FLORIDA MASTER GARDENER

UF IFAS Extension UNIVERSITY of FLORIDA

Florida-Friendly Landscaping™ for Pollinators

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Florida-Friendly Landscaping™ PROGRAM


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FloridaYards.org


Florida-Friendly
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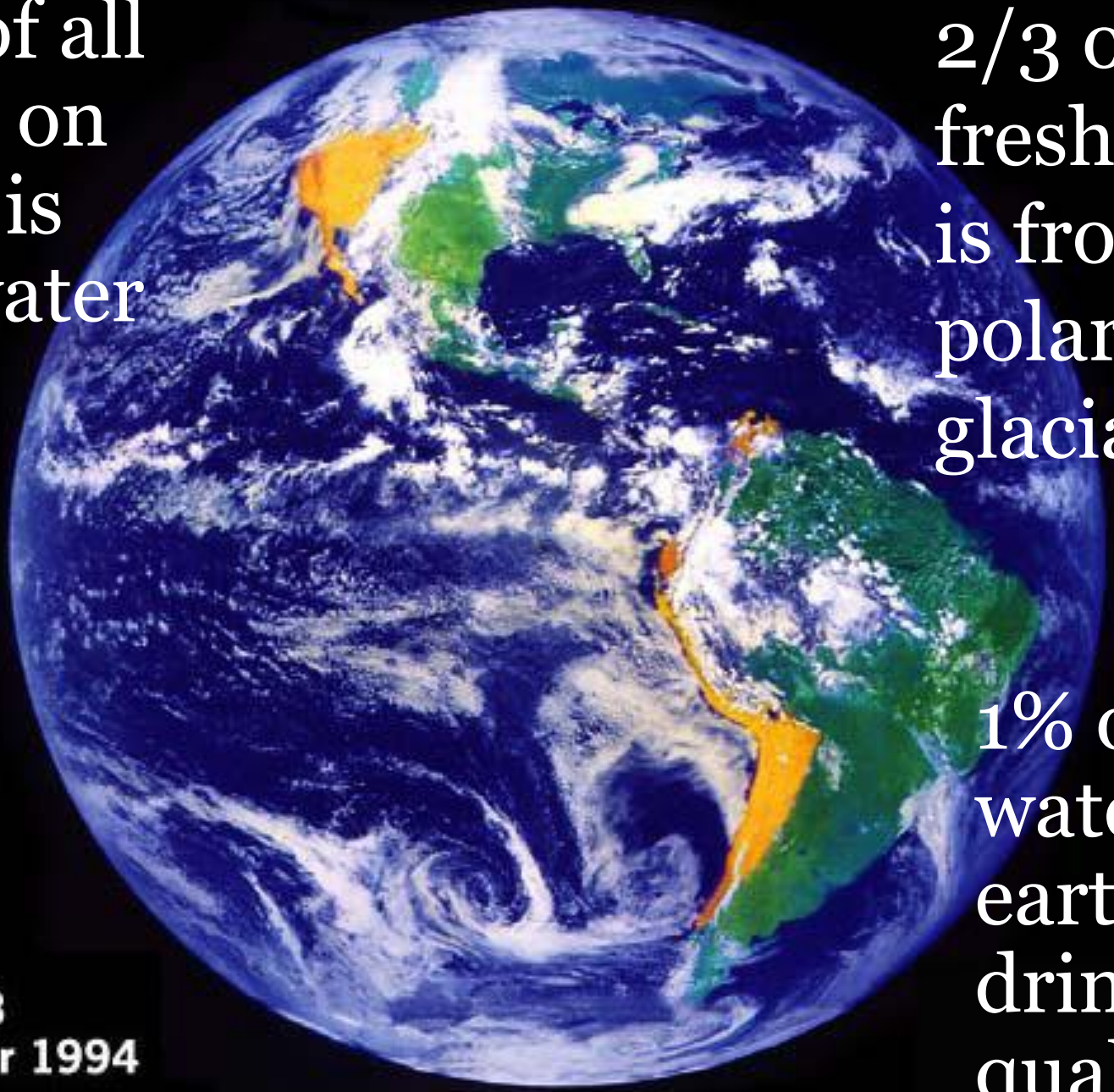
Southwest Florida
Water Management District
WATERMATTERS.ORG · 1-800-423-1476


Manatee
County
FLORIDA


SARASOTA BAY
ESTUARY PROGRAM

97% of all water on earth is salt water



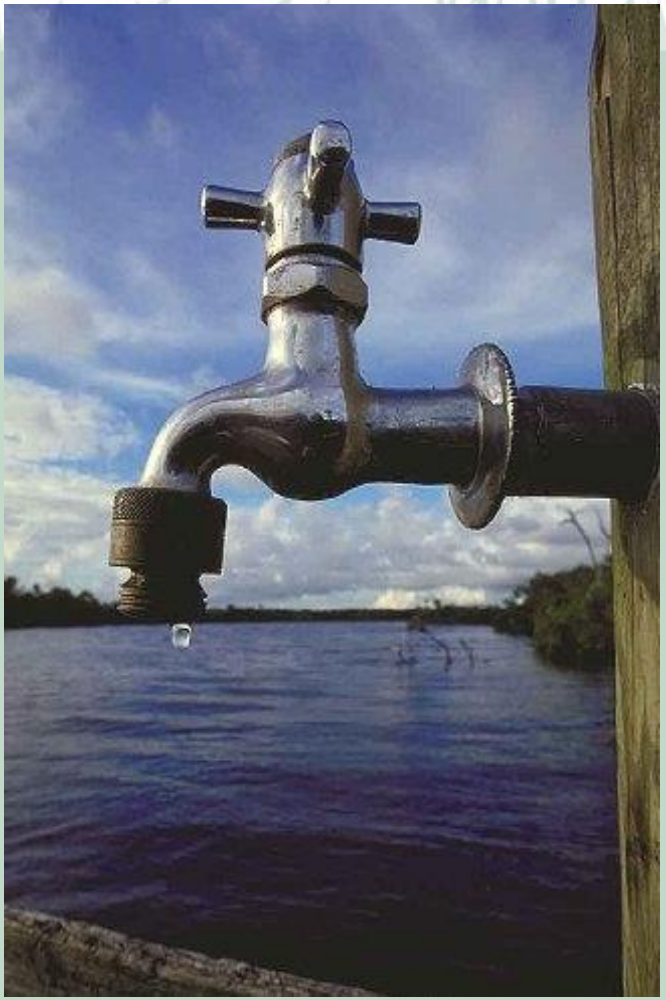
2/3 of all fresh water is frozen in polar and glacial ice

1% of all water on earth is of drinkable quality

Satellite
GOES 8
September 1994

Domestic Water Use

- American water use is high compared to other nations
  - Twice European use
- Florida has the highest *domestic* water use in U.S.
  - Partly due to irrigation of lawns and landscapes



USGS, 1998

Think of it this way…

FOUR traditional irrigation spray heads running for only ONE HOUR = 720 gallons of water!

Which = 6,004 lbs of water!

