Some Native Wisconsin Plants Found Under the Canopy of Oaks[1] that are Periodically Burned (or at least periodically brushed out and the leaf litter removed)

Species most often associated with the full sun of prairie that can also tolerate partial to light shading of oaks:

Amorpha canescens	Leadplant
Anemone patens	Pasque flower
Andropogon gerardii	Big bluestem
Asclepias amplexicaulis	Blunt-leaved milkweed
Asclepias incarnata*	Swamp milkweed
Asclepias tuberosa	Butterfly weed
Aster azureus (oolentangiensis)	Sky-blue aster
Aster laevis	Smooth aster
Baptisia bracteata (leucophaea)	Cream wild indigo
Baptisia lactea (leucantha)	White wild indigo
Bromus kalmii	Prairie brome
Cacalia tuberosa (plantaginea)	Tuberous Indian plantain
Calamagrostis canadensis*	Bluejoint grass
Campanula rotundifolia	Harebells
Coreopsis palmata	Prairie tickseed
Elymus canadensis	Canada wild rye
Eupatorium perfoliatum*	Common boneset
Euphorbia corollata	Flowering spurge
Helianthus occidentalis	Western sunflower
Liatris aspera	Rough blazingstar
Lilium michiganense*	Turk's cap lily
Lithospermum canescens	Hoary puccoon
Silphium perfoliatum*	Cupplant
Sporobolus heterolepis	Prairie dropseed
Stipa spartea	Needlegrass
Thalictrum dasycarpum*	Meadow rue

Species associated with the full sun of prairie that also do well, or even better, under partial to light shading of oaks:

Allium canadense	Wild garlic
Antennaria neglecta	Pussytoes
Antennaria plantaginifolia	Plaintain-leaved pussytoes
Apocynum androsaemifolium	Spreading dogbane
Aster linariifolius	Flax-leaved aster
Aster simplex (lanceolatus)*	Panicled aster

Astragalus canadensis	Canadian milkvetch
Blephilia ciliata*	Ohio horse-mint
Cacalia atriplicifolia*	Pale Indian-plantain
Camassia scilloides*	Wild hyacinth
Cassia (Chamaecrista) fasiculata	Partridge pea
Castilleja coccinea*	Indian paintbrush
Ceanothus americanus	New Jersey tea
Comandra umbellata	False toadflax
Desmodium canadensis*	Showy tick-trefoil
Dodecatheon meadia	Shooting star
Elymus trachycaulus	Slender wheatgrass
Fragaria virginiana	Wild strawberry
Galium boreale*	Northern bedstraw
Gentiana alba	Cream gentian
Gentianella quinquefolia	Stiff gentian
Heuchera richardsonii	Prairie alum-root
Houstonia (Hedyotis) caerulea*	Bluets
Houstonia (Hedyotis) longifolia	Long-leaved bluets
Hypoxis hirsuta	Yellow stargrass
Lilium philadelphicum	Wood (prairie) lily
Lobelia spicata	Pale spiked lobelia
Monarda fistulosa	Wild bergamot
Oxalis violacea	Violet wood-sorrel
Pedicularis canadensis	Wood betony
Phlox pilosa	Prairie phlox
Polemonium reptans*	Jacob's ladder
Polygala sanguinea	Field milkwort
Polygala senega	Seneca snakeroot
Ranunculus fascicularis	Early buttercup
Ranunculus hispida (septentrionalis)*	Swamp buttercup
Rosa spp.	Prairie rose
Salix humilis	Upland prairie willow
Saxifraga pensylvanica*	Swamp saxifrage
Tephrosia virginiana	Goat's rue
Tradescantia ohiensis	Spiderwort
Veronicastrum virginicum*	Culver's root
Viola pedata	Bird's-foot violet
Zizia aurea*	Golden Alexander

Species that may be best suited to the partial to light shading of oaks (i.e., possible savanna specialists):

Anemone virginiana	Tall (woodland) thimbleweed
Asclepias purpurascens	Purple milkweed
Aureolaria grandiflora	Giant false-foxglove

