

WISCONSIN NATIVE PLANTS



RECOMMENDATIONS FOR LANDSCAPING AND NATURAL COMMUNITY RESTORATION

Natural Heritage Conservation Program
Wisconsin Department of Natural Resources
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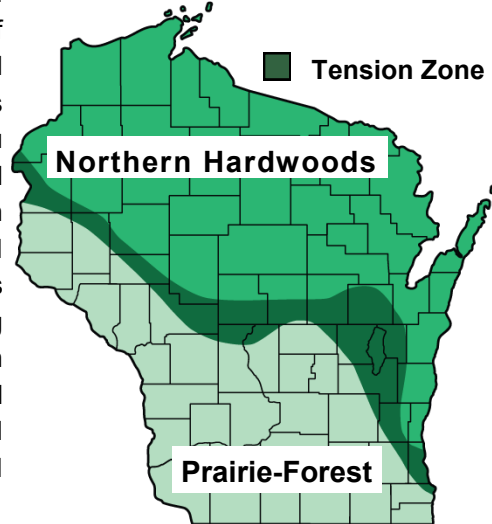
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Background

Wisconsin is composed of two general floristic provinces, the Prairie-Forest in the Southwest and the Northern Hardwoods in the Northeast. The transitional area between these two provinces, where many northern and southern species meet their natural range limits, is known as the Tension Zone. The two provinces and the Tension Zone are characterized by their many natural communities resulting from their differing climatic and geologic conditions. Natural communities are assemblages of interdependent plant and animal species coexisting in one habitat in a given time period. Beginning in the early-1800's, European-American settlement altered or destroyed much of Wisconsin's lands, waters and natural communities in favor of agricultural, natural resource and urban development. While it's impossible to turn back the clock, you can restore Wisconsin's natural heritage and ecological identity in your urban and rural landscapes and natural areas by planting the species that evolved here. By emulating Wisconsin's natural communities with diverse, hardy and locally-adapted species, you can create essential habitat for native wildlife like birds and pollinators as well as humans.

Wisconsin's Floristic Provinces & Climatic Tension Zone



How to Use the Plant Lists

The following lists are comprised of prevalent species of natural communities found widespread throughout Wisconsin: prairies on rich and sandy soils, savannas on rich and sandy soils, southern forests on rich and dry soils, and northern forests on rich and dry soils. Determine which plant lists are most appropriate for your site using its location in the state as well as its specific soils, topography, and climate. If your property is within or near the Tension Zone, blend the northern and forest species adapted to your local conditions. An effective method to determine the plants best adapted for your property is to visit nearby natural areas with similar soil, climatic and topographic conditions. For the greatest likelihood of success, choose plants adapted to the

substrate type, moisture content, fertility and acidity/alkalinity of your soils, the amount of sunlight available, and the degree and direction of any slopes. Select a wide variety of plant types with varying heights and blooming periods to create diverse and dynamic habitat for wildlife.

In ornamental landscapes, plant all core species if possible or at least ten. In larger restorations, plant all species from core species lists, and all satellite species if possible. The "Range" column lists the regions where species are found if they have restricted ranges in Wisconsin. Species only available at a limited number of nurseries are denoted with an asterisk (*) following their name. Aggressive species in ornamental landscapes are denoted with an exclamation point (!). Aggressive species in ornamental landscapes and natural areas are denoted with two exclamation points (!!). Underlined text indicates the presence of a hyperlink. Hold Ctrl and click on the hyperlinks within community lists link to jump to the species characteristics tables. Hold Ctrl and click on the hyperlinks within the species characteristics tables to open species webpages with photos, range maps and more information on the Wisconsin State Herbarium website.

When purchasing plants, reference their scientific names to ensure you are selecting the correct species. Because many species names have been revised over time, some nurseries may use outdated scientific names. Frequently used genus and/or species synonyms are listed in parentheses after their currently accepted scientific name. All frequently used common names are also listed. Native cultivars or nativars are variations of a plant species created by artificially selecting for specific traits; their use in habitat restorations is not encouraged. Intentionally altering a species' traits diminishes the population's genetic diversity and adaptability, jeopardizes their value to animals, and can have other unintended consequences. For the greatest likelihood of success, use plants sourced from within 50 miles north or south or from within 100 miles east or west of your location. To protect existing wild populations, verify the plants and seeds you purchase are locally and commercially grown and are not taken from existing natural areas.

This publication represents just one tool for you to use as you plan your native planting. Some important considerations not covered here include site preparation techniques, whether or not to use a cover crop and invasive species control. Refer to the Additional Resources and References pages to find information on these topics as well as Wisconsin's natural communities, soils, native plant nurseries, restoration consultants and other plant lists.

Plant List and Natural Community Descriptions

Review the descriptions below to determine which lists are applicable to your site. Sites that occur within or near the climatic “Tension Zone” may accommodate both northern and southern forest species. Setting aside geographic considerations, it is important to acknowledge that ornamental landscapes with any native prairie, savanna, or forest species can provide important food and shelter for native pollinators and other wildlife anywhere in the state. To ensure success, take measures to match species with appropriate soil types, moisture regimes, and tolerance of extreme conditions in winter and summer.

Prairies on Rich Soils (pages 7 - 9)

In Wisconsin, prairies on rich soils historically occurred mostly in the southern part of the state and, to a lesser extent, the west-central part. It's possible that native prairie species associated with rich soils may not be a good fit for other parts of the state, in no small part because these plants may not be adapted to the local edaphic (soils, microclimate) and climatic conditions.

Prairies on Sandy Soils (pages 10 - 12)

In Wisconsin, open prairies on sandy soils historically occurred mostly in the southern, western and central parts of the state. (In northeastern and northwestern Wisconsin, prairie species on sandy soils are associated with jack pine and northern pin oak – see “Savanna – Sandy Soils” for appropriate species.) It's possible that native prairie species associated with sandy soils may not be a good fit for other parts of the state, in no small part because these plants may not be adapted to the local edaphic (soils, microclimate) and climatic conditions.

Savannas on Rich Soils (pages 13 - 16)

In Wisconsin, oak savannas on rich soils historically occurred mostly in the southern part of the state and, to a lesser extent, the west-central part. It's possible that native savanna species associated with rich soils may not be a good fit for other parts of the state, in no small part because these plants may not be adapted to the local edaphic (soils, microclimate) and climatic conditions.

Savannas on Sandy Soils (pages 17 - 19)

Oak Barrens and Pine Barrens are two types of savannas associated with sandy soils in Wisconsin. Oak Barrens historically occurred mostly in the western, south central, and central parts of the state, while Pine Barrens occurred in northwest, northeast, and central Wisconsin, as well as along large river terraces in southwestern and western Wisconsin. It's possible that native savanna species associated with sandy soils may not be a good fit for

other parts of the state, in no small part because these plants may not be adapted to the local edaphic (soils, microclimate) and climatic conditions.

Southern Forests on Rich Soils (pages 20 - 23)

These forest species are suitable for southern Wisconsin on a wide variety of soils, including those developed from glacial till and those formed on loess. The soils should have good but not excessive drainage, high fertility, and a deep humus layer (especially if maples are dominant). It's possible that the species listed here may not be a good fit for sites in northern Wisconsin, in no small part because these plants may not be adapted to the local edaphic (soils, microclimate) and climatic conditions.

Southern Forests on Dry Soils (pages 24 - 26)

These forest species are suitable for southern Wisconsin on drier soils that are slightly acidic with lower nutrient content (typically sandy loams). It's possible that the species listed here may not be a good fit for sites in northern Wisconsin, in no small part because these plants may not be adapted to the local edaphic (soils, microclimate) and climatic conditions. To ensure success, take measures to match species with appropriate soil types, moisture regimes, and tolerance of extreme conditions in winter and summer.

Northern Forests on Rich Soils (pages 27 - 29)

These forest species are suitable for northern Wisconsin on a wide variety of soils. These soils should have good but not excessive drainage and high fertility. It's possible that the species listed here may not be a good fit for sites in southern Wisconsin, in no small part because these plants may not be adapted to the local edaphic (soils, microclimate) and climatic conditions.

Northern Forests on Dry Soils (pages 30 - 32)

These forest species are suitable for northern Wisconsin on sandy soils. It's possible that the species listed here may not be a good fit for sites in southern Wisconsin, in no small part because these plants may not be adapted to the local edaphic (soils, microclimate) and climatic conditions.

Glossary

Annual - A plant species that completes its life cycle (flowers and sets seeds) in 1 growing season or year.

Biennial - A plant species that completes its life cycle in 2 growing seasons or years, with the second season typically devoted to flowering and fruiting.

Calcareous - Growing on limestone or in soil that has a significant component of calcium carbonate.

Clay (soil texture class) - Soil that contains 27-40% clay and 20-45% sand.

Core species - Plant species associated with a natural community that provide temporal stability in community structure, or a base matrix. They are strong competitors and have higher abundances than satellite species.

Cultivar - A form of a plant that is bred by humans based on one or more specific traits. This is not a naturally occurring form of plant.

Edaphic - Referring to various soil conditions or qualities, including texture, moisture and chemistry.

Forb

Genus - In scientific names, this is the second level of similar organisms grouped under a family; always capitalized. For example, "*Coreopsis*" is the genus in "*Coreopsis palmata*."

Loam (soil texture class) - Soil that contains 7-27% clay, 28-50% silt, and less than 52% sand.

Mesic - Soil that is generally moist throughout the growing season; moderate moisture.

Microclimate - The climate of a relatively small area that is strongly

influenced by local factors such as slope and aspect, so much so that the microclimate may be distinctly different from the larger regional climate.

Perennial - A plant species whose life cycle lasts for 3 or more years.

Rich soil - Soil with high organic matter content and moderate to high moisture.

Sand (soil texture class) - Soil that contains 85% or more sand and less than 10% clay.

Satellite species - Plant species that contribute to the overall diversity of a natural community, but are not typically found in high abundance as compared to core species.

Savanna - Wisconsin's oak savannas are fire-dependent communities with scattered oaks as the dominant canopy tree and a variety of species growing underneath and between them. In a larger landscape continuum, they often occur in an intermediate position between grassland and forest. Under and between the oaks grow a mixture of sun-loving prairie/barrens plants, shade-loving forest plants and true savanna plants that prefer dappled sunlight.

