

Top Woody Keystone Plants for Lepidoptera (butterflies, moths, skippers, fritillaries)

Large Trees

Oaks (*Quercus*): genus supports 534 species

[White Oak \(*Quercus alba*\)](#)

[Northern Red Oak \(*Quercus rubra*\)](#)

[Chestnut Oak \(*Quercus montana*\)](#)

[Scarlet Oak \(*Quercus coccinea*\)](#)

[Black Oak \(*Quercus velutina*\)](#)

[Post Oak \(*Quercus stellata*\)](#)

[Pin Oak \(*Quercus palustris*\)](#)

[Willow Oak \(*Quercus phellos*\)](#)

Birches (*Betula*): genus supports 413 species

[River Birch \(*Betula nigra*\)](#)

Hickories (*Carya*): genus supports 200 species

[Mockernut Hickory \(*Carya tomentosa*\)](#)

Smaller Trees

Oaks (*Quercus*): genus supports 534 species

[Dwarf Chinquapin Oak \(*Quercus prinoides*\)](#)

Cherries & Plums (*Prunus*): genus supports 456 species

[Chickasaw Plum \(*Prunus angustifolia*\)](#)

[\[Black Cherry \(*Prunus serotina*\) – not recommended: reseeding, defoliation, allelopathic\]](#)

Willows (*Salix*): genus supports 455 species & 14 pollen specialist bees

[Silky Willow \(*Salix sericea*\)](#) (Pussy Willow (*Salix discolor*) rare in MD & VA)

[\[Black Willow \(*Salix nigra*\) – not recommended; messy, breakage, shallow roots\]](#)

Hawthorns (*Crataegus*): genus supports 159 species

[Cockspur Hawthorn \(*Crataegus crus-galli*\)](#)

Woody Keystone Species from Tallamy List Not Recommended for Residential Settings

Alder (*Alnus*) – Fast-growing and water-loving, not ideal for controlled landscapes

Ash (*Fraxinus*) – Emerald Ash Borer

Basswood (*Tilia*) – At southern end of range

Beech (*Fagus*) – Beech Bark Disease, Beech Leaf Disease

Chestnut (*Castanea*) – Chestnut Blight

Crabapple (*Malus*) – Diseases





Keystone Plants for the Home Landscape

Elm (*Ulmus*) – Dutch Elm Disease (cultivars resistant, but not totally immune)
Maple (*Acer*) – Red Maple overplanted, at southern end of range for Sugar Maple
Pine (*Pinus*) – White Pine can be blown over in wind; pines drop lower branches, leaving stubs behind
Poplar (*Populus*) – Very large size & extensive root systems; weak branch attachments, disease
Spruce (*Picea*) – Limited range in higher elevations
Walnut (*Juglans*) – Black Walnut allelopathic (exudes chemical toxic to growth of other plants)

Additional Woody Keystone Trees from Wild Ones List

Serviceberry (*Amelanchier*) – 124; [Downy Serviceberry \(*Amelanchier arborea*\)](#)
Dogwood (*Cornus*) – 118; [Flowering Dogwood \(*Bethamidia florida*\)](#) & [Pagoda Dogwood \(*Swida alternifolia*\)](#)
Hornbeam (*Carpinus*) – 68; [American Hornbeam \(*Carpinus caroliniana*\)](#)
Sumacs (*Rhus*) – 58; [Staghorn Sumac \(*Rhus typhina*\)](#)
Arborvitae (*Thuja*) – 50; [Arborvitae \(*Thuja occidentalis*\)](#)

Plants for “Soft Landings” Landscaping Beneath Trees

(See Chart of [Soft Landings](#), Izel Native Plants)

