Lathyrus aphaca L. – 1878; W, no habitat.
L. latifolius L. – 1910-p; N.
L. pratensis L. – 1865-p; N, few.
L. sativus L. – 1884; W, dump.
L. sylvestris L. – 1910-p; N.
L. tuberosus L. – 1911; W, roadside and fence.
Lens culinaris Medik. – 1902–1916; W, roadside.
Lespedeza bicolor Turcz. – 1984; P, wildlife management area.

- L. cuneata* (Dum.-Cours.) G. Don – 1965-p; N.
L. cyrtobotrya Miq. – 1970-p; N, few.
L. thunbergii (DC.) Nakai – 1916–1975; W, wildlife plot.
Lotus corniculatus L. – 1880–1882; 1960-p; N.
L. unifolius (Hoover) Benth. – 1898; W, yard weed.
Lupinus polyphyllus Lindl. – 1948-p; N.
Medicago arabica (L.) Hudson – 1863–1920; N, few.
M. laciniata (L.) P. Mill. – 1881–1884; W, ww, dump.
M. lupulina L. – Hitchcock-1889-p; N.
M. minima (L.) L. – 1878–1948; W, fill land, dump.
M. polymorpha L. – 1857–1948; N.
M. sativa L. subsp. *falcata* (L.) Arcang. – 1886–1920; W, roadsides, waste places.
M. sativa subsp. *sativa* – 1861–1973; N.
Melilotus albus Medik. – Cutler-1866-p; N.
M. indicus (L.) All. – 1879–1884; W, dumps, wool mill yards.
M. officinalis (L.) Lam. – 1882-p; N.
Ornithopus sativus Brot. – 2000; W, disturbed sandy area Nant (Standley 2001).
Phaseolus coccineus L. – 1920–1921; W, waste ground, dump.
P. vulgaris L. – 1886–1932; W, dumps, fallow fields.
Pisum sativum L. – 1884–1949; W, waste places, wharf.
Pueraria montana (Lour.) Merr. var. *lobata* (Willd.) Maesen & S. Almeida – 1938-p;
N, few; perhaps just P.
Robinia hispida L. – 1885-p; N.
R. pseudoacacia L. – Hitchcock-1839-p; N.
R. viscosa Vent. – 1879–1937; N.
Scorpiurus muricatus L. – 1884; W, ww.
Sesbania exaltata (Raf.) Rydb. ex A.W. Hill – 1958; W, dump.
Thermopsis villosa (Walter) Fernald & Schub. – 1959-p; N, few.
Trifolium arvense L. – Cutler-1841-p; N.
T. aureum Pollich – Cutler-1854-p; N.
T. campestre Schreber – 1841-p; N.
T. dichotomum W.J. Hooker & Arn. – 1879; W, ww.
T. dubium Sibth. – 1879-p; N.
T. echinatum Bieb. – 1914; W, ww (Fletcher 1915).
T. hybridum L. – 1841-p; N.
T. incarnatum L. – 1849-p; N.
T. medium L. – Oakes-1863–1970; N, few.
T. pratense L. – Cutler-1836-p; N.
T. purpureum Loisel. – 1913; W, ww (Fletcher 1913).
T. repens L. – Cutler-1839-p; N.
T. resupinatum L. – 1879–1935; W, fill land, field.
T. striatum L. – 1914–1918; W, fields.
T. subterraneum L. – 1949; W, ww.
T. tomentosum L. – 1886; W, ww.
Trigonella corniculata (L.) L. – 1879; W, ballast.
T. laciniata L. – 1879; W, ballast.
T. noeana Boiss. – 1884; W, dump.
Ulex europaeus L. – 1899–1931; N, few.
Vicia cracca L. – Hitchcock-1849-p; N.

- V. faba* L. – 1913; W, cult ground.
V. grandiflora Scop. – 1983-p; N, few.
V. hirsuta (L.) S.F. Gray – 1877–1913; N, few.
V. lathyroides L. – 1931–1988; N, few.
V. sativa L. subsp. *nigra* (L.) Ehrh. – Hitchcock-1841-p; N.
V. sativa subsp. *sativa* – ca. 1880-p; N, few.
V. tetrasperma (L.) Schreb. – Dewey-1882-p; N.
V. villosa Roth – 1899-p; N.
Wisteria floribunda (Willd.) DC. – 1983-p; N, few.
W. frutescens (L.) Poir. – 1979–1992; P, woodland border (remnant of cult),
 abandoned flower garden.

FAGACEAE

- Castanea mollissima* Blume – 1941-p; N, few.
C. pumila (L.) P. Mill. – 1897–1987; N, few.
C. sativa P. Mill. – 1979; P, disturbed wooded lot.
Fagus sylvatica L. – 1900-p; N, few.
Quercus cerris L. – 1938-p; N, few.
Q. imbricaria Michx. – 1902–1976; W, roadside, rr.
Q. robur L. – 1894-p; N, introduced during 1700s for shipbuilding.

FUMARIACEAE

- Corydalis bulbosa* (L.) DC. – 1957–1975; W, yard weed.
Fumaria officinalis L. – Hitchcock-pre 1848–1975; N.

GENTIANACEAE

- Centaurium erythraea* Raf. – 1890–1974; W, fields, waste places.
C. pulchellum (Sw.) Druce – 1989-p; N.
C. spicatum (L.) Fritsch – 1829 (Oakes)-1966; N, saltmarshes on Nant only.
Sabatia angularis (L.) Pursh – 1885; W, field.

GERANIACEAE

- Erodium botrys* (Cav.) Bertol. – 1884–1928; W, wool mill yards, ww.
E. ciconium (L.) L'Her. ex Aiton – 1913–1958; W, ww, waste lot.
E. cicutarium (L.) L'Her. ex Aiton – 1878-p; N.
E. cygnorum Nees – 1917; W, ww.
E. malacoides (L.) L'Her. – 1902; W, ww.
E. moschatum (L.) L'Her. ex Aiton var. *praecox* Lange – 1878–1916; W, wool mill
 yards, ww.
E. stephenianum Willd. – 1916; W, ww.
Geranium columbinum L. – 1989; N, few, single large pop in dry calcareous
 field.
G. dissectum L. – 1884–1921; W, dump, yard.
G. ibericum Cav. – 1944–1983; W, roadside, garden, path in wetland.
G. molle L. – 1879-p; N.

G. pratense L. – 1903–1955; W, field, garden weed, roadside.

G. pusillum L. – 1877–1982; N.

G. sanguineum L. – 1901–1935; W, damp field.

G. sibiricum L. – 1885-p; N, few.

GROSSULARIACEAE

Ribes aureum Pursh var. *villosum* DC. – 1879–1970; N.

