



Orange County Roadside Conservation

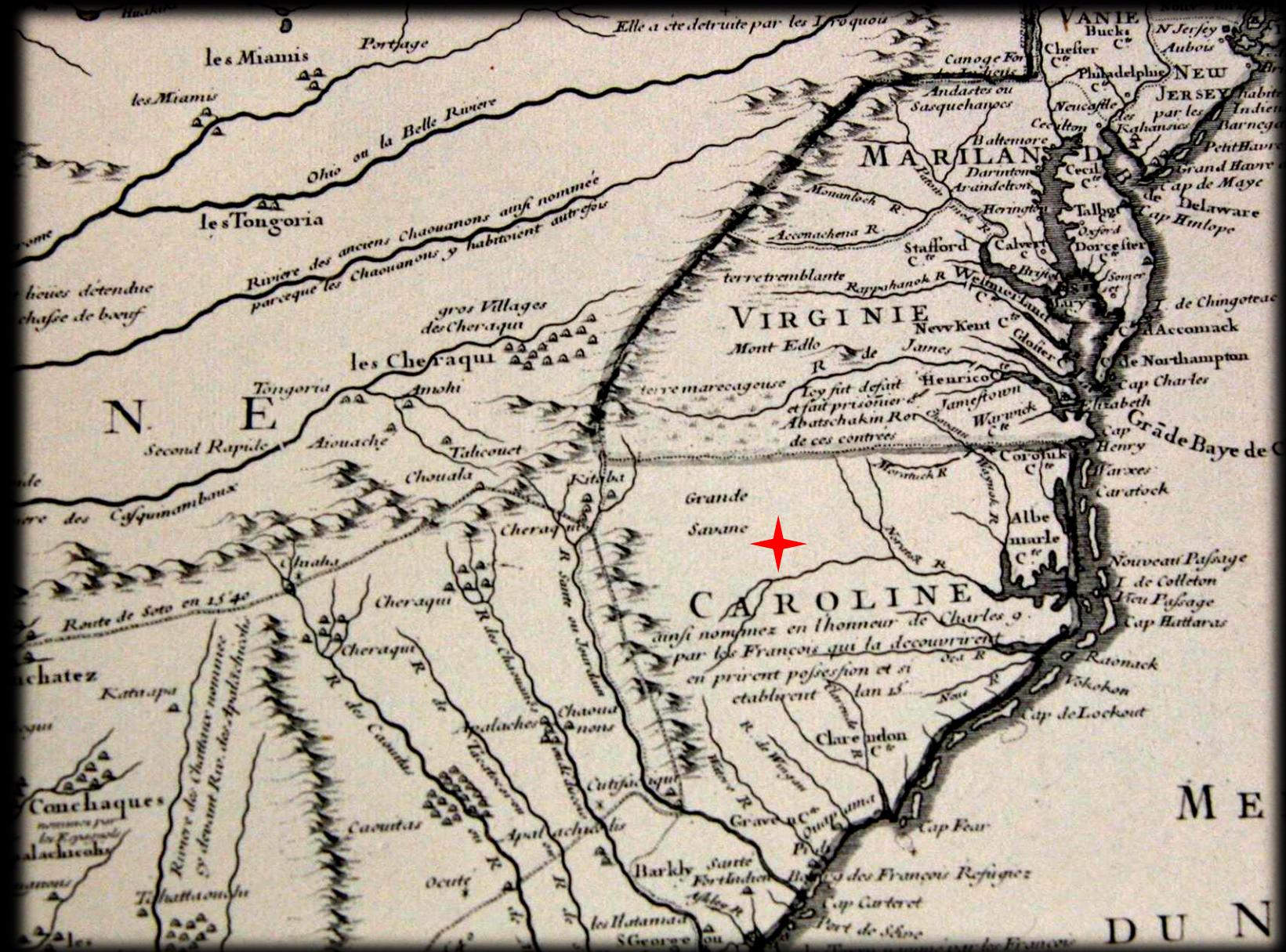
Johnny Randall
Director of Conservation



Why all this interest in roadsides and rights-of-way

- Sites for biological diversity conservation
- Locations of refugial and/or remnant vegetation
- General inventory and documentation (CVS, VegBank, NatureServe, NCHNP, etc.)
- *Ex situ* conservation targets (and NCBG seedbank storage)
- Source of ecological restoration and/or erosion control seed
- Locations for potential natural area purchases or conservation agreements
- Inspiration and methodology for other counties and state
- Aesthetics
- Tourism
- More





DeLisle, 1718 (in Cumming, 1962)

Hwy 49
near
Concord



Remnant savannas and refugia













Orange County roadside garden – North Carolina Botanical Garden



Orange County roadside garden – North Carolina Botanical Garden

Seed processing and storage





Introducing indian paintbrush
(*Castilleja coccinea*) – 13 May, 2010







Meet the 2018 NC Wildflower of the Year

Maryland

golden-aster,

Chrysopsis

marianna, is a

cheerful member
of the Asteraceae

(Sunflower



Family), common throughout the southeastern United States. It can be found in well-drained open woods and dry forests and is a familiar sight on North Carolina roadsides from the mountains to the coast. [Find out more](#)



2906 White Cross Rd Chapel Hill, North Carolina





ORANGE COUNTY BOARD OF COMMISSIONERS

RESOLUTION

Conservation of Native Wildflowers along Orange County Roadways

WHEREAS, the natural beauty of native wildflowers in Orange County can be enjoyed by everyone, can attract guests, and benefit commerce, environmental health, and public well-being; and

WHEREAS, enjoyment of native wildflowers is an occasion for all County and community leaders to unite for the benefit of everyone; and

WHEREAS, many naturally beautiful species of native wildflowers, including Indian paintbrush, yellow wild indigo, and Carolina rose, are already prominently displayed along Orange County's state and county roadways; and

WHEREAS, increasing the visibility of native wildflowers in Orange County is consistent with the vision of the 2030 Comprehensive Plan, and goals of many individuals, businesses, and community-based organizations; and

WHEREAS, the presence of native wildflowers is essential to the fitness of native pollinator species necessary for productive and profitable farms and forests; and

WHEREAS, it is desirable and attainable to experience the beauty of many more native wildflowers by reducing the frequency and extent of roadside mowing; and

WHEREAS, State Road 1006 (Orange Grove Road) and State Road 1114 (Buckhorn Road) are examples of roadways with pilot projects where native wildflowers have been conserved;

NOW THEREFORE, BE IT RESOLVED that the Orange County Board of Commissioners does hereby commit and encourage others to commit to the conservation of roadside native wildflowers along the roadways in Orange County, and do hereby authorize the Commission for the Environment and County staff to work with the NC Department of Transportation, utility companies, and property owners to plan and implement roadside management practices that will increase the visibility and enjoyment of North Carolina native wildflowers.