Sedge

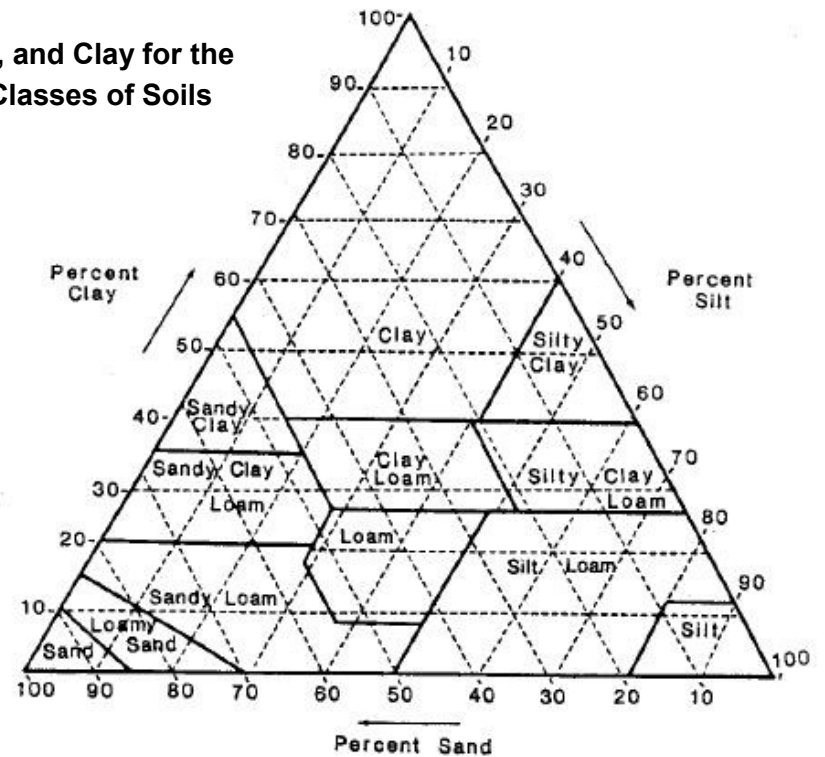
Silt (soil texture class) - Soil that contains 80% or more silt and less than 12% clay.

Subspecies - A genetically distinguishable population from other populations within a species; always written following its species name. For example, "*racemosa*" is the subspecies in "*Cornus foemina* ssp *racemosa*."

Tension Zone - The transitional area between the Northern Hardwood and Prairie-Forest floristic provinces that extends in an "S" shape from Racine County to Burnett County.

Key to Symbols	
*	Limited Commercial Availability
!	Aggressive in Ornamental Landscapes
!!	Aggressive in Ornamental Landscapes and Natural Areas
ssp	Subspecies
☀	Adapted to Full Sun
☀-☾	Adapted to Partial Sun
●	Adapted to Shade
☀ - ☾	Adapted to Full Sun to Partial Sun
☀ - ●	Adapted to Partial Sun to Shade
☀ - ●	Adapted to Full Sun to Shade
STZ	South of Tension Zone Only
NA	Not Applicable
NRR	No Range Restriction
N	North
S	South
E	East
W	West
C	Central
NE	Northeast
NW	Northwest
SE	Southeast
SW	Southwest
≤	Less than or equal to
"	Inches
'	Feet

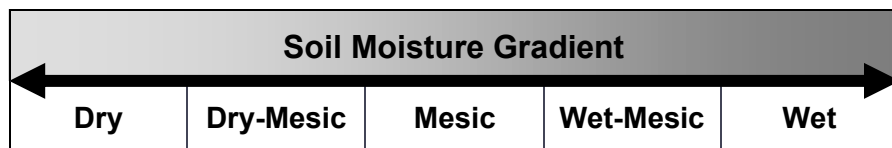
Ranges in Sand, Silt, and Clay for the Different Textural Classes of Soils



Size range in millimeters (mean diameter)

75	2	1	.5	.25	.1	.05	.02	.005	.002	.0002	.0008
GRAVEL	SAND					SILT			CLAY		
	very coarse	coarse	medium	fine	very fine	coarse	medium	fine	coarse	medium	fine

Excerpt from Schulte et al., *Management of Wisconsin Soils*



Prairies on Rich Soils - Core Species

Genus species	Common Name(s)	Type
<u><i>Andropogon gerardii</i></u>	big bluestem, turkey foot	Perennial grass
<u><i>Anemone cylindrica</i></u>	thimbleweed, long-headed anemone	Perennial forb
<u><i>Aquilegia canadensis</i></u>	wild columbine, Canadian columbine, red columbine	Perennial forb
<u><i>Asclepias tuberosa</i></u>	butterfly milkweed	Perennial forb
<u><i>Carex bicknelli</i></u>	Bicknelli's sedge, Bicknelli's oval sedge	Perennial sedge
<u><i>Carex stipata</i></u>	common fox sedge, owl-fruit sedge	Perennial sedge
<u><i>Carex vulpinoidea</i></u>	brown fox sedge, fox sedge	Perennial sedge
<u><i>Coreopsis palmata</i></u>	prairie coreopsis, finger tickseed	Perennial forb
<u><i>Heliopsis helianthoides!!</i></u>	oxeye sunflower, false sunflower	Perennial forb
<u><i>Lespedeza capitata</i></u>	round-headed bush-clover	Perennial forb
<u><i>Liatis aspera</i></u>	rough blazing-star	Perennial forb
<u><i>Maianthemum racemosum</i></u> (<i>Smilacina racemosa</i>)	false Solomon's seal, false spikenard, Solomon's plume	Perennial forb
<u><i>Monarda fistulosa</i></u>	bee balm, wild bergamot	Perennial forb
<u><i>Panicum virgatum</i></u>	switch grass	Perennial forb
<u><i>Polygonatum biflorum</i></u>	giant Solomon's seal, king Solomon's seal, smooth Solomon's seal, Solomon's seal	Perennial forb
<u><i>Potentilla arguta</i></u>	prairie cinquefoil, tall cinquefoil	Perennial forb
<u><i>Ratibida pinnata</i></u>	yellow coneflower	Perennial forb
<u><i>Rudbeckia hirta</i></u>	black-eyed Susan	Biennial/Perennial forb
<u><i>Schizachyrium scoparium</i></u>	little bluestem, broom beard grass, prairie beard grass	Perennial grass
<u><i>Sorghastrum nutans</i></u>	yellow Indiangrass	Perennial grass
<u><i>Tradescantia ohiensis</i></u>	common spiderwort, blue-jacket	Perennial forb
<u><i>Veronicastrum virginicum</i></u>	Culver's-root, Culver's-physic	Perennial forb

Prairies on Rich Soils - Satellite Species

Genus species	Common Name(s)	Type
<u><i>Anemone patens</i></u>	American pasque-flower	Perennial forb
<u><i>Asclepias syriaca</i></u>	common milkweed	Perennial forb
<u><i>Astragalus canadensis</i></u>	Canada milk vetch	Perennial forb
<u><i>Baptisia leucophaea</i></u> (<i>B. bracteata</i>)	cream wild indigo	Perennial forb
<u><i>Brickellia eupatorioides</i></u> (<i>Kuhnia</i>)	false boneset	Perennial forb
<u><i>Cirsium discolor</i></u>	prairie thistle, old field thistle	Perennial forb
<u><i>Dalea purpurea</i></u>	purple prairie clover	Perennial forb
<u><i>Desmodium canadense</i></u>	Canada tick trefoil, showy tick trefoil	Perennial forb
<u><i>Dodecatheon meadia</i></u> (<i>Primula</i>)	eastern shooting star	Perennial forb
<u><i>Euphorbia corollata</i></u>	flowering spurge	Perennial forb
<u><i>Eutrochium maculatum</i></u> (<i>Eupatorium</i>)	spotted Joe-Pye-weed	Perennial forb
<u><i>Eutrochium purpureum</i></u> (<i>Eupatorium</i>)	purple Joe-Pye-weed, green-stemmed Joe-Pye-weed	Perennial forb
<u><i>Fragaria virginiana</i></u>	wild strawberry, Virginia strawberry	Perennial forb
<u><i>Geum triflorum</i></u>	prairie smoke, old man's whiskers	Perennial forb
<u><i>Helianthus pauciflorus</i></u>	few-leaved sunflower, stiff sunflower	Perennial forb
<u><i>Hesperostipa spartea</i></u> (<i>Stipa</i>)	needle grass, porcupine grass	Perennial grass
<u><i>Phlox pilosa</i></u>	prairie phlox, downy phlox	Perennial forb
<u><i>Sporobolus heterolepis</i></u>	prairie dropseed, northern dropseed	Perennial grass
<u><i>Symphyotrichum laeve</i></u> (<i>Aster laevis</i>)	smooth blue aster	Perennial forb
<u><i>Symphyotrichum oolentangiense</i></u> (<i>Aster oolentangiensis</i> , <i>Aster azureus</i>)	sky-blue aster, azure aster	Perennial forb
<u><i>Zizia aurea</i></u>	common golden Alexander	Perennial forb

Prairies on Rich Soils - Shrub and Additional Satellite Species

Genus species	Common Name(s)	Type
<u><i>Amorpha canescens</i></u>	leadplant	Perennial Shrub
<u><i>Ceanothus americanus</i></u>	New Jersey tea, redroot	Perennial Shrub
<u><i>Ceanothus herbaceus</i></u> (<i>C. ovatus</i>)	prairie red root, inland New Jersey tea, Jersey tea	Perennial Shrub
<u><i>Rosa arkansana</i></u> *	dwarf prairie rose, prairie rose, sunshine rose, wild prairie rose	Perennial Shrub
<u><i>Rosa carolina</i></u>	Carolina rose, pasture rose	Perennial Shrub

Prairies on Sandy Soils - Core Species

Genus species	Common Name(s)	Type
<u><i>Andropogon gerardii</i></u>	big bluestem, turkey foot	Perennial grass
<u><i>Anemone cylindrica</i></u>	thimbleweed, candle anemone, long-headed anemone	Perennial forb
<u><i>Aquilegia canadensis</i></u>	wild columbine, Canadian columbine, red columbine	Perennial forb
<u><i>Asclepias tuberosa</i></u>	butterfly milkweed	Perennial forb
<u><i>Carex brevior</i></u>	fescue sedge, plains oval sedge	Perennial sedge
<u><i>Carex muehlenbergii</i></u>	Muhlenberg's bracted sedge, Muhlenberg's sedge, sand bracted sedge, sand sedge	Perennial sedge
<u><i>Coreopsis palmata</i></u>	prairie coreopsis, finger tickseed	Perennial forb
<u><i>Cyperus schweinitzii</i></u> *	Great Plains sand sedge, Schweinitz's cyperus, Schweinitz's flat sedge	Perennial sedge
<u><i>Koeleria macrantha</i></u>	Junegrass, prairie Junegrass	Perennial grass
<u><i>Lespedeza capitata</i></u>	round-headed bush-clover	Perennial forb
<u><i>Liatis aspera</i></u>	rough blazing-star	Perennial forb
<u><i>Lupinus perennis</i></u>	wild lupine	Perennial forb
<u><i>Maianthemum racemosum</i></u> (<i>Smilacina racemosa</i>)	false Solomon's seal, false spikenard, Solomon's plume	Perennial forb
<u><i>Maianthemum stellatum</i></u> (<i>Smilacina stellata</i>)	starry false Solomon's seal, little false Solomon's seal, starflower Solomon's seal	Perennial forb
<u><i>Monarda fistulosa</i></u>	bee balm, wild bergamot	Perennial forb
<u><i>Panicum virgatum</i></u>	switch grass	Perennial grass
<u><i>Rudbeckia hirta</i></u>	black-eyed Susan	Biennial/Perennial forb
<u><i>Schizachyrium scoparium</i></u>	little bluestem, broom beard grass, prairie beard grass	Perennial grass
<u><i>Solidago speciosa</i></u>	showy goldenrod	Perennial forb
<u><i>Tephrosia virginiana</i></u>	goat's rue, rabbit pea	Perennial forb
<u><i>Tradescantia ohiensis</i></u>	common spiderwort, blue-jacket	Perennial forb

