



FLORIDA
**MASTER
GARDENER**



Florida-Friendly Landscaping™ for Pollinators



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Today we will focus on...

Principle # 5-
Attracting Wildlife,
with Focus on
Pollinators



A Florida-friendly yard incorporates the following nine principles:

Right plant, right place *

Water efficiently *

Fertilize appropriately *

Mulch

Attract Wildlife



Manage Yard Pests Responsibly

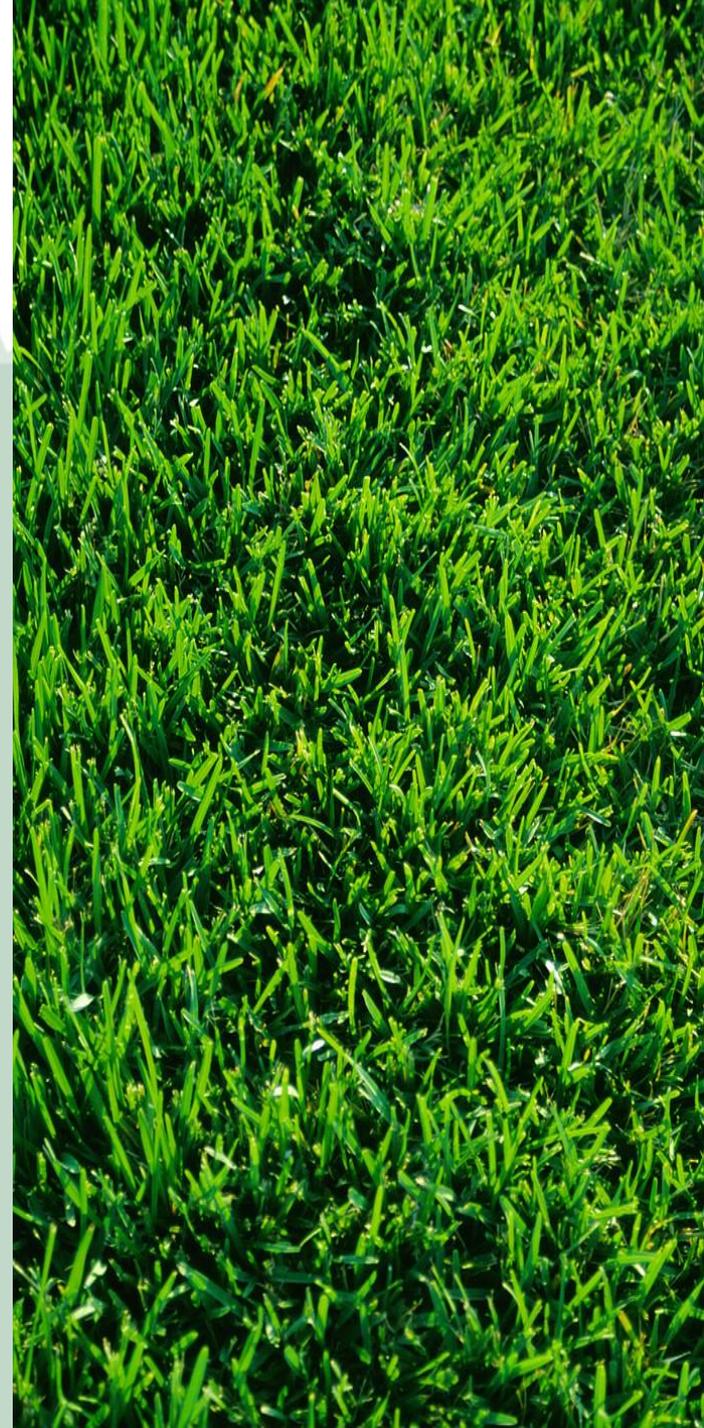
Recycle

Reduce stormwater runoff

Protecting the waterfront

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



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.
- Landscapes must appear to be MAINTAINED-NOT MESSY







Partly Sunny Side Yard- Right Plant, Right Place

Pollinator-friendly!

Great colors, textures and extremely low watering requirements once established!





01.01.2005



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

Native

vs.

Non-Native



Coreopsis- Tickseed



Assorted Annuals

Native Plants are a Key to helping Native Pollinators

- Native plants are the Larval host plants to the Native, beneficial pollinators in our state
- Without these plants, these creatures as larvae have nothing to eat, so it is very important to help them by supplying these plants in our yards.



#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 sempervirens



Native Wild coffee
Psychotria nervosa



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.



Some long-tongued bees like Apidae and Megachilidae, favor deep flowers with a



A long-tongued bee (Anthophora centriformis) drinking nectar from a beardstongue flower (Penstemon parryi).



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



Food- Nectar plants

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

Nectar gives pollinators **energy**

They also attract **Hummingbirds**

Native Coral Bean Shrub



Native Coral Honeysuckle vine

Native Tropical Sage



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.

Pollen provides protein for pollinators





A sea of native Gaillardia

Larval Host Plants



Gulf fritillary butterfly & *Passiflora incarnata*, native passionflower



Eastern Tiger Swallowtail and Native Sweetbay Magnolia



More Larval Host Plants and their Butterflies Who need them Desperately to Survive

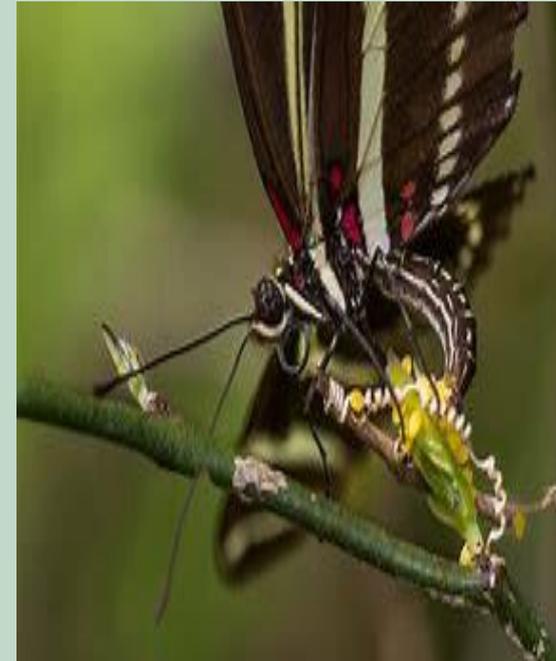
The Rare Atala Butterfly &
The Coontie



The Dainty Sulphur
Butterfly and Spanish
Needle (our Native weed
that all pollinators love)



Our State Butterfly, the
Zebra longwing & Corky-
Stem Passionvine (laying
her eggs on it).



Corkystem Passionvine – A Native Volunteer in Your Yard!



Milkweeds are the main larval host plant
of the Monarch butterfly



Florida has more than 20 Native Milkweeds- here are a few...



Swamp Milkweed
Asclepias incarnata



Pinewoods Milkweed
Asclepias humistrata



Florida Milkweed
Asclepias longifolia



Few Flower Milkweed
Asclepias lanceolata



Butterfly Weed
Asclepias tuberosa



Redring Milkweed
Asclepias variegata

Non-Native Milkweeds



Giant Milkweed
Calotropis gigantean
*note- this one is a
different Genus



Tropical Milkweed
Asclepias curassavica

Meet the Pollinators

Animal pollinators (bees, moths, bats, etc.) pollinate about **75% of the world's food, fiber and medicine crops!** (Chocolate, apples, pumpkins and peaches are a few!)

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 other lesser-known pollinators and how we can help as individuals



Have you ever seen a Hummingbird Moth?

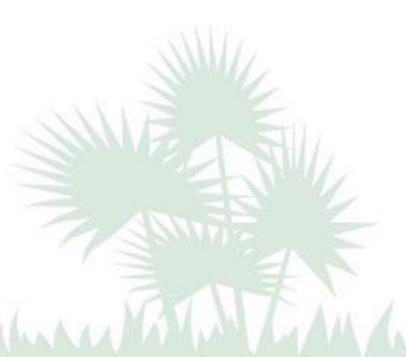


Guess what these gorgeous creatures start out as...

Hint: they are also called Sphinx moths or Hawk moths



Have you ever grown tomatoes?
And had these terribly pesky
worms attack them?

