

C/o North Carolina Botanical Garden
Totten Center 3375, UNC-CH
Chapel Hill, NC 27599-3375

wild flower

Journal of the
North Carolina Native Plant Society



Ilex verticillata

WINTER 2004
VOLUME XVI

*And as, when summer trees are seen,
So bright and green,
The holly leaves their fadeless hues display,
Less bright than they;
But when the bare ad wintry woods we see,
What then so cheerful as the holly tree.*

Robert Southey (1774 – 1843)

GRASSES

The Department would like to acknowledge Alice Zawadzki, NC Native Plant Society, for her encouragement and support of this program. Her knowledge of native plants and passion for North Carolina's natural beauty is an inspiration to us all.

Submitted by Don Smith, NCDOT

North Carolina Native Plant Society, Inc.

Aims and Objectives

The North Carolina Native Plant Society was formed as the N. C. Wild Flower Preservation Society in 1951 by a group of individuals appreciative of native plants throughout the state and region. The purpose of the Society is to promote the conservation and enjoyment of native plants and their habitats through education, protection and propagation.

Quarterly meetings are held at "natural gardens" across the state. Members exchange seeds and propagated plants at these meetings. Other excursions are organized on a local basis throughout the year.

The Society newsletter is usually issued twice a year with articles and illustrations by professional and amateur contributors.

The Shinn Scholarship/Grant Fund sponsors research on native plants by undergraduate and graduate students. The fund is supported by member contributions and by gifts and memorials. Applications are made to the Scholarship/Grant Fund Committee for awards in May of each year.

The Society is a nonprofit organization under North Carolina and Internal Revenue Service regulations. Donations are tax deductible.

Correspondence concerning the Society and its programs should be addressed to:

North Carolina Native Plant Society, Inc.



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From the President.....

Happy New Year to you and your loved ones!

As we start the New Year, we ring in some important changes and new beginnings for native plants in North Carolina and our Society.

After many years of consideration and many hours of thoughtful discussion, the Society made an important decision at its Fall 2004 meeting to officially change the Society's name to the North Carolina Native Plant Society.

The new name recognizes the expanded scope of our interests and activities in enjoying, promoting, and protecting our native plants and the conservation of their habitats.

Many of us have great affection and pride in our historic name and the accomplishments of the North Carolina Wild Flower Preservation Society since 1951. Some of us would have preferred to keep that name in the charter and just use the NC Native Plant Society name informally. But we learned that we needed to protect this new name in an amended charter; otherwise another group could have adopted it if we did not change our name officially. We will continue to honor our heritage, our Society's contributions over the last 53 years, and welcome new members who cherish and steward our native flora.

Our new name recognizes that our interests and concerns encompass not only wildflowers, but also a wider variety of the state's native flora, including flowering trees, grasses, rushes, and the rich world of non-flowering plants such as mosses, liverworts, ferns and their allies, and gymnosperms that we so enjoy.

Our new name emphasizes to the public the importance of "native plants", the need for their protection and the conservation of their habitats, and the challenges of the new millennium on protected areas brought on by the introduction of invasive alien plant and animal species, displaced critters due to habitat loss, barrels of water no longer absorbed by a forest or wetland cover, and contaminants in our fragile Spaceship.

In this journal and in future newsletters, we will write more about several new initiatives about which we are very excited. Tom Harville has spearheaded an initiative to certify native plant habitats in our yards and neighborhoods. Tom Harville, Misty Franklin, and Dale Suiter

Staghorn Sumac	Shiny Sumac	Smooth Sumac	Flowering Dogwood
American Holly	Eastern Redbud	Fringetree	Hawthorn (Little Hip)
Sweetbay Magnolia	Serviceberry	Yellowwood	Sourwood
Eastern Red Cedar	Smoketree	Hornbeam	
Red Buckeye	Sassafras	Hop Hornbeam	

Along US 70 near Garner

Blackeyed Susan	Purple Coneflower	Goldenrod	Yarrow
Joe-Pye Weed	Indigo (legume)	Narrow-leaf Sunflower	Butterfly Weed
Ironweed	Aster (sp.)	Bidens (Bur-Marigold)	Lance-Leaved Coreopsis

Virginia Sweetspire	Possumhaw	Winterberry
Hydrangea	Witchhazel	Chokeberry
Beautyberry	Viburnum	Redosier Dogwood

A partial

plant list

for Color - Canopy Zones:

Big Bluestem	Bushy Bluestem	Split-Beard Bluestem	Side Oats Grama
Pink Muhly Grass	Switchgrass	Little Bluestem	Indian Grass
Prairie Dropseed (Sporobolus)	Soft Rush	Cord Grass	Gama Grass

TREES/LARGE SHRUBS

PERENNIALS

SHRUBS

- Identify areas that readily succumb to severe weather damage or areas that are a result of clearing operations that are potential Color - Canopy sites. Also, identify areas that already exhibit elements of the Color - Canopy Program and preserve them.
- Develop pilot projects to create templates for placement, establishment and maintenance of the Color - Canopy Zone and determine the associated costs for statewide expansion.
- Evolve the program over several years to refine the best methods for establishing and maintaining the Color-Canopy areas.
- Develop partnerships with University specialist, members of the NC Green Industry Council, NC Nurseryman's Association, and environmental organizations to gain technical knowledge and expertise.

Over the next few years, the Department plans to let-to-contract approximately 90 new construction projects with an estimated 800 associated miles. The Color - Canopy Zone concept will be evaluated for inclusion where appropriate on these sites.



are developing a tiered NCNPS program to certify nurseries that propagate native plants and lead the way in limiting the sale of known invasive exotic plants. Through Tom's efforts and encouragement, the Society will sponsor one student scholarship for the Cullowhee Native Plant conference at Western Carolina University that many of our members attend in late July. In these efforts, Tom has strengthened our ties not only with nurseries, but also with college faculty across the state with his work with the NCNPS Shinn Education Fund. Tom has expressed his preference to steward these programs in the future and Carla Handrinos has agreed to transition into his Treasurer's responsibilities.

Along with all these great new NCNPS efforts, I would like to introduce you to a wonderful new pilot program in the North Carolina Department of Transportation (NCDOT) that I am really excited about called the "Color Canopy" with native plants.