Which = 3 TONS of WATER!

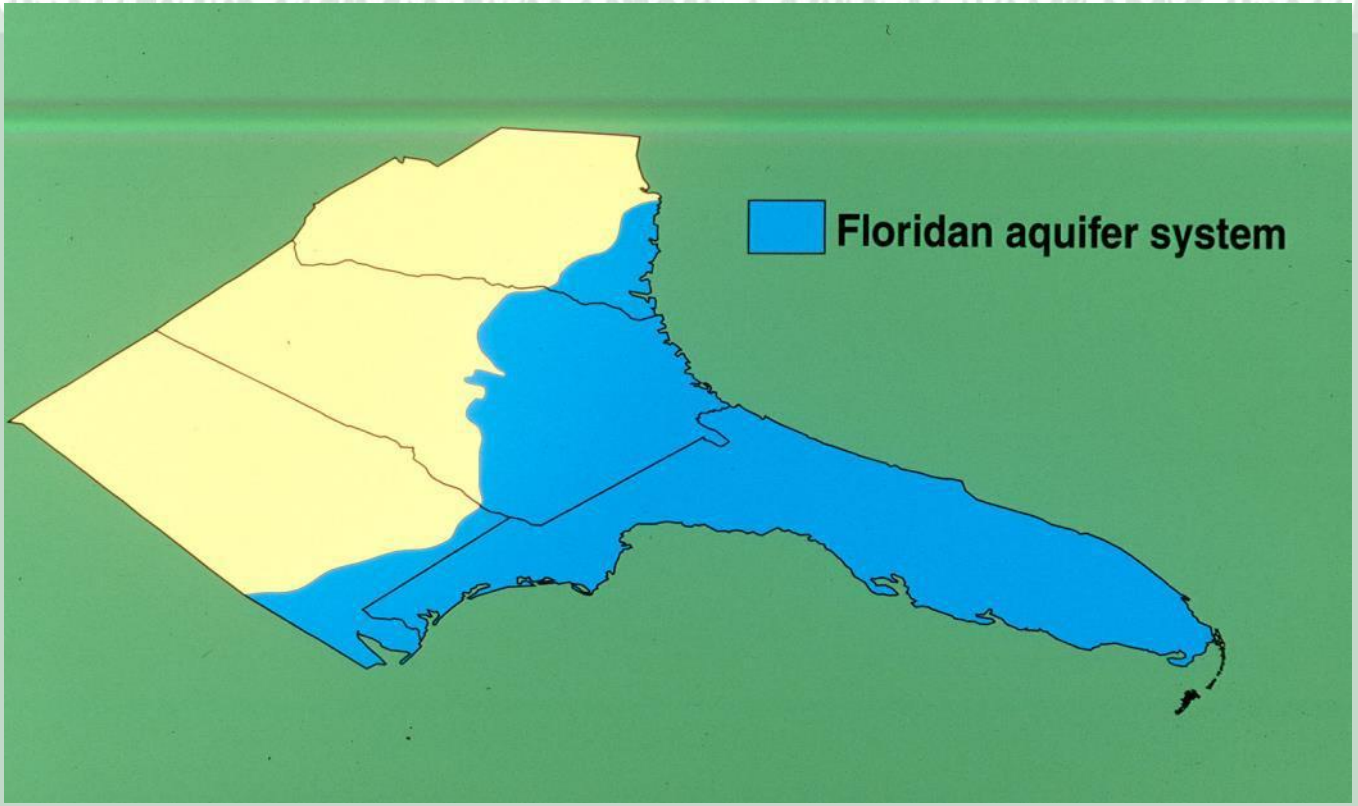
3 -Ton Pickup Truck

Or this way, for you hose-waterers…

One 75 foot garden hose, ¾ inch diameter, at average household pressure, uses **33 gallons per minute**, or **1,980** gallons **per hour** or **16,513 Lbs of water! (Over 8 TONS of water!)**

About the same as a light semi-truck… OR … an adult male African Elephant

Where does our water come from?



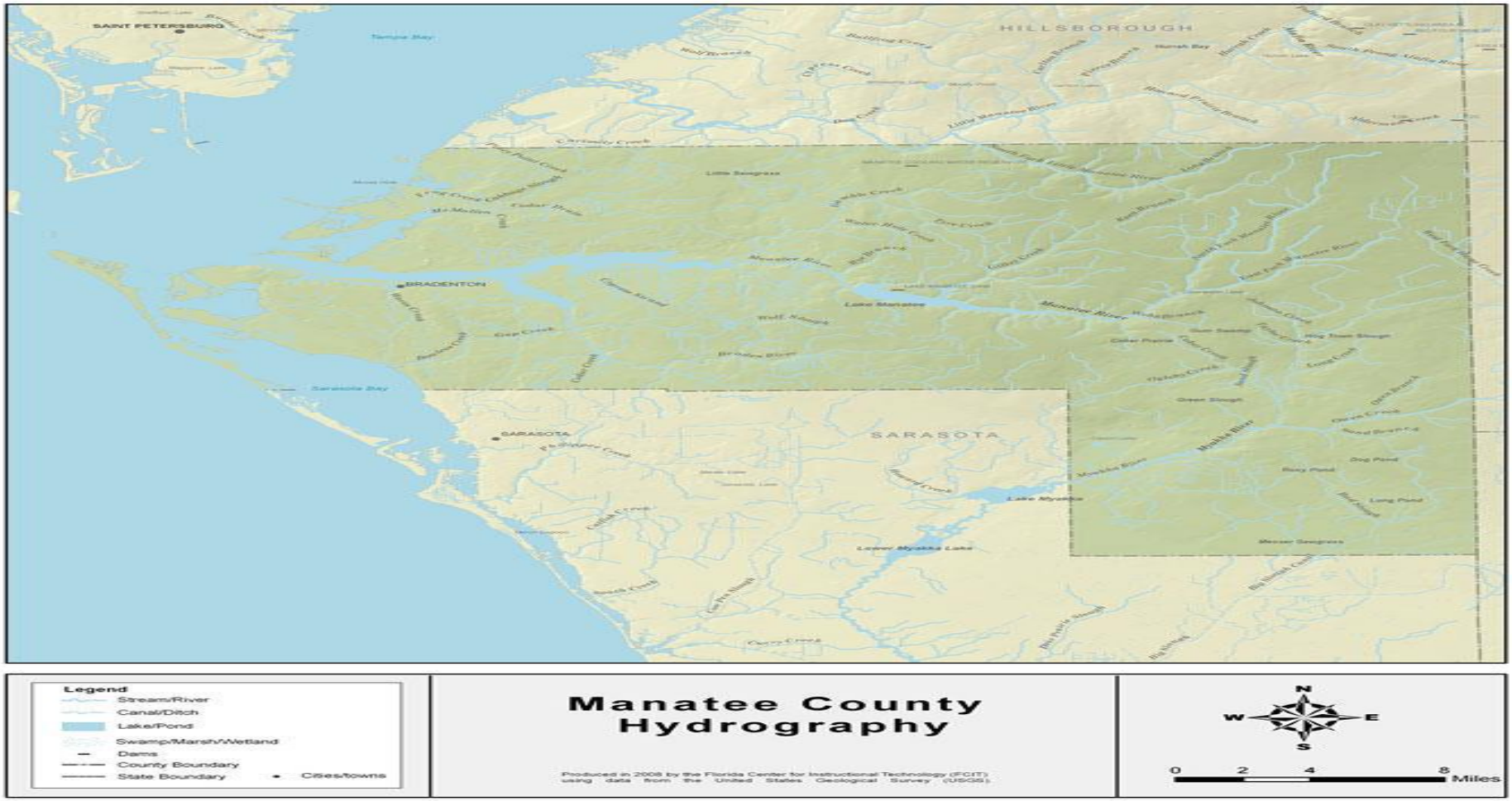
- 95% of Florida's drinking water supply come from groundwater sources

Where does stormwater and landscape runoff go?