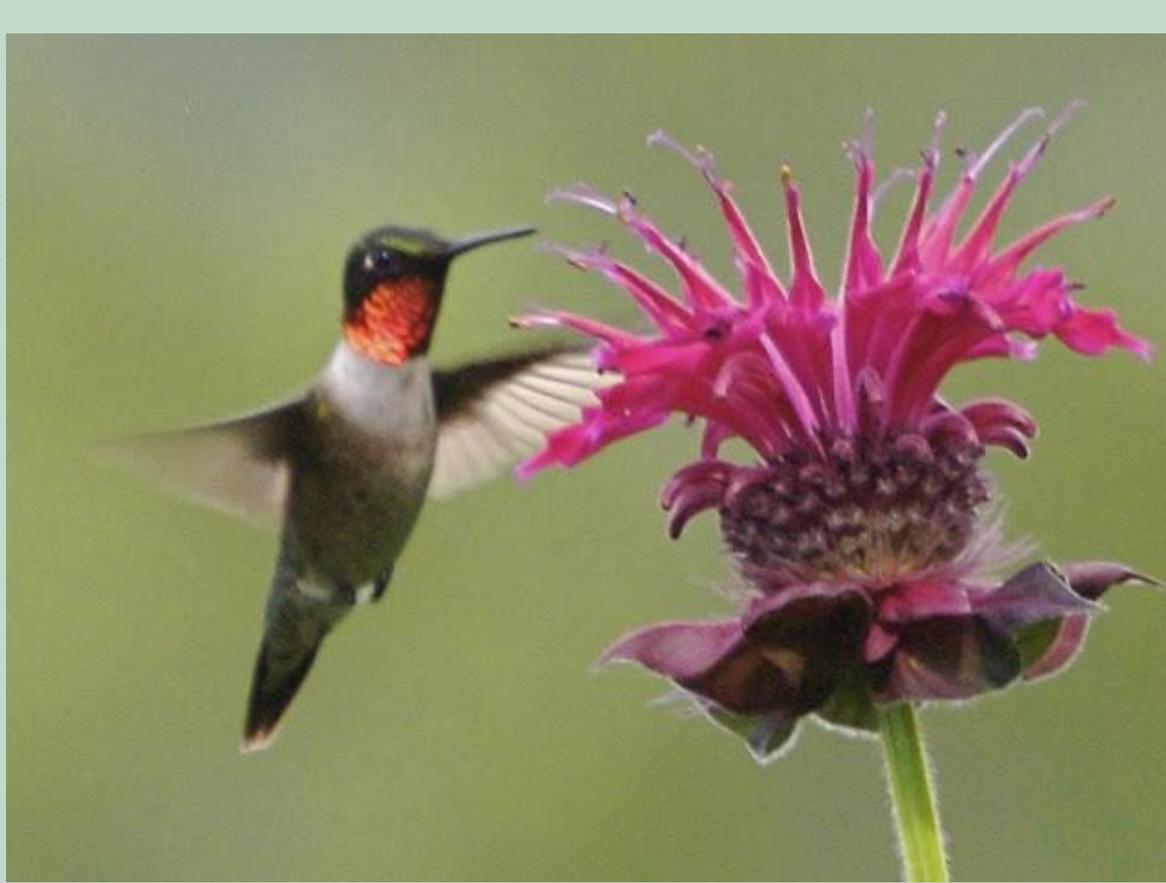


Tomato Hornworm!



Does that make you think twice about killing him?

Hummingbirds are also pollinators



Forgo the Hummingbird Feeders



That yucky, artificially colored red dyed, cheap, sugary stuff cannot possibly be good for them.

Would you drink it?

Instead, attract the little guys with the appropriate nectar plants

They like Tubular flowers.

They can be pink, red, yellow or purple.

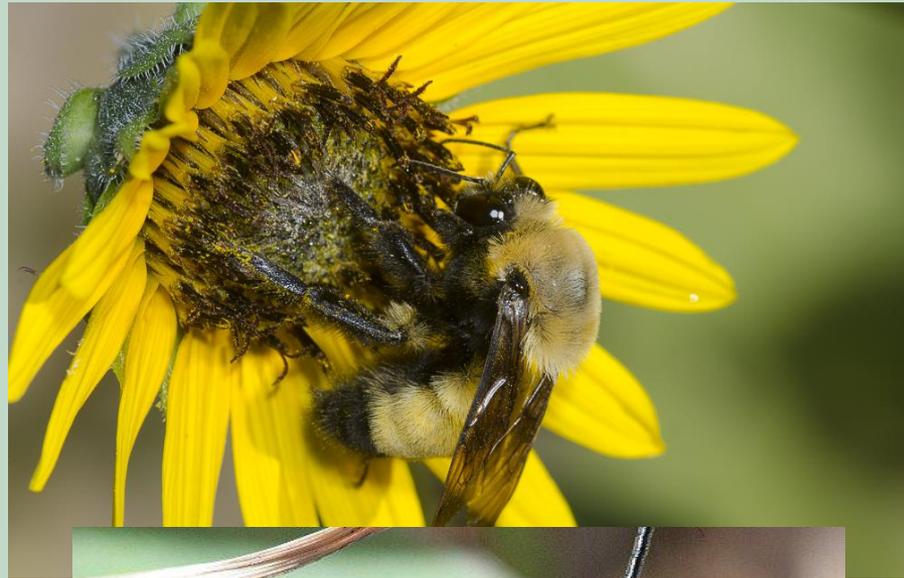


Florida has about 315 species of Native Bees

Buzz pollination- sonication



Bombus morrisoni Morrison's bumble bee



Bombus impatiens Impatient bumble bee



Blue orchard bee *Osmia lignaria* -a mason bee



Southeastern Blueberry bee- a ground bee

Native Bumble bees



Large, fuzzy and noisy bees

They travel long distances for food

They live in colonies, often in abandoned rodent dens and can be found under boards or empty flower pots

Large and Small Carpenter Bees

- **Large Carpenter bees excavate dead wood to build their nests**



Small Carpenter bees sometimes excavate more narrow twigs and even rose canes to build their nests



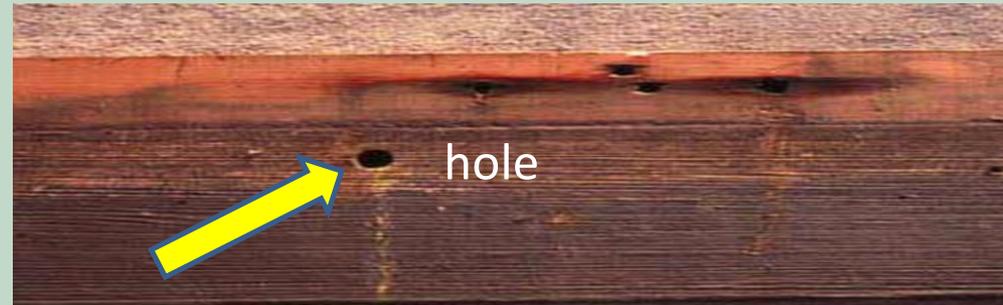
Carpenter Bees

2 genus in Florida
with 4 species
2 small -2 large

Unlike other bees there are no Queen or worker Castes- just males and females and the females of the small Genus, *Ceratina* is parthenogenic meaning the females can reproduce without males.

They do not eat wood, only tunnel into it. They only use dead, not rotting wood, but can get a bad rap because they can use unpainted wood on houses.

They are long-lived bees with lifespans of up to 3 years.



Habitat Native –Solitary Bees

Miner bees, Mason bees and Carpenter bees are Solitary bees

Some of 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



There are about **130** species of **Mason Bee** in North America

They get their name from the mud they use in their nest-building.

Like all Solitary bees, all females are Queens. They exist separately unlike cooperative honeybee hives, but they prefer to live close to one another such as in these Bee Condos pictured here.

Females live 6 weeks and lay 15-20 eggs in 2 tubes
Males live 2 weeks.

