# LANDSCAPING AT MATTHAEI FARM

Revised: March 27, 2023

**MATTHAEI FARM**
**A DISTINCTIVE WAY OF LIVING**

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# 1. Introduction

Matthaei Farm was founded with a commitment to building homes in harmony with the contours of the land and preserving the natural landscape, forests, and trails for all to enjoy. This commitment is reflected in a plan that clusters individual home sites together, preserving relatively large areas of open natural space as common areas, rather than using a conventional subdivision design. With the exception of those areas established for recreational purposes (e.g. the Pond House, tennis court, nature trails, Big Valley Pond, Nature Pond, and Pond House Pond), the common areas are to remain undisturbed so as to preserve their natural beauty and to sustain wildlife.

In this, as in all phases of life at Matthaei Farm, co-owners have a critical role to play. By designing and maintaining their individual home sites in ways that blend with and enhance the natural surroundings, co-owners are partners in maintaining Matthaei Farm as "a distinctive way of living."

The Landscape Standards described herein were developed by the Landscape Committee to educate and assist co-owners in making decisions about landscape design, plant selection, and ongoing maintenance that preserve and enhance our natural surroundings by promoting a natural landscaping aesthetic throughout the development. They strike a balance between preserving the natural beauty of Matthaei Farm by using sound environmental practices on the one hand and respecting the preferences of co-owners on the other. When landscaping issues arise, co-owners are encouraged to contact the Committee Chair, currently Linda Haywood (birdaa@comcast.net) or the President of the MFCA Board.

# 2. Purpose and Scope

Owning a home at Matthaei Farm is different from owning a home on a city lot or in a traditional subdivision. Here we are governed by state statute, by Superior Township ordinances, by the terms of the Master Deed, and by the Matthaei Farm Condominium Association (MFCA) Bylaws. The administration of the "rules of the road" identified in these documents is the responsibility of the MFCA Board. As part of that responsibility, the Board is charged with ensuring the appropriate use and conservation of the land and water resources throughout Matthaei Farm and with guiding the community in the preservation of green areas, open space, and locally endangered species of flora and fauna, avoiding to the extent possible any damage to the natural environment and ecology.

To meet its obligations under Article VI, Section 12 of the Matthaei Farm Bylaws, the MFCA Board has established a Landscape Committee and a Landscape Plan Review Process to assist co-owners in landscape design, implementation, and maintenance. No landscaping, whether for a new home or for subsequent re-landscaping of an existing home, should be undertaken without submitting plans to the Landscape Committee and receiving approval from the MFCA Board of Directors. (For further details, see Section 4 – Matthaei Farm Landscape Plan Review.)

# 3. Matthaei Farm Landscape Standards

## 3.1 Philosophy

In keeping with its commitment to preserving and enhancing the natural environment, the MFCA Board has endorsed the principle of natural landscaping, defined as using native plants, trees, shrubs, groundcovers, and grasses that are indigenous to the local geographic area in order to provide the beneficial natural functions that are often lost through cultivation of conventional lawns. Because native plants have adapted and evolved over thousands of years to local soils, climate, geography, and hydrology, they should not require pesticides, fertilizers, or watering to maintain. Further, native plants suit today's interest in low-maintenance gardening and landscaping, with many species vigorous, hardy, and able to survive winter cold and summer heat. While not maintenance free, natural landscaping requires less time and money for ongoing maintenance than conventional landscapes. Once established, they typically flourish without irrigation or fertilization, and are resistant to most pests and diseases.

## 3.2 Plant, Shrub, and Tree Selection

The options available to native landscapers are many and varied. Wildflowers and native grasses are an excellent choice in place of formal lawns. Plants that provide habitats and food for birds, butterflies, dragonflies, and other

indigenous fauna also are recommended. Plants that are resistant to drought, disease, and deer will require less maintenance.

When planning landscape projects, co-owners are strongly encouraged to consult one of several local landscaping companies that specialize in native landscape design and plants. Those wishing to learn more about the ins and outs of native landscaping can avail themselves of a number of excellent books and online resources. See Appendix A for a list of useful resources.

In addition, the Lady Bird Johnson Wildflower Center at the University of Texas maintains a searchable database of native plants recommended for each state. The site allows you to search by a variety of plan features including color, height, and soil and sunlight requirements.

The full list of plants recommended for Michigan is included as Appendix C.

When selecting native plants co-owners should be sure to distinguish between true natives versus nativars. Nativars are less desirable than native species; they are cultivars of a native species and the result of artificial selections aimed at exaggerating positive traits. As a result, they may be less attractive to birds and insects, require greater care, and do not propagate.

If non-natives are selected, they should be non-invasive, compatible with the indigenous plant community, arranged informally in curved beds to create a natural look, and installed close to the house rather than near the edge of the lot where they might easily escape to a neighbor's lot or common area. Where conventional turf grass is used, it, too, should be limited to the immediate area around the house.

### 3.3 Invasive Species

Invasive species pose the most significant threat to the natural beauty of Matthaei Farm. An invasive species is a plant that is both non-native to the geographic area and able to establish on many sites, grow quickly, and spread to the point of disrupting native plant communities and ecosystems. Of particular concern at Matthaei Farm are well-established non-natives that are crowding out native plants and dominating in many areas. In keeping with the recommendation of the City of Ann Arbor's Natural Area Preservation Department, these and other invasives should not be deliberately planted at Matthaei Farm and, when feasible, removed. In addition, co-owners are responsible for ensuring that any invasive species on their property do not spread to nearby co-owner lots or to common areas.