R. nigrum L. – 1887-p; N, few.

R. rubrum L. – 1865-p; N.

R. uva-crispa L. var. *sativum* DC. – 1984; W, sandplain grassland Nant.

HALORAGACEAE

Myriophyllum heterophyllum Michx. – 1937-p; N.

M. spicatum L. – 1971-p; N.

HIPPOCASTANACEAE

Aesculus hippocastanum L. – 1905-p; N, few.

HYDRANGEACEAE

Hydrangea arborescens L. – 1973-p; N, few.

H. paniculata Siebold – 1929-p; N, few.

Philadelphus coronarius L. – 1895–1981; N, few.

P. inodorus L. – 1990; W, two pops: wooded slope, roadside pulloff.

P. pubescens Loisel. – 1908–1959; N, few.

HYDROPHYLLACEAE

Ellisia nyctelea (L.) L. – 1902; W, newly seeded highway.

Phacelia brachyloba (Benth.) A. Gray – 1878; W, ww.

P. distans Benth. – 1878; W, ww.

P. egea (Greene ex Brand) Greene ex J.T. Howell – 1878; W, ww.

P. minor (Harvey) Thell. ex F. Zimm. – 1878; W, ww.

JUGLANDACEAE

Juglans ailanthifolia Carrière – 1975; W, thickets.

J. nigra L. – Hitchcock-1899-p; N, few.

LAMIACEAE

Acinos arvensis (Lam.) Dandy – 1897–1988; N, few.

Ajuga genevensis L. – 1904-p; N, few.

A. reptans L. – 1901-p; N.

Ballota nigra L. – 1881–1913; W, waste places.

Clinopodium vulgare L. – Hitchcock-1884-p; N.

- Dracocephalum parviflorum* Nutt. – Cutler-1895–1926; N.
D. thymiflorum L. – 1911; W, ww.
Elsholtzia ciliata (Thunb.) Hyl. – 1943-p; N, few.
Galeopsis bifida Boenn. – Hitchcock-1839-p; N.
G. ladanum L. – Dewey-1853–1900; W, cult ground, roadside.
G. tetrahit L. – 1839-p; N.
Glechoma hederacea L. – Cutler-1840-p; N.
Hyssopus officinalis L. – 1877–1893; W, roadsides, pastures.
Lamiastrum galeobdolon (L.) Ehrend. & Polatschek – 1963-p; N, few.
Lamium album L. – 1857–1959; W, lawns, roadsides, waste ground.
L. amplexicaule L. – Hitchcock-1878-p; N.
L. maculatum L. – 1879–1934; N.
L. purpureum L. – 1932-p; N.
Leonurus cardiaca L. – Cutler-1839-p; N.
Lycopus asper Greene – 1956; W, no habitat.
L. europaeus L. – 1900–1975; N, few.
Marrubium vulgare L. – Cutler-pre 1848-p; N.
Melissa officinalis L. – Dewey-1875-p; N.
Mentha aquatica L. – 1874–1902; W, edge of ditch, roadside.
M. arvensis L. – 1877-p; N.
M. ×gracilis Sole – 1878-p; N.
M. longifolia (L.) L. – 1919-p; N, few.
M. ×piperita L. – Hitchcock-1877-p; N.
M. ×rotundifolia (L.) Hudson – 1895-p; N, few.
M. spicata L. – Hitchcock-1839-p; N.
M. ×villosa Hudson – 1895-p; N, few.
Monarda clinopodia L. – ca. 1854; W, “spreading.”
M. didyma L. – Hitchcock-1879–1955; N.
M. media Willd. – Oakes-1869–1930; N.
M. punctata L. var. *punctata* – 1885; W, dry sandy soil.
M. punctata var. *villicaulis* (Pennell) Palmer & Steyererm. – 1896–1942; W, waste ground, airfield.
Nepeta cataria L. – Cutler-1853-p; N.
Ocimum basilicum L. – 1866–1936; W, no habitat.
Origanum majorana L. – 1878; W, ww.
O. vulgare L. – pre 1848-p; N.
Perilla frutescens (L.) Britton var. *crispa* (Benth.) Deane – 1882–1924; W, ww.
Physostegia virginiana (L.) Benth. – 1878-p; N.
Prunella laciniata (L.) L. – 1912; W, no habitat.
P. vulgaris L. subsp. *vulgaris* – 1849-p; N.
Pycnanthemum verticillatum (Michx.) Pers. var. *pilosum* (Nutt.) Cooperrider – 1882–1978; N, few.
Salvia nemorosa L. – 1913-p; N, few.
S. pratensis L. – 1913–1962; W, dump.
S. sclarea L. – 1886; W, rubbish heap.
S. splendens Sellow ex Roemer & J.A. Schultes – 1958; W, dump.
S. tiliifolia Vahl – 1908–1913; W, no habitat.
S. verticillata L. – 1908–1920; W, no habitat.
Satureja hortensis L. – 1877–1884; W, dump, waste ground.

- Scutellaria altissima* L. – 1913; W, “naturalized.”
Stachys annua (L.) L. – 1942; W, garden weed.
S. arvensis (L.) L. – 1818 (Oakes)-1903; N, few.
S. palustris L. subsp. *palustris* – 1815–1926; N.
Teucrium botrys L. – 1903-p; N, few.
T. canadense L. var. *occidentale* (A. Gray) McClintock & Epling – 1897–1954; N, few.
T. scorodonia L. – 1945; W, open woods.
Thymus pulegioides L. – 1819 (Oakes)-p; N.
T. vulgaris L. – ca. 1880; W, garden escape.

LARDIZABALACEAE

- Akebia ×pentaphylla* (Makino) Makino – 1983; P, disturbed woods.
A. quinata (Houtt.) Duchesne – 1924-p; N, few.

LINACEAE

- Linum catharticum* L. – 1993; P, gravel roadside.
L. usitatissimum L. – Dewey-1878-p; N.

LOASACEAE

- Mentzelia oligosperma* Nutt. ex Sims – 1948; W, ww.

LYTHRACEAE

- Cuphea procumbens* Ortega – 1895–1901; W, garden weed.
C. viscosissima Jacq. – Dewey-1902; W, fields, waste ground.
Lythrum hyssopifolia L. – Dewey-1874–1919; N.
L. salicaria L. – Dewey-1879-p; N.

MAGNOLIACEAE

- Magnolia acuminata* (L.) L. – 1954-p; N, few.
M. tripetala (L.) L. – 1952-p; N, few.

