

# FLORIDA-FRIENDLY LANDSCAPES: CREATING BEAUTY WITH RESILIENCE



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# What is Extension?



Palm Beach County  
Cooperative Extension  
Service

**UF** | IFAS Extension  
UNIVERSITY of FLORIDA

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FAMILY AND  
CONSUMER SCIENCES

Florida-Friendly  
Landscaping™ PROGRAM 

# Agenda

- **Introduction to Florida-Friendly Landscaping™**  
9 Principles
- **How to Use Our Landscapes for Positive Environmental Impact**
- **Native Plants for Your Coastal Landscapes**
  - Trees & Palms
  - Shrubs
  - Groundcovers, Grasses & Vines
  - Invasive Plants





# What Was Here Before Us?

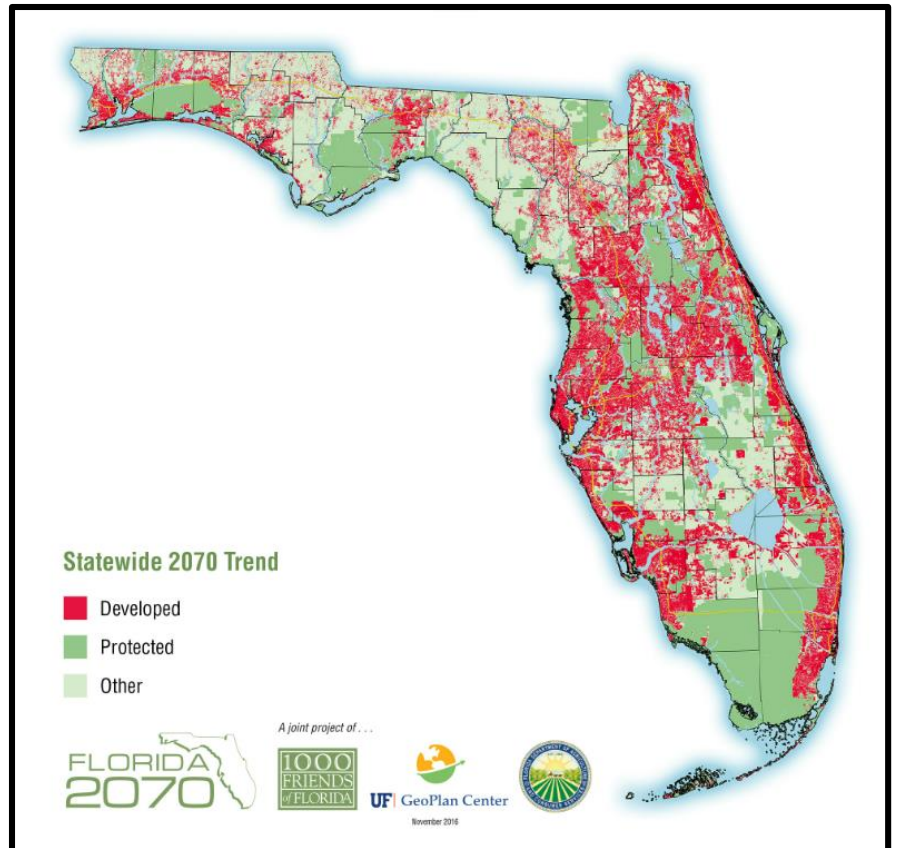
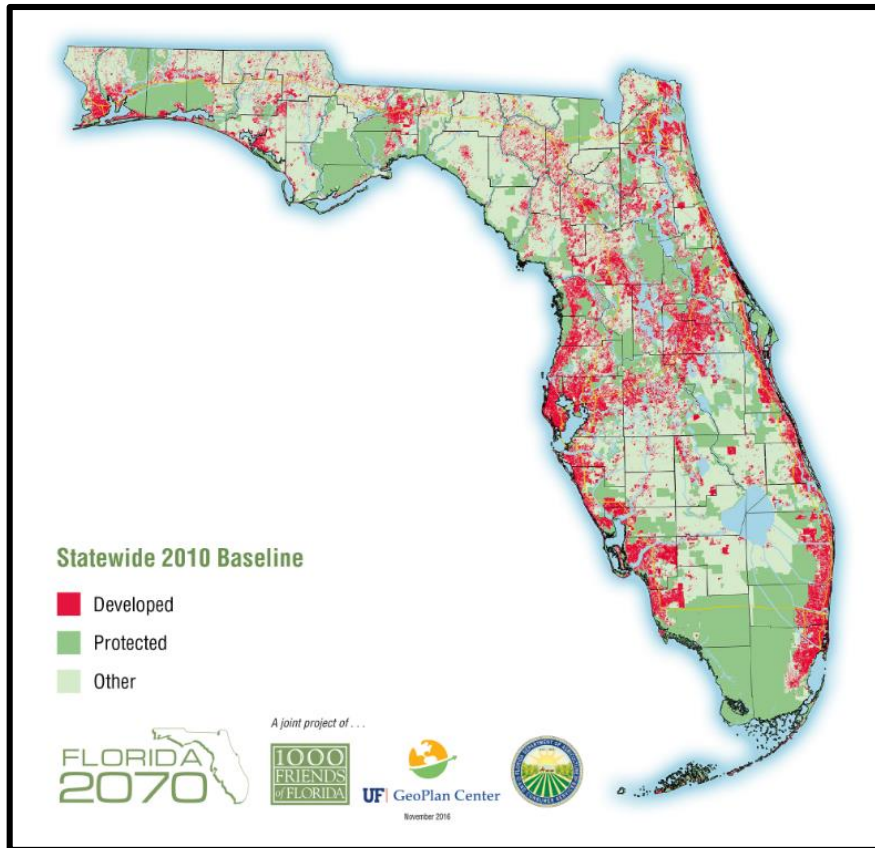