- Not to a wastewater treatment facility

… straight to creeks and ponds and groundwater.

Manatee County Hydrography Map



So, we have 2 problems when it comes to water…
We use too much of it *and* we end up polluting the runoff that ends up flowing into our waterways and into our groundwater with overuse of pesticides, fertilizers, herbicides and other chemicals.

What Can I Do?

Employ and recommend Florida-Friendly Landscape principles:

- Right plant, right place
- Choose natives or lower maintenance plants
- Group plants according to their water needs
- Use mulch

www.floridayards.org

Who is a part of the equation?

- Citizens
  - Master Gardeners advise
- Property Managers/HOA's
  - Agents advise
- Landscape Professionals
  - Agents advise
  - As of 1/1/2014, Landscape professionals must be certified in Green Industry Best Management Practices, or GI-BMP.

HOA restrictions

- Areas/neighborhoods with restrictions still need approval to make landscape changes
- The Florida-Friendly Law allows you to have a Florida friendly landscape…
- But often HOA's /ARB's must sign off on design changes
- Clients who live in HOA communities should be advised to check first to see what the rules are prior to starting *any* new work on their landscapes.

A Florida-friendly yard incorporates the following nine principles:

Right plant, right place *

Water efficiently *

Fertilize appropriately *

Mulch

Manage yard pests

Provide for wildlife

Recycle

Reduce stormwater runoff

Protect the waterfront


Certified
Florida
Yard

Letting go of Lawns

- Lawns don't pollute, people pollute trying to keep lawns looking "perfect"
- Potential for over-watering, over-fertilizing and applying too much pesticide can be greater with turf than in other areas of the landscape
- Especially those maintained by the homeowner

What is a "Florida-Friendly landscape”?

- A Florida Yard is unique
- It can take any form
- Can easily reflect the owner’s preferences
- Created by changing maintenance practices
- Is not a cookie-cutter approach

Can be **Traditional and Simple**
or Whimsical and Tropical
or anything in-between!

#1 Right Plant, Right Place

- Arguably the most important principle
- Reduces the need for water, fertilizer, pesticides and pruning by using plants suited to the specific site conditions

If your goal is to reduce turf grass

- Remove turf/weeds
  - Sod cutter
  - By smothering with black plastic or card board (2 weeks)
  - Physical removal
  - Herbicide (should be last choice)
- Replace turf or weeds or bare ground with
  - Mulch
  - Ground covers
  - Plant beds

If your goal is to reduce turf grass

- **Plant trees** in groups and mulch under the trees
- Increase the size of your mulched beds by a foot or two
- Increase rings of mulch around trees to merge into larger planted and mulched beds
- This can be done gradually in steps, especially when budget considerations are a big factor


01.01.2005


8132

Widen this mulched bed by a foot or more
Reduces maintenance, irrigation system, costs

Right place, Wrong plant

Mexican petunia

Skunk vine

#2 Water Efficiently

Design and maintain a landscape that thrives predominantly on rainfall, once plants are established

Did you know that both natives and non-natives require similar amounts of water to become established?

After getting established, natives will generally require less water than non-natives

Native vs. Non-Native

Coreopsis- Tickseed

Assorted Annuals

Efficient design really helps to save water

(Irrigation won't grow more houses or streets)
Watch for signs of irrigation efficiency

Low-Volume Sprinklers

Micro-jet sprinkler

Micro-irrigation can improve watering efficiency

Often given extra time under restrictions to encourage

Rain Barrels

- Collect and harvest rain water for watering later
- Rainwater runs off roof into barrel from the downspout or roof line
- Fasten screen over the inlet prevents leaves or insects from entering

Rain Barrels Help Recycle Water

- One inch of rain water on 1,000 square feet of roof will generate over 600 gallons of water

#3 Fertilize Appropriately

Less is often best

Over-utilization of fertilizers can be hazardous to your yard and our environment

Adopt a low maintenance schedule

Use slow-release fertilizers (except during fertilizer ban June 1st-Sept 30th when you can't use any)

Compost or directly use your own leaves for mulch that decomposes, giving plants nutrients naturally

Grass clippings, leaves and yard trimmings are recycled on site to provide added nutrients to the soil and to reduce waste disposal

#4 Mulch, Mulch, Mulch

Maintain a 3-4” layer of mulch to help retain soil moisture, prevent erosion, suppress weeds, & moderate soil temperatures.

Use weed block or cardboard under

Rock and other non-organic materials are not conducive to good plant health

Which mulch?

- Your own leaves, clippings or shredding
- Melaleuca mulch called Florimulch
- Pine straw
- Pine bark
- Municipal mulch
- Tree trimming mulch

- NOT
  - Cypress
  - Lava rock
  - Not diseased trees
  - Not rubber
  - Not red
  - Why not red or dyed brown?

Beds can always get larger

- You can take your time!

This mulch bed can expand with time as resources allow

#5 Attract Wildlife

Plants in your yard that provide food, water and shelter can help conserve Florida's diverse wildlife.

Planting Natives is particularly helpful in attracting beneficial, native animals such as birds and pollinators

Native coral honeysuckle
Lonicera sempivirens

Native Wild coffee
Psychotria nervosa

#6 Manage Yard Pests Responsibly

Unwise use of pesticides (too much, the strongest, routine application…) can harm people, pets, beneficial organisms and the environment. Learn IPM techniques.