This the 19th day of June, 2012.

Bernadette Pelissier

Bernadette Pelissier, Chair
Orange County Board of Commissioners

Donna Baker

Donna Baker, Clerk to the Board



Roadside Wildflower Conservation Resolution 2012

The BOCC “commit and encourage” roadside and rights-of-way wildflower conservation, but do not recognize or discourage the extensive harm caused by herbicide use.

Observer Name(s):

Date:

Road Name:

Nearest Intersection (roadnames):

Begin Latitude:

End Latitude:

Projection:

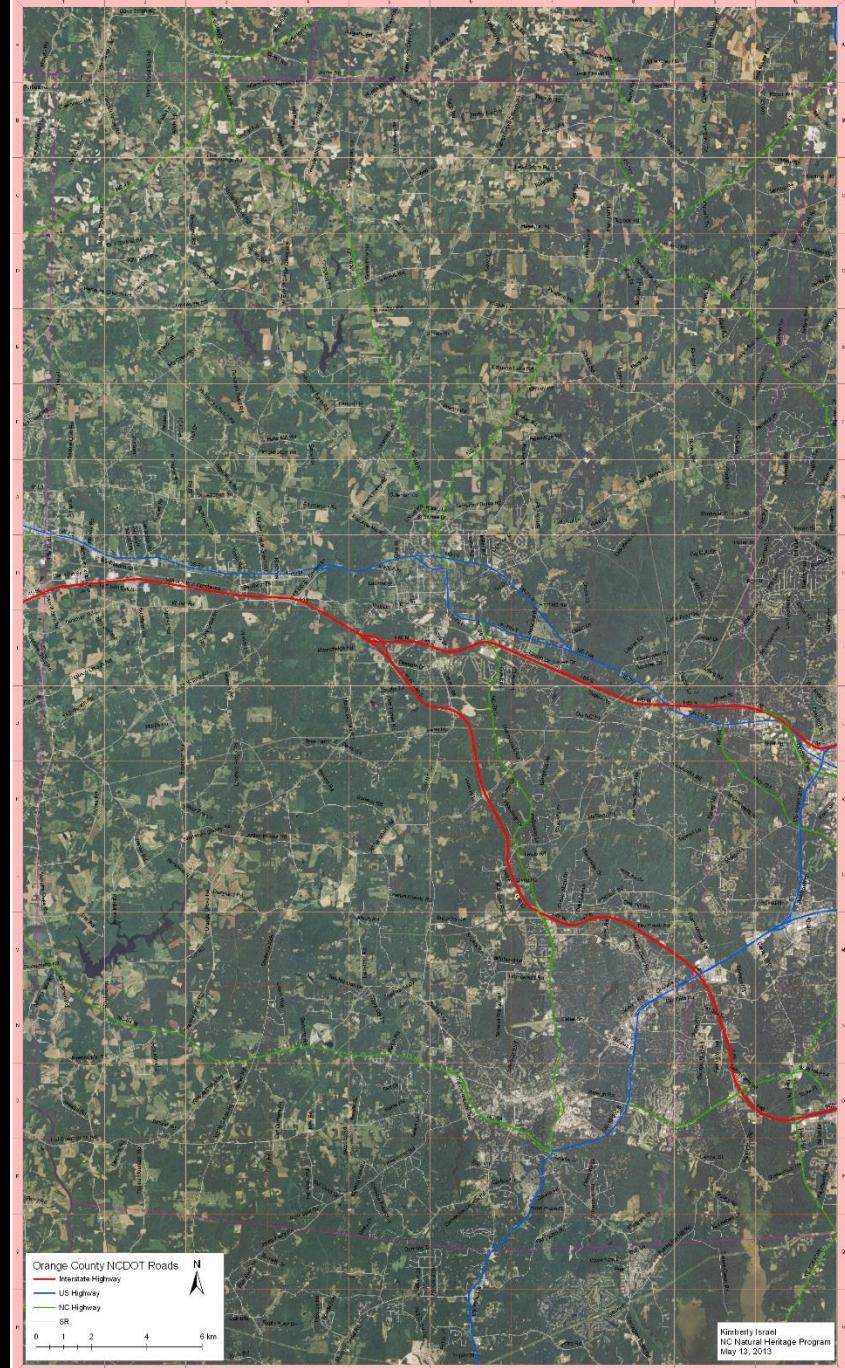
SR Number (optional)

Evidence of herbicide use

Enter % cover for all species. 0=not present, 1=<25%, 2=25-50%, 3=50-75%, 4=>75%.

Site Indicator Species	% Cover	Comments (continue on back as needed)
<i>Aletris farinosa</i>		
<i>Andropogon gerardii</i>		
<i>Arnica acaulis</i>		
<i>Asclepias variegata</i>		
<i>Baptisia spp.</i>		
<i>Castilleja coccinea</i>		
<i>Clematis ochroleuca</i>		
<i>Coreopsis major</i>		
<i>Erianthus giganteus</i>		
<i>Liatris spp.</i>		
<i>Marshallia obovata</i>		
<i>Parthenium spp.</i>		
<i>Schizachyrium scoparium</i>		
<i>Silphium spp.</i>		
<i>Sorghastrum nutans</i>		
<i>Sympyotrichum grandiflorum</i>		
<i>Sympyotrichum patens</i>		
<i>Tephrosia virginiana</i>		
<i>Tripsacum dactyloides</i>		
Rare plants (* = historical)		
<i>Baptisia australis</i> var. <i>aberrans</i> *		
<i>Berberis canadensis</i>		
<i>Buchnera americana</i> *		
<i>Collinsonia tuberosa</i>		
<i>Desmodium ochroleucum</i> *		
<i>Dichanthelium annulum</i> *		
<i>Echinacea laevigata</i> *		
<i>Eupatorium godfreyanum</i>		
<i>Gillenia (Porteranthus) stipulata</i> *		
<i>Hexalectris spicata</i>		
<i>Liatris squarrulosa</i> *		
<i>Matelea decipiens</i> *		
<i>Panicum flexile</i> *		
<i>Parthenium articulatum</i> *		
<i>Platanthera ciliaris</i>		
<i>Platanthera peramoena</i>		
<i>Pseudognaphalium helleri</i> *		
<i>Pycnanthemum torreyi</i>		
<i>Rhus michauxii</i> *		
<i>Ruellia purshiana</i>		
<i>Scutellaria leonardii</i> *		
<i>Thermopsis mollis</i> *		

