

Primitive Angiosperm Families of Massachusetts

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Introduction

The purpose of this work is to highlight historical observations of the various plants found within Massachusetts in an effort to classify their native range and population distributions. Its other intent is to develop an accurate etymology of historical Latin names to the present day. For most plants, we will be using *Florula Bostoniensis* written by Dr. Jacob Bigelow as a launching point for naming conventions and status within Massachusetts. While his book was originally intended to classify plants within 5-10 miles of Boston, Bigelow later expanded his range to many parts of New England. There are many interesting observations of rare plants and those species unique to the alpine zones of Northern New England, but here I only include those that are native to Massachusetts. There should be no plants listed here that are not native to the state. To build a complete picture, I chose the earliest floras from Middlesex County, Worcester County, and Berkshire County as historical markers for various regions of the state: east, central, and west respectively. I have broadly included the southeastern coastal region as part of the east in several descriptions, but be advised that most plants that often appear in this plant community will be ones that prefer dry or sandy soils. The range of all species come from the field guides cited below or GoBotany, when no physical information could be found. This document is organized according to the *Vascular Plants of Massachusetts: A County Checklist* which is the authoritative list of the plants known to Massachusetts.

Bibliography

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Aristolochiaceae – Birthwort Family

Asarum

One species of wild ginger is present.

Asarum canadense (Canada Wild Ginger)

Bigelow uses *Asarum canadense* (Linnaeus), found in dry woods in the western and northern parts of the state. Gray uses the same name.

Boston District: Rich woods and roadsides, infrequent. Probably introduced at most of its stations.

Middlesex: Westford, locally established

Worcester: In rich woods; Worcester, Millbury

Berkshire: Rich woods; common in the valley, less common on the plateau

Conservation status S4; range throughout New England excluding parts of central Maine. iNaturalist data shows populations mostly in western Massachusetts. Suggestion: frequent in the west

Ceratophyllaceae – Coontail Family

Ceratophyllum

Two species of hornwort are present. Being an aquatic species, these plants were likely not studied too closely historically.

Ceratophyllum demersum (Common Hornwort)

Bigelow does not describe this species. Gray uses *Ceratophyllum demersum* (Linnaeus).

Boston District: Ponds and slow streams; occasional, but not reported south of Boston

Middlesex: Cambridge, Newton

Worcester: In ponds

Berkshire: Ponds and slow streams; common

Conservation status S5; range throughout New England minus parts of the Maine Coast and interior of New Hampshire and Vermont. iNaturalist data shows few observations with populations scattered across Massachusetts. Suggestion: widely distributed; frequent

Ceratophyllum echinatum (Spineless Hornwort)

Bigelow uses *Ceratophyllum echinatum* (Gray), stating that it has been considered a variety of *Ceratophyllum demersum* (Pursh) of Europe. Gray later uses *Ceratophyllum demersum* var *echinatum*.

Middlesex: Cambridge

Worcester: In ponds

Conservation status S4; range scattered throughout New England, but heavier population in the south. iNaturalist data shows even fewer observations than the last, scattered across Massachusetts. Suggestion: scattered; frequent

Lauraceae – Laurel Family

Lindera

One species of spicebush is present.

Lindera benzoin (Northern Spicebush)

Bigelow uses *Laurus benzoin* (Linnaeus), found growing in low situations in Brighton and elsewhere, but not very common in the environs of Boston. He also uses the unconfirmed synonym *Laurus pseudo-benzoin* (Michaux). Gray uses *Benzoin odoriferum* (Nees von Esenbeck) and references *Laurus benzoin* as a synonym. Gray later uses *Lindera benzoin* which he attributes to Meisner and Blume.

Boston District: Swampy woods and wet places, frequent throughout

Middlesex: Common

Worcester: In moist grounds; common

Berkshire: Swampy woods; occasional in the valley

Conservation status S5; range from southern regions of northern New England southwards. iNaturalist data shows populations throughout Massachusetts, greatly declining in the west. Suggestion: frequent in central and east, occasional elsewhere

Sassafras

One species of sassafras is present.

Sassafras albidum (Sassafras)

Bigelow uses *Laurus sassafras* (Linnaeus). Gray references this name and uses *Sassafras officinale* (Nees von Esenbeck).

