

# Restoring the Gold Coast

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# Who is The Institute for Regional Conservation?

- **Our Mission:** The Institute for Regional Conservation (IRC) is dedicated to the protection, restoration, and long-term management of biodiversity on a regional basis, and to the prevention of regional extinctions of rare plants, animals and ecosystems.



# Restoring the Gold Coast Program

## The Institute for Regional Conservation



- **What is Restoring the Gold Coast?**

- A collaborative initiative to restore the incredible diversity of native plants and animals native to coastal beaches and dunes in southeastern Florida, along the historic Gold Coast from Miami-Dade to Palm Beach County.





# Restoring the Gold Coast Program

## The Institute for Regional Conservation



- **How did this program start?**

- RGC is the culmination of years of research and planning, and builds upon small volunteer-driven restoration projects in Delray Beach and Miami Beach.
- In May 2019, IRC was awarded a \$100,000 Impact 100 Palm Beach County grant to jumpstart this program in southern Palm Beach County.
  - The grant from Impact 100 will be used to conduct biodiversity assessments along the coast, hold restoration events, and host workshops from May 2019 to December 2020.



# Why Restore Coastal Dunes?

- The United Nations General Assembly declared 2021-2030 the Decade on Ecosystem Restoration.
- Diverse dunes are healthy, strong dunes, and our first line of defense against sea level rise and catastrophic storms.
- They contain hundreds of NATIVE species, not just sea oats, sea-grapes, and sea turtles, as important as those species are.
- They comprise an economic engine, protecting the beaches essential to tourism and property values.
- And they are charismatic; nearly everyone likes to go to the beach.



# What is a Native Plant?

- Simply put, a plant that grows naturally in a specific region
- We call something a native if it's natural range includes southern Florida, i.e. here without human involvement
- Not always easy to figure out, so there are a small number of species that we just don't know

Sea oats (*Uniola paniculata*) – iconic species of Florida beaches, and beaches of the eastern US, Caribbean, and Mexico



# Why Plant Native?

## Environmental Benefits

- Reduce pesticide/fertilizer use
- Reduce water use
- Energy savings
- Support local pollinator populations



Community in Osprey, FL  
Photo © Russell Sparkman/ Fusionspark Media Inc.

