

Why Native Plants?



**Water
Awareness
Speaker Series 2025**

Colby Pitts

FFL Program Coordinator

Your watering day is based on the LAST digit
of your address



Monday



Tuesday



Wednesday



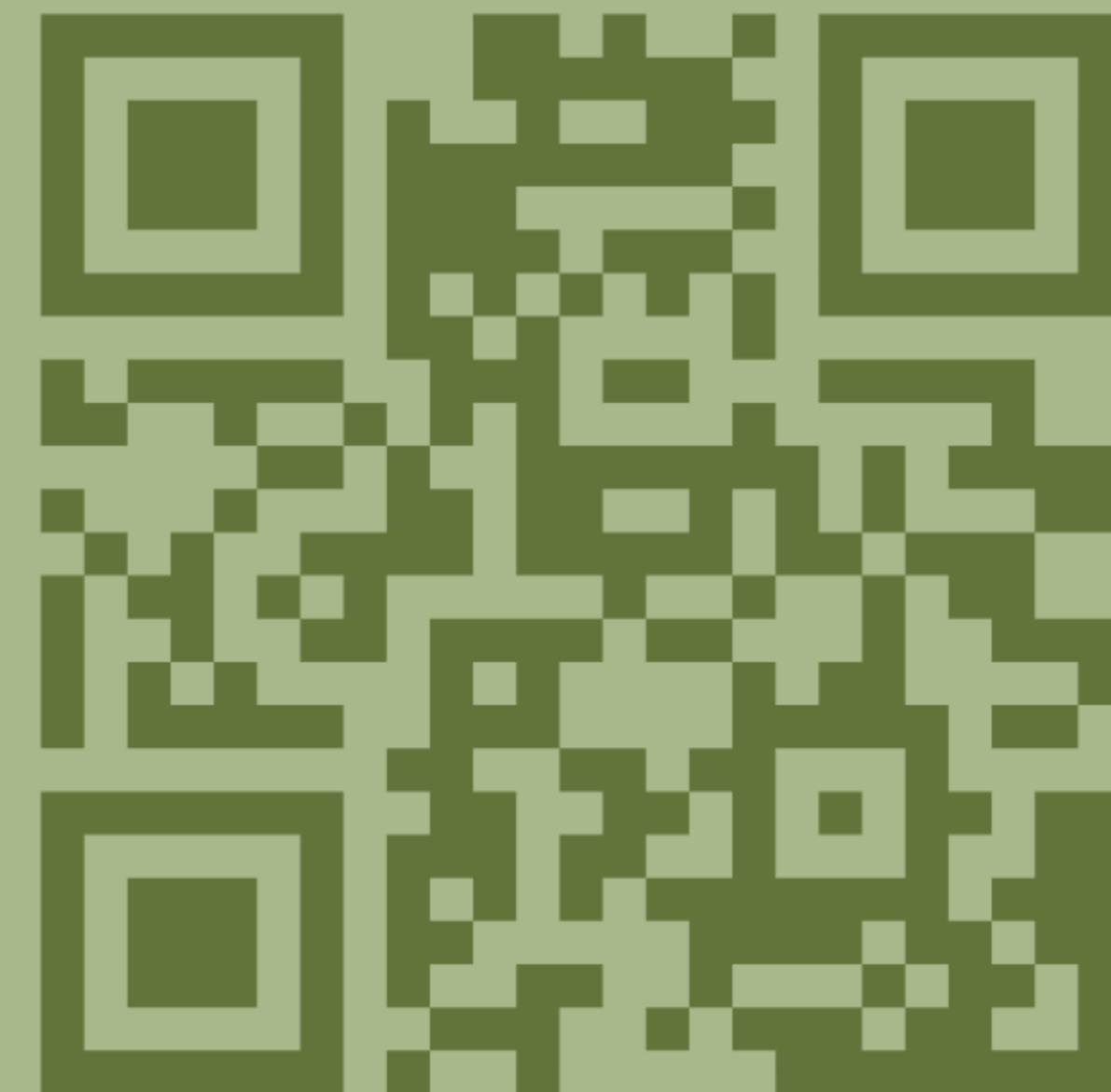
Thursday



Friday

You can water before 8:00 am **OR** after 6:00 pm on your designated day

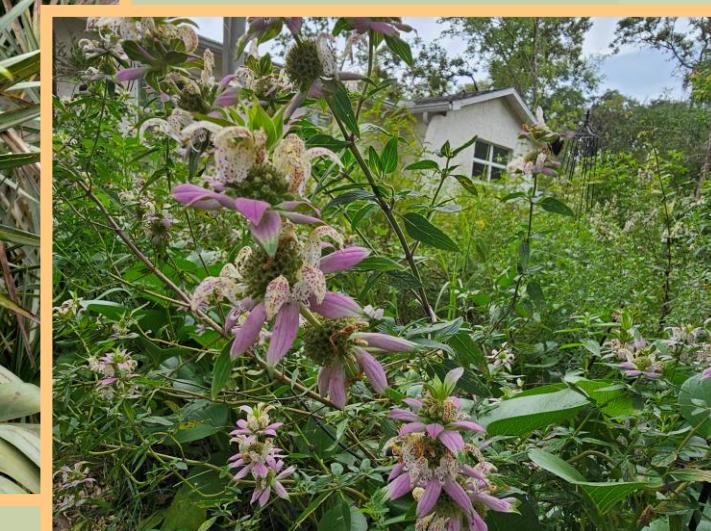
Check out Hernando FFL!



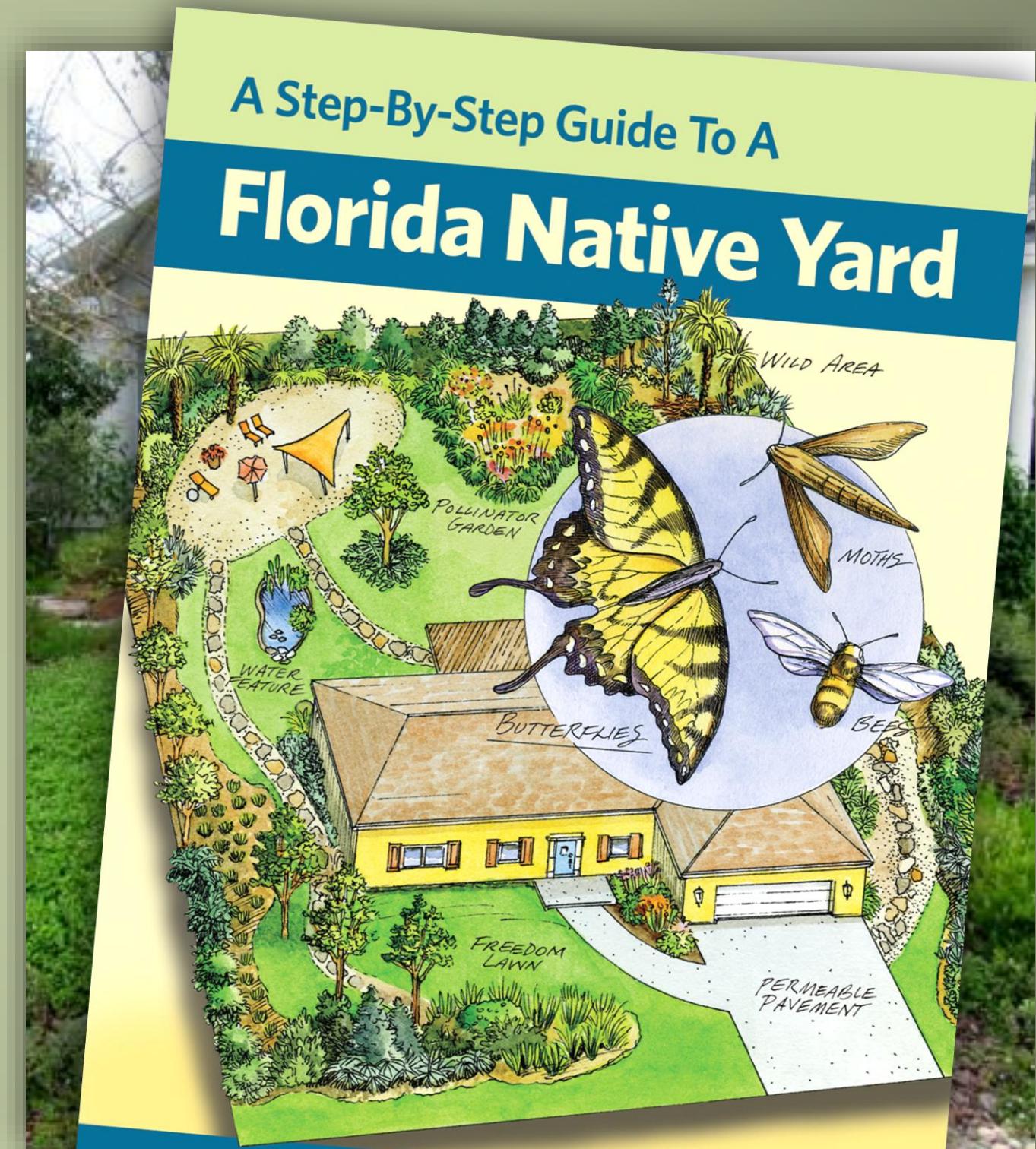
Why Native Plants?

Landscapes

Jason LaRoche,
Hernando Chapter
Florida Native Plant Society



www.StepByStepNatives.com



An all-native landscape can be a great way to live and create habitat in any neighborhood.

Why Native Plants?