Boston District: Dry woods and thickets, frequent throughout

Middlesex: Common

Worcester: Rich woods; common

Berkshire: Dry woods; occasional in the southern part of the valley and in Williamstown

Conservation status S5; range from Massachusetts southwards, minus a large portion between Berkshire County and the Connecticut River Valley. Dame and Brooks state that in Massachusetts it is common, especially in the eastern sections. Suggestion: frequent in central and east, occasional elsewhere

Magnoliaceae – Magnolia Family

Liriodendron

One species of tulip tree is present.

Liriodendron tulipifera (Tulip Tree)

Bigelow uses *Liriodendron tulipifera*, found native in the southern parts of Massachusetts and in Connecticut. Gray uses the same name and attributes it to Linnaeus.

Worcester: Rare

Berkshire: Along streams and in swampy woods; locally frequent in the southern part of the valley

Conservation status S4; range from the southern border of Massachusetts southwards. Dame and Brooks state that it is frequent in the Connecticut River Valley and westward; reported as far east as Douglas, southeastern corner of Worcester county. Suggestion: scattered; frequent

Magnolia

One species of magnolia is present. It is rare in the state.

Magnolia virginiana (Sweet bay Magnolia)

Bigelow uses *Magnolia glauca* (Linnaeus), growing plentifully in a sheltered swamp in Gloucester. Gray uses the same name. Britton and Brown reference this name as *Magnolia virginiana* (Linnaeus).

Boston District: West Gloucester in swampy woods

Conservation status S1; range from Massachusetts southwards with very few populations in New England. iNaturalist shows few populations scattered throughout Massachusetts. The site in Gloucester shows greater sampling. Suggestion: rare in the east

Nymphaeaceae – Water Lily Family

Brasenia

One species of water shield is present.

Brasenia schreberi (Water Shield)

Bigelow uses *Hydropeltis purpurea* (Michaux), found in Fresh Pond and other stagnant waters. Gray references this name and uses *Brasenia peltata* (Pursh). Bigelow also uses the unconfirmed synonyms *Ixodia padustris* (Solander) and *Brasenia hydropeltis* (Muhlenberg).

Boston District: Shallow ponds and slow streams; frequent

Middlesex: Common

Worcester: In ponds and slow streams; common

Berkshire: Ponds; frequent

Conservation status S5; range throughout New England. iNaturalist data shows populations distributed throughout Massachusetts. Suggestion: widely distributed; common

Nuphar

Two species of pond lily are present. *N. microphylla* is rare in the state.

Nuphar microphylla (Small Leaved Pond Lily)

Bigelow uses *Nuphar kalmiana* (Aiton), found in the Sudbury River. Gray uses *Nuphar lutea* var *kalmiana* (Smith), *Nuphar kalmianna* (Pursh), *Nuphar luteum* var *pumilum* (Smith), and *Nuphar kalmianum* (Ait) as synonyms. Britton and Brown reference these names as *Nymphaea microphylla* (Persoon).

Boston District: Still water of Sudbury and Concord Rivers at Sudbury, Concord, and Billerica; also at Round Pond, Woburn.

Middlesex: Not common

Worcester: Southbridge

Berkshire: Spectacle Pond, Sandisfield; Housatonic River, Stockbridge; Sheffield

Conservation status S1; range throughout New England. iNaturalist shows one observation in South Hadley, MA. Suggestion: scattered; rare

Nuphar variegata (Yellow Pond Lily)

Bigelow uses *Nuphar advena* (Aiton) and *Nymphaea advena* (Aiton). Gray uses *Nuphar advena* var. *variegatum* (Engelmann). This species was not well recognized in older botanical manuals.

Boston District: Still water; common

Middlesex: Common

Worcester: Common

Berkshire: Ponds and slow streams; common

Conservation status S5; range throughout New England. iNaturalist shows observations distributed throughout Massachusetts with heavier population east of the Berkshires. Suggestion: widely distributed; common

Nymphaea

One species of water lily is present.

Nymphaea odorata (White Water Lily)

Bigelow and Gray use *Nymphaea odorata* (Aiton).

Boston District: Ponds and still waters; common

Middlesex: Common

Worcester: Common

Berkshire: Ponds and slow streams; common

Conservation status S5; range throughout New England. iNaturalist shows populations distributed throughout Massachusetts. Suggestion: widely distributed; common

Saururaceae – Lizard’s Tail Family

Saururus

One species of lizard’s tail is present.

Saururus cernuus (Lizard’s Tail)

Bigelow does not describe this species. Gray uses *Saururus cernuus* (Linnaeus). It is not described in the floras. It was historically found in Hampshire County. The UMass Amherst Herbarium collection has no date, but states that it was found in Patrick’s Pond, Amherst.