Additional Notable Species (list below or on reverse):



Baptisia australis var. *aberrans**
Berberis canadensis
*Buchnera americana**
Collinsonia tuberosa
*Desmodium ochroleucum**
*Dichanthelium annulum**
*Echinacea laevigata**
Eupatorium godfreyanum
*Gillenia (Porteranthus) stipulata**
Hexalectris spicata
*Liatris squarrulosa**
*Matelea decipiens**
*Panicum flexile**
*Parthenium ariculatum**
Platanthera ciliaris
Platanthera peramoena
*Pseudognaphalium helleri**
Pycnanthemum torreyi
*Rhus michauxii**
Ruellia purshiana
*Scutellaria leonardii***
*Thermopsis mollis**

Rare Plants Orange County



* historical



Roadsides and Piedmont Savanna Species

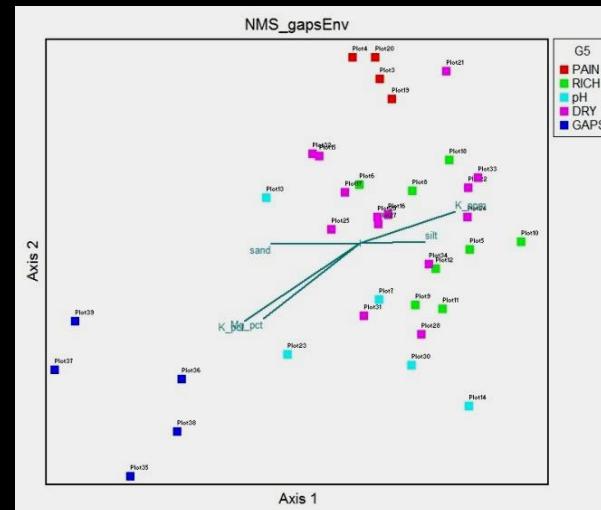
PAIN: *Chamaecrista nictitans, Gymnopogon brevifolius, Oenothera fruticosa, Symphyotrichum grandiflorum, Parthenium integrifolium, Eupatorium rotundifolium*

DRY: *Silphium compositum, Tephrosia virginiana*

RICH: *Aletris farinosa, Marshallia obovata, Apocynum cannabinum, Pycnanthemum tenuifolium*

pH: *Diodia teres, Lonicera sempervirens, Parthenium auriculatum, Echinacea laevigata, Silphium terebinthinaceum*

Nick Adams –
Graduate Research





Southeastern
Roadside
Defenders
[@RoadsideDefenders](#)



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Photo/Video



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620 people like this

621 people follow this

Alan Weakley and 13 other friends like this



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Coalition to Protect AI...
Community

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Roadside native "prairie" bouquet!

Like · Comment · Share

Patricia Blackwell-Cox, Alan Weakley, Laura Nichols Mahan and 6 others like this.



Julie Tuttle These species (and lots more) in about a 100-yard stretch of high-quality roadside: skullcap, butterfly milkweed, wild petunia, sundrops, lobelia, wild quinine, witch grass, Barbara's buttons, white colicroot, Venus' looking glass, flat sedge, beak sedge, downy danthonia, narrowleaf whitetop aster, narrowleaf mountain mint, several Coreopsis spp., rush spp.

June 7 at 11:13am · Like · 31



Scott Geisel That's awesome. I didn't even know many of those plants.

June 7 at 1:13pm · Like



Judy Erlichman Beautiful, Julie! Wish I was there to pick them with you.

June 7 at 9:07pm · Like



Elizabeth Russell That's a healthy stretch!

June 7 at 10:32pm · Like · 1



Julie Tuttle Judy, you would have enjoyed it--me, Alan, and Alan's kids running around with scissors... :-)

June 7 at 11:14pm · Like



Judy Erlichman Uh-oh...running with scissors! Tee-hee. Are the red flowers the butterfly milkweed?

June 8 at 12:12am · Like



Julie Tuttle Yes. That was an unusually red example. The others were mostly orange.

June 8 at 11:53am · Like



Quentin Holden Great arrangement

June 9 at 8:59pm · Like



Write a comment...



North Carolina Piedmont Roadside Native Plants

[Add observations to this project](#)

Stats

Totals

1553[Observations »](#)**231**[Species »](#)**26**[People »](#)

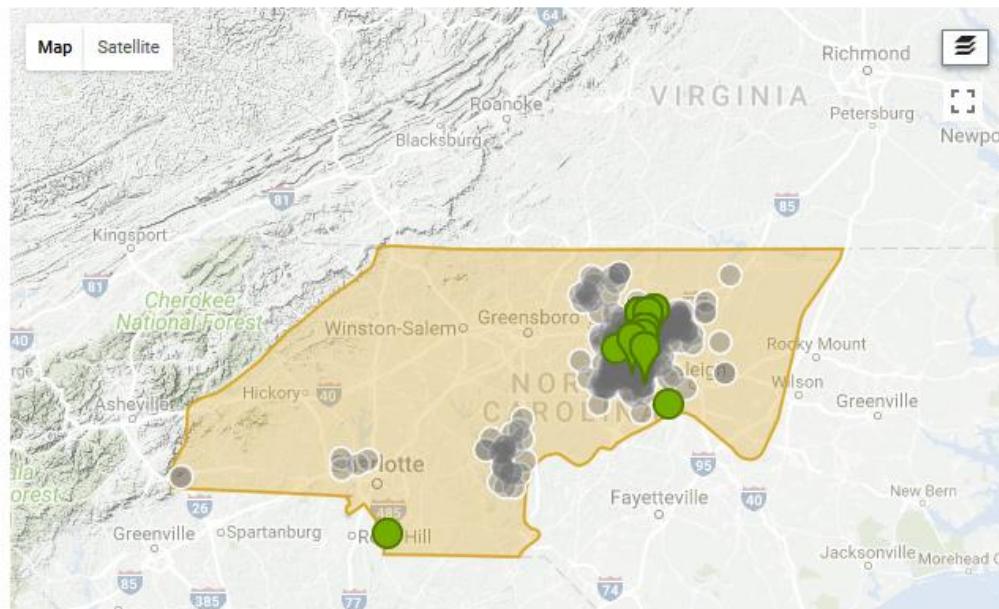
Most Observations

**jtuttle**
1223 observations**whiteoak**
155 observations**mkunz**
36 observations**rlephoto**
21 observations**loarie**
17 observations