The main species of concern fall into three groups:

Vines and groundcover species:

- Japanese honeysuckle (Lonicera japonica)
- Myrtle, or periwinkle (Vinca minor)
- Oriental bittersweet (Celastrus orbiculatus)
- Purple winter creeper (Euonymus fortunei)

Herbaceous species:

- Narrowleaf Bittercress (Cardamine impatiens)
- Canada thistle (Cirsium arvense)
- Common motherwort (Leonurus cardiaca)
- Dame's rocket (Hesperis matronalis)
- Garlic mustard (Alliaria petiolata)
- Golden archangel (Lamiastrum galeobdolon)
- Japanese knotweed (Polygonum cuspidatum); see also https://mnfi.anr.msu.edu/invasive-species/JapaneseKnotweedBCP.pdf
- Lily-of-the-valley (Convallaria majalis)
- Phragmites (phragmites australis)
- Purple loosestrife (Lythrum salicaria)

- Spotted knapweed (Centaurea maculosa)

Trees and shrub species:

- Autumn olive (Elaeagnus umbellata); see also https://mnfi.anr.msu.edu/invasive-species/AutumnOliveBCP.pdf
- Black locust (Robinia pseudoacacia); see also https://mnfi.anr.msu.edu/invasive-species/BlackLocustBCP.pdf
- Common buckthorn (Rhamnus cathartica); see also https://mnfi.anr.msu.edu/invasive-species/CommonBuckthornBCP.pdf
- Glossy buckthorn (Rhamnus frangula); see also https://mnfi.anr.msu.edu/invasive-species/GlossyBuckthornBCP.pdf
- Honeysuckle (Lonicera spp.)
- Japanese barberry (Berberis thunbergil)
- Multiflora rose (Rosa multiflora)
- Norway maple (Acer platanoides)
- Siberian elm (Ulmus pumila)
- Tree-of-heaven (Ailanthus altissima)

The above list is a small but important subset of the invasive species of concern both at Matthaei Farm and in the Ann Arbor area. The City of Ann Arbor maintains a more comprehensive list that can be found here.

Not all non-native species are invasive. When considering a non-native species, co-owners should first determine whether the species is invasive. The resources listed above can be helpful. When in doubt, consult the Landscape Committee Chair.

Many plants that are known to be invasive nonetheless are commercially available as they often do extremely well in a variety of growing conditions. Do not assume that nurseries are always aware and forthcoming about the risks associated with individual species.

### 3.4 Invasive Control

By their very nature, invasive species are difficult to control and a key reason why they should never be deliberately planted. Once established, their extensive seed banks and root systems sustain them from season to season and so a multi-year approach generally is required. Wind, birds, mammals, insects, and even people and pets can carry the seeds far and wide.

Methods to eradicate or control invasives vary depending on the species. Co-owners are encouraged to use an integrated management approach that involves a combination of methods including hand pulling, cutting, burning, and careful use of herbicides.

In 2000, PlantWise conducted an ecological assessment of the common areas of Matthaei Farm. The study identified numerous invasive species and recommended techniques for controlling and/or eliminating some of the most common. Since most of these are also found on co-owners' lots, the specific control techniques recommended for each species described are also applicable to individual home sites. See Appendix B.

### 3.5 Fertilizers, Herbicides, and Insecticides

Co-owners should restrict their use of fertilizers, herbicides, and insecticides to the maximum extent possible. While their use can damage the environment in many different ways, the Board is especially concerned with the potential impact on our streams, ponds, and, eventually, the groundwater that feeds our wells. The most effective way to protect our well water is to use **NO CHEMICALS**.

A common residential use of chemicals is to support turf grass lawns. A number of online resources are available to help co-owners maintain a healthy, environmentally-friendly lawn. They include The Michigan Green Industry Association and the Michigan State Turf Grass Science website. The Southeastern Oakland Country Water Authority has summarized best practices in their pamphlet, Healthy Lawn Care Tips.

### 3.5.1 Fertilizers

Fertilizers are chemically prepared mixtures of nitrogen (to promote leaf development and root growth), phosphorus (to stimulate root growth and flower development), and potassium (for overall vigor and stem strength). Their most common residential use is turf grass lawns. Their capacity to contaminate streams, ponds, and groundwater is well documented.

The Board recommends several strategies to reduce these potential harmful effects:

- Minimize the size of the lawn using native grasses and wildflowers, which do not require fertilization or frequent watering to thrive.
- Only use fertilizers that contain no phosphates, slow-release nitrogen, and no pesticides. The Michigan Fertilizer Act prohibits the use of phosphorus fertilizers for home lawns except under very limited conditions.
- Avoid "weed and feed" products.
- Only fertilize once a year in the late summer when lawns need the nutrients the most.
- Do not fertilize within 50 feet of a stream or pond. The MFCA Bylaws specifically state that, "*no landscaping will be allowed along the rear of the units bordering Fleming Creek or that portion lying within the flood plain, and no spraying of insecticides or use of fertilizer shall occur within the flood plain.*"
- Never fertilize before a rainstorm.
- When fertilizing trees, always use sub soil fertilization, which injects the fertilizer into the ground, reducing the potential for runoff.

### 3.5.2 Herbicide*s*

Herbicides are chemical agents used to destroy or inhibit plant growth. Their use is sometimes appropriate on some invasive species. However, they should only be used to treat individual stems or stumps of unwanted species and never be sprayed in either granular or liquid form across a wide area.

The most commonly used herbicide for controlling invasive species is glyphosate (Roundup or Rodeo). When used it should be applied only in the recommended dilutions and consistent with the procedure described in Appendix B.

### 3.5.3 Insecticides

Insecticides are chemical agents used to manage an insect pest population. While they can contribute to plant health and to public health (in the case of disease carrying pests), they also can harm beneficial insects as well as harmful ones.

A prime example of unintended harm to beneficial insects is the dramatic decline in bee populations due to the widespread use of insecticides containing neonicotinoids. Bees are critical contributors to the world's food supply. They pollinate 70 of the roughly 100 crop species that feed 90% of the world population. Other important pollinators are also in decline due to the widespread use of these and other similar insecticides.

Co-owners are strongly encouraged to refrain from using insecticides of any sort, or when doing so to contain their use within a very limited area, follow the directions carefully, and dilute only as directed.

Refer to 3.7 below when dealing with insect infestations in trees.

## 3.6 Prescribed Burns

A prescribed burn (sometimes called a "controlled burn") is a deliberately set fire designed to burn vegetation over a confined area. Periodic prescribed burning of native plants and grasses maintains vigorous growth and desired plant composition. They stimulate native warm season grass growth, increase seed germination and growth of broadleaf plants, retard invasive plant species, and keep maintenance costs low. They typically are done in the cold months, often in early spring.

Historically, our local prairies, wetlands, and woodlands were burned with some frequency. As this area became more densely settled, fires were extinguished before they could spread. Without fire, many fire-intolerant, non-native plant species outcompeted native, fire-adapted plants, and our natural areas became thickets of shrubs or weeds with very little diversity. Fire controls the invasion by killing the woody and non-native plants that would otherwise take over these sites. It stimulates native plants that are adapted to fire, and with the enriched soil and lengthened growing season after a burn, native plants regain their competitive edge.