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# Environmental Concerns

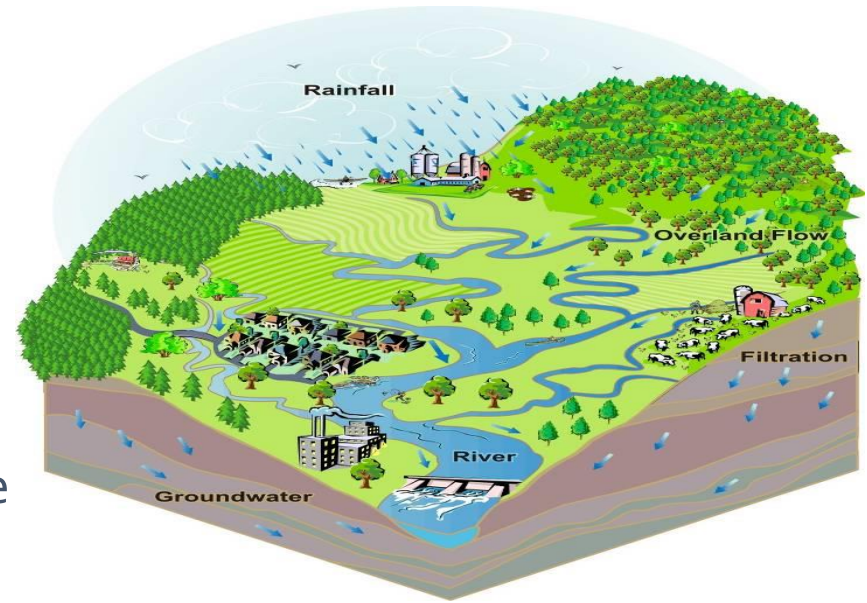
## Population Growth



# Environmental Concerns

## Water Quality

- One of Florida's greatest natural resources is its water!
- **Nonpoint Source Pollution**
  - Cannot be pinpointed to any one place
- Misuse of fertilizers and pesticides are big contributors to water pollution
- Most storm drains lead directly to stormwater ponds or natural waterways





# Florida-Friendly Landscaping™

## What is it?

- A science-based approach to maintaining an attractive, colorful, and diverse landscape
- Environmentally friendly
- Friendly to wildlife
- Less work than the traditional landscape

## Goals of FFL

- Conserve water
- Protect water quality
- Environmental stewardship

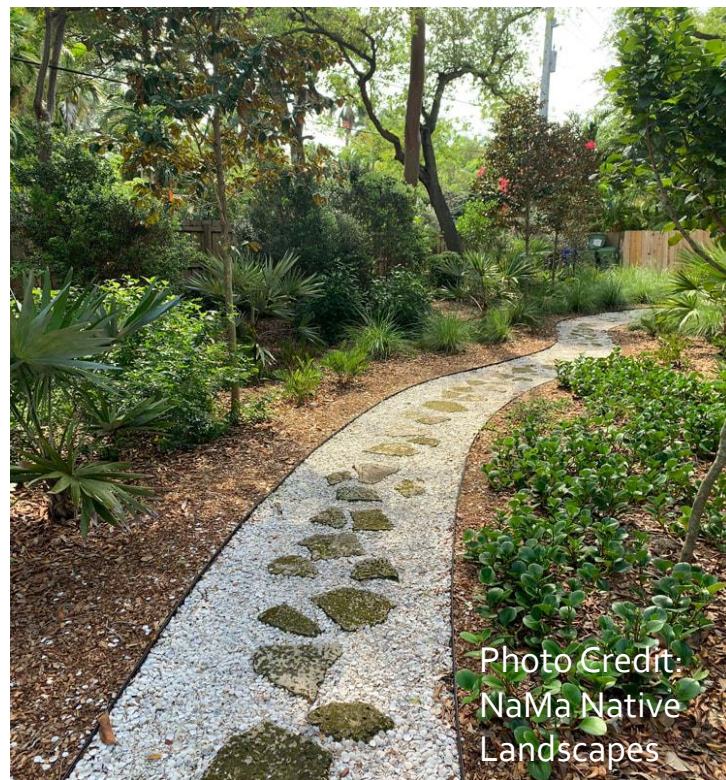


Photo Credit:  
NaMa Native  
Landscapes

# 9 Principles

1. Right plant, right place
2. Water efficiently
3. Fertilize appropriately
4. Mulch
5. Attract wildlife
6. Manage yard pests
7. Recycle
8. Reduce stormwater runoff
9. Protect the waterfront



Florida-Friendly Landscaping is a collection of practices involving design, installation, operation, and maintenance which are intended to reduce irrigation water use, protect water quality from over-use of fertilizer and pesticides, and reduce stormwater runoff.



# Right Plant, Right Place

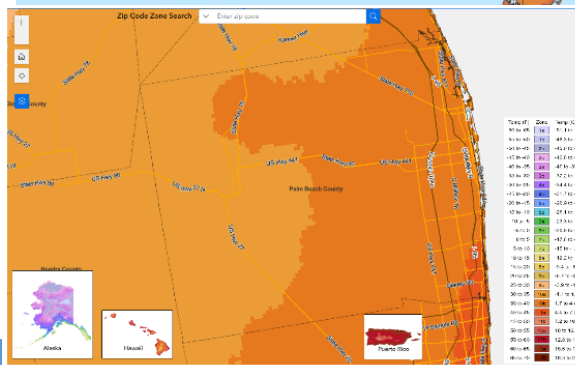
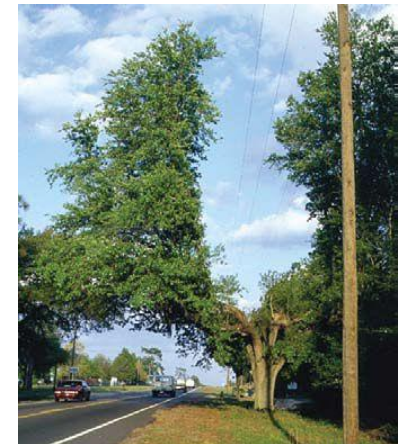
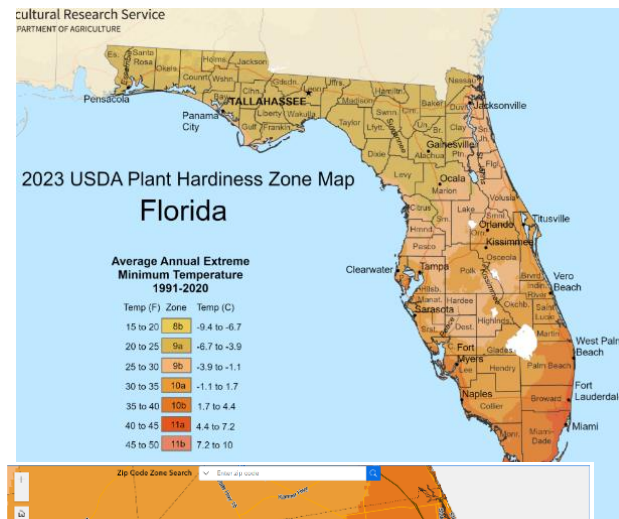
- The cornerstone of FFL Program
- Plants selected for the proper site require minimal
  - Water/Irrigation
  - Fertilizer
  - Pesticides
  - Maintenance
- Thorough planning will help you place plants where their needs and yours are met



# Right Plant, Right Place

## Site Analysis

- Light
- Water
- Soil type
- Drainage
- Structural limitations & obstructions – **Mature size!**
- Choose plants recommended for your USDA Hardiness Zone
  - 10a, 10b, & 11
- Views





