

Selection and Care of Native Trees and Shrubs

Presented by:

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Master Naturalists



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Shrub Species List

Organized by:

- **Light Requirements**
 - Full Sun (>6 hrs, full sun)
 - Part Sun (4-6 hrs, ind sun)
 - Part Shade (2-4 hrs, ind sun)
 - Shade (>2 hrs, indirect sun)
- **Moisture Conditions**
 - Dry
 - Medium
 - Wet

Other info:

- Size, flowers, fall color, etc.
- Thicket forming habit noted
- Problems – list of common, possible issues; not always that bad
- Tolerance –drought, urban soils, other conditions
- Wildlife value – based on a not exhaustive literature search

Full Sun/Part Shade – Dry/Medium

New Jersey Tea (*Ceanothus americanus*)

- Ht. = 3-4 ft. W = 3-5 ft.
- Flwrs – White; May-July (3-4 wks)
- Fall Color – Insignificant
- Problems – Powdery mildew, If spots
- Tolerant - drought, dry conditions, juglone
- Wildlife Value -Nectar/pollen for bees, wasps, flies, beetles and butterflies – 14 native pollinators; 6 native caterpillar

Notes: High ecological and horticultural value; long flowering period; fragrant flowers



Full Sun/Part Shade – Dry/Medium

Ninebark (*Physocarpus opulifolius*)

- Ht. = 5-8ft. W = 4-6ft.
- Flwrs – White/Pinkish; May-June (2-3 wks)
- Fruit – druping greenish-red fruits
- Fall Color – Yellow
- Problems – fireblight, lf spots
- Tolerant - drought, erosion, clay, dry conditions; handles tough conditions
- Wildlife value – Nectar and pollen; lf feeding insects; birds eat berries -5 native caterpillar species, 6 other native insects
- Notes: Prefers drier, full sun sites; mature size set by site



Full Sun/Part Shade – Dry/Medium

Smooth Sumac (*Rhus glabra*)

- Ht. = 9-15 ft. W = 9-15 ft.
- Flwrs – Yellowish-green, insignificant
- Fruit – showy red berries
- Fall Color – Excellent
- Problems – thicket forming; no diseases
- Tolerant - wide range of soil, drought tolerant
- Wildlife Value -pollinators and leaf feeders (17 pollinators; 24 caterpillars and leaf feeders); 31 bird spp; winter browse (deer, rabbits, etc)



Full Sun/Part Shade – Medium

Shrubby St. John's Wort (*Hypericum prolificum*)

- Ht. = 1-5 ft. W = 1-4ft.
- Shrubby, perennial wildflower
- Flwrs – Yellow, showy; June-Aug (2 mo.)
- Fruits – Cone-shaped seed capsule
- Fall Color – Insignificant
- Problems – Relatively none
- Tolerant - drought, erosion, clay soils
- Wildlife Value – Pollen for insects (no nectar) and leaf feeding insects (13 native spp total); Mammals don't feed leaves
- Notes: Attractive leaves and flowers; High pollinator value; winter interest from exfoliating bark and seed capsules



Full Sun/Part Shade – Medium

Hazelnut (*Corylus americana*)

- Ht. = 10-16 ft. W = 8-13 ft.
- Flwrs – Female - reddish, small catkins;
*Male – Showy yellow/ brown catkin
- Fruits – Egg-shaped, edible nut
- Fall Color – Variable, can be excellent
- Problems – Thicket forming; Leaf spots, blight and crown gall; leaf feeding insects
- Tolerant - clay soils; easily grown
- Wildlife Value – Insects feed on leaves, flowers, fruits (14 moth spp, 19 other insects); Mammals and birds eat nuts
- Notes: AKA ‘American Filbert’; Works best as thicket



Full Sun/Part Shade – Wet

Buttonbush (*Cephalanthus occidentalis*)

- Ht. = 5-12 ft. W = 4-8 ft.
- Flwrs – Showy, unique; White-cream
 - June-July (4 wks)
- Fruits – Ball-like fruits; persist in winter
- Fall Color – Variable, can be good
- Problems – Relatively few
- Tolerant – erosion, wet soils and saturation
- Wildlife Value – flwrs/nectar for pollinators (12 native spp of bees, flies, wasps); leaf feeding insects (8 native spp); winter berries for birds (>24 spp)
- Notes: Highly attractive to pollinators; Good for wet site



Full Sun/Part Shade – Wet

Elderberry (*Sambucus canadensis*)

