

# **SUPPORTING POLLINATORS WITH NATIVE TREES AND SHRUBS**

NEW YORK STATE



**POLLINATOR  
PARTNERSHIP**

Protect their lives. Preserve ours.



# Supporting Pollinators with Native Trees and Shrubs

## New York State

Pollinator Partnership (P2) is a non-profit organization dedicated exclusively to the protection and promotion of pollinators and their ecosystems. P2's mission is to promote the health of pollinators, critical to food and ecosystems, through conservation, education, and research. For more information and resources regarding pollinators and their conservation, please [Pollinator.org](http://Pollinator.org).

### **Information for this guide was sourced from:**

Lepidoptera data – Tallamy, D. W., & Shropshire, K. J. (2009). Ranking Lepidopteran Use of Native versus Introduced Plants. *Conservation Biology*, 23(4), 941–947. <http://www.jstor.org/stable/29738829>

New York Native Plants – New York Flora Atlas (<https://nyflora.org/new-york-flora-atlas/>)

Tree and Shrub Species Information – U.S. Forest Service, Fire Effects Information System (<https://www.feis-crs.org/feis/>) and USDA Plants Database (<https://plants.sc.egov.usda.gov/>)

Forest Data – New York Department of Environmental Conservation

### **Please note the following:**

Information regarding the number of lepidopteran supported by the listed trees and shrubs *only* include native lepidopteran species.

The information presented in this guide is not meant to be an exhaustive list, but a general guide to assist in tree and shrub selection.

Content for this guide was assembled by Lacey Smith with editing and other support from Amber Barnes, Michael Fournier, and Kaleigh Obrock. Version 2.3 published October 2024. Contact Lacey Smith ([lacey@pollinator.org](mailto:lacey@pollinator.org)) for comments on this guide or suggested revisions for future editions.



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# Table of Contents

<b>Introduction.....</b>	<b>1</b>
Forestry 101: Understanding Site Requirements.....	2
<b>1. Native Trees and Shrubs for Lepidoptera Species (Moths and Butterflies).....</b>	<b>4</b>
Trees and Shrubs for Lepidoptera (Moths and Butterflies): Site Requirements ....	5
<b>2. Nectar and Pollen Producing Trees and Shrubs .....</b>	<b>10</b>
Bloom Chart for Trees and Shrubs .....	10
Nectar and Pollen Producing Trees and Shrubs: Site Requirements.....	13





Pollinators provide vital ecosystem services to crops and wild plants. More than 80% of the world's blooming plants require animal pollination for successful fruit and seed set. According to the Empire State Native Pollinator Survey, at least 38% of New York's native pollinators are at risk of extinction.

The term pollinator includes all types of animals from bees, butterflies, and moths, to wasps, birds, bats, beetles, flies, and more! Because of this, their exact habitat needs can vary widely. However, the principles of what pollinators need to survive and thrive are often quite similar. Effective habitat will support their needs for nutrition, shelter, and reproduction. Trees, shrubs, and woodlands, while not always considered prime pollinator habitat, are essential to the life cycles of many types of pollinators.

Lepidoptera (butterflies and moths), for example, have developed strong ties to woodland plants, with many trees and shrubs playing a key role in their reproductive cycle by serving as a necessary food source (larval host plant) for their young. The profuse blooms that some trees and shrubs generate can also be a vital source of pollen and nectar for pollinators, especially early in the year when only a limited number of plants on the landscape are in bloom. Additionally, the cracks, crevices, fallen leaves, pithy stems, and downed woody debris provided by trees and shrubs are key to the overwinter survival of many pollinators and other wildlife that require shelter from the elements and predators.

Because healthy pollinator populations are important not only for our natural ecosystems, but also for our economy and food security, they are a priority resource concern for many farmers, landowners, and conservationists. Woody wind breaks, hedgerows, and woodland habitat enhancement projects can all benefit pollinators when the right species (diversification) or practices (management) are chosen and applied. Through the Farm Bill, agencies such as the Natural Resources Conservation Service (NRCS) and conservation organizations such as Pollinator Partnership, can provide information, resources, and in some cases technical and financial support to landowners and managers seeking assistance in making improvements to their lands. With 61% of New York state being forested and 76% of that being privately owned, New York forest owners, land managers, and conservation planners, are uniquely positioned to help the pollinators of New York survive and thrive into the future.

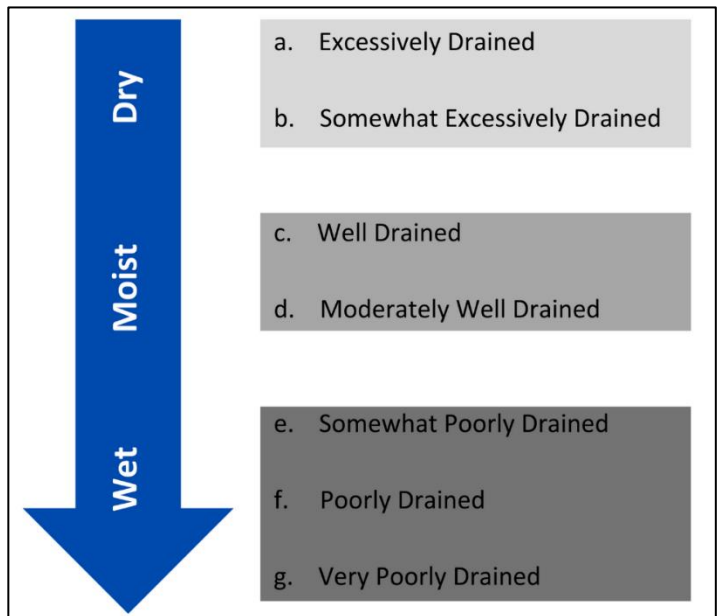
This document is separated into two sections. **Section one focuses on New York native trees and shrubs that will support many native caterpillars as host plants.** The species selected are based on the ranking provided by Douglas Tallamy and Kimberley Shropshire (2009) on the best native tree and shrub genera for supporting larval Lepidoptera species (caterpillars) in the Mid-Atlantic region of the United States. It's important to note that the genera and species listed are in the order of how many species of native larval Lepidoptera they support (in alignment with Table 1 on page 4). **Section two focuses on New York native trees and shrubs that will provide nectar and pollen that can support the adult phase of many moths, butterflies, and other pollinators, such as bees.** The species in this section are sorted by their bloom time, with early blooming species listed first and late blooming species listed last (in alignment with Table 3 on page 10).