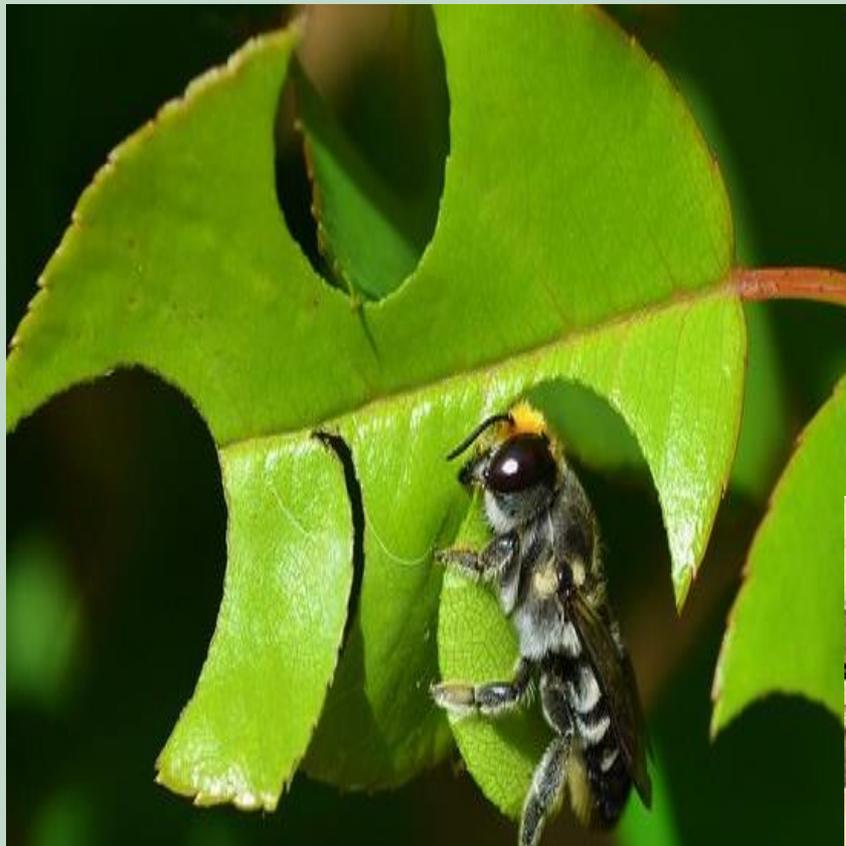


More Native Bees...

Are these on your radar?



Leaf-cutter bee
Megachilidae spp.



Habitat- Native Ground Bees

Digger bees are solitary ground bees. Some Bumblebees live in ground nest colonies.

Though called solitary, they prefer to live in close proximity to their neighbors

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.



Some more beautiful Native Bees and Wasps...

Yellowjacket wasp



Cuckoo wasp



Green sweat bee



Orchid bee

If you grow orchids outside...

You have probably seen the beautiful Orchid Bee, a non-native but now naturalized species native to Mexico and Central America. They line their nests with propolis (plant resins) that the females collect. Solitary, but communal bees.



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. Never use bleach or other harsh chemicals to clean the container.



Did You Know?

The bees who make our honey are not native?

They were brought here from Europe by early settlers who were accustomed to having honey.

They are friendly, “well-behaved” bees... Non-invasive and quite beneficial as very efficient pollinators of most plant food crops



Bats and Nocturnal Moths are the Night-time Pollinators



13 native species of bat live in Florida!
However, the non-native Fruit Bats who also live here are the main plant pollinator bats.

Bats also will eat crop pests they find on flowers such as June bugs, Stink bugs and corn worm moths.

Bats pollinate flowers that stay open at night and that are at least 1" diameter.

They prefer light-colored flowers with a fermented fruity smell

Bats pollinate over 300 species of fruit and over 500 species of other plants

Bananas, Mangoes, Guava, Cacao(chocolate)
Giant Saguaro cactus, Agave(tequila) are all Bat-pollinated



Nocturnal Moths

Pollinate Yucca, Gardenia,
Tobacco and Morning glory,
most cacti, among others



Not all moths are nocturnal (out at night)
Some are diurnal (out during day)
Many others are crepuscular (out only during
the twilight hours before sunrise or after set)

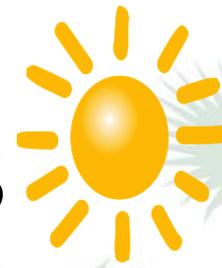
There are about 160,000 species of moths

Of the Nocturnal ones, about 50,000 of
them have evolved to have ears on their
bodies to hear bat sonar noises because
bats also like to eat moths at night!

The Gorgeous Luna Moth



A few of the Diurnal Florida Moths



Scarlet-bodied wasp moth



Harnessed Tiger moth



Polyphemus moth



Faithful beauty moth



Oleander moth



White-tipped black moth



Did you know that Beetles are also great Pollinators?

Longhorned beetle



Scarab beetle



Tumbling flower beetle



Beetles were major pollinators before the evolution of bees.

Bees first appeared about 130 million years ago.

THE *DREADED* SADDLEBACK CATERPILLAR!



Ouch!!!

...Becomes this (*yawn*) incredibly non-descript moth



Sometimes also referred to as the Slug moth.
An interesting dichotomy to say the least!

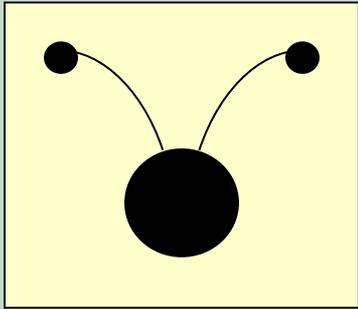
There are about 20,000 known butterfly species as opposed to 160,000 species of moths but that balance may change a bit...



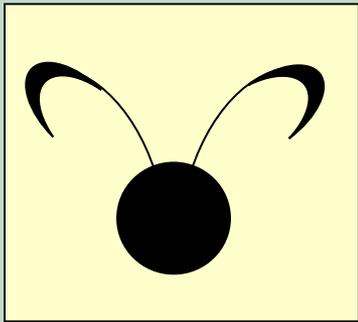
Researchers are finding through DNA testing that some moths originally classified as such are actually butterflies instead!

Butterflies, Skippers and Moths are all in the Order Lepidoptera

They have many similarities, but here are some key differences:



Butterflies have clubbed antennae



Skippers have curved antennae



Moths have feathered or plumose antennae

In most cases, but there are some exceptions

The Monarch Butterfly



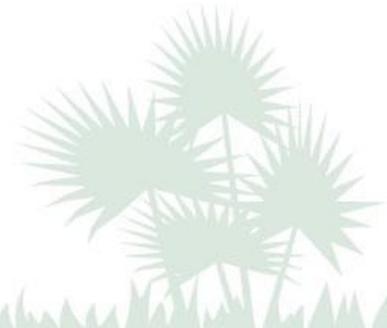
Female- No dots



Male- 2 black Dots

Male dots are scent glands the males use to attract females for mating

Monarch Lifecycle



How long do butterflies live?



Butterflies, like most insects, lead an ephemeral existence.

The answer depends on many factors. Different species have different lifespans and seasons of the year, diet and whether they migrate or not all play a role in their lifespans.

As an example, Zebra Longwings eat pollen as part of their diet which contributes to a longer lifespan. Zebra Longwings commonly live for 6 months. In contrast, Gulf Fritillary live only 4-6 weeks in warm weather- only 2-3 weeks in cold.

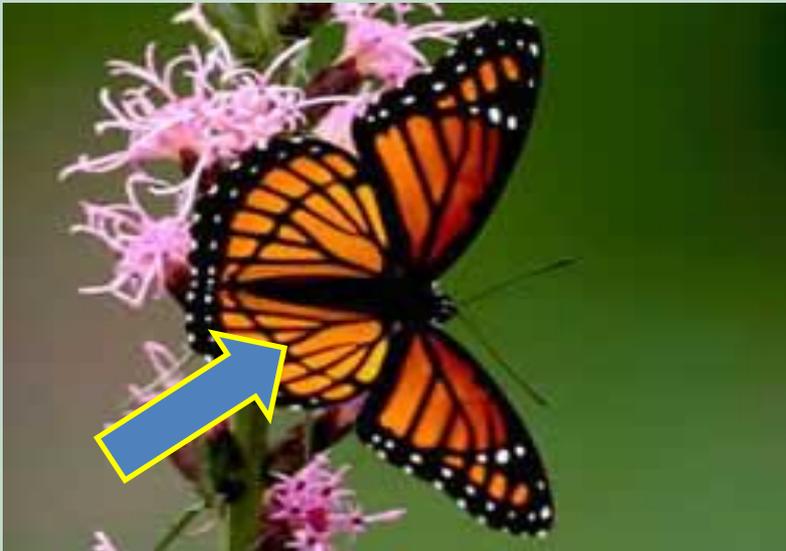
Monarch Caterpillars feast primarily on Milkweed plants. Be sure to plant some in your yard. Know that they will usually completely devour your plants, but they will grow back!