#7 Recycle in the Landscape

Let your grass clippings stay on your lawn

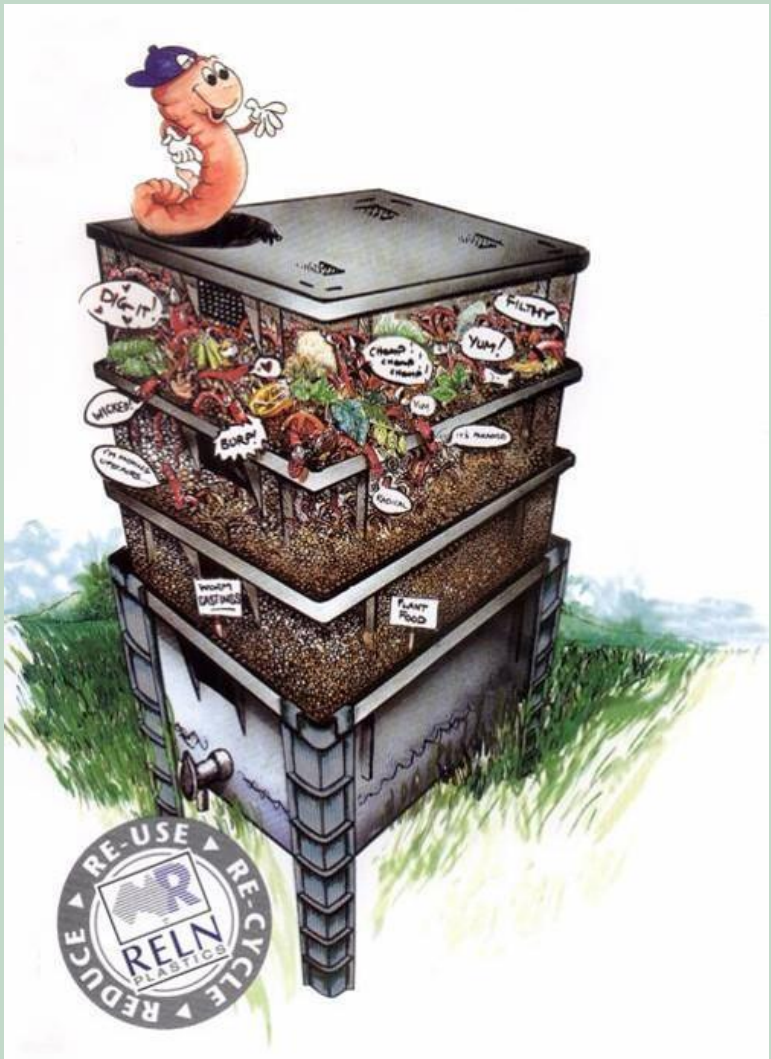
They will naturally fertilize your grass as they decompose. Get a **mulching blade** for mower.

Use excess to mulch your planter beds.

Recycle Old Leaves-Don’t Rake,

Just leave them where they are!

Recycle yard waste and kitchen scraps with Composters and Worm Bins

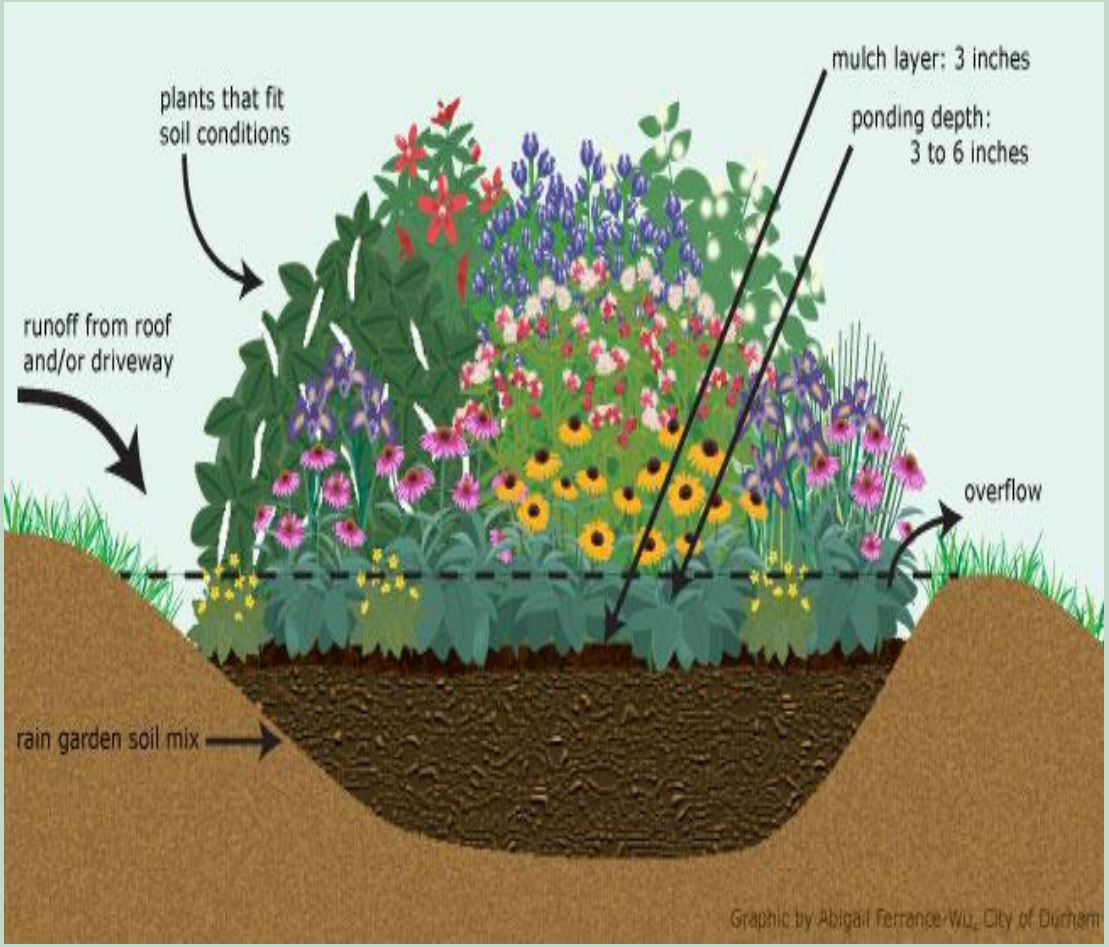


#8 Reduce Stormwater Runoff

Water running off the landscape can carry soil, debris, fertilizer and pesticides that may harm water quality.

Divert downspouts into planter beds/filtration areas

Create Rain Gardens



Use Rain barrels to prevent runoff from storms

#9 Protect The Waterfront

With the Aquifer just below our feet, we all live on waterfront property! But if your property backs up to a river, stream, lake, pond or bay you have even more responsibility to protect the waterfront.

Respect the 10’ “No Maintenance Zone”

- 10’ out from water body- do not mow
- Do not fertilize
- Remove turfgrass and replace with plantings

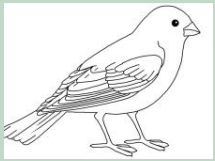
Sampling of some more great plants- Remember Florida-Friendly plants don't *have* to be native!

The following slides are mostly of native plants, but also some are Florida-Friendly non-natives.

All are to benefit Pollinators and some even have the extra benefit of attracting Birds as well, sometimes even Hummingbirds!

Look for these Icons:



Sunshine Mimosa Groundcover
Mimosa strigillosa

Bees adore this cute and “happy”-looking native groundcover

Prefers full sun, will be a bit aggressive as it stakes out its territory. However, it is not evergreen and will “disappear” in cold times.