This document has been developed by Pollinator Partnership in collaboration with New York NRCS to provide landowners, land managers, and conservation professionals with the information needed to guide species selection when working in landscaping or woodland improvements. Pollinator Partnership has compiled information from several sources into this one guide to create a one stop shop for pollinator-supporting tree and shrub information.



# Terminology: Understanding Site Requirements

1. **Height at maturity:** height of the tree or shrub at maturity (i.e., complete natural development or growth).
2. **Bloom Time:** period of time that the plant typically blossoms (i.e., flowers) and provides pollen and/or nectar. In this document, bloom period is focused on species that provide pollen and nectar. While many trees and shrubs are wind pollinated, the pollen produced is still beneficial to pollen collecting insects, such as bees.
3. **Shade tolerance:** term used to describe the ability of a tree or shrub to establish, grow, or persist under shade or low light availability. Please note that shade tolerance can vary within a species depending on genetics, age, and geographic ranges.
  - a. **Tolerant:** species that grow well when light availability is limited. These species will grow best when planted in a partially shaded area (i.e., beneath larger trees or beside structures that will provide shade).
  - b. **Intermediate:** species that are flexible with light availability. These species are between tolerant and intolerant.
  - c. **Intolerant:** species that will not grow well with limited light availability. These species will grow and reproduce successfully only in open canopies or where the species will have access to full sunlight.
4. **Soil Moisture:** water content in the top 1-2 meters of soil (i.e., the active layer). Most plant nurseries utilize Dry, Moist, and Wet as a guide for plant moisture requirements.
  - a. **Dry:** water is removed rapidly; excessively drained
  - b. **Moist:** average garden soil, water soaks in with no runoff; well drained – moderately well drained.
  - c. **Wet:** soggy or wet most of the year; somewhat poorly drained – very poorly drained.
5. **Drainage Class:** moisture conditions of the soil in its natural condition throughout the year. Drainage classes are commonly used by NRCS. Drainage class is used if utilizing Web Soil Survey (WSS) or other soil data software.
  - a. **Dry:**
    - i. Excessively Drained
    - ii. Somewhat excessively drained
  - b. **Moist:**
    - i. Well drained
    - ii. Moderately well drained
  - c. **Wet:**
    - i. Somewhat poorly drained
    - ii. Poorly drained
    - iii. Very poorly drained
6. **pH:** pH is the measurement of acidity or alkalinity of a material. Soil pH is shared as the range of tolerable acidity or alkalinity for the listed tree or shrub.
  - a. pH 7 = neutral
  - b. pH <7 = acidic
  - c. pH >7 = alkaline/basic



## Native Trees and Shrubs for Lepidoptera Species in the Mid-Atlantic Region of the United States

Rank	Host Plant (Common Name; Scientific)	Number of Native Larval Lepidoptera (Moth and Butterfly Caterpillars)
1	Oak; <i>Quercus</i>	518
2	Willow; <i>Salix</i>	440
3	Cherry/Plum; <i>Prunus</i>	429
4	Birch; <i>Betula</i>	400
5	Poplar; <i>Populus</i>	358
6	Maple; <i>Acer</i>	287
7	Blueberry; <i>Vaccinium</i>	286
8	Crabapple; <i>Malus</i>	284
9	Alder; <i>Alnus</i>	248
10	Hickory; <i>Carya</i>	233
11	Elm; <i>Ulmus</i>	206
12	Pine; <i>Pinus</i>	191
13	Blackberry/Raspberry; <i>Rubus</i>	151
14	Hawthorn; <i>Crataegus</i>	150
15	Spruce; <i>Picea</i>	146
16	Basswood; <i>Tilia</i>	142
17	Ash; <i>Fraxinus</i>	141
18	Chestnut; <i>Castanea</i>	125
19	Hazel; <i>Corylus</i>	124
20	Beech; <i>Fagus</i>	124
21	Walnut; <i>Juglans</i>	123
22	Rose; <i>Rosa</i>	122
23	Serviceberry; <i>Amelanchier</i>	119
24	Dogwood; <i>Cornus</i>	115
25	Viburnum; <i>Viburnum</i>	97
26	Ironwood; <i>Ostrya</i>	91

Table 1: Tree and shrub genera that support native lepidoptera species (moths and butterflies) as a larval host plant in the Mid-Atlantic Region of the United States. Lepidoptera data – Tallamy, D. W., & Shropshire, K. J. (2009). Ranking Lepidopteran Use of Native versus Introduced Plants. *Conservation Biology*, 23(4), 941–947. <http://www.jstor.org/stable/29738829>



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**Oak; *Quercus***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
White oak, <i>Q. alba</i>	50-80'	No	Intermediate	Dry-Moist	4.5-6.8
Swamp white oak, <i>Q. bicolor</i>	50-70'	No	Intermediate	Moist-Wet	4.3-6.5
Scarlet oak, <i>Q. coccinea</i>	60-80'	No	Intolerant	Dry-Moist	4.5-6.9
Scrub oak, <i>Q. ilicifolia</i>	3-30'	No	Intolerant	Dry	4.0-7.5
Bur oak, <i>Q. macrocarpa</i>	70-80'	No	Intermediate	Moist	4.5-7.5
Chinquapin oak, <i>Q. muehlenbergii</i>	40-50'	No	Intolerant	Dry-Moist	5.0-8.0
Pin oak, <i>Q. palustris</i>	60-70'	No	Intolerant	Moist-Wet	4.5-6.5
Chestnut, oak <i>Q. montana</i>	50-70'	No	Intermediate	Dry-Moist	4.5-6.5
Red oak, <i>Q. rubra</i>	60-75'	No	Intermediate	Dry-Moist	4.3-7.3
Black oak, <i>Q. velutina</i>	60-80'	No	Intermediate	Dry	4.5-6.5