1. They're completely adapted to the soil, climate, and insects that are here
2. Require far less maintenance and cost — little to no water, no fertilizer, no pesticides, herbicides, or fungicides
3. They offer the best food, shelter, foraging, and nesting for birds, pollinators, and wildlife — real Florida habitat that provides a sense of 'place'



A typical landscape. Plants are replaced 3-4 times a year. It is:

- Expensive for labor and plants
- High maintenance if kept looking good
- Harmful to the soil



Using long-lived native plants instead of annuals in full bloom is less expensive and better for the planet.



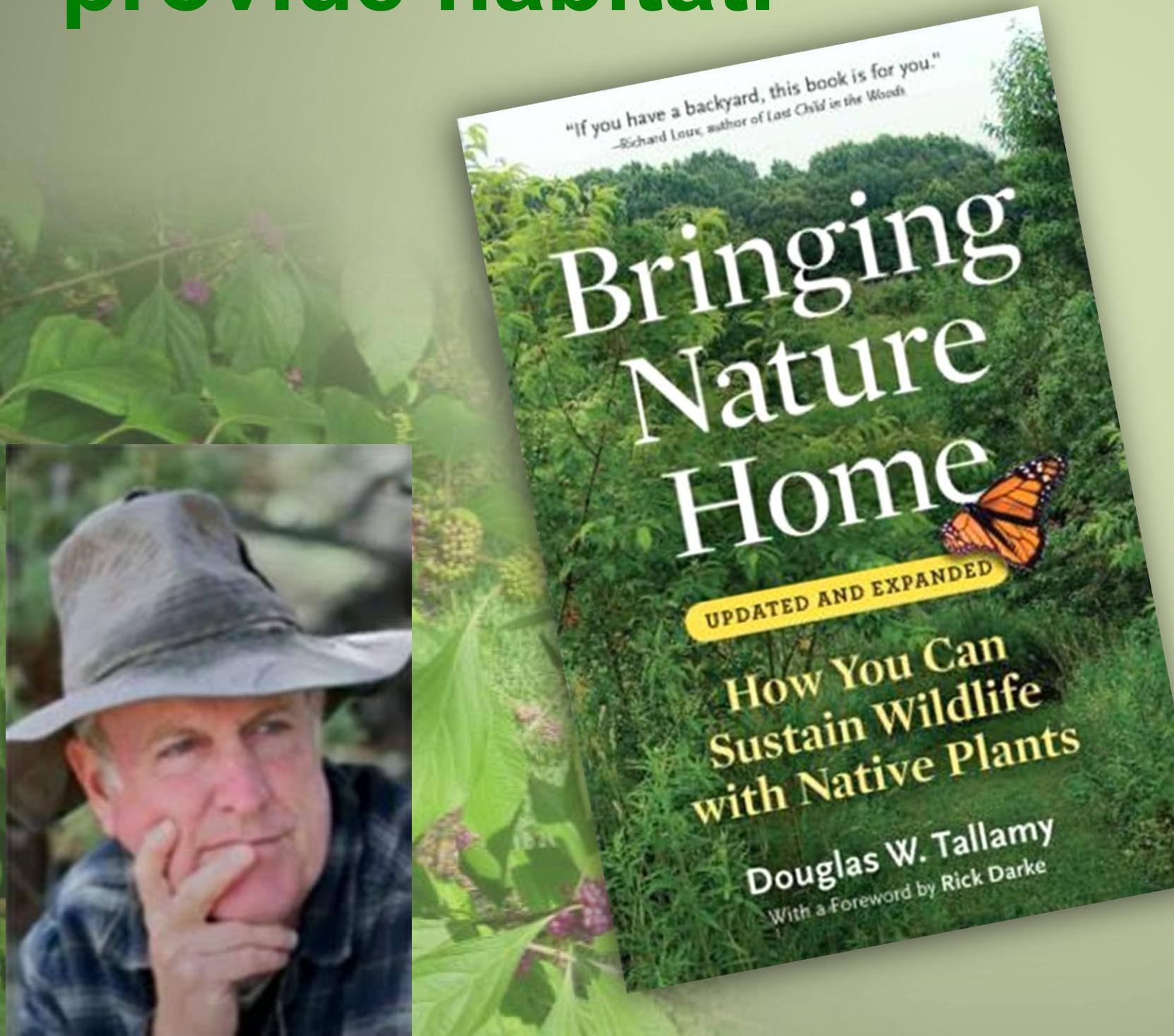
Good for the store, but not necessarily consumers or the environment.

Garden center annuals are typically:

- At the ends of their life cycles
- High maintenance
- Often treated with poisons that can harm pollinators



Doug Tallamy's research shows that even small native landscapes provide habitat.



As an entomologist, he says, "Plants need to do more than to just be pretty. They should play a role in your yard's ecosystem."

**There are so many beautiful,
earth-friendly alternatives to
lawns and seasonal plantings.**





© Springer Environmental

FRONT YARDS

Photos by Troy Springer, Springer Environmental
Restoring Florida One Yard at a time



© Springer Environmental



Shrink lawn

BACK YARDS

Pathways

Photos by Troy Springer, Springer Environmental
Restoring Florida One Yard at a time





© Springer Environmental



Roadsides

BUFFERS



© Springer Environmental

Photos by Troy Springer, Springer Environmental
Restoring Florida One Yard at a time

© Springer Environmental

**A cool native landscape
in Jacksonville, Florida:
literally 2° cooler.**

Before →
↓ *After*



Support local, real Florida native nurseries

Growers offer plants at their *natural* stage for the time of year, look for educational signs or websites for plant details.



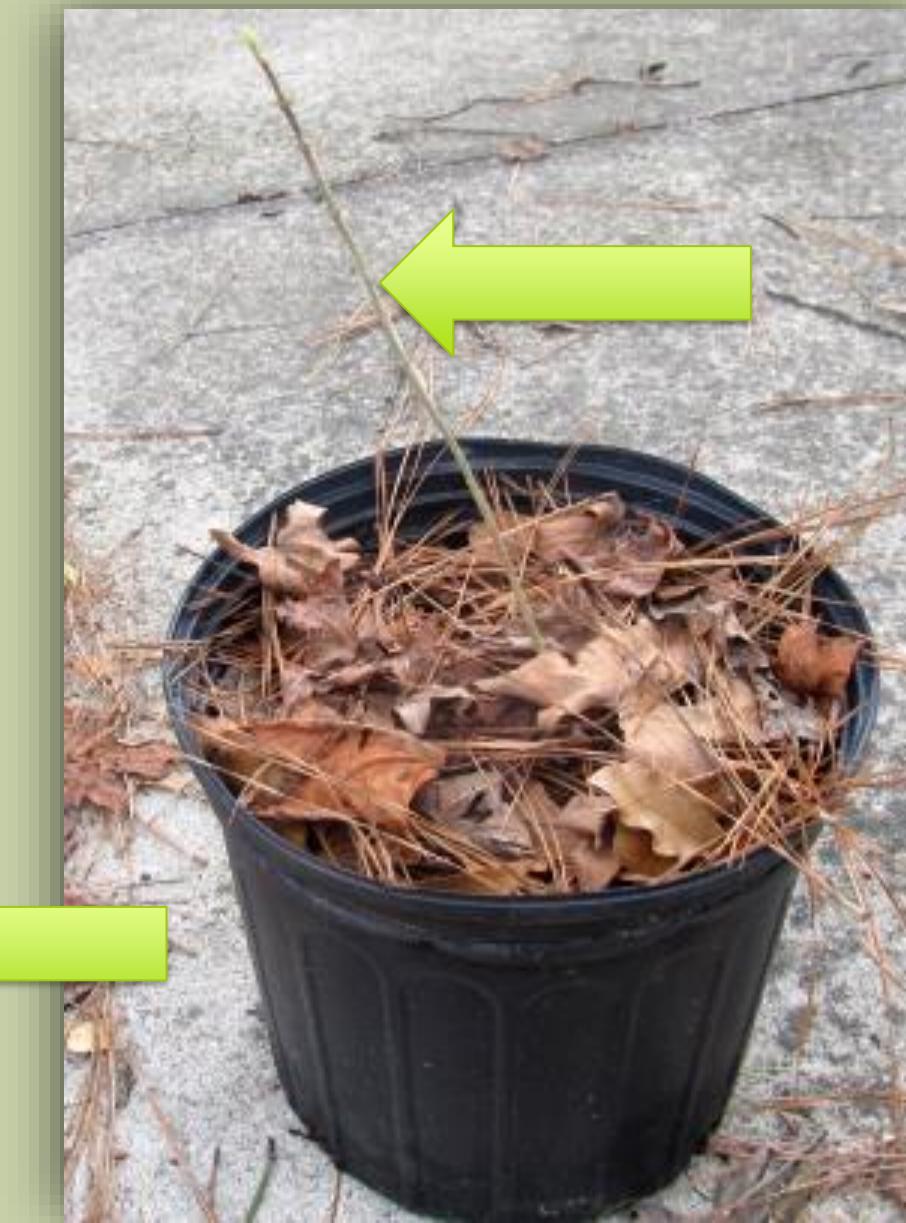
Find local native nurseries by visiting:

www.PlantRealFlorida.com



A bit of patience is needed

This beautyberry shrub will be beautiful in the landscape because small, dormant plants have a much better chance of success.



Planting natives
is a long-term
investment—not an
instant landscape.