MALVACEAE

- Abutilon theophrasti* Medik. – Hitchcock-1841-p; N.
Alcea rosea L. – 1914-p; N, few.
Althaea officinalis L. – Dewey-1886; W, saltmarsh, rubbish heap.
Anoda cristata (L.) Schlecht. – 1915; W, ww.
Gossypium hirsutum L. – 1881–1910; W, cotton waste, rr yard.
Hibiscus trionum L. – 1868–1978; N, garden weeds.
Malva alcea L. – 1879–1918; N.
M. crispa (L.) L. – 1880–1924; N, few.
M. moschata L. – Cutler-1879-p; N.
M. neglecta Wallr. – 1839-p; N.

- M. ×parviflora* L. – 1880–1884; W, rubbish heap, waste ground.
M. rotundifolia L. – 1880–1973; W, streetside, wool mill, waste ground, barnyard.
M. sylvestris L. – Hitchcock-1881–1959; N.
Malvastrum coromandelianum (L.) Garcke – 1916; W, ww (Fletcher 1917).
Modiola caroliniana (L.) G. Don – 1938–1944; W, single pop on college campus.
Sida hermaphrodita (L.) Rusby – 1888–1911; W, no habitat.
S. spinosa L. – 1881–1958; W, dump, lawn, waste place.
Sphaeralcea fendleri A. Gray – 1915; W, ww.
Wissadula callimorpha (Hochr.) Hassler var. *friesii* Hassler – 1917; W, ww.

MENYANTHACEAE

- Nymphoides peltata* (S.G. Gmel.) Kuntze – 1927-p; P, no firm evidence of reproduction.

MOLLUGINACEAE

- Mollugo verticillata* L. – Cutler-p; N.

MORACEAE

- Broussonetia papyrifera* (L.) L'Her. ex Vent. – 1956; P, cellar hole.
Ficus carica L – 1913–1931; W, sidewalk, waste ground.
Maclura pomifera (Raf.) Schneider – 1907–1969; N, few.
Morus alba L. – 1879-p; N.

NELUMBONACEAE

- Nelumbo lutea* Willd. – 1886-p; N, few.

NYCTAGINACEAE

- Mirabilis albida* (Walter) Heimerl – ca. 1962; W, no habitat.
M. hirsuta (Pursh) MacMillan – 1912–1932; W, escape from cult, waste place.
M. nyctaginea (Michx.) MacMillan – 1878-p; N.

OLEACEAE

- Chionanthus virginicus* L. – 1916–1982; W, roadside, disturbed woodland.
Forsythia suspensa (Thunb.) Vahl – 1908–1970; N, few.
Fraxinus excelsior L. – 1871-p; N, few.
Ligustrum amurense Carrière – 1957; W, thicket.
L. obtusifolium Siebold & Zucc. – 1917-p; N.
L. ovalifolium Hassk. – 1970-p; N.
L. sinense Lour. – 1975–1977; W, rr, roadside.
L. vulgare L. – Hitchcock-1876-p; N.
Syringa amurensis (Rupr.) Rupr. (= *S. reticulata* var. *mandschurica* of Checklist) – 1983; N, few, single pop “well established” in rich woods, but note on label says since extirpated.

- S. ×persica* L. – 1989-p; N, few.
S. villosa Vahl – 1972; W, wooded bank.
S. vulgaris L. – 1887-p; N.

ONAGRACEAE

- Camissonia bistorta* (Nutt ex Torr. & A. Gray) Raven – 1878; W, ww.
C. campestris (Greene) Raven – 1880; W, ww.
Clarkia pulchella Pursh – 1900–1919; W, ww, wheat field, meadow.
C. rhomboidea Douglas ex Hooker – 1878; W, ww.
Epilobium hirsutum L. – ca. 1830-p; N.
Gaura biennis L. – 1886-p; N.
G. parviflora Douglas ex Lehm. – 1886; W, rubbish heap.
Oenothera glazioviana Micheli – 1881–1923; N.
O. laciniata Hill – 1878–1938; N.
O. pilosella Raf. – 1869–1889; W, no habitat.
O. villosa Thunb. – 1898–1919; W, field, farm field.

OXALIDACEAE

- Oxalis corniculata* L. – Oakes-1896-p; N.

PAEONIACEAE

- Paeonia officinalis* L. – 1958; W, dump.

PAPAVERACEAE

- Argemone albiflora* Hornem. – 1983; W, fallow field.
A. mexicana L. – 1873–1917; N, few.
Chelidonium majus L. – Cutler-1858-p; N.
Eschscholzia californica Cham. ex Nees – 1910-p; W, roadsides, etc.; recent records likely from seed mixes.
Glaucium flavum Crantz – 1904-p; N.
Macleaya cordata (Willd.) R. Br. – 1906-p; N, few.
Papaver dubium L. – 1926; W, pasture.
P. rhoeas L. – Dewey-1895–1980; N.
P. somniferum L. – 1845–1977; N, few.

PEDALIACEAE

- Proboscidea louisianica* (P. Mill.) Thell. subsp. *louisianica* – 1877–1932; W, ww.
Sesamum orientale L. – 1959; W, dump.

PLANTAGINACEAE

- Plantago aristata* Michx. – 1878-p; N.
P. coronopus L. – 1886; W, dump.
P. lanceolata L. – Dewey-1842-p; N.

- P. major* L. var. *major* – Dewey-1873-p; N.
P. media L. – 1904-p; N.
P. patagonica Jacq. var. *patagonica* – 1918-p N, few.
P. psyllium L. – 1932-p; N.
P. virginica L. – 1893–1950; N, few.

POLEMONIACEAE

- Collomia linearis* Nutt. – 1949; W, henyard.
Gilia achilleifolia Benth. subsp. *multicaulis* (Benth.) V. & A. Grant – 1913; W, dump.
G. interior (Mason & A. Grant) A. & V. Grant – 1879; W, ww.
G. tricolor Benth. – 1900; W, ww.
Ipomopsis rubra (L.) Wherry – 1887; W.
Navarretia leucocephala Benth. – 1879; W, ww.
Phlox paniculata L. – 1875-p; N.
P. subulata L. – 1900-p; N.
Polemonium micranthum Benth. – 1928; W, garden.
P. reptans L. – 1899-p; N, few.