**Willow; *Salix***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
Peach-leaved willow, <i>S. amygdaloides</i>	20-40'	May-Jun	Intolerant	Moist	6.0-8.0
Sage-leaved willow, <i>S. candida</i>	5-6'	Apr-May	Intermediate	Moist-Wet	5.7-7.6
Pussy willow, <i>S. discolor</i>	15-30'	Mar-Apr	Tolerant	Moist-Wet	4.0-7.0
Heart-leaved willow, <i>S. eriocephala</i>	40-50'	Apr-May	Tolerant	Moist-Wet	4.0-7.0
Shinning willow, <i>S. lucida</i>	3-20'	May-Jun	Intolerant	Moist-Wet	5.8-7.2
Silky willow, <i>S. sericea</i>	10-12'	Mar-Apr	Intermediate	Moist-Wet	5.2-7.0
Autumn willow, <i>S. serissima</i>	3-15'	May-Jun	Intermediate	Moist-Wet	5.0-8.0

**Cherry and Plum; *Prunus* \***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
American plum, <i>P. americana</i>	3.3-33'	Apr-May	Intolerant	Moist	5.0-7.0
Fire cherry, <i>P. pensylvanica</i>	15-50'	May-Jun	Intolerant	Dry-Moist	4.3-7.3
Wild black cherry, <i>P. serotina</i>	80-125'	May-Jun	Intolerant	Dry-Moist	4.0-7.5
Choke cherry, <i>P. virginiana</i>	10-25'	Apr-Jun	Intolerant	Dry-Moist	5.2-8.4

\* Please note that *Prunus* is great for wildlife, but it can be poisonous to livestock. Be sure to avoid near livestock and grazers.

**Birch; *Betula***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
Yellow birch, <i>B. alleghaniensis</i>	60-75'	No	Intermediate	Moist	4.0-8.0
Black birch, <i>B. lenta</i>	50-60'	No	Intolerant	Dry-Moist	3.6-6.8
Paper birch, <i>B. papyrifera</i>	60-70'	No	Intolerant	Dry-Moist	4.2-7.4
Gray birch, <i>B. populifolia</i>	20-30'	No	Intermediate	Dry-Moist	3.5-6.5

**Poplar; *Populus***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
Balsam poplar, <i>P. balsamifera</i>	30-100'	No	Intolerant	Dry-Moist	4.5-7.0
Eastern cottonwood, <i>P. deltoides</i>	36-190'	No	Intolerant	Dry-Wet	4.6-6.5
Big-toothed aspen, <i>P. grandidentata</i>	60-80'	No	Intolerant	Moist	4.8-7.2

**Poplar; *Populus***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
Quaking aspen, <i>P. tremuloides</i>	45-65'	No	Intolerant	Dry-Moist	4.3-9.0

**Maple; *Acer***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
Black maple, <i>A. nigrum</i>	70-110'	No	Tolerant	Moist	4.5-7.3
Striped maple, <i>A. pensylvanicum</i>	35-45'	No	Tolerant	Moist	4.4-6.5
Red maple, <i>A. rubrum</i>	30-90'	Mar-Apr	Intermediate	Dry-Wet	4.7-7.3
Silver maple, <i>A. saccharinum</i>	90-120'	Mar-Apr	Intermediate	Moist	4.0-7.3
Sugar maple, <i>A. saccharum</i>	90-120'	No	Tolerant	Dry-Moist	3.7-7.9

**Blueberry; *Vaccinium***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
Lowbush blueberry, <i>V. angustifolium</i>	2-24"	May-Jun	Intermediate	Dry-Moist	4.7-7.5
Highbush blueberry, <i>V. corymbosum</i>	6.5-10'	May-Jun	Tolerant	Dry-Wet	4.7-7.5
Velvet-leaved blueberry, <i>V. myrtilloides</i>	4-35"	May-Jun	Intermediate	Moist-Wet	3.0-5.9
Hillside blueberry, <i>V. pallidum</i>	9-21"	May-Jun	Tolerant	Dry-Moist	4.3-5.3

**Crabapple; *Malus***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
Wild Crabapple, <i>M. coronaria</i>	20-30'	May-Jun	Intermediate	Moist	5.5-7.5

**Alder; *Alnus***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
Speckled alder, <i>A. incana ssp. rugosa</i>	15-25'	No	Intermediate	Moist-Wet	4.8-7.7
Smooth alder, <i>A. serrulata</i>	15-30'	No	Intolerant	Moist-Wet	5.0-7.0

**Hickory; *Carya***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
Bitternut hickory, <i>C. cordiformis</i>	60-80'	No	Intolerant	Moist-Wet	4.8-7.4
Pignut hickory, <i>C. glabra</i>	65-98'	No	Intermediate	Dry-Moist	4.8-7.3
Shagbark hickory, <i>C. ovata</i>	60-80'	No	Intermediate	Dry-Moist	4.0-7.3
Mockernut hickory, <i>C. tomentosa</i>	65-100'	No	Intermediate	Dry-Moist	4.7-6.9

**Elm; *Ulmus***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
American elm, <i>U. americana</i>	40-60'	No	Intermediate	Moist-Wet	5.0-8.0
Slippery elm, <i>U. rubra</i>	60-70'	No	Tolerant	Dry-Moist	5.0-7.5

**Pine; *Pinus***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
Red pine, <i>P. resinosa</i>	75-200'	No	Intolerant	Dry-Moist	4.5-6.0

**Pine; *Pinus***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
Pitch pine, <i>P. rigida</i>	80-100'	No	Intolerant	Dry-Moist	3.5-5.1
White pine, <i>P. strobus</i>	100-150'	No	Intermediate	Dry-Wet	4.0-6.5

**Blackberry and Raspberry; *Rubus* \***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
Common blackberry, <i>R. allegheniensis</i>	5-8'	May-July	Tolerant	Dry-Moist	4.6-7.5
Black raspberry, <i>R. occidentalis</i>	3-6'	May-July	Intermediate	Dry-Moist	5.2-7.5
Purple flowering, raspberry <i>R. odoratus</i>	5-8'	Jun-Aug	Intermediate	Moist	4.5-6.5

\* 24 species of *Rubus* documented in NY 14 native species. Considerable interbreeding and can be very difficult to identify.

