



Landscaping
for Wildlife with
Native Plants
Urban Wildlife

NC STATE

EXTENSION

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North Carolina's native plants provide well-adapted food and cover for North Carolina's native animals, and a well-planned landscape of native plants can help you attract a diversity of wildlife to your property (Figure 1). Plants native to North Carolina also are well-suited to the state's soils and climate, and they require relatively little upkeep once established on an appropriate site. However, the spread of non-native plants poses a threat to native plants and animals of North Carolina. This publication describes the problems associated with some non-native, invasive plants and presents a detailed list of native plants that may be used in place of these foreign ornamentals to attract wildlife to your property.

Why Use Native Plants?

Biologists and other scientists consider invasion by non-native plants to be one of the most serious problems facing native plant and wildlife populations in the United States. For example, multiflora rose, bicolor lespedeza, Japanese honeysuckle, and autumn olive are examples of non-native plants introduced into North Carolina—all for the purpose of promoting "wildlife habitat." However, each introduction has proven detrimental to North Carolina's native plants, pushing them out of their traditional habitats; and recent research indicates that many invasive plants may be harmful to local wildlife as well.

- *Native* plants generally are defined as those that occurred in North America before European settlement.
- *Non-native* plants are those not native to an area. In North Carolina, non-natives usually come from Asia or western Europe, regions that have similar climate and environmental conditions to those in this state.

- Some non-natives are planted intentionally as lawn or garden ornamentals or as plants to attract wildlife, but other non-native plants were introduced accidentally.
- Many non-native species become *naturalized*, which means they are able to survive, spread, and reproduce on their own.
- Approximately 25 percent of the plants growing wild in the United States are naturalized non-natives, some of which have become *invasive*, that is, they grow unabatedly where native plants otherwise would occur.

Invasive non-native plants are those that pose the greatest risk to the native plants and animals of North Carolina. Competitors, diseases, and insects control a plant's growth and dispersal in its native range.

Over thousands of years, natural checks and balances develop, which greatly reduce the chance that a single species will increase in number to completely dominate a plant community. However, when a non-native plant is introduced to North Carolina, it escapes its natural controls and can become invasive (Figure 2). The characteristics that make many non-native plants



Figure 1. American goldfinches commonly feed on the seeds of orange coneflower in the fall and winter. Photo by Chris Moorman



Figure 2. Non-native invasive plants, including mimosa, kudzu, Queen Anne's lace, and Chinese lespedeza, have taken over this vacated suburban lot. Photo by Chris Moorman



Figure 3. Sawtooth oak, a tree native to Asia, continues to be recommended as a wildlife plant, despite the availability of many native oak species. Photo courtesy of Alice B. Russell, NC State University retired

attractive as ornamentals (colorful berries, pest resistance, tolerance of harsh conditions) also increase their potential for invasiveness and make them difficult to contain. Prolific growth by a single plant species can be harmful because forests with a limited number of plant species provide poor habitat for wildlife.

All non-native plants do not become invasive, and many can safely be planted as ornamentals. However, it takes scientists many years or even decades to fully understand an introduced plant's potential invasiveness. New information is being gathered continually, and you should check with your local nature center, botanical garden, conservation organization, or Cooperative Extension agent about a plant's invasiveness before introducing it to your property.

Ironically, non-native plants that are attractive to birds and other wildlife often are the most invasive because animals serve as great dispersers of their fruits and seeds. Autumn olive is a non-native plant that produces fruits favored by birds, but the plant grows and spreads quickly where the seeds are defecated. Native fruit-producing plants may succumb to the competition from this type of invasive plant, thereby reducing the diversity of foods available to birds. In addition, research from the midwestern United States suggests birds that nest in some non-native shrubs experience poor nesting success. Lower nest height, the absence of sharp thorns on the non-native plants, and a branching pattern that allows predators easier access to nests built in non-native plants all contributed to the increased nest predation. Despite the growing base of knowledge related to the potential problems of non-native plants, species like sawtooth oak (*Quercus acutissima*) continue to be recommended as plantings to encourage wildlife (Figure 3). Until adequate information on the invasiveness of such plants exists, native alternatives should be used (Figure 4).



Figure 4. Native plants are attractive additions to any property. Both American beautyberry (top) and strawberry bush (bottom) are attractive to wildlife and the human eye. Photos by Chris Moorman

Reversing the Trend

You can help stop the non-native plant invasion by using and nurturing native plants around your home and on your property. Native plants generally grow well and require less care than non-native species when grown on the proper soils under the right environmental conditions. Additionally, North Carolina's native wildlife has become adapted to using native plants over thousands of years. Therefore, native plants meet the needs, including food and cover, of North Carolina's native wildlife without causing long-term damage to local plant communities.

Many native plants produce showy flowers, abundant fruits and seeds, and brilliant fall foliage. A diversity of native plants in an urban landscape provides:

- Protective cover for most animals.
- Seeds, nuts, and fruits for squirrels and other mammals.
- Seeds, fruits, and insects for birds.
- Nectar for hummingbirds and butterflies (Figure 5).
- Larval host plants for butterfly caterpillars (many caterpillars are adapted to eat the foliage of specific plants, called their *host plants*).



Figure 5. Tiger swallowtails, along with other butterflies and the ruby-throated hummingbird, eat nectar from larger blooms. Photo by iStock.com/Angelcarver



Figure 6. A native *Viburnum* sp. (above), rather than a non-native berry-producer like autumn olive, should be planted to attract wildlife. Photo by Chris Moorman

Table 1 contains examples of native trees, shrubs, and herbs beneficial to wildlife. Use the table to identify native alternatives to the non-native plants commonly recommended to attract wildlife. For example, consider a viburnum (*Viburnum* spp.) or holly (*Ilex* spp.) in place of autumn olive, or consider one of our dozens of native oaks (*Quercus* spp.) in place of sawtooth oak, which has been introduced from Asia (Figure 6).