Prairies on Sandy Soils - Satellite Species

Genus species	Common Name(s)	Type
<u><i>Anemone patens</i></u>	American pasque-flower	Perennial forb
<u><i>Artemisia campestris</i></u>	beach wormwood, field sagewort	Biennial/Perennial forb
<u><i>Asclepias syriaca</i></u>	common milkweed	Perennial forb
<u><i>Asclepias verticillata</i></u>	whorled milkweed	Perennial forb
<u><i>Baptisia leucophaea</i></u> (<i>B. bracteata</i>)	cream wild indigo	Perennial forb
<u><i>Bouteloua curtipendula</i></u>	side-oats grama	Perennial grass
<u><i>Danthonia spicata</i></u>	poverty oats, poverty grass, poverty danthonia	Perennial grass
<u><i>Eragrostis spectabilis</i></u>	purple love grass, tumble grass	Perennial grass
<u><i>Euphorbia corollata</i></u>	flowering spurge	Perennial forb
<u><i>Fragaria virginiana</i></u>	wild strawberry, Virginia strawberry	Perennial forb
<u><i>Geum triflorum</i></u>	prairie smoke, old man's whiskers	Perennial forb
<u><i>Helianthus occidentalis</i></u>	western sunflower, naked-stemmed sunflower	Perennial forb
<u><i>Monarda punctata</i></u>	dotted horsemint	Annual/Biennial/Perennial forb
<u><i>Oenothera biennis</i></u>	common evening primrose	Biennial/Perennial forb
<u><i>Penstemon grandiflorus</i></u>	large-flowered beard-tongue, large penstemon, shell-leaved penstemon	Biennial/Perennial forb
<u><i>Pseudognaphalium obtusifolium</i></u> (<i>Gnaphalium</i>)	sweet everlasting, fragrant cudweed, rabbit tobacco	Annual forb
<u><i>Sporobolus heterolepis</i></u>	prairie dropseed, northern dropseed	Perennial grass
<u><i>Symphotrichum oolentangiense</i></u> (<i>Aster oolentangiensis</i> , <i>Aster azureus</i>)	sky-blue aster, azure aster	Perennial forb
<u><i>Viola pedata</i></u> *	bird's-foot violet	Perennial forb

Prairies on Sandy Soils - Shrub and Additional Satellite Species

Genus species	Common Name(s)	Type
<u><i>Amorpha canescens</i></u>	leadplant	Perennial shrub
<u><i>Ceanothus herbaceus</i></u> (<i>C. ovatus</i>)	prairie red root, inland New Jersey tea, Jersey tea	Perennial shrub
<u><i>Comptonia peregrina</i></u>	sweet fern	Perennial shrub
<u><i>Corylus americana</i></u>	American hazelnut	Perennial shrub
<u><i>Gaylussacia baccata</i></u>	huckleberry	Perennial shrub
<u><i>Opuntia macrorhiza</i></u> (<i>O. humifusa</i>)	plains prickly-pear cactus	Perennial shrub
<u><i>Vaccinium angustifolium</i></u>	early low blueberry, low sweet blueberry, low-bush blueberry	Perennial shrub

Savannas on Rich Soils - Core Species

Genus species	Common Name(s)	Type
<u><i>Andropogon gerardii</i></u>	big bluestem, turkey foot	Perennial grass
<u><i>Anemone cylindrica</i></u>	thimbleweed, long-headed anemone	Perennial forb
<u><i>Anemone virginiana</i></u>	tall anemone, tall thimbleweed	Perennial forb
<u><i>Aquilegia canadensis</i></u>	wild columbine, Canadian columbine, red columbine	Perennial forb
<u><i>Brickellia eupatorioides</i></u> (<i>Kuhnia</i>)	false boneset	Perennial forb
<u><i>Carex cephalophora</i></u>	oval-headed sedge, short-headed bracted sedge, wood-bank sedge	Perennial sedge
<u><i>Carex meadii</i></u> *	Mead's sedge, Mead's stiff sedge	Perennial sedge
<u><i>Carex pensylvanica</i></u> !	Pennsylvania sedge, common oak sedge	Perennial sedge
<u><i>Carex radiata</i></u> *	eastern star sedge, straight-styled wood sedge	Perennial sedge
<u><i>Carex rosea</i></u>	curly-styled sedge, rosy sedge, stellate sedge	Perennial sedge
<u><i>Carex tonsa</i></u> *	shaved sedge	Perennial sedge
<u><i>Coreopsis palmata</i></u>	prairie coreopsis, finger tickseed	Perennial forb
<u><i>Elymus hystrix</i></u>	bottlebrush grass, eastern bottlebrush grass, glumeless wild-rye	Perennial grass
<u><i>Elymus villosus</i></u> *	downy wild-rye, hairy wild-rye, silky wild-rye	Perennial grass
<u><i>Eutrochium purpureum</i></u> (<i>Eupatorium</i>)	purple Joe-Pye-weed, green-stemmed Joe-Pye-weed	Perennial forb
<u><i>Fragaria virginiana</i></u>	wild strawberry, Virginia strawberry	Perennial forb
<u><i>Galium boreale</i></u>	northern bedstraw	Perennial forb
<u><i>Geranium maculatum</i></u>	wild geranium, spotted geranium, crane's bill	Perennial forb
<u><i>Heliopsis helianthoides</i></u> !!	oxeye sunflower, false sunflower	Perennial forb
<u><i>Lespedeza capitata</i></u>	round-headed bush-clover	Perennial forb
<u><i>Maianthemum racemosum</i></u> (<i>Smilacina racemosa</i>)	false Solomon's seal, false spikenard, Solomon's plume	Perennial forb
<u><i>Monarda fistulosa</i></u>	bee balm, wild bergamot	Perennial forb
<u><i>Polygonatum biflorum</i></u>	giant Solomon's seal, king Solomon's seal, smooth Solomon's seal, Solomon's seal	Perennial forb
<u><i>Rudbeckia hirta</i></u>	black-eyed Susan	Biennial/Perennial forb
<u><i>Schizachyrium scoparium</i></u>	little bluestem, broom beard grass, prairie beard grass	Perennial grass
<u><i>Symphotrichum urophyllum</i></u> * (<i>Aster sagittifolius</i>)	arrow-leaved aster, white arrowleaf aster	Perennial forb

Savannas on Rich Soils - Satellite Species

Genus species	Common Name(s)	Type
<u>Allium canadense</u>	wild garlic, meadow garlic, wild onion	Perennial forb
<u>Astragalus canadensis</u>	Canada milk vetch	Perennial forb
<u>Baptisia leucophaea</u> (<i>B. bracteata</i>)	cream wild indigo	Perennial forb
<u>Campanulastrum americanum</u> (<i>Campanula americana</i>)	native tall bellflower, American bellflower	Perennial forb
<u>Desmodium canadense</u>	Canada tick trefoil, showy tick trefoil	Perennial forb
<u>Dodecatheon meadia</u> (<i>Primula</i>)	eastern shooting star	Perennial forb
<u>Heuchera richardsonii</u>	prairie alumroot	Perennial forb
<u>Lupinus perennis</u>	wild lupine	Perennial forb
<u>Phlox pilosa</u>	prairie phlox, downy phlox	Perennial forb
<u>Polemonium reptans</u>	Jacob's ladder	Perennial forb
<u>Solidago ulmifolia</u>	elm-leaved goldenrod	Perennial forb
<u>Symphotrichum laeve</u> (<i>Aster laevis</i>)	smooth blue aster	Perennial forb
<u>Symphotrichum oolentangiense</u> (<i>Aster oolentangiensis</i> , <i>Aster azureus</i>)	sky-blue aster, azure aster	Perennial forb
<u>Tradescantia ohioensis</u>	common spiderwort, blue-jacket	Perennial forb
<u>Veronicastrum virginicum</u>	Culver's-root, Culver's-physic	Perennial forb
<u>Zizia aurea</u>	common golden Alexander	Perennial forb

Savannas on Rich Soils - Shrub and Additional Satellite Species

Genus species	Common Name(s)	Type
<u><i>Ceanothus americanus</i></u>	New Jersey tea, redroot	Perennial shrub
<u><i>Ceanothus herbaceus</i></u> (<i>C. ovatus</i>)	prairie red root, inland New Jersey tea, Jersey tea	Perennial shrub
<u><i>Corylus americana</i></u>	American hazelnut	Perennial shrub

Savannas on Rich Soils - Tree Species

Genus species	Common Name(s)	Type
<u><i>Carya ovata</i></u> *	shagbark hickory	Deciduous tree
<u><i>Celtis occidentalis</i></u> (minor component)	northern hackberry	Deciduous tree
<u><i>Prunus serotina</i></u> (minor component)	wild black cherry	Deciduous tree
<u><i>Quercus alba</i></u>	white oak	Deciduous tree
<u><i>Quercus macrocarpa</i></u>	bur oak	Deciduous tree
<u><i>Quercus rubra</i></u> (minor component)	northern red oak	Deciduous tree
<u><i>Quercus velutina</i></u> *	black oak	Deciduous tree

Savannas on Sandy Soils - Core Species

Genus species	Common Name(s)	Type
<u><i>Anemone cylindrica</i></u>	thimbleweed, long-headed anemone	Perennial forb
<u><i>Aquilegia canadensis</i></u>	wild columbine, Canadian columbine, red columbine	Perennial forb
<u><i>Asclepias tuberosa</i></u>	butterfly milkweed	Perennial forb
<u><i>Carex brevior</i></u>	fescue sedge, plains oval sedge	Perennial sedge
<u><i>Carex tonsa</i></u> *	shaved sedge	Perennial sedge
<u><i>Comandra umbellata</i></u> *	bastard toadflax, false toadflax	Perennial forb
<u><i>Coreopsis palmata</i></u>	prairie coreopsis, finger tickseed	Perennial forb
<u><i>Galium boreale</i></u>	northern bedstraw	Perennial forb
<u><i>Koeleria macrantha</i></u>	Junegrass, prairie Junegrass	Perennial grass
<u><i>Lespedeza capitata</i></u>	round-headed bush-clover	Perennial forb
<u><i>Liatris aspera</i></u>	rough blazing-star	Perennial forb
<u><i>Lupinus perennis</i></u>	wild lupine	Perennial forb
<u><i>Maianthemum racemosum</i></u> (<i>Smilacina racemosa</i>)	false Solomon's seal, false spikenard, Solomon's plume	Perennial forb
<u><i>Maianthemum stellatum</i></u> (<i>Smilacina stellata</i>)	starry false Solomon's seal, little false Solomon's seal, starflower Solomon's seal	Perennial forb
<u><i>Monarda fistulosa</i></u>	bee balm, wild bergamot	Perennial forb
<u><i>Polygonatum biflorum</i></u>	giant Solomon's seal, king Solomon's seal, smooth Solomon's seal, Solomon's seal	Perennial forb
<u><i>Rudbeckia hirta</i></u>	black-eyed Susan	Biennial/Perennial forb
<u><i>Schizachyrium scoparium</i></u>	little bluestem, broom beard grass, prairie beard grass	Perennial grass
<u><i>Tephrosia virginiana</i></u>	goat's rue, rabbit pea	Perennial forb
<u><i>Tradescantia ohiensis</i></u>	common spiderwort, blue-jacket	Perennial forb