My Backyard- Giant Milkweed



Difference Between Monarch and Viceroy



Viceroy- Horizontal Line



Monarch – No Line There

So, is this a female or a male Monarch?

And to confuse things further... The Queen Butterfly

Under-side view – yikes! Looks like a Monarch! But look at the white spots on the body...



From the top you can easily distinguish them!



Tropical Milkweed Controversy

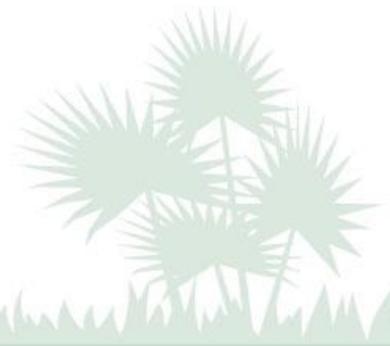


Because tropical milkweed *Asclepias curassavica* remains green until frost throughout the Deep South, it can enable monarchs to continue breeding well into fall and winter, causing populations to persist longer in certain areas than they naturally would.

Unfortunately, prolonged breeding can foster higher than normal infection rates by a lethal protozoan parasite, *Ophryocystis elektroscirrha* (OE). It can also increase the risk of organism exposure to freezing temperatures, resulting in the potential death of adult butterflies or immature stage.

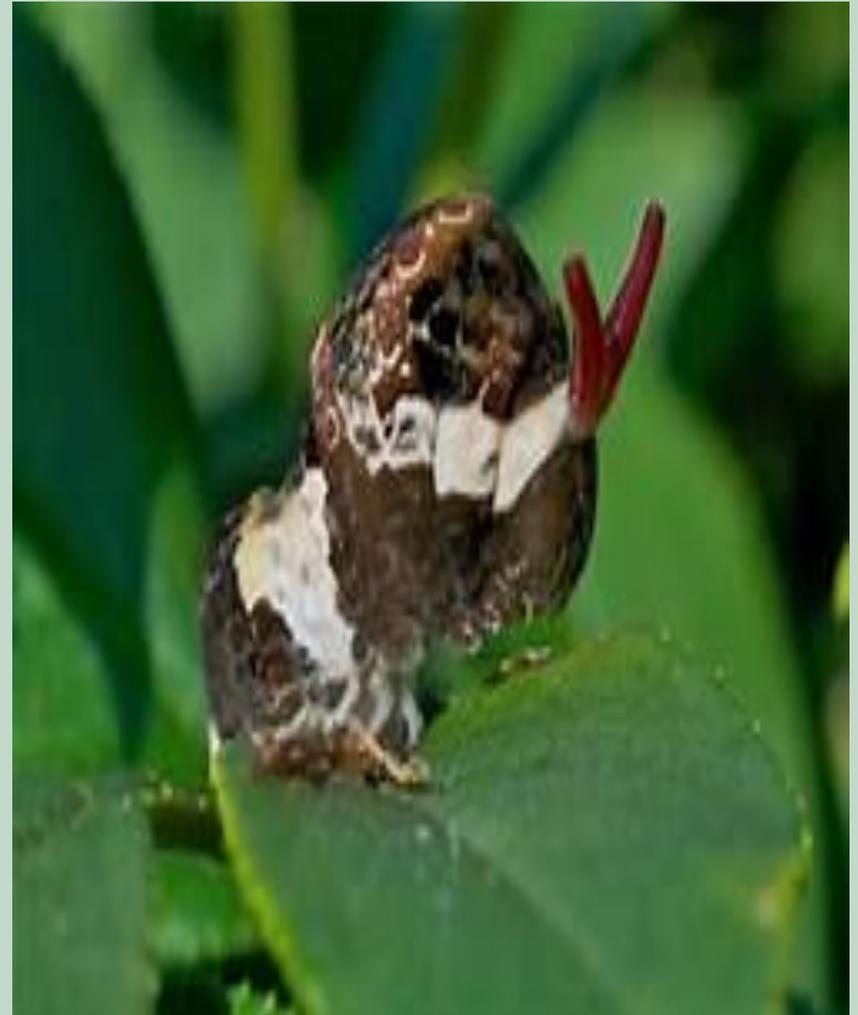
An added danger is that some commercially grown plants may have been treated with systemic pesticides during cultivation. Native Plants at Native Nurseries would not be affected by this risk. The application of such pesticides will make the plants toxic to monarch larvae, exasperating most butterfly gardeners.

The Giant Swallowtail Butterfly



Starts out as this guy. He's kinda cute.
Some people think they look like puppies.

And here he is sticking out his forked
Osmeterium, a defense mechanism.



And here he is looking just like bird poop!



The pretty Spicebush Swallowtail Butterfly...



...Starts life as these cutie pies...



Contenders for Cutest Caterpillars!



The orange one is older, just before it starts to form a Chrysalis (below)



Gulf Fritillary Butterfly



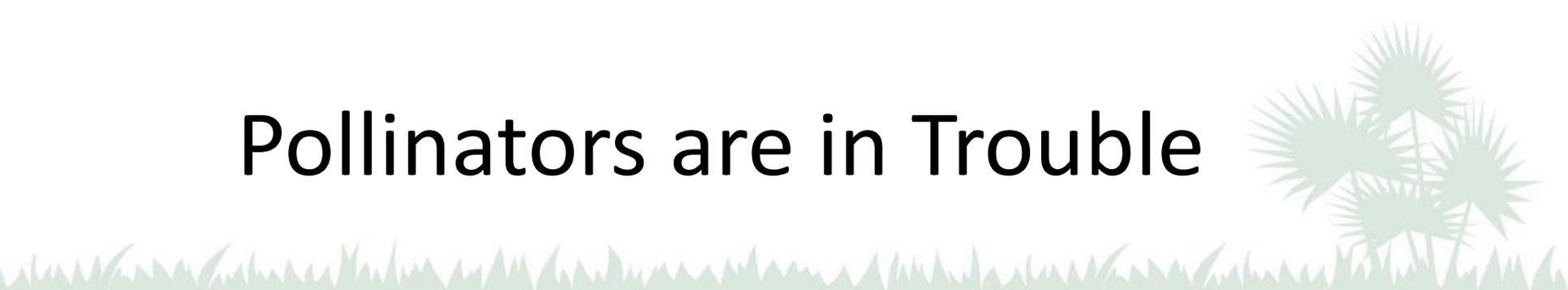
Zebra Longwing The State Butterfly of Florida



Chrysalis



Pollinators are in Trouble



- Pollinators are under threat from **habitat loss, pollution and needless overuse of pesticides**. They are not only beautiful creatures, they also pollinate some 75% of human crops.

What would we do without them?

- Researchers do not know what would happen to humanity if we were to lose our pollinators.

(How about, let's not find out?!)

If we can turn our backyards and our communities into havens for pollinators, providing them with all of their needs, protecting them from pesticides, we may be able to save them before it is too late!

Much of Human Food is Pollinated by Bees



FRUITS

- ⊗ Almonds
- ⊗ Apples
- ⊗ Apricots
- ⊗ Avocadoes
- ⊗ Blueberries
- ⊗ Cherries
- ⊗ Citrus
- ⊗ Cranberries
- ⊗ Grapes
- ⊗ Kiwifruit
- ⊗ Loganberries
- ⊗ Macadamia nuts
- ⊗ Nectarines
- ⊗ Olives
- ⊗ Peaches
- ⊗ Pears



