



A Guide to Preserving and Nurturing the Woodland Landscape



Transition into tranquility when you make Oakland Hills
your home.

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Oakland Hills is based on the innovative idea of a woodland landscape. The dramatic topography and well-established woodlands pre-existing on the site, make it a unique and desirable place to live. It is our hope that you, the residents, will help maintain the natural beauty of the area when altering the landscape for your home.

A Guide to Preserving and Nurturing the Woodland Landscape will aid you in preserving and enhancing your own woodland landscape. This document provides benefits of the woodland landscape, a description of the woodland landscape, directions for designing, installing, and maintaining the woodland landscape, and a list of plants and additional resources to aid you throughout the process.



Benefits of the Woodland Landscape

Not only is a woodland landscape positive for the environment, it is also very beneficial to you, the homeowner. A woodland landscape will:

- *Increase your property value.* By enhancing the environment surrounding your home, you will make it a more desirable place to live.
- *Give you a sense of privacy.* Trees and shrubs surrounding your property serve as a screen and eliminate the need for a privacy fence or other means of buffering.
- *Provide shade* both inside and out of your home. Not only will this make the summer weather more tolerable, but you can also see a difference in your energy bill. Well-shaded homes don't incur as much heat loss or gain as a home that is vulnerable to the wind and sun.
- *Accelerate landscape maturity.* Many popular landscape plants must be trimmed and shaped to conform to a designated planting area. In a woodland landscape, only minor pruning will be necessary and plants will mature quickly.
- *Be more convenient.* It is much easier and less expensive to maintain a home with a woodland landscape. Only minimal pruning will be required. Mowing will only be required in sodded areas. Only periodic weeding will be needed, and after the first few years, nature will make its own mulch.
- *Increase wildlife diversity.* You can enjoy the comforts of nature from your own home. Plants with berries will attract birds and other small animals. There are even some plants available that will attract different kinds of butterflies.
- *Foster seasonal beauty.* Careful plant selection will result in points of interest throughout all four seasons. Spring and summer will be filled with flowers while autumn is bursting with reds, oranges and yellows. Winter is even interesting with the evergreens and berries, occasionally covered in snow.
- *Reduce air pollution.* Gas powered garden tools emit significant amounts of air pollution. With less lawn area, there will be less mowing and with woodland plantings there will be minimal gas powered trimming. Native plants also remove carbon from the air.

- *Require fewer chemicals.* Because these plants are native to the area, few special measures are needed to make them grow.
- *Relieve stress.* Nature is proven to be a great stress reliever, and what better way to relax than sitting in your own home, watching squirrels chase each other and listening to the birds sing.

The Woodland Landscape

A successful forest system is made up of many plants and animals that act together to create a thriving environment for all species that inhabit it. There are three basic levels in a healthy forest that are necessary for regeneration.



- *The forest floor* is the rich organic layer consisting of decaying plant parts and microorganisms, which produce the spongy, moist, fertile layer where new seedlings germinate.
- *The understory* is made up of the seedlings and small shrubs and trees that need protection from the direct light of the sun.
- *The canopy* consists of large established trees that provide shade for the forest floor. These large trees also provide a majority of the seeds needed to continue the forest cycle.

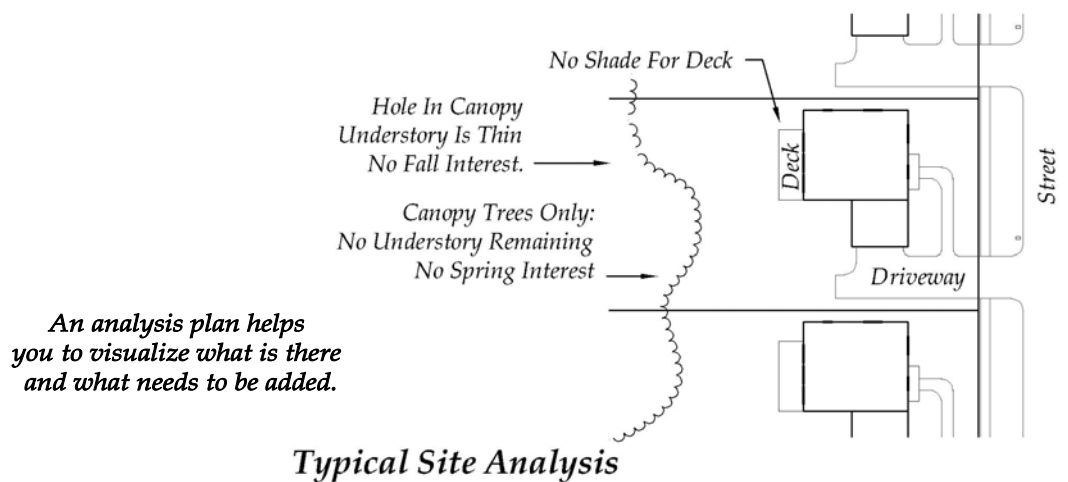
All three of these are habitats for a diverse selection of animals. Animals play an important part in the forest cycle as well. For example, insects pollinate flowers when feeding on their nectar. Then these flowers produce fruit to feed the birds. The birds, in turn, eat the insects which, in excess, can be harmful to the flower. This is just one of many examples of a chain formed in a forest ecosystem.