Plant Associations

Some things just go together



Photo: Jason LaRoche



Atala butterfly. Photo by Jenny Ryan



Atala cat



Red-banded hairstreak butterfly.
Photo by Kate Dolamore



Red-banded



Ceraunus blue butterfly
Photo by Emily Bell



Ceraunus



Common buckeye butterfly
Photo by Emily Bell



Common



Frogfruit
Photo by Emily Bell



Partridge pea
Photo by Emily Bell



Smallflower pawpaw
Photo by Emily Bell



Sweetbay
Photo by Kate Dolamore

Box hedging. Can we talk?



Does this even look like nature?



Lose the power tools.

Install native shrubs in mixed hedgerows where they are allowed to take their own shapes.



The variety of shrubs:

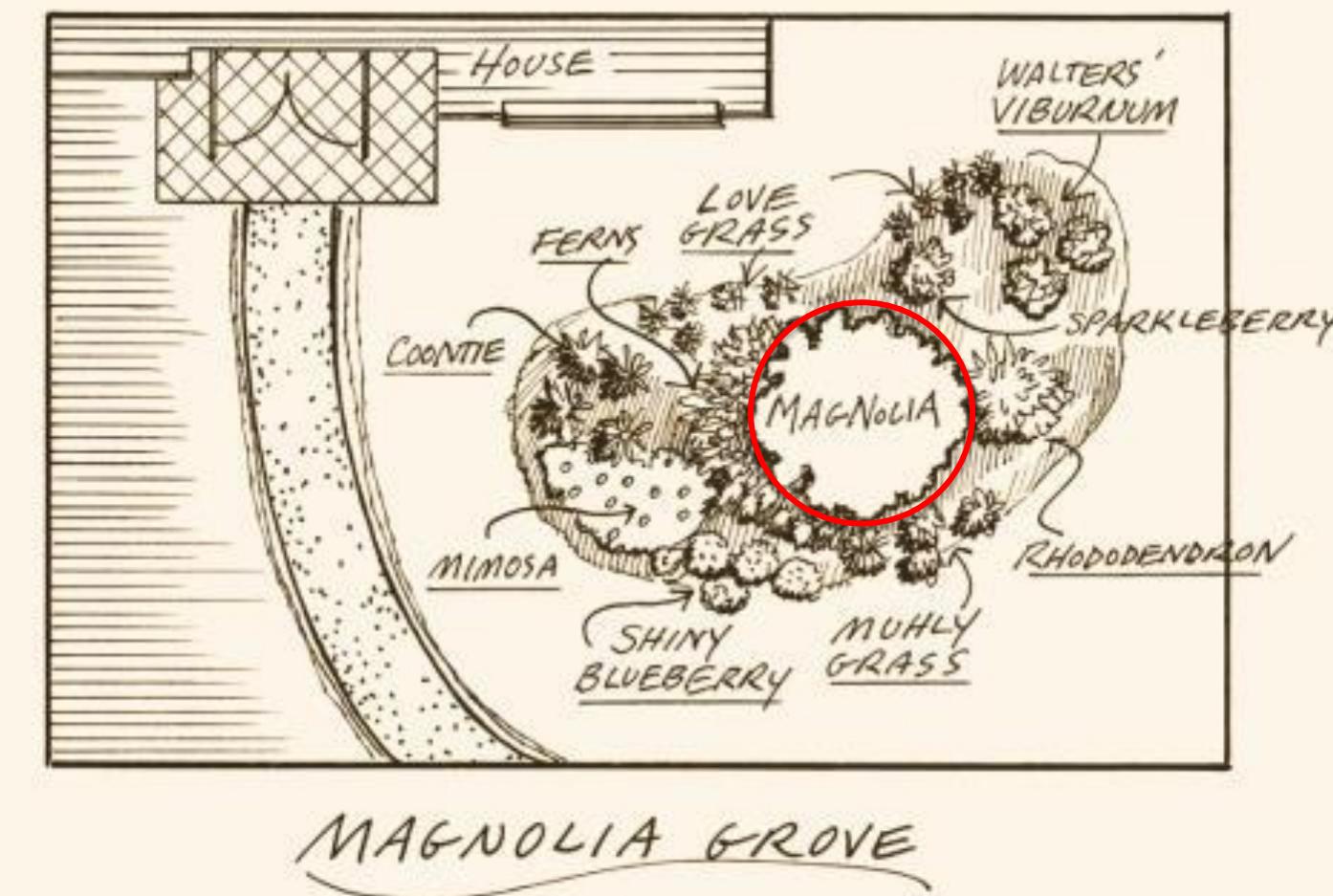
- Makes them more resilient against disease
- Provides more interest and better habitat



Around existing trees is a perfect place to shrink lawn and add natives.



Create 'groves' around lawn trees that reduces maintenance and increases habitat.



Shrink your lawn!

Lawns demand significant resources, can negatively affect the environment, and do little (and often nothing) to support wildlife. The goal is to limit lawn to areas where its truly needed.

Troy Springer, Tampa



© Springer Environmental

Steve Turnipseed, The Villages

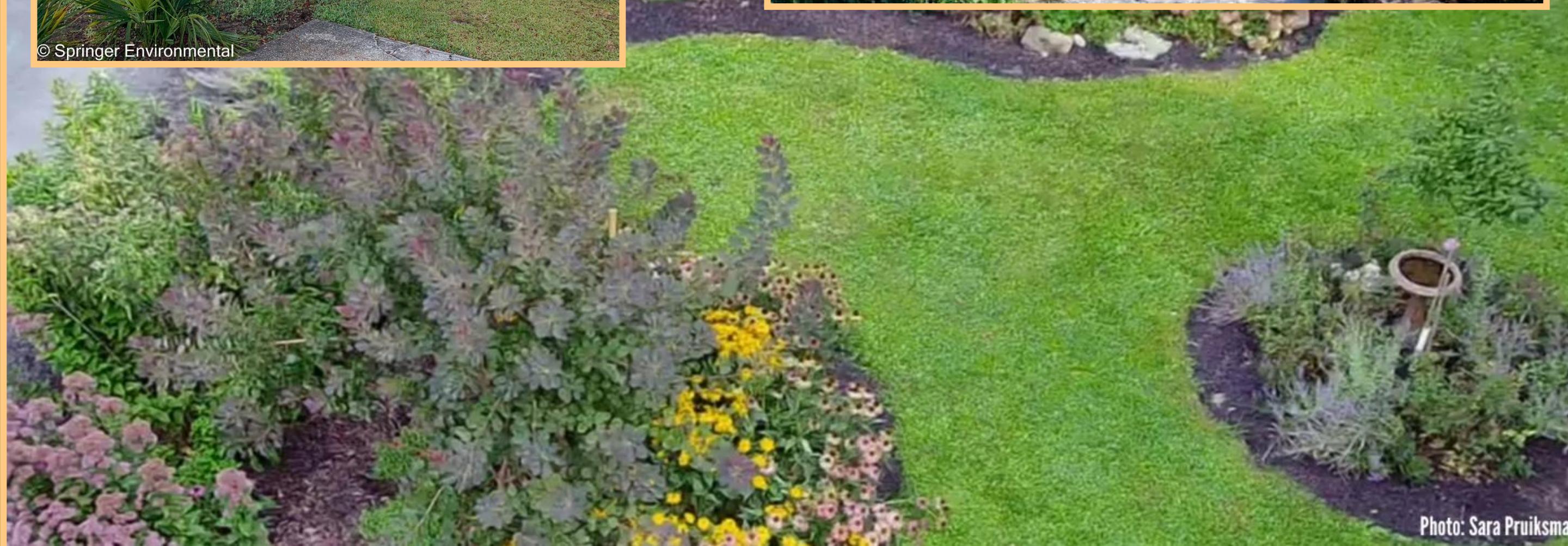


Photo: Sara Pruijsma

Be smart choosing where to shrink lawn.

Strategize, there are often many ways to take advantage what's already there and the lay of the land....



Pine straw is the best mulch...

Sustainable, local, renewable, adds nutrients to soil



Some facts on turf lawns.

- Lawns are conventionally just turf grass, a non-native monoculture that replaces diverse habitats for wildlife.
- Lawns often require lots of resources, including water, fuel, fertilizers, herbicides, pesticides, and fungicides.
- Lawns can have environmental impacts, from fertilizer nutrient pollution, toxins leaching to aquifers & water bodies, & air pollution from gas emissions.
- Lawns are our largest irrigated ‘crop’ – not corn – we use more water on lawns than the seven largest water-using crops combined.
- Approximately 50% of Florida’s fresh water is used on lawns

Convert lawn areas to Freedom Lawns.

A lawn laced with whatever grows naturally. If it's green, you mow it. Free from fertilizer, weed killer, pesticides, over-watering or over-seeding.



This lawn in NE Florida has been a Freedom Lawn for more than 10 years.

Freedom Lawns host a wide variety of plants that can be mowed.

Kid-safe & pet-safe 100% of the time.





Where you want lawn,
consider Bahiagrass

buffer our waters



buffer our waters



Now let's talk a little more about seasons...