**Hawthorn; *Crataegus* \***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
Cockspur hawthorn, <i>C. crus-galli</i>	25-35'	May-Jun	Intolerant	Dry-Moist	4.5-7.2
Holmes's hawthorn, <i>C. holmesiana</i>	20-30'	May-Jun	Tolerant	Dry-Moist	5.0-8.0
Frosted hawthorn, <i>C. pruinosa</i>	10-20'	May-Jun	Intermediate	Moist	5.0-8.0
Dotted hawthorn, <i>C. punctata</i>	20-30'	May-Jun	Intermediate	Moist	5.0-8.0

\* Over 40 species documented in NY, considerable interbreeding and very difficult to distinguish most species.

**Spruce; *Picea***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
White spruce, <i>P. glauca</i>	40-70'	No	Intermediate	Moist	4.0-8.2
Black spruce, <i>P. mariana</i>	30-50'	No	Tolerant	Moist-Wet	4.7-6.5
Red spruce, <i>P. rubens</i>	60-75'	No	Tolerant	Moist	4.0-5.8

**Basswood; *Tilia***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
American basswood, <i>T. americana</i>	75-130'	Jun-July	Tolerant	Dry-Moist	4.5-7.5

**Ash; *Fraxinus* \***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
White ash, <i>F. americana</i>	60-70'	No	Intolerant	Dry-Moist	4.7-7.5
Black ash, <i>F. nigra</i>	40-60'	No	Intolerant	Moist-Wet	4.4-8.2
Green ash, <i>F. pennsylvanica</i>	50-100'	No	Tolerant	Moist-Wet	4.7-8.1

\* Ash trees are attacked by an invasive wood-boring beetle

**Chestnut; *Castanea***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
American chestnut, <i>C. dentata</i>	*90-115'	No	Tolerant	Dry-Moist	5.5-6.5

\* Historical records, average height now is approximately 20-30' due to chestnut blight.

**Hazel; *Corylus***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
American hazelnut, <i>C. americana</i>	3-10'	No	Intermediate	Moist	5.0-7.0

**Hazel; *Corylus***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
Beaked hazelnut, <i>C. cornuta</i>	13-20'	No	Tolerant	Dry-Moist	4.8-7.5

**Beech; *Fagus* \***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
American beech, <i>F. grandifolia</i>	65-80'	No	Tolerant	Moist	4.1-7.2

\*Information on Beech Leaf Disease: <https://www.dec.ny.gov/lands/120589.html#Threat>

**Walnut; *Juglans* \***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
Butternut, <i>J. cinerea</i>	40-60'	No	Intolerant	Dry-Moist	6.0-7.0
Black walnut, <i>J. nigra</i>	80-125'	No	Intolerant	Moist	4.6-8.2

\* *Juglans* produces an allelopathic compound, juglone, that will inhibit the growth of other plants. Additional information from Penn State Extension: <https://extension.psu.edu/landscaping-and-gardening-around-walnuts-and-other-juglone-producing-plants>

**Rose; *Rosa* \***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
Pasture rose, <i>R. carolina</i>	2-5'	Jun-Aug	Intermediate	Dry-Moist	4.0-7.0
Swamp rose, <i>R. palustris</i>	5-8'	Jun-July	Tolerant	Moist-Wet	4.0-7.0

\* Over 20 rose species documented in New York 11 native species.

**Serviceberry; *Amelanchier***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
Lovely shadbush, <i>A. amabilis</i>	15-25'	May-Jun	Intermediate	Dry-Moist	5.5-7.0
Downy serviceberry, <i>A. arborea</i>	20-30'	Apr-May	Intermediate	Dry-Moist	5.5-7.0
Mountain shadbush, <i>A. bartramiana</i>	2-8'	May-Jun	Intermediate	Moist	5.5-7.0
Canadian Serviceberry, <i>A. canadensis</i>	20-30'	Mar-Apr	Intermediate	Dry-Wet	5.5-7.5
Smooth serviceberry, <i>A. laevis</i>	25-35'	Apr-May	Tolerant	Moist-Wet	4.8-7.0
Roundleaf serviceberry, <i>A. sanguinea</i>	6-10'	Apr-May	Tolerant	Dry-Moist	4.5-7.2

**Dogwood; *Cornus* \***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
Alternate-leaf dogwood, <i>C. alternifolia</i>	25-30'	May-Jun	Tolerant	Moist	4.8-7.3
Silky cornel, <i>C. amomum</i>	6-12'	Jun-July	Intermediate	Moist-Wet	5.0-7.0
Flowering dogwood, <i>C. florida</i>	16-49'	Apr-May	Tolerant	Dry-Moist	4.8-7.7
Gray dogwood, <i>C. racemosa</i>	4-10'	Jun-July	Tolerant	Moist-Wet	4.8-7.4
Roundleaf dogwood, <i>C. rugosa</i>	6-10'	May-Jun	Tolerant	Dry-Moist	6.4-7.8
Red-osier dogwood, <i>C. sericea</i>	3-20'	May-Jun	Intermediate	Wet-Most	5.0-7.5

\* While most dogwoods are shade tolerant, many will require full-partial sunlight for blooms.