Over many years our members have been advocates for native plant use and protection along our many miles of roadsides. Through the years endangered plants have been protected along roadsides with managed mowings and signage, providing critical sunny habitat for these fire-dependant species. Tourists have come to love our spectacular managed roadside plantings of brilliantly colored "wildflowers" and day lilies. NCDOT designers are including more and more southeastern US native plants in their designs in new road landscapes.

And now "Color Canopy" will bring a new dimension that will be more subtle and perhaps more dear to our hearts. The Roadside Environmental Unit has several pilot plots in the Piedmont area where they are experimenting with native grasses and wildflowers in less formal plantings making a transition area between the mowed safety area near the roadside and the trees forming the buffer areas. "Color Canopy" will be a opportunity for us to help support NCDOT's efforts which will include introducing the public to value the less-tended, more "Natural-Gardens-of-North-Carolina" look, the native plant bouquets that will seed in with some prudent plugging.

I am really excited about "Color Canopy" because it also includes identifying the already Natural Gardens along older established

roadsides. Derek C. Smith and Connie Morgan and other members of the NCDOT/REU staff look forward to working with our NCNPS members and division environmental engineers throughout the state as we suggest significant areas that can be posted and a satisfactory management established to offer enjoyment of God's gift as NCDOT is mindful of traveler delight and safety.

Our new member Sally Boesch has agreed to chair this NCNPS liaison with NCDOT. She and I had a very successful interaction this fall with the Durham County engineer as he delayed mowing on a dirt road at the Hill Forest entrance so the spectacular display of full-bloom New York ironweed and naturalized Aster tartaricus was saved for delight and delayed from the blade for a month for seed formation. After we meet with Connie and Derek, we will keep you posted in suggested ways that we and our members will interact with them and the local NCDOT engineers as we make reports of potential lovely sites for posting and planned stewardship. Keep your eyes open for that great rock-face of bird-foot violet, that ditch of jewelweed or Atamasco lilies; write down details, take a picture if you safely can, note the dates of blooming and seed production. Wouldn't it be wonderful to know those beautiful sites won't be mowed at their peak?

This year has been a challenging and rewarding one for me with my Mother's several-month recovery from a very severe recluse spider bite to her lower leg. I want to sincerely thank all of you for your kind words and calls and all the efforts the NCNPS Board members have undertaken in my behalf as I have spent so much time with Mom in New Jersey. You all are truly a wonderful community and very caring Family.

Alice Zawadzki

Winter Berries

Katherine Schlosser

Don't be fooled by those frosty days when a toasty fire and a good book beckon, for as bleak as it may appear outside your door, dedicated woods walkers find something of interest in every season, in every weather condition. Nature has provided for her creatures, and in winter the woods are filled with colors and textures not easily visible in spring and summer, when we are dazzled with fresh green growth and

- Hurricane Fran (September 1996): At the time, the single worst natural economic disaster to occur in North Carolina's history. The NCDOT removed approximately 400,000 truckloads of debris left by Hurricane Fran.
- Ice storm of early December 2002: Large trees and power lines were downed all across central North Carolina. A record number of nearly one million persons lost power, some for as long as a week. Total property damages estimated at 199 million dollars. Total cleanup costs approximately 1.5 million dollars.

Statistics on storm events in NC since 2000:		
❖ 112 Snow and Ice events		217.8 million dollars total property damage
❖ 7 Hurricanes/Tropical Storms		478.4 million dollars total property damage
❖ 85 Tornadoes		8.94 million dollars total property damage



Color - Canopy objectives:

- Define a new Color-Canopy Zone which is distinct of established turf and mowing patterns and develop vegetation management plans.
- Utilize native vegetation to improve the aesthetics and natural environment along these select corridors.

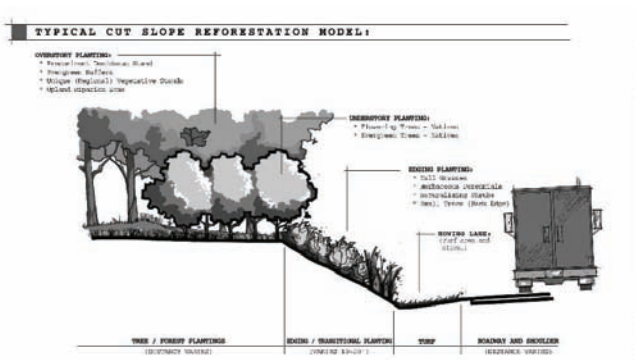
Sustainable Native Roadside Plantings for Enhanced Safety Clear Zones

Color - Canopy Zone Concept

On May 15, 2003 the North Carolina Department of Transportation (NCDOT) embarked on a rights-of-way project which accomplishes several goals including the use of native grasses and forbs. The working title for this project is 'Color-Canopy'.

Color - Canopy is defined as a zone of varying widths, located behind the “clean-up” mowing limits, that combines colorful low-growing trees and native plants within an area that is managed to control undesirable species.

One of the Department's primary goals is to find a viable solution to the encroachment of over-story trees that shade the roadway and tend to fall into the roads as a result of severe weather. At the same time, the color-canopy transition zone will be both environmentally sustainable and aesthetically pleasing.



Examples of severe storm events:

sparkling spring flowers. The colors of winter are often subdued and can be lost against leaf litter, bark, and gray skies. But when you happen across the brilliant red berries of a holly like *Ilex verticillata*, with a backdrop of gray or the white of snow, it is almost a shocking surprise. When nature's stores have dwindled and energy is needed for a long flight south, or to survive the cold months here in the Piedmont, berries are a rich food source. The real trick is to catch the winter show before birds, insects and animals have their fill.

Casual observers delight in the bright red and orange orbs hanging like holiday finery on trees, shrubs and vines, but closer inspection will reveal an array of colors including burgundy, blue, black, white and purple, each with appeal to specific birds. Berries are not always easily spotted, as some colors recede and blend into the background or hide behind evergreen leaves. Sassafras and Virginia Creeper berries aren't always easy for us to see, but birds have no problem finding them.

Berries, not all of which can be safely consumed by humans, ripen at different times of the year, providing food just when birds and animals seem to need it most. Dogwood is a good example: when the red berries first appear, they are bitter and a last choice for most birds, but as the winter progresses, the berries sweeten up a bit. A number of berries are left on branches until they begin to ferment, at which time birds will partake, then stagger off for a good sleep. Sort of makes me wonder if thousands of years ago some enterprising person watched the birds, wondered about the effects of fermented berries, then applied the principle to grapes. Cheers to that good soul!

