Natives in Your Neighborhood

Habitat Restoration at Home
Terms

Habitat – the place where a plant or animal species naturally lives

Vegetation type- defined as a suite of characteristics that include soil, water, physiognomy, phenology and biotic communities that can be used to identify natural areas.

Ecosystem - a community of organisms interacting with one another and with the chemical and physical factors in the environment.

Ecosystem Management - land management that attempts to maintain or simulate natural processes and conditions that support native plant and animal communities and promote continued interactions among organisms and their environment as an integrated system across the landscape.

Biodiversity – the variety of life on Earth at all its levels, from genes to ecosystems, and the ecological and evolutionary processes that sustain it.

Restoration – The act of returning something to it’s original state thus providing the ecological benefits to ecosystem and it’s inhabitants and visitors.

SEE: http://crocdoc.ifas.ufl.edu/msrpmap/
What is the difference between habitat restoration and native landscaping?

Environmental Benefits and Conservation Benefits
Habitat Components

Overstory
Canopy
Understory
Shrub Layer
1) Atlantic coast
2) Atlantic Tributaries West
3) Mississippi along the gulf coast

The Atlantic Flyway encompasses some of the hemisphere's most productive ecosystems, including forests, beaches, and coastal wetlands. This avian superhighway is utilized by 500-plus bird species and millions of individual birds.

Forty percent of the Atlantic Flyway's bird species are species of conservation need, 32 of which are priority bird species. www.audubon.org
Despite what we know, we have broken Florida and much of the world into fragments or completely destroyed habitat all together.

Note the small areas for Broward County Nature Centers and Natural Area Conservation.

More importantly, note how much space belongs to someone with a yard!

Think about the difference we can make.....

http://www.broward.org/Parks/FindAPlace/Pages/NaturalAreas.aspx
Good news though....... 

Roughly 60% of land area in the United States (1.43 billion acres) is privately owned by millions of individuals, families, organizations, and corporations, including 2 million ranchers and farmers and about 10 million woodland owners. More than 100 species have 50% or more of their U.S. breeding distribution on private lands.

That means, your yard counts!
Selecting habitat type

1. What is the history of your yard?
   1. What ecosystem was there historically?
   2. How has it been altered since development?

2. Current yard characteristics?
   1. High and dry?
   2. Low and wet?
   3. A little of both?

3. What is your soil like?

4. How much sun do you get?

General Considerations:
- You may not be able to recreate original habitat type
- Something is better than nothing
- A high nutrient/low interior light habitat (e.g. hammocks) will be easiest.
- Low nutrient/high light habitats will be the most difficult. (Pines)
South Florida Ecosystems

- Hammocks
- Pine
- Wetland
USING NATIVES FOR YOUR NEIGHBORHOOD
South Florida: Then and Now

Davis 1943
Reconstructed original landscape (Pielke et al) for Florida

land cover conversion to agriculture and urban development

http://earthobservatory.nasa.gov/Features/DeepFreeze, 2005
We live in a botanically unique region

- Mixture of tropical and temperate species
- Isotherm – average minimum temperature in January of 54°F or warmer
Natives for Your Neighborhood

Why Natives for Your Neighborhood?

- Protected areas cannot support all species.
- Empowers individual action and engages community members in conservation.
- Creates urban habitat, connectivity, and resilience to change.
Urban Habitat

- Biophilia = humans need nature (Biophilic cities)
- Sustainability – cities are not going away
- Utilizing every opportunity to incorporate nature into urban settings

Backyard Habitat

Bioswales Rain Gardens

Portland, OR. Photo by Mike Houck. http://wildread.blogspot.com/

Vertical gardens

http://www.wmagazine.com/

Parklets

http://ruthfm.wordpress.com/tag/parklet/
Natives for your Neighborhood: The Data

- Floristic Inventory of South Florida
  - Seven years, three plant nerds, one complete database

- Assessed status of native species, identified rare species

- Determined effectiveness of existing conservation areas, including small conservation areas, to conserve native plant species

- Identified opportunities to restore rare plants and their habitat.
Natives for Your Neighborhood

Different levels to search?