Traditional landscape plantings don't fully mimic the dense foliage and high plant diversity of natural areas. Therefore, birds and butterflies are most likely to use native plants that grow naturally in unmowed or unmanicured portions of your yard or in adjacent natural areas. Allow native grasses and forbs, brambles, and shrubs to grow in small corners of your yard where neighbors will be less likely to see the "unsightly" growth. These areas provide nest sites, cover, and food for birds and commonly harbor host plants for butterfly caterpillars. Minimize the amount of lawn on your property because these areas require frequent use of water, fertilizer, and pesticides that can be harmful to the environment and the very insects you want to attract. Before making drastic changes that might upset your neighbors, describe your plan to them and explain why you intend to make the changes.



Figure 7. The presence of a variety of herbaceous (jewelweed, left) and woody (trumpet creeper, right) flowering plants helps ensure that hummingbirds will have access to nectar from spring to fall. Photos by Chris Moorman

Landscaping with Native Plants

Retain as much native vegetation as possible during land clearing and construction of houses and buildings. However, areas where plants were cleared during development can be landscaped using native plants. It's best to provide a diversity of native plant species on your property, which in turn ensures that fruits and nectar will be available throughout the year (Figure 7). Each native plant species is adapted to a specific range of soil types, light conditions, and moisture regimes. Before planting, have your soil analyzed. A small sample from your yard can be tested for nutrient content and will allow you to receive specific recommendations for preparing your soil before planting. Use the results of the soil tests to help determine which native plants will grow best on your land. Contact your local Cooperative Extension Center for instructions on this free service.

Here are some important concepts to consider when landscaping your property:

- Before initiating landscaping activities, create a map of the existing vegetation on your property. From this base map, identify areas where food and cover are limited



and abundant. Then create a projected map and plan for your final landscape, making sure to incorporate areas that will provide food, cover, and water.

- Include a diversity of native plants in your landscape. Provide plants that produce winter cover (evergreens), seeds, fruits, and nectar attractive to birds, butterflies, and other wildlife (Figure 8). Also, use plants that are known hosts for the larvae of butterflies native to your area.
- Select plants that flower and bear fruit or seed at different times of the year (see *Managing Backyards and Other Urban Habitats for Birds and Butterflies in Your Backyard*), thereby assuring fruits, seeds, and nectar will be available throughout most of the year (Figure 9).
- Check to make sure the plant will fruit. Only the female of some plant species (American holly, wax myrtle, and eastern redcedar) produces fruit. In this case, be sure to provide at least one male plant for pollination.
- Plan viewing areas by mapping wildflower beds and fruit-producing plants in sight of windows and paths, but avoid planting them near reflective glass or windows to reduce accidental window strikes by feeding birds.
- Consider the moisture and light requirements of plants when including them in your plan. Map moisture-loving plants in low-lying areas, and position shade-loving plants underneath large trees or on the shady side of your home (Figure 10).
- Mimic “Mother Nature” by creating gentle curves in your landscape. Plant wildflower beds in irregularly shaped patterns. The beauty of a “natural” landscape rivals that of more regimented traditional ornamental plantings.
- Cluster similar types of vegetation to allow wildlife easy access to seasonally abundant food sources without excessive movement and increased exposure to



Figure 8. Flowering dogwood is a great wildlife plant because it produces abundant fruits nearly every year. Photo by Chris Moorman

predators (Figure 11). Clumping similar species and placing shorter herbs and shrubs in front of taller vegetation improves the appearance of your landscape.

- Plant low-growing herbs and shrubs under taller shrubs and trees. This helps to provide the layering



Figure 9. Eastern redbud (top left) is one of the first plants to flower in the spring, and cardinal flower (right) and goldenrod (bottom left) are two excellent late-season nectar sources for butterflies and other insects. Left photo courtesy of Alice B. Russell, NC State University retired; other photos by Chris Moorman

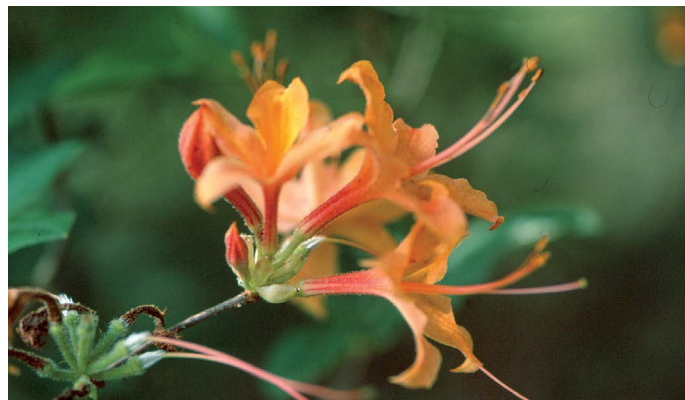


Figure 10. Position shade-loving plants like this flame azalea under tall trees or on the shady side of your home. Photo by Chris Moorman



Figure 11. A cluster of orange coneflowers allows butterflies and birds access to abundant nectar and seeds without excessive movement or exposure to predators. Photo by Chris Moorman

important to birds. Different birds eat and nest on the ground and in the shrub, midstory, and canopy layers of a landscape.