Following are descriptions of a few of the berries producers in our area:

Inkberry, *Ilex glabra*. Family: Aquifoliaceae (Holly)

My first memory of inkberry was as a child on a visit to a family friend along the Eastern Shore of Maryland. I don't remember the name of my parent's friend, but I do remember the warm and engaging nature of this Native American woman with lovely long black hair and eyes that danced with wit and mischief. She delighted in taking a small child out into the wooded, marshy land around her home, sharing stories of her own childhood and pointing out plants that she remembered, among them the inkberry (*Ilex glabra*). We pulled berries from the stems, took

them to the wide front porch, and painted pictures with them. The stains on my fingers lingered, but not as long as my memories of a pleasant late summer afternoon.

Ilex glabra is a native evergreen shrub, generally found in acidic sandy or peat soils in swamps or wet areas, with an upright habit and a slightly rounded head, reaching as much as 8 feet tall. As the plant ages, the stems close to the ground are often leafless, giving it a spindly look. The evergreen leaves are a lustrous dark green, with a lighter underside, and without the sharp spines of many *Ilex* species.



If you draw a line down the center of North Carolina, on a slight east to west angle, you will define the native range for *Ilex glabra*

Britton, N.L., and A. Brown.
1913. *Illustrated flora of the northern states and Canada*.
Vol. 2: 487.

twenty-four to thirty-six hours.

A snowstorm coming in from any point between northwest and northeast: likely to be a real one.

If the wind is west to south: the snow either stops soon or turns to rain.

Snow with wind veering to the east or southeast: a change to rain is probably in one to three hours.

Small snowflakes becoming much larger and remaining so for a half-hour or so: look for a change to rain.

If the condition is reversed: rain is unlikely.

“When all is said and done, I suppose that human curiosity as to the form of things to come is a major reason why weather forecasting, be it accurate or otherwise, holds so much appeal. Yet one soon grows to realize that out of the back-fence technique arise many incidental experiences of deeply satisfying nature. The search for signs is mainly an affair of seeing, and truly understanding sight often discloses far more than one originally set out to find.

It is the weatherwise eye that notes the wavy line of south-bound geese high in the November sky, the silhouette of pines across the sunset, the utter peace of the evening star poised in the westward afterglow. The varied faces of the clouds, the mystery of the distance that lies beyond every horizon, the immeasurable silence of the Milky Way’s pale track bridging the valley on a winter night—these can come as influences of great worth in a harried world. They, and many another impression that is rich beyond all outward seeming, are part and parcel of the weather prophet’s hobby. Whether his forecasting be true or variable as the very sky he scans, they bring him an inner wealth that no mint of man’s contriving can ever coin.”

And then, of course, there are the fogs—clouds that hug the earth rather than float above it. On occasion they rate among the most reliable of all indicators.

Dense morning land fog, completely blotting out the sun, slightly lighter color near the zenith an hour or so after sunrise: fully clear in an hour or two.

Heavy land for developing in the course of a storm: ordinarily indicates that the rain or snow is nearly over.

Sea fogs, sometimes blowing inland along the coast: seldom mean anything in the nature of basic weather change.

Fog forming at night over valleys and other lowlands, while the high ground remains unshrouded: has little if any bearing on the subsequent weather.

Winds can stand among the most reliable of long-range tools:

Easterly storm with the wind backing northward to the north or northwest: clearing and much cooler, commonly within six hours.

Flat calm in the midst of an easterly or southeasterly storm: marked shift of wind, generally to the west, within an hour or so. Clearing normally accompanies the change or follows it closely.

Protracted storms rarely come from the west or northwest, but if the clouds are from this direction in the beginning, and then veer to southwest and south: stand by for a day or more of bad weather.

Rising temperature and increasing cloudiness on a really cold winter day:

If the wind is between northwest and northeast: snow inside of twenty-four hours.

If it is between northeast and south: storm may start as snow but generally changes to sleet and then rain.

Predicting snow:

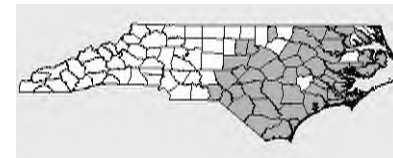
A whitish haze on the northwest to northeast horizon, spreading imperceptibly to the zenith on an otherwise clear winter day: snow in

in our state. It grows abundantly in the eastern part of the state, often in longleaf pine forests, sometimes forming colonies by sprouting from root crowns and rhizomes. In pine forests of the coastal plain, the presence of inkberry thickets, with volatile oils in the leaves and branches that ignite quickly, increases the frequency, hazard, and severity of forest fires. Ecosystems allowed to experience surface fires at one to five year intervals are less likely to develop dense, flammable thickets of inkberry, creating a healthier environment yet still providing food and shelter for wildlife as the plants survive by sprouting from rhizomes.

Typical of *Ilex*, there are male and female plants: both must be in close proximity in order to produce fruit. When in flower they are easily distinguished because the male plants have 3 – 7 flowers in a cluster in the axils, while the female plants have 1 – 3 in the axils. The flowers are pollinated by bees, which then produce a flavorful honey.

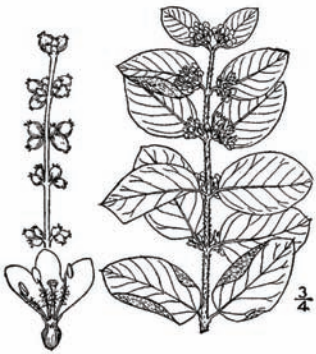
The fruits appear in September or October, when they are hard and unpalatable to wildlife. After a frost or two, the fruits soften and attract bobwhite, turkeys, bluebirds, brown thrashers, hermit thrushes, raccoons, coyotes, and opossum. Rabbits and white-tailed deer will eat the leaves, as will an occasional black bear.

Ilex glabra is an attractive plant in a natural area, where it needs some sun to fruit, but not so much that the leaves will scorch. It is slow to germinate, taking up to two years, and difficult to transplant, so find a reputable nursery if you don't have the plant on your land already.



N.C. distribution map
USDAPlants database

Coralberry, *Symphoricarpos orbiculatus*. Family: Caprifoliaceae



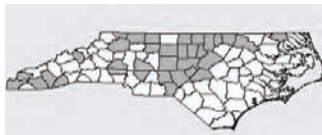
Symphoricarpos orbiculatus Moench
coralberry
Britton, N.L., and A. Brown. 1913.
Illustrated flora of the northern

When winter winds are blowing and there is scarce food for wildlife, Coralberry provides sustenance. Though we find the berries inedible, grouse, quail, grosbeaks, thrushes, and even black bears are grateful for their presence, though not likely a first choice, which helps to explain the persistence of the berries throughout the winter.