**Viburnums; *Viburnum***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
Maple-leaf viburnum, <i>V. acerifolium</i>	3-6'	May-Jun	Tolerant	Dry-Moist	4.8-7.5
Smooth arrowwood, <i>V. dentatum</i> var. <i>lucidum</i>	3-10'	May-Jun	Intermediate	Moist-Wet	4.5-7.3



**Viburnums; *Viburnum***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
Hobblebush, <i>V. lantanoides</i>	3-10'	May-Jun	Tolerant	Moist	4.9-7.0
Nannyberry, <i>V. lentago</i>	10-20'	May-Jun	Tolerant	Moist-Wet	5.0-7.0
Highbush cranberry, <i>V. opulus</i> var. <i>americanum</i>	8-15'	May-Jun	Intolerant	Moist-Wet	5.5-7.5
Blackhaw, <i>V. prunifolium</i>	10-15'	Apr-Jun	Tolerant	Dry-Moist	4.8-7.5
Downy arrowwood, <i>V. rafinesqueanum</i>	3-8'	May-Jun	Tolerant	Dry-Moist	4.5-7.1

**Ironwood; *Ostrya***

	Height at Maturity	Nectar	Shade Tolerance	Soil Moisture	pH
Ironwood or hop hornbeam, <i>O. virginiana</i>	35-45'	No	Tolerant	Dry-Moist	4.2-7.6

Table 2: New York native trees and shrubs that rank the highest for supporting native larval lepidoptera (caterpillars of moths and butterflies) as host plants.



Photo: Tree and Shrub Establishment (NRCS Practice 612).



# Bloom Chart for Trees and Shrubs

#	Common Name	Scientific Name	Bloom									
			Early			Mid			Late			
			Mar	April	May	June	July	Aug	Sep	Oct	Nov	
1	Red maple	<i>Acer rubrum</i>										
2	Silver maple	<i>Acer saccharinum</i>										
3	Canadian serviceberry	<i>Amelanchier canadensis</i>										
4	Eastern leatherwood	<i>Dirca palustris</i>										
5	Pussy willow	<i>Salix discolor</i>										
6	Silky willow	<i>Salix lucida</i>										
7	Dangleberry	<i>Gaylussacia frondosa</i>										
8	Fragrant sumac	<i>Rhus aromatica</i>										
9	Downy shadbush	<i>Amelanchier arborea</i>										
10	Smooth shadbush	<i>Amelanchier laevis</i>										
11	Roundleaf serviceberry	<i>Amelanchier sanguinea</i>										
12	Flowering dogwood	<i>Cornus florida</i>										
13	American plum	<i>Prunus americana</i>										
14	Sassafras	<i>Sassafras albidum</i>										
15	Heart-leaved willow	<i>Salix eriocephala</i>										
16	Canada buffalo berry	<i>Shepherdia canadensis</i>										
17	Bladdernut	<i>Staphylea trifolia</i>										
18	Prickly ash	<i>Zanthoxylum americanum</i>										
19	Leatherleaf	<i>Chamaedaphne calyculata</i>										
20	Mountain laurel	<i>Kalmia latifolia</i>										
21	Tulip tree, yellow poplar	<i>Liriodendron tulipifera</i>										
22	Blackgum, sourgum	<i>Nyssa sylvatica</i>										
23	Choke cherry	<i>Prunus virginiana</i> var. <i>virginiana</i>										
24	Prickly gooseberry	<i>Ribes cynosbati</i>										
25	Sage-leaved willow	<i>Salix candida</i>										
26	Blackhaw	<i>Viburnum prunifolium</i>										
27	Lovely shadbush	<i>Amelanchier amabilis</i>										
28	Mountain shadbush	<i>Amelanchier bartramiana</i>										
29	Red chokeberry	<i>Aronia arbutifolia</i>										
30	Black chokeberry	<i>Aronia melanocarpa</i>										
31	Alternate-leaved dogwood	<i>Cornus alternifolia</i>										
32	Round-leaved dogwood	<i>Cornus rugosa</i>										
33	Red-osier dogwood	<i>Cornus sericea</i>										
34	Cockspur hawthorn	<i>Crataegus crus-galli</i>										
35	Holmes's hawthorn	<i>Crataegus holmesiana</i>										
36	Frosted hawthorn	<i>Crataegus pruinosa</i>										
37	Dotted hawthorn	<i>Crataegus punctata</i>										
38	Swamp fetterbush	<i>Eubotrys racemosa</i>										
39	Mountain holly	<i>Ilex mucronata</i>										
40	Bog laurel	<i>Kalmia polifolia</i>										
41	Spicebush	<i>Lindera benzoin</i>										
42	American fly honeysuckle	<i>Lonicera canadensis</i>										

# Bloom Chart for Trees and Shrubs

#	Common Name	Scientific Name	Bloom								
			Early			Mid			Late		
			Mar	April	May	June	July	Aug	Sep	Oct	Nov
43	Smooth-leaved honeysuckle	<i>Lonicera dioica</i>									
44	Mountain fly honeysuckle	<i>Lonicera villosa</i>									
45	Cucumber tree	<i>Magnolia acuminata</i>									
46	Wild crab apple	<i>Malus coronaria</i>									
47	Ninebark	<i>Physocarpus opulifolius</i>									
48	Pin cherry, fire cherry	<i>Prunus pensylvanica</i>									
49	Black cherry	<i>Prunus serotina</i>									
50	Early azalea	<i>Rhododendron prinophyllum</i>									
51	Wild black currant	<i>Ribes americanum</i>									
52	Peach-leaved willow	<i>Salix amygdaloides</i>									
53	Shining willow	<i>Salix lucida</i>									
54	Autumn willow	<i>Salix serissima</i>									
55	Red elderberry	<i>Sambucus racemosa</i>									
56	Lowbush blueberry	<i>Vaccinium angustifolium</i>									
57	Highbush blueberry	<i>Vaccinium corymbosum</i>									
58	Velvet-leaved blueberry	<i>Vaccinium myrtilloides</i>									
59	Hillside blueberry	<i>Vaccinium pallidum</i>									
60	Maple-leaf viburnum	<i>Viburnum acerifolium</i>									
61	Smooth arrowwood	<i>Viburnum var. lucidum</i>									
62	Hobblebush	<i>Viburnum lantanoides</i>									
63	Nannyberry	<i>Viburnum lentago</i>									
64	Highbush cranberry	<i>Viburnum opulus var. americanum</i>									
65	Downy arrowwood	<i>Viburnum rafinesqueanum</i>									
66	Smooth winterberry	<i>Ilex laevigata</i>									
67	Swamp fly honeysuckle	<i>Lonicera oblongifolia</i>									
68	Silky dogwood	<i>Cornus amomum ssp. amomum</i>									
69	Gray dogwood	<i>Cornus racemosa</i>									
70	Bush honeysuckle	<i>Diervilla lonicera</i>									
71	American wahoo	<i>Euonymus atropurpureus</i>									
72	Black huckleberry	<i>Gaylussacia baccata</i>									
73	Common winterberry	<i>Ilex verticillata</i>									
74	Sheep laurel, sheepkill	<i>Kalmia angustifolia</i>									
75	Swamp azalea	<i>Rhododendron viscosum</i>									
76	Staghorn sumac	<i>Rhus typhina</i>									
77	Swamp rose	<i>Rosa palustris</i>									
78	Common elderberry	<i>Sambucus nigra ssp. canadensis</i>									
79	American mountain ash	<i>Sorbus americana</i>									
80	Northern mountain ash	<i>Sorbus decora</i>									
81	American basswood	<i>Tilia americana</i>									
82	New Jersey tea	<i>Ceanothus americanus</i>									
83	Buttonbush	<i>Cephalanthus occidentalis</i>									
84	Coastal sweet pepperbush	<i>Clethra alnifolia</i>									