- Make sure to provide adequate growing space for landscape plantings. Avoid planting large-maturing trees and shrubs where they will overgrow their space and interfere with overhead utilities or crowd homes and other structures. Shrubs and trees should be at least 6 feet away from all structures.

- Consult a local expert or one of many guides for recommended planting procedures. Because of North Carolina's hot summers, fall planting works best for most native plant species.
- Remain patient. It generally takes 3 to 5 years before the results of landscaping efforts pay off and wildlife use of native plants becomes obvious. An old adage says, "The first year a garden sleeps, the second year it creeps, the third year it leaps."

Table 1. Plant species native to North Carolina* (including soil moisture and light requirements, region of primary occurrence, and benefit to wildlife)

Plant Type	Latin Name	Common Name**	Soil/Light	Region	Wildlife Value
Tall trees (more than 30 ft)	<i>Acer barbatum</i>	Southern Sugar Maple	M/F-S	P,CP	S
	<i>Acer rubrum</i>	Red Maple	W-D/F-P	M,P,CP	S
	<i>Acer saccharum</i>	Sugar Maple	M/F-S	M	S
	<i>Aesculus flava</i>	Yellow Buckeye	M/P-S	M	H
	<i>Betula lenta</i>	Sweet Birch	M-D/F-S	M	S,L
	<i>Betula nigra</i>	River Birch	W-D/F	P,CP	S,L
	<i>Carya glabra</i>	Pignut Hickory	D/F-S	M,P,CP	S,L
	<i>Carya ovata</i>	Shagbark Hickory	M-D/F-S	M,P,CP	S,L
	<i>Carya tomentosa</i>	Mockernut Hickory	D/F-S	M,P,CP	S,L
	<i>Celtis laevigata</i>	Sugarberry	M/F-S	P,CP	F,L
	<i>Chamaecyparis thoides</i>	Atlantic Whitecedar	W-M/F-P	CP	C,L
	<i>Diospyros virginiana</i>	Persimmon	M-D/F-P	M,P,CP	F
	<i>Fagus grandifolia</i>	American Beech	M/P-S	M,P,CP	S
	<i>Fraxinus americana</i>	White Ash	M/F-S	M,P	S,L
	<i>Fraxinus pennsylvanica</i>	Green Ash	W-D/F-P	M,P,CP	S,L
	<i>Gordonia lasianthus</i>	Loblolly Bay	W-M/F-P	CP	C
	<i>Ilex opaca</i>	American Holly	W-D/F-S	M,P,CP	C,F,N,L
	<i>Juniperus virginiana</i>	Eastern Redcedar	M-D/F-P	M,P,CP	C,F,L
	<i>Liquidambar styraciflua</i>	Sweetgum	W-M/F-P	M,P,CP	S
	<i>Liriodendron tulipifera</i>	Yellow-Poplar	M/F-P	M,P,CP	S,H,N,L
<i>Magnolia acuminata</i>	Cucumber Tree	M/F-P	M,P	S	
<i>Magnolia grandiflora</i>	Southern Magnolia	M/P-S	P,CP	C,S	
<i>Magnolia virginiana</i>	Sweetbay	W-M/F-P	P,CP	S,L	

Plant Type	Latin Name	Common Name**	Soil/Light	Region	Wildlife Value
Tall trees (more than 30 ft) continued	<i>Nyssa sylvatica</i>	Blackgum	D/F-P	M,P,CP	F
	<i>Oxydendrum arboreum</i>	Sourwood	D/F-S	M,P,CP	N
	<i>Persea borbonia</i>	Redbay	W-M/F-S	CP	C,F,L
	<i>Pinus echinata</i>	Shortleaf Pine	D/F-P	M,P,CP	C,S,L
	<i>Pinus palustris</i>	Longleaf Pine	D/F	P,CP	C,S
	<i>Pinus strobus</i>	Eastern White Pine	D/F	M,P	C,S
	<i>Pinus taeda</i>	Loblolly Pine	M-D/F	M,P,CP	C,S,L
	<i>Platanus occidentalis</i>	Sycamore	M/F-P	M,P,CP	S
	<i>Prunus serotina</i>	Black Cherry	M-D/F	M,P,CP	F,N,L
	<i>Quercus alba</i>	White Oak	M-D/F-P	M,P,CP	S,L
	<i>Quercus coccinea</i>	Scarlet Oak	D/F-P	M,P	S,L
	<i>Quercus falcata</i>	Southern Red Oak	M-D/F-P	M,P,CP	S,L
	<i>Quercus michauxii</i>	Swamp Chestnut Oak	M/F-P	P,CP	S,L
	<i>Quercus nigra</i>	Water Oak	M-D/F-P	P,CP	S,L
	<i>Quercus pagoda</i>	Cherrybark Oak	M/F-P	P,CP	S,L
	<i>Quercus phellos</i>	Willow Oak	W-M/F-P	P,CP	S,L
	<i>Quercus rubra</i>	Red Oak	M/F-P	M,P	S,L
	<i>Quercus shumardii</i>	Shumard Oak	M/F-P	P,CP	S,L
	<i>Quercus stellata</i>	Post Oak	D/F	M,P,CP	S,L
	<i>Quercus velutina</i>	Black Oak	M-D/F-P	M,P,CP	S,L
	<i>Quercus virginiana</i>	Live Oak	D/F	CP	C,S,L
	<i>Robinia pseudoacacia</i>	Black Locust	M-D/F-P	M,P	S,L
	<i>Salix nigra</i>	Black Willow	W-M/F-S	M,P,CP	L
	<i>Sassafras albidum</i>	Sassafras	M-D/F-P	M,P,CP	F,L
	<i>Taxodium distichum</i>	Baldcypress	W-M/F-P	CP	S
	<i>Tilia americana</i>	Basswood	M/F-P	M,P,CP	S,N,L

Soil moisture: W = wet; M = moist; D = dry.