POLYGONACEAE

- Chorizanthe pungens* Benth. – 1878; W, ww.
Emex spinosa (L.) Campd. – 1882; W, waste lot.
Fagopyrum esculentum Moench – Dewey-1858-p; N.
F. tataricum (L.) Gaertn. – 1853–1912; N, few.
Polygonum arenastrum Jordan ex Boreau – 1899-p; N.
P. argyrocoleon Steudel ex Kunze – 1973; W, rr yard.
P. aubertii Henry – 1967-p; N, few.
P. aviculare L. – Cutler-p; N.
P. bellardii All. – 1881-p; N.
P. bistorta L. – 1883–1955; W, mill yard, dump.
P. caespitosum Blume var. *longisetum* (Bruijn) A.N. Steward – 1931-p; N.
P. convolvulus L. – Hitchcock-1853-p; N.
P. cuspidatum Siebold & Zucc. – 1888-p; N.
P. nepalense Meisner – 1989-p; N, few.
P. orientale L. – Hitchcock-1853-p; N.
P. persicaria L. – Cutler-1849-p; N.
P. sachalinense F. Schmidt ex Maxim. – 1934-p; N.
Rheum rhaponticum L. – 1896–1916; W, waste ground, fallow field.
Rumex acetosa L. – 1890–1956; N.
R. acetosella L. subsp. *angiocarpus* (Murb.) Murb. – Cutler-1850-p; N.
R. altissimus Wood – 1880–1968; N, few.
R. aquaticus L. var. *fenestratus* (Greene) Dorn – 1903; W, no habitat.
R. crispus L. – Cutler-1854-p; N.
R. hastatulus Baldw. – 1902; W, ocean beach.
R. longifolius DC. – 1872-p; N.
R. maritimus L. var. *maritimus* – 1879–1881; W, fill land.
R. obtusifolius L. – Hitchcock-1854-p; N.

- R. patientia* L. – pre 1850-p; N.
R. pulcher L. – 1881; W, fill land.
R. salicifolius Weinm. – 1881-p; N.

PORTULACACEAE

- Calandrinia ciliata* (Ruiz & Pavon) DC. – 1935; W, weedy cult field.
Claytonia sibirica L. – 1916; W, yard.
Montia linearis (Douglas ex Hooker) Greene – 1984; W, weedy cult field.
Portulaca grandiflora Hooker – 1883–1958; N, few.
P. oleracea L. – Cutler-1873-p; N.

PRIMULACEAE

- Anagallis arvensis* L. – Cutler-1853-p; N.
Androsace occidentalis Pursh – pre 1941; W, no habitat.
Lysimachia nummularia L. – 1873-p; N.
L. punctata L. – 1869–1962; N.
L. vulgaris L. – 1878-p; N.
Primula anisodora Balf. f. & G. Forrest – 1984; N, few, single pop established by old spring.
P. veris L. – 1886–1887; W, no habitat.

RANUNCULACEAE

- Aquilegia vulgaris* L. – 1879-p; N.
Clematis terniflora DC. – 1894-p; N.
Consolida ajacis (L.) Schur – 1885–1945; W, waste, rubbish, dump.
Myosurus minimus L. – 1988; W, weedy cult field.
Ranunculus acris L. – Hitchcock-1853-p; N.
R. bulbosus L. – Hitchcock-pre 1848-p; N.
R. ficaria L. – 1914-p; N.
R. repens L. – Hitchcock-1854-p; N.
Xanthorhiza simplicissima Marshall – 1874–1972; N, few.

RESEDACEAE

- Reseda alba* L. – 1891–1938; W, pasture, waste ground, roadside, dump.
R. lutea L. – 1882–1931; N.
R. luteola L. – 1855-ca. 1905; W, no habitat given.
R. odorata L. – 1882–1920; W, garden escape.

RHAMNACEAE

- Ceanothus herbaceus* Raf. – 1888–1911; W or P, single pop by cemetery.
Rhamnus cathartica L. – Hitchcock-1863-p; N.
R. frangula L. – 1915-p; N.

ROSACEAE

- Agrimonia eupatoria* L. – pre 1920; W, ww.
A. rostellata Wallr. – 1910; W, no habitat.
Alchemilla monticola Opiz – 1906; W, ww.
Argentina anserina (L.) Rydb. subsp. *anserina* – 1909–1924; W, streetside, grassy depression near ocean beach.
Aruncus dioicus (Walter) Fernald – 1903–1953; W, escapes from cult.
Choenomeles speciosa (Sweet) Nakai – 1916; W, roadside, thicket.
Cotoneaster divaricatus Rehd. & E.H. Wilson – 2001-p; N, few, roadside thickets (Zika 2002).
Crataegus crus-galli L. – 1874-p; N.
C. monogyna Jacq. – 1879-p; N.
C. phaenopyrum (L. f.) Medik. – 1887–1899; W, roadsides.
Cydonia oblonga P. Mill. – 1896–1921; W, by pond, road at rr.
Exochorda racemosa (Lindl.) Rehd. – 1909–1921; W, no habitat.
Filipendula rubra (Hill) B.L. Robinson – 1875–1974; N, few.
F. ulmaria (L.) Maxim. – 1869-p; N, few.
Fragaria ~~*Xananassa*~~ *Duchesne* – 1865-p; N, few.
F. vesca L. subsp. *vesca* – 1877–1972; N.
Geum urbanum L. – 1884–1918; W, waste places.
Malus baccata (L.) Borkh. – 1916-p; N.
M. floribunda Siebold *ex* Van Houtte – 1991; W, pitch pine-scrub oak barren.
M. prunifolia (Willd.) Borkh. – 1920-p; N, few.
M. pumila P. Mill. – 1884-p; N.
M. sieboldii (Regel) Rehd. – 1972-p; N.
Physocarpus opulifolius (L.) Maxim. – 1869-p; N.
Porteranthus trifolius (L.) Britton – 1932–1978; W, escape from cult.
Potentilla alba L. – 1924; W, waste ground.
P. argentea L. – Hitchcock-1849-p; N.
P. inclinata Vill. – 1916-p; N.
P. intermedia L. – 1877-p; N, few.
P. recta L. – Cutler-1877-p; N.
P. reptans L. – 1900–1958; W, lawn weed.
P. rivalis Nutt. var. *millegrana* (Engelm. *ex* Lehm.) S. Wats. – 1975; W, rr yard.
Prunus alleghaniensis Porter – 1907; N, few, single pop on roadside by lake.
P. avium (L.) L. – 1895-p; N.
P. cerasifera Ehrh. – 1906–1959; W, vacant lot, escape from cult.
P. cerasus L. – 1890-p; N.
P. domestica L. subsp. *domestica* – 1898–1986; W, roadside, near reservoir.
P. domestica subsp. *institia* (L.) Schneider – 1882–1915; N, few.
P. hortulana Bailey – 1975; W or P, border of woods.
P. mahaleb L. – 1887–1974; N, few.
P. persica (L.) Batsch – 1895-p; N.
P. serrulata Lindl. – 1936–1980; P, rhododendron garden, border of woods.
Pyrus communis L. – 1885-p; N.
Rhodotypos scandens (Thunb.) Makino – 1932-p; N, few.
Rosa canina L. – 1884-p; N.
R. cinnamomea L. – 1879–1971; N.