Even so, the arching berry-covered branches of this small shrub, which are a clue to its family, the honeysuckles, make it a reasonably attractive plant during the winter months. Coralberry grows to about six feet tall, often at the edges of forests in

well-drained, neutral to alkaline soil. In heavy clay, mildew can be a problem, otherwise, it is an easy-care landscape addition.

Wildlife find it attractive for more than its berries. The shrub tends to form waist-high thickets, spreading from rhizomes, and provides cover for small animals. Insects are attracted to the litter that accumulates in the branches, which in turn attracts foraging birds and mammals, making the thickets a bee-hive of activity. It is common in the Piedmont and mountains, in rocky, neutral soils.



N. C. distribution map

direction: wait and watch before leaping to any conclusion.

Clear morning, hazing over during the day, even without evident clouds: change on the way—probably showers or even a real storm, either rain or snow.

Curious whitish appearance of a starry sky in winter: snow coming.

A pale, hazy ring around the moon: storm of some sort brewing. Count the stars within to predict number of days til rain or snow.

Clear sunrise, clouded over by nine or ten o'clock: some rain or snow by afternoon or evening.

Clear sunset, wind between north and west, normal temperature: fair tomorrow and often for several days.

Blackish, indeterminate haze around the horizon on a hot morning: thunderstorms, especially if the wind become light easterly in the early afternoon.

A brilliantly clear day with little or no wind and an odd, crystalline quality in the air that seems to enable one to hear unusually long distances: some kind of storm coming, frequently a severe one, in twenty-four or thirty-six hours. In the back country they call this sort of day a “weather breeder.”

When clearing and cooler follow a fairly heavy storm: the second night is generally the coldest, particularly in winter. Thereafter the temperature can be expected to rise if the wind diminishes.

A windless, cool autumn or spring night: before morning, several degrees cooler in the valleys than on the hill. If windy: temperature approximately equal in high and low places.

On Developing A Weather Eye

Katherine Schlosser

Weather watching is an occupation that most of us have surrendered to meteorologists, usually to those appearing on television's nightly news, where daily, weekly and monthly predictions are available as a sort of modern-day, animated version of the Old Farmer's Almanac. Predicting weather is important for farmers and gardeners: understanding weather can be life saving for hikers and nature enthusiasts. So how do we go about getting familiar with weather patterns?

In December 1946, Robert S. Lemmon wrote an article in *The Home Garden* in which he recorded some of his "by-the-sign" methods for guessing what the weather will be on any given day. "The real fun of the game," he writes, "is largely the avoidance of all scientific or otherwise complicated methods." "I feel a little sorry for the professionals, those mysterious men whose diagnoses appear with such faithful regularity in the daily press, for their lives must be so cluttered with barometric pressures, occluded fronts, cyclonic winds and radio reports from Owl's Head, NY, that they find it difficult even to laugh comfortably at themselves without picking up a slide rule to calculate the atmospheric effect of the disturbance their mirth causes," he continues. Mr. Lemmon would probably be amazed and amused at the changes in the weather-predicting industry, and might turn to his own devices simply to avoid weather-overload.

We can do the same, whether out of idle curiosity in a season that keeps us indoors, or because we think it might be of real value when we are at the peak of a mountain and see what appear to be storm clouds rolling in from the horizon. Keep a small notebook by the door and stick your head out a couple of times a day, recording what you see, making some assessments based on Mr. Lemmons observations, then checking back in a day or two to see how you did. **Stormy weather, sky clearing along the northwest horizon:** fair weather in a few hours, often lasting several days.

Fair, with breeze wandering aimlessly in that, that and the other

Beautyberry, *Callicarpa americana*. Family: Verbenaceae



Photinia pyrifolia (Lam.) Robertson & Phipps, red chokeberry
Britton, N.L., and A. Brown. 1913.
Illustrated flora of the northern states and Canada. Vol. 2: 290.

There is no accounting for taste: this plant has been described as "an ideal showy, attractive shrub" and, by the University of Florida Cooperative Extension Service, as "not a particularly outstanding plant." Lovers of the unusual disagree with the folks in Florida—this IS an outstanding plant. No where else will you find tightly clustered early winter berries of such a stunning violet-purple hue. They almost catch your breath if you are lucky enough to beat the birds to them. Among your competition are catbirds, mockingbirds, robins, brown thrashers, sparrows, quail, and towhees.

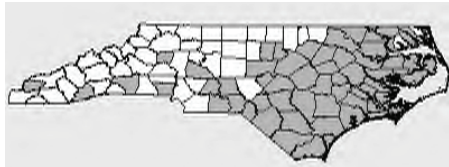
You won't be in competition for them as food, just as a visual feast, for the berries as listed variously as poisonous or inedible. Strangely enough, in one book (*Edible Wild Plants of Eastern North America*, Fernald & Kinsey), they are listed as edible wild fruits (pg. 31), poisonous (pg. 66), and "in the doubtful class (pg. 70). There are other sources that list the berries as edible, but my advice—enjoy them for their beauty. Birds have a little competition from mammals for the fruits of beautyberry, and some mammals will graze on the leaves.

The arching branches that bend almost to the ground on this 3 to 6 foot-tall shrub bear white to lilac-tinged flowers in late spring, followed by a profusion of brilliant violet-purple berries close to the stem in the fall. It requires a pH of 4.8 - 7.1, plenty of moisture, and 175 frost free days to set fruit. It can be propagated by seed or

cuttings and will grow in some shade, but needs sun to produce a good crop of berries. Opposite, simple leaves with serrated edges are an ordinary green, turning yellowish in the fall before dropping to expose the berries.

Native Americans used a tea of the leaves and roots in sweat baths to treat rheumatism and fevers. A root tea was also used for stomach complaints and colic. Walter Taylor (*Florida Wildflowers in their Natural Communities*) says that a jelly can be made from the ripened fruit. No toxicity is reported by the USDA or by Steve Foster and James Duke in *Eastern/Central Medicinal Plants*, though I am inclined to suggest leaving the roots to make new plants, the leaves to feed grazing animals, and the berries for the birds.