# Water Efficiently

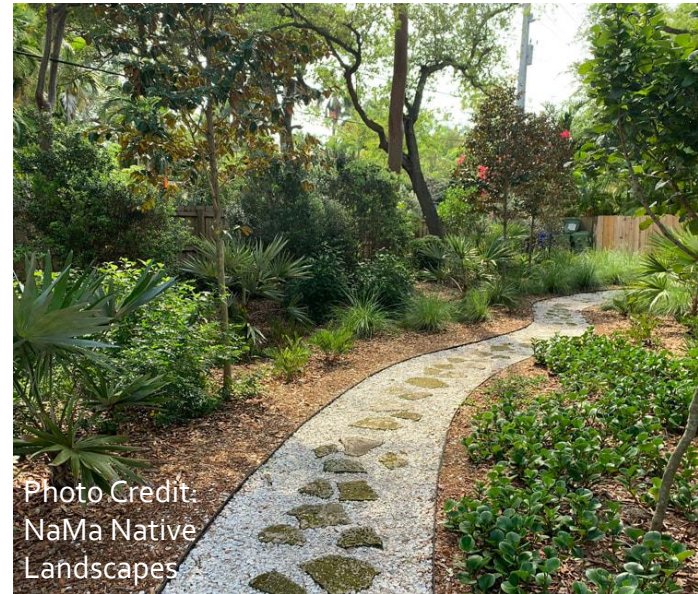
Approximately **60%** of a residential water bill attributed to irrigation

1000 ft<sup>2</sup> of Grass



Requires **12,000- 22,000** gallons of irrigation water per year

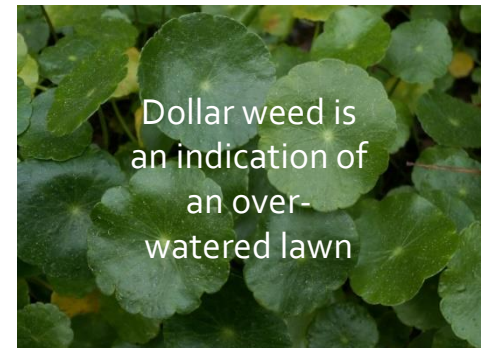
1000 ft<sup>2</sup> of Landscape Beds



Can conserve over **15,000** gallons of irrigation water per year

# Water Efficiently

- Early morning is the best time to irrigate
  - Wind is **calm**
  - Temperatures are **cooler**
  - **40-60%** of water applied evaporates in the afternoon sun
- All automatic landscape irrigation systems require **rain sensors** by law
- **1/2" – 3/4"** of water per zone
- Water only when your lawn tells you it needs it
  - Water less frequently when rainfall expected
  - Water less in cooler months





# Fertilize Appropriately

- Soil test! Base your fertilizer purchases and application on results
- Apply only when grass is actively growing (know your local fertilizer ordinance)
- Calculate area to be fertilized
- **Avoid** using “weed and feed” products
- **Never** fertilize within 10' of any water body
  - Use a deflector shield
- **Never** fertilize before a heavy rain
  - Runoff into the nearest body of water
  - Stimulate excessive growth



# Mulch

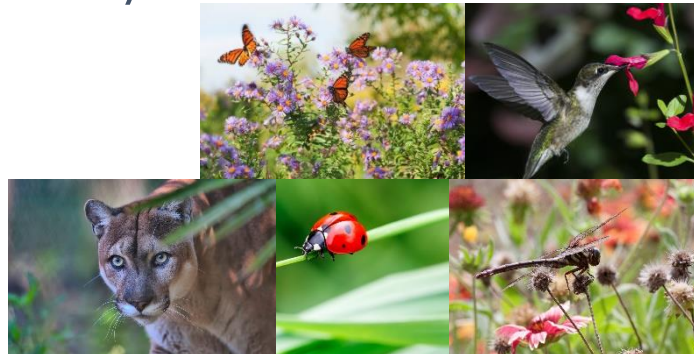
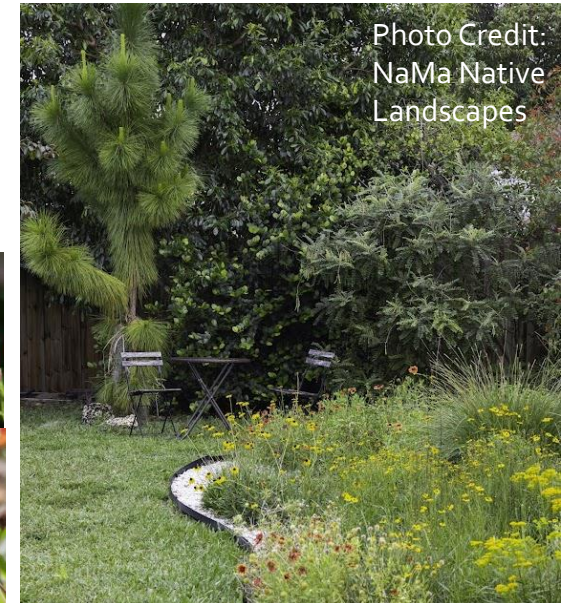
- Recommended 2" – 3"
  - Buffers soil temperature and evaporation
  - Inhibits weed germination and growth
  - Protects plants from damage
  - Can add nutrients to the soil
  - Create self-mulching areas
  - Use alternative, by-products or, recycled mulches when available
  - Keep mulch off the base of the plant!
- No Volcano Mulching**
- No Cypress Mulch!**





# Attracting Wildlife

- Urban areas rapidly increasing worldwide
- Local plant and animal communities are particularly affected
- Habitats need...
  - Food
  - Water
  - Shelter/Cover
  - Space
- Animals only reside/forage in areas with appropriate habitats
- Plant a diverse variety of natives
  - Heights
  - Densities
  - Flowers
  - Fruits/Seeds
  - Seasons