Due to the obvious safety concerns, prescribed burns are regulated by Superior Township and require an Open Burning Permit, which, among other things, stipulates that the contractor wishing to conduct the burn must notify and get the approval of the Superior Township Fire Department on the day of the burn.

In addition, Matthaei Farm requires that:

- the burn be performed by a qualified contractor;
- the contractor have an Open Burning Permit from Superior Township;
- the contractor provide proof of insurance to cover any incidental damage;
- the co-owner agree to notify nearby co-owners the day of the burn; and
- the MFCA Board President's approval in writing.

There currently are two contractors approved for prescribed burns at Matthaei Farm:

- Mike Appel (https://www.appelenvironmental.com/)
- David Borneman, LLC (http://www.restoringnaturewithfire.com/)
- Plantwise (http://www.plantwiserestoration.com/)

### 3.7 Care of Trees

Our native hardwoods, both on the common areas and on individual home sites, are a key feature of the Matthaei Farm landscape and part of what gives the development its unique character. Their care and preservation are of utmost importance.

Co-owners are strongly encouraged to establish an ongoing relationship with one of many licensed arborists in the Ann Arbor area. An annual inspection can be a valuable tool for identifying trees threatened by disease or in need of thinning or pruning. Any treatments for disease or pruning should be done with extreme care and only with professional guidance.

Of special note are precautions to prevent the spread of oak wilt, a non-native fungus that spreads through roots to neighboring trees within up to a 50-foot radius. It also can be spread over an even wider area by insects that feed off the tree's sap via open wounds on the tree. For that reason, oaks should never be pruned or cut from early spring to fall. The preferred time is the cold winter months when the tree is dormant, and sap is not flowing.

No responsible arborist will agree to prune an oak during the spring and summer months.

Both hardwoods and conifers are susceptible to other infestations by fungi and insects, most of which are treatable. In some cases, treatments can be applied below ground, minimizing the danger to other insects, mammals, and plants. In others there is no recourse but to spray the affected tree(s). Such spraying should only be done under the following conditions:

1. There is evidence of an infestation currently or in the recent past.
2. The chemical being used has been certified as safe by the Michigan Department of Environmental Quality.
3. The dilution is at the level where treatment is efficacious and potential harm to other trees, plants, insects, and mammals is minimized.
4. The work is done by a trained and certified arborist.

Removal of any native tree should be undertaken only as a last resort and only when it is dead, diseased, or poses a danger to people, individual homes, roadways, or other trees. Prior to removal co-owners should contact the Landscape Committee to advise them of the plan to remove.

On rare occasions it may come to the Board's attention that a tree on a co-owner's lot poses a threat to a nearby co-owner's lot or some feature of a common area. In such a case the Board will notify the co-owner of the need to have the tree removed at the co-owner's expense.

### 3.8 Hardscape and Drainage

Impervious surfaces such as roofs, driveways, walks, and patios can disturb natural drainage patterns and create a variety of problems for nearby home sites and natural areas. Therefore, co-owners should limit the use of asphalt, concrete, and other impervious materials to protect natural drainage patterns. Where those patterns are damaged, they should be restored. Any runoff from the house, hardscapes, or other landscape plan features must be absorbed on the co-owner's site.

### 3.9 Lighting

Landscape lighting (including driveway lights) is prohibited unless approved in writing by the Board of Directors.

### 3.10 Fencing and Other Manmade Structures

While these features are normally handled by the MFCA Architectural Review Committee (ARC), they are included here because they sometimes appear on landscape plans. Co-owners considering adding manmade structures to their lots are advised to work through the ARC.

Perimeter fencing is prohibited at Matthaei Farm. Other uses of fencing must be approved by the ARC.

Other manmade structures such as prefabricated storage buildings, outbuildings, sheds, play equipment, jungle gyms, compost piles, and other manmade structures are prohibited or otherwise regulated. Specific approval must be obtained from the ARC the prior to installation.

Satellite dishes, flag poles, and antennas are strongly discouraged.

If accessory storage for garden tools, maintenance items or other storage is considered necessary by the co-owner, he or she can present a storage proposal to the ARC. Proposed structures must be built of similar materials as the home, attached to the home and designed to blend in with the surroundings. The ARC will review the proposal, consult with the co-owner, and present its recommendation to the Board.

### 3.11 Common Areas

Undisturbed areas are protected as wildlife habitats and should remain unused. This includes the old field succession, commonly called the Red Fox Run meadow, bordered by Red Fox Run and Pheasant Trail, and the trails bordering Fleming Creek.

Invasive plant species are controlled in common areas through a community effort. Environmentally friendly and effective techniques are used, which may include mowing, hand pulling, or burning. Any new plantings will use native species.

Co-owner landscaping should never encroach on a common area without written approval from the Board. When common areas covered by surface easements are disturbed (as for septic fields), they must be restored by the co-owner using native plants by the end of the first growing season after completion of the field.

## 4. Matthaei Farm Landscape Plan Review Process

As noted above, no landscaping, whether for a new home or for subsequent re-landscaping of an existing home, may be undertaken without submitting plans to the Landscape Committee. A good starting point is to contact the Committee Chair, currently Linda Haywood. She is best reached via her email address: birdaa@comcast.net. Alternatively, contact the President of the MFCA Board.

For new home construction, a preliminary landscape plan must be submitted to the ARC in conjunction with the proposed architectural plans prior to any site clearing so that drainage, screening and tree conservation can be evaluated. The ARC may choose to consult with the Landscape Committee as part of its review.

No later than six months after construction begins the co-owner must submit a full Landscape Plan to the Landscape Committee. Once a plan is approved, work must begin no later than one year after the Certificate of Occupancy has been obtained.

Major modifications to an existing landscape plan also should be reviewed by the Landscape Committee and submitted for review and approval prior to any work being done.

In all cases, use of a landscape architect experienced in natural landscaping is strongly recommended. In addition, woods and wetlands should be left undisturbed as much as possible.

Submitted plans will be reviewed by the Landscape Committee to ensure that they comply with the Landscape Standards presented above. The Landscape Committee will meet with the co-owner(s) as needed to achieve a mutually acceptable plan. The review may include a site visit by one or more members of the Landscape Committee and/or the Board of Directors.