## Bloom Chart for Trees and Shrubs

#	Common Name	Scientific Name	Bloom								
			Early			Mid			Late		
			Mar	April	May	June	July	Aug	Sep	Oct	Nov
85	Labrador tea	<i>Rhododendron groenlandicum</i>				■	■	■			
86	Great rosebay, great laurel	<i>Rhododendron maximum</i>				■	■	■			
87	Pasture rose	<i>Rosa carolina</i>				■	■	■			
88	Common blackberry	<i>Rubus allegheniensis</i>				■	■	■			
89	Black raspberry	<i>Rubus occidentalis</i>				■	■	■			
90	Purple-flowering raspberry	<i>Rubus odoratus</i>				■	■	■			
91	Water willow	<i>Decodon verticillatus</i>					■	■			
92	Common winged sumac	<i>Rhus copallinum</i>					■	■			
93	Smooth sumac	<i>Rhus glabra</i>					■	■			
94	Broad-leaved meadowsweet	<i>Spiraea alba</i> var. <i>latifolia</i>					■	■			
95	Shrubby cinquefoil	<i>Dasiphora fruticosa</i>					■	■	■		
96	Swamp rose mallow	<i>Hibiscus moscheutos</i>					■	■	■		
97	Narrow-leaved meadowsweet	<i>Spiraea alba</i> var. <i>alba</i>					■	■	■		
98	Steeplebush	<i>Spiraea tomentosa</i>						■	■		
99	Witch hazel	<i>Hamamelis virginiana</i>								■	■

Table 3: Bloom chart for native trees and shrubs in New York. Species that bloom March through April are considered early, June through August are considered mid, and species that bloom September through November are considered late season bloomers.

Nectar and Pollen Producing Trees and Shrubs: Site Requirements

#	Common Name, Scientific Name	Height at Maturity	Bloom Time	Shade Tolerance	Soil Moisture	pH
1	Red maple, <i>Acer rubrum</i>	30-90'	Mar-Apr	Intermediate	Dry-Wet	4.7-7.3
2	Silver maple, <i>Acer saccharinum</i>	90-120'	Mar-Apr	Intermediate	Moist	4.0-7.3
3	Canadian Serviceberry, <i>Amelanchier canadensis</i>	20-30'	Mar-Apr	Intermediate	Dry-Wet	5.5-7.5
4	Eastern leatherwood, <i>Dirca palustris</i>	3-6'	Mar-Apr	Tolerant	Dry-Moist	5.0-7.0
5	Pussy willow, <i>Salix discolor</i>	10-30'	Mar-Apr	Intolerant	Moist-Wet	4.0-7.0
6	Silky willow, <i>Salix sericea</i>	10-12'	Mar-Apr	Intermediate	Moist-Wet	5.2-7.0
7	Dangleberry, <i>Gaylussacia frondosa</i>	5-6'	Mar-May	Intermediate	Dry-Moist	3.8-5.5
8	Fragrant sumac, <i>Rhus aromatica</i>	5-8'	Mar-May	Intermediate	Dry-Moist	5.0-7.5
9	Downy shadbush, <i>Amelanchier arborea</i>	20-30'	Apr-May	Intermediate	Dry-Moist	5.5-7.0
10	Smooth shadbush, <i>Amelanchier laevis</i>	25-35'	Apr-May	Intermediate	Dry-Moist	4.8-7.0
11	Roundleaf serviceberry, <i>Amelanchier sanguinea</i>	6-10'	Apr-May	Tolerant	Dry-Moist	4.5-7.2
12	Flowering dogwood, <i>Cornus florida</i>	16-49'	Apr-May	Tolerant	Dry-Moist	4.8-7.7
13	American plum, <i>Prunus americana</i>	3-33'	Apr-May	Intolerant	Moist	5.0-7.0
14	Sassafras, <i>Sassafras albidum</i>	40-100'	Apr-May	Intolerant	Dry-Moist	4.5-7.3
15	Heart-leaved willow, <i>Salix eriocephala</i>	40-50'	Apr-May	Tolerant	Moist-Wet	4.0-7.0
16	Canada buffalo berry, <i>Shepherdia canadensis</i>	3-13'	Apr-May	Intermediate	Dry-Moist	5.3-8.0
17	Bladdernut, <i>Staphylea trifolia</i>	10-20'	Apr-May	Tolerant	Dry-Moist	6.8-7.2
18	Prickly ash, <i>Zanthoxylum americanum</i>	15-25'	Apr-May	Tolerant	Moist-Wet	6.8-7.2
19	Leatherleaf, <i>Chamaedaphne calyculata</i>	3-5'	Apr-June	Intolerant	Moist-Wet	5.0-6.0
20	Mountain laurel, <i>Kalmia latifolia</i>	6-10'	Apr-June	Intermediate	Dry-Moist	4.5-5.5
21	Tulip poplar, <i>Liriodendron tulipifera</i>	80-200'	Apr-June	Intolerant	Moist	4.5-6.5
22	Blackgum, <i>Nyssa sylvatica</i>	60-80'	Apr-June	Tolerant	Moist-Wet	4.5-6.0
23	Choke cherry, <i>Prunus virginiana</i>	10-25'	Apr-June	Intermediate	Dry-Moist	5.2-8.4
24	Prickly gooseberry, <i>Ribes cynosbati</i>	2-4'	Apr-June	Intermediate	Moist-Wet	5.6-6.5
25	Sage-leaved willow, <i>Salix candida</i>	5-6'	Apr-May	Intermediate	Moist-Wet	5.7-7.6
26	Blackhaw, <i>Viburnum prunifolium</i>	12-15'	Apr-June	Tolerant	Dry-Moist	4.8-7.5