Native plants are an important part of that ecosystem. These plants that have grown naturally in this region for thousands of years, have adapted to the geography, hydrology and climate over time. It is important to avoid non-native species (plants that have been introduced into an environment where they do not

grow naturally) because without disease and predators to control the population, many of these plants can become invasive and force out the native species.

Planning the Woodland Landscape

The first step in preserving or enhancing your woodland landscape is to take an inventory of what already exists. On a scaled plan of your property, mark buildings, patios, walks, driveways, existing plant material and anything else that might play a factor in the layout of your design. Take note of drainage, soil, sun angles and climate. Be sure to note the existing condition of any woodland areas. Look for things such as significant holes in the tree canopy, thin areas of understory and lack of seasonal interest. If possible, make a list of the existing plant material and become familiar with their seasonal habits.



Next, think about the way you want your property to look. Are there specific views that you want to screen? Do you want to shade a certain area? Be sure to use curving lines to lay out your woodland area, and make sure you coordinate with your neighbors existing or proposed landscape. Designate the areas where woodlands are to be created. Make a separate symbol for the woodland areas that are to be enhanced.

Now it is time to get into specifics. You need to decide which plants you want and where they will go. This part may require a little more research. Some of the best resources can be found at your local nurseries or arboretums. Some of the things you need to look at are:

- Existing Species.* Find out what types of trees and shrubs are growing near your property. Cut off a small leaf or branch and take it to an expert if you can't identify it on your own. This is a good starting point for plant selection.

- *Mature size.* Make sure you know the mature height of the plants before you buy them so you can determine if they are understory plants or canopy plants. Select a variety of each. Get a general idea of how far apart trees and shrubs should be planted to avoid crowding.

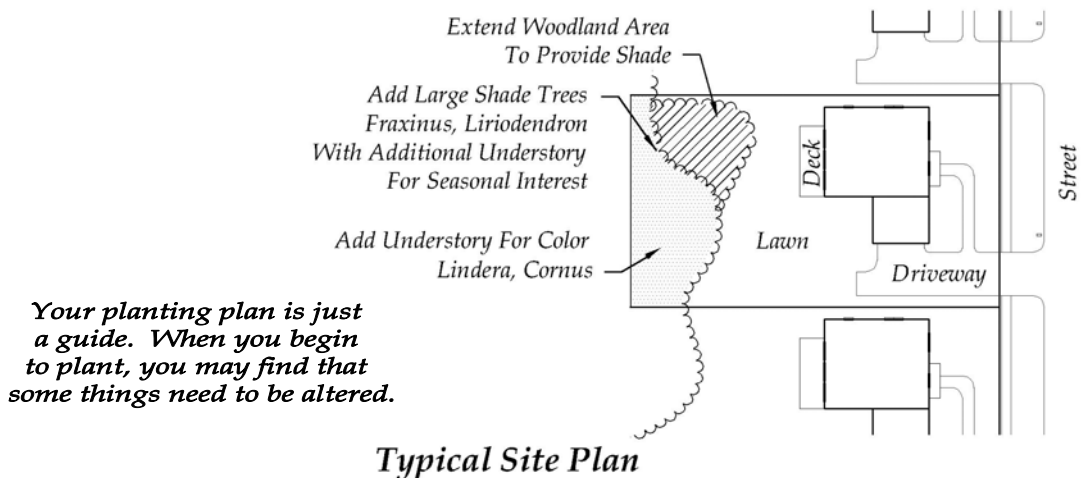


Make sure there is a variety of color for the fall.