In spite of what some of the folks in Florida have to say, this plant is definitely worth watching for as you wander through partly shady, acidic to slightly alkaline, sandy, loam, or clay soil areas in open forests and hedgerows.



NC distribution map
americana

(USDA Plants Database)

for *Callicarpa*

Birds and their favorite fall and winter plants

American Goldfinches - box elder, grapes, roses, mulberries, serviceberries

American Robins - Hackberry trees, hollies, cedars, mulberry trees, sumacs, viburnums, serviceberries, virginia creeper, pyracantha, roses

Black-capped Chickadees - viburnums, bayberries

Blue Jays - wild cherries, viburnums, mulberry trees, hollies, dogwoods, sumac, crab apples

Dark-eyed Juncos - sumacs, roses

Downy Woodpeckers - mountain ash, dogwoods, service berries, virginia creeper

Eastern Bluebirds - Dogwoods, sumacs, cedars, hackberries, virginia creepers, hollies, chokeberry, cotoneaster, dogwood, crab apple, mulberry, bayberry, rose, pyracantha, viburnum

Mourning Doves - pokeberry

Northern Cardinals - Hollies, hackberry trees, dogwoods, mulberry trees, sumacs, viburnums, hawthorn, pokeberries, black cherries, pyracantha, roses

Northern Mockingbirds - Hackberry trees, hollies, cedars, mulberry trees, sumacs, viburnums, bayberries, dogwoods, serviceberry, hawthorns, honeysuckle, virginia creeper, cherry laurel, cherry, pyracantha

Northern Orioles - Mulberry trees, serviceberry, black cherry, honeysuckle

Pine Siskins - honeysuckle

Rufous-sided Towhees - Hollies, oaks, cherries, bayberries, mulberries, wax myrtle

Stellar's Jays - dogwoods, wild cherries

Summer Tanagers - Mulberry trees, wild cherries, dogwoods, elderberries, pokeberries

Tufted Titmice - Hackberry trees, mulberry trees, crabapples, virginia creeper

Yellow-rumped Warblers - honeysuckle, viburnums, sumac, dogwoods, virginia creeper, wax myrtle

More Native Trees and Plants with Winter Berries

Compiled by K. Schlosser

Bayberry (*Myrica pensylvanica*). The southern wax myrtle may be a keystone species for fruit-eating birds in the southeast.

Cherry (*Prunus*). Pin cherry (*P. pensylvanica*), black cherry (*P. serotina*), and chokecherry (*P. virginiana*) are important food sources for Cedar waxwings, crows, finches, grosbeaks, jays, mockingbirds, vireos, and woodpeckers.

Cotoneaster (*Cotoneaster apiculatus*). This 1 - 3 foot-tall groundcover has tiny pink flowers in spring and red berries in winter.

Crabapple (*Malus*). The fruits will often last into early winter, providing food for cedar waxwings, finches, and mockingbirds.

Eastern Red Cedar (*Juniperus virginiana*). The powdery blue berries that are actually cones, on these 50 foot evergreen trees are devoured by birds.

Firethorns (*Pyracantha*). The orange berries on *Pyracantha* persist well into the winter, providing landscape interest and food for birds.

Hackberry (*Celtis occidentalis*). Nearly 50 species of birds feast on the small fruits of these trees, which can reach 60 feet in height. Also called Sugarberry because of its purplish fruit, it attracts finches, thrushes, and woodpeckers.

Hawthorn (*Crataegus spp.*). Because of the thorns on these trees, they make secure shelter for birds. They also provide food in the form of winter berries.

Rose (*Rosa*). Rose hips, which persist well into the winter, are a dependable food source for songbirds. They also make a great jelly and syrup!

Sassafras. Produces small berries that are devoured very early in winter - a favorite of many birds.

Serviceberry (*Amelanchier*). The small trees have white flowers in the spring, fluorescent red/orange fall foliage, and red berries to feed the birds.

Sumac (*Rhus spp.*). Widely cultivated for brilliant autumn foliage and showy weed heads. A good winter food source for a wide range of birds and animals.

Tupelo (*Nyssa*). One of the first trees to turn bright red in late summer/early fall, it produces small dark blue fruits that appeal to mockingbirds, thrushes, and waxwings.

Yew (*Taxus canadensis*). Not only does the dense evergreen foliage provide shelter, but the plants produce sticky red fruits loved by mockingbirds, robins, and sparrows.

Red Chokeberry, *Sorbus arbutifolia* var. *arbutifolia*; *Photinia pyrafolia*. Family: Rosaceae



Photinia pyrifolia (Lam.) Robertson & Phipps, red chokeberry
Britton, N.L., and A. Brown. 1913.
Illustrated flora of the northern states and Canada. Vol. 2: 290.

If you are looking for cedar waxwings, thrushes, robins, grosbeaks, buntings, finches, cardinals, or mockingbirds, head for a thicket of red chokeberry trees. Birds find the berries an acceptable food source when all else is gone, but it's unlikely that we would agree, as they are quite astringent. It has been reported that Native Americans ate the berries after cooking them, and that a fine jam can be made from chokeberries, as they are high in pectin content, but though they are juicy, their common name is well-deserved.

Chokeberries, also known as *Aronia arbutifolia*, *Photinia pyrofolia*, and *Pyrus*, are in the Rosaceae family, along with apples, thus the fruit is called a pome (a fleshy fruit from an inferior ovary embedded in receptacular tissue), and has been described as looking like a tiny

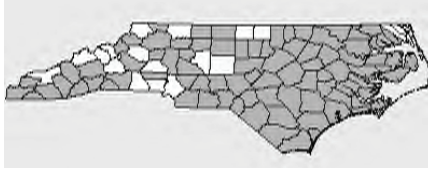
apple.

The trees are small, growing from 4 to 15 feet, and tend to be a spindly with age, giving rise to the suggestions of both Vita Sackville-West and many years later, J.C. Raulston, that the trees be grown in clumps. They are an all-season tree, with clusters of tiny white flowers in spring, glossy green leaves in summer, scarlet fall foliage, and bright red berries through the winter. The leaves are alternate, simple, with serrated edges and a pad of soft hairs underneath.

Growing on their own, this tree will form small colonies. Soil pH of 5.5 - 7.5, moist soil, and about 120 frost free days will produce healthy trees. It is hardy to zone 4 and is propagated by seed, softwood cuttings, or division.