SUMMER

1. Blue Curls, *Trichostema dichotomum*
2. Tropical Sage, *Salvia coccinea*
3. Firebush, *Hamelia patens*
4. Privet Senna, *Senna ligustrina*
5. Yaupon Holly, *Ilex vomitoria*
6. American Beautyberry, *Callicarpa americana*



SUMMER

1. Blue curls,
Trichostema dichotomum
2. Firebush, *Hamelia patens*
3. Blanketflower,
Gaillardia pulchella
4. Wild Poinsettia,
Euphorbia cyathophora
5. Privet senna, *Senna ligustrina*
6. Yaupon holly, *Ilex vomitoria*





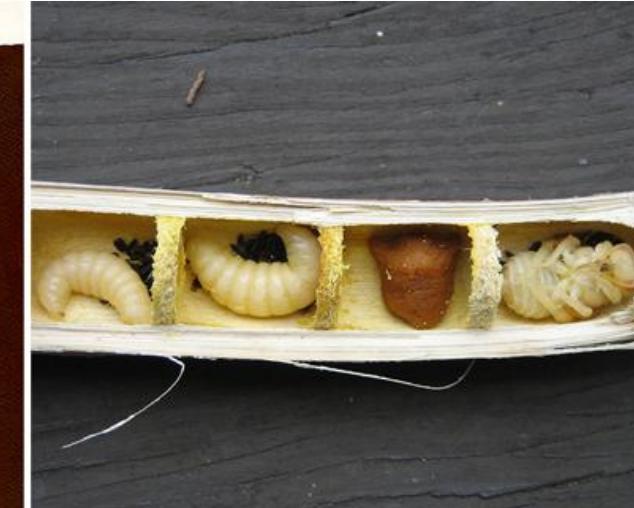
WINTER

SUMMER

1. Spotted Beebalm,
Monarda punctata
2. Partridge Pea,
Chamaecrista fasciculata
3. Wild Poinsettia,
Euphorbia cyathophora
4. Railroadvine, *Ipomoea pes-caprae*
5. Dune Sunflower,
Helianthus debilis
6. Dune Sunflower,
Helianthus debilis
7. Manyflower
Beardtongue,
Penstemon multiflorus
8. Ironweed, *Vernonia angustifolia*



WINTER



1. Spotted Beebalm,
Monarda punctata
2. Partridge Pea,
Chamaecrista fasciculata
3. Wild Poinsettia,
Euphorbia cyathophora
4. Railroadvine, *Ipomoea pes-caprae*
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Helianthus debilis
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Penstemon multiflorus
8. Ironweed, *Vernonia angustifolia*

WINTER

- Remember to leave your plant stems up for winter which provides a whole lot of ecosystem services
- Seed heads and stems are vital source of food & shelter for birds & pollinators in winter months
- 80% of native bees nest in dead plant stems, one stem can house up to 20 pollinator larvae (over 4,000 species in N. America)
- Early cleanup kills months of bee development
- By leaving some areas of our gardens “wild” and unmanicured, we can support the native insects that play huge role in pollination



NATIVE INSECTS - THE HEAVY LIFTERS

SOLITARY BEES



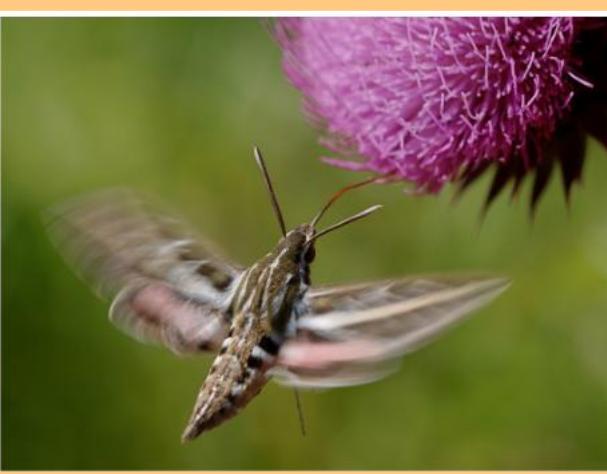
BUMBLE BEES



BUTTERFLIES



MOTHS



BEETLES



WASPS



FLIES





The Forgotten Pollinators: How Moths Work at Night



KEEP THE
NIGHT SKY
DARK!!

- *Artificial lights confuse nocturnal wildlife, migrating birds, bats, and critical pollinators such as moths*
- *Moths & other nocturnal pollinators play a huge role in pollination - as much or more than daytime pollinators*
- *Turn off unnecessary outdoor lighting, dim, or shield direct to the ground*

We can all be good stewards of the land.



How to get started with natives:



For native plant profiles or to create a recommended list by county, visit:

www.fnps.org/plants

To find local native nurseries and plant availability:

www.PlantRealFlorida.org



Vaccinium arboreum

Sparkleberry, Farkleberry
Ericaceae

Plant Specifics

Form:	Tree
Size:	15-25 ft tall by 4-15 ft wide
Life Span:	Long-lived perennial
Flower Color:	White
Fruit Color:	Black
Phenology:	Deciduous. Blooms in spring. Fruits ripen late summer
Noted for:	Interesting bark, Fall color, Showy flowers

Landscaping

Recommended Uses: A profuse bloomer. Use for natural landscapes and under a high pine canopy.

Propagation: Seed and softwood cuttings.

Availability: Native nurseries, Seed

Light: Part Shade

Moisture Tolerance: 



© Shirley Denton

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FIND THIS PLANT AT A NATIVE NURSERY

Florida Association of Native Nurseries

LEARN MORE ABOUT PLANT STATUS IN FL

Learn your native plant community

Generate a list of natives for your regional habitat

[www.PlantRealFlorida.org](https://www.plantrealflorida.org)

Sandhills Zone 9

Filter by Plant Type:

- Canopy tree
- Understory tree
- Palm
- Shrub
- Vine
- Groundcover
- Groundcover-grass/grasslike
- Wildflower

Counties

Citrus

Clay

DeSoto

Duval

Flagler

Glades

Hardee



Sandhill, the high rolling savannah of Florida marked by longleaf pines, grasses, and abundant wildflowers, occurs on deep, well-drained yellow sands with few nutrients and little organic matter. Like flatwoods, sandhill burns every 1-5 years, preventing hardwood succession. Canopy of longleaf pine and turkey oak, understory of wildflowers, wiregrass and few woody shrubs.

Canopy tree

[Slash Pine \(*Pinus elliottii*\)](#)

 [Longleaf Pine \(*Pinus palustris*\)](#)

 [Bluejack Oak \(*Quercus incana*\)](#)

Understory tree

[Summer Haw \(*Crataegus flava*\)](#)

 [Sand Live Oak \(*Quercus geminata*\)](#)

 [Common Persimmon \(*Diospyros virginiana*\)](#)

 [Turkey Oak \(*Quercus laevis*\)](#)

[Sand Live Oak \(*Quercus geminata*\)](#)

 [Common Persimmon \(*Diospyros virginiana*\)](#)

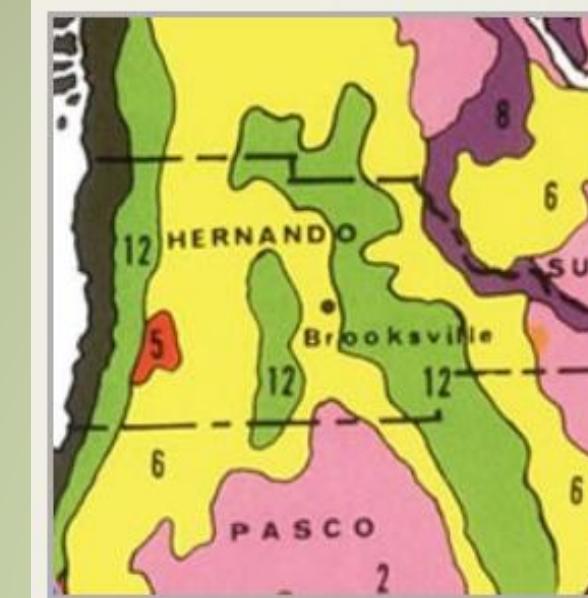
 [Turkey Oak \(*Quercus laevis*\)](#)

[Chickasaw Plum \(*Prunus angustifolia*\)](#)

 [Sparkleberry \(*Vaccinium arboreum*\)](#)

 [Bluejack Oak \(*Quercus incana*\)](#)

 [Rusty Lyonia \(*Lyonia ferruginea*\)](#)