- R. eglanteria* L. – Hitchcock-1866-p; N.
R. gallica L. – 1893-p; N.
R. micrantha Borrer ex J.E. Smith – Dewey-1866–1919; N.
R. multiflora Thunb. ex Murray – 1906-p; N.
R. rugosa Thunb. – 1905-p; N.
R. setigera Michx. – 1919-p; N, few.
R. spinosissima L. – 1912–1977; N, few.
R. wichuraiana Crépin – 1973-p; N, few.
Rubus bifrons Vest ex Tratt. – 1962-p; N.
R. discolor Weihe & Nees – 1930–1934; P, at two sites on Nant.
R. idaeus L. subsp. *idaeus* – 1918-p; N, few.
R. laciniatus Willd. – 1923-p; N.
R. phoenicolasius Maxim. – 1909-p; N.
R. triphyllus Thunb. – 1907; W, vacant lot.
Sanguisorba minor Scop. subsp. *muricata* (Spach) Nordborg – 1901-p; N, few.
Sorbaria sorbifolia (L.) A. Braun – 1879-p; N.
Sorbus aucuparia L. – 1877-p; N.
Spiraea japonica L. f. – 1908-p; N, few.
S. prunifolia Siebold & Zucc. – 1905-p; N, few.

RUBIACEAE

- Asperula arvensis* L. – 1954; W, bird feeder.
Diodia teres Walter – 1974-p; N.
Galium mollugo L. – 1862-p; N.
G. odoratum (L.) Scop. – 1908; W, near a spring.
G. sylvaticum L. – 1889–1912; W, escapes from cult.
G. verum subsp. *verum* – 1854-p; N.
G. verum subsp. *wirtgenii* (F.W. Schultz) Oborny – 1911-p; W, field, pasture.
Houstonia purpurea L. var. *calycosa* A. Gray – 1897–1923; W, waste ground.
Rubia tinctoria L. – 1958; W, nursery weed.
Sherardia arvensis L. – 1878–1977; W, lawns, cemetery.

RUTACEAE

- Phellodendron amurense* Rupr. – 1958; W, roadside; possibly P, but data lacking.
P. japonicum Maxim. – 1969-p; N, few.
P. sachalinense (Schmidt) Sarg. – 1966; N, few, single pop on wooded slope of college campus.
Ptelea trifoliata L. – 1880-p; N.

SALICACEAE

- Populus alba* L. – 1854-p; N.
P. ×canescens (Aiton) J.E. Sm. – 1891-p; N, few.
P. ×jackii Sarg. – Hitchcock-p; N.
P. nigra L. – Hitchcock-1883–1958; N.
P. tremula L. – 1973; W, disturbed area.
Salix alba L. – 1858–1958; N.

- S. babylonica* L. – 1875-p; N.
S. cinerea L. – 1907–1916; N, few.
S. elaeagnos Scop. – 1854; W, shore at Woods Hole.
S. fragilis L. – Oakes-1865-p; N.
S. pentandra L. – 1902-p; N.
S. purpurea L. – 1854-p; N.
S. ×smithiana Willd. – 1874–1913; W, thicket, field, meadow, dump.
S. viminalis L. – 1854–1966; N, few.

SAPINDACEAE

- Cardiospermum halicacabum* L. – 1878; W, no habitat.
Koelreuteria paniculata Laxm. – 1975; W, spontaneous in yard.

SCROPHULARIACEAE

- Antirrhinum majus* L. – 1913–1958; W, garden escapes.
Castilleja exserta (Heller) Chuang & Heckard – 1879; W, ww.
Chaenorrhinum minus (L.) Lange – 1914-p; N.
Chelone lyonii Pursh – 1906–1937; W, garden escape, pondshore, spontaneous in town.
C. obliqua L. – 1981; N, few, one pop established in woods.
Cymbalaria muralis Gaertn., B. Meyer & Scherb. – 1884-p; N, few.
Digitalis lanata Ehrh. – 1918; W, old dump in woods.
D. purpurea L. – 1913–1983; N, few.
Euphrasia micrantha Reichenb. – 1944-p; N, few.
E. nemorosa (Pers.) Wallr. – 1972-p; N.
E. stricta Wolff ex Lehm. – 1989-p; N, few.
Kickxia elatine (L.) Dumort. – 1825 (Oakes)-1877; W, weed in grass.
Linaria angustissima (Loisel.) Borbas – 1946; W, factory yard.
L. dalmatica (L.) P. Mill. – 1945–1980; W, roadsides.
L. genistifolia (L.) P. Mill. – 1905–1942; W, rr, roadside.
L. maroccana Hooker f. – 1985–1986; W, no habitat.
L. repens (L.) P. Mill. – 1900–1924; W, no habitat.
L. vulgaris P. Mill. – Cutler-1857-p; N.
Mazus miqueli Makino – 1941 – W, garden weed.
M. pumilus (Burm. f.) Steenis – 1979-p; N, few, single pop on college campus.
Mimulus brevipes Benth. – 1879; W, ww.
Odontites vernus (Bellardi) Dumort. subsp. *serotinus* (Dumort.) Corb. – 1915–1925; W, single pop on roadside and in field.
Paulownia tomentosa (Thunb.) Siebold & Zucc. ex Steudel – 1960; W, spontaneous in yard.
Penstemon barbatus (Cav.) Roth – 1909; W, no habitat.
P. calycosus Small – 1892-p; N.
P. digitalis Nutt. ex Sims – 1878-p; N.
P. grandiflorus Nutt. – 1898; W, waste land.
P. pallidus Small – 1886-p; N.
P. tubiflorus Nutt. – 1907–1924; W, rr.

- Rhinanthus alectorolophus* (Scop.) Pollich – 1837–1980; N, few, single pop in meadow.
R. minor L. – 1886-p; N.
Scrophularia nodosa L. – 1892-p; N.
Verbascum blattaria L. – Cutler-1843-p; N.
V. densiflorum Bertol. – 1911; W, ww.
V. lychnitis L. – 1887–1920; W, roadsides.
V. nigrum L. – 1879–1953; W, waste ground.
V. phlomoides L. – 1879-p; N.
V. thapsus L. – Cutler-1873-p; N.
Veronica agrestis L. – Dewey-1899; W, cult ground.
V. arvensis L. – Hitchcock-1841-p; N.
V. austriaca L. subsp. *teucrium* (L.) D.A. Webb – 1887–1915; N, few.
V. beccabunga L. var. *beccabunga* – 1973; W, drainage ditch.
V. chamaedrys L. – 1874-p; N.
V. longifolia L. – 1885-p; N.
V. officinalis L. – Hitchcock-1850-p; N.
V. persica Poir. – 1858–1976; N.
V. serpyllifolia L. – Hitchcock-1858-p; N.