Growing in wet woods and bogs, or even in dry woods, from the coast to the mountains, they are attractive in colonies, and provide

shelter for wildlife. The berries are generally persistent through the winter, though the numbers decline quickly as other food sources disappear and birds have little choice but to consume the sometimes still astringent berries.



NC distribution map
arbutifolia
(USDA Plants

for *Sorbus*
Database)

Coral Greenbrier, *Smilax walteri*. Family: Smilacaceae



Smilax walteri Pursh
coral greenbrier
Britton, N.L., and A. Brown. 1913.
*Illustrated flora of the northern states
and Canada*. Vol. 1: 530.

There were the usual groans when Harry LeGrand called out “*Smilax walteri*” as we carefully stepped through the boggy area of the Sandhills Gamelands that is home to many *Saracenias*. But a closer look at the vine gracefully rambling through tree branches and stretching across the small stream made me reach for my camera. Beyond reach but well within sight were small clusters of bright red berries, clinging to the vine and adding color where leaves had long since dropped. Not only is it a pretty vine, but spines are usually absent from this *Smilax* species, though it is hard to keep from wincing when around any of them.

pectin content. Native Americans also used the astringent-like pomes in concocting topical ointments for the treatment of hemorrhoids. The preference for a provincial habitat, along with the many distinctive characteristics of *Sorbus americana*, easily lends itself to a dramatic visual performance. No matter the season, Mountain Ash enhances the beauty of the upland region and serves as a welcoming beacon to the pleasure of the woodland experience. So, when exploring the forest floor for wildflowers, look up and search out this picturesque tree. While widely used in the ornamental landscape today, *Sorbus americana* is best appreciated in harmony with it’s natural environment.

VA Tech Forestry Dept., <http://www.cnr.vt.deu/dendro/dendrology/syllabussamericana.htm>

USDA, http://plants.usda.gov/cgi_bin/plant_profile

Eastman, Hohn, The Book of Forest and Thicket, 1992 Stackpole Books, pgs, 135-136.

Petrides, George A., Petersen Field Guide to Trees and Shrubs, 1972 Houghton Mifflan Co., Boston, New York., pg. 137.

the mountainous regions of the northeastern United States, from Canada to Georgia. It needs the moist, acidic soils of the deciduous forest and the colder climate of the mountain zones. Two similar species include: Northern Mountain Ash, *Pyrus decora* and European Mountain Ash, *Pyrus aucuparia*. The Northern Mountain Ash is found from Massachusetts northward and generally differs by its wider leaflets, flowers and buds. European Mountain Ash, as its name suggests, is not native to the U.S. and is distinguished by its woolly buds. It, too, is usually found north of Pennsylvania.

In late summer, the appearance of its brilliantly colored pomes (August-March) proclaims the imminent arrival of harsher months. The pome is a fleshy fruit with a papery core, as in apples and shadbushes. The fruit of *Sorbus americana* is not a primary food source for woodland creatures in early autumn, due to its low-fat content and high acidity. However, as food sources dwindle and repeated freezes occur, the fermented fruit becomes more attractive to many birds, including Cedar waxwings, evening and pine grosbeaks, thrushes, ruffed and sharp-tailed grouse, flycatchers, and ruby throated hummingbirds. As with many fermented fruits, creatures that consume these morsels in quantity, may be briefly affected by their potency in late winter. Another obvious associate among birds, is the yellow-bellied sapsucker. This species commonly frequents *Sorbus americana*, leaving behind tell-tale rows of drilled holes in the bark. Ruby throated hummingbirds and insects follow, benefiting from the existing wells of sap created by the industrious woodpeckers. Indeed, many field guides include these symbiotic relationships in their descriptions because they may assist the novice in identifying the species. Few mammals consider the pomes as tempting as other woodland offerings. However, martens and fishers are common visitors later in the year. Nocturnal members of the weasel family, these two creatures are seldom observed as they use their ability to climb in pursuit of the fruit. Moose and deer are fond of the twigs and the foliage of Mountain Ash during the spring and summer months. Plant associates of *Sorbus americana* include many species, which prefer the forest edge environments, such as balsam fir, plum thickets, maples, white spruce and yellow birch.

Little is known regarding the use of *Sorbus americana* by earlier cultures. While the pomes are widely considered inedible by humans, it was found purposeful in preparing jellies, due to its high

Birds don't mind an occasional prickle, however, and bluebirds, catbirds, cedar waxwings, crows, mockingbirds, robins, thrashers, woodpeckers, and even wild turkeys help themselves to the berries. Berries that drop float on the water that is usually underneath, and waterfowl take advantage of the unexpected treat. If it makes you feel any better, deer graze on the foliage, and thickets of the vines provide shelter for other creatures.

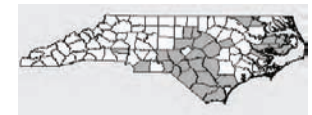
Smilax walteri blooms in early spring with small yellowish flowers with a somewhat unpleasant fragrance that attracts their pollinators—flies. Angled stems and bright red berries that appear in September and persist through November make this an attractive vine. It is generally found in swampy forests and alluvial woods*, common along the coastal plain and rare in the Piedmont. Soil pH range of 4 to 7, low drought tolerance, and 180 frost free days make this plant a natural for swampy, floodplain forests and bogs. It is propagated by seed, which requires some cold stratification. It is a vigorous grower, providing good grazing for animals.

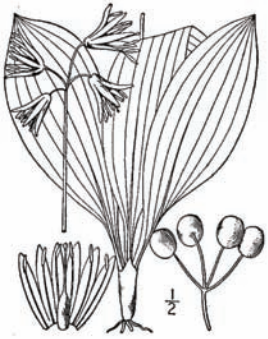
Alternate, simple, entire leaves are sometimes difficult to distinguish from *Smilax rotundifolia*, but the fruits leave no question, for *S. walteri*'s red berries are a knock-out when compared to the dull black berries of *S. rotundifolia*.

Most *Smilax* species have a history of medicinal use. Native Americans sometimes rubbed the stems of prickly species on their skin as a counter-irritant to itching and localized pain. Leaf and stem tea was used for rheumatism and stomach problems, while a root tea was used in childbirth. Webster's 1913 dictionary says that *S. walteri* roots were used in the manufacture of tobacco pipes.

The leaves of *S. walteri* turn a yellow-brown in fall, leaving the berries behind to attract birds, small mammals, and curious photographers.