Native

Blanket Flower
Gaillardia pulchella

Beautiful native perennial

Pollinators love it

Summer blooms

Native

Beach sunflower

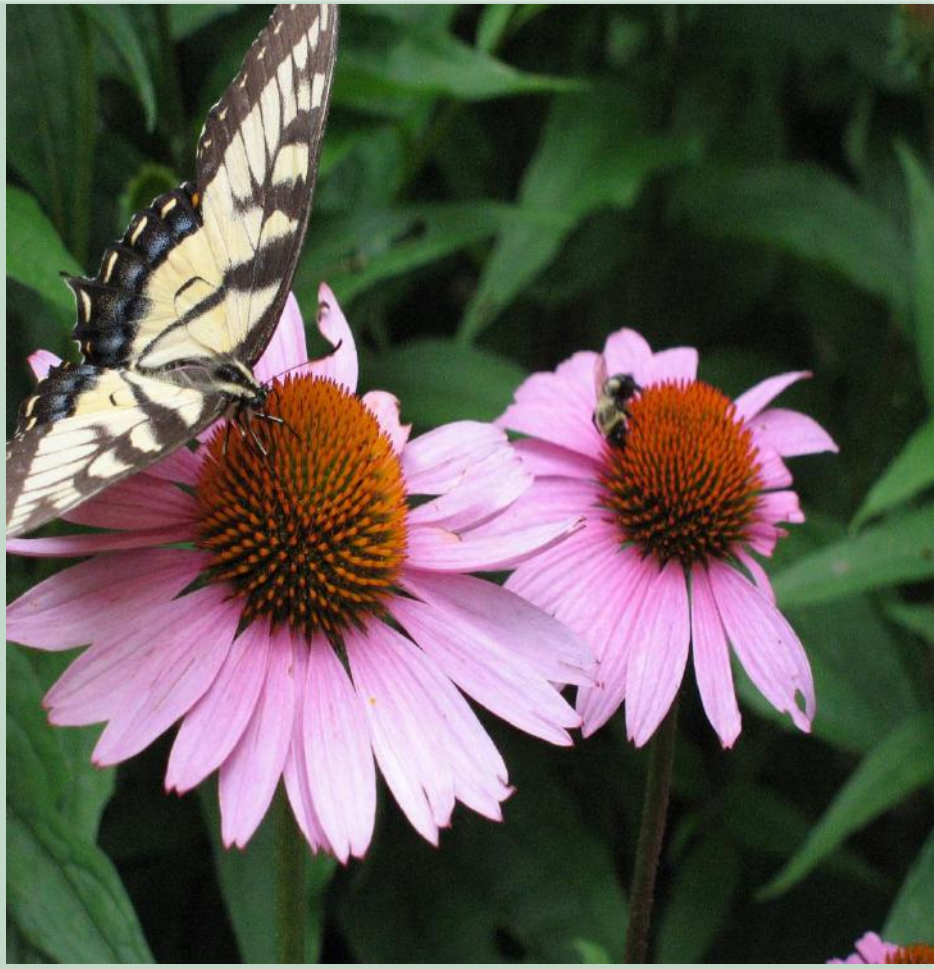
Helianthus debilis

Ground cover

Native

Purple Coneflower
Echinacea purpurea

- Beautiful native plant that pollinators love with medicinal properties for humans. A gorgeous addition to any garden.
- Blooms Spring-Summer

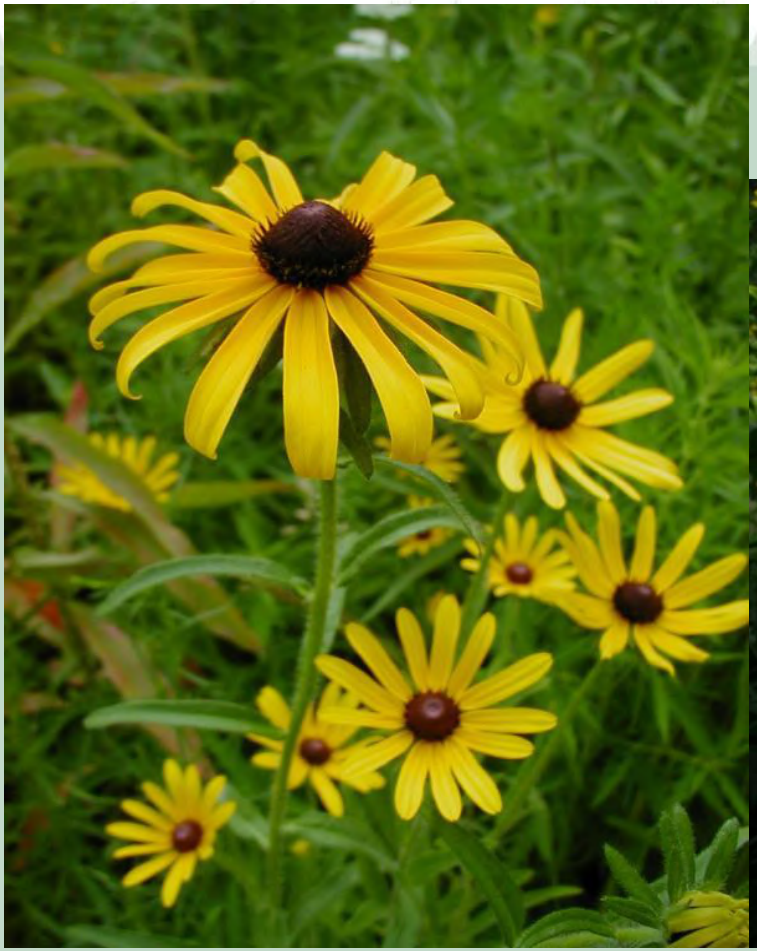




Native

Black-eyed Susan

Rudbeckia sp.



Blooms in summer

Cut leaf coneflower

Natives

Scarlet sage
Salvia coccinea

Blooms year-round!

‘Coral Nymph’ Tropical Sage

Tropical sage

Native

Basil
Ocimum basilicum

- Bees go mad for the flowers!
- When flowers go dry and brown, pick them and save in jar to re-plant seeds for next crop! You should never have to buy basil again
- Herbs can be used anywhere in amongst your landscape plants- not just for herb gardens!

Bee Balm also called **Dotted Horsemint**

Monarda punctata

Native

- Medium-sized perennial Native shrub.
- As name indicates, bees love it. Summer flowers.
- Save the seeds to replant after it goes away.



Coral Honeysuckle Vine
Lonicera sempivirens

Native vine attracts all pollinators
Bees, butterflies and even Hummingbirds!

Not a terribly aggressive vine (unlike some)

Can grow in some shade

Blooms for several months

Needs to grow on arbor or large trellis for support

Native

Maypop Vine
Passiflora incarnata

Passion flower

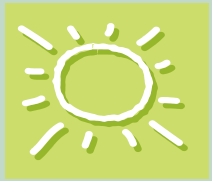
Blooms in Summer-Fall

P. incarnata is Native, most are not.

vine

Trumpet Creeper Vine
Campsis radicans

Blooms Spring-Summer



vine

Native

Adams needle bright edge
Yucca filamentosa

When they bloom in summer, will attract bees

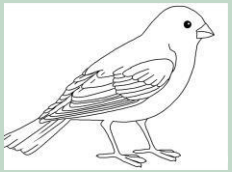
Yucca filamentosa is **native**

(Some yucca species aren't native.)

