Celebrate our natural heritage and protect native plant communities

- 1. Learn more about native plants.
- 2. Buy nursery propagated plant material.
- **3.** Don't dig plants from the wild.
- 4. Protect native plant and natural area habitat.
- 5. Promote responsible landscaping practices.
- **6.** Plant native and not exotic plant species.

For more information

Great Smoky Mountains National Park 107 Park Headquarters Road Gatingburg TN 37738 423/436-1706

Tennessee Dept. of Environment and Conservation (TDEC)

Division of Natural Heritage 401 Church St., 8th floor, L & C Tower Nashville TN 37243-0447 615/532-0436

Tennessee Exotic Pest Plant Council (TN-EPPC)

P.O. Box 40692 Nashville TN 37204 615/532-0436

Tennessee Native Plant Society

Department of Botany University of Tennessee Knoxville TN 37996-1100 423/974-2256

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Personalized Plantings (Pigeon Forge)

Tennessee Native Plant Society Tennessee Field Office of The Nature Conservancy

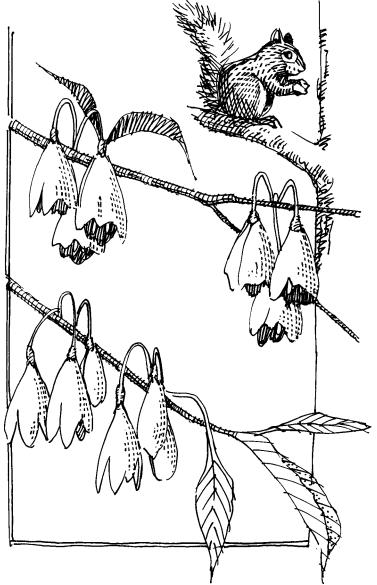
TDEC Division of Natural Heritage TDEC Bureau of State Parks

Tennessee River Gorge Trust (Chattanooga) Tennessee Wildlife Resource Agency

Tennessee Valley Authority

EAST TENNESSEE

Unaka Mountains, Ridge and Valley, **Cumberland Plateau and Mountains**



LANDSCAPING **PLANTS**

PROMOTES BIODIVERSITY

and endorses a land ethic that celebrates our natural heritage

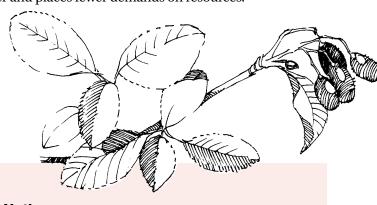
Our natural heritage

The use of native plants in landscaping is a celebration of our natural heritage and an awakening of a land ethic first expressed by Aldo Leopold more than 50 years ago.

The natural processes from which natives evolve represent the cog and wheel of a healthy ecosystem sustained by a complex web of biological diversity.

Native plants have many inherent qualities and adaptive traits that make them aesthetically pleasing, practical, and ecologically valuable for landscaping.

Using native plants contributes to the health and often the restoration of an ecosystem. Landscaping with natives in an urban setting helps restore regional character and places fewer demands on resources.



Native

species naturally occurring in a region (indigenous)

Exotic

species introduced by humans, either deliberately or accidentally (alien, non-native)

What are natives?

Natives are plants that evolved in place over geologic time and are distributed across the landscape largely in response to climatic episodes and adaptation to site conditions related to land formation.

Natives are generally defined as plants that occurred in North America before European settlement. This distinction is made because of the large-scale changes in the flora that have resulted since European settlement and the introduction of "exotic" plants.

Exotics are plants that are directly or indirectly, deliberately or accidentally introduced by human action. To be more precise, natives are natural elements of a regional landscape. While some species are native to North America, they may be exotic to East Tennessee.

Natives vs. exotics

While many exotics are harmless, others pose serious threats to biodiversity. Exotics that escape and naturalize change the floral composition of native plant communities. Exotics that invade native plant communities spread, out-compete, and displace natives. Other exotics are vectors for disease and exotic insects. Future introductions can be prevented by using native species.

Using natives also exhibits regional flora and promotes our natural heritage. Natives have often been overlooked and their aesthetic value ignored. Instead, many regions look the same because overuse of the same exotics has created a monotonous, predictable landscape.

Basics about using natives

When landscaping with natives match the right plants with the right site conditions. Consider using plants that occur together in their natural habitats. Do your homework before planting; study the plants and the site condition information in this brochure. Visit a natural area and observe how plants occur and design your landscape accordingly. Buy nursery propagated plants. Remember, landscaping with natives is art imitating nature.