Savannas on Sandy Soils - Satellite Species

Genus species	Common Name(s)	Type
<i>Andropogon gerardii</i>	big bluestem, turkey foot	Perennial grass
<i>Asclepias syriaca</i>	common milkweed	Perennial forb
<i>Asclepias verticillata</i>	whorled milkweed	Perennial forb
<i>Danthonia spicata</i>	poverty oats, poverty grass, poverty danthonia	Perennial grass
<i>Eragrostis spectabilis</i>	purple love grass, tumble grass	Perennial grass
<i>Euphorbia corollata</i>	flowering spurge	Perennial forb
<i>Fragaria virginiana</i>	wild strawberry, Virginia strawberry	Perennial forb
<i>Helianthus occidentalis</i>	western sunflower, naked-stemmed sunflower	Perennial forb
<i>Monarda punctata</i>	dotted horsemint	Annual/Biennial/Perennial forb
<i>Oenothera biennis</i>	common evening primrose	Biennial/Perennial forb
<i>Panicum virgatum</i>	switch grass	Perennial grass
<i>Penstemon grandiflorus</i>	large-flowered beard-tongue, large penstemon, shell-leaved penstemon	Biennial/Perennial forb
<i>Pseudognaphalium obtusifolium</i> (<i>Gnaphalium</i>)	sweet everlasting, fragrant cudweed, rabbit tobacco	Annual forb
<i>Symphotrichum oolentangiense</i> (<i>Aster oolentangiensis</i> , <i>Aster azureus</i>)	sky-blue aster, azure aster	Perennial forb
<i>Viola pedata</i> *	bird's-foot violet	Perennial forb

Savannas on Sandy Soils - Shrub and Additional Satellite Species

Genus species	Common Name(s)	Type
<u><i>Amorpha canescens</i></u>	leadplant	Perennial shrub
<u><i>Ceanothus herbaceus</i></u> (<i>C. ovatus</i>)	prairie red root, inland New Jersey tea, Jersey tea	Perennial shrub
<u><i>Comptonia peregrina</i></u>	sweet fern	Perennial shrub
<u><i>Corylus americana</i></u>	American hazelnut	Perennial shrub
<u><i>Gaylussacia baccata</i></u>	huckleberry	Perennial shrub
<u><i>Vaccinium angustifolium</i></u>	early low blueberry, low sweet blueberry, low-bush blueberry	Perennial shrub

Savannas on Sandy Soils - Tree Species

Genus species	Common Name(s)	Type
<u><i>Pinus banksiana</i></u> *	jack pine	Coniferous tree
<u><i>Quercus alba</i></u>	white oak	Deciduous tree
<u><i>Quercus ellipsoidalis</i></u> *	northern pin oak, Hill's oak	Deciduous tree
<u><i>Quercus macrocarpa</i></u>	bur oak	Deciduous tree
<u><i>Quercus rubra</i></u> (minor component)	northern red oak	Deciduous tree
<u><i>Quercus velutina</i></u> *	black oak	Deciduous tree

Southern Forests on Rich Soils - Core Species

Genus species	Common Name(s)	Type
<u><i>Adiantum pedatum</i></u>	maidenhair fern, northern maidenhair fern	Perennial fern
<u><i>Anemone quinquefolia</i></u> *	wood anemone, nightcaps	Perennial forb
<u><i>Aralia nudicaulis</i></u> *	wild sarsaparilla	Perennial forb
<u><i>Aralia racemosa</i></u>	American spikenard, life-of-man	Perennial forb
<u><i>Arisaema triphyllum</i></u>	Jack-in-the-pulpit, Indian turnip	Perennial forb
<u><i>Athyrium filix-femina</i></u>	common lady fern, lady fern, northeastern lady fern, northern lady fern	Perennial fern
<u><i>Carex arctata</i></u> *	drooping woodland sedge	Perennial sedge
<u><i>Carex blanda</i></u> *	common wood sedge, eastern wood sedge	Perennial sedge
<u><i>Carex gracillima</i></u>	graceful sedge, purple-sheathed graceful sedge	Perennial sedge
<u><i>Carex grisea</i></u> *	eastern narrow-leaved sedge, gray sedge	Perennial sedge
<u><i>Carex radiata</i></u> *	eastern star sedge, straight-styled wood sedge	Perennial sedge
<u><i>Carex rosea</i></u>	curly-styled sedge, rosy sedge, stellate sedge	Perennial sedge
<u><i>Caulophyllum thalictroides</i></u>	blue cohosh, papoose-root, squaw-root	Perennial forb
<u><i>Elymus hystrix</i></u>	bottlebrush grass, eastern bottlebrush grass, glumeless wild-rye	Perennial grass
<u><i>Fragaria virginiana</i></u>	wild strawberry, Virginia strawberry	Perennial forb
<u><i>Geranium maculatum</i></u>	wild geranium, spotted geranium, crane's-bill	Perennial forb
<u><i>Maianthemum racemosum</i></u> (<i>Smilacina racemosa</i>)	false Solomon's seal, false spikenard, Solomon's plume	Perennial forb
<u><i>Osmorhiza claytonii</i></u> *	hairy sweet cicely, bland sweet cicely, Clayton's sweet-root	Perennial forb
<u><i>Podophyllum peltatum</i></u>	Mayapple, wild mandrake	Perennial forb
<u><i>Prenanthes alba</i></u>	rattlesnake-root, lion's-foot, white-lettuce, white rattlesnake-root	Perennial forb
<u><i>Sanguinaria canadensis</i></u>	bloodroot	Perennial forb
<u><i>Solidago ulmifolia</i></u>	elm-leaved goldenrod	Perennial forb
<u><i>Symphotrichum urophyllum</i></u> * (<i>Aster sagittifolius</i>)	arrow-leaved aster, white arrowleaf aster	Perennial forb
<u><i>Thalictrum dioicum</i></u>	early meadow-rue, quicksilver-weed	Perennial forb
<u><i>Triosteum perfoliatum</i></u> *	feverwort, late horse-gentian, tinker's-weed, wild coffee	Perennial forb
<u><i>Uvularia grandiflora</i></u>	large-flowered bellwort	Perennial forb

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Southern Forests on Rich Soils - Core Species (CONTINUED)

Genus species	Common Name(s)	Type
<u><i>Viola cucullata</i></u>	marsh blue violet, blue marsh violet, hooded violet	Perennial forb
<u><i>Viola pubescens</i></u> *	yellow forest violet, yellow violet	Perennial forb

Southern Forests on Rich Soils - Satellite Species

Genus species	Common Name(s)	Type
<u><i>Actaea pachypoda</i></u>	white baneberry, doll's eyes	Perennial forb
<u><i>Anemone acutiloba</i></u> * (<i>Hepatica</i>)	sharp-lobed hepatica	Perennial forb
<u><i>Anemone virginiana</i></u>	tall anemone, tall thimbleweed	Perennial forb
<u><i>Aquilegia canadensis</i></u>	wild columbine, Canadian columbine, red columbine	Perennial forb
<u><i>Carex plantaginea</i></u> *	plantain-leaved sedge, plantain-leaved wood sedge	Perennial sedge
<u><i>Claytonia virginica</i></u> *	springbeauty, Virginia springbeauty	Perennial forb
<u><i>Enemion biternatum</i></u> * (<i>Isopyrum</i>)	false rue anemone	Perennial forb
<u><i>Hydrophyllum virginianum</i></u> *	Virginia waterleaf, John's-cabbage, Shawnee-salad	Perennial forb
<u><i>Osmunda claytoniana</i></u>	interrupted fern	Perennial fern
<u><i>Phlox divaricata</i></u>	woodland phlox, wild blue phlox, blue phlox, forest phlox, wild sweet William	Perennial forb
<u><i>Polygonatum biflorum</i></u>	giant Solomon's seal, king Solomon's seal, smooth Solomon's seal, Solomon's seal	Perennial forb
<u><i>Solidago flexicaulis</i></u>	zigzag goldenrod, broad-leaved goldenrod	Perennial forb
<u><i>Trillium grandiflorum</i></u>	big white trillium, great white trillium, large-flowered trillium, snow trillium, white trillium, white wake-robin	Perennial forb
<u><i>Veronicastrum virginicum</i></u>	Culver's-root, Culver's-physic	Perennial forb

Southern Forests on Rich Soils - Shrub and Additional Satellite Species

Genus species	Common Name(s)	Type
<u><i>Celastrus scandens</i></u>	American bittersweet, climbing bittersweet	Perennial vine
<u><i>Cornus alternifolia</i></u>	alternate-leaved dogwood, pagoda dogwood	Perennial shrub/tree
<u><i>Cornus foemina ssp racemosa</i></u> (<i>C. racemosa</i>)	gray dogwood, northern swamp dogwood, panicked dogwood	Perennial shrub
<u><i>Corylus americana</i></u>	American hazelnut	Perennial shrub
<u><i>Diervilla lonicera</i></u>	northern bush-honeysuckle	Perennial shrub
<u><i>Dioscorea villosa</i></u> *	colic-root, wild yam, yam root	Perennial vine
<u><i>Sambucus canadensis</i></u>	American elder, elderberry	Perennial shrub
<u><i>Viburnum lentago</i></u>	nannyberry, sheepberry	Perennial shrub/tree

Southern Forests on Rich Soils - Tree Species

Genus species	Common Name(s)	Type
<u><i>Acer saccharum</i></u>	sugar maple, hard maple	Deciduous tree
<u><i>Prunus pensylvanica</i></u> *	pin cherry, bird cherry, fire cherry	Deciduous tree
<u><i>Prunus serotina</i></u>	wild black cherry	Deciduous tree
<u><i>Prunus virginiana</i></u>	chokecherry	Deciduous tree
<u><i>Quercus rubra</i></u>	northern red oak	Deciduous tree
<u><i>Tilia americana</i></u> *	American basswood, American linden, basswood	Deciduous tree

Southern Forests on Dry Soils - Core Species

Genus species	Common Name(s)	Type
<u><i>Aquilegia canadensis</i></u>	wild columbine, Canadian columbine, red columbine	Perennial forb
<u><i>Athyrium filix-femina</i></u>	common lady fern, lady fern, northeastern lady fern, northern lady fern	Perennial fern
<u><i>Carex arctata</i></u> *	drooping woodland sedge	Perennial sedge
<u><i>Carex blanda</i></u> *	common wood sedge, eastern wood sedge	Perennial sedge
<u><i>Carex gracillima</i></u>	graceful sedge, purple-sheathed graceful sedge	Perennial sedge
<u><i>Carex radiata</i></u> *	eastern star sedge, straight-styled wood sedge	Perennial sedge
<u><i>Carex rosea</i></u>	curly-styled sedge, rosy sedge, stellate sedge	Perennial sedge
<u><i>Desmodium glutinosum</i></u> * (<i>Hylodesmum</i>)	cluster-leaf tick trefoil, pointed tick trefoil	Perennial forb
<u><i>Elymus villosus</i></u> *	downy wild-rye, hairy wild-rye, silky wild-rye	Perennial grass
<u><i>Eurybia macrophylla</i></u> (<i>Nonnative in SC, SW, and WC</i>)	large-leaved aster, big-leaved aster	Perennial forb
<u><i>Fragaria virginiana</i></u>	wild strawberry, Virginia strawberry	Perennial forb
<u><i>Galium boreale</i></u>	northern bedstraw	Perennial forb
<u><i>Geranium maculatum</i></u>	wild geranium, spotted geranium, crane's-bill	Perennial forb
<u><i>Maianthemum racemosum</i></u> (<i>Smilacina racemosa</i>)	false Solomon's seal, false spikenard, Solomon's plume	Perennial forb
<u><i>Maianthemum stellatum</i></u> (<i>Smilacina stellata</i>)	starry false Solomon's seal, little false Solomon's seal, starflower Solomon's seal	Perennial forb
<u><i>Osmorhiza claytonii</i></u> *	hairy sweet cicely, bland sweet cicely, Clayton's sweet-root	Perennial forb
<u><i>Polygonatum biflorum</i></u>	giant Solomon's seal, king Solomon's seal, smooth Solomon's seal, Solomon's seal	Perennial forb
<u><i>Prenanthes alba</i></u>	rattlesnake-root, lion's-foot, white-lettuce, white rattlesnake-root	Perennial forb
<u><i>Solidago flexicaulis</i></u>	zigzag goldenrod, broad-leaved goldenrod	Perennial forb
<u><i>Viola cucullata</i></u>	marsh blue violet, blue marsh violet, hooded violet	Perennial forb