Fire-bush
Hamelia patens

Native- big leaf,
Less yellow on
flowers

Simpson stopper
Myrcianthes fragrans



Native

Red Powderpuff

Calliandra haematocephala

- Blooms in warm months
- High drought tolerance
- Large, fragrant flowers during warm months
- Attracts pollinators- Bees esp
- Can be large shrub or small tree

Not Native

Red Firespike

Odontonema strictum

Hummingbird plant

Attracts many pollinators

Easy to grow tall shrub to 6’ tall

Unusual because it blooms all through fall and winter when not many other plants do

Full sun/partial shade

Walters Viburnum
Viburnum obovatum

Native large shrub to
Small tree up to 25’ tall

Bees LOVE this plant
when it is in full bloom
in spring!

Native

Sabal Palm aka Cabbage Palm

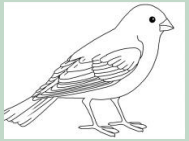
Sabal palmetto

Florida state tree

Iconic native, wonderful wildlife attractor

Bees LOVE its summer blooms!

Provides food and cover for myriad Native wildlife



Native

Saw Palmetto
Serenoa repens

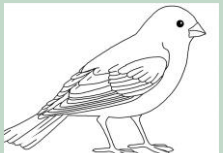
Another iconic native Florida palm with the “Old Florida” look

Instead of growing tall trunks like Sabal, it has reclining, clumping trunks

Has green and silver varieties

Can grow in some shade

Bees love the spring flowers –great plant for native birds



Native

Jatropha spp.
Jatropha intergerrima

Small tree- max 15’ tall x 10’ wide
Scarlet, year-round flowers
Attract butterflies and hummingbirds
Drought-tolerant

Not Native

Coontie
Zamia pumila

Extremely tolerant of most conditions
Sole food source for the rare Atala butterfly (pictured below)

Native

Yellow Elder
Tecoma stans

Fast growing
Evergreen
Grows to ~20 feet
Attracts butterflies and hummers
Small tree or large shrub
Decent drought-tolerance (non-native)



Full bloom in fall, but has some flowers for most of the year.

King's Mantle
Thunbergia Erecta

NATIVE BUMBLEBEES LOVE THIS PLANT!

Non-Native med-large shrub that
Is very Florida-Friendly

Blooms most of year pretty purple flowers
with yellow throats

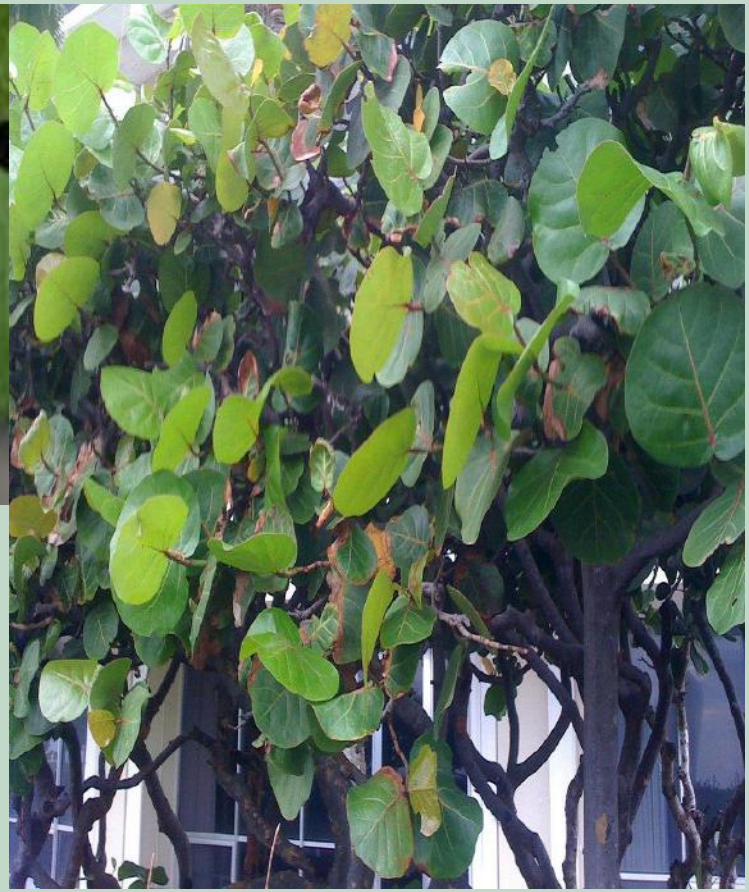
Low-maintenance, hardly needs pruning
Stays a rounded 6'x6' shape

Prefers some shade- like North or East
side of house

Non-Native

Sea Grape
Coccoloba uvifera

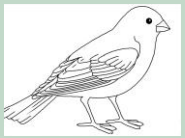
A beautiful native tree, or can be kept as large shrub



Not just for coastlines, this plant is under-used as a specimen in Florida landscapes

Bees adore the cascading white flowers in Spring!

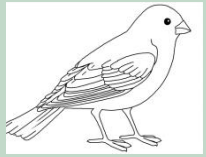
Large, attractive leaves can be messy when shed



Native

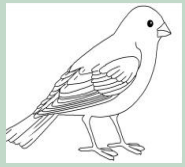
Fringe tree
Chionanthus virginicus

- Small tree
- Spring blooms
- One flush of growth
- Moist acid soil
- Native



Necklace Pod
Sophora tormentosa

- High drought-tolerance
- Evergreen, unusual foliage
- Showy, yellow flowers
- Tree or shrub 10’ x 12’ max



Native

Pollinators 101

Putting together a pollinator garden in your backyard is one of the best ways to support these important and quite beautiful insects

We will go over the plight of the Bee and how we can help as individuals

The plight of the honeybee

Honeybees placed on Endangered species list for first time.
Much of this is due to a few different problems.

- Varoa mites
- Israeli Acute Paralysis virus
- The gut parasite ‘Nosema’
- Stress to bees during transportation for human endeavor
- Colony Collapse Disorder – CCD

A mysterious phenomenon which may be linked to systemic pesticides- neo nicotinoids

Colony Collapse Disorder -CCD

- In 2006-2007 CCD was rampant with beekeepers reporting 30-90% loss of hives
- Symptoms were mysterious –inconsistent with any known cause of honeybee death
- Sudden disappearance of all worker bees with very few found dead near the colony
- Queen and brood remaining often with abundant honey and pollen reserves, but all doomed to perish without the worker bees they depend on completely to survive.
- The food left behind is not taken by neighboring bees or hive predators, indicating that it must be contaminated somehow- with something… but what?
- Ten years later seven species of native Hawaiian bees are put on the Endangered Species List.