# Attracting Wildlife





# Manage Landscape Pest Responsibly

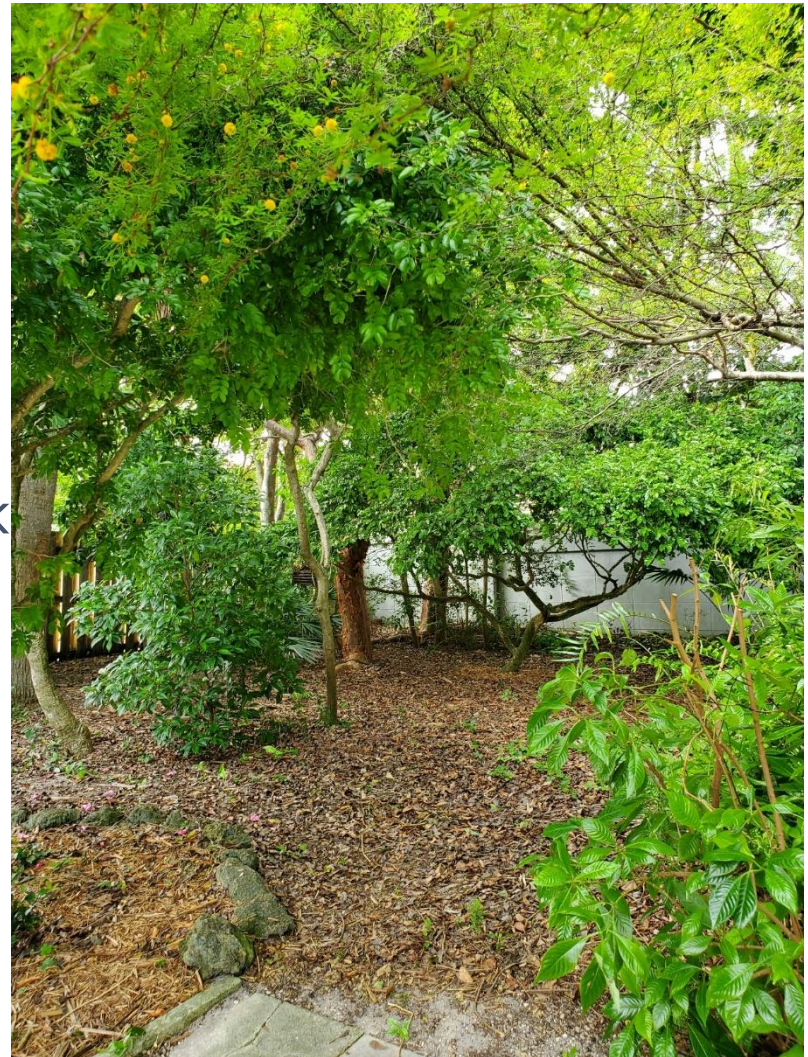
- **Set realistic expectations!**
  - Not practical to strive for insect-free, weed-free, or disease-free landscape
- Integrated Pest Management (IPM)
  - Scout
  - Start with the least toxic methods
  - Spot treat! Avoid routine applications of pesticides
  - Know beneficial insects in your yard
- Management
  - Cultural
  - Biological
  - Physical
  - Chemical





# Recycle Yard Waste

- Retains the nutrients in your landscape
- Saves money on fertilizer, mulch, & waste disposal
- Create self-mulching areas
- Create & maintain a compost pile with kitchen scraps & yard waste
- Grass clippings add nutrients back to the turf





# Reduce Stormwater Runoff

- Nonpoint Source Pollution
  - Irrigation
  - Rain
  - Other sources
- Keep water in the landscape
  - Keep irrigation off of impervious surfaces
  - Direct downspouts & gutters to porous areas
- Sweep up
  - Grass clippings
  - Fertilizer
  - Soil
- Use porous surfaces for walkways, patios, and driveways



**ONLY RAIN  
DOWN THE DRAIN**  
**LAKE STARTS HERE** ♻️



# Protect the Waterfront

- No one in Florida lives more than **60 miles** from the ocean
- **75%** of Florida's population lives within **30 miles** of the beach
- Plant a border of low-maintenance plants between lawn & shoreline/seawall (Living Shoreline)
  - Absorbs nutrients
  - Provides wildlife habitat
  - Prevents erosion
- Establish a **10'+ buffer zone**
- Protect & plant native shoreline plants