- County Lists
  - Most generalized species
  - Highest ease of success

- Zip Code Lists
  - Inland zip codes - lists include more specialists
  - Coastal zip codes – generalist species (use habitat)

- Habitat Lists
  - Most specialized
Search by zip code

- Retrieve lists of plants, habitats, and wildlife native to your area.
- Why by zip code?
  - Conservation and wildlife considerations
## Mesic Hammock

**Learn more about this habitat**

### Plants found in the Mesic Hammock habitat, in zip code 33432

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>American beautyberry</td>
<td>Callicarpa americana</td>
</tr>
<tr>
<td>Bell-moss</td>
<td>Tillandsia recurvata</td>
</tr>
<tr>
<td>Bloodleaf, Juba's bush</td>
<td>Iresine diffusa</td>
</tr>
<tr>
<td>Blue-maids cane</td>
<td>Amplicarpum muhlenbergianum</td>
</tr>
<tr>
<td>Button-hemp, False nettle, Bog hemp</td>
<td>Boehmeria cylindrica</td>
</tr>
<tr>
<td>Cabbage palm</td>
<td>Sabal palmetto</td>
</tr>
<tr>
<td>Calusa grape</td>
<td>Vitis shuttleworthii</td>
</tr>
<tr>
<td>Canada toadflax</td>
<td>Linaria canadensis</td>
</tr>
<tr>
<td>Coastal bedstraw</td>
<td>Galium hispidulum</td>
</tr>
<tr>
<td>Coastalplain staggerbush</td>
<td>Lyonia fruticosa</td>
</tr>
<tr>
<td>Coco-plum</td>
<td>Chrysobalanus icaco</td>
</tr>
</tbody>
</table>

- [Widely cultivated](#)
- [Cultivated at native plant nurseries](#)
Wildlife and Plant Lists

Wildlife in Zip Code 33483

Below is a list of animals that may be observed in this zip code. By planting native species, you will not only create a low-maintenance landscape to enjoy, but you will also create habitat for these wildlife species.

Sort By: 
Scientific Name  Common Name

Ceranus Blue on Galactia smallii

Screech owl in nest box in a restored Pine Rockland

Restored Rockland Hammock in Miami-Dade County yard.

Palamedes Swallowtail on Liatris
American beautyberry
Callicarpa americana
Verbenaceae

General Landscape Uses:
•Added flowering and ornamental plant in residential and commercial landscapes. Also used in wetland plantings.

Ecological Restoration Notes:
•An early successional shrub that is highly effective at colonizing disturbed areas. It is found throughout South Florida.

Description, Height, Growth Rate, and Range:
•Flower: White, pink, or red
•Fruit: Blue, purple, or black
•Habitat: Wetlands, shallow water, roadside ditches, and floodplains

Flower and Fruit Descriptions:
•Flower: White, pink, or red
•Fruit: Blue, purple, or black

Wildlife Interactions:
•Attracts birds and butterflies
•Seeds are eaten by wildlife

Notes, Comments, Advice, and Caveats:
•An excellent plant for wet areas
•Easy to grow and maintain
•Attracts wildlife

Requirements: soil, nutrients, salt tolerance, water, and light

Habitats where it is typically found:
•Wetlands, shallow water, roadside ditches, and floodplains

How the plant can be used in landscapes and ecological restorations:
•Added flowering and ornamental plant in residential and commercial landscapes. Also used in wetland plantings.

Requirements: soil, nutrients, salt tolerance, water, and light

Where the plant can be found:
•Wetlands, shallow water, roadside ditches, and floodplains

Description, Height, Growth Rate, and Range:
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Wildlife Interactions:
•Attracts birds and butterflies
•Seeds are eaten by wildlife
Other ways to search

- Advanced search forms let you find exactly what you are looking for.
  - A wildlife attracting shrub that will grow in light shade and has conspicuous fruits?