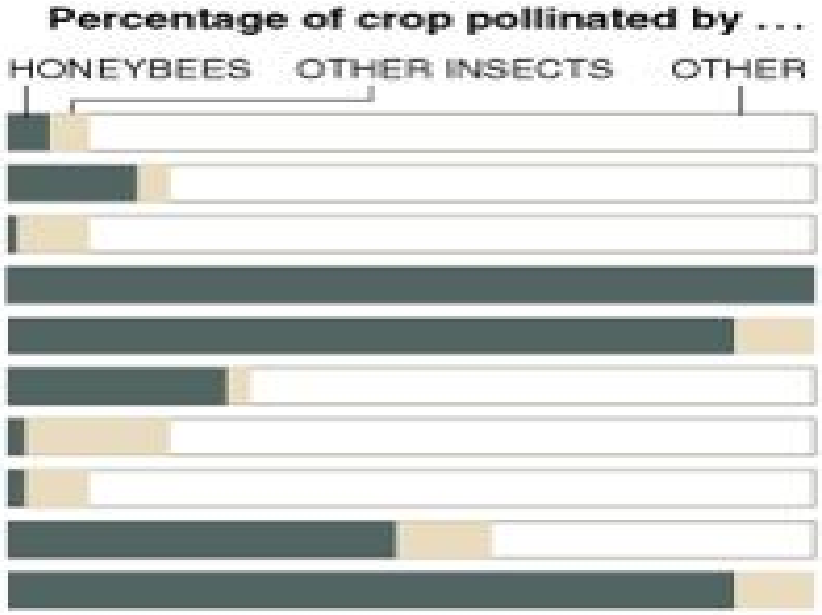
Much of Human Food is Pollinated by Bees

Relying on Bees

Some of the most valuable fruits, vegetables, nuts and field crops depend on insect pollinators, particularly honeybees.

	Crop value *in billions 2006*	Percentage pollinated by honeybees
Soybeans	$19.7	5%
Cotton	5.2	16
Grapes	3.2	1
Almonds	2.2	100
Apples	2.1	90
Oranges	1.8	27
Strawberries	1.5	2
Peanuts	0.6	2
Peaches	0.5	48
Blueberries	0.5	90

cultivated



Besides insects, other means of pollination include birds, wind and rainwater.

Sources: United States Department of Agriculture; Roger A. Morse and Nicholas W. Calderone, Cornell University

The New York Times

If your plan is to attract and foster Native Bees and Honeybees, start with discontinuing pesticide use

- **Discontinue use of Systemic Insecticides**. Systemics are absorbed into the plant .
- Every part of the plant becomes toxic for weeks to any insect that feeds from it.
- This includes bees and other pollinators who drink its nectar or collect the pollen.
- There is no “safe” time to use these because they stay IN the plant.

Some common Systemic insecticides are:

Bonide Systemic

Hi-Yield Systemic

Compare –n-Save Systemic

Safari

Criterion 75

All Bayer Advanced/ Complete products

Try to avoid using any pesticide but if you must, stay away from anything that says Systemic, Complete, Long-term, Advanced. **If you have yard guys- do you know what they use?**

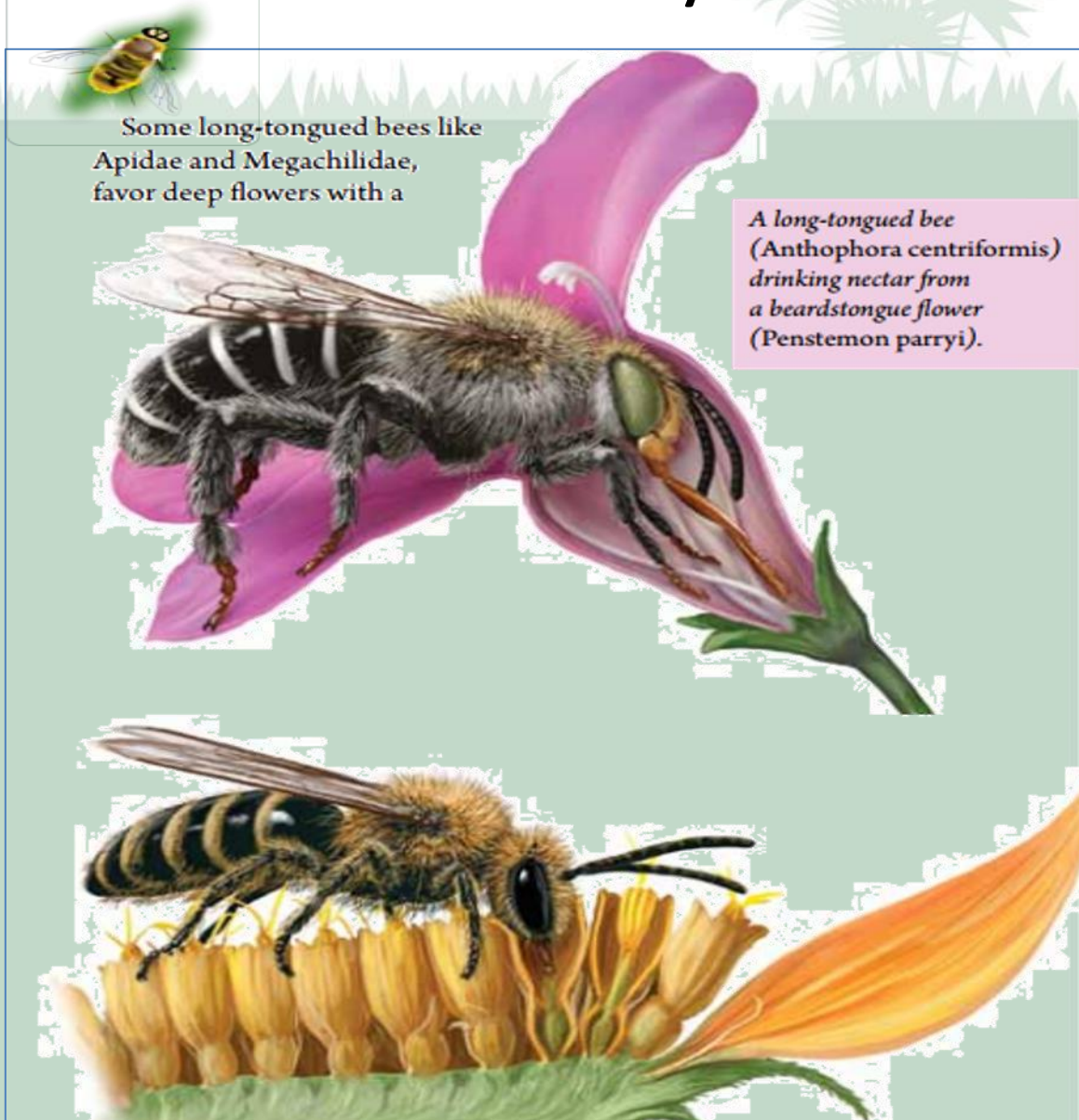
4 Requirements for Pollinator- Friendly Gardens

Food- Nectar and Pollen plants

Cover- Vertical layering in the landscape using 3 different heights of plants ideally- groundcover- shrubs and trees

Habitat- Pollinators like to have some sun and some shade. Native ground bees need loose, sandy, open areas.