Most Species

**jtuttle**
158 species**whiteoak**
84 species**mkunz**
25 species**georgepauly**
16 species**rlephoto**
16 species

Most Observed Species

**Wild Quinine**
46 observations**Helmet skullcap**
46 observations**Narrowleaf mountainmint**
43 observations**Greater Tickseed**
40 observations**Goat's Rue**
38 observations

» Members

54 members

[View all members »](#)

» Export observations

[Atom](#) / [KML](#) / [CSV](#)

» Usage stats

About

The purpose of this project is to document native plant species on high-quality roadsides and power line rights-of-way in the North Carolina Piedmont. Locations can include managed or unmanaged roadsides or power line rights of way, and observations can

iNaturalist Piedmont Roadsides – Orange County

The World 1,553 OBSERVATIONS 231 SPECIES 100 IDENTIFIERS 26 OBSERVERS

Map Grid List Places of Interest Redo search in map

Confederate violet
(Viola sororia priceana)
817 Burch Ave, Dur... • Dec 14, 2017
Research Grade 1 20d

Late purple aster
(Symphyotrichum patens)
482-1062 Transis C... • Nov 30, 2017
1mo

Virginia pine
(Pinus virginiana)
3102 Sandy Creek D... • Nov 28, 2017
Research Grade 1 1mo

Water oak
(Quercus nigra)
3102 Sandy Creek D... • Nov 28, 2017
Research Grade 1 1mo