- *Seasonal interest.* Determine which plants will provide interest in which seasons. Make sure there are flowering shrubs for the spring and summer, a variety of colors in the fall, and evergreens or shrubs with berries for the winter. Make sure the seasonal interest is spread throughout the landscape to create a more pleasing view in each season.

- *Practicality.* Make sure the plants you have chosen are practical for a forest setting. For instance, a boxwood shrub grows virtually

symmetrical and is generally trimmed to a geometric sphere. This is not something you would find in a native forest. Also make sure they are practically placed. Plants in a natural setting don't grow in a symmetrical pattern. They also tend to grow in groups. It is best to avoid even numbers. Try planting them in groups of 3 or 5 with one species of plant per cluster.



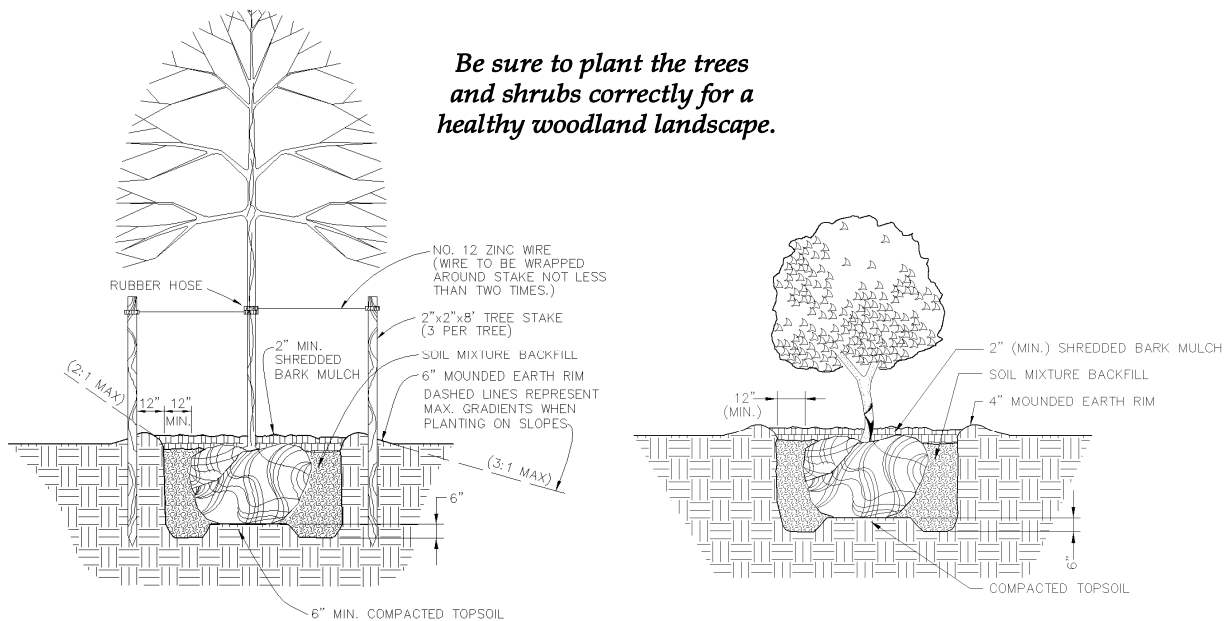
Enhancing the Woodland Landscape

When you have a well-rounded selection of plants and have an idea of where they will be planted, it is time to begin preparation of your woodland beds.

To extend an existing woodland area or create a new one, you will first need to cut up any sod. (If you are only enhancing your existing woodland landscape you can skip to the next step.) Using a spade, cut about three inches into the ground along the curvilinear line the future woodland bed will make with the remaining sod. Then use the same spade to cut the roots of the sod just under the surface of the dirt. (A sod-cutting machine may also be available for rent at the local tool rental store.) Pull up the unwanted sod and dispose of it. There is no need to turn over the soil. This may stimulate the weeds that are buried under the surface. Be sure to create a barrier (see "Edging" pg. 7) between your

new woodland bed and the remaining sod to discourage lawn grass from growing into the woodlands.

The next step is planting the canopy trees. Before you put them in the ground, place them where they will go. Focus on filling in holes in the existing woodland canopy and creating new clusters for any proposed woodland areas. Make sure that the trees are staggered and spaced the way you like. Next, dig a hole just as deep and twice as wide as the ball of dirt around the roots of the tree. Water the hole well before you plant the tree. Place the tree in the hole and fill it in. Make sure the surface of the dirt is level with the top of the root ball. The tree should not be planted any higher or deeper than it was before. After the tree is in the ground, it is important to stake it. This will keep the wind from breaking the fragile roots that are forming.