Photo Credit:  
PBCERM







Photo Credit:  
NaMa Native  
Landscapes

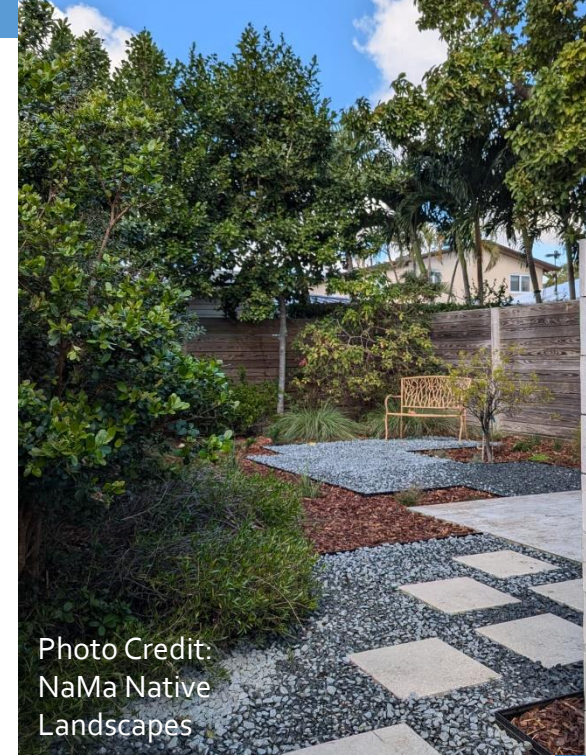


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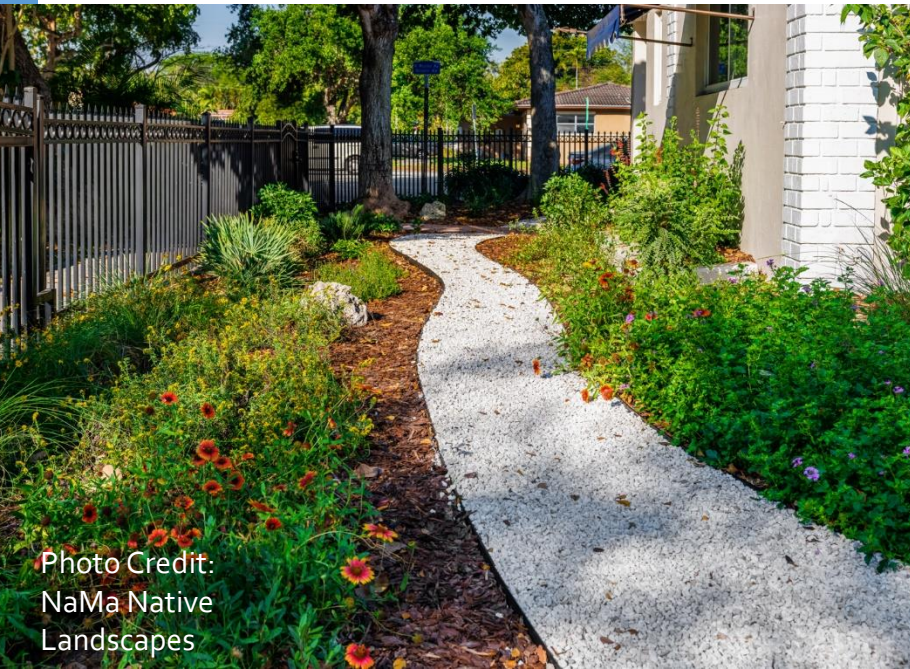
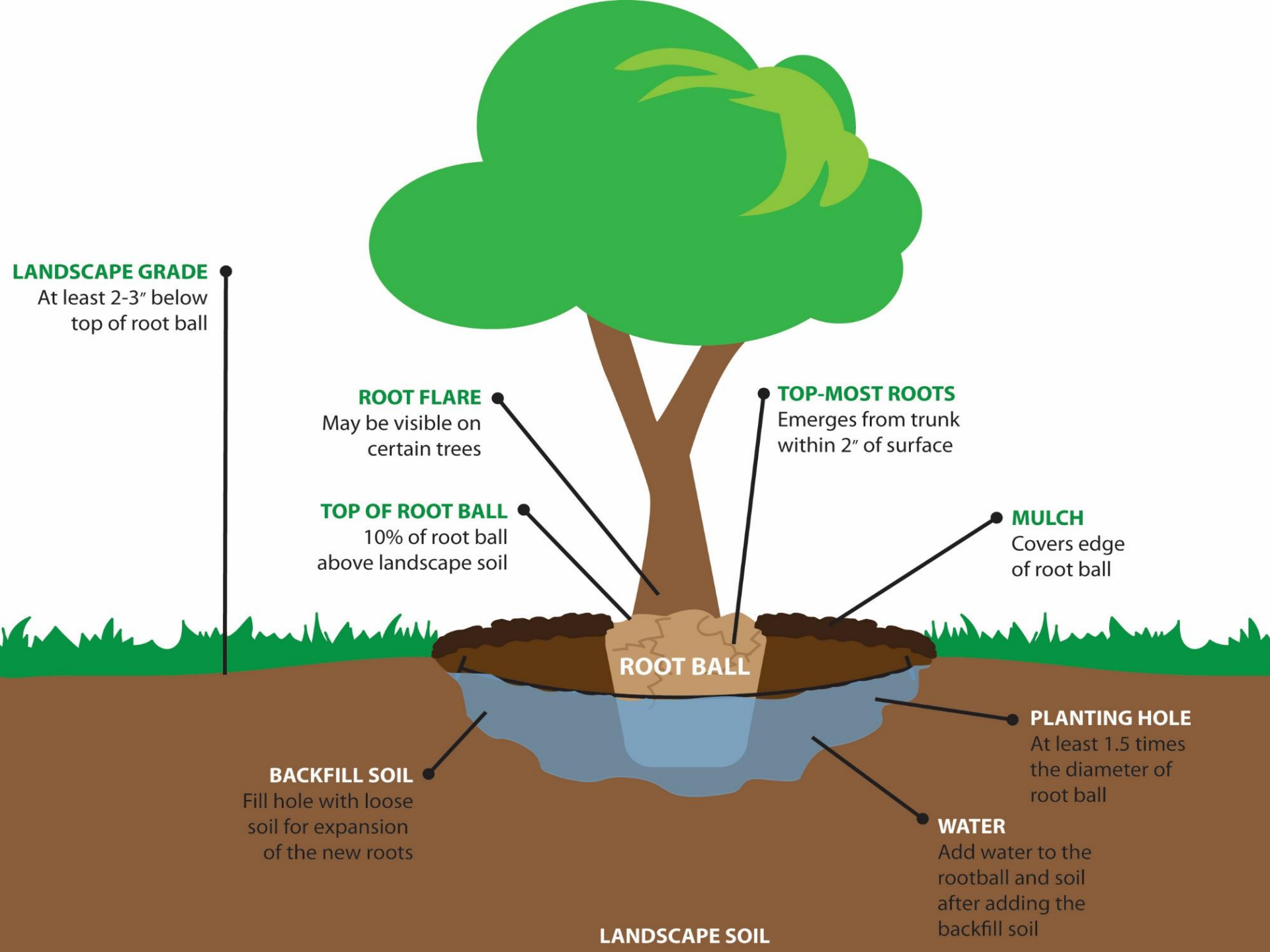


Photo Credit:  
NaMa Native  
Landscapes



Photo Credit:  
NaMa Native  
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**LANDSCAPE GRADE**

At least 2-3" below  
top of root ball

**ROOT FLARE**

May be visible on  
certain trees

**TOP OF ROOT BALL**

10% of root ball  
above landscape soil

**TOP-MOST ROOTS**

Emerges from trunk  
within 2" of surface

**MULCH**

Covers edge  
of root ball

**ROOT BALL**

**BACKFILL SOIL**

Fill hole with loose  
soil for expansion  
of the new roots

**PLANTING HOLE**

At least 1.5 times  
the diameter of  
root ball

**WATER**

Add water to the  
rootball and soil  
after adding the  
backfill soil

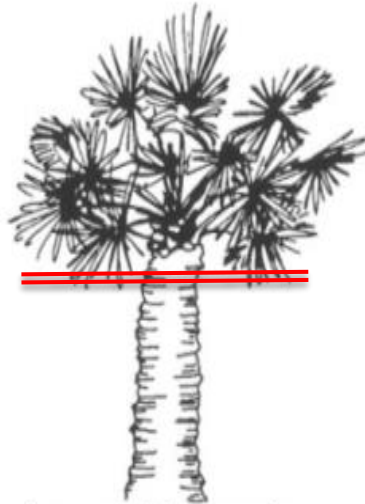
**LANDSCAPE SOIL**



# Palms in the Landscape



Before pruning



Acceptable pruning



Overpruning

- Remove only brown fronds – **NO GREEN FRONDS**
- Can remove dead or living flower or fruit stalks
- “Hurricane cut” is **NOT** appropriate pruning
- UF/IFAS recommended palm fertilizer 8-2-12 +4

# Florida Native Plants!





# Why Use Native Plants?

- Conserve water
- Protect soil – erosion control
- Fewer inputs – **fertilizers and pesticides**
- Support wildlife
  - Butterflies & Bees
  - Birds
  - Mammals
  - Amphibians
  - Reptiles