False foxgloves
—

Observations

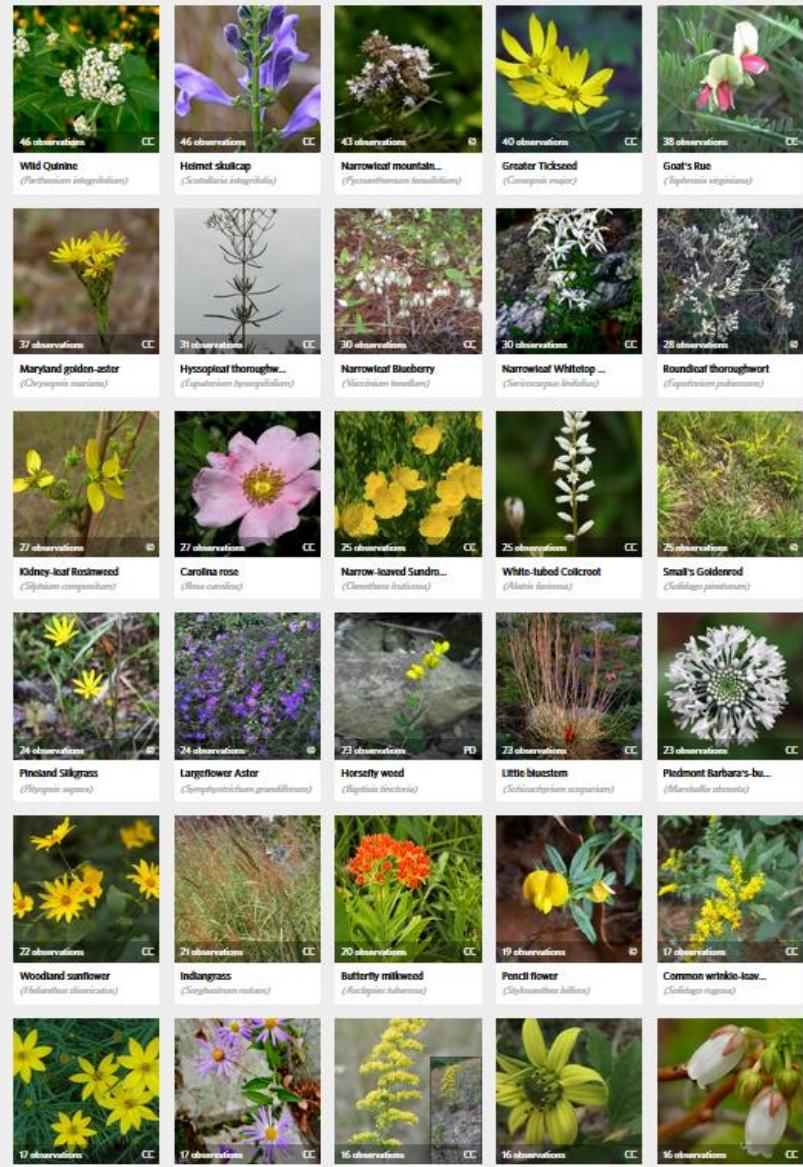
Species

Location

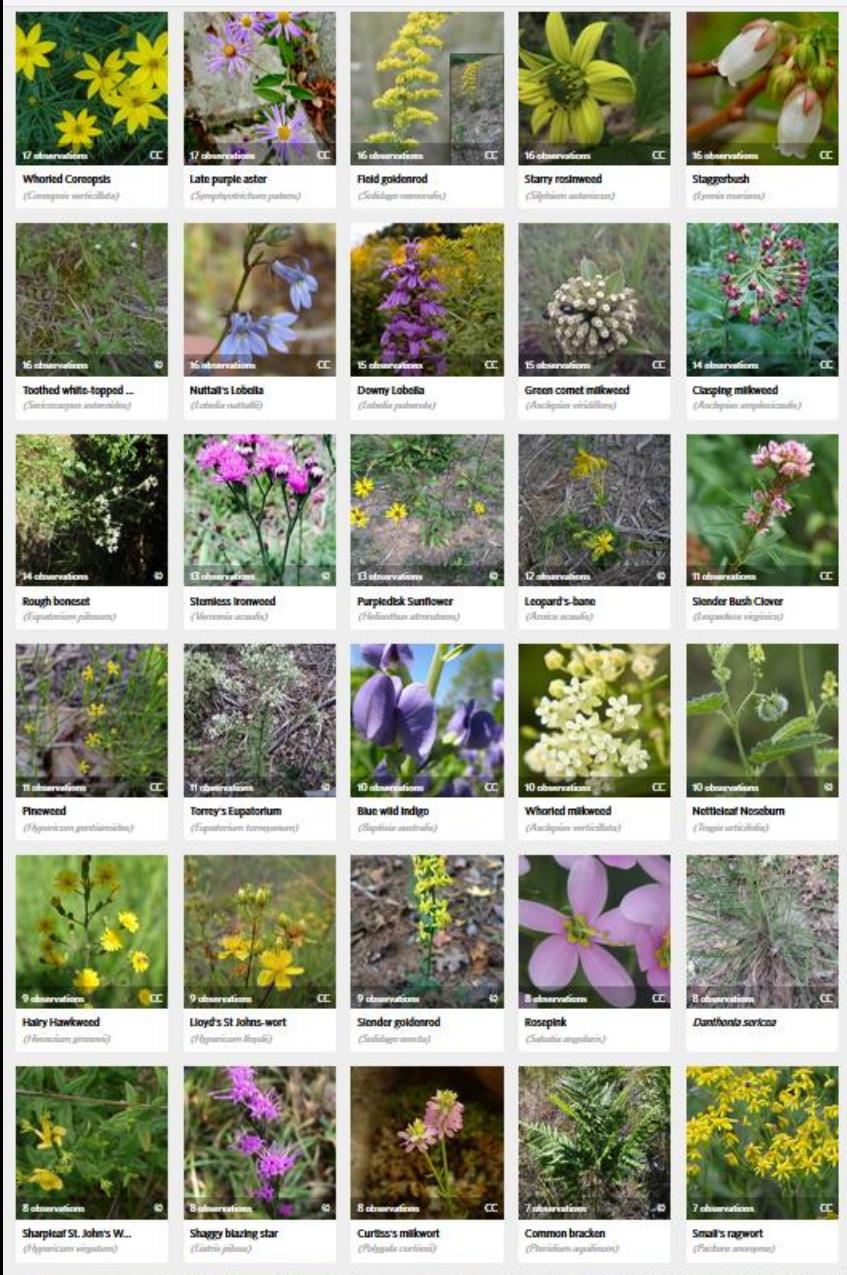
Go

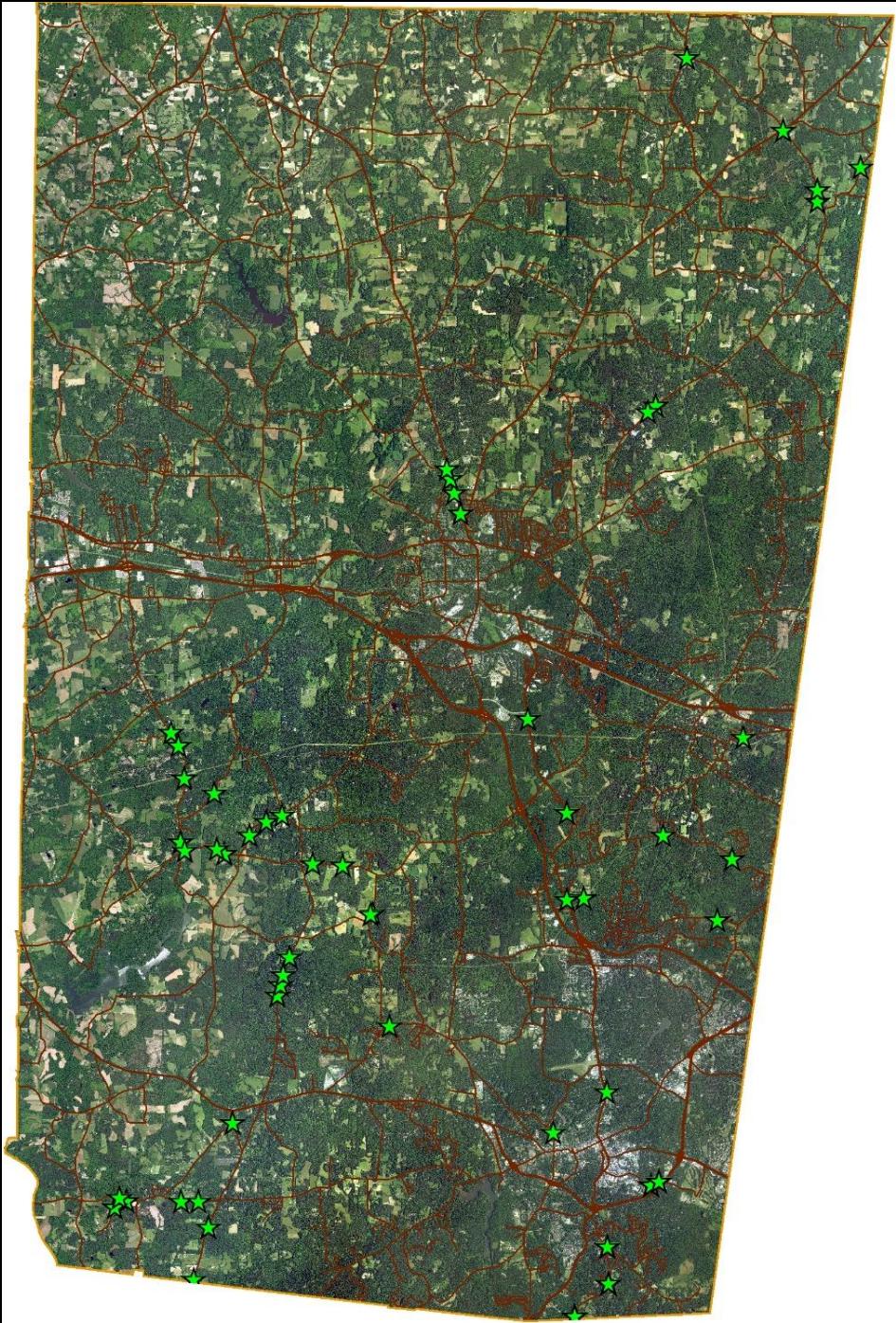


The World

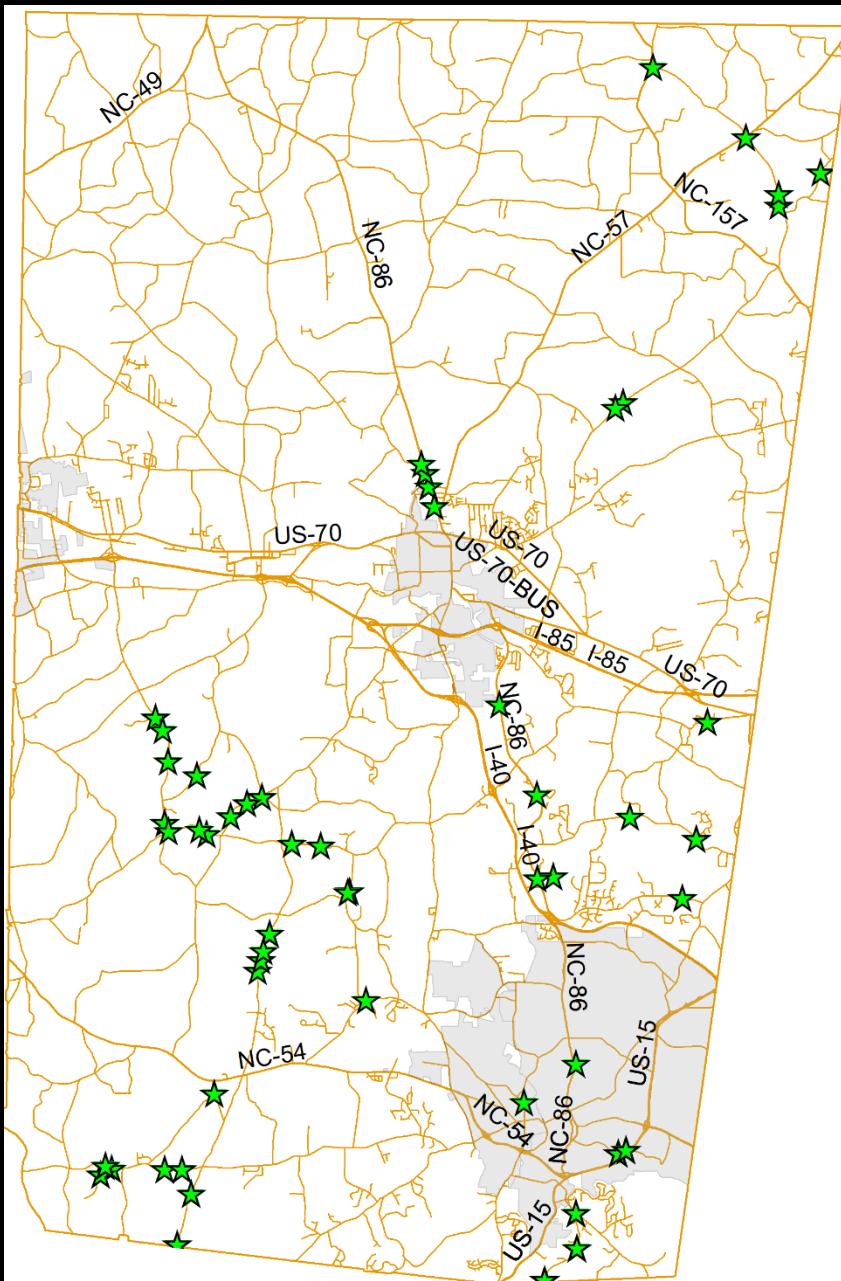
1553
OBSERVATIONS231
SPECIES100
IDENTIFIERS26
OBSERVERS

60 of 231 species observed





iNaturalist Piedmont Roadsides – Orange County



iNaturalist Piedmont Roadsides – Orange County



Site Name	Number of Species
NC86 2	52
Orange Grove Road 1	48
Buckhorn Road 4	45
NC86 4	45
NC86 5	27
Whitfield Road 1	20
NC86 3	13
Orange Grove Road 3	13
Old Lystra Road 2	12
Bradshaw Quarry Road 1	10
Dodsons Crossroads 3	10
Buckhorn Road 2	8
Dodsons Crossroads 2	8
Mt Carmel Church Road 1	7
NC86 1	7
Rocky Ridge Road 1	7
White Cross Road 3	7
Ables Hill Road 1	7
Old Greensboro Road 3	6
Dodsons Crossroads 1	5
New Sharon Church Road 1	5
Old Greensboro Road 1	5
Old State Highway 10	5
NC86 6	4
New Sharon Church Road 2	4
Orange Grove Road 2	4
Arthur Minnis Road 1	3
Buckhorn Road 3	3
Chestnut Ridge Church Road 1	3
Dodsons Crossroads 4	3
Laurel Hill Road 1	3