SIMAROUBACEAE

- Ailanthus altissima* (P. Mill.) Swingle – 1887-p; N.

SOLANACEAE

- Browallia americana* L. – 1924; W, greenhouse dump.
Datura inoxia P. Mill. – 1885-p; N, few.
D. stramonium L. – Cutler-1853-p; N.
Hyoscyamus niger L. – Cutler-1878–1961; N, few.
Lycium barbarum L. – 1881-p; N.
L. chinense P. Mill. – 1895-p; N, few.
Lycopersicon esculentum P. Mill. – 1872-p; N.
Nicandra physalodes (L.) Gaertn. – 1863–1964; N.
Nicotiana alata Link & Otto – 1916–1958; N, few.
N. longiflora Cav. – 1883–1965; W, waste ground.
N. quadrivalvis Pursh var. *bigelovii* (Torr.) DeWolf – 1879–1883; W, ww.
N. rustica L. – 1863–1929; W, fill land, dumps, waste place.
N. ×sander Hort. ex W. Wats. – 1928; W, greenhouse weed.
N. tabacum L. – 1965; W, fallow field.
Petunia ×hybrida Vilm. – 1887–1975; N.
Physalis alkekengi L. – 1932–1958; W, meadow, shady moist soil, escape from cult.
P. angulata L. – 1932; W, dump.
P. peruviana L. – 1926; W, garden weed.
P. philadelphica Lam. var. *immaculata* Waterfall – 1884–1929; W, waste ground.
P. pubescens L. var. *integrifolia* (Dunal) Waterfall – 1881; W, mill ground.
P. virginiana P. Mill. – 1918; W, wool mill.
Solanum carolinense L. – 1879-p; N.
S. citrullifolium A. Braun – 1885–1949; W, dumps.

- S. dulcamara* L. – Cutler-1849-p; N.
S. melongena L. – 1956; W, dump.
S. nigrum L. – Hitchcock-1885-p; N.
S. physalifolium Rusby – 1901–1962; W, yard, waste areas, dump.
S. pseudocapsicum L. – 1906–1919; W, dumps.
S. rostratum Dunal – 1882-p; N.
S. sarrachoides Sendtner – 1901–1960; N.
S. sisymbriifolium Lam. – 1913–1955; W, dumps.
S. triflorum Nutt. – 1926; W, beach near wharf.
S. tuberosum L. – 1902–1952; N, few.

TAMARICACEAE

- Tamarix parviflora* DC. – 1913–1916; W, fill land.

THYMELAEACEAE

- Daphne mezereum* L. – 1884-p; N.

TILIACEAE

- Tilia americana* L. var. *heterophylla* (Vent.) Loudon – 1918; W, field.
T. cordata P. Mill. – 1934-p; N, few.
T. petiolaris DC. – 1942; W, roadside.
T. ×vulgaris Hayne – 1919–1979; N.

TRAPACEAE

- Trapa natans* L. – 1879-p; N.

TROPAEOLACEAE

- Tropaeolum majus* L. – 1916–1958; W, dumps.

ULMACEAE

- Ulmus glabra* Hudson – 1883-p; N.
U. minor P. Mill. – 1879-p; N.
U. parvifolia Jacq. – 1961; W, roadside.
U. pumila L. – 1966-p; N.

URTICACEAE

- Parietaria judaica* L. – 1880; W, fill land.
Urtica dioica L. subsp. *dioica* – 1853-p; N.
U. urens L. – Hitchcock-1877–1918; N, few.

VALERIANACEAE

- Valeriana officinalis* L. – 1891-p; N.
Valerianella umbilicata (Sullivant) Wood – 1892–1934; W, roadsides.

VERBENACEAE

- Verbena bracteata* Lag. & Rodr. – 1878-p; N.
V. hispida Ruiz & Pavon – 1908–1913; W, dumps.
V. hybrida Voss ex Rumpl. – 1916; W, dump.
V. officinalis L. – Oakes-1880; W, fill land.
V. stricta Vent. – 1902-p; N.

VIOLACEAE

- Viola arvensis* Murr. – 1879-p; N.
V. chinensis G. Don – 1906–1913; W, garden weed.
V. odorata L. – 1899-p; N.
V. striata Aiton – 1863–1929; W, old estate, lawn.
V. tricolor L. – Hitchcock-1874-p; N.

VITACEAE

- Ampelopsis brevipedunculata* (Maxim.) Trautv. – 1957-p; N.
Parthenocissus tricuspidata (Siebold & Zucc.) Planch. – 1928-p; N, few.
Vitis vinifera L. – 1956–1958; W, dumps.
V. vulpina L. – 1919; W, roadside.

MONOCOTYLEDONS

AGAVACEAE

- Yucca filamentosa* L. – 1908-p; N.

ARECACEAE

- Phoenix dactylifera* L. – 1915–1926; W, single site: seedlings appeared in 6 of 12 years at unused dump.

COMMELINACEAE

- Commelina communis* L. – 1894-p; N.
Tradescantia virginiana L. – 1918-p; N.

CYPERACEAE

- Carex acutiformis* Ehrh. – 1865–1880; W, single pop on rr bank.
C. brunnea Thunb. – 1905; W, fill land.
C. caryophyllea Latourr. – 1824–1935; N.
C. contigua Hoppe – 1878-p; N.
C. hirta L. – 1850-p; N.
C. kobomugi Ohwi – 1973; W, sand pit.
C. ovalis Goodenough (= *leporina* L.) – 1879–1931; N, few.
C. panicea L. – Dewey-1891-p; N.
Cyperus amuricus Maxim. – 1979–1986; W, two former nurseries.

- C. echinatus* (L.) Wood – 1880-p; W, fill land, roadside, parking lot catch basin.
C. flavescens L. var. *poiformis* (Pursh) Fernald – 1985; W, meadow behind stables.
C. fuscus L. – 1878–1893; W, fill land, waste ground.
C. pseudovegetus Steudel – 1981; W, wet clearing near trucking warehouse.
C. schweinitzii Torr. – 1973; W, rr yard.

HYDROCHARITACEAE

- Egeria densa* Planch. – 1939–1977; N, few.

IRIDACEAE

- Crocus vernus* (L.) Hill – 1918; N, naturalized in grassland; sight records up to 1988 in lawns.
Iris cristata Aiton – 1983; N, few, single large pop established in deciduous woodland.
I. ×germanica L. – 1921–1958; W, disturbed land.
I. pseudacorus L. – ca. 1885-p; N.
I. sibirica L. – 1959-p; N, few.