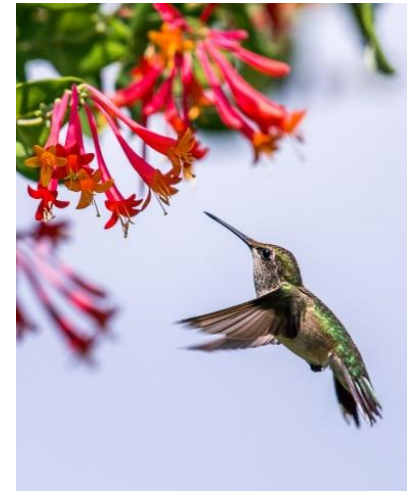
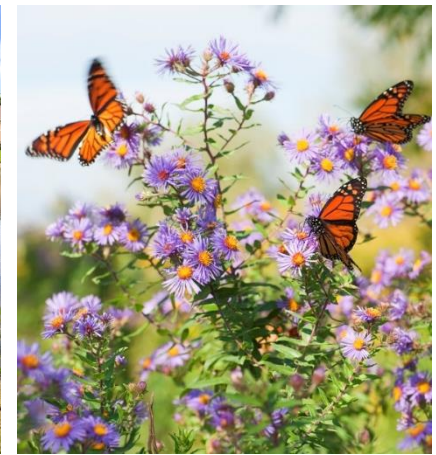


Photo Credit: UF/IFAS

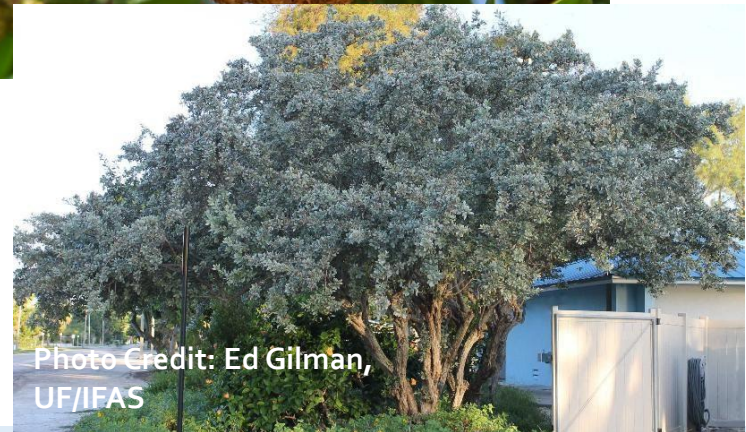












## Buttonwood

*Conocarpus erectus*

**Zone:** 10B – 11

**Size:** Mature height of 30 – 40 ft  
with a spread of 20 – 30 ft

- Buttonwood can become larger trees often maintained smaller or as a hedge
- Blooms all year (inconspicuous)
- Also has a silver variety – smaller
- Extreme drought tolerance
- High salt tolerance
- Provides for pollinators and birds
- Hurricane wind resistant





## Cabbage Palm, Sabal Palm

*Sabal palmetto*

**Zone:** 8 – 11

**Size:** Mature height of 40+ feet

- Sabal Palms are slow growing and can live over 100 years
- Extremely drought tolerant
- Salt wind tolerance
- Pollinators, birds and other wildlife



*Thrinax radiata*

Photo by Patricia Howell



## Florida Thatch Palm

*Thrinax radiata*

**Zone:** 10A – 11

**Size:** Mature height of 15 – 30 ft  
with a spread of 5 – 15 ft

- Florida Thatch Palms are slow growing
- Extremely drought tolerant
- High salt wind tolerance and occasional/brief inundation (storm surge)
- Provides for pollinators and birds
- The flowers are fragrant and the white berries provide interest





Photo Credit: UF/IFAS

## Gumbo Limbo, Tourist Tree

*Bursera simaruba*

**Zone:** 10B – 11

**Size:** Mature height of 25 – 50 feet  
with a spread of 25 – 50 feet



- Gumbo Limbo trees have interesting bark and are briefly deciduous in winter
- Bloom in spring
- Very drought tolerant
- Salt wind tolerance (not direct spray)
- Provides for pollinators and birds
- Hurricane wind resistant





Photo Credit: UF/IFAS

## Paradise Tree

*Simarouba glauca*

**Zone:** 9B – 11

**Size:** Mature size of 30 – 50 ft



Photo Credit: UF/IFAS

Photo Credit:  
UF/IFAS

- Paradise tree is a large tree
- Blooms in spring
- Extremely drought tolerant
- Salt wind tolerance (not direct spray)
- Provides for pollinators and birds
- Hurricane wind resistant





Photo Credit: UF/IFAS



## Lignum Vitae

*Guaiacum sanctum*

**Zone:** 9B – 11

**Size:** Mature size of 8 – 15+ ft



*Guaiacum sanctum* fruit in Key West in August. Credit: M. Leonard-Mularz, UF/IFAS



- Lignum vitae is a slow-growing, small tree with extremely dense wood (sinks in water)
- Blooms all year
- Extremely drought tolerant
- Salt wind tolerance (not direct) and occasional/brief inundation (storm surge)
- Provides for pollinators and birds
- Hurricane wind resistant





## Florida Keys Blackbead

*Pithecellobium keyense*

**Zone:** 10A – 11

**Size:** Mature size of 8 – 15 ft

- FL Keys Blackbead is a long-lived perennial shrub/small tree
- Bloom peak in spring, fragrant!
- Extremely drought tolerant
- Salt wind tolerance (not direct) and occasional/brief inundation (storm surge)
- Provides for pollinators and birds



# More Trees

**Bahama Strongbark** – *Bouffieria succulenta*, Zone 10A-11

**Black Ironwood** – *Krugiodendron ferreum*, Zone 10-11

**Crabwood** – *Gymnanthes lucida*, Zone 10A-11

**Mastic, False Mastic** – *Sideroxylon foetidissimum*, Zone 10A-11

**Pond Apple** – *Annona glabra*, Zone 9B-11

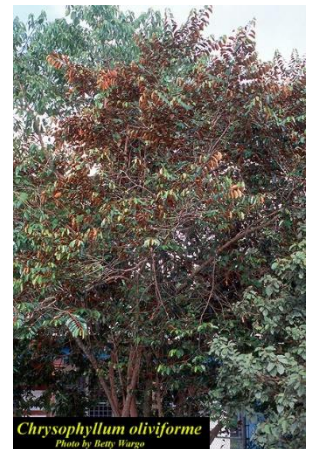
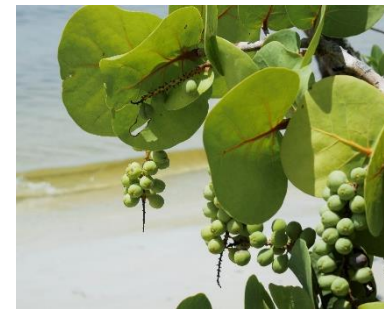
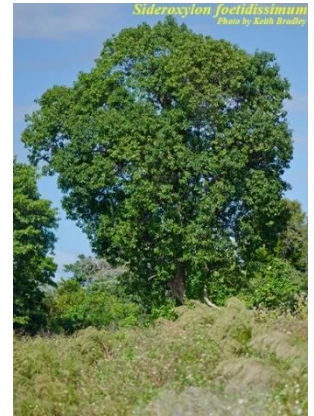
**Royal Palm** – *Roystonea regia*, Zone 10-11