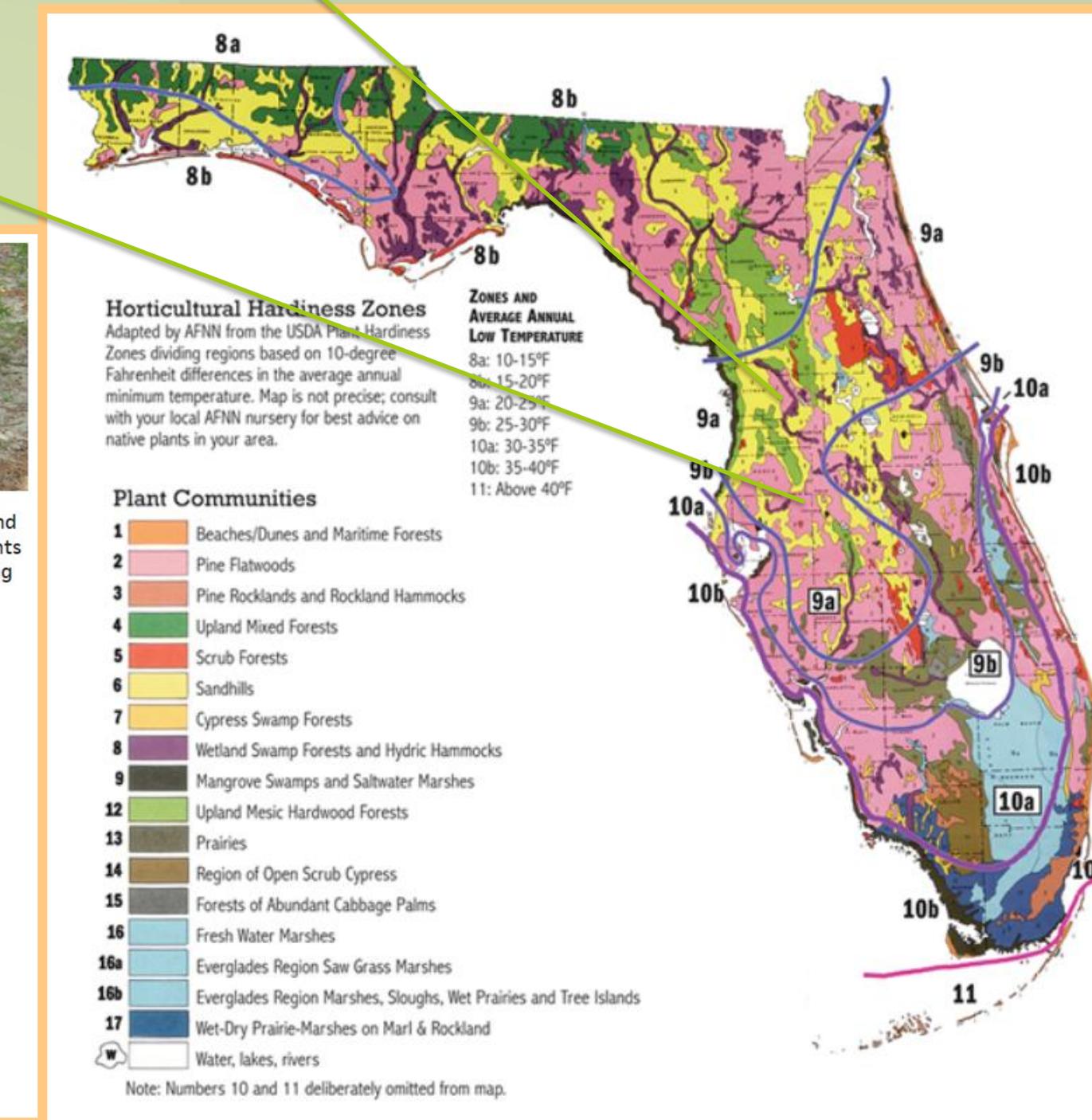


FANN - Native Plant Communities Map

<https://www.plantrealflorida.org/plant-communities/>

Native plant communities are unique collections of plants, birds, insects, wildlife, water, soils, topography and climate, all adapted to work together. They define a natural area visually and are a powerful example of real sustainability — no irrigation, fertilizers or pesticides need apply. Explore your local native plant communities and inspire your own sustainable landscape design. Read more about plant communities

This map, originally developed by University of Florida botanist John Davis in 1967 and subsequently modified by FANN, shows the historical variety of native plant communities in Florida.



SATURDAY SEPTEMBER 27, 9:00 AM - NOON
FAMILY-FRIENDLY FUN!

PLANT SALE & EXHIBITS

28 RUSSELL ST, BROOKSVILLE, FL 34601

Native Plants at Russell St. Park

Where Hernando's rail history
meets the Good Neighbor Trail



FLORIDA NATIVE PLANT SALE with plants suitable for fall
planting from local native plant growers.

INFORMATION about best practices in native landscaping and
gardening, invasive imported plant identification and control,
local public lands and more.

ACCESS to the Good Neighbor Trail, Depot Museum and
Picnic Green Spaces.



Sponsored by the Hernando Chapter,
Florida Native Plant Society
<http://hcfnps.org> • hcfnps@gmail.com





Coral Honeysuckle

- Vine
- Red tubular flowers great for hummingbirds
- Makes a great hedge on a fence or trellis

Ginny Stibolt

Coral Honeysuckle,
Lonicera sempervirens



Jason LaRoche

Helmet Skullcap

- Wildflower
- Full sun
- Reseeds
- Blooms early before most others
- 'Smurf hats'



Shirley Denton

Helmet Skullcap,
Scutellaria integrifolia

Simpson's Stopper

- Large shrub (or Dwarf)
- Full sun, Part shade
- Flowers Spring/Summer & berries Fall
- Good as specimen or mixed hedge
- Birds love berries



Simpson's Stopper,
Myrcianthes fragrans

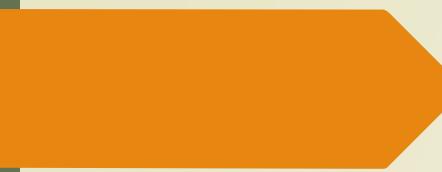


Spotted Beebalm



Spotted Beebalm,
Monarda punctata

- Wildflower
- Full sun
- Reseeds
- Meadows or as individuals



Silver-leaved Aster or Silk-grass

- Wildflower
- Full sun
- Reseeds
- Silvery gray-green leaves year-round
- Great alone or in mass pollinator gardens



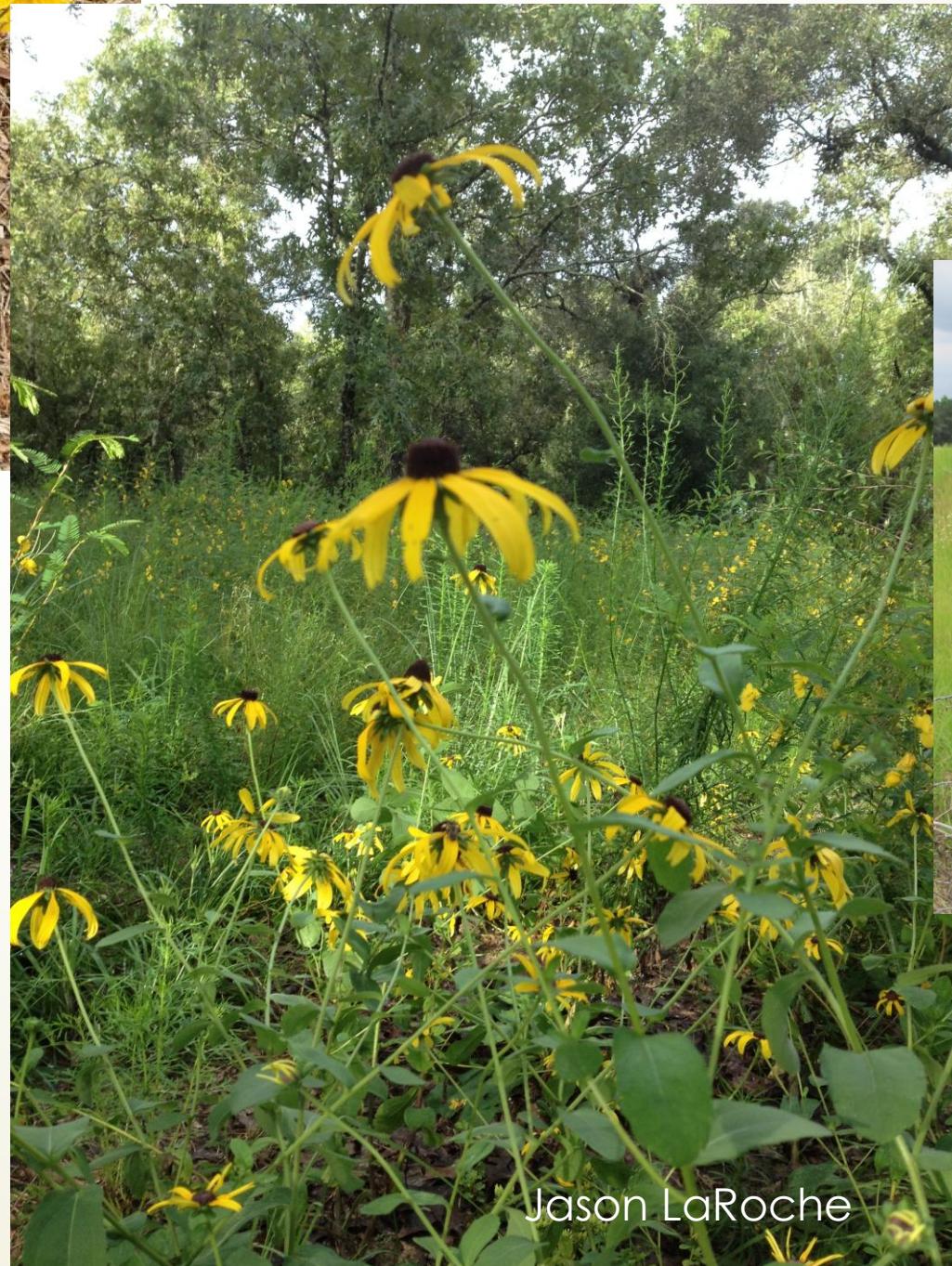
Green Isle Gardens

Silk-grass,
Pityopsis graminifolia



Black-eyed Susan,
Rudbeckia hirta

- Wildflower
- 2-3 feet
- Full sun
- Readily reseeds
- Moist to dry



Softhair Coneflower or
Brown-eyed Susan
Rudbeckia mollis

- Wildflower
- 3-4 feet
- Full sun
- Readily reseeds
- Moist to dry

Black-eyed Susan or Brown-eyed Susan





Scarlet Sage,
Salvia coccinea

- Wildflower
- 2-4 feet
- Full sun, Part shade
- Readily reseeds
- Moist to very dry
- Great mixed in pollinator gardens and meadows
- Hummingbirds, various pollinators



Marjorie Shropshire

Lyre-leaved Sage
Salvia lyrata

- Wildflower
- 1-1.5 feet
- Full sun, Part shade
- Readily reseeds
- Moist to dry
- Great mixed in pollinator garden or ditches; can mow
- Various pollinators



Ginny Stibolt



Ginny Stibolt

Salviás

Forked Bluecurls

- Wildflower
- 2-3 feet
- Full sun to Part shade
- Readily reseeds
- Various pollinators
- Dry to Very dry
- Great mixed in pollinator gardens and meadows



Shirley Denton



Mark Hutchinson
© 2020 Mark Hutchinson

Forked Bluecurls,
Trichostema dichotomum

Oblongleaf Twinflower

- Wildflower
- 0.5-1 foot
- Full sun to Part shade
- Readily reseeds, runners
- Various pollinators, esp. bees
- Dry to Very dry
- Groundcover or mixed pollinator gardens or meadows



Shirley Denton



© Shirley Denton

Shirley Denton

Oblongleaf Twinflower,
Dyscoriste oblongifolia



on LaRoche



Marjorie Shropshire



Florida Wildflower Foundation

Frogfruit

- Low growing groundcover
- 6 inches
- Full sun to Part shade
- Moist to Dry
- Nectar and larval host
- Can be turf substitute in low traffic, swales
- Great mixed in Freedom Lawns



© 2013 Mark Hutchinson

Mark Hutchinson

Frogfruit,
Phyla nodiflora



Thanks!