JUNCACEAE

- Juncus brachycarpus* Engelm. – 1865–1901; W, dump, roadside.
J. bulbosus L. – pre 1860; W, no habitat.
J. inflexus L. – 1990-p; N, few.
J. subnodulosus Schrank – 1908–1928; N, few, one or two pops in brackish marshes.
J. torreyi Cov. – 1908-p; N, few.
Luzula campestris (L.) DC. – 1883–1920; N, few, mostly lawns.
L. congesta (Thuill.) Lej. – 1918; W, sandstone soil.
L. luzuloides (Lam.) Dandy & Wilmott – 1910–1934; W, dry bank, lawn.

LILIACEAE

- Allium cepa* L. var. *cepa* – 1925-p; W, waste ground, dumps.
A. cepa var. *viviparum* M.C. Metz – 1953–1955; W, dumps.
A. oleraceum L. – 1916–1983; W, roadside, riverside meadow.
A. sativum L. – 1961; W, waste area.
A. schoenoprasum L. – ca. 1880-p; N, few.
A. vineale L. – 1891-p; N.
Asparagus officinalis L. – Hitchcock-1863-p; N.
Chionodoxa luciliae Boiss. – 1980-p; W, rr bank, disturbed woods.
Colchicum autumnale L. – 1910; W, field by dump.
Convallaria majalis L. – 1889-p; N.
Galanthus nivalis L. – 1997; W, disturbed woods.
Hemerocallis fulva (L.) L. – Hitchcock-1869-p; N.
H. lilioasphodelus L. – 1958-p; N, few.
Hosta ventricosa (Salisb.) Stearn – 1912-p; N, few.
Lilium lancifolium Thunb. – 1879-p; N.
Muscari botryoides (L.) P. Mill. – 1879-p; N, mostly in lawns.

- M. neglectum* Guss. ex Ten. – 1881; W, “naturalized” at Bussey Farm (now Arnold Arboretum).
Narcissus poeticus L. – 1911-p; N, few.
N. pseudonarcissus L. – 1910-p; N, few.
Ornithogalum umbellatum L. – Dewey-1852-p; N.
Polygonatum latifolium (Jacq.) Desf. – 1920–1976; W, woods, thicket.
Scilla sibirica Haw. – 1905-p; N, few, plus recent sight records from lawns.
Tricyrtis hirta (Thunb.) Hooker – 1892–1936; W, open woods, dumping place.
Trillium grandiflorum (Michx.) Salisb. – 1898-p; N, few; no bona fide native pop.
Tulipa gesneriana L. – 1898; W, waste heap near greenhouse.
T. sylvestris L. – 1898–1980; W, 2 pops: lawn, roadside near former nursery.

NAJADACEAE

- Najas guadalupensis* (Spreng.) Magnus – 1907-p; N, few; possibly native.
N. minor All. – 1974-p; N, few.

ORCHIDACEAE

- Epipactis helleborine* (L.) Crantz – 1887-p; N.

POACEAE

- Agropyron desertorum* (Fischer ex Link) J.A. Schultes – 1953; W, ww.
Agrostis canina L. – pre 1848–1956; N.
A. capillaris L. – 1845-p; N.
A. gigantea Roth – 1846-p; N.
A. pallens Trin. – 1971; W, back of ocean beach.
Aira caryophyllea L. – 1884-p; N.
A. praecox L. – 1960-p; N.
Alopecurus carolinianus Walter – 1955–1966; W, single pop in herb garden.
A. geniculatus L. – Hitchcock-1908-p; N.
A. myosuroides Hudson – 1879–1903; W, no habitat.
A. pratensis L. – Hitchcock-1912-p; N.
Anthoxanthum aristatum Boiss. – 1897–1902; N, few.
A. odoratum L. – Hitchcock-1841-p; N.
Apera spica-venti (L.) P. Beauv. – 1878-p; N, few.
Aristida basiramea Engelm. ex Vasey – 1995; N, few, single large pop at capped landfill.
A. longespica Poir. var. *geniculata* (Raf.) Fernald – 1852-p; W, waste ground, rr.
A. oligantha Michx. – 1878; 1945-p; N.
Arrhenatherum elatius (L.) J. & C. Presl var. *bulbosum* (Willd.) Spenner – 1912; W, dump.
A. elatius var. *elatius* – Hitchcock-1844-p; N.
Arthraxon hispidus (Thunb.) Makino – 1973–1974; W, single pop in rr yard.
Avena barbata Brot. (= *strigosa* Schreb.) – 1886–1898; W, dump, brickyard.
A. fatua L. – 1887-p; N.
A. sativa L. – 1878-p; N.
Bouteloua gracilis (Willd. ex Humb., Bonpl. & Kunth) Lag. ex Steudel – 1878–1880; W, ww, fill land.

- B. repens* (Kunth) Scribn. & Merr. – 1882; W, fill land.
B. rigidiseta (Steudel) Hitchc. – 1882; W, fill land.
Brachiaria texana (Buckley) S.T. Blake – 1888; W, cotton mill waste.
Brachypodium pinnatum (L.) P. Beauv. – 1952–1957; W, single pop on dry bank.
Briza maxima L. – 1878; W, fill land.
B. media L. – pre 1848-p; N.
Bromus arvensis L. – 1879–1973; W, fill land, sand dunes.
B. briziformis Fischer & C.A. Meyer – 1879–1903; W, fill land, waste ground.
B. commutatus Schrader – pre 1848-p; N.
B. diandrus Roth – 1879–1954; W, fill land, waste places.
B. hordeaceus L. subsp. *hordeaceus* – 1864-p; N.
B. hordeaceus subsp. *thominii* (Hardouin) Hyl. – 1893–1955; W, edge of plowed land, dry soil with seaweed mulch, waste place.
B. inermis Leyss. – 1904-p; N.
B. japonicus Thunb. ex Murray – 1892-p; N.
B. lepidus Holmb. – 1915; W, recently seeded meadow.
B. marginatus Nees ex Steudel – ca. 1880–1954; W, waste ground.
B. rubens L. – 1883; W, ww.
B. secalinus L. – pre 1848-p; N.
B. sterilis L. – 1878-p; N.
B. tectorum L. – 1861-p; N.
Calamagrostis epigeios (L.) Roth – 1928-p; N.
Chloris gayana Kunth – 1945; W, no habitat.
C. verticillata Nutt. – 1988-p; N, few.
C. virgata Sw. – 1882–1954; W, fill land, gardens manured with ww.
Corynephorus canescens (L.) P. Beauv. – 1910–1913; W, single pop in sandy field MV.
Crypsis schoenoides (L.) Lam. – 1908–1909; W, fill land.
Cynodon dactylon (L.) Pers. – 1879–1958; N, few.
Cynosurus cristatus L. – 1878–1933; N.
Dactylis glomerata L. – Hitchcock-1853-p; N.
Dactyloctenium aegyptium (L.) Willd. – 1888–1921; W, cotton waste, ww.
Danthonia californica Boland – 1991; W, by trucking warehouse.
Deschampsia cespitosa (L.) P. Beauv. subsp. *parviflora* (Thuill.) Jarmolenko & Soó – 1919-p; N, few.
Desmazeria rigida (L.) Tutin – 1878; W, fill land.
Digitaria cognata (J.A. Schultes) Pilger – 1944-p; N.
D. ischaemum (Schreb.) Muhl. – 1852-p; N.
D. sanguinalis (L.) Scop. – Hitchcock-1863-p; N.
Diplachne acuminata Nash – 1979; W, rr yard.
D. fascicularis (Lam.) P. Beauv. – 1885; W, ww.
Echinochloa crus-galli (L.) P. Beauv. var. *crus-galli* – Hitchcock-1852-p; N.
E. crus-galli var. *frumentacea* (Link) W.F. Wight – 1903-p; N.
Eleusine indica (L.) Gaertn. – Hitchcock-1853-p; N.
Elymus virginicus L. var. *submuticus* Hooker – 1853–1882; W, ocean beach.
Elytrigia pungens (Pers.) Tutin – 1861-p; N.
Eragrostis cilianensis (All.) Lut. ex Janchen – 1880-p; N.
E. curvula (Schrader) Nees – 1964-p; N.
E. intermedia Hitchc. – 1878; W, cotton mill waste.