### Advanced Search for Plants

- Zip Code: 33483
- Name (common or scientific):  
- Light Preferences: Light Shade
- Soil: Moist
- Form: Shrub
- Drought Tolerances:
- Fruit: Conspicuous
- Wildlife Attractant: Yes
- Flowers Significant:

### Common Name

- American Beautyberry
- Cabbage palm
- Coastal Plain willow
- Common ammoberry, Milkberry
- Coralbean, Cherokee bean
- Elderberry, American elder
- Gooseberry
- Maple
- San palmetto
- Shiny-leaved wild coffee
- Shortleaf wild coffee
- Twinberry, Simpson's steeper
- Wax myrtle, Southern Myrtle
- White stopper

### Scientific Name

- Callicarpa americana
- Ixer palmetto
- Salix caroliniana
- Chocoreja alba
- Frutina hermex
- Sambucus cedrensis
- Licaria mitchellii
- Ardisia esentialoides
- Serenoa repens
- Psychotria narina
- Psychotria alhamed
- Myriahthas fragrans
- Myrica cerifera
- Eugenia eliaria

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American Beautyberry  
Coralbean
Where to get plants:

• Join your local chapter of the Florida Native Plant Society
• Native plant day and other native plant sales (Tropical Audubon Society)
• Local native nurseries
• Seeds and propagation
  – Don’t collect in protected areas
• Beware fake natives
Pinelands

- **Flatwoods** – term for Florida pinelands, occurring on flat, sandy soil. Originally the most widespread plant community in FL
- **Mesic pine flatwoods** – higher, dryer flatwoods
- **Hydric pine flatwoods** - lower flatwoods with some soil saturation and flooding
- **Pine rockland** – occur on southern Atlantic Coastal Ridge. Not flatwoods, grow on rough, exposed limestone
- **Scrub** - fewer or no pine trees, short woody shrub vegetation with bare patches of sand
Pineland Restoration

Not for the faint of heart! – Start small

- Soils: acidic, poorly drained, sandy, low nutrient.
- Open, low diversity tree canopy
- Diverse herbaceous layer
- Naturally maintained by fire

Considerations
- Open area
- Buffer between habitat and structures
  - Hammock edges, lawn, gravel, etc
- Trees and shrubs first, grasses and flowers later
Natives to Avoid

Spanish-needles

*Bidens alba var. radiata*

Hardwood seedlings
Hammock Restoration

Relatively simple, can be done even in small areas

- Soils: well drained, organic.
- Diverse canopy and sub-canopy
- Open understory
- Dense edges

Considerations
- Overhead and underground utilities
- Higher canopy diversity
  - More diverse in tropical hammocks
  - Less diverse in PBC – more temperate species
Hammock Structure

Simplified hammock structure:
- Pineland
- Hammock edge
- Hammock interior
Wetlands

• Hydroperiod – how often and how much water is in your wetland?
• Examples:
  – Canal edges
  – Ponds
  – Seasonally flooded areas
  – Swales

Types of Aquatic Plants

– Plants which float in the water un-rooted
– Plants rooted at the bottom with leaves above the water
– Plants on the water edge. (Marginal and Emergent)
– Completely Submerged plants
**Submerged**
*Ceratophyllum demersum*

**Bottom rooted, floating leaves**
*Nymphaea odorata*

**Emergent and Marginal**
*Pontederia cordata*

**Floating**
*Spirodela polyrhiza*
Example: Pine Rockland Restorations in Miami-Dade County
Tropical Audubon Society
phase one (c. 1990)
Tropical Audubon Society
phase two (Fall, 2002)
Pinklet – *Stenandrium dulce*

Walter’s groundcherry – *Physalis walteri*

Spurred Butterfly-pea – *Centrosema virginianum*

Southern Florida sandmat – *Chamaesyce pergamena*
In 2007
Important Considerations

• **Something is better than nothing!**

• Start simple and become more complex with time.
  – Choose more generalized plants at first for most success

• Conservation benefits:
  – Use FISF and other resources to select species that could benefit from connectivity in yards
  – Focus on rare species
Sponsors and Contributors

- Nurseries
  - Native Choice Nursery
  - Jesse Durko’s Nursery