White Cross Road 2	3
Bill Poole Road 1	2
Bradshaw Quarry Road 3	2

iNaturalist Piedmont Roadsides – Orange County

Buckhorn Road 1	2
Dawson Road 1	2
Old Greensboro Road 2	2
Old Greensboro Road 4	2
Arthur Minnis Road 2	1
Bethel Hickory Grove Church Road 1	1
Bolinwood Drive	1
Bradshaw Quarry Road 2	1
Farrington Mill Road 1	1
Fern Lane 1	1
Holly Ridge Road 1	1
Johnston Mill Power Line	1
Mount Sinai Road 1	1
Mount Sinai Road 2	1
NC86 0	1
New Sharon Church Road 3	1
New Sharon Church Road 4	1
North Greensboro Street 1	1
Old Lystra Road 1	1
Rocky Top Drive 1	1
White Cross Road 1	1

Roadside conservation is
not a new idea!

**ROADSIDES:
THE FRONT YARD OF THE NATION**

BY J.M. BENNETT, 1936



CLASSIC REPRINT SERIES

ROADSIDES

The Front Yard of the Nation



by
J. M. Bennett

Forgotten Books

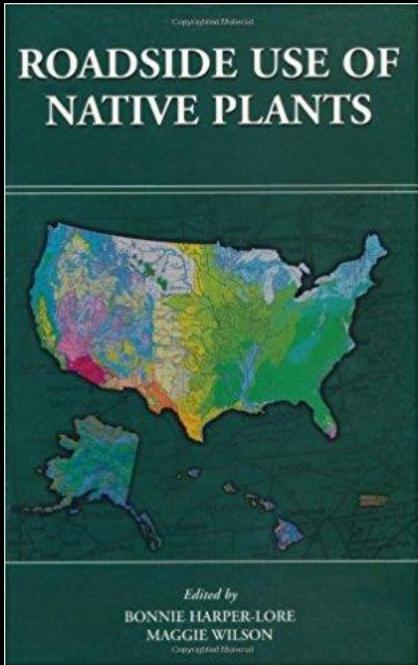


Photo: LBJ Library Photo: by Frank Wolfe

After signing the Highway Beautification Act on October 22, 1965, President Johnson hands the bill signing pen to Lady Bird in the East Room of the White House. Photo: LBJ Library Photo by Frank Wolfe.