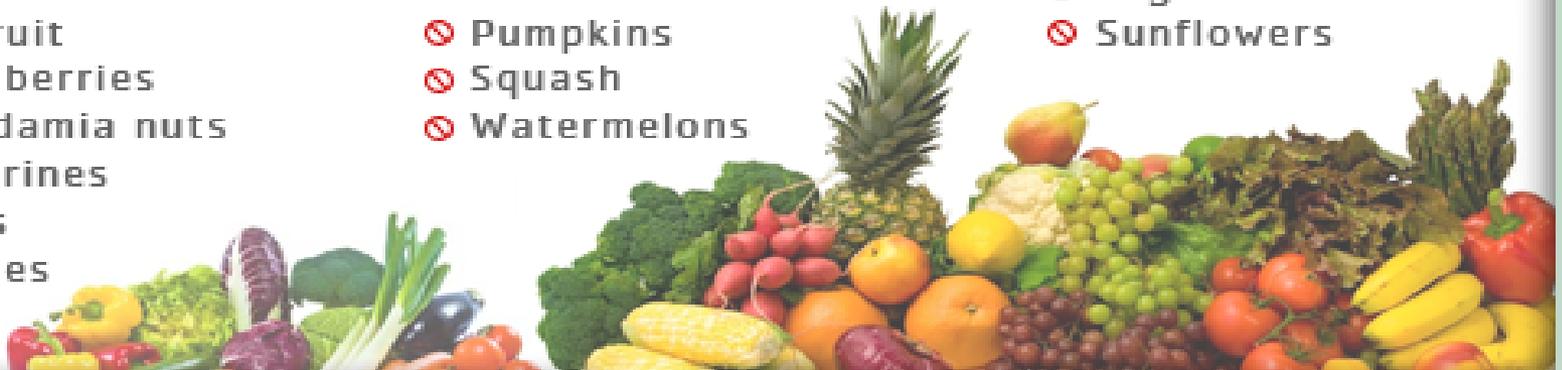
VEGETABLES

- ⊗ Asparagus
- ⊗ Broccoli
- ⊗ Carrots
- ⊗ Cauliflower
- ⊗ Celery
- ⊗ Cucumbers
- ⊗ Cantaloupe
- ⊗ Honeydew
- ⊗ Onions
- ⊗ Pumpkins
- ⊗ Squash
- ⊗ Watermelons



FIELD CROPS

- ⊗ Alfalfa Hay
- ⊗ Alfalfa Seed
- ⊗ Cotton Lint
- ⊗ Cotton Seed
- ⊗ Legume Seed
- ⊗ Peanuts
- ⊗ Rapeseed
- ⊗ Soybeans
- ⊗ Sugar Beets
- ⊗ Sunflowers



The plight of the honeybee ^(European)

These are the non-native bees that are most commonly cultivated as “working bees” for humans because they are the only ones who produce honey.

- 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- neonicotinoids



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...
- Ten years later seven species of native Hawaiian bees are put on the Endangered Species List.

Must See Bee Documentaries

The background features a light green field with a white border at the top. The border contains a silhouette of grass and several stylized, spiky flowers. The main content area is a solid light green color.

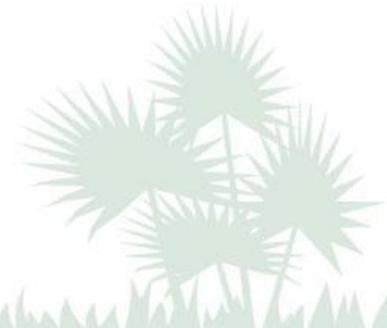
More than Honey 2012

Queen of the Sun what are the bees telling us? 2010

Vanishing of the Bees 2009

Who Killed the Honeybees? 2009

If You Want To Protect Pollinators- Stop Spraying Pesticides



#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, and also learn to tolerate a little damage.



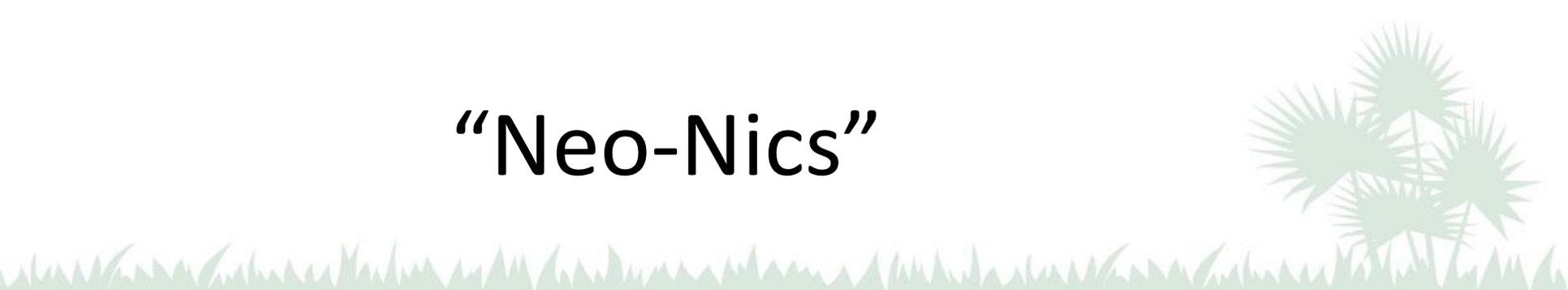
Gulf Fritillary
Butterfly
Caterpillars
Eating Native
Passionvine



Ladybug Larva



“Neo-Nics”



- Have you heard of Systemic insecticides?
- Chemical name Imidacloprid is a big one.
- It is also referred to as a “Neo-Nicotinoid” (as in a synthesized version of Nicotine)
- Super heavy usage of this pesticide in the early 2000’s made it a suspect in the bee colony collapse disorders
- Many people do not realize that Rx Flea and Tick medications for cats and dogs like Advantage, K9 Advantix contain these, or this family, of pesticides.

If your plan is to attract and foster Native Bees, Honeybees and other pollinators, 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



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?**

IPM is Integrated Pest Management

Encourage- Don't Kill Beneficial Predator Insects

Cryptolaemus montrouzieri larvae
Aka the Mealy bug Destroyer

Metamorphosis- the Instars

Adult Beetle- Final
Stage of *Cryptolaemus*



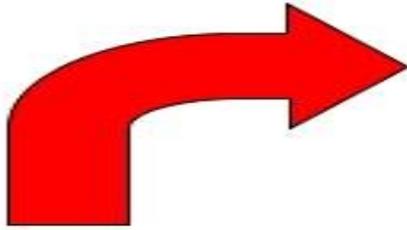
Lifecycle of the Mealybug Destroyer- a Beneficial Predator Insect

Ladybugs are Voracious Predators- particularly of Aphids

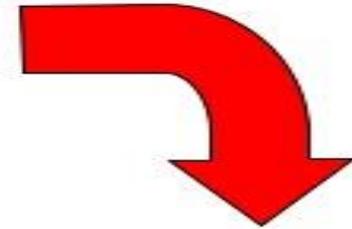


Both Larval Stage and Adult Ladybugs are Excellent Predator Insects!

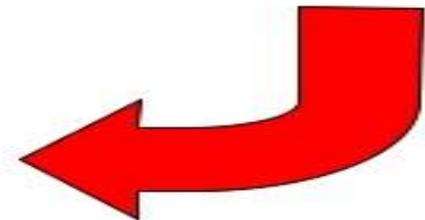
Life Cycle of a Ladybug



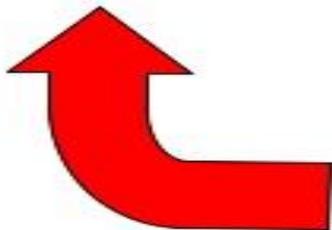
Adult Ladybug



Eggs



Larva



Pupa

Meet the Lacewing

The 3 p's



Pretty -as delicate eggs

Predator (as larva) eating aphids, scale insects and thrips

Pollinator- as adult



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.



Florida-Friendly
Landscaping™ PROGRAM



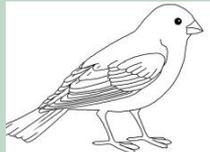
Pollinator -attracting Plants

Remember, Florida-Friendly plants don't *have* to be native.. but it is great to use as many natives as you can

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, especially Hummingbirds!

Look for these Icons:



Choose a Mix of Plants that Bloom at *Different* Times of the Year so that You *Always* have Something for the Pollinators to Eat

Make sure you choose both pollen-providing and nectar-providing flowers



Black-eyed Susan -provides pollen
Blooms in spring



Purple Firespike –provides nectar
Blooms in fall

Florida-Friendly

Perennials



A perennial is a plant that lives for an extended time and that flowers and produces seed throughout its life.

Beach sunflower

Helianthus debilis

Blooms most
of the year.
Can be a bit
aggressive.



Ground cover

Native

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, returning when it warms up.



Native

Lanceleaf Coreopsis

Coreopsis lanceolata



Native- pollinators love it!