- Ht. = 5-12 ft. W = 5-12 ft.
- Flwrs – Abundant, White (June-July; 3-4 wks)
- Fruits – Small, dark-purple berries
- Problems – Thicket forming; Cankers, powdery mildew, leaf spot, borers, spider mites, aphids
- Tolerant – erosion, clay, wet soils
- Wildlife Value – Pollen for pollinators (>20 native insects); Berries for birds and some small mammals (>30 native birds)
- Notes: Best as a ticket; Rejuvenation pruning possible; Competes well in edge habitat; Easily propagated



Partial Sun – Medium

Wild Black Currant (*Ribes americanum*)

- Ht. = 3-5 ft. W = 3-5 ft.
- Flwrs – Showy, fragrant, yellow-orange
 - July-Aug (3 wks)
- Fruits – Fleshy, black berries
- Problems – Host to white pine blister rust
- Tolerant – Rabbit, drought, erosion, clay soils
- Wildlife Value – Nectar and pollen for insects (26 native spp); Fruit for birds/mammals (5 birds, 8 mammals)
- Notes: Can handle full sun, but prefers consistent soil moisture



Part Sun/Part Shade – Medium

Blackhaw (*Viburnum prunifolium*)

- Ht. = 12-15 ft. W = 6-12 ft.
- Flwrs – Showy, white (Mid-spring; 2wks)
- Fruits – Showy, blue-black berries
- Fall Color – Excellent, red-orange
- Problems – Relatively few
- Tolerant – Drought, clay soils
- Wildlife Value – Pollen/nectar; Insects feed on lvs (13 native caterpillars); Birds feed on berries (21 native spp)
- Notes: Great background hedge for native planting



Part Sun/Shade – Med to Wet

Spicebush (*Lindera benzoin*)

- Ht. = 6-12 ft. W = 6-12 ft.
- Flwrs – Fragrant, showy, yellow-green
 - March (2 wks)
- Fruits – Bright red drupe
- Fall Color - Yellow
- Problems – Relatively few
- Tolerant – Drought, heavy shade, clay soils
- Wildlife Value – Pollen/nectar; Insects feed on lvs (3 native caterpillars); Woodland birds feed on berries (14 spp)
- Notes: More open and spreading in shade, better fall color with more sun



Tree Species List

Organized by:

- **Tree Size**
 - Large Shade Tree
 - Medium Shade Tree
 - Understory Tree
- **Moisture Conditions**
 - Dry
 - Medium
 - Wet
- **Light Requirements**
 - Full Sun (>6 hrs, full sun)
 - Part Sun (4-6 hrs, ind sun)
 - Part Shade (2-4 hrs, ind sun)
 - Shade (>2 hrs, indirect sun)

Other info:

- Size, flowers, fall color, etc.
- Problems – list of common, possible issues; not always that bad
- Tolerance –drought, urban soils, other conditions
- Wildlife value – based on a not exhaustive literature search

Understory Tree – Med/Wet – Part Sun

Paw Paw (*Asimina triloba*)

- Ht. = 15-30 ft
- Flwrs – Tiny, purple (April)
- Fruits – Large, oblong, yellow-green
- Fall Color – Good, yellow
- Problems – Relatively few
- Tolerant – Wet soils (well-drained); Intolerant of drought; deer browse
- Wildlife Value – Flwrs attract flesh flies, blow flies, others; Zebra swallowtail and Pawpaw Sphinx (moth) caterpillars feed exclusively; Fruits ate by 8 native mammals and woodland box turtle;
- Notes: Can handle full sun when older; Largest native tree fruit; Unique tropical characteristics (fruit, lvs, flwrs);



Understory Tree – Med – Full Sun/Shade

Ironwood (*Ostrya virginiana*)

- Ht. = 25-40 ft
- Flwrs – monecious, insignificant
- Fruits – Showy, hop-like
- Fall Color – Yellow
- Problems – None
- Wildlife Value – 33 moth spp; 10 spp of beetle; 5 other leaf feeding insect spp, 3 bird spp; 5 mammal spp
- Notes: AKA Hop Hornbeam; adaptable to wide range of light conditions; great for underplanting



Understory Tree – Med – Full Sun/Part Sun

American Witch Hazel (*Hamamelis virginiana*)

- Ht. = 15-20 ft
- Flwrs – Showy, fragrant (Mid-fall, 3 wks)
- Fruits – acorn-like seedpod
- Fall Color – Good, yellow
- Problems – Relatively few, Jap beetles
- Tolerant – Erosion, clay soil, deer browse
- Wildlife Value – Nectar/pollen (19 insect spp); Lf feeding insects (20 native moths; 9 other insect spp); Fruits consumed by 5 native vertebrate spp
- Notes: More sun will produce better flowering; Fall flowering; Unique seedpods explode



Medium Shade Tree – Medium to Wet

Blackgum (*Nyssa salvatica*)