Southern Forests on Dry Soils - Satellite Species

Genus species	Common Name(s)	Type
<u><i>Adiantum pedatum</i></u>	maidenhair fern, northern maidenhair fern	Perennial fern
<u><i>Anemone cylindrica</i></u>	thimbleweed, candle anemone, long-headed anemone	Perennial forb
<u><i>Anemone quinquefolia</i></u> *	wood anemone, nightcaps	Perennial forb
<u><i>Arisaema triphyllum</i></u>	Jack-in-the-pulpit, Indian turnip	Perennial forb
<u><i>Carex pensylvanica</i></u>	Pennsylvania sedge, common oak sedge	Perennial sedge
<u><i>Elymus hystrix</i></u>	bottlebrush grass, eastern bottlebrush grass, glumeless wild-rye	Perennial grass
<u><i>Euphorbia corollata</i></u>	flowering spurge	Perennial forb
<u><i>Helianthus strumosus</i></u> !!	pale-leaved woodland sunflower, rough-leaved sunflower	Perennial forb
<u><i>Podophyllum peltatum</i></u>	Mayapple, wild mandrake	Perennial forb
<u><i>Symphotrichum urophyllum</i></u> * (<i>Aster sagittifolius</i>)	arrow-leaved aster, white arrowleaf aster	Perennial forb
<u><i>Uvularia grandiflora</i></u>	large-flowered bellwort	Perennial forb
<u><i>Veronicastrum virginicum</i></u>	Culver's-root, Culver's-physic	Perennial forb

Southern Forests on Dry Soils - Shrub and Additional Satellite Species

Genus species	Common Name(s)	Type
<u><i>Celastrus scandens</i></u>	American bittersweet, climbing bittersweet	Perennial vine
<u><i>Cornus foemina ssp racemosa</i></u> (<i>C. racemosa</i>)	gray dogwood, northern swamp dogwood, panicked dogwood	Perennial shrub
<u><i>Corylus americana</i></u>	American hazelnut	Perennial shrub
<u><i>Diervilla lonicera</i></u>	northern bush-honeysuckle	Perennial shrub
<u><i>Rosa arkansana</i></u> *	dwarf prairie rose, prairie rose, sunshine rose, wild prairie rose	Perennial shrub
<u><i>Rosa carolina</i></u>	Carolina rose, pasture rose	Perennial shrub
<u><i>Sambucus canadensis</i></u>	American elder, elderberry	Perennial shrub
<u><i>Vaccinium angustifolium</i></u>	early low blueberry, low sweet blueberry, low-bush blueberry	Perennial shrub

Southern Forests on Dry Soils - Tree Species

Genus species	Common Name(s)	Type
<u><i>Prunus serotina</i></u>	wild black cherry	Deciduous tree
<u><i>Quercus alba</i></u>	white oak	Deciduous tree
<u><i>Quercus ellipsoidalis</i></u> *	northern pin oak, Hill's oak	Deciduous tree
<u><i>Quercus macrocarpa</i></u>	bur oak	Deciduous tree
<u><i>Quercus velutina</i></u> *	black oak	Deciduous tree

Northern Forests on Rich Soils - Core Species

Genus species	Common Name(s)	Type
<u><i>Adiantum pedatum</i></u>	maidenhair fern, northern maidenhair fern	Perennial fern
<u><i>Anemone quinquefolia</i></u> *	wood anemone, nightcaps	Perennial forb
<u><i>Apocynum androsaemifolium</i></u> *	spreading dogbane	Perennial forb
<u><i>Aralia nudicaulis</i></u> *	wild sarsaparilla	Perennial forb
<u><i>Carex arctata</i></u> *	drooping woodland sedge	Perennial sedge
<u><i>Carex gracillima</i></u>	graceful sedge, purple-sheathed graceful sedge	Perennial sedge
<u><i>Carex sprengei</i></u>	long-beaked sedge, Sprengel's sedge	Perennial sedge
<u><i>Cornus canadensis</i></u> *	bunchberry, bunchberry dogwood, dwarf cornel	Perennial forb
<u><i>Dryopteris intermedia</i></u> *	intermediate woodfern, fancy woodfern, glandular woodfern	Perennial fern
<u><i>Eurybia macrophylla</i></u> (Nonnative in SC, SW, and WC)	large-leaved aster, big-leaved aster	Perennial forb
<u><i>Fragaria virginiana</i></u>	wild strawberry, Virginia strawberry	Perennial forb
<u><i>Maianthemum canadense</i></u> *	Canada mayflower, Canada bead-ruby, wild lily-of-the-valley	Perennial forb
<u><i>Maianthemum racemosum</i></u> (<i>Smilacina racemosa</i>)	false Solomon's seal, false spikenard, Solomon's plume	Perennial forb
<u><i>Mitchella repens</i></u> *	partridgeberry	Perennial forb
<u><i>Prenanthes alba</i></u>	rattlesnake-root, lion's-foot, white-lettuce, white rattlesnake-root	Perennial forb
<u><i>Rubus pubescens</i></u> *	dwarf red raspberry, dwarf red blackberry	Perennial forb
<u><i>Trillium grandiflorum</i></u>	big white trillium, great white trillium, large-flowered trillium, snow trillium, white trillium, white wake-robin	Perennial forb
<u><i>Uvularia sessifolia</i></u> *	sessile bellwort, sessile-leaved bellwort, straw-lily, wild-oats	Perennial forb

Northern Forests on Rich Soils - Satellite Species

Genus species	Common Name(s)	Type
<u><i>Actaea pachypoda</i></u>	white baneberry, doll's-eyes	Perennial forb
<u><i>Aquilegia canadensis</i></u>	wild columbine, Canadian columbine, red columbine	Perennial forb
<u><i>Athyrium filix-femina</i></u>	common lady fern, lady fern, northeastern lady fern, northern lady fern	Perennial fern
<u><i>Dicentra cucullaria</i></u>	Dutchman's breeches	Perennial forb
<u><i>Geum fragarioides</i></u> * (<i>Waldsteinia</i>)	barren strawberry	Perennial forb
<u><i>Gymnocarpium dryopteris</i></u> *	common oak fern, western oak fern	Perennial fern
<u><i>Mitella diphylla</i></u>	bishop's cap, two-leaf miterwort	Perennial forb
<u><i>Osmorhiza claytonii</i></u> *	hairy sweet cicely, bland sweet cicely, Clayton's sweet-root	Perennial forb
<u><i>Uvularia grandiflora</i></u>	large-flowered bellwort	Perennial forb
<u><i>Viola cucullata</i></u>	marsh blue violet, blue marsh violet, hooded violet	Perennial forb
<u><i>Viola pubescens</i></u> *	yellow forest violet, yellow violet	Perennial forb

Northern Forests on Rich Soils - Shrub and Additional Satellite Species

Genus species	Common Name(s)	Type
<u><i>Cornus alternifolia</i></u>	alternate-leaved dogwood, pagoda dogwood	Perennial shrub/tree
<u><i>Diervilla lonicera</i></u>	northern bush-honeysuckle	Perennial shrub
<u><i>Gaultheria procumbens</i></u> *	eastern teaberry, wintergreen, checkerberry	Perennial shrub
<u><i>Hamamelis virginiana</i></u>	American witch hazel	Perennial shrub
<u><i>Sambucus racemosa</i></u> (<i>S. pubens</i>)	red elderberry, red-berried elder, scarlet elderberry	Perennial shrub
<u><i>Vaccinium angustifolium</i></u>	early low blueberry, low sweet blueberry, low-bush blueberry	Perennial shrub
<u><i>Viburnum acerifolium</i></u> *	maple-leaved viburnum, dockmackie, maple-leaved arrow-wood	Perennial shrub

Northern Forests on Rich Soils - Tree Species

Genus species	Common Name(s)	Type
<u><i>Acer rubrum</i></u>	red maple	Deciduous tree
<u><i>Acer saccharum</i></u>	sugar maple, hard maple	Deciduous tree
<u><i>Betula papyrifera</i></u>	paper birch, white birch, canoe birch	Deciduous tree
<u><i>Pinus resinosa</i></u>	red pine, Norway pine, Canadian pine	Coniferous tree
<u><i>Pinus strobus</i></u>	eastern white pine	Coniferous tree
<u><i>Quercus rubra</i></u>	northern red oak	Deciduous tree
<u><i>Tilia americana</i></u> *	American basswood, American linden, basswood	Deciduous tree
<u><i>Tsuga canadensis</i></u>	eastern hemlock, northern hemlock, hemlock	Coniferous tree

Northern Forests on Dry Soils - Core Species

Genus species	Common Name(s)	Type
<i>Anemone quinquefolia</i> *	wood anemone, nightcaps	Perennial forb
<i>Apocynum androsaemifolium</i> *	spreading dogbane	Perennial forb
<i>Aralia nudicaulis</i> *	wild sarsaparilla	Perennial forb
<i>Athyrium filix-femina</i>	common lady fern, lady fern, northeastern lady fern, northern lady fern	Perennial fern
<i>Carex pensylvanica</i> !	Pennsylvania sedge, common oak sedge	Perennial sedge
<i>Carex tonsa</i> *	shaved sedge	Perennial sedge
<i>Comandra umbellata</i> *	bastard toadflax, false toadflax	Perennial forb
<i>Danthonia spicata</i>	poverty oats, poverty grass, poverty danthonia	Perennial grass
<i>Eurybia macrophylla</i> (Nonnative in SC, SW, and WC)	large-leaved aster, big-leaved aster	Perennial forb
<i>Fragaria virginiana</i>	wild strawberry, Virginia strawberry	Perennial forb
<i>Galium boreale</i>	northern bedstraw	Perennial forb
<i>Geum fragarioides</i> * (Waldsteinia)	barren strawberry	Perennial forb
<i>Maianthemum canadense</i> *	Canada mayflower, Canada bead-ruby, wild lily-of-the-valley	Perennial forb
<i>Maianthemum racemosum</i> (<i>Smilacina racemosa</i>)	false Solomon's seal, false spikenard, Solomon's plume	Perennial forb
<i>Mitchella repens</i> *	partridgeberry	Perennial forb
<i>Rubus pubescens</i> *	dwarf red raspberry, dwarf red blackberry	Perennial forb
<i>Uvularia sessifolia</i> *	sessile bellwort, sessile-leaved bellwort, straw-lily, wild-oats	Perennial forb