*composed of earth deposited by water



Bluebead Lily, *Clintonia borealis*. Family: Liliaceae

Clintonia borealis (Ait.) Raf.
bluebead
Britton, N.L., and A. Brown.
1913. *Illustrated flora of the
northern states and Canada*.
Vol. 1: 514

The first time I saw *Clintonia borealis* was some years ago in Quoddy Head State Park at the northeastern tip of Maine. It was the bright blue berries of the plant that caught my eye, as they stood above thick carpets of damp moss, soggy fallen logs, and humusy soil. I was at the edge of a steep 100 foot cliff overlooking crashing waves of the Atlantic. Breathing in the rich, piney air tinged with salt, listening to the waves and a clanging buoy, I thought I would never again be anyplace so beautiful. The next time I saw them was deep in a hardwood cove forest in the Southern Appalachians, surrounded by cold, rushing streams, moss covered fallen logs, myriad wildflowers, and hawks squawking their noon calls. I thought I would never again be anyplace so beautiful—I can't wait until the next time I see them!

Named for DeWitt Clinton (1769-1828), a naturalist and New York governor, and *borealis*, Greek for "from the quarter of the North Wind," the bluebead lily is a rhizomatus perennial with broad, basal, parallel-veined leaves and 3/4" pale yellow, nodding flowers on a leafless stalk emerging from the center of the leaf rosette. The nodding, bell-shaped flowers open in early summer in moist pine forests, maturing to shiny dark blue berries by late summer, which stand out against the yellowing leaves. *Clintonia borealis* is often found in the company of wild sarsaparilla (*Aralia nudicaulis*), Canada Mayflower (*Maianthemum canadense*), Bishop's Cap (*Mitella nuda*), Starflower (*Trientalis borealis*), Violets (*Viola* spp.), and gold thread (*Coptis trifolia*).

Clintonia borealis grows to about 12 inches tall, producing shiny bright blue berries. The plant has a history of medicinal uses,

A Beacon In the Upland
Deciduous Forest
American Mountain Ash, *Sorbus americana*

Marilyn K. Westervelt

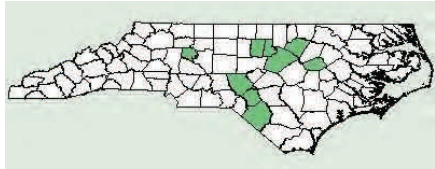
The visual bounty of the autumnal season is often precipitated by the appearance of the fruit of the American Mountain Ash, *Sorbus americana*. Weeks before the upland deciduous forest erupts into intense color, *Sorbus americana* begins a show of it's own, which often persists long into the winter. This enchanting species of the mountain woodland, with its abundant, crimson pomes, offers a striking contrast to the deep green of the surrounding canopy. American Mountain Ash is not usually an understory resident; but, rather, it prefers the edge of the woodland, openings, bogs and rocky hillsides. It is a relatively short-lived species, which is moderately shade tolerant, as well as very slow growing. *Sorbus americana* may grow to 40 feet tall, but is usually shorter. As a juvenile, its crown is narrow, yet becomes wider with age. The numerous lenticels develop into cracks splits and scaly white patches, creating very distinctive bark. The growth habits of this shrub, or small tree, often culminate in a specimen which compliments the forest by its almost bonsai-like appearance.

The aesthetic properties of *Sorbus americana* are not limited to the autumn and winter months; for, its showy sprays of delicate, white flowers in May/June are equally captivating. Mountain Ash is relatively easy to identify throughout the year. In early spring, conspicuous (3/4" - 1/2" long) dark purplish-red, gummy, glabrous buds develop on the gray to brownish twigs, between March and April. The stout twigs often have a spur shoot present and bear numerous narrow lenticels and 5 bundle leaf scars. The flat topped clusters of bisexual flowers range in size from 3 - 5" across and appear in May to June. The dainty 1/4" flowers are pollinated by insects and later develop into clusters of long-lasting fruit. The alternate, pinnately compound leaves are 6-10 inches long. Each leaf (2 - 2 1/2" long) is composed of 11-17 lance-shaped, toothed leaflets, which are usually three times longer than as broad, and have an acuminate tip. The non-pubescent foliage is dark green above and paler beneath. American Mountain Ash is primarily limited to

wild flower

colonies of *Rhus michauxii* in October 2004, one in Weymouth Woods State Park and one in the Sandhills Gamelands.

N C Distribution map



Sign at Ft. Pickett

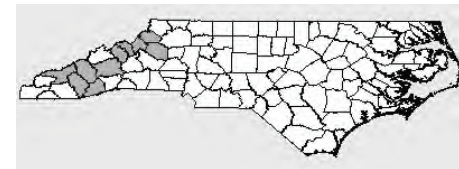
wild flower

which Steve Foster and James O. Duke (*Eastern/Central Medicinal Plants*) suggest should be investigated by modern pharmaceutical companies. Traditional uses include a poultice of leaves for burns, sores, infections, and rabid-dog bites; and a tea for heart ailments, diabetes, and as an aid in childbirth.

Hunters have rubbed their traps with the roots to remove traces of human odor, and the Menomini of Wisconsin thought dogs used the plant to poison their teeth, making it easier to kill their prey. They also thought that anyone bitten by such a dog would need to drink a tea made from the same plant to counteract the poisons. The berries are not considered edible, but probably aren't poisonous either. As a matter of fact, the leaves have been boiled and eaten as a vegetable, with a taste faintly similar to cucumber. If you are hungry, you can find better things to eat.

Clintonia borealis is propagated by seed, producing slow growing plants that do best in cool, moist areas, as seen in the distribution map below. They are hardy to zone 3, withstanding temperatures as low as -33° F.. They need only 90 frost free days to flower and set their fruit.

NC distribution



map for

Clintonia borealis
(USDA Plants Database)

Virginia Creeper, *Parthenocissus quinquefolia*.Family: Vitaceae

Parthenocissus quinquefolia (L.)
Planch.
Virginia creeper
Britton, N.L., and A. Brown. 1913.
*Illustrated flora of the northern states
and Canada*. Vol. 2: 511.

One of the plants attributed to André Michaux, who is said to have introduced it into cultivation in the 18th century, is Virginia Creeper, *Parthenocissus quinquefolia*, a familiar, vigorous vine throughout our state and across the eastern half of the United States. It will find a foothold in the smallest and most unlikely of places, even growing up walls from a crack in the sidewalk. It is most commonly seen growing up hardwoods, and probably most attractive when it twines its way up through an evergreen and turns a brilliant red in the fall—nature's own idea of holiday decorations!