The review will consider the plan in its entirety, including any grade changes and sight lines from roadways and neighboring co-owners.

Once the plan review by the Landscape Committee has been completed, the plan is submitted to the Board of Directors along with the committee's written recommendation regarding approval, disapproval, or partial approval.

## Appendix A: Books and Online Resources

**Books:**

Diekelmann, John and Schuster, Robert (2002) *Natural Landscaping: Designing with Native Plant Communities.* University of Wisconsin Press.

Ernst, Ruth Shaw (1993) *The Naturalist's* Garden. Globe Pequot Press.

Johnson, Lorraine (1999) *100 Easy-to-Grow Native Plants for American Gardens in Temperate Zones*. Firefly Books.

Jones, Samuel B. and Foote, Leonard E. (1990) *Gardening with Native Wild Flowers.* Timber Press.

Ladd, Doug (1995) *Tallgrass Prairie Wildflowers*. The Nature Conservancy.

Schinkell, Dick and Morhardt, David (1994) *Favorite Wildflowers of the Great Lakes and Northeastern US*. Thunder Press.

Steiner, Lynn M. (2006) *Landscaping with Native Plants in Michigan*. Voyageur Press.

Tallamy, Douglas W. (2009) *Bringing Nature Home: How You Can Sustain Wildlife with Native Plants*. Timber Press.

Wasowski, Sally (2002) *Gardening with Prairie Plants*. University of Minnesota Press.

**Resources on the Matthaei Farm Website:**

Donkerbrook, Donna (undated) Matthaei Farm Invasive, Native, and Poisonous Plants: Suggestions for a Beginner From a Beginner.

Wildtype Design, Ltd. (2006) Matthaei Farm Condominium Association Land Stewardship and Management Plan.

**Other online Resources:**

City of Ann Arbor Natural Area Preservation Department (https://www.a2gov.org/departments/Parks-Recreation/NAP/Pages/NaturalAreaPreservation.aspx).

The Native Plant Nursery, LLC (www.nativeplant.com/).

Wild Ones (https://www.wildones.org/).

## Appendix B: Control Techniques for Some Common Invasives

Prepared by David Mindell, Plantwise Native Landscapes

1. **Common buckthorn, glossy buckthorn, honeysuckle, common privet, autumn olive, and Siberian elm**

   Stems larger than ½" in diameter should be cut approximately 3" from the ground and painted with a 10-20% concentration of glyphosate (Roundup or Rodeo) within 10 minutes of being cut. Treatment should be completed anytime between June and early March. **Note: glyphosate should never be applied to any plant near water.**

2. **Canada thistle**

   Individual plants should be hand pulled where possible. Patches of this plant growing with native vegetation should be controlled with either late spring burning and/or repeated cutting of the stems during the growing season. Plants should be cut any time from early bud formation through the first week of flowering. After that period, cut stems may produce viable seed and should therefore be removed from the site. Following the initial cutting, plants should be monitored for late-season bud growth and re-cut accordingly. Typically, re-cutting in August and again in September will control clonal patches. Multiple cuttings during the growing season will likely be needed for several years in succession.

3. **Dame's rocket and garlic mustard**

   Both species are biennials. Second year plants are easily hand-pulled, bagged and removed from site. Alternatively, flower stalks can be cut and left on site if cut at early bud formation. If plants are cut and left on site later than this, flowers will mature and produce viable seed.

4. **Spotted knapweed**

   Small infestations can be controlled with intense burns or by hand pulling individual plants. Higher density stands may be controlled by cutting flowering stalks close to the ground shortly after bud formation. Since the plant will send up a new flowering stalk, the site should be monitored and recut several times between late June and August. Basal rosettes remain green through the winter and can be treated with a 2% solution of glyphosate when temperatures are 42 degrees or higher (Le., when the plant is photosynthesizing).

5. **Purple loosestrife**

   Very young plants can be effectively hand-pulled from moist ground. Older plants are most effectively controlled with herbicide. Infestations should be treated by spraying a 1-2% active ingredient solution of glyphosate into the palm of the hand (a cotton glove over a chemical-resistant glove is recommended) and running the gloved hand over 25- 50% of the plant surface. Flower heads should then be snapped oft, bagged, and removed from the site.

6. **Soapwort or bouncing bet**

   Use the gloved handed herbicide technique described above for purple loosestrife.

## Appendix C: Michigan Native Plants

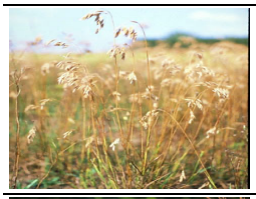
The pages that follow were downloaded from Lady Bird Johnson Wildflower Center at the University of Texas. The Ann Arbor Natural Area Preservation Department also maintains a list of recommended native trees, shrubs, vines, perennials, ferns grasses, rushes, and sedges. For more information visit the NAP website.

**Michigan Recommended**

Commercially available native plant species suitable for planned landscapes in Michigan. Visit our Suppliers Directory to locate businesses that sell native plants or seeds or provide professional landscape or consulting services in this state. Visit the Organizations Directory to locate native plant societies, conservation groups, governmental agencies, botanical gardens, arboreta, and other plant-related organizations in this state.

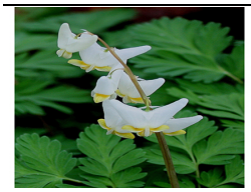
| Thumb | Species | Characteristics |
|---|---|---|
|  | *Acer rubrum*<br>Red maple, Scarlet maple, Soft maple | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Part-shade<br>**Water:** Moist |
|  | *Acer saccharinum*<br>Silver maple, Soft maple, White maple | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist |
|  | *Acer saccharum*<br>Sugar maple, Northern sugar maple | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Actaea pachypoda*<br>White baneberry, Dolls eyes | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Shade, Part-shade<br>**Water:** Wet, Moist |
|  | *Actaea rubra*<br>Red baneberry | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist |
|  | *Adiantum pedatum*<br>Northern maidenhair fern, Maidenhair fern | **Duration:** Perennial<br>**Habit:** Fern<br>**Light:** Shade, Part-shade<br>**Water:** Moist |
|  | *Allium canadense*<br>Meadow garlic, Wild garlic, Wild onion | **Duration:** Perennial<br>**Habit:** Grass/Grass-like<br>**Light:** Sun<br>**Water:** Moist |
|  | *Amelanchier arborea*<br>Common serviceberry, Downy serviceberry, Shadbush, Juneberry, Junebush, Shadblow, Sarvis | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Dry |