Northern Forests on Dry Soils - Satellite Species

Genus species	Common Name(s)	Type
<i>Andropogon gerardii</i>	big bluestem, turkey foot	Perennial grass
<i>Aquilegia canadensis</i>	wild columbine, Canadian columbine, red columbine	Perennial forb
<i>Bromus kalmii</i> *	Arctic brome, ear-leaved brome, Kalm's brome, prairie brome	Perennial grass
<i>Cornus canadensis</i> *	bunchberry, bunchberry dogwood, dwarf cornel	Perennial forb
<i>Linnaea borealis</i> *	twinflower	Perennial forb
<i>Lysimachia quadrifolia</i> *	whorled loosestrife, whorled yellow loosestrife	Perennial forb
<i>Solidago nemoralis</i>	Dyer's-weed goldenrod, gray goldenrod, old-field goldenrod	Perennial forb
<i>Viola pedata</i> *	bird's-foot violet	Perennial forb

Northern Forests on Dry Soils - Shrub and Additional Satellite Species

Genus species	Common Name(s)	Type
<i>Arctostaphylos uva-ursi</i>	bearberry, kinnickinnick	Perennial shrub
<i>Comptonia peregrina</i>	sweet fern	Perennial shrub
<i>Corylus americana</i>	American hazelnut	Perennial shrub
<i>Corylus cornuta</i> *	beaked hazelnut	Perennial shrub
<i>Diervilla lonicera</i>	northern bush-honeysuckle	Perennial shrub
<i>Epigaea repens</i> *	trailing-arbutus	Perennial shrub
<i>Gaultheria procumbens</i> *	eastern teaberry, wintergreen, checkerberry	Perennial shrub
<i>Prunus pumila</i> *	sand cherry	Perennial shrub
<i>Rosa blanda</i>	early wild rose, meadow rose, smooth rose, wild rose	Perennial shrub
<i>Sibbaldiopsis tridentata</i> *	shrubby five-fingers, three-toothed cinquefoil	Perennial shrub
<i>Vaccinium angustifolium</i>	early low blueberry, low sweet blueberry, low-bush blueberry	Perennial shrub

Northern Forests on Dry Soils - Tree Species

Genus species	Common Name(s)	Type
<i>Acer rubrum</i>	red maple	Deciduous tree
<i>Betula papyrifera</i>	paper birch, white birch, canoe birch	Deciduous tree
<i>Pinus banksiana</i> *	jack pine	Coniferous tree
<i>Pinus resinosa</i>	red pine, Norway pine, Canadian pine	Coniferous tree
<i>Pinus strobus</i>	eastern white pine	Coniferous tree
<i>Quercus ellipsoidalis</i> *	northern pin oak, Hill's oak	Deciduous tree
<i>Quercus rubra</i>	northern red oak	Deciduous tree

Forb Species Characteristics and Habitat Preferences

Genus species	Height	Bloom	Sun	Soil	Moisture	Range
<i>Actaea pachypoda</i>	1.5'-3'	May-Jun.	☀️	Rich	Mesic	NRR
<i>Allium canadense</i>	8"-24"	May-Jun.	☀️ - ☀️	Loam	Dry↔Wet	NRR
<i>Anemone acutiloba</i> *	2"-6"	Apr.-May	☀️ - ●	Gravel-Sand-Loam	Dry↔Mesic	NRR
<i>Anemone cylindrica</i>	1'-3'	May-Jul.	☀️ - ☀️	Sand	Dry↔Mesic	NRR
<i>Anemone patens</i>	4"-16"	Mar.-May	☀️ - ☀️	Gravel-Sand	Dry↔Mesic	S, W
<i>Anemone quinquefolia</i> *	2"-8"	Apr.-Jun.	☀️ - ●	Loam	Mesic	NRR
<i>Anemone virginiana</i>	1'-3'	Jun.-Aug.	☀️	Loam	Dry↔Mesic	NRR
<i>Apocynum androsaemifolium</i> *	8"-32"	Jun.-Aug.	☀️ - ☀️	Sand-Loam	Dry↔Mesic	NRR
<i>Aquilegia canadensis</i>	1'-3'	May-Jul.	☀️ - ●	Gravel-Sand-Loam	Dry↔Mesic	NRR
<i>Aralia nudicaulis</i> *	8"-20"	May-Jun.	●	Gravel-Sand-Loam	Dry↔Mesic	NRR
<i>Aralia racemosa</i>	3'-7'	Jul.	●	Rich	Dry↔Mesic	NRR
<i>Arisaema triphyllum</i>	1'-3'	Apr.-Jun.	☀️ - ●	Sand-Loam	Mesic	NRR
<i>Artemisia campestris</i>	8"-32"	Jul.-Sep.	☀️	Sand	Dry	NRR
<i>Asclepias syriaca</i>	3'-6'	Jun.-Aug.	☀️ - ☀️	Gravel-Sand-Loam-Clay	Dry↔Wet	NRR
<i>Asclepias tuberosa</i>	1'-3'	Jun.-Aug.	☀️	Sand	Dry↔Mesic	NRR
<i>Asclepias verticillata</i>	8"-20"	Jul.-Sep.	☀️ - ☀️	Gravel-Sand-Loam	Dry	NRR
<i>Astragalus canadensis</i>	1'-4'	Jun.-Aug.	☀️ - ☀️	Sand-Loam	Dry↔Mesic	NRR
<i>Baptisia leucophaea</i>	10"-32"	Apr.-Jul.	☀️ - ☀️	Sand-Loam	Dry↔Mesic	S, C, W
<i>Brickellia eupatorioides</i>	1'-4'	Jul.-Oct.	☀️	Limy Gravel-Sand-Loam	Dry↔Mesic	S, W
<i>Campanulastrum americanum</i>	3'-6'	Jul.-Sep.	☀️ - ●	Rich Loam	Mesic	S
<i>Caulophyllum thalictroides</i>	1'-3'	Apr.-May	☀️ - ●	Rich	Mesic	NRR
<i>Cirsium discolor</i>	3'-7'	Jul.-Sep.	☀️ - ☀️	Loam-Clay	Dry↔Mesic	NRR
<i>Claytonia virginica</i> *	3"-6"	Apr.-Jun.	☀️ - ●	Rich	Mesic	NRR
<i>Comandra umbellata</i> *	4"-12"	May-Jun.	☀️ - ☀️	Gravel-Sand-Loam	Dry↔Mesic	NRR
<i>Coreopsis palmata</i>	2'-3'	Jun.-Aug.	☀️	Sand-Loam	Dry↔Mesic	NRR

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Forb Species Characteristics and Habitat Preferences (CONTINUED)

Genus species	Height	Bloom	Sun	Soil	Moisture	Range
<i>Cornus canadensis</i> *	2"-8"	May-Jul.	●	Acidic	Dry↔Mesic	NRR
<i>Dalea purpurea</i>	1'-3'	Jul.-Sep.	☀	Sand-Loam	Dry↔Mesic	NRR
<i>Desmodium canadense</i>	3'-6'	Jun.-Sep.	☀ - ☾	Sand-Loam	Dry↔Wet	NRR
<i>Desmodium glutinosum</i> *	2'-5'	Jul.-Aug.	●	Rich Loam-Clay	Dry↔Mesic	NRR
<i>Dicentra cucullaria</i>	4"-12"	Apr.-May	☾	Rich	Mesic	NRR
<i>Dodecatheon meadia</i>	8"-24"	May-Jun.	☀ - ☾	Limy	Dry↔Wet	S
<i>Enemion biternatum</i> *	4"-16"	Apr.-May	☾ - ●	Rich Loam	Mesic	NRR
<i>Euphorbia corollata</i>	12"-40"	May-Sep.	☀	Gravel-Sand-Loam	Dry↔Mesic	NRR
<i>Eurybia macrophylla</i>	1'-4'	Jul.-Sep.	☾ - ●	Loam	Dry↔Mesic	SE, C, N, NW, NE
<i>Eutrochium maculatum</i>	2'-7'	Jul.-Sep.	☀ - ☾	Sand-Loam-Clay	Wet↔Mesic	NRR
<i>Eutrochium purpureum</i>	4'-6'	Jul.-Aug.	☀ - ☾	Sand-Loam	Dry↔Mesic	S, W
<i>Fragaria virginiana</i>	4"-6"	Apr.-Jun.	☀ - ☾	Sand-Loam	Dry↔Mesic	NRR
<i>Galium boreale</i>	6"-40"	Jun.-Jul.	☀ - ☾	Loam-Clay	Wet↔Mesic	NRR
<i>Geranium maculatum</i>	12"-28"	May-Jun.	☾ - ●	Sand-Loam-Clay	Dry↔Mesic	NRR
<i>Geum fragarioides</i> *	4"-6"	Apr.-May	☾ - ●	Sand-Loam	Dry↔Mesic	NRR
<i>Geum triflorum</i>	4"-16"	Apr.-Jun.	☀	Sand-Loam	Dry↔Mesic	NRR
<i>Helianthus occidentalis</i>	2'-5'	Jul.-Sep.	☀	Gravel-Sand-Loam	Dry↔Mesic	NRR
<i>Helianthus pauciflorus</i>	1'-6.5'	Jul.-Sep.	☀	Sand-Loam	Dry↔Wet	NRR
<i>Helianthus strumosus</i> !!	2'-6'	Jul.-Sep.	☀ - ☾	Sand-Loam	Dry↔Mesic	NRR
<i>Heliopsis helianthoides</i> !!	2'-5'	Jun.-Oct.	☀	Sand-Loam	Dry↔Mesic	NRR
<i>Heuchera richardsonii</i>	1'-3'	May-Jul.	☀ - ☾	Gravel-Sand-Loam	Dry↔Mesic	NRR
<i>Hydrophyllum virginianum</i> *	6"-30"	May-Jun.	☾ - ●	Rich loam	Wet↔Mesic	NRR
<i>Lespedeza capitata</i>	2'-4'	Jul.-Oct.	☀ - ☾	Gravel-Sand-Loam	Dry↔Mesic	NRR
<i>Liatis aspera</i>	16"-48"	Jul.-Oct.	☀	Sand-Loam	Dry↔Mesic	NRR
<i>Linnaea borealis</i> *	≤ 5' long	Jun.-Aug.	☾ - ●	Acidic Sand-Loam-Clay	Dry↔Mesic	NRR
<i>Lupinus perennis</i>	8"-24"	May-Jun.	☀	Sand	Dry↔Mesic	NRR

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Forb Species Characteristics and Habitat Preferences (CONTINUED)