[Wild Ginger \(*Asarum canadense*\)](#)
[Green-and-Gold \(*Chrysogonum virginianum*\)](#)
[White Wood Aster \(*Eurybia divaricata*\)](#)
[Alumroot \(*Heuchera americana*\)](#)
[Golden Ragwort \(*Packera aurea*\)](#)
[Violets \(*Viola* spp.\)](#)
[Pennsylvania Sedge \(*Carex pensylvanica*\)](#)
[Bottlebrush Grass \(*Elymus hystrix*\)](#)
[Marginal Wood Fern \(*Dryopteris marginalis*\)](#)
[Christmas Fern \(*Polystichum acrostichoides*\)](#)

Shrubs

Blueberries (*Vaccinium*): genus supports 288 species & 7 pollen specialist bees

[Highbush Blueberry \(*Vaccinium corymbosum*\)](#)
[Northern Lowbush Blueberry \(*Vaccinium angustifolium*\)](#)
[Early Lowbush Blueberry \(*Vaccinium pallidum*\)](#)

Roses (*Rosa*): genus supports 139 species

[Carolina Rose \(*Rosa carolina*\)](#)

Hazelnuts (*Corylus*): genus supports 131 species

[American Hazelnut \(*Corylus americana*\)](#)

Honeysuckles (*Lonicera*): genus supports 36 species

[Trumpet Honeysuckle \(*Lonicera sempervirens*\)](#)





Keystone Plants for the Home Landscape

Additional Woody Keystone Shrubs from Wild Ones List

Viburnums (*Viburnum*) – 104; [Arrowwood \(*Viburnum dentatum*\)](#)
Witch Hazels (*Hamamelis*) – 63; [Witch Hazel \(*Hamamelis virginiana*\)](#)
Rhododendrons (*Rhododendron*) – 21; [Great Rhododendron \(*Rhododendron maximum*\)](#)
(See Wild Ones resource on [“Native Woodies”](#) for complete list)

Top Herbaceous Keystone Plants for Lepidoptera

Goldenrod (*Solidago*): genus supports 115 species & 42 pollen specialist bees

[Blue-stemmed Goldenrod \(*Solidago caesia*\)](#)

[Rough-stemmed Goldenrod \(*Solidago rugosa*\)](#) (‘Fireworks’ cultivar)

[Gray Goldenrod \(*Solidago nemoralis*\)](#)

Other species: [Autumn Goldenrod \(*S. spachelata*\)](#), [Early Goldenrod \(*S. juncea*\)](#), [Stiff Goldenrod \(*S. rigida*\)](#), [Tall Goldenrod \(*S. altissima*\)](#), [Zig-zag Goldenrod \(*S. flexicaulis*\)](#)

Asters (*Symphyotrichum* & *Eurybia*): genera support 112 species & 33 pollen specialist bees

[New England Aster \(*Symphyotrichum novae-angliae*\)](#)

[Aromatic Aster \(*Symphyotrichum oblongifolium*\)](#)

[White Wood Aster \(*Eurybia divaricata*\)](#)

Other species: [Blue Wood Aster \(*S. cordifolium*\)](#), [New York Aster \(*S. novi-belgii*\)](#), [Smooth Aster \(*S. laeve*\)](#)

Landscape Combinations with Goldenrods & Asters:

Taller ‘Fireworks’ or shorter [Autumn Goldenrod \(*Solidago spachelata*\)](#) with Aromatic Aster

Tall [Autumn Sneezeweed \(*Helenium autumnale*\)](#) with New York and New England Asters

Other fall-blooming plants: [Obedient Plant \(*Physostegia virginiana*\)](#), [Blue Mist Flower \(*Conoclinium coelestinum*\)](#), Sunflowers and *Rudbeckia* species (see below)

Sunflowers (*Helianthus*): genus supports 73 species & 50 pollen specialist bees

[Woodland Sunflower \(*Helianthus divaricatus*\)](#)

Other species: [Narrow-leaved Sunflower \(*H. angustifolius*\)](#)

Bonesets (*Eupatorium*/*Eutrochium*): genera support 42 species

[Common Boneset \(*Eupatorium perfoliatum*\)](#)

[Hyssop-leaf Thoroughwort \(*Eupatorium hyssopifolium*\)](#)

