Welcome to Crystal River Preserve State Park — a place to experience Florida's rich plant and animal life. While you're here, we'd like to bring attention to some invasive plant species that are a serious ecological threat within this park and other natural areas throughout the state.

What Is An Invasive Plant?

Of the more than 4,000 plant species found in Florida, 1,300 or more are **non-native*** or **exotic**; they come from other countries or regions within the U.S. At least 130 of these exotic plants are spreading rapidly throughout our natural areas and private lands. When they cause environmental or economic harm, they are considered to be **invasive**.

So, What's The Problem?

In their native ranges, plants generally do not become a nuisance. Today, with modern transportation, many exotic plants have caught a free ride to Florida. Once they arrive, they are free from natural enemies that existed in their home range (insects, diseases, etc.) and can outgrow and replace Florida's native plants.

When Invasive Plants Replace Native Plants:

- Native plants can be permanently eliminated, diminishing Florida's natural diversity;
- Animals that use native plants are often unable to adapt, so they leave the area or die out;
- Invasive aquatic plants can completely fill the water column so that fish and wildlife are driven from the area.

* Florida botanist, Richard Wunderlin, defines non-native plants as "those that have become part of the Florida flora following the occupation by European man." In other words, if a plant was introduced after 1513, it is considered to be non-native.

Kudzu infestation

Water hyacinth on the St. John's River, Palatka 1968

Why Should We Care?

Invasive plants are costing Floridians a lot of money; nearly 80 million taxpayer dollars were spent in 2005 to control them. If not kept in check, invasive plants can create ideal breeding grounds for mosquitos, cause serious navigation blockages, and major flooding problems during storms. Boating, swimming, hiking and other uses of natural areas can also be made difficult, even dangerous, by invasive plant infestations.

Keeping Things Under Control

After much research, we know that some invasive plant species will never be eradicated in Florida; they simply reproduce too fast. So now, the strategy is to keep infestations at the lowest feasible levels. This helps lessen overall environmental damage; it maintains habitat for native wildlife; and it keeps the plants from damaging bridges and flood control structures. It also reduces the total amount of herbicides needed over the long term.

Control of invasive plants allows greater enjoyment of our waters and natural areas, and preserves Florida's natural diversity.

Help Us Control Invasive Plants by Keeping Them Out of Your Landscape at Home

Preventing the introduction and spread of non-native plants in Florida is the most effective and least expensive means of protecting Florida's natural habitats. Here are a few things we can all do:

- Learn to identify which plants are invasive, especially in your area.
- Volunteer to help remove invasive plants.
- Inspect your yard, woods, garden, or school for invasive plants; throw them in household trash (don't compost).
- Practice good stewardship: never transport Florida's plants to other areas, and never empty your aquarium into a body of water, even a canal.
- Avoid chopping aquatic plants with boat propellers as some plant fragments can grow into new infestations.
- Remove plant matter from boats/trailers after use; check clothing and shoes for seeds.
- Ask your nursery or garden center for native and/or non-invasive plants.

Park staff controlling an air potato infestation

Learn more about invasive plants:
http://plants.ifas.ufl.edu/guide/invasplant.html

UF UNIVERSITY of FLORIDA IFAS Extension

Invasive Plants You Should Know

Crystal River Preserve State Park

Crystal River, Florida
www.floridastateparks.org/crystalriverpreserve
(352) 563-0450

Identifying Invasive Plants

The non-native plants in this brochure have proven to be invasive in our park and region and are currently being controlled by park staff, contractors and volunteers. Do you recognize any of them? Read on to learn more about these quiet invaders.

Dioscorea bulbifera

A vine introduced as an ornamental and food plant around 1905, **air potato** was already recognized as a pest plant throughout the state by the early 1970s. This "pretty plant" can quickly grow 60-70 feet — long enough to overtop and shade out tall trees. A member of the yam family, air potato vines produce large numbers of aerial potato-like growths which fall to the ground and grow into new vines. They are reported to be bitter when eaten raw and are not considered edible.

