

## Strategies to help pollinators

- Choose native plants with varying heights, flower colors, sizes, shapes and bloom times to attract a variety of pollinators year round.
- Provide nesting and egg-laying sites: Ground nesting bees prefer bare soil, while other solitary bees prefer holes in wood in varying sizes. For butterflies, make sure to plant caterpillar host plants.
- Provide a pesticide-free pollinator habitat. Contact Extension Services to help with identifying the insects you are concerned about.

### Alternatives to pesticides:

- Work with natural predators (for example: ladybugs, spiders, and lizards).
- Use strong streams of water or soapy water, or handpick pest insects off the plant.

### If you must use pesticides:

- Minimize damage by **following label directions**.
- Reduce drift - do not spray on windy days.
- Do not apply when pollinators are actively visiting landscapes.

## Websites

UF Native Buzz

[entomology.ifas.ufl.edu/ellis/nativebuzz](http://entomology.ifas.ufl.edu/ellis/nativebuzz)

Gardening for Pollinators - Bees

[brevard.ifas.ufl.edu/Horticulture/pollinators.shtml](http://brevard.ifas.ufl.edu/Horticulture/pollinators.shtml)

Leaf Cutting Bees [edis.ifas.ufl.edu/in619](http://edis.ifas.ufl.edu/in619)

Minimizing Honey Bee Exposure to Pesticides

[edis.ifas.ufl.edu/in1027](http://edis.ifas.ufl.edu/in1027)

USDA Native Pollinators [plants.usda.gov/pollinators/Native\\_Pollinators.pdf](http://plants.usda.gov/pollinators/Native_Pollinators.pdf)

The Xerces Society [xerces.org](http://xerces.org)

Pollinator Partnership [pollinator.org](http://pollinator.org)

North American Pollinator Protection Campaign

[pollinator.org/nappc/index.html](http://pollinator.org/nappc/index.html)

Conserving Pollinators

[extension.org/pages/19581/conserving-pollinators-a-primer-for-gardeners#.VD1qn1cVC8A](http://extension.org/pages/19581/conserving-pollinators-a-primer-for-gardeners#.VD1qn1cVC8A)

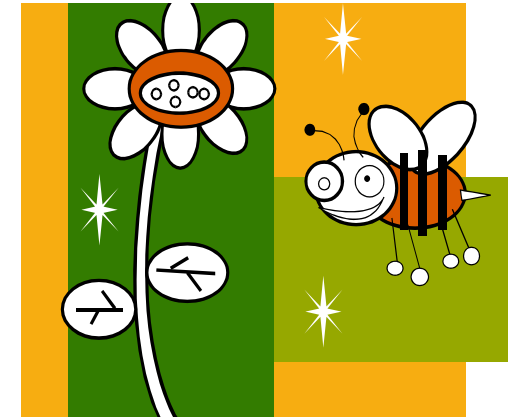
UC Berkeley Urban Bee Lab [helpabee.org](http://helpabee.org)

Alternative Pollinators: Native Bees

[jswcd.org/download/conservation\\_info/native\\_pollinators/ATTRA%20native%20pollinators.pdf](http://jswcd.org/download/conservation_info/native_pollinators/ATTRA%20native%20pollinators.pdf)

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## Attracting Florida Keys Insect Pollinators

Bees

Beetles

Wasps

Flies

Butterflies

Moths

**MONROE COUNTY EXTENSION SERVICES**

**1100 SIMONTON STREET, SUITE 2-260**

**KEY WEST, FL 33040**

**(305) 292-4501**

**HTTP://MONROE.IFAS.UFL.EDU**

# Why care about pollinators?

## Benefits:

- Pollinators are vital for production of some Florida fruits and vegetables, such as: blueberries, apples, oranges, cucumbers, watermelon, mangoes and cacao.
- Pollinators help preserve our native plant communities.
- Pollinators are a part of nature - pollinating food crops and as a food source for wildlife.
- Pollinators are drawn to the bright colors of flowers where they feed on nectar. As they feed, they transfer pollen from flower to flower, increasing plant reproduction.

## Threats:

- Habitat loss and fragmentation
- Pesticides and other pollutants
- Climate change
- Exotic plants and insects
- Diseases

**Bees:** Most important pollinator group feeding their babies on collected pollen and nectar. There are many native solitary bees species: leaf cutter, mining bees, and sweat bees.



*European Honey Bee*

European Honey Bees are introduced as hive dwelling bees. Africanized Honey Bees (AHBs) have been increasing throughout the Florida Keys since first found in 2007. Learn more about AHBs at <http://edis.ifas.ufl.edu/mg113>.



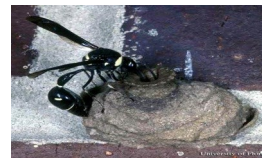
*False blister beetle*

**Beetles:** One of the oldest and most diverse groups of plant pollinators. Attracted to fruity fermenting flowers and are important pollinators of Atemoya and Sugar Apple. Examples: blister beetles, sap beetles, jewel beetles, and scarab beetles.

**Wasps:** Ability to pollinate plants is limited due to short tongues and lack of pollen trapping hair. Attracted to shallow flowers, honeydew (sticky insect waste), soda cans spills, and rotting fruit.

Examples: yellow jackets, paper wasps, and potter wasps

**Most wasps do not sting!**



*Potter wasp*

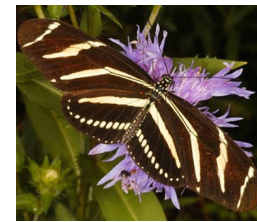
# Meet the Pollinators



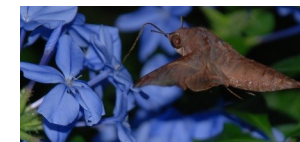
*Flower Fly*

**Flies** are pollinator generalists, consuming nectar for energy. Flies may resemble bees, having only two wings. Two tasty food crops, mangoes and cacao, are pollinated by different flower fly species.

**Butterflies:** In the Florida Keys there are over 100 butterfly species. Butterflies are accidental pollinators in the process of drinking nectar. Spanish needles (one of our most abundant yard weeds) is a popular nectar source.



*Zebra Longwing Butterfly*



*Hawk Moth*

**Moths** are accidental pollinators, some species are known as "Hawk Moths." Moths are important pollinators of night blooming plants. Some are day flyers.