Light requirements: F = full sun; P = partial shade; S = shade.

Region: M = mountains; P = piedmont; CP = coastal plain.

Wildlife Value: C = winter cover; F = fleshy fruit; S = seed, hard mast, or catkin; H = hummingbird nectar; N = butterfly and other insect nectar; L = butterfly larvae host plant.

*Use of specific plants by wildlife will vary regionally, and there always are exceptions.

**For information on which plants may be toxic to humans, visit <https://plants.ces.ncsu.edu/plants/category/poisonous-plants/>

Table 1. Plant species native to North Carolina* (including soil moisture and light requirements, region of primary occurrence, and benefit to wildlife)

Plant Type	Latin Name	Common Name**	Soil/Light	Region	Wildlife Value	
Tall trees (more than 30 ft) continued	<i>Tsuga canadensis</i>	Eastern Hemlock	M/P-S	M,P	C,S	
	<i>Ulmus alata</i>	Winged Elm	M-D/F-P	M,P,CP	S,L	
	<i>Ulmus americana</i>	American Elm	W-M/F-P	M,P,CP	S,L	
Small trees/shrubs (10-30 ft)	<i>Aesculus pavia</i>	Red Buckeye	M/P	CP	H,N	
	<i>Aesculus sylvatica</i>	Painted Buckeye	M/P	P	H	
	<i>Alnus serrulata</i>	Alder	W-M/F-P	M,P,CP	S,L	
	<i>Amelanchier arborea</i>	Serviceberry	M-D/F-S	M,P	F,N,L	
	<i>Amelanchier canadensis</i>	Juneberry	W-D/F-P	P,CP	F,N,L	
	<i>Amelanchier laevis</i>	Allegheny Serviceberry	M-D/F-P	M	F,N,L	
	<i>Aralia spinosa</i>	Devil's Walking Stick	M/F-P	M,P,CP	F,N	
	<i>Asimina triloba</i>	Pawpaw	M/F-S	M,P,CP	F,L	
	<i>Carpinus caroliniana</i>	Ironwood	W-M/P-S	M,P,CP	S,L	
	<i>Castanea pumila</i>	Chinquapin	D/F-P	M,P,CP	S	
	<i>Celtis tenuifolia</i>	Dwarf Hackberry	D/F-P	P	F,L	
	<i>Cercis canadensis</i>	Eastern Redbud	M-D/F-P	M,P	S,N,L	
	<i>Chionanthus virginicus</i>	Fringetree	M-D/F-P	M,P,CP	F	
	<i>Cornus amomum</i>	Silky Dogwood	W-M/P-S	M,P,CP	F,N,L	
	<i>Cornus florida</i>	Flowering Dogwood	M-D/F-P	M,P,CP	F,N,L	
	<i>Crataegus spp.</i>	Hawthorn	M/F-S	M,P,CP	F,H,N,L	
	<i>Cyrilla racemiflora</i>	Titi, Swamp Cyrilla	W-M/F-S	P,CP	C,N	
	<i>Halesia tetraptera</i>	Carolina Silverbell	M/P-S	M,P	N	
	<i>Hamamelis virginiana</i>	Witch-Hazel	M/F-S	M,P,CP	S	
	<i>Ilex decidua</i>	Possumhaw	W-D/F-P	P,CP	F,N,L	
	<i>Ilex verticillata</i>	Winterberry	W-M/F-S	M,P,CP	F,N,L	
	<i>Ilex vomitoria</i>	Yaupon	W-D/F-S	CP	C,F,N,L	
	<i>Morus rubra</i>	Red Mulberry	M-D/F-S	M,P,CP	F,L	
	<i>Myrica cerifera</i>	Wax Myrtle	W-D/F-P	P,CP	C,F,L	
	<i>Osmanthus americana</i>	Wild Olive, Devilwood	M-D/F-P	CP	C,F	
	<i>Ostrya virginiana</i>	Hophornbeam	M-D/F-S	M,P	F,L	
	<i>Prunus americana</i>	Wild Plum	M-D/F	M,P	F,N,L	
	<i>Prunus angustifolia</i>	Chickasaw Plum	D/F	P,CP	F,N,L	
	<i>Prunus caroliniana</i>	Carolina Laurel Cherry	M-D/F-P	CP	C,F,N,L	
	Small trees/shrubs (10-30 ft) continued	<i>Prunus pensylvanica</i>	Fire Cherry	M-D/F	M	F,N,L
<i>Rhus copallina</i>		Winged Sumac	M-D/F-P	M,P,CP	F,N,L	
<i>Rhus glabra</i>		Smooth Sumac	M-D/F-P	M,P,CP	F,N,L	
<i>Salix caroliniana</i>		Carolina Willow	W-M/F-S	P,CP	L	
<i>Sambucus canadensis</i>		Elderberry	W-M/F-P	M,P,CP	F	
<i>Sorbus americana</i>		Mountain-Ash	M/F-P	M	F	
<i>Symplocos tinctoria</i>		Sweetleaf	M-D/F-S	M,P,CP	S,N,L	
<i>Viburnum prunifolium</i>		Black Haw	M/F-S	M,P,CP	F,L	
<i>Viburnum rufidulum</i>		Rusty Blackhaw	D/F-S	P,CP	F,L	
Small shrubs		<i>Callicarpa americana</i>	American Beautyberry	M-D/F-S	P,CP	F
		<i>Calycanthus floridus</i>	Sweetshrub	M/P-S	M,P	N
		<i>Ceanothus americanus</i>	New Jersey Tea	M-D/P-S	M,P,CP	S,N,L
		<i>Cephalanthus occidentalis</i>	Buttonbush	W-M/F-P	M,P,CP	S,H,N
		<i>Clethra alnifolia</i>	Sweet Pepperbush	W/F-S	P,CP	F,H,N
		<i>Corylus americana</i>	Hazelnut	M/F-S	M,P	S
	<i>Euonymus americanus</i>	Strawberry Bush	M/P-S	M,P,CP	S	
	<i>Gaylussacia dumosa</i>	Dwarf Huckleberry	M-D/F-P	M,P,CP	F,N,L	
	<i>Gaylussacia frondosa</i>	Blue Huckleberry	M/F-P	P,CP	F,N,L	
	<i>Hydrangea arborescens</i>	Wild Hydrangea	M/P-S	M,P	S,N	
	<i>Ilex glabra</i>	Inkberry	M/F-P	P,CP	C,F,N,L	
	<i>Itea virginica</i>	Virginia Willow	W-M/P-S	M,P,CP	S,N	
	<i>Kalmia latifolia</i>	Mountain Laurel	M-D/F-S	M,P,CP	C,H,N	
	<i>Leucothoe axillaris</i>	Doghobble	W-M/F-P	M,P,CP	C,N	
	<i>Lindera benzoin</i>	Spicebush	M-D/F-S	M,P,CP	F,L	
<i>Lyonia lucida</i>	Fetterbush	M/P-S	P,CP	C,N		
<i>Phoradendron serotinum</i>	Mistletoe	parasite	M,P,CP	F,L		
<i>Rhododendron atlanticum</i>	Dwarf Azalea	W-D/F-P	P,CP	H,N		
<i>Rhododendron calendulaceum</i>	Flame Azalea	M-D/P-S	M	H,N		
<i>Rhododendron catawbiense</i>	Catawba Rhododendron	M/P-S	M,P	C,H,N		