Self-seeds readily

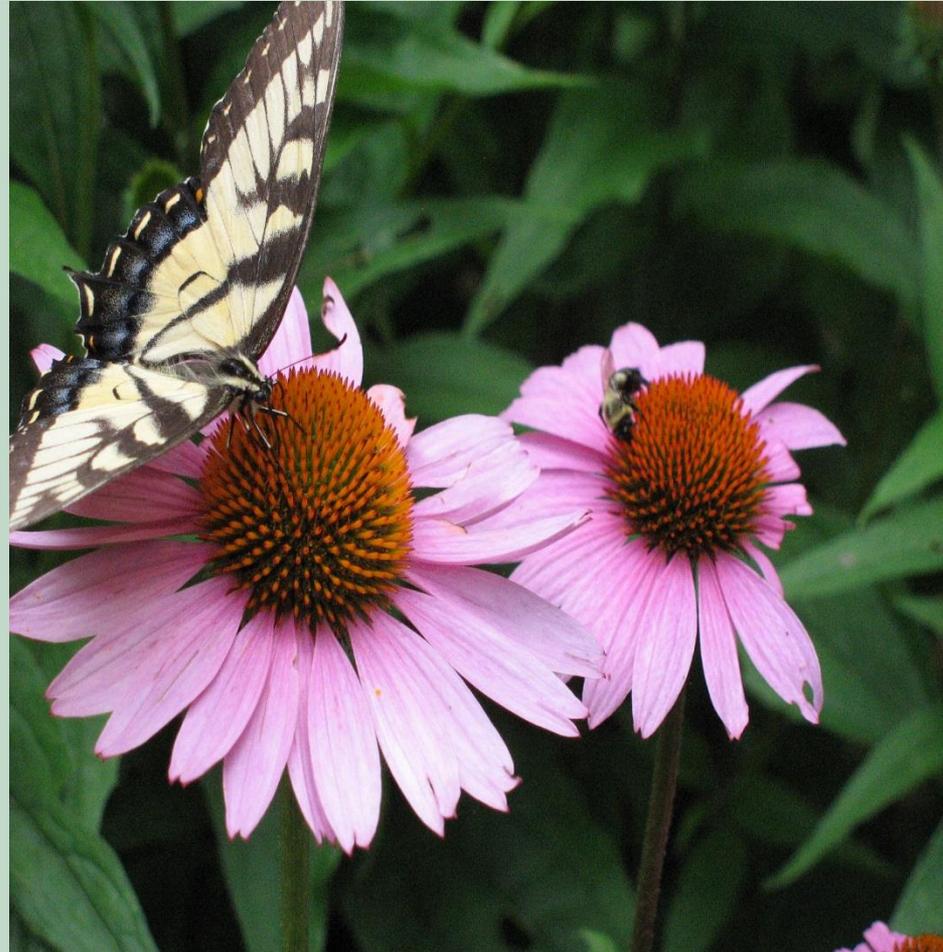
Peak bloom is late spring but most of year you get some flowers



Purple Coneflower

Echinacea purpurea

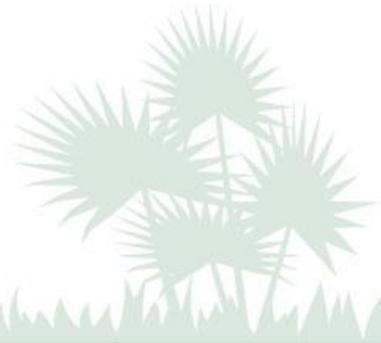
- Beautiful native plant that pollinators love with medicinal properties for humans. A gorgeous addition to any garden.
- Blooms Spring-Summer



Native

Black-eyed Susan

Rudbeckia sp.



Blooms in summer



Cut leaf coneflower



Natives

Stoke's Aster

Stokesia laevis



- Native, evergreen perennial
- Starts blooming in spring up till fall or even longer.
- Considered deer resistant
- Bees and Butterflies love it.



Bastard Indigo

Amorpha fruticosa



- Native Larval Food Source for a few different butterflies, including Southern Dogface
- Bees also love it
- Blooms in hotter months



Oblong twinflower

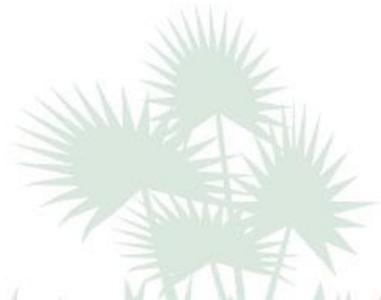
Dyschoriste oblongifolia

- Native Larval Food Source for the Common Buckeye Butterfly
- Member of Snapdragon family
- Likes acidic, dry soils
- Groundcover up to 12"
- Evergreen
- (Flowers are tiny-this is magnified!)



Turkey Tangle- Frogfruit

Phyla nodiflora



- Native Larval Host Plant for several butterfly species
- Not a weed, but it will volunteer in your yard.
- They sell it at Sweetbay, so be glad if you get it for free!



Spanish Needle

Bidens alba



- Ok, so this one is usually considered a weed... but it IS Native and they let it grow at Fairchild Tropical Gardens to help the pollinators...
- It is also a **Native Larval Host Plant**. And all bees love this plant!
- It goes to seed in winter, dies and returns full force as seedlings in late Spring thru Summer-Fall



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!



There is also a native-
Wild Sweet Basil
Ocimum campechianum



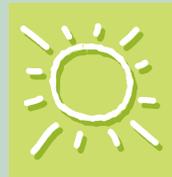
Bee Balm also called Dotted Horsemint

Monarda punctata

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



Native



Native Vines are Best Bet

- Non-native Vines can become aggressive and difficult to manage, even if they are not on the Invasive species lists
- Native vines still need to be managed, but nowhere near to the degree on Non-native Vines.



Cross vine is NATIVE

Coral Honeysuckle Vine

Lonicera sempervirens

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

Larval Food Source for
Gulf Fritillary and Zebra
Longwing Butterflies

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

Florida-Friendly Shrubs

The background features a light green gradient. At the top, there is a decorative border consisting of a row of stylized grass blades. To the right of the title, there are several stylized palm trees with spiky fronds.

Here are some great small trees, shrubs, accent and specimen plants that will attract both birds and pollinators to your yard!

Jatropha spp.

Jatropha integerrima

Small tree- max 15' tall x 10' wide
Scarlet, year-round flowers
Attract butterflies and hummingbirds
Drought-tolerant
Species selection important
- some are invasive
Integerrima and *multifida* are fine



Not Native



Bloodberry bush

Cordia globosa

Native shrub that is always teeming with native bees! Butterflies visit often too!

Birds love the red berries!

Drought tolerant

Another common name is
Butterfly sage

Can be frost sensitive



Native



Fire-bush

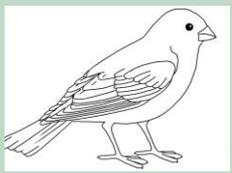
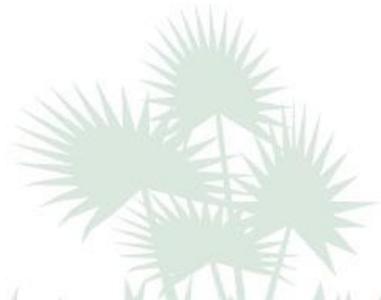
Hamelia patens



Native- big leaf,
Less yellow on
flowers

Simpson stopper

Myrcianthes fragrans



Native

Wild lime

Zanthoxylum fagara

Native Larval Food Source for Giant Swallowtail Butterflies

Pretty foliage with citrus scent when leaves are crushed, does have thorns.

Native small to medium- sized tree

Can be grown in full sun or used as An understory tree in more shade

Up to 20' tall x 12' wide



Here he is,
Looking
Like poop!



Walter's 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!