Benefits of natives

- ➤ Adapted to regional conditions and may require less maintenance and are cost-effective.
- ➤ Hardy, withstand extreme winter cold, do not suffer from die back.
- ➤ Environmentally friendly, require fewer pesticides and fertilizers because of natural adaptations.
- ➤ Promote biodiversity and stewardship.
- ➤ Provide food and shelter for native wildlife.
- ➤ Restore regional landscapes.
- ➤ Prevent future exotic introductions.

Natives for wildlife

provide winter cover and food.

Using natives in landscaping helps sustain native butterflies, moths and other beneficial insects; native birds, reptiles, mammals, and other fauna. Fall migrating birds depend on high-energy fruits from flowering dogwood and spicebush. Spring migrants feed on insects that occur on oak trees. Beech and other native trees provide nesting habitat, while Eastern red cedar short leaf pine, and American holly

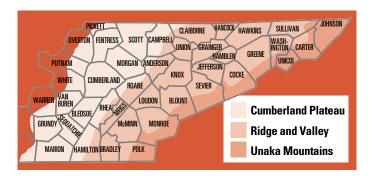
- ➤ Don't dig plants from the wild.
- ➤ Buy nursery-propagated plant material.

EAST TENNESSEE

Unaka Mountains, Ridge and Valley, **Cumberland Plateau and Mountains**

The Unaka Mountains, the Ridge and Valley, and the Cumberland Plateau and Mountains are distinctively different physiographic regions that make up East Tennessee. Site conditions for each province are determined by topography, soil pH, soil depth, elevation, availability of light, and hydrology. These varying site conditions support a mosaic of native plant communities.

- ➤ Dry, higher-elevation, south-facing slopes have extremely acidic soils that support evergreens such as mountain laurel and pines, as well as oaks, huckleberry, blueberries, and hickories.
- ➤ On north-facing slopes, a mixed mesophytic forest community occurs that includes hemlock, tulip poplar and maple.
- ➤ Hydric plants occur in drainages, floodplains and upland swamps; these include sweetgum, sycamore, ironwood, and birches.



Soil pH and geology distinguish the Unaka Mountains and the Ridge and Valley from the Cumberland Plateau and Mountains. The Unaka Mountains contain an extremely acidic (lower pH) coarse to fine loam soil. The soil in the northern part of the mountains is formed from granite and gneiss. The soil in the southern part of the mountains derives from phyllite, slate, sandstone, and quartzite. The Ridge and Valley contains a wide variety of topography and geologic formations, and the soils are less acidic (higher pH). The valleys are made up of tilted rock formations of soft shales and clavey limestones. Mostly sandstones and hard shale underlie the ridges, but some limestone exists. The Cumberland Plateau and Mountain Region is generally more acidic (lower pH), underlain by Pennsylvanian sandstones and shales. The dominant soils are well-drained, loamy, strongly acidic, and low in natural fertility.

For landscaping purposes it is important to remember that plants growing in our region are specifically adapted to hydrology (moisture and dryness) and soil pH (acidity and alkalinity). Soil moisture, soil pH, and light availability are important limiting factors. Matching plants to site conditions will yield the maximum benefits that natives provide.