Roadside
Beautification
Act and other
means of education
and action

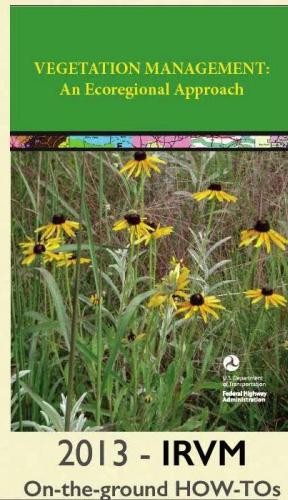
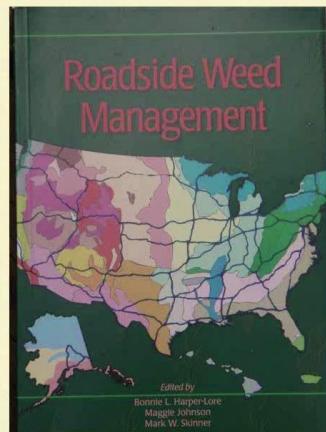
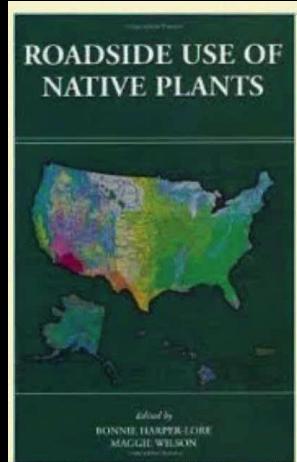
Roadsides as Vital Habitat

Air Date: Week of August 25, 2017

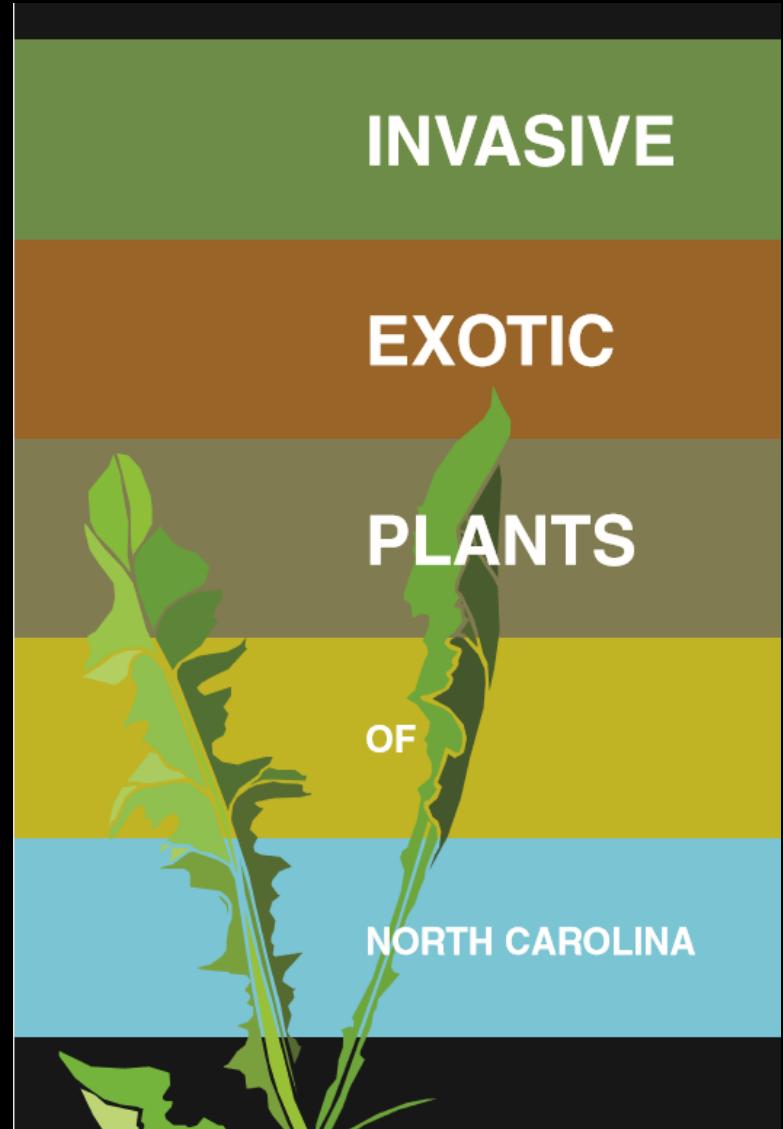


[stream/download](#) this segment as an MP3 file





FHWA-USDOT



http://www.namethatplant.net/PDFs/NCDOT_Invasive_Exotic.pdf

Which NC Roadside Has The Best Wildflowers?

By LAURA CANDLER • APR 5, 2013

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Best Overall Division Wildflower Program - 1st Place - Div 4

NC DOT

Best Overall Division Wildflower Program

- 1st Place – Division 4, which includes Edgecombe, Halifax, Johnston, Nash, Wayne and Wilson counties
- 2nd Place – Division 7, which includes Alamance, Caswell, Guilford, Orange and Rockingham counties

RESOLUTION: 12-32

WILDFLOWER PILOT PROGRAM

WHEREAS, the natural beauty of native wildflowers in Leon County can be enjoyed by everyone; can attract guests, and benefit commerce, environmental health, and public well-being; and

WHEREAS, enjoyment of native wildflowers is an occasion for all County and community leaders to unite for the benefit of everyone; and

WHEREAS, many naturally beautiful species of native wildflowers, including Coreopsis, the state wildflower, as depicted upon the State Wildflower license tag, are already prominently displayed along Leon County's state and county roadways; and

WHEREAS, Leon County was selected as the site of the State Capitol because of its natural beauty; and

WHEREAS, increasing the visibility of native wildflowers in Leon County is consistent with the vision of the Comprehensive Plan, and goals of many individuals, businesses, and community-based organizations; and

WHEREAS, the presence of native wildflowers is essential to the fitness of native pollinator species necessary for productive and profitable farms and forests; and

WHEREAS, in the spring of 1513, Juan Ponce de Leon named this beautiful place La Florida, Land of Flowers, because of the wealth of native wildflowers; and

WHEREAS, in the year 2013, native wildflowers will be a prominent icon of Florida's and Leon County's quincentennial celebration of Spain in Florida; and

WHEREAS, it is desirable and attainable to experience the beauty of many more native wildflowers by reducing the frequency and extent of roadside mowing; and

WHEREAS, Leon County's state and county roadways are ideal candidates to establish pilot project corridors for management of native wildflowers;

NOW, THEREFORE, BE IT RESOLVED by the Board of County Commissioners of Leon County, Florida, that Leon County is committed to establishing a Wildflower Pilot Program and that the Board hereby instructs County staff to partner with the Florida Department of Transportation (FDOT) and adjoining property owners, along designated segments of Leon County and FDOT maintained roadways, to plan and implement roadside management practices that will increase the visibility and enjoyment of Florida native wildflowers.

