



Keep Tampa Bay Beautiful

KEEP AMERICA BEAUTIFUL AFFILIATE

INVASIVE WORKBOOK

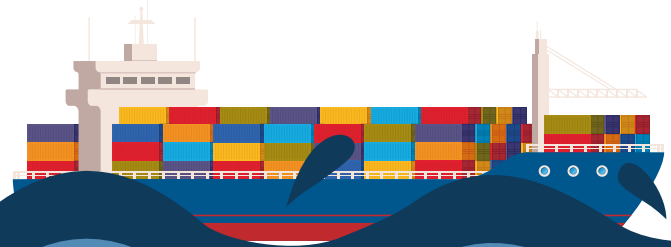
WHAT ARE INVASIVE SPECIES?

Invasives are introduced species and can be plants, animals, a disease or a parasite that can harm the environment, our economy, or human health.

*Not all nonnative organisms (those not historically local to an area) are considered invasive. Some cause no harm to the environment they live in.

WHY ARE INVASIVE SPECIES A PROBLEM?

Due to few predators or no predators at all, an invasive population grows rapidly. They also outcompete native species for food, water and habitat. This can cause some native species to struggle to survive as well as the local environment to become affected.



HOW DO INVASIVE SPECIES GET HERE?

Some invasives can travel unintentionally, for instance attached to boats, and some are intentionally brought here to sell. For example: someone buys a lionfish for their tank. They can't take it with them when they move so they release it into the ocean. The lionfish can out-compete native species for food and space causing a huge problem in Florida.

FLORIDA INVASIVE PROFILE:

Burmese python

- The nonnative Burmese python was likely introduced to Florida's Everglades by accidental or intentional releases by pet owners
- Burmese pythons possess an insatiable appetite. They can not only kill Florida native prey species and pose a threat to humans, but also rob panthers, birds of prey, alligators and bobcats of their preferred foods



Information Credit: sfwmd.gov

FUN FACT:

The largest Burmese captured in Florida measured over 18 ft in length!

Lionfish

- It is believed that the lionfish issue began with the aquarium trade. The most popular explanation for their release is the destruction of housing during the heavy hurricane seasons
- These fish are voracious feeders consuming over 50 species of reef fishes, shrimps, crabs, and sometimes small spiny lobsters. Many species they prey upon are economically important to Florida



Information Credit: blogs.ifas.ufl.edu

Cane Toad

- The skin-gland secretions of cane toads are highly toxic and can sicken or even kill animals that bite or feed on them, including native animals and domestic pets.
- Cane toad eggs also contain bufotoxin and can harm or kill native animals that consume them
- You can own them as pets but they should never be released into the wild
- They eat anything and everything, including native frogs, insects and fish



Information Credit: myfwc.com

Tegus



- Tegus compete with and prey upon Florida's native wildlife
- Tegus prey upon some imperiled and protected species, such as the nests of American alligator eggs, American crocodile and the threatened juvenile gopher tortoises
- They also eat agriculturally valuable foods
- Adults have few predators and can give birth to large numbers of offspring per year, so their populations grow rapidly

Information Credit: myfwc.com

Cats

- According to the FWC, a free-ranging domestic cat can kill 100 birds per year. Unlike most predators in the wild, a pet cat that is being fed will stay in one area and continue to hunt even when prey populations decline
- Cats also can carry toxoplasmosis, a parasite they excrete that can kill manatees and other mammals



Information Credit: sfwmd.gov

Iguanas

- Green iguanas cause damage to residential and commercial landscapes, and vegetation. They are often considered a nuisance by property owners
- Iguanas are attracted to trees with foliage or flowers, most fruits (except citrus) and almost any vegetable
- Some green iguanas cause damage to infrastructure by digging burrows that erode and collapse sidewalks, foundations, seawalls, berms and canal banks
- Green iguanas may also leave droppings on docks, moored boats, seawalls, porches, decks, pool platforms and inside swimming pools

Information Credit: myfwc.com



FLORIDA INVASIVE PROFILE:

Brazilian peppertree

- These were planted because the green leaves and bright red berries reminded Floridians of Christmas holly bushes. Instead of a nice Christmas present, Florida was in for a nasty surprise
- Brazilian pepper is now considered one of the most invasive species in the state
- It grows next to water and crowds out mangroves and other native plants, but doesn't provide the same high quality habitat

Information Source: Southwest Florida Water Management District



BEWARE:

Getting rid of it is difficult, and for some people – itchy!