Native plant recommendations



COMMON NAME

SHRUBS

Serviceberry

Indigo bush

Sweetshrub

Buttonbush

Hazelnut

Leatherwood

Hearts-a-bustin

Wild hydrangea

Virginia-willov

Snicebush

Ninebark

Flame azalea

Wild azalea

Fragrant sumac

Winged sumac

Carolina rose

Swamp rose

Elderberry

Bladdernut

Farkleberry

Cranherry

Deerberry

Coralberry, buckbrush

Highbush blueberry

Mapleleaf viburnum

SMALL TREES

Hercules club

Serviceberry

Paw paw

Ironwood

Fringe tree

Hawthorn

Witch-haze

American holly

Hop-hornbeam

American plum

Carolina buckthorn

Sourwood

Flowering dogwood

Washington hawthorn

Parslev hawthorn

Carolina silverbell

Sweet bay magnolia

Redbud

Rose bay

Mountain laurel

Common winterberry

Red chokeberr

Black chokeberr

New Jersey tea

American beautyberry

Cumberland rosemary Conradina verticillata

Golden St. John's Wort Hypericum frondosum

Shrubby St. John's Wort Hypericum prolificum

SOIL MOISTURE

SCIENTIFIC NAME

Alnus serrulata

Amelanchier laevis

Amornha fruticosa

Aronia arbutifolia

Calvcanthus floridus

Callicarna americana

Corvlus americana

Fuonymus americanus

Hydrangea arborescens

Dirca palustris

Ilex verticillata

Itea virginica

Kalmia latifolia

Lindera henzoin

Rhus aromatica

Rhus copallina

Rosa carolina

Rosa palustris

Staphylea trifolia

Samhucus canadensis

Vaccinium arboreum

Vaccinium corvmbosum

Vaccinium macrocarpon

Vaccinium stamineum

Viburnum acerifoliun

Amelanchier arhorea

Carpinus caroliniana

Chionanthus virginicus

Cercis canadensis

Crataegus marshalli

Crataegus phaenopyrum

Crataegus mollis

Halesia carolina

Magnolia virginiana

Oxydendrum arboreum

Rhamnus caroliniana

Ostrva virginiana

Aralia spinosa

Asimina triloba

Alternate leaved dogwood Cornus alternifolia

Physocarpus opulifolius

Rhododendron calendulaceum

Rhododendron canescens

Rhododendron maximum

Ceanothus americanus

Cephalanthus occidentalis

H = hydric; wet, plants periodically or often inundated by water M = mesic; moist, adequate soil moisture retention year-round S = sub-xeric; moist to dry, seasonally moist, periodically dry

MOISTURE

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X = xeric; dry & drought resistant, little moisture retention, excessively drained

SOIL pH

B = basic; prefers limestone A = acidic; prefers acidic soils

COMMON NAME	SCIENTIFIC NAME	LIGHT		T	MOISTURE				SOIL pH		
		F	Р	S	Н	M	S	Χ	В	Α	R
SMALL TREES (continued)											
Staghorn sumac	Rhus typhina	•	•				•	•		•	
Mountain ash	Sorbus americana	•	•		•	•	•			•	
Southern rusty blackha	aw Viburnum rufidulum	•	•	•		•	•	•	•		
Northern blackhaw	Viburnum prunifolium	•	•	•		•	•	•			

Mountain ash	Sorbus americana
Southern rusty blackhaw	Viburnum rufidulum
Northern blackhaw	Viburnum prunifolium
TREES	
Red maple	Acer rubrum
Silver maple	Acer saccharinum
Sugar maple	Acer saccharum
Yellow buckeye	Aesculus flava
Black birch	Betula lenta
River birch	Betula nigra
Bitternut hickory	Carya cordiformis
Pignut hickory	Carya glabra
Shagbark	Carya ovata
Mockernut	Carya tomentosa
Yellow-wood	Cladrastis lutea
Persimmon	Diospyros virginiana
American beech	Fagus grandifolia
White ash	Fraxinus americana
Green Ash	Fraxinus pennsylvanica
Blue ash	Fraxinus quadrangulata
Black walnut	Juglans nigra
Red cedar	Juniperus virginiana
Sweetgum	Liquidambar styraciflua
Tulip poplar	Liriodendron tulipifera
Blackgum	Nyssa sylvatica
Cucumber tree	Magnolia acuminata
Red mulberry	Morus rubra
Short leaf pine	Pinus echinata
White pine	Pinus strobus
Sycamore	Platanus occidentalis
Black cherry	Prunus serotina
White oak	Quercus alba
Scarlet oak	Quercus coccinea
Southern red oak	Quercus falcata
Water oak	Quercus nigra
Pin oak	Quercus palustris
Chestnut oak	Quercus prinus
Northern red oak	Quercus rubra
Post oak	Quercus stellata
Black oak	Quercus velutina

VINES										
Dutchman's pipe	Aristolochia macrophylla		•	•		•	•			
Crossvine	Bignonia capreolata	•	•		•	•	•			
Trumpet creeper	Campsis radicans	•	•				•	•		
Leatherflower	Clematis viorna	•	•	•		•	•	•		
Virgin's bower	Clematis virginiana	•	•	•		•	•	•		
Climbing hydrangea	Decumaria barbara	•	•		•	•				
Carolina jasmine	Gelsemium sempervirens	•	•			•	•		•	
Virginia creeper	Parthenocissus quinquefolia	•	•	•		•	•	•		
Passionflower	Passiflora incarnata	•	•				•	•		
Atlantic wisteria	Wisteria frutescens		•	•	•	•	•			

R = restricted to either B or A

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GRASSES AND SEDGES Split beard bluestem River cane ,Oat grass Bottle brush

FFRNS

Lady fern

Bulblet feri

Maidenhair fern

Common grape fer

Hay-scented fern

Shining club moss

Cinnamon ferr

Christmas ferr

Plaintain-leaved sedge River oats, spangle grass Canada wild rve Sugarcane plumegrass Narrow plumegrass Switch-grass