Fruit attracts birds



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 of 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

Coral Bean

Erythrina herbacea

Native, spring bloomer with
stunning red, tubular
flowers hummingbirds love

Also has interesting foliage



Bahama Cassia

Senna chapmanii



Native Larval Host Plant for
Sulphur Butterflies

Blooms Fall-winter

Becomes a large shrub-
3-9' tall x wide

Easy, low maintenance



Coontie

Zamia pumila



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



Native

Sea Grape

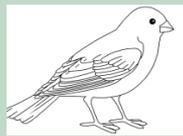
Coccoloba uvifera

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

Necklace Pod

Sophora tomentosa

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



Native

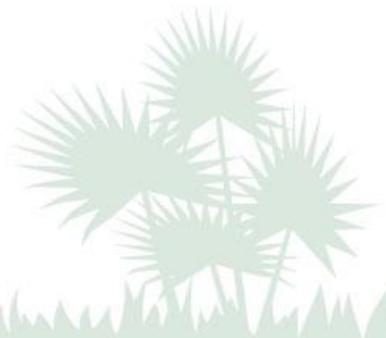
Here are some plants who bloom and look their best during the Winter-Spring season in Florida

Snowbird Season Bloomers



Key West Skyblue Clustervine

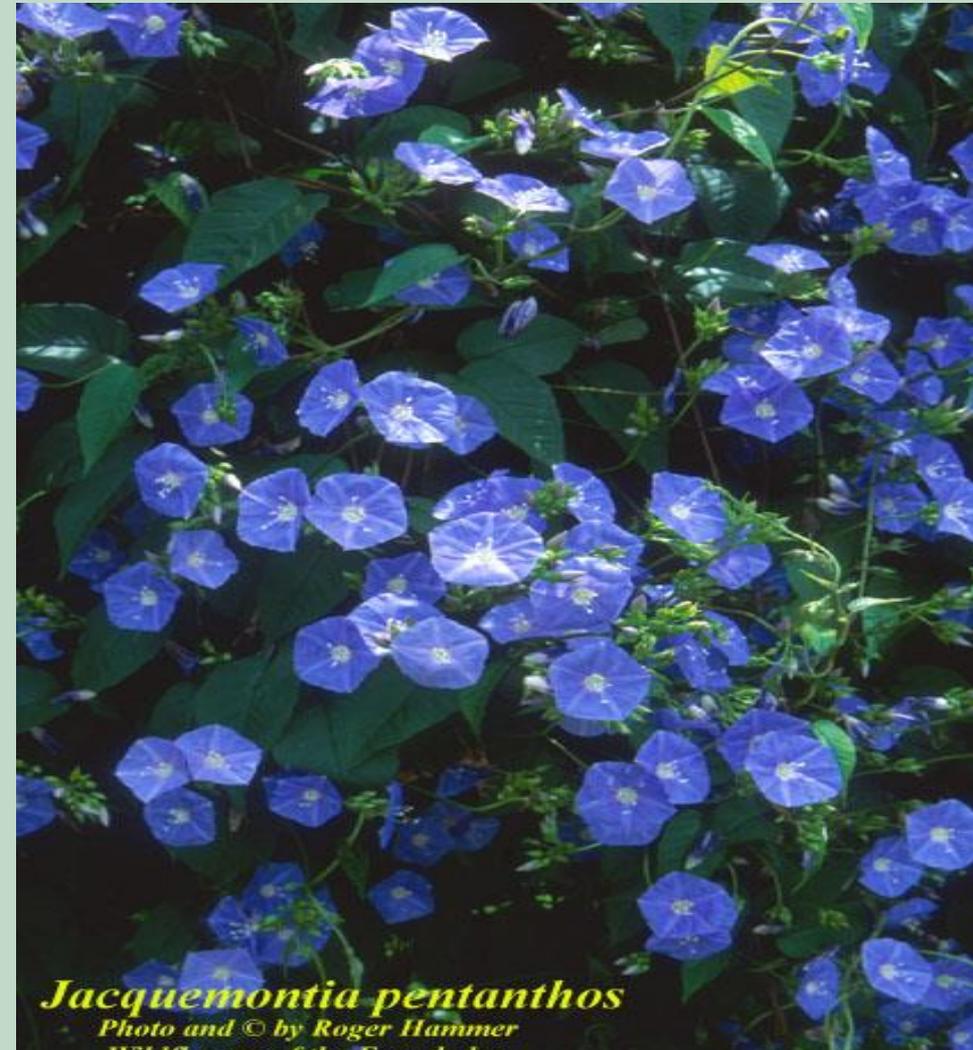
Jaquemontia pentanthos



Blooms fall- winter mainly

Native Vine

Endangered



Jaquemontia pentanthos

Photo and © by Roger Hammer

Black-eyed Susan Vine

Thunbergia alata

Perennial vine that climbs, dies back and returns to bloom in Winter- Spring

Sometimes all yellow flowers, or all orange or a mix of white, yellow, cream and orange on one plant

Sun or shade- more vigorous in more sun



Bougainvillea spp.



Bougainvillea thrives in DRY, cool conditions
So it is happiest and blooming at its best
during the Winter-Spring months in Florida

It is considered a vining shrub but can be
trained to do almost anything, with a little
patience and some thick leather gloves!



This one is a tree-form bougainvillea! It has
very few thorns! It also has fragrant flowers.
Called *Bougainvillea arborea*.

‘Torch Glow’ is a fuschia thornless shrub

Lion's Ear *Leonotis leonurus*

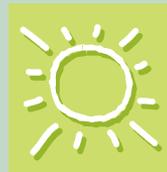


Rounded shrub up to 5' tall x 3' wide

Attractive to Hummingbirds

Needs Full Sun

Thrives in dry areas, no irrigation needed once it is established (except in droughts)



Cape Honeysuckle

Tecoma campensis



Blooms Fall-Winter –very showy blooms,
bright orangey-red

Attracts Hummingbirds and Butterflies

Gets up to 12' tall



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, including Winter

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

Prefers some shade- like North or East
side of house



Non-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

Looks best in partial shade



Purple Firespike

Odontonema strictum



Same genus and species as red firespike

Same attributes, needs and bloom times

Red Powderpuff

Calliandra haematocephala

- Blooms in most months
- High drought tolerance once established, but can be difficult to establish
- Large, fragrant flowers during warm months
- Attracts pollinators- Bees esp
- Can be large shrub or small tree



Not Native

Mulhy grass

Muhlenbergia capillaris

Native



- Tolerant of both extreme drought and flooding

- Pink plumes in fall are quite beautiful
November is peak.

- After blooming, the seeds attract birds

- Beneficial insects such as lady bugs like to live in the grasses, so do native rabbits.



Native Pineland Lantana

Lantana depressa



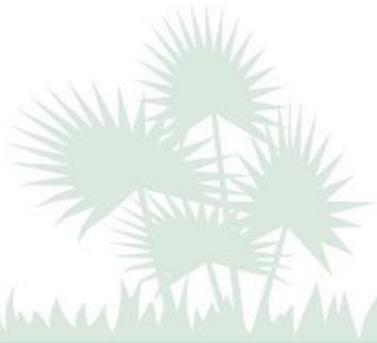
Lantana depressa
Photo and © by Roger Hammer
Wildflowers of the Everglades

Most Lantana varieties sold in big box stores and non-native nurseries are the INVASIVE ones.

This particular lantana is native and is sold in native plant nurseries such as Sweetbay in Parrish or Florida Native Plants In Myakka.

Attracts pollinators like native bees

Florida Lobelia *Lobelia floridana*



Native FL plant

Blooms in Winter

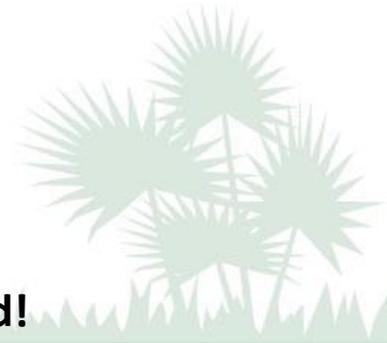
Needs wetter soils

Attracts butterflies



Scarlet sage

Salvia coccinea



Blooms year-round!



**‘Coral Nymph’
Tropical Sage**



Tropical sage

Native

Zinnia elegans

- Grow beautifully here!
- Low maintenance
- Always great colors/ combinations
- Low water usage
- Non-native but attracts wildlife



Kalanchoe *K.blossfeldiana*



Blooms in nearly any color
you can think of

Succulent, needs little water or care

Re-blooms seasonally Winter-Spring

Will bloom in shade or part-shade

Can attract Hummingbirds



Dianthus 'Sweet William' *D. barbatus*



Also likes drier conditions.
Plan this for an area not
heavily irrigated and well-
draining.

Blooms Winter- Spring

Crossandra spp.



Perennial that blooms Fall-Winter

Snapdragons *Antirrhinum majus*



Non-native Annual (Short Season)

They thrive in Florida's Winter and cool Spring

They now come in deeper colors like burgundy and lipstick red.

Petunias

They love the cooler temps of Florida's Winter-Spring will start to fade out by the time the heat returns. Plant in late Oct-plan to remove in May

Nearly every color imaginable!