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Plant Type	Latin Name	Common Name**	Soil/Light	Region	Wildlife Value	Plant Type	Latin Name	Common Name**	Soil/Light	Region	Wildlife Value
Small shrubs continued	<i>Rhododendron maximum</i>	Rosebay Rhododendron	M/P-S	M,P	C,H,N	Herbs and wild-flowers continued	<i>Arisaema triphyllum</i>	Jack-in-the-Pulpit	W-M/P-S	M,P,CP	F
	<i>Rhododendron periclimenoides</i>	Wild Azalea	W-M/F-P	M,P,CP	H,N		<i>Aristolochia serpentaria</i>	Virginia Snakeroot	M-D/P-S	M,P,CP	L
	<i>Rubus</i> spp.	Blackberry, Dewberry	M-D/F-P	M,P,CP	C,F,S,N		<i>Aruncus dioicus</i>	Goat's Beard	M/P-S	M,P	L
	<i>Sorbus arbutifolia</i>	Red Chokeberry	W-M/F-S	M,P,CP	F,L		<i>Asclepias incarnata</i>	Swamp Milkweed	W-M/F-P	M,P,CP	N,L
	<i>Vaccinium arboreum</i>	Sparkleberry	D/F-P	P,CP	C,F,N,L		<i>Asclepias tuberosa</i>	Butterfly Weed	D/F-P	M,P,CP	N,L
	<i>Vaccinium corymbosum</i>	Highbush Blueberry	M/F-P	P,CP	F,N,L		<i>Asclepias variegata</i>	White Milkweed	M-D/F-P	M,P,CP	N,L
	<i>Vaccinium stamineum</i>	Deerberry	D/F-P	M,P,CP	F,N,L		<i>Baptisia australis</i>	Blue False Indigo	M/F-P	M,P	N,L
	<i>Vaccinium vacillans</i>	Lowbush Blueberry	D/F-P	M,P,CP	F,N,L		<i>Baptisia tinctoria</i>	Yellow Wild Indigo	D/F-P	M,P,CP	N,L
	<i>Viburnum acerifolium</i>	Mapleleaf Viburnum	M-D/P-S	M,P	F,L		<i>Bidens aristosa</i>	Sticktight	W-D/F-P	P,CP	S,N
	<i>Viburnum dentatum</i>	Arrowwood	M/F-S	M,P,CP	F,L		<i>Chamaecrista fasciculata</i>	Partridge Pea	M-D/F	M,P,CP	S,L
	<i>Viburnum nudum</i>	Wild Raisin	W-M/F-S	M,P,CP	F,L		<i>Chrysogonum virginianum</i>	Green and Gold	M/S	P,CP	S,N
	Vines	<i>Ampelopsis arborea</i>	Peppervine	W-M/F-P	CP		F	<i>Cimicifuga racemosa</i>	Black Cohosh	M/S	M,P
<i>Aristolochia macrophylla</i>		Dutchman's Pipe	M-D/P-S	M	L	<i>Cirsium horridulum</i>	Yellow Thistle	M-D/F	P,CP	S,H,N,L	
<i>Berchemia scandens</i>		Rattanvine, Supplejack	W-M/F-P	P,CP	F	<i>Coreopsis angustifolia</i>	Narrow-Leaved Coreopsis	M/F-P	CP	S,N	
<i>Bignonia capreolata</i>		Crossvine	M-D/F-P	P,CP	H	<i>Coreopsis auriculata</i>	Eared Coreopsis	M/F-P	M,P,CP	S,N	
<i>Campsis radicans</i>		Trumpet Vine	M-D/F-P	M,P,CP	H	<i>Coreopsis falcata</i>	Sickle Tickseed	W-M/F-P	P,CP	S,N	
<i>Decumaria barbara</i>		Climbing Hydrangea	M/F-S	CP	N	<i>Coreopsis lanceolata</i>	Lance-Leaved Coreopsis	D/F	M,P,CP	S,N	
<i>Gelsemium sempervirens</i>		Carolina Jessamine	M/F-P	P,CP	C,H,N	<i>Coreopsis major</i>	Greater Tickseed	D/F-P	M,P	S,N	
<i>Lonicera sempervirens</i>		Coral Honeysuckle	M/F-P	P,CP	H	<i>Coreopsis verticillata</i>	Threadleaf Coreopsis	D/F-P	M,P,CP	S,N	
<i>Parthenocissus quinquefolia</i>		Virginia Creeper	M-D/F-S	M,P,CP	F	<i>Desmodium</i> spp.	Beggarlice	M-D/F-P	M,P,CP	S,L	
<i>Passiflora incarnata</i>		Passionflower	M-D/F-P	M,P,CP	H,N,L	<i>Echinacea purpurea</i>	Purple Coneflower	M-D/F	M,P	S,N	
<i>Smilax</i> spp.		Greenbrier	W-D/F-P	M,P,CP	C,F	<i>Eupatorium coelestinum</i>	Mistflower	M/F-P	M,P,CP	S,N	
<i>Toxicodendron radicans</i>		Poison Ivy	M-D/F-P	M,P,CP	F	<i>Eupatorium fistulosum</i>	Joe-Pye-Weed	M/F	M,P,CP	S,N,L	
<i>Vitis</i> spp.		Grape	W-D/F-P	M,P,CP	F	<i>Eurybia divaricata</i>	White Wood Aster	M-D/P-S	M,P	S,N,L	
Ferns		<i>Polystichum acrostichoides</i>	Christmas Fern	M/P-S	M,P,CP	C	<i>Geranium maculatum</i>	Wild Geranium	M-D/F-P	M,P	S,N
		<i>Apocynum cannabinum</i>	Hemp Dogbane	M-D/F-P	M,P,CP	N	<i>Helianthus angustifolius</i>	Swamp Sunflower	W-M/F-P	M,P,CP	S,N
Herbs and wild-flowers		<i>Aquilegia canadensis</i>	Columbine	M-D/P-S	M,P,CP	S,H,N	<i>Helianthus atrorubens</i>	Sunflower	D/F	M,P,CP	S,N,L
						<i>Helianthus divaricatus</i>	Woodland Sunflower	D/P	M,P,CP	S,N	