Lygodium japonicum

Native to eastern Asia, the **Japanese climbing fern** can overtop forest trees, shading out and even killing them (like its cousin, Old World climbing fern). It often grows as a tangled mass over shrubs and fencelines, smothering ground cover and tree seedlings. It grows throughout the southeastern U.S. In Florida, it occurs north of Broward and Highlands counties and thrives in damp places. Its leaflets are killed by winter frost, but the rhizomes live on. Its reproductive spores, like those of other ferns, can be transported long distances by wind, vehicles, and even clothing and shoes.

Sapium sebiferum

Introduced into the southeastern U.S. from China as early as the 1700s, **Chinese tallow** has been cultivated for about 1,500 years as a seed-oil crop. It spreads rampantly in large natural areas by out-competing native plants, and can thrive in well-drained uplands as well as in bottomlands, shores of waterbodies, and even on floating islands. It is commonly referred to as "Florida aspen" or "popcorn-tree" and continues to be sold in plant nurseries.

Plant descriptions excerpted from *Identification & Biology of Non-Native Plants in Florida's Natural Areas* by K.A. Langeland and K. Craddock Burks, UF/IFAS. ©1998 University of Florida.

Dioscorea bulbifera
air potato - vine; long stems; round, aerial tubers **P**

Lygodium japonicum
Japanese climbing fern - vine with two "leaf" types: 1) multi-lobed, 2) two rows of sporangia on margins **P**

Sapium sebiferum
Chinese tallow - tree to 10 m; milky sap; leaves turn orange in autumn; seeds resemble popped corn **P**

P = This plant is prohibited by federal or state law.

Imperata cylindrica
cogon grass - midrib off-center (see inset above); margins sharp; white, plume-like inflorescence **P**

Paederia foetida
skunk vine - skunk-like odor; tubular pink or lilac flowers **P**

Schinus terebinthifolius
Brazilian pepper - tree to 13m; berries bright red; crushed leaf smells of turpentine **P**

Imperata cylindrica

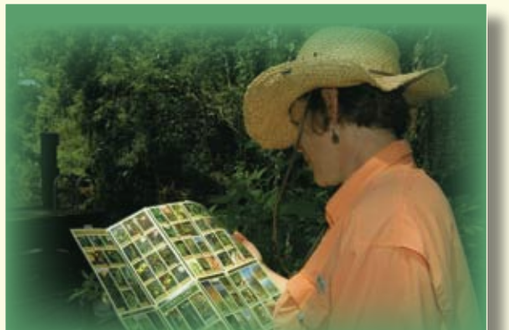
Cogon grass is considered one of the 10 worst weeds in the world and is reported by 73 countries as a pest in at least 35 crops. Native to warmer regions, it was brought into the U.S. as an experimental forage and as packing material. It is a serious weed of dry lands in Florida, but also occurs in places that become briefly flooded. It can cover large areas and has invaded the habitats of federally listed endangered and threatened native plant species.

Paederia foetida

Reportedly introduced from Asia in 1897 as a "potential fiber crop," **skunk vine** now occurs throughout the southeastern United States. It prefers sunny floodplains and bottomlands, though it can grow underwater and high into trees in a variety of habitats, from moderately moist hammocks to dry sand hill communities. It has an unpleasant, musky odor.

Schinus terebinthifolius

Brazilian pepper infests both aquatic and terrestrial habitats, greatly reducing the quality of native biotic communities in the state. From South America, it was probably introduced as an ornamental in the mid 1800s. Though this tree is not particularly cold-hardy, it occurs as far north as St. Augustine on the Atlantic coast and Cedar Key on the Gulf coast of Florida. In this park, Brazilian pepper is our greatest invasive plant problem, infesting over 1,000 acres.



Identify plants in your own neighborhood:
http://plants.ifas.ufl.edu/photocat.html