Geraniums

Prefers the cool

Plant in November,
Plan to replace in May or June

Virtually every color
under the sun

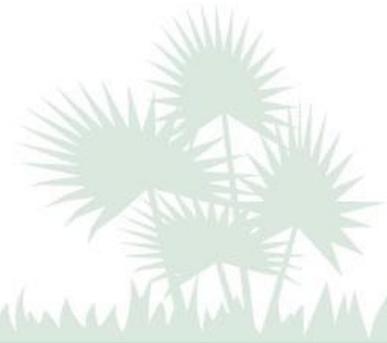
Classic Geranium



Trailing Ivy Geranium



Pansies



They like the cold, usually can withstand freezing temps. In Florida they can only thrive from Dec- April



Fringe tree *Chionanthus virginicus*

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



Eastern Redbud *Cercis canadensis*



Native, Larval host plant for butterflies

Considered a small tree/ large shrub
It gets to be 30' high by 35' wide.

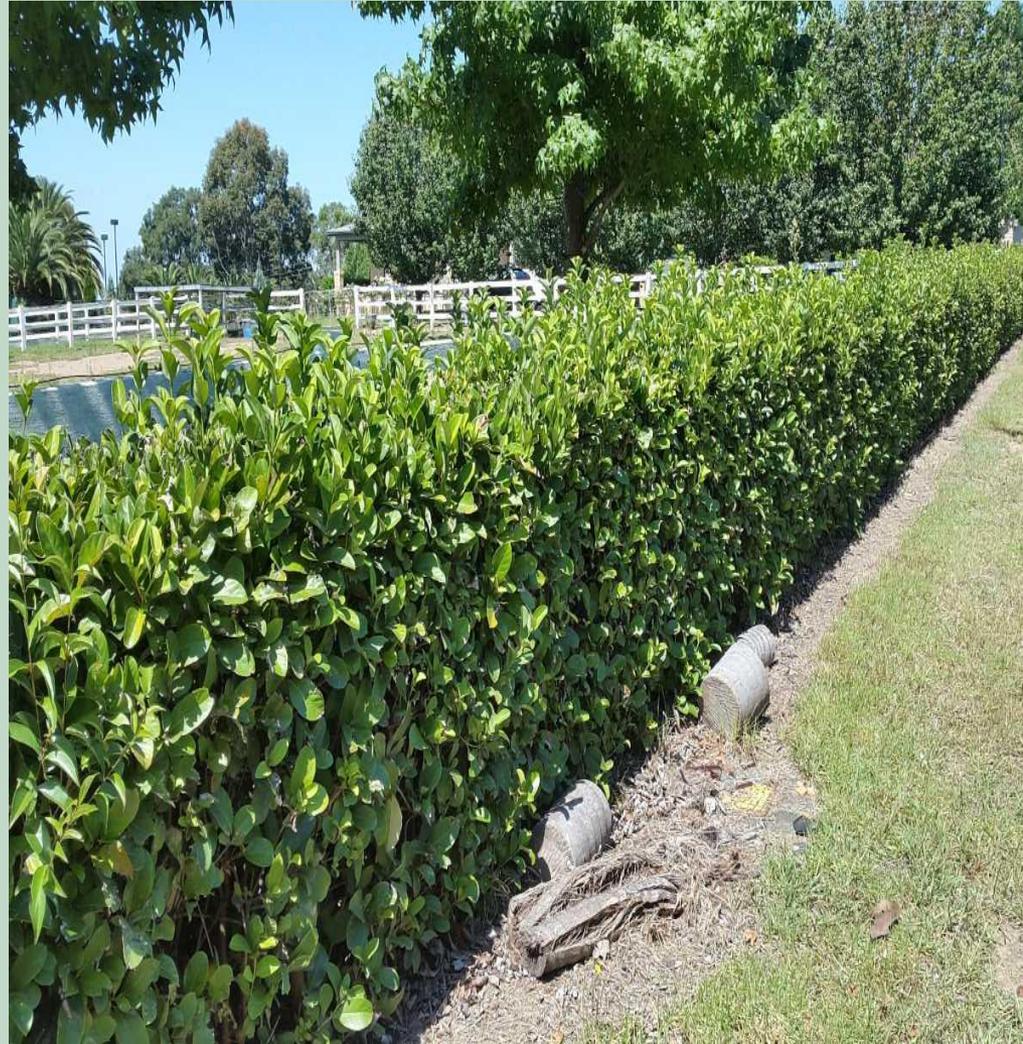
Deciduous, it blooms Winter-Spring

It attracts butterflies and birds and lust
from onlookers!

Discourage Monocultures

Lack of diversity in the landscape welcomes insect pests and disease

One very long hedge of *Viburnum odoratissimum* pictured



Encourage Plant Diversity!



Imagine Your Life Without...

Coffee

Chocolate

Almonds



or Blueberries ???

Among others...

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!

Florida Backyard Wildlife Habitat Program

Another yard recognition program,
this one is with emphasis on
Principle #5 Attracting Wildlife!



The Key to Landscape Success

Following the 9 Principles

Proper planning and plant selection:

- It affects everything else done in the landscape
- Saves energy, effort, water, money, etc.
- Makes the landscape more enjoyable



Plan First, Plant Once

- Clients will come to us looking for advice on what to plant. Be ready to share your knowledge and expertise

- Tell them to first make out a plan.

Resources:

www.ffl.ifas.ufl.edu/plants

www.solutionsforyourlife.com

- Refer to qualified nursery professionals for design. We at Extension make plant recommendations but do not make designs for clients

- Get to know the plants and their requirements and share your knowledge with clients



Getting started?



Put the right plant in
the Right place

Water conservatively

Fertilize carefully

Try to avoid pesticides

Minimize runoff

Encourage others

Additional FFL Resources:

The slide features a decorative header with a light green background. At the top right, there are silhouettes of palm trees. Below the header, a horizontal band of grass silhouettes spans the width of the slide. The main content area has a light green background.

- Adopting Florida-Friendly Landscape-Steps for Converting

<http://edis.ifas.ufl.edu/ep396>

- Searchable database- color photos-plant list and interactive yard for easy design

www.floridayards.org

Landscape Assistance Program

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



It's a Free
Service!

LAP info



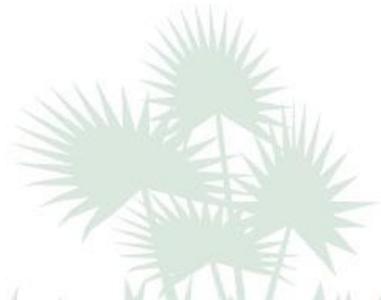
What the Client brings to us:

- Site sketch of property
- Soil Samples –pH, E.C.
- Location, size and ID of existing plants
- Structural features
- Orientation of home on property
- Moisture and light patterns

MG Volunteers provide:

- FFL 9 Principles quick talking points and FFL –based recommendations according to their site and soil conditions, pH readings, etc.
- Advice about irrigation techniques with aim to reduce water usage
- Mulch advice and recommendations
- Best sources for recommended items
- We **do not** offer landscape design

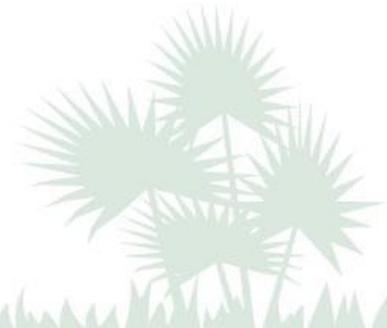
The Plant Diagnostic Clinic



Our extremely knowledgeable and helpful volunteer Master Gardeners can help you with all of your plant questions every weekday except Wed



Mobile Irrigation Lab (MIL)



Irrigation & Landscape
Evaluation Service

FREE



MOBILE IRRIGATION LAB

University of Florida/IFAS
Manatee County
Agriculture & Extension Service

1303 - 17th Street West
Palmetto, Florida 34221





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

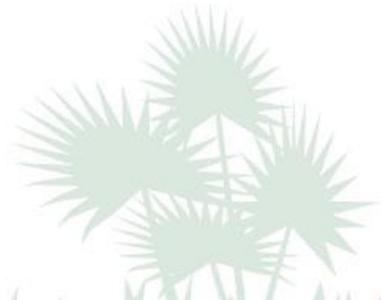
Silver Recognition Level:

As many as 20 Requirements and 50-52 points earned

Thank you and the Pollinators
Thank you too!



Any Questions?



Presentation Credit

Wendy Wilber

Alachua County Extension Service

Modified and Presented by Susan Griffith

Florida Friendly Landscape Coordinator

Manatee County Extension