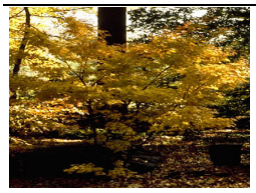
| Thumb | Species | Characteristics |
|---|---|---|
|  | *Amorpha canescens*<br>Leadplant, Leadplant amorpha, Prairie shoestring | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Sun, Part-shade<br>**Water:** Dry |
|  | *Andropogon gerardii*<br>Big bluestem, Tall bluestem, Turkeyfoot | **Duration:** Perennial<br>**Habit:** Grass/Grass-like<br>**Light:** Sun, Part-shade<br>**Water:** Moist |
|  | *Anemone canadensis*<br>Canadian anemone, Round-leaf thimbleweed, Canada anemone, Windflower, Meadow anemone | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Shade, Part-shade<br>**Water:** Moist |
|  | *Anemone cylindrica*<br>Candle anemone, Long-headed thimbleweed, Longhead thimbleweed, Thimbleweed | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Part-shade<br>**Water:** Dry |
|  | *Aquilegia canadensis*<br>Eastern red columbine, Wild red columbine | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Arctostaphylos uva-ursi*<br>Kinnikinnick, Red bearberry, Kinnikinnik | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Arisaema triphyllum*<br>Jack in the pulpit, Indian jack in the pulpit, Jack-in-the-pulpit | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Shade<br>**Water:** Wet, Moist |
|  | *Asarum canadense*<br>Canadian wild ginger, Wild ginger | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Shade, Part-shade<br>**Water:** Moist |
|  | *Asclepias incarnata*<br>Swamp milkweed, Pink Milkweed | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Part-shade<br>**Water:** Wet, Moist |

| Thumb | Species | Characteristics |
|---|---|---|
|  | *Asclepias tuberosa*<br>Butterflyweed, Butterfly milkweed, Orange milkweed, Pleurisy root, Chigger flower | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun<br>**Water:** Moist, Dry |
|  | *Asclepias verticillata*<br>Whorled milkweed, Eastern whorled milkweed | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Part-shade<br>**Water:** Dry |
|  | *Athyrium filix-femina*<br>Common lady fern, Subarctic lady fern, Lady fern, Ladyfern | **Duration:** Perennial<br>**Habit:** Herb, Fern<br>**Light:** Shade, Part-shade<br>**Water:** Wet, Moist |
|  | *Betula nigra*<br>River birch, Red birch, Black birch, Water birch | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Part-shade<br>**Water:** Moist |
|  | *Betula papyrifera*<br>Paper birch, Canoe birch, White birch | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist |
|  | *Bromus kalmii*<br>Arctic brome, Prairie brome, Wild chess | **Duration:** Perennial<br>**Habit:** Grass/Grass-like<br>**Light:** Sun<br>**Water:** Dry |
|  | *Calamagrostis canadensis*<br>Bluejoint | **Duration:** Perennial<br>**Habit:** Grass/Grass-like<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Wet, Moist |
|  | *Caltha palustris*<br>Yellow marsh marigold, Cowslip | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Shade, Part-shade<br>**Water:** Wet, Moist |
|  | *Campanula rotundifolia*<br>Bluebell bellflower, Bluebell of Scotland, Bluebell, Harebell, Witches' thimble | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Dry |

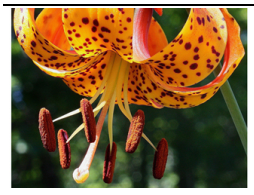
| Thumb | Species | Characteristics |
|---|---|---|
|  | *Carex pensylvanica*<br>Pennsylvania sedge | **Duration:** Perennial<br>**Habit:** Grass/Grass-like<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Dry |
|  | *Carex stipata*<br>Awlfruit sedge, Awl-fruited sedge, Stalk-grain sedge | **Duration:** Perennial<br>**Habit:** Grass/Grass-like<br>**Light:** Sun<br>**Water:** Wet, Moist |
|  | *Carpinus caroliniana*<br>American hornbeam, Blue beech, Water beech, Musclewood, Ironwood | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Shade, Part-shade<br>**Water:** Moist |
|  | *Carya ovata*<br>Shagbark hickory, Carolina hickory, Scalybark hickory, Upland hickory, Shellbark hickory | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Ceanothus americanus*<br>New Jersey tea, Redroot | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Celastrus scandens*<br>American bittersweet | **Duration:** Perennial<br>**Habit:** Vine<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Celtis occidentalis*<br>Common hackberry, Northern hackberry, American hackberry, Nettle tree, Beaverwood, False elm | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Cephalanthus occidentalis*<br>Common buttonbush, Buttonbush, Button willow | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Shade, Part-shade<br>**Water:** Wet, Moist |
|  | *Cercis canadensis*<br>Eastern redbud, Redbud | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Shade, Part-shade<br>**Water:** Moist |

| Thumb | Species | Characteristics |
|---|---|---|
|  | *Chamerion angustifolium* ssp. *angustifolium*<br>Fireweed, Narrow-leaf fireweed, Willow herb | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun<br>**Water:** Moist |
|  | *Chelone glabra*<br>White turtlehead | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Wet, Moist |
|  | *Coreopsis lanceolata*<br>Lanceleaf coreopsis, Lance-leaved coreopsis, Lanceleaf tickseed, Sand coreopsis | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Dry |
|  | *Cornus alternifolia*<br>Alternateleaf dogwood, Alternate-leaf dogwood, Pagoda dogwood | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Shade, Part-shade<br>**Water:** Moist |
|  | *Cornus canadensis*<br>Bunchberry dogwood, Canadian bunchberry | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist |
| | *Cornus obliqua*<br>Silky dogwood, Pale dogwood, Swamp dogwood, Kinnikinnik | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Shade, Part-shade<br>**Water:** Moist |
|  | *Cornus racemosa*<br>Gray dogwood | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist |
|  | *Cornus sericea*<br>Red osier dogwood, Red osier, Red-twig dogwood | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Part-shade<br>**Water:** Moist |
|  | *Corylus americana*<br>American hazelnut, American filbert | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Shade, Part-shade<br>**Water:** Moist, Dry |

