American Arborvitae, Northern White Cedar
*Thuja occidentalis*

This native evergreen is a hard-working, versatile specimen. The narrow, pyramid shape makes it a natural choice for windbreaks. It requires almost no care when used as a hedge or screen. Pairs of these hardy trees make great accents for doors and garden gates. And single trees soften house corners.

**Mature Size:**
The American arborvitae grows to a height of 40–60’ and a spread of 10–15’ at maturity.

**Growth Speed:** Slow to Medium Growth Rate
This tree grows at a slow to medium rate, with height increases of anywhere from less than 12” to 24” per year.

**Sun Preference:**
Full sun is the ideal condition for this tree, meaning it should get at least six hours of direct, unfiltered sunlight each day.

**Soil Preference:**
The American arborvitae grows well in acidic, loamy, moist, rich, sandy, silty loam, well-drained, wet and clay soils.

**Attributes:**
- Grows in a pyramidal shape.
- Adapts well to shearing and shaping.
- Releases a pleasing aroma when leaves are squeezed.
- Can be planted 3’ apart for a low-maintenance hedge.

**Wildlife Value:**
Providing shelter in the winter and nesting sites for grackles, robins and house finches in the summer, this evergreen is also browsed by deer, cottontail rabbits, snowshoe hares and an occasional moose. The seeds are eaten by red squirrels and birds such as pine siskins.
Red Pine

Pinus resinosa

This native evergreen is a hard-working, versatile specimen. The narrow, pyramid shape makes it a natural choice for windbreaks. It requires almost no care when used as a hedge or screen. Pairs of these hardy trees make great accents for doors and garden gates. And single trees soften house corners.

Mature Size:
A large evergreen tree reaching 50 to 80 feet high with varying width. Older trees develop an oval habit with lateral branches that start relatively low to the ground.

Growth Speed: Moderate Growth Rate
This tree grows at a moderate rate, with height increases of anywhere from less than 12” to 24” per year.

Sun Preference
It is intolerant of shade, but does well in windy sites

Soil Preference
Prefers a dry, loose, sandy soil with a low pH in full sun. Trees are extremely cold tolerant.

Attributes
- Grows in a pyramidal shape.
- The red pine is susceptible to salt.
- Long, 5 to 6 inch needles in pairs, twisted and serrated.

Wildlife Value
Red pine is an attractive tree that is used in recreational areas because of its colorful bark. This species provides cover for many species of mammals and birds. Deer, cottontails, and snowshoe hares browse seedlings. Songbirds, mice and chipmunks feed on the seed.
Eastern White Pine
Pinus strobus

Eastern white pine forests originally covered much of north-central and north-eastern North America. Only one percent of the old-growth forests remain after the extensive logging operations of the 18th century to early 20th century. Mature trees are often 200–250 years old, and some live to over 400 years. The Native American Haudenosaunee denominated it the “Tree of Peace”.

**Mature Size:**
The eastern white pine grows to a height of 50–80’ and a spread of 20–40’ at maturity.

**Growth Speed:** Fast Growth Rate
This tree grows at a fast rate, with height increases of more than 24” per year.

**Sun Preference:**
Full sun and partial shade are best for this tree. It prefers a minimum of four hours of direct, unfiltered sunlight each day.

**Soil Preference:**
The eastern white pine grows in acidic, moist, well-drained and dry soils. While it does best in moist soil, the tree can has been known to tolerate everything from dry, rocky ridges to bogs.

**Attributes:**
- Grows in an oval, pyramidal shape. Transplants easily.
- Is sensitive to air pollution, road salt and soil compaction.

**Wildlife Value:**
Eastern white pine seeds are favored by black bears, rabbits, red squirrels and many birds, especially red crossbills. While potentially damaging to the trees, the bark is eaten by mammals such as beavers, snowshoe hares, porcupines, rabbits and mice. White pines provide nesting sites as well for many birds including woodpeckers, common grackles, mourning doves, chickadees and nuthatches.
White Spruce
Picea glauca

A straight, tall tree easily recognized by its needles. Cones always hang down. Beautiful year-round color.

**Mature Size:**
The white spruce grows to a height of 40–60’ and a spread of 10–20’ at maturity.

**Growth Speed:** Medium Growth Rate
This tree grows at a medium rate, with height increases of 13–24” per year.

**Sun Preference:**
Full sun is the ideal condition for this tree, meaning it should get at least six hours of direct, unfiltered sunlight each day.

**Soil Preference:**
The white spruce grows in acidic, loamy, moist, sandy, well-drained and clay soils. It has some drought tolerance.

**Attributes:**
- Transplants readily.
- Can withstand wind, heat, cold, drought, crowding and some shade.
- Works well in cities and rural windbreaks.

**Wildlife Value:**
Besides providing nesting sites and shelter, white spruces provide food for many kinds of wildlife. Crossbills, evening grosbeaks and red-breasted nuthatches prefer the seeds. The foliage is eaten by grouse, rabbits and deer. Red squirrels cut open cones to eat the seeds, and they feast upon young, tender spruce shoots. The bark is enjoyed by both porcupines and black bears, sometimes to the detriment of the trees.
Monkey Flower
*Mimulus ringens*

Mimulus ringens, commonly called Allegheny monkey flower or square-stemmed monkey flower, is a rhizomatous, Missouri native, upright perennial which typically occurs in swampy areas, wet meadows, pond/streambanks and low woods throughout the State. Typically grows 1-3’ (less frequently to 4’) tall on erect, square, sometimes branching stems. Features lilac-purple, snapdragon-like flowers (to 1” long) with two-lipped, open-mouthed corollas. Flowers appear in pairs in the leaf axils on slender 1-2” long pedicels. Each flower purportedly resembles the face of a smiling monkey (hence the common name). Flowers bloom throughout the summer. Sessile, opposite leaves (2-4” long) are oblong to lanceolate and sharply-toothed.