*Flip My Florida Yard Show –
‘Going Native in the Villages’
with Steve Turnipseed, President of the new Villages
Chapter of the Florida Native Plant Society*

https://www.youtube.com/watch?v=xSC-nf_aNg&list=PLyn6G24b3DtbAtu1n9mBP9Segxfcfyep5L&index=1&pp=gAQBiAQB

Don’t forget!!! The Hernando FNPS Native Plant Sale is on Saturday September 27 at Russell Street Park in Downtown Brooksville. See our Facebook page for more details and updates!

Intermission



The Problem of Invasive Plants & What To Do About Them

Heather Sharkey





Scope of the Problem:

By The Numbers:

- **1,583 Invasive Plant Species in the U.S.** (Invasive Plant Atlas)
- **165 Invasive Plant Species in Florida** (FISC Plant List)
- **Invasives cost \$26 billion per year in North America**
(Crystal-Ornela, R. et al. 2021)
- **\$30-45 Million Florida Tax dollars annually on Invasive Plants in Natural Areas** (per FDACS & Nature Conservancy)
- **Florida Ranks in the Top 3 States Impacted by Invasives** (S. Luke Flory, UF)
- **Invasive species contribute to the decline of 46% of U.S. endangered and threatened species, and for 18% ,invasives are the main cause of their decline.**

Other Impacts :

- Ecological
 - disruption of native communities
 - loss of habitat value
 - changes in disturbance regime
 - hydrological effects, etc.
- Economic
 - forestry production
 - agricultural weeds
 - aquatic invasives that clog waterways, etc.
- Health and safety
 - allergic reactions (Brazilian pepper)
 - indirect health effects (*Hydrilla* and mosquito habitat)
 - effects on wildfires (cogongrass) ,etc.



How Did We Get Here ?



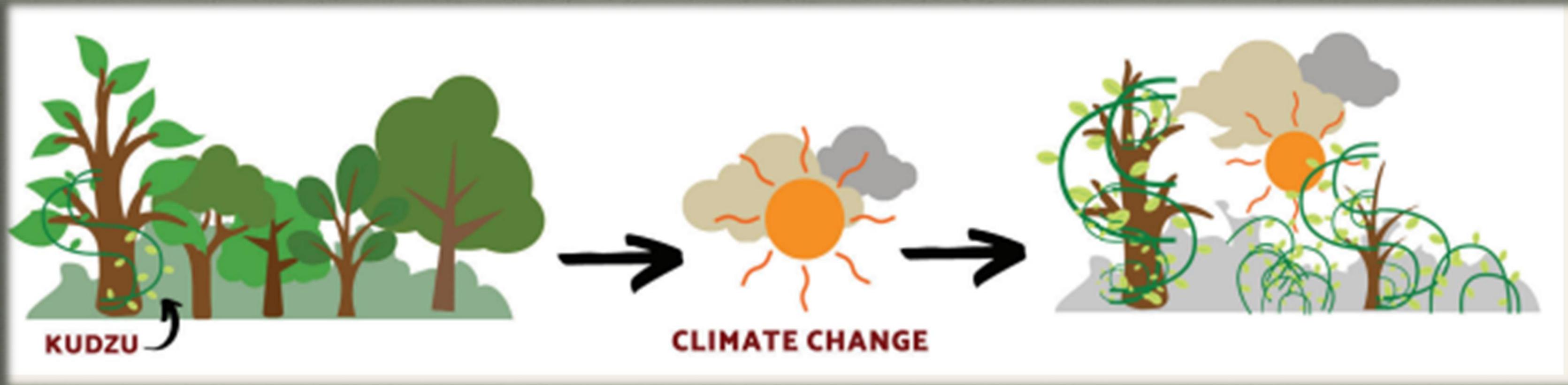
Introductions: Both Intentional and Accidental

- 10% will become naturalized
- 10% of those (1% of total) will become invasive
- Roughly holds true in FL – >25,000* plant species introduced, ~1,500 naturalized, ~160 invasive
- Now in Florida 30% of plant species outside cultivation are Non-Native.

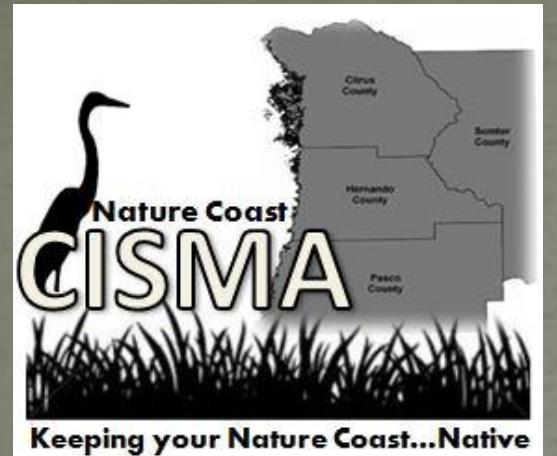
Increased Disturbance and Urban interface

Range Expansion due to Climate Change

Sleeper Species



- Some plants previously considered Naturalized may find future climate more suitable and become Invasive.
- Potentially Invasive plants that occur in small numbers for a long period before infestations manifest.
- EDRR Candidates



What's Being Done?

- Mapping
- Research
- Risk Assessment
- Land Management
- Laws



THE UNIVERSITY OF GEORGIA
**CENTER FOR INVASIVE SPECIES
AND
ECOSYSTEM HEALTH**
WALSH SCHOOL OF
FORESTRY AND NATURAL RESOURCES
COLLEGE OF AGRICULTURAL
AND ENVIRONMENTAL SCIENCES



EDD MapS
Early Detection & Distribution Mapping System



What Can YOU Do ?

- Education
 - Terminology
 - Species ID
 - Outreach
- Prevention
 - Cautious use of Non-Natives
 - Decontamination
- Eradication
 - Control
 - Herbicides



Terminology



Weed

Any plant that is growing where you don't want it.

Could be native.

Non-native ~~(Exotic)~~

Plants not originally from an area.

Introduced intentionally or accidentally by humans.

Established (Naturalized)

Plants which become established in a forest or natural area and reproduce and spread on their own. (Not necessarily invasive)



Terminology

Invasive

A species that is Non-Native, Established and does or can cause environmental or economic harm or harm to humans.

Nuisance

A species that causes management issues or property damage, presents a threat to public safety, or is an annoyance. Can be native or nonnative.

Cogon Grass *Imperata cylindrica* (Cat I)



Cogon Grass *Imperata cylindrica* (Cat I)



Treatment

Foliar application of **2% Glyphosate with .5% Imazapyr or 3% Glyphosate**

Brazilian Pepper *Schinus terebinthifolia* (Cat I)



5392582

Treatment

Cut Stump application of **Glyphosate**
or **Triclopyr (remove cuttings with seeds)**
Basal application of **20% Triclopyr (Garlon G4) in oil**
Bio Control **in development**

Coral Ardesia *Ardesia crenata* (Cat I)



Treatment : Foliar 3% Triclopyr or Basal application of 20% Triclopyr (Garlon G4) in oil

Heavenly bamboo *Nandina domestica* (Cat I)



Treatment:
Manual removal or 15% Triclopyr in oil

Mexican Petunia *Ruellia simplex* (Cat I)



Treatment : Foliar 2–3% **glyphosate** ,often resprouts. Multiple treatments may be required.