**Satin Leaf** – *Chrysophyllum oliviforme*, Zone 9B-11

**Seagrape** – *Coccoloba uvifera*, Zone 10-11

**Silver Thatch Palm** – *Leucothrinax morrisii*, Zone 10A-11

**Wild Cinnamon Bark** – *Canella winterana*, Zone 10A-11





## Bay Cedar

*Suriana maritima*

**Zone:** 9B – 11

**Size:** Mature size of 10 x 10 ft

- Bay Cedar is a long-lived perennial shrub
- Blooms all year
- Extremely drought tolerant
- High salt wind tolerance and occasional/brief inundation (storm surge)
- Provides for pollinators and birds





## Coontie

*Zamia integrifolia*

**Zone:** 8A – 11

**Size:** Mature height of 2 – 3 feet  
with a spread of 3 – 5 feet

- Coontie has been integral in the success of the Atala butterfly, its only native host plant
- Extremely drought tolerant.
- Some salt tolerance (not direct spray)
- This is a great small shrub that can be used throughout the landscape.





*Scaevola plumieri*

Photo by T. Ann Williams



Photo Credit:  
@noaboa,  
iNaturalist



Photo-Credit:  
@johnhboldt,  
iNaturalist

## Inkberry

*Scaevola plumieri*

**Zone:** 9B – 11

**Size:** Mature size 2-6 ft x 4-8 ft

- Inkberry is a smaller shrub that is typically wider than it is tall
- Blooms all year, peak summer
- Extremely drought tolerant
- High salt wind tolerance
- Provides for pollinators and birds





*Ardisia escallonioides*

Photo and © by Roger Hammer  
Wildflowers of the Everglades



## Marlberry

*Ardisia escallonioides*

**Zone:** 7 – 11

**Size:** Mature height of 12 – 20 feet  
with a spread of 6 – 12 feet

- Marlberry is columnar in habit and grows in part shade to part sun
- Blooms all year (on and off), fragrant!
- Drought tolerant
- Salt tolerant (not direct salt spray)
- Provides for pollinators and birds





## Necklace Pod

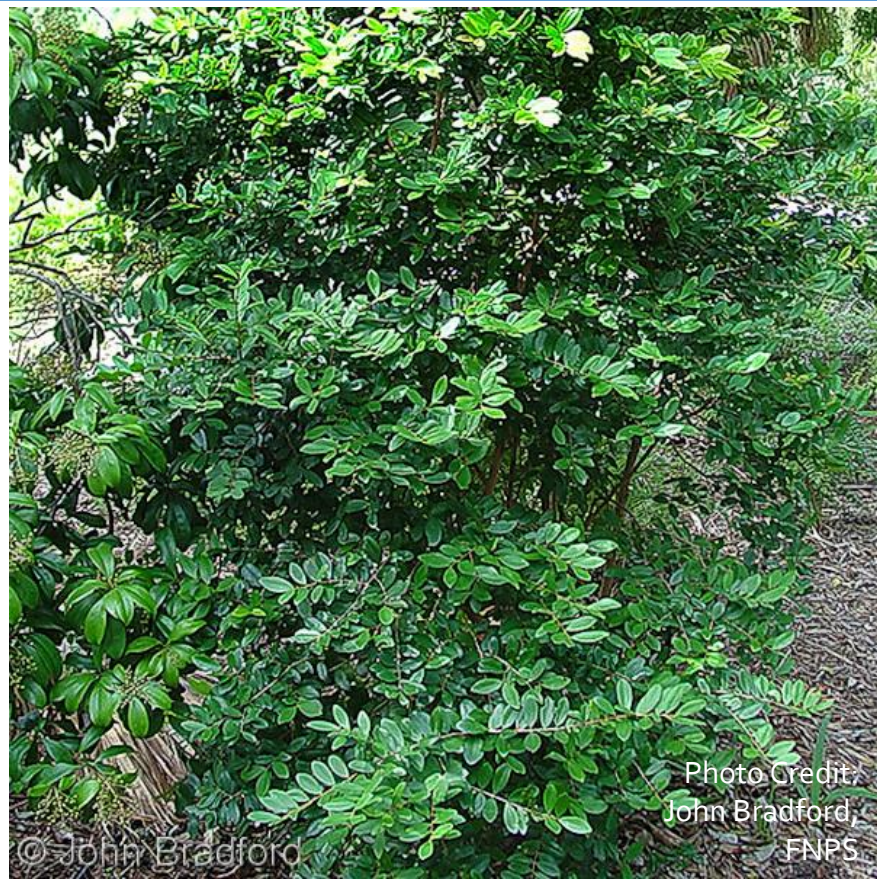
*Sophora tomentosa var. truncata*

**Zone:** 9B – 11

**Size:** Mature height of 6 – 12 feet  
with a spread of 4 – 12 feet

- Necklace Pod is a long-lived perennial
- Blooms throughout warm seasons
- Very drought tolerant
- High salt wind tolerance and occasional/brief inundation (storm surge)
- Provides for pollinators and birds





## Spanish Stopper

*Eugenia foetida*

**Zone:** 9B – 11

**Size:** Mature height of 12 – 15 feet

- Spanish Stopper has an upright, columnar habit that is versatile in the landscape
- Blooms all year, peak summer
- Drought tolerant
- Salt wind tolerance
- Provides for pollinators and birds



# More Shrubs

Cocoplum – *Chrysobalanus icaco*, Zone 10A- 11

Florida Privet – *Forestiera segregata*, Zone 8A-11

Jamaican Caper – *Quadrella jamaicensis*, Zone 10A- 11

Joewood – *Jacquinia keyensis*, Zone 10A- 11

Limber Caper – *Cynophalla flexuosa*, Zone 9B-11

Myrsine – *Myrsine cubana*, Zone 9A-11

Pineland Croton – *Croton linearis*, Zone 10A- 11

Saw Palmetto – *Serenoa repens*, Zone 8A-11

Sea-Lavender – *Heliotropium gnaphalodes*, Zone 9B-11

Sea Oxeye Daisy (Green) – *Borrichia arborescens*, Zone 10A- 11

Sea Oxeye Daisy (Silver) – *Borrichia frutescens*, Zone 8B-11

Simpson's Stopper – *Myrcianthes fragrans*, Zone 9A-11

Snowberry – *Chiococca alba*, Zone 9A-11

Wild Coffee – *Psychotria nervosa*, Zone 9A-11



Photo Credit:  
@coastalkaylin,  
iNaturalist







## Muhly Grass

*Muhlenbergia capillaris*

**Zone:** 8A – 11

**Size:** Mature height of 2 – 4 feet  
with a spread of 1 – 4 feet

- Muhly Grass provides wonderful fall color and texture in the landscape, sometimes called cloud grass
- Blooms in the fall
- Very drought tolerant
- Salt wind tolerant
- Small birds use for shelter and seeds