Genus species	Height	Bloom	Sun	Soil	Moisture	Range
<i>Lysimachia quadrifolia</i> *	1'-3'	Jun.-Jul.	☀ - ●	Acidic Sand-Loam-Clay	Dry↔Mesic	NRR
<i>Maianthemum canadense</i> *	4"-6"	May-Jun.	☀ - ●	Sand-Loam-Clay	Mesic	NRR
<i>Maianthemum racemosum</i>	16"-32"	May-Jun.	☀ - ●	Sand-Loam	Dry↔Mesic	NRR
<i>Maianthemum stellatum</i>	8"-24"	May-Jun.	☀ - ☀	Sand-Loam	Dry↔Mesic	NRR
<i>Mitchella repens</i> *	4"-12"	Jun.-Jul.	☀ - ●	Acidic Gravel-Sand	Dry↔Mesic	NRR
<i>Mitella diphylla</i>	4"-16"	May-Jun.	☀ - ☀	Rich Sand-Loam	Dry↔Mesic	NRR
<i>Monarda fistulosa</i>	2'-4'	Jun.-Sep.	☀ - ☀	Gravel-Sand-Loam	Dry↔Wet	NRR
<i>Monarda punctata</i>	6"-36"	Jun.-Sep.	☀	Gravel-Sand	Dry	NRR
<i>Oenothera biennis</i>	2'-6'	Jun.-Oct.	☀	Sand-Loam	Dry↔Mesic	NRR
<i>Osmorhiza claytonii</i> *	1'-3'	May-Jun.	●	Loam	Mesic	NRR
<i>Penstemon grandiflorus</i>	12"-40"	Jun.-Jul.	☀	Gravel-Sand	Dry	S, C, W
<i>Phlox divaricata</i>	12"-20"	Apr.-Jun.	☀	Rich Loam	Mesic	NRR
<i>Phlox pilosa</i>	6"-24"	May-Jul.	☀ - ☀	Sand-Loam	Dry↔Mesic	NRR
<i>Podophyllum peltatum</i>	1'-2'	May-Jun.	☀ - ●	Rich Loam	Mesic	NRR
<i>Polemonium reptans</i>	8"-20"	May-Jun.	☀ - ●	Rich Loam	Mesic	NRR
<i>Polygonatum biflorum</i>	1'-5'	May-Jul.	☀ - ●	Sand-Loam	Dry↔Mesic	NRR
<i>Potentilla arguta</i>	12"-40"	Jun.-Aug.	☀	Sand-Loam	Dry↔Mesic	NRR
<i>Prenanthes alba</i>	1.5'-5'	Aug.-Sep.	☀ - ●	Gravel-Sand-Loam	Dry↔Mesic	NRR
<i>Pseudognaphalium obtusifolium</i>	4"-32"	Aug.-Oct.	☀ - ☀	Sand	Dry	NRR
<i>Ratibida pinnata</i>	1.5'-4'	Jun.-Oct.	☀	Limy Sand-Loam	Wet↔Mesic	NRR
<i>Rubus pubescens</i> *	6"-20"	May-Jul.	☀ - ●	Loam-Muck-Peat	Wet	NRR
<i>Rudbeckia hirta</i>	1'-3'	Jun.-Oct.	☀ - ☀	Sand-Loam	Dry↔Wet	NRR
<i>Sanguinaria canadensis</i>	3"-6"	Apr.-May	☀ - ●	Rich Loam	Dry↔Mesic	NRR
<i>Solidago flexicaulis</i>	8"-48"	Aug.-Sep.	☀ - ●	Sand-Loam	Dry↔Mesic	NRR
<i>Solidago nemoralis</i>	4"-40"	Aug.-Oct.	☀	Gravel-Sand-Clay	Dry↔Mesic	NRR

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Forb Species Characteristics and Habitat Preferences (CONTINUED)

Genus species	Height	Bloom	Sun	Soil	Moisture	Range
<u>Solidago speciosa</u>	8"-60"	Aug.-Sep.	☀	Sand-Loam	Dry↔Mesic	NRR
<u>Solidago ulmifolia</u>	1'-5'	Jul.-Oct.	☀ - ☀	Sand-Loam	Dry↔Mesic	NRR
<u>Symphyotrichum laeve</u>	1'-3'	Jul.-Oct.	☀ - ☀	Sand-Loam	Dry↔Mesic	NRR
<u>Symphyotrichum oolentangiense</u>	2'-3'	Aug.-Oct.	☀ - ☀	Gravel-Sand-Loam	Dry↔Mesic	NRR
<u>Symphyotrichum urophyllum</u> *	1.5'-4'	Aug.-Oct.	☀ - ●	Sand-Loam	Dry↔Mesic	NRR
<u>Tephrosia virginiana</u>	8"-28"	Jun.-Jul.	☀ - ☀	Sand	Dry↔Mesic	STZ
<u>Thalictrum dioicum</u>	12"-28"	Apr.-May	☀ - ●	Sand-Loam	Dry↔Mesic	NRR
<u>Tradescantia ohiensis</u>	16"-40"	Apr.-Jul.	☀ - ☀	Sand-Loam	Dry↔Wet	NRR
<u>Trillium grandiflorum</u>	8"-16"	May-Jun.	☀ - ●	Sand-Loam-Rich	Dry↔Mesic	NRR
<u>Triosteum perfoliatum</u> *	2'-4'	May-Jun.	☀ - ☀	Gravel-Sand-Loam	Dry↔Mesic	NRR
<u>Uvularia grandiflora</u>	8"-20"	Apr.-May	☀ - ●	Rich Sand-Loam	Dry↔Mesic	NRR
<u>Uvularia sessifolia</u> *	4"-12"	Apr.-May	☀ - ●	Rich Sand-Loam	Dry↔Mesic	NRR
<u>Veronicastrum virginicum</u>	3'-6'	Jun.-Aug.	☀ - ●	Sand-Loam	Dry↔Wet	NRR
<u>Viola cucullata</u>	≤ 6"	Apr.-Jun.	☀ - ☀	Sand-Silt-Loam	Wet↔Mesic	NRR
<u>Viola pedata</u> *	≤ 4"	Apr.-Jun.	☀ - ☀	Gravel-Sand	Dry	NRR
<u>Viola pubescens</u> *	4"-18"	Apr.-Jun.	☀	Rich Sand-Loam	Dry	NRR
<u>Zizia aurea</u>	1'-2'	May-Jul.	☀	Sand-Loam	Wet↔Mesic	NRR

Fern Species Characteristics and Habitat Preferences

Genus species	Height	Bloom	Sun	Soil	Moisture	Range
<u>Adiantum pedatum</u>	6"-36"	NA	☀ - ●	Rich Loam	Mesic	NRR
<u>Athyrium filix-femina</u>	12"-40"	NA	☀ - ●	Loam	Dry↔Wet	NRR
<u>Dryopteris intermedia</u> *	14"-28"	NA	☀ - ●	Gravel-Loam	Dry↔Wet	NRR
<u>Gymnocarpium dryopteris</u> *	8"-18"	NA	☀ - ●	Acidic Gravel-Sand-Loam-Clay	Wet↔Mesic	NRR
<u>Osmunda claytoniana</u>	15"-40"	NA	☀ - ●	Rich Sand-Loam	Mesic	NRR

Grass Species Characteristics and Habitat Preferences

Genus species	Height	Bloom	Sun	Soil	Moisture	Range
<i>Andropogon gerardii</i>	3'-9'	Aug.-Oct.	☀	Sand-Loam	Dry↔Mesic	NRR
<i>Bouteloua curtipendula</i>	2'-3'	Aug.-Sep.	☀	Gravel-Sand-Loam	Dry↔Mesic	NRR
<i>Bromus kalmii</i> *	≤ 2'	Jul.	☀	Sand	Dry↔Mesic	NRR
<i>Danthonia spicata</i>	≤ 40"	Jun.-Jul.	☀ - ☀	Sand	Dry↔Mesic	NRR
<i>Elymus hystrix</i>	2'-5'	Jul.-Aug.	☀ - ●	Sand-Loam	Dry↔Mesic	NRR
<i>Elymus villosus</i> *	2.5'-3.5'	Summer	☀ - ●	Rich Loam	Dry↔Wet	NRR
<i>Eragrostis spectabilis</i>	12"-30"	Jun.-Oct.	☀	Gravel-Sand	Dry	NRR
<i>Hesperostipa spartea</i>	2'-4'	Jun.-Jul.	☀	Sand	Dry↔Mesic	NRR
<i>Koeleria macrantha</i>	10"-20"	Jun.-Jul.	☀	Sand	Dry↔Mesic	NRR
<i>Panicum virgatum</i>	3'-6'	Jul.-Oct.	☀	Sand-Loam	Dry↔Wet	NRR
<i>Schizachyrium scoparium</i>	2'-3'	Jul.-Sep.	☀ - ☀	Gravel-Sand	Dry↔Mesic	NRR
<i>Sorghastrum nutans</i>	5'-7'	Aug.-Sep.	☀	Sand-Loam	Dry↔Wet	NRR
<i>Sporobolus heterolepis</i>	2'-4'	Aug.-Sep.	☀	Sand-Loam	Dry↔Mesic	S, C, W

Sedge Species Characteristics and Habitat Preferences

Genus species	Height	Bloom	Sun	Soil	Moisture	Range
<i>Carex arctata</i> *	8"-40"	May-Jun.	☀ - ●	Rich Sand-Loam	Dry↔Mesic	NRR
<i>Carex bicknelli</i>	1.5'-2.5'	May-Jun.	☀	Sand	Dry↔Mesic	NRR
<i>Carex blanda</i> *	6"-20"	Late spring	☀ - ●	Gravel-loam-clay	Dry↔Mesic	NRR
<i>Carex brevior</i>	6"-10"	Jun.-Jul.	☀ - ●	Sand	Dry↔Mesic	NRR
<i>Carex cephalophora</i>	1'-2'	Mid-spring-Early summer	☀ - ☀	Gravel-Sand-Loam-Clay	Dry↔Mesic	NRR
<i>Carex gracillima</i>	8"-36"	May-Jun.	☀ - ●	Gravel-Sand-Loam	Wet↔Mesic	NRR
<i>Carex grisea</i> *	1.25'-2'	Late spring	☀ - ●	Loam	Mesic	NRR
<i>Carex meadii</i> *	0.5'-1.25'	Apr.-May	☀ - ☀	Gravel-Sand-Loam	Dry↔Mesic	NRR
<i>Carex muehlenbergii</i>	12"-33"	Late spring-Early summer	☀ - ☀	Sand	Dry	NRR
<i>Carex pennsylvanica!</i>	6"-12"	Apr.-May	☀ - ●	Gravel-Sand-Loam	Dry↔Mesic	NRR
<i>Carex plantaginea</i> *	0.5'-2'	Mid-spring	☀ - ●	Rich	Mesic	NRR
<i>Carex radiata</i> *	≤ 1'	Late spring	☀ - ●	Rich	Mesic	NRR
<i>Carex rosea</i>	10-12"	Jun.	☀ - ●	Sand-Loam	Mesic	NRR
<i>Carex sprengellii</i>	1'-3'	May-Jun.	☀ - ●	Sand-Loam-Clay	Dry↔Mesic	NRR
<i>Carex stipata</i>	1.5'-3'	Jun.	☀ - ☀	Sand-Loam-Clay	Mesic	NRR
<i>Carex tonsa</i> *	≤ 5"	Apr.	☀	Acidic Sand	Dry	NRR
<i>Carex vulpinoidea</i>	≤ 3'	Late spring-Early summer	☀	Gravel-Loam-Silt-Clay	Wet	NRR
<i>Cyperus schweinitzii</i> *	≤ 1'	Jun.-Sep.	☀	Sand	Dry	NRR

Vine Species Characteristics and Habitat Preferences

Genus species	Height	Bloom	Sun	Soil	Moisture	Range
<i>Celastrus scandens</i>	≤ 30'	May-Jun.	☀ - ☀	Gravel-Sand-Loam	Dry↔Mesic	NRR
<i>Dioscorea villosa</i> *	≤ 18'	May-Aug.	☀ - ☀	Gravel-Sand-Loam-Clay	Dry↔Mesic	NRR