Nectar and Pollen Producing Trees and Shrubs: Site Requirements

#	Common Name, Scientific Name	Height at Maturity	Bloom Time	Shade Tolerance	Soil Moisture	pH
27	Lovely shadbush, <i>Amelanchier amabilis</i>	15-25'	May-June	Intermediate	Dry-Moist	5.5-7.0
28	Mountain shadbush, <i>Amelanchier bartramiana</i>	2-8'	May-June	Intermediate	Moist	5.5-7.0
29	Red chokeberry, <i>Aronia arbutifolia</i>	5-12'	May-June	Intermediate	Moist-Wet	5.5-7.5
30	Black chokeberry, <i>Aronia melanocarpa</i>	3-10'	May-June	Intermediate	Dry-Wet	4.4-6.5
31	Alternate-leaved dogwood, <i>Cornus alternifolia</i>	25-30'	May-June	Tolerant	Moist	4.8-7.3
32	Roundleaf dogwood, <i>Cornus rugosa</i>	6-10'	May-June	Tolerant	Dry-Moist	6.4-7.8
33	Red-osier dogwood, <i>Cornus sericea</i>	3-20'	May-June	Intermediate	Moist-Wet	5.0-7.5
34	Cockspur hawthorn, <i>Crataegus crus-galli</i>	25-35'	May-June	Intolerant	Dry-Moist	4.5-7.2
35	Holmes's hawthorn, <i>Crataegus holmesiana</i>	20-30'	May-June	Tolerant	Dry-Moist	5.0-8.0
36	Frosted hawthorn, <i>Crataegus pruinosa</i>	10-20'	May-June	Intermediate	Moist	5.0-8.0
37	Dotted hawthorn, <i>Crataegus punctata</i>	10-30'	May-June	Intermediate	Moist	5.0-8.0
38	Swamp fetterbush, <i>Eubotrys racemosa</i>	3-12'	May-June	Tolerant	Wet	4.5-6.0
39	Mountain holly, <i>Ilex mucronata</i>	3-15'	May-June	Intermediate	Moist-Wet	5.6-6.0
40	Bog laurel, <i>Kalmia polifolia</i>	0.5-2.5'	May-June	Intermediate	Moist-Wet	6.0-7.3
41	Spicebush, <i>Lindera benzoin</i>	6-12'	May-June	Tolerant	Moist-Wet	4.5-6.0
42	American fly honeysuckle, <i>Lonicera canadensis</i>	4-5'	May-June	Tolerant	Moist	6.1-7.8
43	Smooth-leaved honeysuckle, <i>Lonicera dioica</i>	5-10'	May-July	Tolerant	Dry-Moist	6.0-8.0
44	Mountain fly honeysuckle, <i>Lonicera villosa</i>	1-5'	May-June	Intermediate	Moist-Wet	6.0-8.0
45	Cucumber tree, <i>Magnolia acuminata</i>	60-80'	May-June	Intermediate	Moist	5.2-7.0
46	Wild crabapple, <i>Malus coronaria</i>	20-30'	May-June	Intermediate	Moist	5.5-7.5
47	Ninebark, <i>Physocarpus opulifolius</i>	2-8'	May-June	Intermediate	Moist	5.0-8.0
48	Fire cherry, <i>Prunus pensylvanica</i>	15-50'	May-June	Intolerant	Dry-Moist	4.3-7.3
49	Wild black cherry, <i>Prunus serotina</i>	80-125'	May-June	Intolerant	Moist	4.0-7.5
50	Early azalea, <i>Rhododendron prinophyllum</i>	2-8'	May-June	Intermediate	Moist	4.5-6.0
51	Wild black currant, <i>Ribes americanum</i>	3-5'	May-June	Intermediate	Moist-Wet	5.0-7.8
52	Peach-leaved willow, <i>Salix amygdaloides</i>	20-40'	May-June	Intolerant	Moist	6.0-8.0