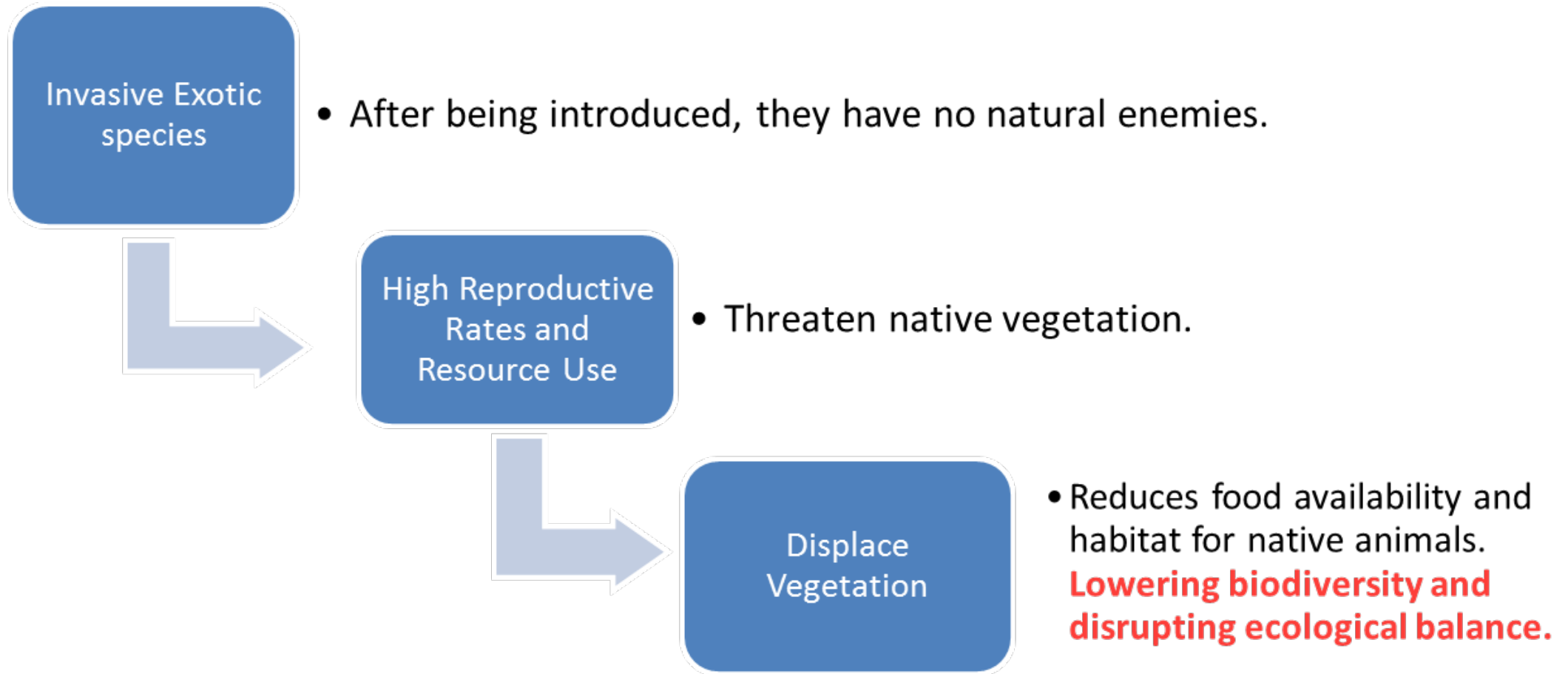
## Conservation Benefits

- Creates recognizable habitats
- Provides connectivity
- Allows recruitment of native species
- Watershed recharge, carbon sequestration, other ecosystem services



Troy Residence, Miami, FL  
Photo by George Gann

# Why are Invasive Plants Bad?





# Why is Biodiversity Important?

- Biodiversity: the variety of life in the world or in a particular habitat or ecosystem
- It is important socially, economically and ecologically
- Higher biodiversity results in greater resilience, greater wildlife abundance, higher ecosystem productivity – the list goes on!
  - Can you think of any reasons biodiversity is important?



# Florida's Coastline – A Brief History

- Construction and Development resulted in the loss of coastal habitat in Southern Palm Beach County and throughout the state
- Efforts were made in the 1970s and 1980s to begin restoration, but the main focus was on putting sand back on the beach. Native habitat was not the main focus.



# Case Study in Delray Beach

- By 1972 - public beaches were essentially gone due construction and development
- In the 1970s – the beach was first restored with dredged sand.
  - When engineers suggested planting dunes, the city rejected it at first.
  - Exotic shrub hedges were planted along A1A, which later cost \$\$\$ to remove



# Case Study in Delray Beach

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- In the 1980s - environmental awareness increased and the City began approving some restorative activities
  - Seagrapes and sea oats were planted
  - Grassy foredune began to expand towards the ocean and capture more sand
  - But... seagrapes have since expanded to 40 times their original footprint
  - Although millions of dollars worth of sand has been captured, seagrapes overshadow and kill most species below the canopy



# Case Study in Delray Beach

- In the 1990s - regulations were changed to allow the trimming of seagrapes, together with the removal of nonnative species, and the planting of other native dune plants
  - Work to restore a complex dune ecosystem has continued to move forward since that time, but more awareness is needed
  - In 2015, IRC documented about 100 native plant species on the beach in Delray, still only about ½ the number of species thought to occur historically



# Case Study in Delray Beach

- In the 2000s - the city has reduced light pollution and a Comprehensive Dune Management Program has been written
- In the 2010s - Delray Beach dune is considered a model for projects in other Florida communities
  - Seagrapes are trimmed and control of exotic plants continues
  - Supplemental planting moves forward, but in a haphazard way
  - Native species and dunes are recognized in the new Comprehensive Plan