[Purple Joe-pye-weed \(*Eutrochium purpureum*\)](#)

Sedges (*Carex*): genus supports 36 species

[Rosy Sedge \(*Carex rosea*\)](#)

[Blue Wood Sedge \(*Carex flaccosperma*\)](#)

[Gray’s Sedge \(*Carex grayi*\)](#)

(See Mt. Cuba report: [“Carex for the Mid-Atlantic Region”](#) on growing conditions & mowing trials)



Violets (*Viola*): genus supports 29 species; support specialist bees

[Common Blue/Confederate Violet \(*Viola sororia*\)](#)

Yellow Violet (*Viola pubescens*)

Striped Violet (*Viola striata*)

Geraniums (*Geranium*): genus supports 23 species; supports pollen specialist bee

[Wild Geranium \(*Geranium maculatum*\)](#)

Coneflowers (*Rudbeckia*): genus supports 17 species; 29 supports pollen specialist bees

[Orange Coneflower \(*Rudbeckia fulgida*\)](#)

[Brown-eyed Susan \(*Rudbeckia triloba*\)](#)

[Cut-leaf Coneflower \(*Rudbeckia laciniata*\)](#)

Additional Herbaceous Keystone Plants from Tallamy List

Lupine (*Lupinus*) - 33

Beardtongue (*Penstemon*) - 8

Iris (*Iris*) - 17

Phlox (*Phlox*) - 8

Evening Primrose (*Oenothera*) - 16

Beebalm (*Monarda*) - 7

Milkweed (*Asclepias*) - 12

Little Bluestem (*Schizachyrium*) - 6

Verbena (*Verbena*) - 11

Lobelias (*Lobelia*) - 4

Plus grasses from Blakney book: [Purpletop \(*Tridens flavus*\)](#), [Switchgrass \(*Panicum virgatum*\)](#), [Purple Lovegrass \(*Eragrostis spectabilis*\)](#)

RESOURCES

Keystone plants supporting Lepidoptera:

- Blakney, Robert R. *Northern Virginia Butterflies & Skippers*
- [Homegrown National Park](#) (keystone plants by eco-region-8.3 SE USA Plains)
- [Keystone Native Plants, Eastern Temperate Forests – Ecoregion 8](#), National Wildlife Federation
- [Native Caterpillars, Moths, Butterflies, and Host Native Woodies](#), Wild Ones
- Tallamy, Douglas. *Bringing Nature Home, Nature's Best Hope, The Nature of Oaks*

Locally appropriate species:

- [Compendium](#), Earth Sangha Wild Plant Nursery (general advice on planting natives)
- [Digital Atlas of the Virginia Flora](#)
- [Maryland Native Plant Guide](#)
- [Maryland Plant Atlas](#)
- [Native Plant Finder](#), National Wildlife Federation (locate keystone plants by zip code)
- [Native Plant Society of New Jersey](#), Plant Lists
- [Native Plants for Delaware Landscapes](#)
- [Native Tree Choices](#), Plant NoVA Natives



Keystone Plants for the Home Landscape

- [Oaks of the National Capital Region](#), National Park Service
- [Pennsylvania Native Plant Society](#)
- [Plant Virginia Natives](#) (regional native plant guides), including [Native Plants for Northern Virginia](#)

Other:

[Carex for the Mid-Atlantic Region](#), Mt. Cuba Center

[Nectar and Host Plants for Selected Mid-Atlantic Butterflies and Moths](#), MGNV

[Pollen Specialist Bees of the Eastern United States](#), Jarrod Fowler & Sam Droege

[Soft Landings](#), Izel Native Plants blogpost (includes chart by growing condition)

[Native-only Plant Sellers](#), Plant NoVA Natives

[Native Plant Nurseries & Vendors](#), Maryland Native Plant Society

[Native Plant Nurseries](#), Native Plant Society of New Jersey

[Native Plant Nurseries Serving Delaware](#), Delaware Nursery & Landscape Association

[Native Plant Sources](#), Pennsylvania Native Plant Society