Nectar and Pollen Producing Trees and Shrubs: Site Requirements

#	Common Name, Scientific Name	Height at Maturity	Bloom Time	Shade Tolerance	Soil Moisture	pH
53	Shining willow, <i>Salix lucida</i>	3-20'	May-June	Intolerant	Moist-Wet	5.8-7.2
54	Autumn willow, <i>Salix serissima</i>	3-15'	May-June	Intermediate	Moist-Wet	5.0-8.0
55	Red elderberry, <i>Sambucus racemosa</i>	7-20'	May-June	Tolerant	Moist	5.0-8.0
56	Lowbush blueberry, <i>Vaccinium angustifolium</i>	0.25-2'	May-June	Intermediate	Dry-Moist	4.7-7.5
57	Highbush blueberry, <i>Vaccinium corymbosum</i>	6.5-10'	May-June	Tolerant	Dry-Wet	4.7-7.5
58	Velvet-leaved blueberry, <i>Vaccinium myrtilloides</i>	4-35''	May-June	Intermediate	Moist-Wet	3.0-5.9
59	Hillside blueberry, <i>Vaccinium pallidum</i>	9-21''	May-June	Tolerant	Dry-Moist	4.3-5.3
60	Maple-leaf viburnum, <i>Viburnum acerifolium</i>	3-6'	May-June	Tolerant	Dry-Moist	4.8-7.5
61	Smooth arrowwood, <i>Viburnum dentatum</i> var. <i>lucidum</i>	3-10'	May-Jun	Intermediate	Moist-Wet	4.5-7.3
62	Hobblebush, <i>Viburnum lantanoides</i>	6-12'	May-June	Tolerant	Moist	4.9-7.0
63	Nannyberry, <i>Viburnum lentago</i>	10-25'	May-June	Intermediate	Moist-Wet	5.0-7.0
64	Highbush cranberry, <i>V. opulus</i> var. <i>americanum</i>	8-15'	May-June	Intermediate	Moist-Wet	5.5-7.5
65	Downy arrowwood, <i>Viburnum rafinesqueanum</i>	3-8'	May-June	Tolerant	Dry-Moist	4.5-7.1
66	Smooth winterberry, <i>Ilex laevigata</i>	6-10'	May-July	Intermediate	Moist-Wet	4.5-6.5
67	Swamp fly honeysuckle, <i>Lonicera oblongifolia</i>	1-6'	May-July	Intolerant	Moist-Wet	6.6-7.3
68	Silky dogwood, <i>Cornus amomum</i>	6-12'	June-July	Intermediate	Moist-Wet	5.0-7.0
59	Gray dogwood, <i>Cornus racemosa</i>	4-10'	June-July	Tolerant	Moist-Wet	4.8-7.4
70	Bush honeysuckle, <i>Diervilla lonicera</i>	1-3'	June-Aug	Tolerant	Dry-Moist	4.8-7.0
71	American wahoo, <i>Euonymus atropurpureus</i>	0.5-1.5'	May-June	Tolerant	Dry-Moist	5.0-8.0
72	Black huckleberry, <i>Gaylussacia baccata</i>	1-3'	June-July	Tolerant	Dry-Moist	4.5-6.5
73	Common winterberry, <i>Ilex verticillata</i>	5-20'	June-Aug	Intermediate	Moist-Wet	4.5-6.5
74	Sheep laurel, <i>Kalmia angustifolia</i>	1-3'	June-July	Intermediate	Dry-Wet	4.5-6.5
75	Swamp azalea, <i>Rhododendron viscosum</i>	3-8'	June-July	Intermediate	Moist-Wet	4.0-7.0
76	Staghorn sumac, <i>Rhus typhina</i> *	3-33'	June-July	Intolerant	Dry-Moist	4.5-7.2

\*May create large clonal populations if the only competing vegetation is introduced grasses.

\*Tends to be less aggressive if planted with native vegetation.



#	Common Name, Scientific Name	Height at Maturity	Bloom Time	Shade Tolerance	Soil Moisture	pH
77	Swamp rose, <i>Rosa palustris</i>	3-7'	June-July	Intermediate	Moist-Wet	4.0-7.0
78	Common elderberry, <i>Sambucus nigra</i> ssp. <i>canadensis</i>	8-10'	June-July	Intermediate	Moist-Wet	5.0-8.0
79	American mountain ash, <i>Sorbus americana</i>	10-30'	June-July	Intolerant	Moist	5.3-6.8
80	Northern mountain ash, <i>Sorbus decora</i>	10-40'	June-July	Intermediate	Dry-Moist	4.0-7.0
81	American basswood, <i>Tilia americana</i>	75-130'	June-July	Intermediate	Dry-Moist	4.5-7.5
82	New Jersey tea, <i>Ceanothus americanus</i>	1-3'	June-Aug	Intermediate	Dry-Moist	4.3-6.5
83	Buttonbush, <i>Cephalanthus occidentalis</i>	6-12'	July-Aug	Intermediate	Moist-Wet	4.7-8.6
84	Coastal sweet pepperbush, <i>Clethra alnifolia</i>	4-6'	June-Aug	Intermediate	Moist-Wet	4.5-7.0
85	Labrador tea, <i>Rhododendron groenlandicum</i>	1-3'	June-Aug	Intermediate	Moist-Wet	5.0-7.0
86	Great laurel, <i>Rhododendron maximum</i>	10-20'	June-Aug	Tolerant	Moist	4.0-5.5
87	Pasture rose, <i>Rosa carolina</i>	2-5'	June-Aug	Intermediate	Dry-Moist	4.0-7.0
88	Common blackberry, <i>Rubus allegheniensis</i>	5-8'	May-July	Tolerant	Dry-Moist	4.6-7.5
89	Black raspberry, <i>Rubus occidentalis</i>	3-6'	May-July	Intermediate	Dry-Moist	5.2-7.5
90	Purple flowering raspberry, <i>Rubus odoratus</i>	3-5'	June-Aug	Intermediate	Moist	4.5-6.5
91	Water willow, <i>Decodon verticillatus</i>	6-8'	July-Aug	Intermediate	Wet	4.9-8.6
92	Common winged sumac, <i>Rhus copallinum</i>	20-30'	July-Aug	Intermediate	Dry-Moist	5.3-7.5
93	Smooth sumac, <i>Rhus glabra</i>	2-20'	July-Aug	Intermediate	Dry-Moist	5.3-7.5
94	Broad-leaved meadowsweet, <i>Spiraea alba</i> var. <i>latifolia</i>	2-6'	July-Aug	Intermediate	Moist-Wet	5.6-7.3
95	Shrubby cinquefoil, <i>Dasiphora fruticosa</i>	1-3'	July-Sept	Intermediate	Dry-Wet	5.0-8.0
96	Swamp rose mallow, <i>Hibiscus moscheutos</i>	3-7'	July-Sept	Intermediate	Moist-Wet	4.0-7.5
97	Narrow-leaved meadowsweet, <i>Spiraea alba</i>	3-6'	July-Sept	Intermediate	Moist-Wet	4.3-6.8
98	Steeplebush, <i>Spiraea tomentosa</i>	2-3'	Aug-Sept	Intermediate	Moist-Wet	4.5-7.0
99	Witch hazel, <i>Hamamelis virginiana</i>	20-30'	Oct-Nov	Intermediate	Dry-Moist	4.5-6.2

Table 4: New York native trees and shrubs that provide nectar during their bloom time. The species listed are sorted from early blooming to late blooming species.