Soil moisture: W = wet; M = moist; D = dry.

Light requirements: F = full sun; P = partial shade; S = shade.

Region: M = mountains; P = piedmont; CP = coastal plain.

Wildlife Value: C = winter cover; F = fleshy fruit; S = seed, hard mast, or catkin; H = hummingbird nectar; N = butterfly and other insect nectar; L = butterfly larvae host plant.

*Use of specific plants by wildlife will vary regionally, and there always are exceptions.

**For information on which plants may be toxic to humans, visit <https://plants.ces.ncsu.edu/plants/category/poisonous-plants/>

Table 1. Plant species native to North Carolina* (including soil moisture and light requirements, region of primary occurrence, and benefit to wildlife)

Plant Type	Latin Name	Common Name**	Soil/Light	Region	Wildlife Value
Herbs and wild-flowers continued	<i>Heliopsis helianthoides</i>	Ox-Eye	M-D/F-P	M,P,CP	S,N
	<i>Hibiscus moscheutos</i>	Rose Mallow	M/F-P	M,P,CP	H,N
	<i>Houstonia caerulea</i>	Bluets	M-D/F-S	M,P,CP	N
	<i>Impatiens capensis</i>	Jewelweed	W-M/P-S	M,P,CP	H,N
	<i>Ipomoea coccinea</i>	Red Morning Glory	D/F	M,P,CP	S,H,N
	<i>Iris cristata</i>	Crested Iris	M/P-S	M,P	H
	<i>Liatris spicata</i>	Blazing Star	W-M/F	M,P	N
	<i>Lobelia cardinalis</i>	Cardinal Flower	W-M/F-S	M,P,CP	H,N
	<i>Lobelia puberula</i>	Blue Lobelia	W-D/F-P	M,P,CP	H,N
	<i>Lobelia siphilitica</i>	Great Blue Lobelia	W-M/P-S	M	H,N
	<i>Mitchella repens</i>	Partridgeberry	M/F-S	M,P,CP	F
	<i>Monarda didyma</i>	Beebalm	M/P-S	M	H,N
	<i>Monarda fistulosa</i>	Wild Bergamot	M-D/F-P	M,P,CP	H,N
	<i>Monarda punctata</i>	Horsemint	D/F-P	P,CP	H,N
	<i>Oenothera fruticosa</i>	Sundrops	M-D/F-P	M,P,CP	S,H
	<i>Penstemon canescens</i>	Hairy Beardtongue	M-D/F-P	M,P	H,N,L
	<i>Penstemon laevigatus</i>	Smooth Beardtongue	M/F-S	M,P,CP	H,N,L
	<i>Phlox carolina</i>	Carolina Phlox	W-D/F-P	M,P,CP	N
	<i>Phlox divaricata</i>	Blue Phlox	M/P-S	M,P,CP	N
	<i>Phlox paniculata</i>	Summer Phlox	M/F-P	M,P,CP	N
<i>Phlox pilosa</i>	Prairie Phlox	D/F-P	P,CP	N	
<i>Phlox subulata</i>	Moss Pink	D/F	M,P	N	
Herbs and wild-flowers continued	<i>Phytolacca americana</i>	Pokeweed	M-D/F	M,P,CP	F,S
	<i>Pycnanthemum incanum</i>	Hoary Mountainmint	M-D/F-P	M,P,CP	N
	<i>Rudbeckia fulgida</i>	Orange Coneflower	M/F	M,P,CP	S,N
	<i>Salvia lyrata</i>	Lyreleaf Sage	M-D/F-S	M,P,CP	H,N
	<i>Silene virginica</i>	Fire Pink	M-D/P-S	M,P,CP	S,H,N
	<i>Solidago</i> spp.	Goldenrod	M-D/F-P	M,P,CP	S,N
	<i>Spigelia marilandica</i>	Indian Pink	M/P-S	M,P,CP	H
	<i>Stokesia laevis</i>	Stoke's Aster	M/F-P	P,CP	N
	<i>Symphotrichum retroflexum</i>	Whitetop Aster	M-D/F-P	M	S,N,L
	<i>Symphotrichum novae-angliae</i>	New England Aster	M-D/F-P	M	S,N,L
	<i>Symphotrichum novi-belgii</i>	New York Aster	M/F-P	CP	S,N,L
	<i>Symphotrichum pilosum</i>	White Heath Aster	D/F	M,P,CP	S,N,L
	<i>Vernonia noveboracensis</i>	Ironweed	W-M/F-P	M,P,CP	N
	<i>Vicia caroliniana</i>	Wood Vetch	D/F-P	M,P,CP	S,L
	<i>Viola pedata</i>	Bird-Foot Violet	D/F-P	M,P,CP	L
Grasses	<i>Andropogon glomeratus</i>	Bushy Bluestem	M/F	P,CP	C,S,L
	<i>Andropogon ternarius</i>	Splitbeard Bluestem	D/F	M,P,CP	C,S,L
	<i>Aristida stricta</i>	Wiregrass	D/F-P	P,CP	C,S
	<i>Arundinaria gigantea</i>	Switchcane	W-D/F-S	M,P,CP	C,S,L
	<i>Panicum virgatum</i>	Switchgrass	M/F-P	M,P,CP	C,S,L
	<i>Sorghastrum nutans</i>	Indiangrass	M-D/F	M,P,CP	C,S

Soil moisture: W = wet; M = moist; D = dry.

Light requirements: F = full sun; P = partial shade; S = shade.

Region: M = mountains; P = piedmont; CP = coastal plain.