*Ernodea littoralis*

Photo and © by Roger Hammer  
Wildflowers of the Everglades



Photo Credit: Ed F. Gilman, UF/IFAS

## Golden Beach Creeper

*Ernodea littoralis*

**Zone:** 10A – 11

**Size:** Mature height of 2 – 3 feet  
with a spread of 2 – 3 feet

- Golden Beach Creeper is a great landscape plant for mass low plantings or hedges (Green Island)
- Blooms and fruits year-round
- Salt wind tolerance
- Provides for pollinators and birds





*Helianthus debilis* subsp. *debilis* planted en masse in Key West. Credit: M. Leonard-Mularz, UF/IFAS



*Helianthus debilis* subsp. *debilis*. Credit: M. Leonard-Mularz, UF/IFAS

## East Coast Dune Sunflower

*Helianthus debilis* subsp. *debilis*

**Zone:** 8A – 11

**Size:** Mature height of 1 – 3 ft

- East Coast Dune Sunflower a sprawling small shrub or groundcover
- Blooms all year
- Very drought tolerant
- High salt wind tolerance
- Pollinator and nectar plant



*Glandularia maritima*

Photo and © by Roger Hammer  
Wildflowers of the Everglades



*Glandularia maritima*

Photo by Walter R. Taylor  
from his book: Florida Wildflowers  
In Their Natural Communities

## Beach Verbena

*Glandularia maritima*

**Zone:** 9A – 11

**Size:** Mature height of 1 ft with a spread of 1 – 1.5 ft

- Beach Verbena is a long-lived perennial wildflower/groundcover
- Blooms all year
- Drought tolerant
- High salt wind tolerance
- Pollinator and nectar plant





Photo Credit:  
Lucas C. Majure,  
iNaturalist



*Jacquemontia pentanthos*  
Photo by Shirley Denton



Photo Credit:  
@livanescudero,  
iNaturalist



*Jacquemontia pentanthos*  
Photo and © by Roger Hammer  
Wildflowers of the Everglades

## Skyblue Clustervine

*Jacquemontia pentanthos*

**Zone:** 10A – 11

**Size:** Mature sprawl of 6 – 12 ft

- Jacquemontia is an evergreen, sprawling vine that requires support and can be used as a groundcover
- Blooms from the fall to the spring
- High salt wind tolerance and occasional/brief inundation (storm surge)
- Provides for pollinators and birds





## Beach Jacquemontia

*Jacquemontia reclinata*

**Zone:** 10A – 11

**Size:** Mature sprawl of 3+ ft

- Beach Jacquemontia is a sprawling vine often seen as a groundcover
- Blooms from the fall to the spring
- Drought tolerant
- High salt wind tolerance and occasional/brief inundation (storm surge)
- Provides for pollinators and birds



# More Ground Covers, Grasses & Vines

**Beach Elder, Dune Marsh Elder** – *Iva imbricata*, Zone 8B-11

**Blanket Flower** – *Gaillardia pulchella*, Zone 8A-11

**Blue Porterweed** – *Stachytarpheta jamaicensis*, Zone 9B-11

**Eastern Gamagrass, Fakahatchee Grass** – *Tripsacum dactyloides*, Zone 8A-10B

**Elliott's Lovegrass** – *Eragrostis elliottii*, Zone 8A-11

**Sea Oats** – *Uniola paniculata*, Zone 8A-11

**Spartina** – *Spartina alterniflora*, Zone 8A-11

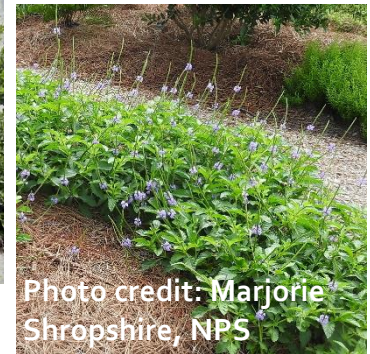
**Spartina** – *Spartina bakeria*, Zone 8A-11

**Spartina** – *Spartina patens*, Zone 9A-11

**Baybean, Beach Bean** – *Canavalia rosea*, Zone 9A-11

**Railroadvine** – *Ipomoea pes-caprae* subsp. *brasiliensis*, Zone 8B-11

**Wild Allamanda** – *Pentalinon luteum*, Zone 10A-11





# Invasive Species to Know



- University of Florida IFAS Assessment of Non-Native Plants
  - <https://assessment.ifas.ufl.edu/>
- Florida Invasive Species Council (FISC)
  - formerly Florida Exotic Pest Plant Council (FLEPPC)
  - <https://www.floridainvasives.org/>





A Great Egret with long legs and a long neck is perched on a thin, leafy tree branch. The bird is facing right, with its head turned slightly towards the viewer. The background is a soft-focus wetland landscape with water and distant trees under a clear sky.

# What Have We Discussed Today?

- The Florida-Friendly 9 Principles
  - Right plant, right place
  - Conserving water
  - Protecting water quality
  - Reduces need for fertilizers & pesticides
- Installation Best Practices
  - Not too deep!
- Palm Pruning
- Importance of Florida Native Plants
  - Reduces need for fertilizers and pesticides
  - Provide for wildlife
- Salt Tolerant Florida Native Plants



# Resources

- UF/IFAS askifas
  - <https://edis.ifas.ufl.edu/>
- Florida-Friendly Landscaping™
  - <https://ffl.ifas.ufl.edu/>
- Florida Native Plant Society
  - <https://www.fnps.org/plants>
- Institute for Regional Conservation – Natives for Your Neighborhood
  - <https://www.regionalconservation.org/beta/nfyn/default.asp>
- Florida Association of Native Nurseries
  - <https://www.fann.org/plants/>
- iNaturalist
  - <https://www.inaturalist.org/home>



**The Institute for Regional Conservation**

*Conservation of rare plants, animals, and ecosystems*



# Thank you!

## Questions?

**Phone**

(561) 233-1750

**Email**

[mastergardener@pbcgov.org](mailto:mastergardener@pbcgov.org)

**Facebook**

UF/IFAS Palm Beach County  
Master Gardener Volunteers

**Visit**

531 N Military Trail  
West Palm Beach

Kara Krueger  
Email: [karackrueger@ufl.edu](mailto:karackrueger@ufl.edu)

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