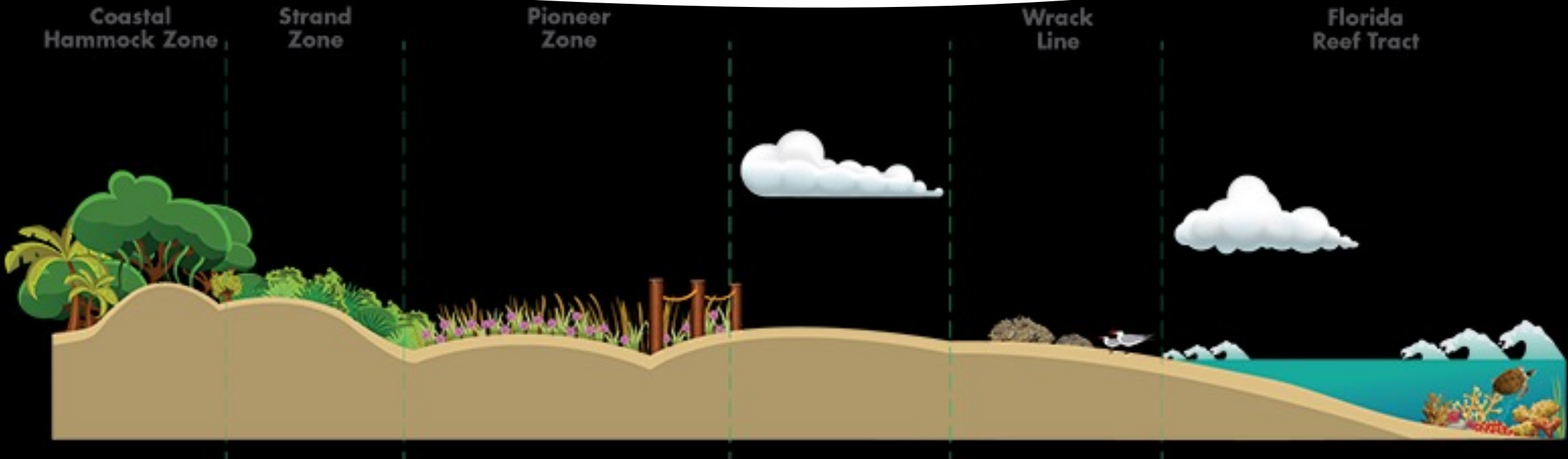
# RGC Goals and Objectives

1. Conduct outreach in all 10 municipalities
2. Assess coastal biodiversity along 10 miles of shoreline
3. Conduct at least 18 restoration/education events and 6 workshops
4. Increase depleted populations of at least 25 species of native plants
5. Engage key stakeholders



# Coastal Communities in our Area

- Pioneer Zone – above the reach of annual wave action, comprised of coarse grasses such as Sea Oats and creeping vines
- Coastal Strand – beyond the reach of constant sand burial, comprised of dwarfed trees and shrubs
  - Why are they dwarfed??
- Maritime Hammock – found inland from coastal strand, comprised of evergreen, tropical and some temperate trees





# Target Species

## Beach ragweed

*Ambrosia hispida*



- Florida Keys north to Brevard County, but nearly extinct along Florida east coast.
- Introduced in Delray Beach and still present at Atlantic Dunes Park and Delray Beach Municipal Beach.

## Beach Clustervine

*Jacquemontia reclinata*



- Federally endangered. Miami-Dade to Martin County (endemic).
- Recently reintroduced to Atlantic Dune Park (2016) by IRC and present at Delray Beach Municipal Beach from earlier biodiversity projects.

# Target Species

## Beach-tea

*Croton punctatus*



- Scattered and rare in southeastern Florida. Not common on re-nourished beaches.
- Present in Delray Beach on public and private beaches. Historically recorded in Ocean Ridge and Boca Raton.

## Pineland Croton

*Croton linearis*



- Florida Keys to St. Lucie County. Nearly extinct north of Miami-Dade County. Sole larval host for two federally endangered and endemic butterflies.
- Still present in northern Palm Beach County but there are no records in south county.

# Target Species

## Bartram's Scrub-hairstreak

*Strymon acis bartramii*



- Federally endangered. Monroe and Miami-Dade counties; extinct in Broward and Palm Beach counties.
- Larvae feed only on Pineland croton.

## Florida prairieclover

*Dalea carthagenensis* var. *floridana*



- Federally endangered. Southern mainland north to Palm Beach and Collier counties. Extinct in Palm Beach County.
- Collected in the Palm Beach area only in 1895 and 1918.

# Target Species

## East Coast lantana

*Lantana depressa* var. *floridana*



- Miami-Dade to St. Johns County along the east coast (endemic), but nearly extinct due to hybridization with the exotic weedy *Lantana camara*.
- Recorded for Atlantic Dunes Park (1993) but presumed extirpated there. Possibly present in Boca Raton but otherwise gone from southern Palm Beach County.

## Red mulberry

*Morus rubra*



- Widespread in south Florida in both inland and coastal locations, but very rare in southern Palm Beach County.
- Previously recorded for Atlantic Dune Park but apparently extirpated there. Present in Boca Raton and Ocean Ridge in tropical hammocks.

# Target Species

## Partridge pea

*Chamaecrista fasciculata*



- Widespread in south Florida in both inland and coastal locations, but perhaps extinct in wild on southern Palm Beach County barrier islands. Some have recently been planted in Ocean Ridge.
- Provides food for birds. Larval host plant for ceraunus blue (*Hemiargus ceraunus*), cloudless sulphur (*Phoebis sennae*), little yellow (*Eurema lisa*), and gray hairstreak (*Strymon melinus*) butterflies.

## Spurred butterfly pea

*Centrosema virginianum*



- Widespread in south Florida in both inland and coastal locations, but very rare in southern Palm Beach County.
- Previously documented at Atlantic Dunes Park but apparently extirpated there.

# Target Species

## Forked bluecurls

*Trichostema dichotoma*



- Widespread in South Florida in both inland and coastal locations, but very rare in coastal southern Palm Beach County.
- Present in Delray Beach at Atlantic Dunes Park where recently relocated. Possibly present in Boca Raton.

## Marshhay cordgrass

*Spartina patens*



- Widespread but scattered in South Florida along the coast and sometimes planted in dune revegetation projects.
- Recently documented in Boynton Beach, Delray Beach, and Ocean Ridge.

# How Can YOU Get Involved?

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- Come out to our public volunteer events throughout the year.
- Volunteer at field trips and other events with us.
- Join IRC's newsletter list and like us on social media.



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# Questions?