Shrub Species Characteristics and Habitat Preferences

Genus species	Height	Bloom	Sun	Soil	Moisture	Range
<i>Amorpha canescens</i>	8"-40"	May-Sep.	☀	Gravel-Sand-Loam	Dry↔Mesic	NRR
<i>Arctostaphylos uva-ursi</i>	2"-6"	May-Jun.	☀	Gravel-Sand	Mesic	NRR
<i>Ceanothus americanus</i>	1'-3'	Jun.-Aug.	☀ - ☀	Gravel-Sand-Loam	Dry↔Mesic	NRR
<i>Ceanothus herbaceus</i>	≤ 40"	May-Jul.	☀ - ☀	Gravel-Sand	Dry	NRR
<i>Comptonia peregrina</i>	2'-4'	May-Jun.	☀ - ☀	Acidic Gravel-Sand	Dry	C, N
<i>Cornus alternifolia</i>	≤ 30'	May-Jun.	☀	Acidic Loam	Mesic	NRR
<i>Cornus foemina ssp racemosa</i>	6'-15'	May-Jun.	☀ - ☀	Gravel-Sand-Loam	Mesic	NRR
<i>Corylus americana</i>	≤ 11'	Apr.-May	☀ - ●	Gravel-Sand-Loam	Dry↔Mesic	NRR
<i>Corylus cornuta</i> *	≤ 16'	Apr.-May	☀ - ☀	Sand-Loam	Dry↔Mesic	NRR
<i>Diervilla lonicera</i>	6"-36"	Jun.-Jul.	☀ - ●	Gravel-Sand	Dry↔Mesic	NRR
<i>Epigaea repens</i> *	1"-3"	Mar.-May	☀ - ●	Acidic Gravel-Sand	Dry↔Mesic	NRR
<i>Gaultheria procumbens</i> *	≤ 8"	Jul.-Aug.	●	Acidic Sand	Dry↔Mesic	NRR
<i>Gaylussacia baccata</i>	1'-3'	May-Jun.	☀ - ●	Acidic Gravel-Sand	Dry	NRR
<i>Hamamelis virginiana</i>	≤ 20'	Fall	☀	Sand-Loam	Mesic	NRR
<i>Opuntia macrorhiza</i>	2"-8"	May-Jul.	☀	Sand	Dry	NRR
<i>Prunus pumila</i> *	1'-6'	May-Jul.	☀	Gravel-Sand	Dry	NRR
<i>Rosa arkansana</i> *	< 40"	Jun.-Sep.	☀	Gravel Sand	Dry↔Mesic	NRR
<i>Rosa blanda</i>	3'-4'	May-Aug.	☀ - ☀	Sand-Loam	Dry↔Mesic	NRR
<i>Rosa carolina</i>	0.5'-4'	May-Sep.	☀ - ☀	Sand-Loam-Rich	Dry↔Mesic	NRR
<i>Sambucus canadensis</i>	4'-13'	May-Jun.	☀ - ☀	Loam	Mesic	NRR
<i>Sambucus racemosa</i>	3'-14'	Apr.-Jun.	☀ - ●	Gravel-Sand-Loam	Mesic	NRR
<i>Sibbaldiopsis tridentata</i> *	4"-12"	Jun.-Aug.	☀	Gravel-Sand	Dry	NRR
<i>Vaccinium angustifolium</i>	2"-14"	May-Jun.	☀ - ●	Acidic Gravel-Sand	Dry↔Mesic	NRR
<i>Viburnum acerifolium</i> *	2'-6'	Late spring-Mid-summer	☀	Acidic Gravel-Sand	Dry↔Mesic	NRR
<i>Viburnum lentago</i>	≤ 25'	Late spring	☀	Loam	Mesic	NRR

Tree Species Characteristics and Habitat Preferences

Genus species	Height	Bloom	Sun	Soil	Moisture	Range
<i>Acer rubrum</i>	≤ 135'	Mar.-May	☀ - ●	Sand-Loam-Clay	Dry↔Wet	NRR
<i>Acer saccharum</i>	≤ 150'	Apr.-May	☀ - ●	Rich Loam	Mesic	NRR
<i>Betula papyrifera</i>	≤ 65'	Apr.-May	☀ - ☀	Sand-Loam	Dry↔Mesic	NRR
<i>Carya ovata</i> *	60'-100'	May-Jun.	☀ - ☀	Gravel-Sand-Loam	Dry↔Mesic	NRR
<i>Celtis occidentalis</i>	40'-60'	Mar.-May	☀ - ☀	Sand-Loam	Mesic	NRR
<i>Pinus banksiana</i> *	15'-40'	May-Jun.	☀	Sand	Dry	NRR
<i>Pinus resinosa</i>	50'-80'	June	☀	Sand	Dry↔Mesic	NRR
<i>Pinus strobus</i>	80'-110'	June	☀	Gravel-Sand	Dry↔Mesic	NRR
<i>Prunus pensylvanica</i> *	20'-35'	May-Jun.	☀ - ●	Sand	Dry↔Mesic	NRR
<i>Prunus serotina</i>	50'-100'	May-Jun.	☀ - ●	Sand-Loam	Mesic	NRR
<i>Prunus virginiana</i>	10'-25'	May-Jun.	☀ - ●	Gravel-Sand-Loam-Silt-Clay	Dry↔Mesic	NRR
<i>Quercus alba</i>	≤ 80'	Spring	☀	Gravel-Sand-Loam	Dry↔Mesic	NRR
<i>Quercus ellipsoidalis</i> *	≤ 65'	May	☀ - ☀	Sand-Loam	Dry	NRR
<i>Quercus macrocarpa</i>	≤ 98'	Early spring	☀	Gravel-Sand-Loam-Clay	Dry↔Mesic	NRR
<i>Quercus rubra</i>	60'-80'	May	☀	Sand-Loam	Dry↔Mesic	NRR
<i>Quercus velutina</i> *	≤ 80'	May	☀	Sand	Dry	NRR
<i>Tilia americana</i> *	≤ 120'	Early summer	☀ - ●	Rich Sand-Loam-Clay	Mesic	NRR
<i>Tsuga canadensis</i>	60'-70'	Spring	☀ - ●	Acidic Gravel-Loam-Clay	Mesic	NRR

Additional Native Plant Resources

General

Wisconsin's Natural Communities (Wisconsin DNR website) <http://dnr.wi.gov/topic/endangeredresources/communities.asp>
Vegetation of Wisconsin in the Mid-1800s (Finley 1976) (Wisconsin DNR map) http://dnr.wi.gov/topic/landscapes/documents/statemaps/map_s2_finley.pdf
"Native Plant Nurseries in Wisconsin" (Wisconsin DNR publication) <http://dnr.wi.gov/files/PDF/pubs/ER/ER0698.pdf>
"Restoration Consultants in Wisconsin" (Wisconsin DNR publication) <http://dnr.wi.gov/files/pdf/pubs/er/er0699.pdf>
Flora of Wisconsin: Consortium of Wisconsin Herbaria (Wisconsin State Herbarium website) <http://wisflora.herbarium.wisc.edu/>
Wild Ones Native Plants, Natural Landscapes (Wild Ones Natural Landscapers Ltd website) <http://www.wildones.org/>
"Management of Wisconsin Soils" (UW Extension publication) <http://learningstore.uwex.edu/Assets/pdfs/A3588.pdf>

Ornamental Landscapes and Rain Gardens

"Wild Ones Handbook: Landscaping with Native Plants" Fourth Edition (Wild Ones and U.S. EPA publication) https://archive.epa.gov/greenacres/web/pdf/wo_2004b.pdf
"Rain Gardens: A How-to Manual for Homeowners" (Wisconsin DNR and UW-Extension publication) <http://dnr.wi.gov/topic/shorelandzoning/documents/rgmanual.pdf>

Natural Area Restorations

"Plant Species Composition of Wisconsin Prairies: An Aid to Selecting Species for Plantings and Restorations Based Upon University of Wisconsin - Madison Plant Ecology Laboratory Data" (Wisconsin DNR publication) <http://dnr.wi.gov/files/PDF/pubs/ss/SS0188.pdf>
"Prairie Primer" (UW-Extension publication) <http://learningstore.uwex.edu/Assets/pdfs/G2736.pdf>
"Creating a Forest: A Step-by-Step Guide to Planting & Maintaining Trees" (Wisconsin DNR publication) <http://dnr.wi.gov/topic/forestmanagement/documents/pub/fr-426.pdf>
"The Tallgrass Restoration Handbook for Prairies, Savannas, and Woodlands," by Stephen Packard and Cornelia F. Mutel of the Society for Ecological Restoration. Island Press: Washington D.C., 1997
"Prairie Seedling and Seedling Evaluation Guide" (Stantec and Iowa DOT publication) <https://secure.iowadot.gov/Irtf/docs/PrairieSeedlingGuide.pdf>

Invasive Plant Control

Working List of Invasive Plants of Wisconsin (Invasive Plants Association of Wisconsin website) <http://ipaw.org/TheProblem/IPAWsPlantList.aspx>
"Invasive Plants of the Upper Midwest: An Illustrated Guide to their Identification and Control," by Elizabeth J. Czarapata. The University of Wisconsin Press: Madison, WI. 2005

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Additional Native Plant Resources (CONTINUED)

Native Plants for Birds, Insects and Other Wildlife

- “Beyond the Birdfeeder: Creating a Bird-Friendly Yard with Native Wisconsin Plants” (Wisconsin Society for Ornithology publication) <http://www.wildones.org/wp-content/uploads/2011/12/birdsc-brochure-2013-02.pdf>
- “Birdscaping in the Midwest: A Guide to Gardening with Native Plants to Attract Birds,” by Mariette Nowak. The University of Wisconsin Press: Madison, WI. 2012.
- “Native Caterpillars, Moths and Butterflies and Host Native Woodies” (Wild Ones publication) <http://www.wildones.org/wp-content/uploads/2011/12/Caterpillars-Moths-and-Butterflies.pdf>
- “Supporting Native Bees: Our Essential Pollinators” (UW-Extension publication) <http://fyi.uwex.edu/sewmg/files/2011/02/UW-Native-bees-2.pdf>
- “Pollinator Plants: Great Lakes Region” (The Xerces Society publication) http://www.xerces.org/wp-content/uploads/2014/03/GreatLakesPlantList_web.pdf
- “Attracting Native Pollinators: Protecting North America’s Bees and Butterflies,” by the Eric Mader, Matthew Shepherd, Mace Vaughan, Scott Hoffman Black and Gretchen LeBuhn of The Xerces Society. Storey Publishing: North Adams, MA. 2011.
- “Wildlife and Your Land Series” (Wisconsin DNR and UW-Extension publication) <http://dnr.wi.gov/topic/wildlifehabitat/yourland.html>

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- Soil Science Society of America. *Online Glossary of Soil Science Terms*. <https://www.soils.org/publications/soils-glossary>
- Wild Ones Natural Landscapers Ltd. *Wild Ones Native Plants, Natural Landscapes*. <http://www.wildones.org/>
- Wisconsin Department of Natural Resources - Division of Forestry. *Wisconsin Forest Management Guidelines*. <http://dnr.wi.gov/topic/ForestManagement/guidelines.html>
- Wisconsin State Herbarium. *Flora of Wisconsin: Consortium of Wisconsin Herbaria*. <http://wisflora.herbarium.wisc.edu/>