Ferns



Treatment

Manual – for Sword fern,
Hand pulling effective ,can be followed by herbicide for resprouts

Herbicide – **3% glyphosate***
Moderately effective

* More effective with addition of metsulfuron methyl at.5%

Sword Fern (Cat I)
Nephrolepis cordifolia



Japanese Climbing Fern (Cat I)
Lygodium japonicum

Oldworld Climbing Fern (Cat I)
Lygodium microphyllum

Trees Treatment; Cut stump- **Triclopyr** Basal- **20% Triclopyr in oil**



Mimosa
Albizia julibrissin



Chinese tallowtree*
Triadica sebifera

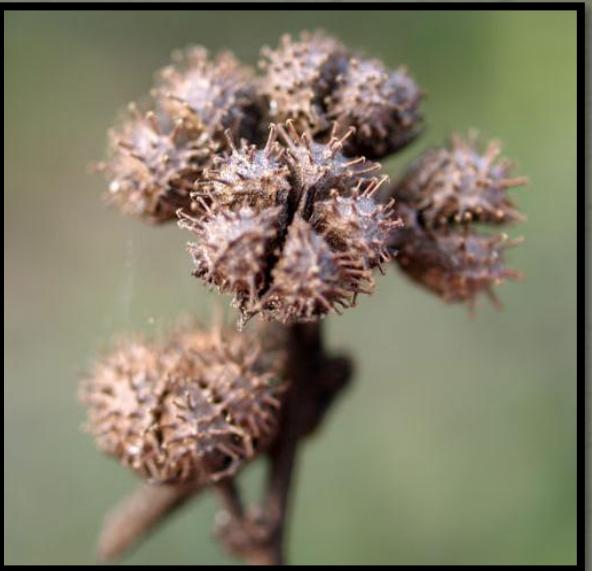
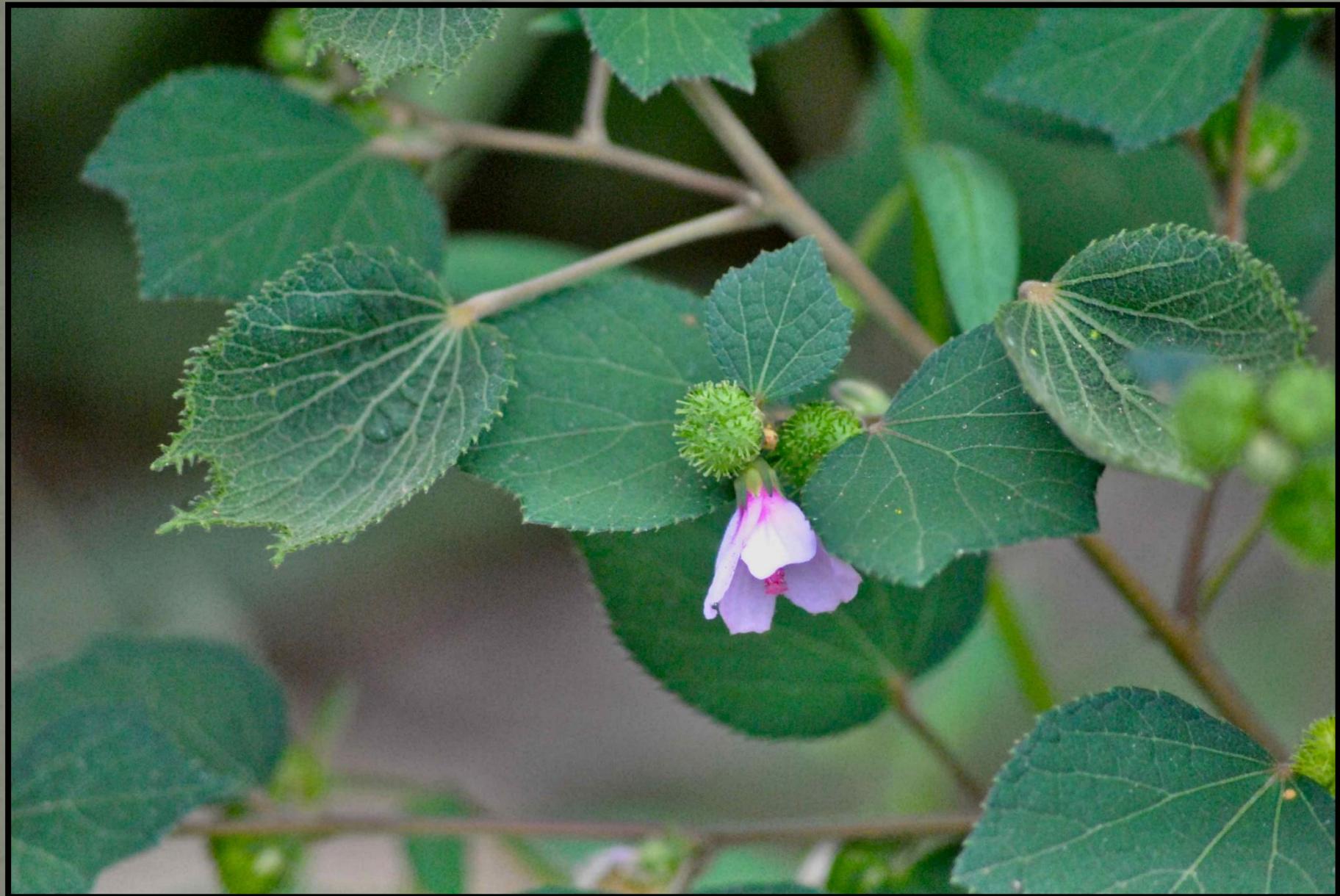


Chinaberry*
Melia azedarach



Camphortree
Cinnamomum camphora

Caesar Weed *Urena lobata* (Cat I)



Treatment: Manual Remove all seeds and destroy
Foliar 3% 2, 4-D , 2% glyphosate or Trichlypr 3A , 0.15% Milestone,

Air potato *Dioscorea bulbifera* (Cat I)



Treatment

Manual **remove fallen bulbils, dig up “potatoes”**

Foliar **2% triclopyr or glyphosate**
(not very effective)



Bio control
Not a full solution

Tropical Vines



Golden Pothos (Cat II)
Epipremnum pinnatum

Treatment Foliar 5% Glyphosate or 3% triclopyr

Manual Remove all stems and destroy (breaks easily & re roots)



Arrowhead vine (Cat I)
Syngonium podophyllum



Sleepers? Present at Old Homesites



Guava (Cat I)
Psidium guajava



Twinleaf Nightshade
Solanum diphyllum (Cat II)



Glossy Privet (Cat I)
Ligustrum lucidum

Treatment; Cut stump- **Triclopyr** Basal- **20% Triclopyr in oil**

EDRR?

Praxalis *Praxelis clematidea* (Cat II)



- Known invader of pastures and nurseries, often introduced in sod.
- Easily reseeds (wind dispersed)
- Pungent when crushed (cat pee like odor)
- Has Native lookalikes

Native Lookalikes



Blue mistflower
Chromolaena odorata



Siam weed
Chromolaena odorata

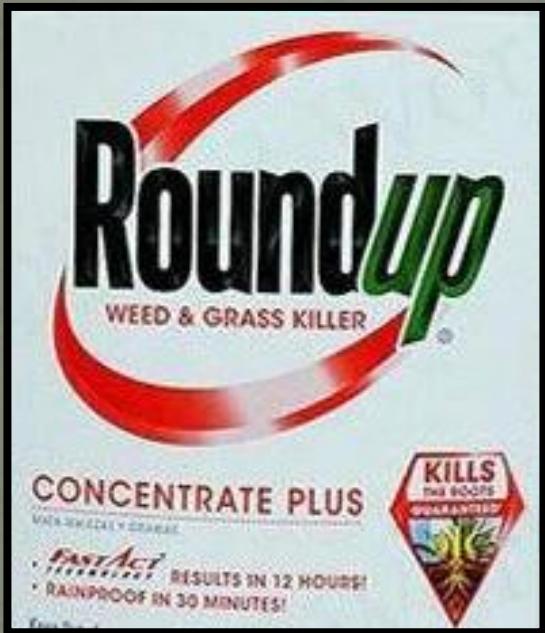
Treatment 2% 2,4-D or Glyphosate

Herbicide - The Label is The Law...

- Active Ingredient
- Uses
- Mixing rates
- Safety Precautions
 - PPE
 - MSDS



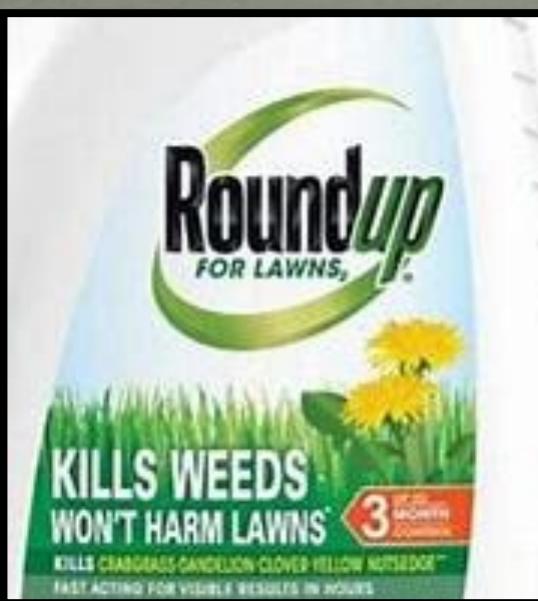
“What’s in a Name?”



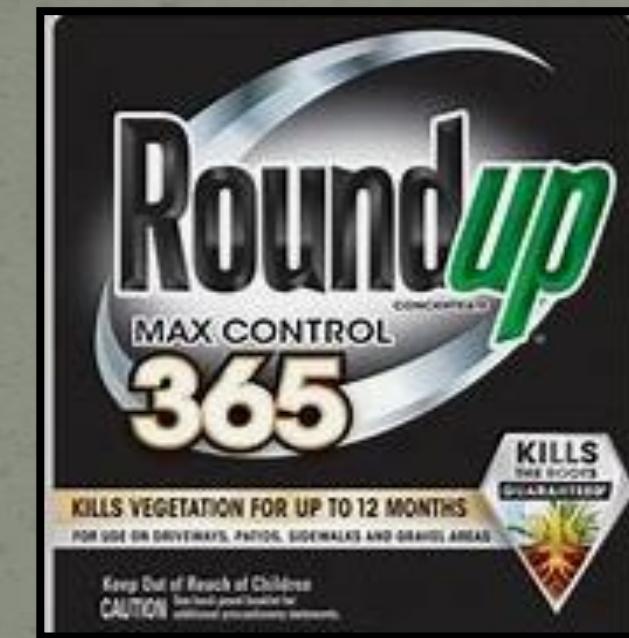
Glyphosate



Triclopyr, Fluazifop-P, Diquat, Imazapic



2,4-D, Penoxsulam, Dicamba



Glyphosate, Imazapic, Diquat

“Add **4 . oz. (1/2 Cup or 8 TBSP)** to **1 gallon water**”

“Stumps: Use full strength. Do not dilute”

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

HOW YOU USE Read and follow directions when using.