- Ht. = 60-50 ft
- Flwrs – Insignificant
- Fruits – Small, blue-black drupes
- Fall Color – Excellent!!!
- Problems – Relatively few
- Tolerant – Clay soil, wet soil
- Wildlife Value – Nectar/pollen; Lf feeding insects, 11 native spp; 3 longhorn beetles; 28 native birds and 6 mammals eat fruits; Deer browse; Cavity nesting
- Notes: One of the best for fall color; tolerates some drought



Medium Shade Tree – Dry to Med

Persimmon (*Diospyros virginiana*)

- Ht. = 35-60 ft
- Flwrs – Insignificant (May to June)
- Fruits – Showy, edible, orange-purple
- Fall Color – Yellow-brown
- Problems – Relatively few
- Tolerant – Drought, clay soils, dry soils
- Wildlife Value – Nectar/pollen, >10 native bees; Insects feed on lvs and other plant parts, 6 longhorn beetles, 9 other native insects.
- Notes: Dioecious; Adaptable, tolerating full sun to light shade



Large Shade Tree – Medium

Basswood (*Tilia americana*)

- Ht. = 50-80 ft
- Flwrs – Pale yellow (June)
- Fruits – Gray-brown nutlets
- Fall Color – Yellowish
- Problems – Relatively few; Infrequent verticillium wilt; Jap. beetles
- Tolerant – Drought, clay soils, narrow branch unions
- Wildlife Value – Pollen/nectar; lvs and other plant parts; 25 moth spp; 11 longhorn beetle spp; >25 other native insects; 7 native mammals eat nutlets; Cavity nesting
- Notes: Japanese beetles are purely an aesthetic issue



Large Shade Tree – Medium

Kentucky Coffeetree (*Gymnocladus dioica*)

- Ht. = 60-80 ft
- Flwrs – Showy, fragrant (May-June)
- Fruits – Unique brown seedpods
- Fall Color – Yellow
- Problems – Relatively few; Seedpod cleanup
- Tolerant – Drought, urban conditions
- Wildlife Value – Nectar/pollen for 3 native insects and ruby-throated humminbird; 3 native caterpillars feed on lvs; Seeds/lvs toxic to most mammals
- Notes: Largest leaves of any native tree, bi-pinnately compound; Dioecious



Large Shade Tree – Dry to Wet

Bur Oak (*Quercus macrocarpa*)

- Ht. = 60-80 ft
- Flwrs – Insignificant, yellow-green (April)
- Fruits – Showy acorns
- Fall Color – Yellow-brown
- Problems – Relatively few
- Tolerant – Drought, varying soils
- Wildlife Value – High; 7 native butterfly caterpillars; Several hundred moth caterpillars; 59 longhorn beetle spp; 45 treehopper spp; >40 other insects; >20 native birds eat acorns; >10 native mammals eat acorns; Nesting habitat
- Notes: Highly adaptable to urban soils; flood and drought tolerant

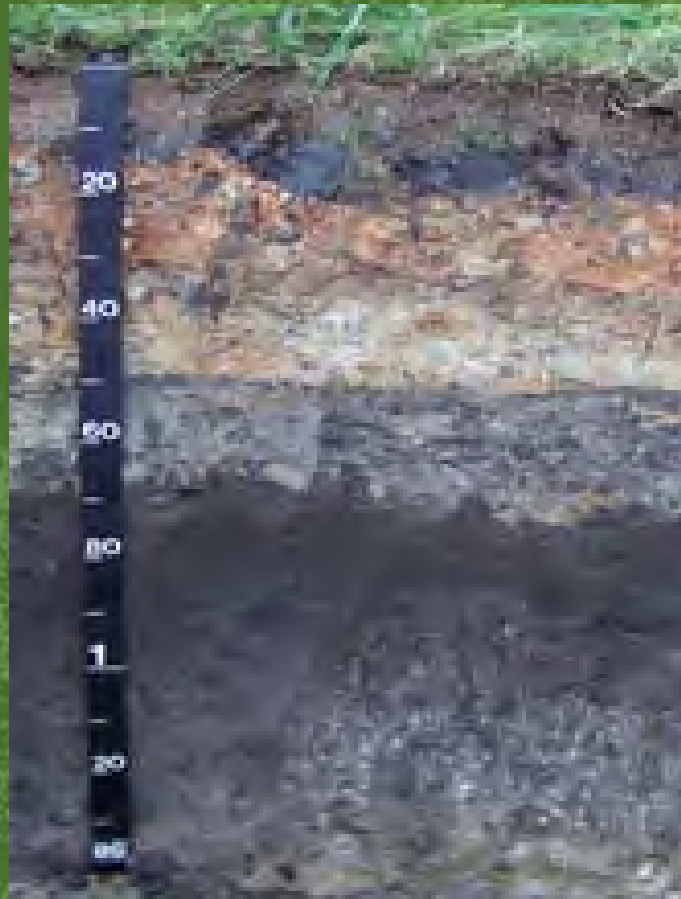


Assessing Your Soil

**Drummer Silty Clay Loam
Mollisol (Prairie)**



Urban Soil



**Fayette Silt Loam
Alfisol (Forest)**



Tree Planting

Step 1 – Identify the root collar or trunk flare

Step 2- Dig shallow broad hole

- Not too deep!!