Aureolaria pedicularia	Clammy false-foxglove
Besseya bullii	Kitten tails
Carex foenea	Sedge
Carex molesta	Sedge
Carex pensylvanica	Sedge
Erigeron pulchellus	Robin's plantain
Eupatorium sessilifolium	Woodland boneset
Helianthemum bicknellii	Frostweed
Helianthemum canadense	Frostweed
Helianthus strumosus	Woodland sunflower
Heliopsis helianthoides	False sunflower (oy-eye)
Hieracium kalmii (canadense)	Canada hawkweed
Hieracium scabrum	Sticky hawkweed
Krigia biflora*	False dandelion
Lathyrus venosus*	Veiny pea
Lespedeza violacea	Violet bush-clover
Lupinus perennis	Wild lupine
Lysimachia ciliata	Fringed loosestrife
Lysimachia lanceolata	Lance-leaved loosestrife
Phryma leptostachya	Loopseed
Ranunculus rhomboideus	Prairie buttercup
Silene stellata	Starry campion
Smilacina stellata	Starry false Solomon's-seal
Taenidia integerrima	Yellow pimpernel
Thaspium trifoliatum	Meadow parsnip
Triosteum perfoliatum	Early horse-gentian
Viola sagittata	Arrow-leaved violet
Zigadenus elegans	White camas lily

Species associated with closed canopy woodland/forest that seem to do best under oak that is mostly free of heavy understory shrub and tree sapling layers and has minimal leaf litter build up (i.e., is periodically burned) (possible open oak woodland specialists):

Agastache nepetoides	Yellow giant hyssop
Agastache scrophulariaefolia	Purple giant hyssop
Agrimonia gryposepala	Tall agrimony
Agrimonia pubescens	Downy agrimony
Anemone quinquefolia	Wood anemone
Aquilegia canadensis	Wild columbine
Arenaria lateriflora*	Wood sandwort
Asclepias exaltata	Poke (woodland) milkweed
Aster drummondii	Hairy heart-leaved aster
Aster lateriflorus	Goblet (calico) aster
Aster sagittifolius (urophyllus)	Arrow-leaved aster

Aster shortii	Blue heart-leaved aster
Botrychium virgianum	Rattlesnake fern
Bromus altissimus (latiglumis)	Tall woodland brome-grass
Bromus pubescens	Woodland brome-grass
Campanula americana	Tall bellflower
Cacalia muhlenbergii	Great Indian-plantain
Carex blanda	Sedge
Carex cephalophora	Sedge
Carex convoluta (rosea)	Sedge
Carex gracillima	Sedge
Carex normalis	Sedge
Cinna arundinacea	Common woodreed
Cirsium altissimum	Woodland thistle
Cypripedium pubescens	Large yellow lady-slipper
Desmodium cuspidatum	Big (bracted) tick-trefoil
Desmodium glutinosum	Pointed-leaved tick-trefoil
Desmodium perplexum (glabellum, paniculatum)	Panicled (smooth) tick-trefoil
Elymus hystrix	Bottlebrush grass
Elymus riparius*	Streambank wild rye
Elymus villosus	Downy wild rye
Elymus virginicus*	Virginia wild rye
Eupatorium purpureum	Purple Joe-pye-weed
Galium circaezans	Forest bedstraw (wild licorice)
Galium concinnum	Shinning bedstraw
Geranium maculatum	Wild geranium
Habenaria (Platanthera) viridus	Green bracted orchid
Heracleum maximum (lanatum) *	Cow-parsnip
Lactuca biennis	Tall blue lettuce
Lactuca floridana	Woodland lettuce
Liparius lilifolia	Lilly-leaved twayblade
Lysimachia quadrifolia	Whorled loosestrife
Oryzopsis racemosa	Blackseed ricegrass
Panicum latifolium	Woodland panicum grass
Polygonatum biflorum	Smooth Solomon’s seal
Potentilla simplex	Common cinquefoil
Prenanthes alba	Lion’s foot
Pyrola elliptica	Elliptic shinleaf
Rudbeckia laciniata*	Wild golden-glow
Scrophularia lanceolata	Early figwort
Scrophularia marilandica	Late figwort
Smilacina racemosa	False Solomon’s seal
Solidago hispida	Hairy goldenrod
Solidago ulmifolia	Elm-leaved goldenrod
Triosteum aurantiacum	Red-fruited (late) horse-gentian

[1]Primarily bur oak, white oak, black oak, and swamp white oak. Less so red oak, which tends to cast a heavier shade than the other oak species.

*These are species commonly associated with wet to moist sites in full to partial sunlight (many are classified as modal to wet or wet-mesic prairie in Curtis' Vegetation of Wisconsin), but they also seem to grow just fine on well drained, upland soils when under the shade of oaks. The light shading that oaks provide seems to modify the growing conditions enough to allow these "moist-soil" species to compete successfully in the upland environment. On the other hand they may be species that are actually best adapted to light shade conditions, and they venture out into the desiccating environment of full sunlight only when there is ample water available.

This list is based upon the recollections of field observations made by Rich Henderson over a 25-year period. It is not the product of quantitative research or documented observations. Future investigations and observations of others will likely add many more species to the lists and alter the placement of species within the categories.

Rich Henderson, DNR Science Services
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