This product will kill or injure all woody plants* contacted. Certain warm season grasses may experience temporary yellowing when sprayed to excess. If a desirable plant (other than grass) is accidentally sprayed, immediately rinse the plant with plenty of water.

Apply when wind is calm.

- Keep people and pets off treated areas until spray has dried.
- Do not apply to or around fruits or vegetables used for food.
- Do not use measuring utensils such as measuring cups or measuring spoons for any food or drinking water purposes after use with this product.

HOW TO USE

- Determine amount of spray solution to prepare – See “How Much to Use”.
- Make up spray solution by following directions specific to your sprayer – See “Sprayer Types”.

Adjust sprayer nozzle to a coarse spray. Spray the weeds you want to kill until thoroughly wet but not dripping.

Use a sheet of cardboard or plastic to protect desirable plants from accidental contact with the product.

- **To Kill Vines,**
For weeds growing on desirable plants, cut the vine and treat as directed for stumps.
- **To Kill Purple Buckthorn or Poison Oak,**
Contact with Purple Buckthorn or Poison Oak anytime of the year can cause an allergic reaction. Handle these plants with rubber gloves. Dispose of plants and gloves in tightly sealed garbage bags.
- **To Kill Stumps,**
Completely cover freshly cut stump with undiluted product using a paintbrush. Do not reuse paintbrush for other uses. When discarding, wrap brush in newspaper and put in trash.

HOW MUCH TO USE

Brush, Vines, Woody Plants and Other Hard-to-Kill Weeds

Add 4 fl. oz. (1/2 Cup or 8 TBSP) to 1 gallon of water to treat up to 500 square feet. Do not apply more than 17 fl oz brush killer per 500 square feet per year.

Stumps

Use full strength. Do not dilute.

SPRAYER TYPES

PUMP-UP TANK SPRAYERS

1. Add the appropriate amounts of concentrate and water to the sprayer tank.
2. Close sprayer, shake well and pressurize.
3. Adjust nozzle to a coarse spray pattern and apply.
4. Occasionally re-pressurize the sprayer to maintain a good spray pattern.

*listed plants/brush/weeds

SPRAYER TYPES (cont'd)

DIAL-STYLE HOSE-END SPRAYERS

Best for spraying large areas of unwanted brush*.

1. Fill sprayer jar with enough product for the area to be treated. DO NOT ADD WATER.
2. Close sprayer and set dial as specified below:

- Ortho Dial N Spray Setting: 4 OZ
- Chameleon Hose-End Sprayer Setting: 4 OZ

TIP: The numbers on dial indicate amount of concentrate per gallon.

3. Hook to garden hose and apply. To avoid contact with the treated area, spray from faucet walking backwards as you spray.

4. Pour any unused product back into this original container.

CONCENTRATE PLUS WATER HOSE-END SPRAYERS

1. Pour concentrate into sprayer jar to the required ‘Fluid Ounce’ mark.

2. Add the appropriate amount of water to the ‘Gallons’ mark.

3. Replace sprayer top and shake well.

4. Attach sprayer to hose and apply.

REFILL 24 fl. oz. BioAdvanced™ Science-Based Solutions Brush Killer Plus Ready-To-Use

- To empty container, add 2 fl oz (4 TBSP) of BioAdvanced™ Science-Based Solutions Brush Killer Plus Concentrate, then fill with water very slowly to avoid foaming.

REFILL 1.3 GAL BioAdvanced™ Science-Based Solutions Brush Killer Plus Ready-To-Use

- To empty container, add 11.5 fl. oz. (23 TBSP) of BioAdvanced™ Science-Based Solutions Brush Killer Plus Concentrate, then fill with water very slowly to avoid foaming.
- Fill sprayer bottle with water to the 1 gal fill line, replace refill port cap, tighten and shake well.

FOR BEST RESULTS

- Apply when weeds are fully leafed out and actively growing.
- Rain or water 4 hours after application will not wash away effectiveness.
- Pump-up Tank Sprayers work best for spot treatments while Hose-end Sprayers work best for large areas.
- Certain hard-to-kill weeds, such as Purple Loosestrife, may require a repeat application if regrowth occurs.
- To kill Buckthorn, first cut down plant and then treat remaining stump as explained in the HOW TO USE section.

HOW BRUSH KILLER PLUS WORKS

This selective systemic herbicide enters plants through their leaves, green or cut woody shoots, and roots, then moves throughout the plant and interferes with processes found only in plants. Visual symptoms, such as wilting and yellowing, appear in 1 to 6 weeks.

“Add **11.5 oz. (23 TBSP)** • Fill sprayer bottle with water to the **1 gal line**”

(cont'd)

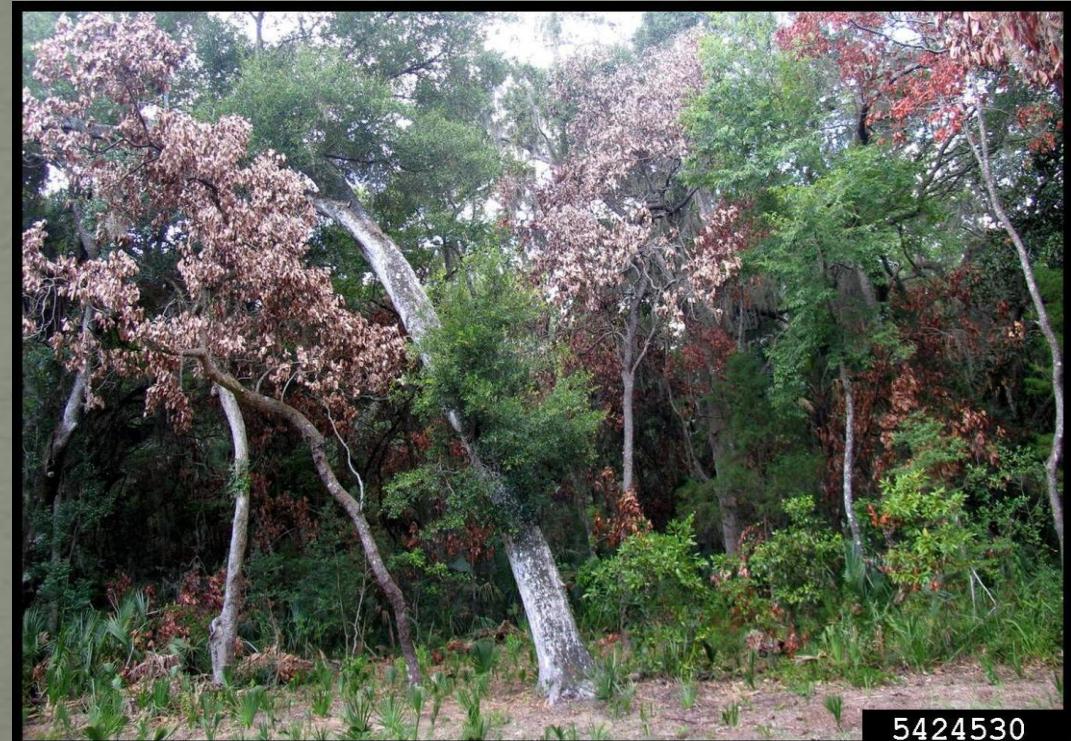
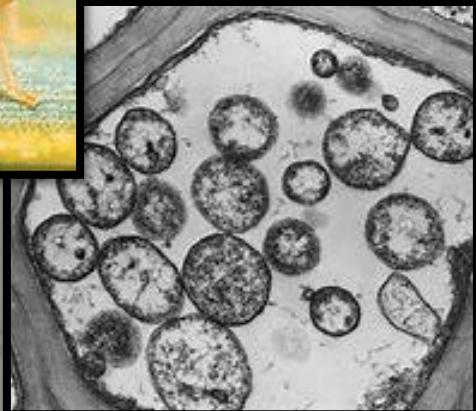
*listed plants/brush/weeds



- Foliar Applications
 - Spray leaves until wet but not to the point of runoff
 - Marking dye recommended
- Basal Bark
 - Wet around trunk 360
 - From the ground up
- Cut Stump & Hack and Squirt
 - High concentration
- Girdle
 - Be sure to break through the cambium layer



And That's only the Plants.... We've Got more Problems



Resources

- www.floridainvasivespecies.org
 - Species List- with maps and info links
 - Control guides- “Integrated Management of Non-Native Plants in Natural Areas”
- www.assessment.ifas.ufl.edu
- www.invasiveplantatlas.org 
- www.invasivespeciesinfo.gov
- Heather.Sharkey @FDACS.gov



THE UNIVERSITY OF GEORGIA
CENTER FOR INVASIVE SPECIES
AND ECOYSTEM HEALTH
WOODRILL SCHOOL OF
FORESTRY AND NATURAL RESOURCES
COLLEGE OF AGRICULTURAL
AND ENVIRONMENTAL SCIENCES

EDDMapS
Early Detection & Distribution Mapping System



Next Time:

September 10th

Tree Talk

Jamie Hagyari

UF/IFAS Extension

**Pruning Practices
& Tree Risk**

Jessica Clark

Florida Forest Service

**Native Trees &
Forest Ecology**