- E. minor* Host – 1883–1979; N.
E. pilosa (L.) P. Beauv. – 1879-p; N.
Eremochloa ophiuroides (Munro) Hack. – 1980–1982; W, disturbed area, backyard.
Festuca arundinacea Schreb. – 1916-p; N.
F. diffusa Dumort. var. *multiflora* (Hoffm.) Aschers & Graebn. – 1916–1918; W, oak woods, wet woods.
F. filiformis Pourret – 1893-p; N.
F. ovina L. – 1853-p; N.
F. pratensis Hudson – Hitchcock-1853-p; N.
F. rubra L. subsp. *fallax* Thuill. – 1896–1956; N.
F. trachyphylla (Hack.) Krajina – 1880-p; N.
Gastridium ventricosum (Gouan) Shinz & Thell. – 1882–1883; W, ww, fill land.
Glyceria fluitans (L.) R. Br. – 1909; W, ditch on Nant.
G. maxima (Hartman) Holmb. – 1990-p; N, few.
Helictotrichon pubescens (Hudson) Pilger – 2001; W, grassy meadow at roadside rest area (Zebryk 2002).
Holcus lanatus L. – Dewey-pre 1848-p; N.
Hordeum jubatum L. – Hitchcock-1854-p; N.
H. marinum Hudson subsp. *gussoneanum* (Parl.) Thell. – pre 1879; W, ww.
H. murinum L. subsp. *leporinum* (Link) Arcang. – 1878; W, wool waste by mill, dump.
H. vulgare L. var. *trifurcatum* (Schlecht.) Alef. – 1913; W, meadow, cult ground.
H. vulgare var. *vulgare* – 1877-p; N.
Leptochloa mucronata (Michx.) Kunth – 1883–1888; W, wool mill waste, cotton mill waste.
Lolium multiflorum Lam. – 1861-p; N.
L. perenne L. – Hitchcock-1846-p; N.
L. temulentum L. – 1830 (Oakes)-p; N.
Mibora minima (L.) Desv. – 1915; W, weed in nursery.
Microstegium vimineum (Trin.) A. Camus – 1990-p; N, few.
Miscanthus sacchariflorus (Maxim.) Franchet – 1958-p; N.
M. sinensis Andersson – 1916-p; N, few.
Molinia caerulea (L.) Moench – 1987-p; N, few.
Panicum amarum Elliott var. *amarulum* (Hitchc. & Chase) P.G. Palmer – 1968-p; N, few, two pops; edge of saltmarsh, sand pit.
P. miliaceum L. – 1879-p; N.
Phalaris canariensis L. – 1853-p; N.
Phleum arenarium L. – 1953; W, under bird feeder.
P. pratense L. subsp. *nodosum* (L.) Arcang. – 1877–1927; N, few.
P. pratense subsp. *pratense* – Hitchcock-1839-p; N.
P. subulatum (Savi) Aschers. & Graebn. – 1953–1954; W, near bird feeders.
Phragmites australis (Cav.) Trin. ex Steudel – [?]-p; N, need to determine earliest date of alien lineage (Saltonstall et al. 2004).
Phyllostachys dulcis McClure – 1964; W, barnyard and hayfield.
Poa annua L. – Hitchcock-pre 1848-p; N.
P. bulbosa L. – 1979-p; N.
P. chapmaniana Scribn. – 1932-p; N, few.
P. compressa L. – Hitchcock-1853-p; N.
P. nemoralis L. – 1891-p; N.

- P. pratensis* L. – Dewey-1854-p; N.
P. trivialis L. – Dewey-p; N.
Polypogon monspeliensis (L.) Desf. – 1880–1948; W, wool mills, waste ground.
Puccinellia distans (Jacq.) Parl. – 1880-p; N.
Secale cereale L. – Hitchcock-1857-p; N.
Setaria faberi Herm. ex Rosen – 1943-p; N.
S. glauca (L.) P. Beauv. – Hitchcock-1863-p; N.
S. italica (L.) P. Beauv. – Oakes-1855-p; N.
S. verticillata (L.) P. Beauv. – 1878–1945; N, few.
S. viridis (L.) P. Beauv. – Hitchcock-1877-p; N.
Sorghum bicolor (L.) Moench – 1878–1970; N.
S. halepense (L.) Pers. – 1880-p; N.
Sporobolus compositus (Poir.) Merr. – 1833-p; N.
Tragus berteronianus J.A. Schultes – 1882; W, fill land.
Tridens flavus (L.) Hitchc. – 1907-p; N.
Trisetum flavescens (L.) P. Beauv. – 1893–1989; W, college farm, border of orchard, dry bank near rr.
Triticum aestivum L. – Hitchcock-1853-p; N.
Vulpia bromoides (L.) S.F. Gray – 1949; W, ww.
V. myuros (L.) K.C. Gmel. var. *hirsuta* Hack. – 1983; W, interdune sandflat.
V. myuros var. *myuros* – 1878-p; N.
Zea mays L. – 1881-p; N, sporadic.

POTAMOGETONACEAE

- Potamogeton crispus* L. – 1880-p; N.