Wildlife Value: C = winter cover; F = fleshy fruit; S = seed, hard mast, or catkin; H = hummingbird nectar; N = butterfly and other insect nectar; L = butterfly larvae host plant.

*Use of specific plants by wildlife will vary regionally, and there always are exceptions.

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Where to Find Native Plants

Look for native plants propagated from locally collected seed. This helps protect the unique characteristics of individual plants of the species growing wild in your area and ensures that the plants you use in your landscaping are best adapted to the local environment. Avoid planting cultivars of native plants when possible. Most of these variants may have been selected for qualities other than their value to wildlife, making them less desirable as wildlife plants. Although many conventional nurseries do not carry a large variety of native species, especially non-cultivars, the number of reputable nurseries

specializing in these plants is on the rise. Be wary of “deals” on native plants, especially orchids and trilliums, which often indicate the plants were collected from wild areas. Collecting plants from the wild contributes to the destruction of their habitats and often increases the chance of planting failure. Occasionally, local nature centers and botanical gardens initiate native plant rescues from areas soon to be cleared for development—these can be good and appropriate wild sources. In addition, it is possible to collect wild seed and sow or propagate native plants from the seed (Figure

12). See Phillips (1985), Bir (1992), and Schopmeyer (1974) for more on propagating native plants from seed.

To locate a nursery near you that sells native plants, visit:

- North Carolina Botanical Garden: ncbg.unc.edu/2019/08/09/recommended-sources-for-native-plants/
- North Carolina Forest Service: www.ncforestservice.gov/Urban/pdf/NurseriesSellingNativeTrees.pdf
- North Carolina Native Plant Society: ncwildflower.org/native-plant-nurseries/

In addition, you can consult with local parks, nature preserves, garden clubs, botanical gardens, arboreta, and the local Extension Center for the names of additional native plant providers.

Eradication and Control of Non-natives

Herbicides or manual removal can be used to eliminate or control unwanted non-native plants (Figure 13). Because the results of these activities vary from county to county, you may need to experiment before finding the most successful approach for your property. In some cases, a range of native plant species already may be present. In others, a single non-native species may dominate a piece of property, requiring the landowner take extreme measures to increase the diversity and abundance of native plants.

Known invasive plants in North Carolina are listed in Table 2. This list is not comprehensive, and most of the plants named have already spread throughout North Carolina to the extent they can never be controlled completely. To prevent the list from continuing to grow, carefully consider a non-native plant's potential for invasiveness before introducing it on your property, especially when trying to attract wildlife. For more information on methods of control required for non-native plant species, contact your local Extension Center. The *North Carolina Agricultural Chemicals Manual*, published by North Carolina State University, and *Nonnative Invasive Plants of Southern Forests*, published by the US Forest Service, are excellent references for non-native plant control.