| Thumb | Species | Characteristics |
|---|---|---|
|  | *Crataegus crus-galli*<br>Cockspur hawthorn, Cockspur thorn, Newcastle hawthorn, Newcastle thorn, Hog apple | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Crataegus mollis*<br>Downy hawthorn, White thorn, Whitethorn, Scarlet hawthorn, Scarlet haw, Red haw, Downy thorn | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Dasiphora fruticosa* ssp. *floribunda*<br>Shrubby cinquefoil, Golden hardhack, Potentilla | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Sun<br>**Water:** Dry |
|  | *Desmodium canadense*<br>Showy tick trefoil | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun<br>**Water:** Moist, Dry |
|  | *Dicentra cucullaria*<br>Dutchman's breeches | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist |
|  | *Diervilla lonicera*<br>Northern bush honeysuckle, Northern bush-honeysuckle, Diervilla | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Shade, Part-shade<br>**Water:** Dry |
|  | *Dryopteris cristata*<br>Crested woodfern, Crested wood fern, Buckler fern | **Duration:** Perennial<br>**Habit:** Herb, Fern<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist |
|  | *Elymus canadensis*<br>Canada wild rye, Canadian wildrye, Prairie wildrye, Nodding wildrye | **Duration:** Perennial<br>**Habit:** Grass/Grass-like<br>**Light:** Sun, Part-shade<br>**Water:** Moist |
|  | *Eupatorium perfoliatum*<br>Common boneset | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Wet, Moist |

| Thumb | Species | Characteristics |
|---|---|---|
|  | *Euphorbia corollata*<br>Flowering spurge | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun<br>**Water:** Dry |
|  | *Euthamia graminifolia*<br>Flat-top goldentop, Grass-leaved goldenrod | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun<br>**Water:** Moist |
|  | *Fragaria virginiana*<br>Virginia strawberry, Wild strawberry | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Part-shade<br>**Water:** Dry |
|  | *Fraxinus americana*<br>White ash, American ash, Cane ash, Smallseed white ash, Biltmore white ash, Biltmore ash | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Fraxinus pennsylvanica*<br>Green ash, Red ash, Swamp ash, River ash, Water ash, Darlington ash | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Wet, Moist, Dry |
|  | *Gentiana andrewsii*<br>Closed bottle gentian, Closed gentian, Bottle gentian | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Shade, Part-shade<br>**Water:** Wet, Moist |
|  | *Geranium maculatum*<br>Spotted geranium, Wild geranium, Cranesbill | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Shade, Part-shade<br>**Water:** Moist |
|  | *Gymnocladus dioicus*<br>Kentucky coffeetree, Stump tree | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Hamamelis virginiana*<br>Witch-hazel, American Witch-hazel, Common Witch-hazel, Winterbloom, Snapping Hazelnut, Striped Alder, Spotted Alder, Tobacco-wood, Water-witch | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Shade, Part-shade<br>**Water:** Moist, Dry |

| Thumb | Species | Characteristics |
|---|---|---|
|  | *Helenium autumnale*<br>Common sneezeweed, Fall sneezeweed, Autumn sneezeweed | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun<br>**Water:** Moist |
|  | *Helianthus strumosus*<br>Paleleaf woodland sunflower, Paleleaf sunflower, Woodland sunflower | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Dry |
|  | *Heliopsis helianthoides*<br>Smooth oxeye, Oxeye sunflower, False sunflower | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun<br>**Water:** Moist |
|  | *Heuchera richardsonii*<br>Richardson's alumroot, Prairie alumroot | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Part-shade<br>**Water:** Dry |
|  | *Hydrophyllum virginianum*<br>Virginia waterleaf, Eastern waterleaf, Shawnee salad | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Shade, Part-shade<br>**Water:** Moist |
|  | *Hypericum prolificum*<br>Shrubby St. John's-wort | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Ilex verticillata*<br>Common winterberry, Winterberry, Michigan holly, Black alder | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Wet, Moist, Dry |
|  | *Iris virginica* var. *shrevei*<br>Shreve's iris, Virginia iris, Southern blue flag, Blue flag | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun<br>**Water:** Wet |
|  | *Juglans nigra*<br>Black walnut, Eastern black walnut, American black walnut | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Part-shade<br>**Water:** Moist |

| Thumb | Species | Characteristics |
|---|---|---|
|  | *Juniperus communis* var. *depressa*<br>Common juniper, Old field juniper, Prostrate juniper | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Sun<br>**Water:** Dry |
|  | *Juniperus horizontalis*<br>Creeping juniper, Creeping savin | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Sun, Part-shade<br>**Water:** Dry |
|  | *Juniperus virginiana*<br>Eastern red cedar, Eastern redcedar, Virginia juniper, Red juniper, Pencil cedar, Carolina cedar, Red savin, Baton rouge | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Dry |
|  | *Koeleria macrantha*<br>Prairie Junegrass, Junegrass, Prairie Koeler's grass | **Duration:** Perennial<br>**Habit:** Grass/Grass-like<br>**Light:** Sun<br>**Water:** Dry |
|  | *Larix laricina*<br>Tamarack, American larch, Hacmatack, Black larch | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade<br>**Water:** Wet, Moist |
|  | *Lespedeza capitata*<br>Roundhead lespedeza, Roundhead bush-clover, Round-headed lespedeza, Round-headed bush-clover | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun<br>**Water:** Dry |
|  | *Liatris aspera*<br>Tall blazing star, Tall gayfeather, Tall liatris, Rough blazing star, Rough gayfeather, Rough liatris, Button snakeroot | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun<br>**Water:** Dry |
|  | *Liatris cylindracea*<br>Ontario blazing star, Ontario gayfeather, Ontario liatris, Dwarf blazing star, Dwarf gayfeather, Dwarf liatris | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun<br>**Water:** Dry |
|  | *Lilium michiganense*<br>Michigan lily, Turk's cap lily | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist |

| Thumb | Species | Characteristics |
|---|---|---|
|  | *Lilium philadelphicum*<br>Wood lily | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Dry |
|  | *Lobelia siphilitica*<br>Great blue lobelia | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Wet, Moist |
|  | *Lupinus perennis*<br>Sundial lupine, Wild lupine | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Part-shade<br>**Water:** Moist, Dry |
|  | *Maianthemum racemosum* ssp. *racemosum*<br>Feathery false lily of the valley, False spikenard, False Solomon's seal, Solomon's plume, Smilacina | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Shade, Part-shade<br>**Water:** Moist |
|  | *Malus ioensis*<br>Prairie crabapple, Iowa crabapple, Western crabapple, Prairie crab, Iowa crab, Western crab | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun<br>**Water:** Moist |
|  | *Mitchella repens*<br>Partridgeberry, Twinberry, Running box, Pigeon plum | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Monarda fistulosa*<br>Wild bergamot, Beebalm | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Part-shade<br>**Water:** Moist, Dry |
|  | *Oenothera biennis*<br>Common evening-primrose, King's cure-all | **Duration:** Biennial<br>**Habit:** Herb<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Dry |
|  | *Opuntia humifusa*<br>Low prickly pear, Smooth prickly pear, Devil's tongue | **Duration:** Perennial<br>**Habit:** Cactus/Succulent<br>**Light:** Sun<br>**Water:** Dry |

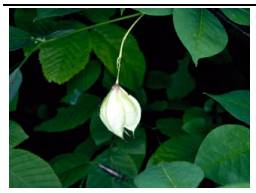
| Thumb | Species | Characteristics |
|---|---|---|
|  | *Osmorhiza claytonii*<br>Clayton's sweetroot, Hairy sweet-cicely, Sweet jarvil | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Shade<br>**Water:** Moist |
|  | *Osmunda cinnamomea*<br>Cinnamon fern | **Duration:** Perennial<br>**Habit:** Herb, Fern<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Wet, Moist |
|  | *Osmunda claytoniana*<br>Interrupted Fern | **Duration:** Perennial<br>**Habit:** Herb, Fern<br>**Light:** Shade<br>**Water:** Moist |
|  | *Ostrya virginiana*<br>Eastern hop-hornbeam, American hop-hornbeam, Woolly hop-hornbean, Eastern ironwood, Roughbark ironwood, Ironwood, Deerwood, Leverwood | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Panicum virgatum*<br>Switchgrass, Wand panic grass | **Duration:** Perennial<br>**Habit:** Grass/Grass-like<br>**Light:** Sun, Part-shade<br>**Water:** Moist, Dry |
|  | *Parthenocissus quinquefolia*<br>Virginia creeper | **Duration:** Perennial<br>**Habit:** Vine<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist |
|  | *Pascopyrum smithii*<br>Western wheatgrass | **Duration:** Perennial<br>**Habit:** Grass/Grass-like<br>**Light:** Sun, Part-shade<br>**Water:** Moist |
|  | *Penstemon digitalis*<br>Mississippi penstemon, Mississippi beardtongue, Smooth white penstemon, Smooth white beardtongue, Talus slope penstemon, Talus slope beardtongue, Foxglove penstemon, Foxglove beardtongue | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Part-shade<br>**Water:** Wet, Moist, Dry |

| Thumb | Species | Characteristics |
|---|---|---|
|  | *Penstemon grandiflorus*<br>Large penstemon, Large beardtongue, Large-flower penstemon, Large-flower beardtongue, Large-flowered penstemon, Large-flowered beardtongue | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun<br>**Water:** |
|  | *Phlox pilosa*<br>Downy phlox, Prairie phlox, Fragrant phlox | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Part-shade<br>**Water:** Dry |
|  | *Physocarpus opulifolius*<br>Atlantic ninebark, Common ninebark | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Wet, Moist, Dry |
|  | *Physostegia virginiana*<br>Fall obedient plant, False dragonhead, Virginia lions-heart | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist |
|  | *Pinus resinosa*<br>Red pine, Norway pine, Canadian pine | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun<br>**Water:** Moist, Dry |
|  | *Pinus strobus*<br>Eastern white pine, Weymouth pine | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Platanus occidentalis*<br>American sycamore, Eastern sycamore, American plane tree, Plane tree, Buttonwood, Buttonball tree | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist |
|  | *Podophyllum peltatum*<br>Mayapple, Indian apple, Wild mandrake, Pomme de mai, Podophylle pelt | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Shade, Part-shade<br>**Water:** Moist |
|  | *Polygonatum biflorum*<br>Smooth Solomon's seal, Great Solomon's-seal, Sealwort | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Shade, Part-shade<br>**Water:** Moist, Dry |

| Thumb | Species | Characteristics |
|---|---|---|
|  | *Polystichum acrostichoides*<br>Christmas fern | **Duration:** Perennial<br>**Habit:** Fern<br>**Light:** Shade, Part-shade<br>**Water:** Moist |
|  | *Populus deltoides*<br>Eastern cottonwood, Carolina poplar, Necklace Poplar, Alamo | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Wet, Moist, Dry |
|  | *Populus tremuloides*<br>Quaking aspen, Golden aspen, Trembling aspen, Mountain aspen, Aspen, Trembling poplar, Alamo blanco | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Wet, Moist, Dry |
|  | *Prunus americana*<br>American plum, Wild plum | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist |
|  | *Prunus serotina*<br>Black cherry, Wild black cherry, Rum cherry | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Prunus virginiana*<br>Chokecherry, Common chokecherry, Choke cherry | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Pycnanthemum virginianum*<br>Virginia mountain mint | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Part-shade<br>**Water:** Moist |
|  | *Quercus alba*<br>White oak, Northern white oak, Eastern white oak, Stave oak, Ridge white oak, Forked-leaf white oak | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Quercus bicolor*<br>Swamp white oak | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Part-shade<br>**Water:** Moist |