The top portion of the image shows the Florida Wildflower Foundation logo on the left and a banner with the text "RESOLVE to Protect Wildflowers" over a background of yellow wildflowers and a "DO NOT MOW" sign on the right. Below this is a map of Florida counties numbered 1 through 7. Green areas represent counties where resolutions have been adopted, while yellow areas represent DOT districts. A key at the bottom left indicates that green dots mean "Adopted" and orange/red dots mean "DOT District". To the left of the map is a group photograph of five people standing together, with one man holding a small booklet or document.

Resolutions paint Florida green

Would you like to see more roadside wildflowers in your county? In 2009, a [model county resolution](#) was developed by Foundation members Eleanor Dietrich and Jeff Caster for just this purpose. It recognizes the historical, environmental and cultural significance of Florida wildflowers and pledges to conserve roadside wildflowers through management practices such as reduced mowing.

Wakulla County led the way by enacting a county policy to preserve roadside wildflowers. Soon afterward, various versions of the resolution were adopted by Gadsden, Leon, Lake, Marion, Brevard and Volusia counties. Now, 28 counties and two municipalities have wildflower resolutions. Click on each county's name to learn how this effort was implemented and who led it. Use this information to bring the resolution to your own county.

In January 2014, the Florida Department of Transportation adopted a new [Wildflower Management Program Procedure](#) that lays out guidelines for nominating natural areas of wildflowers for special management. Our map breaks out Florida Department of Transportation districts, each of which have a wildflower program coordinator. Counties should work directly with their district coordinator to request special management for wildflower areas along state-maintained roads. [Click here](#) for a list of coordinators.

Model resolution

WHEREAS, the natural beauty of native wildflowers in _____ County can be enjoyed by everyone; can attract guests, and benefit commerce, environmental health, and public well-being; and

WHEREAS, enjoyment of native wildflowers is an occasion for all County and community leaders to unite for the benefit of everyone; and

WHEREAS, many naturally beautiful species of native wildflowers, including Coreopsis, the state wildflower, as depicted upon the State Wildflower license tag, are already prominently displayed along _____ County's state and county roadways; and

WHEREAS, increasing the visibility of native wildflowers in _____ County is consistent with the vision of the Comprehensive Plan, and goals of many individuals, businesses, and community-based organizations; and; [read entire model resolution](#).

Helpful research

- [Economic Impact of Ecosystem Services Provided by Ecologically Sustainable Roadside Right-of-Way Vegetation Management Practices](#) ... The

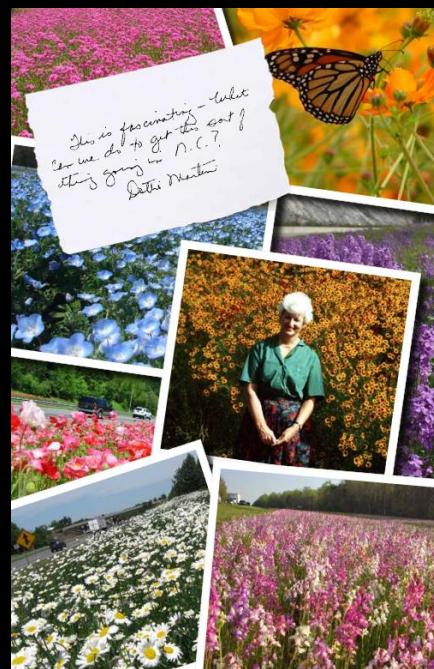
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WILDFLOWERS

on North Carolina Roadsides



North Carolina Department of Transportation
Roadside Environmental Unit



INTRODUCTION

The North Carolina Department of Transportation Wildflower Program began in 1985 as an integral part of highway beautification. Twelve acres were sown during the first year of production. Today, wildflower beds are installed and maintained across the state by Roadside Environmental personnel in each of the fourteen highway districts.

This booklet is intended to be a reference to identify the wildflowers planted by NCDOT, as well as some of the naturally occurring ones growing along North Carolina highways. Both botanical and common names are listed on the following pages. Photographs with descriptions and planting instructions are arranged alphabetically.

This guide also contains the installation techniques used by Roadside Environmental personnel, as well as suggestions for planting your own wildflowers at home.

We hope this booklet will be useful as you drive along our highways and in your own wildflower gardening endeavors. Remember, for your own safety, do not stop and pick the wildflowers. Please leave them for everyone to enjoy!



QUICK FACTS ABOUT THE WILDFLOWER PROGRAM

- ♦ Pauline Clegg, Betty Martin, and their wife, the wife of former Gov. Jim Martin, are credited with initiating the idea for the N.C. program after reading an article in the Wall Street Journal about wildflower beds in Texas.
- ♦ Tourism in North Carolina provides \$16 billion to the state's economy annually. Since most visitors arrive by vehicle, the Wildflower Program plays a particularly important role in making the state an appealing destination. The program is one of NCDOT's most popular initiatives, and receives hundreds of comments of praise each year from drivers and visitors alike.
- ♦ Today's Wildflower Program consists of one-third of each — annuals, perennials and N.C. native wildflowers.
- ♦ The native species planted each year along state roadways include Clapping Coneflower (*Rudbeckia amplexicaulis*), Bur-Marigold (*Bidens aristosa*), Common Sunflower (*Helianthus annuus*) and Maximilian Sunflower (*Helianthus maximiliani*), to name a few.
- ♦ Wildflowers are sources of nectar for pollinator species, including bees, butterflies and birds. (See page 33 for more on pollinators.)
- ♦ The Garden Club of North Carolina is the lead sponsor of the Wildflower Program. Other important partners include N.C. State University and the N.C. Department of Agriculture and Consumer Services.

Mowing vs spraying



Possible next steps



- Continue data collection?
- Recommend to BOCC that mowing replace spraying
(through discussion with rights-of-way managers)?
- Raise awareness of native roadside wildflowers and other roadside species?
- Create a “Guide to Orange County Roadside Wildflowers”?
- Include roadside inventory and protection in Unified Development Ordinance?
- Recommend best management practices for roadside management (such as timing and extent) ?