Step 3 – Remove ball and burlap materials, cut away wire

Step 4 – Place tree at proper height

- Ball on firmly packed soil
- Not too deep!!

Step 5 – Backfill hole with amended soil

Step 6 – Mulch backfilled area

- Include staking only if absolutely necessary

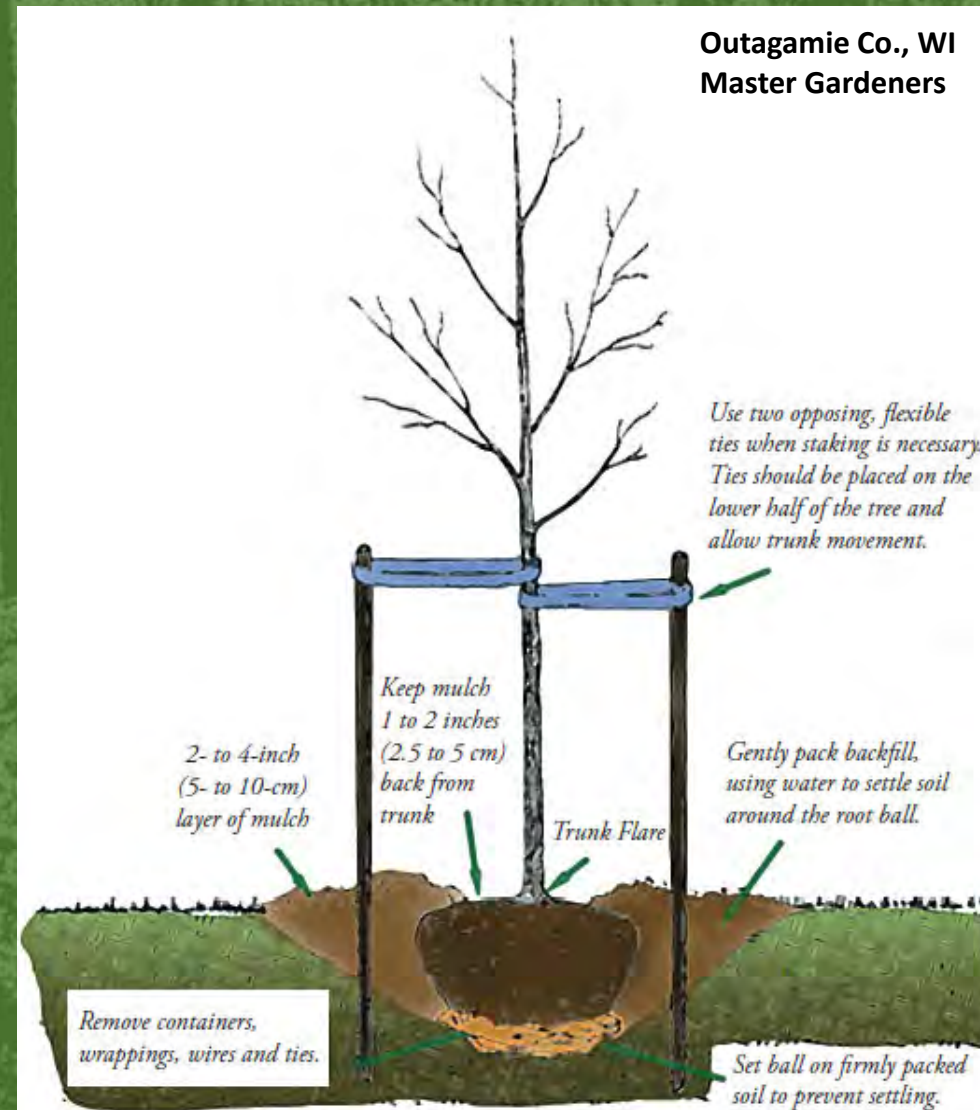
Step 7 – Water tree in

- Trickle garden hose is most effective

Step 7 – Followup care is critical

- Monitor and water as needed
- Trees need 1-2" of water/week

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Questions?



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