Water- Pollinators need shallow fresh, clean water with stones to perch on. Butterflies like to "puddle" drink from barely wet sand. You can provide this.



Food- Pollen plants

Food is easy! Food for them is all of the pretty flowers we want to have in our gardens anyway!

Pollen will come from flowers such as this Native Coreopsis pictured or from any of the flowers like Black-Eyed Susan or Purple Coneflower that we saw earlier.

Pollen provides Protein for Bees

Food- Nectar plants

Plants with **Tubular Flowers** are the nectar providers

Nectar gives pollinators **energy**

They also attract Hummingbirds

Native Coral Honeysuckle vine

Native Coral Bean Shrub

Native Tropical Sage

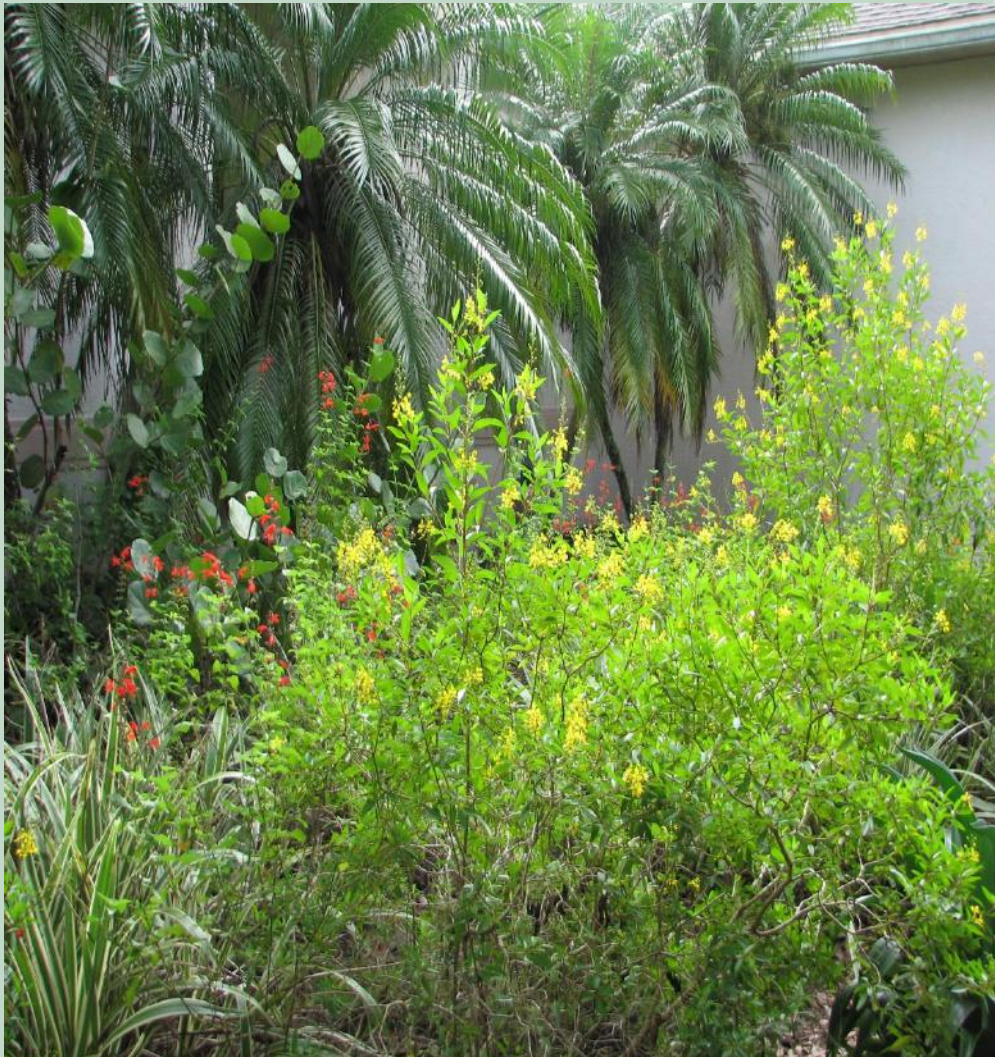
Hummingbirds are also pollinators

Have you ever seen a Hummingbird Moth?

Cover-keep it natural

Provide **vertical layering** with your landscape

3 levels of plants make pollinators feel they are in a natural space and are safe



Habitat Native –Solitary Bees

Our native bees have different needs than European “social bees” who form colonies

Of the 4,000 bees native to North America, 29 are entirely endemic to Florida

Solitary bees use structures that already exist unlike honeybees who make their own honeycomb hives

Learn how to make your own or purchase a “bee bungalow” for your yard to help these native bees make a home in your neighborhood

Habitat- Native Ground Bees

These are the guys who need some small expanse of sandy native soil to do their thing

Their nests are all underground. Be careful to give them wide berth and never step on a bee. It will sting and it isn't fun.

Water and Minerals

Puddlers can be made for pollinators. Keep water clean. Fill shallow dish or bird bath with clean sand and place stones to perch on and add just enough water to get to top of the sand. Do not use bleach or other harsh chemicals to clean the container.

Learn more about Native Bees

UF- IFAS has a wealth of information online about native bees and other pollinators:

http://gardeningsolutions.ifas.ufl.edu/design/gardening-with-wildlife/gardening-for-bees.htm

https://conference.ifas.ufl.edu/gardener12/Onsite%20Presentations/Monday/0345%20Concurrent%20Session%203/D-3/0345%20M%20Peterson.pdf

Learn more about non-native honeybees

bugs.ufl.edu/bug-pix/honeybee

The non-native honeybees, called Western honeybees or European honeybees are the ones who pollinate our major human food crops.

They are also the ones who can hybridize with the Africanized honeybees. Let's discuss if time.

Imagine Your Life Without…

Coffee

Chocolate

Almonds

or Blueberries ???

And many scientists think it could even be Life or Death in terms of human survival. We just don't know!

Let's Save the Bees!

Any Questions?

Thank you and the Bees
Thank you too!

Landscape Assistance Program

- We sit down with clients and help guide them on their plant selections

The Plant Diagnostic Clinic

Part of your volunteer hours will be spent in the Plant Clinic, training with your Mentor so you can learn how to best assist our Customers with Delivering *Stellar* Customer Service!

FFL Yard Recognition Program

FFL-FYN Yard Recognition Program

- Checklist based on 9 Principles of FFL
- Gold Recognition Level:

As many as 26 Requirements and 75-77 points earned

Silver Recognition Level:

As many as 20 Requirements and 50-52 points earned

Florida Backyard Wildlife Habitat Program

Another yard recognition program, this one is with emphasis on

Principle #5 Attracting Wildlife!

Presentation Credit

Wendy Wilber

Alachua County Extension Service

Modified and Presented by Susan Griffith

Florida Friendly Landscape Coordinator

Manatee County Extension

Florida-Friendly Landscaping™ PROGRAM

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