Tree Planting Diagram

Shrub Planting Diagram

When the canopy trees are in the ground, it is time to begin placing the understory plants. If there is no existing shade in the area you are planting, you want to make sure that the understory plants you have selected are sun tolerant. If the shade is dense, you need to make sure the plants chosen can handle these conditions as well. Again, focus on filling in holes in the existing woodland understory and creating new clusters for any proposed woodland areas. The planting procedures for these are relatively the same. Dig the hole (twice and wide and just as deep as the root ball). Fill it with water. Put the tree in the hole. Cover it with dirt (not too deep and not too shallow). If you are planting a tree, you may want to stake it as well, but shrubs require no staking.

Wildflowers are another way to add color to your landscape. You can buy packets of wildflowers by species or as mixes. Once all of your trees and shrubs are planted, select the areas where you would like to see wild flowers. Once

again, make sure you read the packet to see if they prefer sun or shade. Spread the seeds on the ground and cover them with dirt and mulch. Water them gently (a fast stream of water will wash all the seeds away) and enjoy the color they will bring into your landscape.

The last step in enhancing your woodland landscape is supplementing the forest floor. Adding a layer of pine bark or leaves and pine needles to the ground will add nutrients to the soil and discourage the growth of undesirable weeds.

Maintaining the Woodland Landscape

Now that you have enhanced your woodland landscape, here are some basic steps for maintaining it.



Organic material produced by the trees help the forest to grow.

- *Watering.* New plants should be watered well for the first three years. Water more in the hot summer and less in the spring and fall. Try to avoid over watering. In droughts or dry seasons well-established trees may even require some water.

- *Mulching.* The first couple of years may require heavy mulching. Pine bark is available in many nurseries in your area. Once the trees have matured, nature will create its own mulch. In the fall, rake the leaves off the sodded areas of the yard and add them to the woodlands. As the

years go by, the forest floor will accumulate a rich carpet of nutrients and additional mulch will only be required in small areas.

- *Edging.* In order to keep your woodland areas from being invaded by turf grass, it is important to create an edge between the sod and the woodland edge. In the spring, take your spade and cut a small trench between the two areas. Fill the trench with mulch, leaves and pine needles to discourage grass from growing across into the woodlands.

- *Fertilizing.* If your plant palate consists of native plants, fertilizers are not greatly needed, however if you desire to give your plants some form of additional nourishment, it is suggested that you fertilize in the fall with organic fertilizers such as compost or well seasoned manure. There are also some environmentally friendly, slow-release fertilizers available.

- *Pest Control.* Again, if your plant palate consists mostly of native plants, pesticides are not greatly needed. If you start to notice a problem on a small portion of the plant, remove those portions. If a large area is affected, try using insecticidal soap or horticultural oil. Keep in mind that not all insects are bad. There are some “good” insects such as the ladybug that feed on the “bad” insects and keep their populations under control. To avoid disturbing the wrong

population, don't apply your pesticide in a blanket. Selectively spot spray only the plants that are affected.

- *Weeding*. Weeding will be the most intensive in the first few years of establishment. Unwanted plants should be gently pulled out. If the weed does not come gently, cut it to the ground. This will prevent the disturbance of young saplings and wildflowers in the soil.

- *Pruning*. In a woodland landscape, occasional pruning and shaping is fine, but not necessary. Plants in a woodland area should grow in their natural form. Occasional clipping of invasive vines that can threaten canopy trees or trimming of the lower branches of a tree on the edge of the woodlands may be needed but, the removal of existing woodland understory is discouraged. In general, the woodland area should be left to grow into a mature forest.

Appendix A: Suggested Plants

The following list is just a suggestion of plants that can be used in your woodland landscape. There are other plants that are not included on this list that may be suggested by your local nurserymen. Many of these plants are available at nurseries in your area. Some may be more difficult to find, but are most likely available at stores that specialize in native plant material. All of these plants (with the exception of the wildflowers) are listed as preferred plants in the Metro Land Development Code.