**Common Name:** Allegheny monkey flower  
**Type:** Herbaceous perennial  
**Family:** Phrymaceae  
**Native Range:** North America  
**Zone:** 3 to 8  
**Height:** 1.00 to 3.00 feet  
**Spread:** 0.75 to 1.00 feet  
**Bloom Time:** June to September  
**Bloom Description:** Lilac-purple  
**Sun:** Full sun to part shade  
**Water:** Medium to wet  
**Maintenance:** Low  
**Suggested Use:** Water Plant, Naturalize, Rain Garden  
**Flower:** Showy  
**Tolerate:** Deer, Wet Soil  
**Garden locations**

**Culture**
Grow in moist to wet soils in full sun to part shade. Best in part shade. Naturalizes in optimum growing conditions by both self-seeding and creeping rhizomes.
Yellow Coneflower
*Ratibida pinnata*

Ratibida pinnata, commonly called gray headed coneflower, is a Wisconsin native plant which typically occurs in dry woods, prairies and along railroad tracks and roads. A somewhat rough-looking plant that features pinnately divided leaves (to 5” long) on stiff stems growing 3-5’ tall. The composite flowers have a dull-gray central disk in the shape of an elongated cylinder (1 inch long), somewhat resembling the crown of a slender sombrero. When bruised, the disk smells of anise. Attached to the bottom of the disk is a brim of 3-7, extremely reflexed (downward pointing), bright yellow ray flowers (to 3” long). Long summer bloom period.

**Common Name:** grey-head coneflower  
**Type:** Herbaceous perennial  
**Family:** Asteraceae  
**Native Range:** Central North America  
**Zone:** 3 to 8  
**Height:** 3.00 to 5.00 feet  
**Spread:** 1.50 to 2.00 feet  
**Bloom Time:** June to August  
**Bloom Description:** Yellow  
**Sun:** Full sun  
**Water:** Medium  
**Maintenance:** Medium  
**Flower:** Showy  
**Attracts:** Butterflies  
**Tolerate:** Drought, Clay Soil  

**Garden locations**
**Culture**
Grow in average, medium moisture, well-drained soil in full sun. Prefers clay or sandy soils. Tolerates poor, dry soils.
Foxglove Beardtongue  
*Penstemon digitalis*

Penstemon digitalis is a clump-forming, Missouri-native perennial which typically grows 3-5’ tall and occurs in prairies, fields, wood margins, open woods and along railroad tracks. Features white, two-lipped, tubular flowers (to 1.25” long) borne in panicles atop erect, rigid stems. Flowers bloom mid-spring to early summer. Basal leaves are elliptic and stem leaves are lance-shaped to oblong.

Genus name comes from the Greek words penta meaning five and stemon meaning stamen in reference to each flower having five stamens (four are fertile and one is sterile).

**Common Name:** beardtongue  
**Type:** Herbaceous perennial  
**Family:** Plantaginaceae  
**Native Range:** Eastern and southeastern United States  
**Zone:** 3 to 8  
**Height:** 3.00 to 5.00 feet  
**Spread:** 1.50 to 2.00 feet  
**Bloom Time:** April to June  
**Bloom Description:** White  
**Sun:** Full sun  
**Water:** Dry to medium  
**Maintenance:** Medium  
**Suggested Use:** Naturalize, Rain Garden  
**Flower:** Showy, Good Cut  
**Attracts:** Birds, Butterflies  
**Tolerate:** Deer, Drought, Clay Soil, Dry Soil  

**Garden locations**

**Culture**
Grow in average, dry to medium moisture, well-drained soil in full sun. Avoid wet, poorly drained soils.
Asclepias incarnata, commonly called swamp milkweed, is an erect, clump-forming, Wisconsin native plant which is commonly found in swamps, river bottomlands and wet meadows. Small, fragrant, pink to mauve flowers appear at the stem ends in summer. Flowers are very attractive to butterflies as a nectar source. In addition, swamp milkweed is an important food source (albeit somewhat less important than upland species of Asclepias) for the larval stage of Monarch butterflies. Genus name honors the Greek god Asklepios the god of medicine.

**Common Name:** swamp milkweed  
**Type:** Herbaceous perennial  
**Family:** Apocynaceae  
**Native Range:** Northeastern and southeastern United States  
**Zone:** 3 to 6  
**Height:** 4.00 to 5.00 feet  
**Spread:** 2.00 to 3.00 feet  
**Bloom Time:** July to August  
**Bloom Description:** White, pink, mauve  
**Sun:** Full sun  
**Water:** Medium to wet  
**Maintenance:** Low  
**Suggested Use:** Naturalize, Rain Garden  
**Flower:** Showy, Fragrant  
**Attracts:** Butterflies  
**Tolerate:** Deer, Clay Soil, Wet Soil  

**Garden locations**

**Culture**
Easily grown in medium to wet soils in full sun. Surprisingly tolerant of average well-drained soils in cultivation even though the species is native to swamps and wet meadows. Plants have deep taproots and are best left undisturbed once established. Foliage is slow to emerge in spring.