| Thumb | Species | Characteristics |
|---|---|---|
|  | *Quercus macrocarpa*<br>Bur oak, Burr oak, Savannah oak, Overcup oak, Prairie oak, Mossy-cup oak, Mossy-overcup oak, Blue oak | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Wet, Moist, Dry |
|  | *Quercus palustris*<br>Pin oak, Swamp Spanish oak | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Wet, Moist |
|  | *Quercus rubra*<br>Northern red oak | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Part-shade<br>**Water:** Moist, Dry |
|  | *Ratibida pinnata*<br>Grayhead coneflower, Gray-headed coneflower, Grayhead Mexican hat, Gray-headed Mexican hat, Pinnate prairie coneflower, Yellow coneflower | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Part-shade<br>**Water:** Moist, Dry |
|  | *Rhus aromatica*<br>Fragrant sumac, Aromatic sumac, Lemon sumac, Polecat bush | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Rhus glabra*<br>Smooth sumac | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Dry |
|  | *Rhus typhina*<br>Staghorn sumac, Velvet sumac | **Duration:** Perennial<br>**Habit:** Shrub, Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Dry |
|  | *Rosa blanda*<br>Smooth rose, Early wild rose | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Sun<br>**Water:** Dry |
| | *Rosa setigera* var. *tomentosa*<br>Climbing rose, Illinois rose | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Sun<br>**Water:** |

| Thumb | Species | Characteristics |
|---|---|---|
|  | *Rudbeckia hirta*<br>Black-eyed Susan, Common black-eyed Susan, Brown-eyed Susan | **Duration:** Annual<br>**Habit:** Herb<br>**Light:** Sun<br>**Water:** Moist, Dry |
|  | *Rudbeckia subtomentosa*<br>Sweet coneflower, Sweet black-eyed Susan | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Part-shade<br>**Water:** Moist |
|  | *Salix discolor*<br>Pussy willow, Glaucous willow | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Sun<br>**Water:** Moist |
|  | *Sanguinaria canadensis*<br>Bloodroot | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Shade, Part-shade<br>**Water:** Wet, Moist |
|  | *Schizachyrium scoparium*<br>Little bluestem, Popotillo azul | **Duration:** Perennial<br>**Habit:** Grass/Grass-like<br>**Light:** Sun, Part-shade<br>**Water:** Dry |
|  | *Solidago nemoralis*<br>Gray goldenrod, Prairie goldenrod, Oldfield goldenrod, Grayleaf goldenrod, Gray-leaved goldenrod, Dyersweed goldenrod, Dwarf goldenrod, Field goldenrod | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Dry |
|  | *Solidago speciosa*<br>Showy goldenrod, Noble goldenrod | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Part-shade<br>**Water:** Moist |
|  | *Solidago ulmifolia*<br>Elmleaf goldenrod, Elm-leaved goldenrod | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun<br>**Water:** Dry |
|  | *Sorghastrum nutans*<br>Indiangrass, Yellow indiangrass | **Duration:** Perennial<br>**Habit:** Grass/Grass-like<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist, Dry |

| Thumb | Species | Characteristics |
|---|---|---|
|  | *Spartina pectinata*<br>Prairie cordgrass, Freshwater cordgrass, Sloughgrass | **Duration:** Perennial<br>**Habit:** Grass/Grass-like<br>**Light:** Sun<br>**Water:** Wet |
|  | *Spiraea alba*<br>White meadowsweet | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Wet, Moist |
|  | *Staphylea trifolia*<br>American bladdernut | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Shade<br>**Water:** Moist |
|  | *Symphyotrichum ericoides*<br>White Heath Aster, Heath Aster | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun<br>**Water:** Dry |
|  | *Thalictrum dasycarpum*<br>Purple meadow-rue, Tall meadow-rue, Meadow rue | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Part-shade<br>**Water:** Wet, Moist |
|  | *Thalictrum dioicum*<br>Early meadow-rue | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Part-shade<br>**Water:** Moist |
|  | *Thuja occidentalis*<br>Arborvitae, Eastern arborvitae, Northern white cedar | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Tilia americana*<br>American basswood, American linden, Lime tree, Bee tree | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Tradescantia ohiensis*<br>Ohio spiderwort, Bluejacket | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Part-shade<br>**Water:** Dry |

| Thumb | Species | Characteristics |
|---|---|---|
|  | *Tsuga canadensis*<br>Eastern hemlock | **Duration:** Perennial<br>**Habit:** Tree<br>**Light:** Shade, Part-shade<br>**Water:** Moist |
|  | *Typha latifolia*<br>Broadleaf cattail, Common cattail | **Duration:** Perennial<br>**Habit:** Grass/Grass-like<br>**Light:** Sun, Part-shade<br>**Water:** Wet |
|  | *Uvularia grandiflora*<br>Largeflower bellwort, Large-flower bellwort, Merrybells | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Shade<br>**Water:** Moist |
|  | *Uvularia sessilifolia*<br>Spreading bellwort, Straw lily, Wild oats, Merrybells, Sessile-leaf bellwort, Sessile bellwort | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist |
|  | *Vaccinium angustifolium*<br>Lowbush blueberry, Late lowbush blueberry | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist, Dry |
|  | *Verbena hastata*<br>Swamp verbena, Blue verbena, Blue vervain, Simpler's joy | **Duration:** Biennial<br>**Habit:** Herb<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Wet, Moist |
|  | *Vernonia fasciculata*<br>Prairie ironweed, Common ironweed | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Wet, Moist |
|  | *Veronicastrum virginicum*<br>Culver's root | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Part-shade<br>**Water:** Moist |
|  | *Viburnum lentago*<br>Nannyberry, Blackhaw, Sweet viburnum, Sheepberry | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Sun, Shade, Part-shade<br>**Water:** Moist |

| Thumb | Species | Characteristics |
|---|---|---|
|  | *Viburnum opulus* var. *americanum*<br>American cranberry bush, Highbush cranberry, American cranberrybush viburnum, Cranberry viburnum | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Part-shade<br>**Water:** Wet, Moist |
|  | *Viburnum prunifolium*<br>Blackhaw, Smooth blackhaw, Blackhaw viburnum, Smooth blackhaw viburnum, Stagbush | **Duration:** Perennial<br>**Habit:** Shrub<br>**Light:** Part-shade<br>**Water:** Moist |
|  | *Viola pedata*<br>Birdfoot violet, Bird's-foot violet, Bird-foot violet | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Shade, Part-shade<br>**Water:** Dry |
|  | *Viola sororia*<br>Missouri violet, Common blue violet, Hooded blue violet, Florida violet, Meadow violet | **Duration:** Annual<br>**Habit:** Herb<br>**Light:** Sun, Part-shade<br>**Water:** Moist |
|  | *Zizia aurea*<br>Golden zizia, Golden Alexanders | **Duration:** Perennial<br>**Habit:** Herb<br>**Light:** Sun, Part-shade<br>**Water:** Moist |