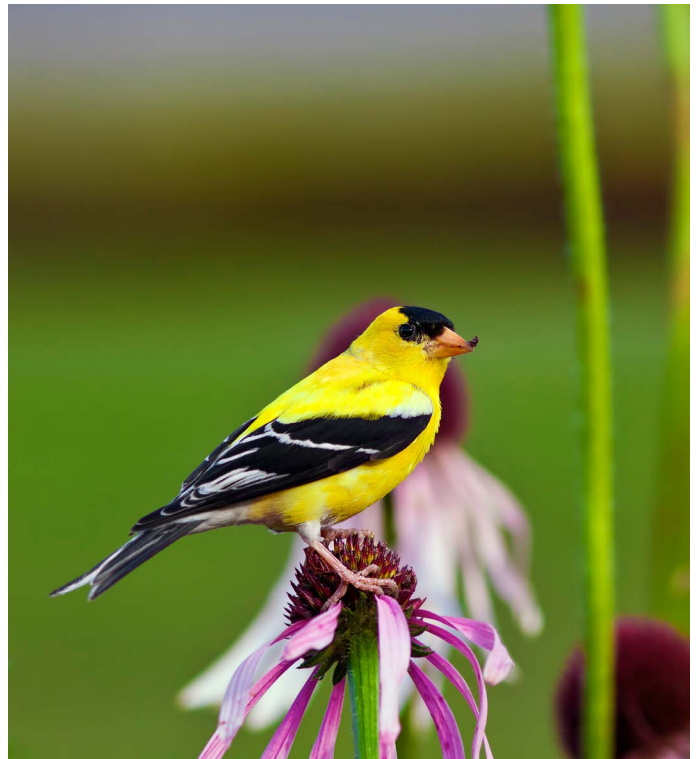


Figure 12. You'll have to compete with American goldfinches for coneflower seed if you hope to propagate your own plants from seed. Photo by iStock.com/ABDESIGN



Figure 13. Although many invasive plants like Japanese honeysuckle are here to stay, they can be controlled locally by using herbicides or removing by hand. Photo by Chris Moorman

Table 2. Known invasive plants in North Carolina

Plant Type	Common Name	Scientific Name
Trees	Tree-of-Heaven	<i>Ailanthus altissima</i>
	Mimosa	<i>Albizia julibrissin</i>
	Chinaberry	<i>Melia azedarach</i>
	Princess Tree	<i>Paulownia tomentosa</i>
	Chinese Tallow Tree	<i>Sapium sebiferum</i>
Shrubs	Japanese Barberry	<i>Berberis thunbergii</i>
	Russian Olive	<i>Elaeagnus angustifolia</i>
	Autumn Olive	<i>Elaeagnus umbellata</i>
	Bicolor Lespedeza	<i>Lespedeza bicolor</i>
	Japanese Privet	<i>Ligustrum japonicum</i>
	Chinese Privet	<i>Ligustrum sinense</i>
	Common Privet	<i>Ligustrum vulgare</i>
	Oregon Grape	<i>Mahonia bealei</i>
	Multiflora Rose	<i>Rosa multiflora</i>
Vines	Porcelain-Berry	<i>Ampelopsis brevipedunculata</i>
	Oriental Bittersweet	<i>Celastrus orbiculatus</i>
	English Ivy	<i>Hedera helix</i>
	Japanese Honeysuckle	<i>Lonicera japonica</i>
	Kudzu	<i>Pueraria lobata</i>
	Japanese Wisteria	<i>Wisteria floribunda</i>
	Chinese Wisteria	<i>Wisteria sinensis</i>
Herbs	Crown Vetch	<i>Coronilla varia</i>
	Queen Anne's Lace	<i>Daucus carota</i>
	Tall Fescue	<i>Lolium arundinaceum</i>
	Sericea Lespedeza	<i>Lespedeza cuneata</i>
	White Sweet Clover	<i>Melilotus alba</i>
	Japanese Grass	<i>Microstegium vimineum</i>
	Johnson Grass	<i>Sorghum halepense</i>

Resources

Native Plant Information

North Carolina Native Plant Society

www.ncwildflower.org

North Carolina Botanical Garden

ncbg.unc.edu

North Carolina Plant Conservation Program

www.ncagr.gov/plantindustry/plant/plantconserve

North Carolina State Extension Gardening

gardening.ces.ncsu.edu

North Carolina Extension Gardener Plant Toolbox

plants.ces.ncsu.edu

Wildlife Friendly Landscapes

wildlifefriendlylandscapes.ces.ncsu.edu

Non-native and Invasive Plant Information

Non-native Invasive Plants of Southern Forests: A Field Guide for Identification and Control
www.srs.fs.usda.gov/pubs/gtr/gtr_srs062/

Southeast Exotic Pest Plant Council

www.se-eppc.org

Plant Conservation Alliance

www.plantconservationalliance.org

U.S. Fish and Wildlife Service

invasives.fws.gov

United States Department of Agriculture PLANTS Database

plants.usda.gov

North Carolina Agricultural Chemicals Manual

content.ces.ncsu.edu/north-carolina-agricultural-chemicals-manual

Backyard and Other Wildlife

NC State Extension Publications

forestry.ces.ncsu.edu/forestry-wildlife

North Carolina Wildlife Resources Commission

ncwildlife.org

National Wildlife Federation

www.nwf.org/Garden-For-Wildlife/Wildlife.aspx

Wildlife Friendly Landscapes

wildlifefriendlylandscapes.ces.ncsu.edu

Additional Resources

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