Canopy Trees

<i>Common Name</i>	<i>Botanical Name</i>	<i>Size</i>	<i>Seasonal</i>
Yellowwood	<i>Cladrastis lutea</i>	50-75 ft	Sp, Su
Persimmon	<i>Diospiros virginiana</i>	50-75 ft	F, W
American Beech	<i>Fagus grandifolia</i>	50-70 ft	Su, F
White Ash	<i>Fraxinus americana</i>	75-80 ft	--
Blue Ash	<i>Fraxinus quadrangulata</i>	80-100 ft	F
Tulip Tree	<i>Liriodendron tulipifera</i>	75-100 ft	Sp
Blackgum	<i>Nyssa sylvatica</i>	50-75 ft	F
Scarlet Oak	<i>Quercus coccinea</i>	50-75 ft	--
Bur Oak	<i>Quercus macrocarpa</i>	75-100 ft	--
American Linden	<i>Tilia americana</i>	75-100 ft	Su, F



Bur Oak



American Linden



Blue Ash



Blackgum



American Beech

Understory Trees

<i>Common Name</i>	<i>Botanical Name</i>	<i>Size</i>	<i>Seasonal</i>
Red Buckeye	<i>Aesculus pavia</i>	12-20 ft	Sp
Alder	<i>Alnus serrulata</i>	12-30 ft	Sp, W
Allegheny Serviceberry	<i>Amelanchier laevis</i>	18-35 ft	Sp, F, W
Pawpaw	<i>Asimina triloba</i>	10-35 ft	Su, F
Red Bud	<i>Cercis Canadensis</i>	20-30 ft	Sp, Su
Fringe Tree	<i>Chionanthus virginicus</i>	20-35 ft	Sp, F, W
Flowering Dogwood	<i>Cornus florida</i>	10-20 ft	Su, F, W
Hawthorn	<i>Crataegus macracantha</i>	30 ft	Sp, F, W
Washington Hawthorn	<i>Cataegus phaenopyrum</i>	30 ft	Sp, F, W
Carolina Silverbell	<i>Halesia carolina</i>	25-35 ft	Sp, F, W

Hophornbeam	<i>Ostrya virginiana</i>	25-35 ft	F, W
Sourwood	<i>Oxydendrum arboreum</i>	30-50 ft	Su, F
Nannyberry Viburnum	<i>Viburnum lentago</i>	6-18 ft	Sp
Blackhaw Viburnum	<i>Viburnum prunifolium</i>	15-20 ft	Sp



Flowering Dogwood



Fringe Tree



Nannyberry Viburnum



Hawthorn



Red Buckeye

Shrubs

Common Name	Botanical Name	Size	Seasonal
Bottlebrush Buckeye	<i>Aesculus parviflora</i>	9-12 ft	Su
Indigo Bush	<i>Amorpha fruticosa</i>	8-12 ft	Su
Red Chokeberry	<i>Aronia arbutifolia</i>	3-12 ft	Sp, F, W
Black Chokeberry	<i>Aronia melanocarpa</i>	2-3 ft	Su, F, W
Sweet Shrub	<i>Calycanthus floridus</i>	3-9 ft	Sp
New Jersey Tea	<i>Ceanothus americanus</i>	2-3 ft	Su
Buttonbush	<i>Cephalanthus occidentalis</i>	5-15 ft	Su, F
Cinnamon Clethra	<i>Clethra acuminata</i>	15-20 ft	Su, F
Summersweet	<i>Clethra alnifolia</i>	6-12 ft	Su, F
American Hazel	<i>Corylus Americana</i>	10-12	Sp
Strawberry Bush	<i>Euonymus americanus</i>	3-6 ft	Sp, F, W
Common Witchhazel	<i>Hamamelis virginiana</i>	20-30 ft	F
Smooth Hydrangea	<i>Hydrangea arborescens</i>	6-9 ft	Su
Saint Johnswort	<i>Hypericum frondosum</i>	3 ft	Sp, Su, F, W
Possumhaw	<i>Ilex deciduas</i>	12-20 ft	Sp
Winterberry	<i>Ilex verticillata</i>	10-18 ft	F, W
Virginia Sweetspire	<i>Itea virginica</i>	6-9 ft	Sp, F, W
Spicebush	<i>Lindera benzoin</i>	6-12 ft	Sp, Su
Wild Plum	<i>Prunus Americana</i>	20-30 ft	Sp, F, W
Carolina Buckthorn	<i>Rhamnus caroliniana</i>	20-35 ft	F, W
Fragrant Sumac	<i>Rhus aromatica</i>	6-9 ft	Sp, f, W
Flame Leaf Sumac	<i>Rhus copallina</i>	4-8 ft	Su, F, W
Smooth Sumac	<i>Rhus glabra</i>	5-10 ft	F
Staghorn Sumac	<i>Rhus typhina</i>	15-25 ft	F, W
Carolina Rose	<i>Rosa Carolina</i>	1-3 ft	Sp
Prarie Rose	<i>Rosa setigera</i>	15-20 ft	Su, F, W
Elderberry	<i>Sambucus canadensis</i>	6-8 ft	Sp, F, W
Steeplebush	<i>Spiraea tomentosa</i>	2-4 ft	Su, F