Melaleuca trees

- These troublemakers form gangs and chase everybody else out of town, growing in groves so dense nothing else can live with them
- They grow to about 80 feet tall and draw too much water from the soil
- They don't like the cold so they're more of a problem in southern Florida, where they have gobbled up hundreds of thousands of acres in the Everglades

Information Source: Southwest Florida Water Management District



Photo Credit:
Florida Sea Grant

Australian pine

- People planted them for lumber, to stabilize beaches and for shade
- Now they chase away other beach plants with chemical warfare - chemicals in its leaves can inhibit the growth of neighboring plants
- When things get windy, instead of stabilizing the beach like native plants, they blow over. This can mess up nesting sites for sea turtles and gopher tortoises



Hydrilla

- Hydrilla canopies lower oxygen in water, leading to reduced aquatic life
- Hydrilla decay doubles the amount of sediments that accumulate in a water body
- Dense hydrilla infestations can restrict water flow resulting in flooding along rivers and canals
- Hydrilla canopies produce ideal breeding environments for mosquitoes
- Dense hydrilla canopies shade out native submersed vegetation lowering biodiversity
- Hydrilla infestations restrict recreational activities such as boating, swimming and fishing



Information Source: myfwc.com

Water Lettuce

- Water-lettuce mats can lower oxygen concentrations too, reducing aquatic life
- Dense populations may lower water levels because water-lettuce increases evaporation rates over open water areas
- Water-lettuce mats can restrict water flow increasing flooding along rivers and canals
- Dense water-lettuce populations produce ideal breeding environments for mosquitoes
- Water-lettuce populations crowd out native plants and animals (lowers biodiversity)
- Because of its aggressive growth rate, water-lettuce is illegal to possess in Florida without a special permit



Information Source:
myfwc.com

Old World climbing fern

- Highly invasive in undeveloped areas
- Severe threat to Everglades tree island communities
- A canopy producer that smothers native trees and shrubs
- Can serve as a fire ladder that carries fire into native tree canopies that normally wouldn't burn
- The fern is rapidly spreading in South Florida's public conservation lands



Photo & Information Credit:
myfwc.com

WHO CAN HELP?

Mimosa



Christmas cassia



tuberous sword fern



Wedelia



FOR GARDENERS

- Check out UF's Florida Friendly Landscaping when planting in your garden
- Check to make sure the plants you buy are not invasive, like the plants pictured - stores can sell plants that are supposed to be kept in pots
- Remove and treat invasives
- Stick with native plants in your garden, they are a natural defense against invasives



FOR PET OWNERS

- Never release aquarium fish or plants into Florida's water bodies
- Keep your cat indoors if you are able
- If you can no longer care for your exotic pet, surrender it at one of FWC's Exotic Pet Amnesty Day events. You will not be penalized and the animal will be placed in the care of a pre-approved adopter
- Learn about regulations and permitting requirements for certain exotic pets at the FWC's website

Goldfish



Tegus



Clean all watercraft



FOR BOATERS

- Inspect boating and fishing equipment after coming out of the water, and remove any "hitchhiking" plants or animals
- Remember to Clean, Drain and Dry every time for every body of water
- Take part in the Everglades CISMA's annual Nonnative Fish Roundup



Asian citrus psyllid



FOR CAMPERS

- Decontaminate your equipment. Boats, canoes, kayaks, bicycles, tents and hiking shoes can be potential carriers of seeds of invasive plants
- Firewood can also carry invasive species. Be sure to buy that at the park where you are camping

Information Credit: www.floridastateparks.org

Air potatoes

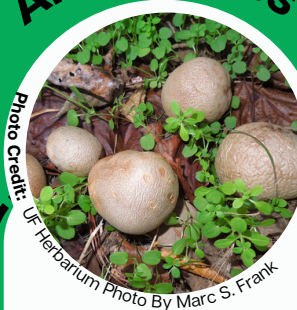


Photo Credit: UF Herbarium Photo By Marc S. Frank

FOR HIKERS

- Do not take plants or animals home with you
- Volunteer to help survey natural areas to identify locations where invasive species are known to grow
- Volunteer to help with hand-removal events. Many local and state parks host special events where volunteers can help with removing invasive species. Popular events include air potato roundups.

Information Credit: www.floridastateparks.org

FOR EVERYONE

- Learn how to identify nonnative animals and plants so you can tell them apart from native Florida species. The Everglades CISMA offers many identification tools on their Publications & Tools page
- Download the “IveGot1” app for iPhone or Android so you can identify and report invaders wherever you go
- Report invasive species by calling 1-888-IVE-GOT1 or online at www.IveGot1.org
- Take the Introduced Reptile Early Detection and Documentation (REDDy) online training course to learn how to recognize and report large, invasive reptiles
- Join the Python Patrol! This training program teaches people how to identify Burmese pythons, capture them safely and humanely, and properly report the data to the FWC. Visit the FWC’s website to find out about upcoming workshops

Information Source: www.evergladescisma.org