Eastern bluebirds, cardinals, chickadees, woodpeckers, and turkeys know something about the vine that many of us do not. It produces pea-sized blue berries in the fall, that

though low in protein content, are a nourishing food source for small mammals as well. Virginia creeper has a history of medicinal uses, too, serving as a treatment for ailments such as jaundice, diarrhea, lockjaw, and as an astringent. There is also a report that the bruised leaves alleviate painful bunion swelling. Steven Foster and James O. Duke suggest that both leaves and berries may be toxic to humans, so experimenting with medicinal properties of the plant is ill-advised. For some, contact with the fall leaves can cause dermatitis, though it is possible that sufferers have confused the plant with poison ivy.

The alternate, palmately compound green leaves, growing with five leaflets per leaf, have crenate to serrate edges. New stems are light brown and dotted with lenticels. Tiny greenish-white flowers in June and

Michaux's sumac
Rhus michauxii

Charlie Williams

Michaux's sumac *Rhus michauxii* is a low-growing shrub listed in September 1989 by the US Fish and Wildlife Service as a federally endangered species. Other common names are dwarf sumac or false poison sumac. Historically, the plant was known to occur in the inner Coastal Plain and Piedmont of the Carolinas, Florida and Georgia.

The species was both discovered by and named for French explorer-botanist André Michaux (1746-1802), which is rather unusual. Nearly a hundred years after Michaux published his name for the plant, *Rhus pumila*, botanist C.S. Sargent discovered that Michaux's name had already been used for another plant. This invalidated Michaux's name so Sargent chose to honor the plant's discoverer with the new name *Rhus michauxii*.

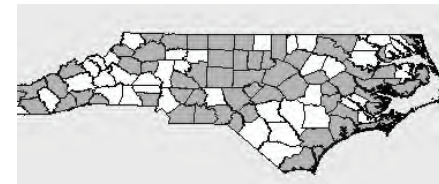
Michaux worked for the French government as a researcher and plant collector. From a garden near Charleston that he used as a base, Michaux traveled widely and often, especially in the Carolinas and Georgia, and was the first to document many plants in our flora. Dr. David Rembert of USC did a study of Michaux's work and credits the French botanist with being the first to name 283 species found in the Carolinas. Traveling throughout eastern North America, he also named many other species not found in the Carolinas.

Michaux's sumac is a dioecious shrub; single plants are not both sexes as are most plants, but each plant is a single sex. The species has been seriously impacted by habitat fragmentation and habitat loss. The most recent reports indicate that there are 36 known populations, but a population of this rhizomatous shrub may have just one genetic individual with clonal reproduction only. Most of the known populations are found in NC; Kershaw County is the only SC location listed in the Manual of the Vascular Flora of the Carolinas (1968). The plant is quite rare throughout its range.

Individual plants are reported to grow to a height of about a half-meter. The plant is deciduous with alternate, pinnately compound leaves. Each compound leaf has between 7 and 13 oblong, toothed leaflets. Sometimes the rachis will be narrowly winged near the apex. In

July lead to small blue-black berries in October. The birds and animals that find the berries palatable act as seed dispersers. The vine is propagated by seed, which requires a period of cold stratification, and grows well in moderately moist soil with a pH range of 5 to 7.5. Its low tolerance for salinity and fire make it a poor grower in coastal areas. It will tolerate temperatures well below freezing, and will grow in shade, though the most brilliant fall colors are in leaves exposed to the sun.

Virginia creeper is enjoyed as a landscape plant and in the wild, providing food and shelter for birds and small animals. It is a rapid grower with an unearned reputation for ultimately destroying the trees in which it grows. It can grow to about fifty feet tall, climbing with tendrils growing opposite leaf buds and with small adhesive disks at the ends, and should be encouraged as an alternative to non-native, invasive ivies (*Hedera* spp.).



N.C. distribution as reported by
USDA Plants Database

Flowering Dogwood,
Cornus Florida
Family: Cornaceae

Marlene Kinney



Cornus florida L.
flowering dogwood
Britton, N.L., and A. Brown. 1913.
*Illustrated flora of the northern
states and Canada*. Vol. 2: 664

When the season changes and the leaves begin to fall, the showy berries of our native trees and shrubs capture my attention. It is delightful to watch the playful squirrels and birds darting around and sampling their favorite berries.

I especially focus on the Flowering Dogwood (*Cornus florida*) our North Carolina State flower. The clusters of brilliant red fleshy berries of this fabulous small tree began to turn red in the fall well before the leaves begin to color. The Flowering Dogwood is a very common understory

tree of deciduous woodlands throughout most of the eastern U. S. from Zone 5-9. It is a 25-30 foot tall tree with year round interest. Each spring the dogwood blossoms turn the woodlands into a fairyland of white and pink.

Propagation:

Seeds should be removed from the red fruit in the fall and stratified for 90 days. They can be sown outside from late October through November, letting seeds stratify naturally.

Soft wood cuttings may be rooted using rooting hormone powder. These cuttings should not be disturbed until new growth has been forced by supplemental lighting or cuttings have been allowed to go through normal winter dormancy and new growth appears in the spring.

Failure with the Flowering Dogwood usually comes from planting in the wrong place. They thrive in moderately drained soil, slightly acid and partly shaded areas.

To protect against dogwood anthraenose disease in cooler parts of the region, the tree needs at least a half day of sunshine and good circulation of air.

Spring flowering trees blossom on wood grown from the previous summer. Any pruning which removes the bud wood will reduce the number of blossoms in the spring.

Fertilize spring flowering trees about the time they blossom. This aids the new wood which will form the buds of next spring bloom.

History:

The name "Dogwood" comes from England. In England a preparation was made from the bark of *Cornus Sanquinea* to use in treating mangy dogs. In the past, the bark of the dogwood has also been used medicinally for astringents, febrifuge, stimulants, tonics and made into ointments for skin ailments. The hardwood of the dogwood was at one time used to make farm implements, wedges, split rails and spindles for cotton mills.

The Legend of the Dogwood lacks basis in fact. The pass-a-long story that the tree's wood was used to make the cross upon which Jesus was crucified is questionable, since the tree is not known in Palestine. However, this religious significance may have helped preserve many dogwoods that would have otherwise been destroyed.

Other Native Dogwoods:

Cornus alternifolia (Pagoda Dogwood)

Cornus amomum (Silky Dogwood, Silky Cornel)