Bladdernut	<i>Staphylea trifolia</i>	6-10 ft	F, W
Coralberry	<i>Symphoricarpos orbiculatus</i>	1-4 ft	F, W
Mapleleaf Viburnum	<i>Viburnum acerifolium</i>	3-6 ft	Su, F
Witherod Viburnum	<i>Viburnum cassinoides</i>	6-10 ft	Su, F, W
Arrowwood Viburnum	<i>Viburnum dentatum</i>	4-15 ft	Sp
Smooth Witherod	<i>Viburnum nudum</i>	15-18 ft	Sp



Black Chokeberry



Witherod Viburnum



Winter Holly



Common Witchhazel



Sweet Shrub

Wild Flowers

<i>Common Name</i>	<i>Botanical Name</i>	<i>Size</i>	<i>Seasonal</i>
Wild Columbine	<i>Aquilegia canadensis</i>	--	Sp
Jack-in-the-Pulpit	<i>Arisaema triphyllum</i>	--	SP
Wild Ginger	<i>Asarum canadense</i>	--	Sp
Dutchman's Breeches	<i>Dicentra cucullaria</i>	--	Sp
Yellow Trout Lily	<i>Erythronium americanum</i>	--	SP
Wild Geranium	<i>Geranium maculatum</i>	--	Sp
Virginia Waterleaf	<i>Hydrophyllum virginianum</i>	--	Sp, Su
Virginia Bluebells	<i>Mertensia virginica</i>	--	Sp
Mayapple	<i>Podophyllum peltatum</i>	--	Sp
Solomon's Seal	<i>Polygonatum canaliculatum</i>	--	Sp
Bloodroot	<i>Sanguinaria canadensis</i>	--	Sp
Trillium	<i>Trillium spp.</i>	--	Sp

Vines

<i>Common Name</i>	<i>Botanical Name</i>	<i>Size</i>	<i>Seasonal</i>
Trumpet Vine	<i>Campsis radicans</i>	--	Su, F
Virgin's Bower	<i>Clematis virginiana</i>	--	Su, F
Trumpet Honeysuckle	<i>Lonicera sempervirens</i>	--	Sp, Su, F
Virginia Creeper	<i>Parthenocissus quinquefolia</i>	--	Su, F, W

*Sp - Spring

*Su - Summer

*F - Fall

*W - Winter

Appendix B: Additional Resources

The following is a list of additional resources that may be helpful during the research process of your design. It includes books, and web sites that can assist you in creating your woodland landscape. Many of these resources were used in writing *A Guide to Preserving and Nurturing the Woodland Landscape*.

Internet

Organization

Web Site

Kentucky Native Plant Society

www.knps.org

Kentucky Nature Preserves

www.kynaturepreserves.org/index.html

Environmental Protection Agency

www.epa.gov/glnpo/greenacres/nativeplants

Audubon Society

www.audubon.wku.edu/daviess/wildflowers.html

Scott County Native Plant Arboretum

www.spider.georgetowncollege.edu/arbor/

Bernhiem Arboretum

www.bernheim.org

Shooting Star Nursery

www.shootingstarnursery.com

University of Georgia

www.ces.uga.edu/Agriculture/horticulture/H-00-060.htm

University of Florida

http://edis.ifas.ufl.edu/BODY_EP079

Books

Author

Title

Michael A. Dirr

[Manual of Woody Landscape Plants](#)

Allan M. Armitage

[Herbaceous Perennial Plants](#)

C. Brickell and J. Zuk

[The American Horticultural Society A-Z](#)

Rick Darke

[Encyclopedia of Garden Plants](#)

[The American Woodland Garden: Capturing the Spirit of the Deciduous Forest](#)

Carolyn Harstad

[Go Native!: Gardening With Native Plants and Wildflowers in the Lower Midwest](#)

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