Adiantum pedatum Asplenium platyneuror

Botrvchium dissectum

Dennstaedtia nunctiloha

Lycopodium lucidulum

Osmunda cinnamomea

Woodwardia areolata

Polystichum acrostichoide

Onoclea sensibilis

Woodsia obtusa

Cystopteris bulbifera

Athyrium felix-femina ssp. asplenioid

Andropogon gerardii Andropogon ternarius Andropogon virginicus Arundinaria gigantea ssp. giga Carex plantaginea Chasmanthium latifolii Danthonia compressa Elvmus canadensis Erianthus giganteu Erianthus strictus

Hvstrix patula

Amphicarnaea bracteata

Asarum canadense

Coreonsis auriculata

Goodvera pubescens

Phacelia bipinnatifida

Mitchella repens

Phlox amoena

Phlox carolina

Phlox pilosa

Phlox divaricata

Phlox stolonifera Tiarella cordifolia

Verbena canadensi

Actaea pachypoda

Anemone virginiana

Aquilega canadensis

Amsonia tabernaemontan

Iris cristata

Antennaria plantaginifolia

Pachysandra procumbens

Panicum virgatun

Sorghastrum nutans

GROUND COVERS

Hog-peanut Pussy's toes Wild ginger Mouse-eared coreonsis Rattlesnake plaintair **Dwarf crested iris** Partridge berry Allegheny spurge Chalice phlox Carolina phlox Wild blue phlo Creeping phlox

FLOWERS Blue star Wild columbine Green dragon Jack-in-the-pulpit Goat's-beard Swamp milkweed Butterfly-weed White wood aster Showy aster Late purple aster False goatsbeard Blue wild indigo Marsh marigold Blue cohosh Pink turtlehead Whorled tickseed Wild bleeding heart Shooting star Purple coneflowe Wild ageratum Joe-Pye weed Wild geranium Maximillian sunflowe Sharp-lobed hepatica Jewelweed Dense blazing sta

Virginia bluebells

Bishop's cap

Phlox maculat Garden phlox

Jacob's Jadder

Solomon's seal

Blackeyed Susar

Rough stemmed goldenroom

Ginseng

Fire pink

Spiderwork

Tall ironweed

Bird-foot violet

Long-spurred violet

Arisaema dracontiur Arisaema triphyllum Aruncus dioicus Asclepias incarnata Asclepias tuberosa Aster divaricatus Aster arandiflorus Aster patens Astilbe biternata Rantisia australis Caltha nalustris Caulonhyllum thalictroide. Chelone Ivonii Coreonsis maio Dicentra eximia Dodecatheon meadia Echinacea purpurea Eupatorium coelestinum Eupatorium fistulosum Geranium maculatum Helianthus maximiliani Hepatica acutiloba Heuchera americana Impatiens capensis

Iris versicolor

Liatris spicata

Lilium superbum

Lobelia cardinalis

Mitella diphylla

Phlox maculata

Phlox paniculata

Mertensia virginica

Panax quinquefolius

Polemonium reptans

Rudbeckia fulgida

Silene virginica

Solidago rugosa

Vernonia altissima

Viola pedata

Viola rostrata

Polygonatum biflorum

Tradescantia virginiana

MOSAIC FOR FULL SUN Rig blue stem

Andronogon gerardi **Butterfly** weed Asclenias tuberosa River oats Chasmanthium latifolium .Ine-Pve weed Funatorium dubium Carolina iasmin Gelsemium semnervi Phlox spp. Black-eved Susan Rudheckia fulgida Indian grass Sorghastrum nutans



MOSAIC FOR SHADE

Jack-in-the-pulpit Dutchman's pipe Wild ginger River oats Sharp-lobed hepatica Alumroot Cinnamon fern Solomon's seal Christmas fern

Aristolochia macrophylla Asarum canadense Chasmanthium latifoliui Hepatica acutiloba Heuchera americana Osmunda cinnamomea Polygonatum hiflorum Polystichum acrostichoide Viola snn

Arisaema triphyllur





Black willow

Sassafras

White cedar

Basswood

Salix niara

Sassafras albidum

Thuja occidentalis

Tilia americana

Outchman's pipe	Aristolochia macrophylla									1
Crossvine	Bignonia capreolata	•	•		•	•	•			
rumpet creeper	Campsis radicans	•	•				•	•		
.eatherflower	Clematis viorna	•	•	•		•	•	•		
/irgin's bower	Clematis virginiana	•	•	•		•	•	•		
Climbing hydrangea	Decumaria barbara	•	•		•	•				
Carolina jasmine	Gelsemium sempervirens	•	•			•	•		•	
/irginia creeper	Parthenocissus quinquefolia	•	•	•		•	•	•		
Passionflower	Passiflora incarnata	•	•				•	•		
										-