



UNIVERSITY OF
FLORIDA

CNR-8

EXTENSION

Institute of Food and Agricultural Sciences

Florida's Invaders: Exotic Pests¹

The Center for Natural Resources²

Florida's natural ecosystems are increasingly coming under attack by invading exotic species which displace native species, thereby degrading the diversity of floral and faunal resources. Florida has ecosystems not found in the other 47 contiguous states, and it also has more non-native species than any state other than Hawaii. Many of these species have become sufficiently abundant or otherwise destructive to be considered pests. Faculty members at the University of Florida are conducting research and outreach programs to better understand and control these exotic invasive species.

Plants

With its plant-friendly south temperate / subtropical climate and an ongoing influx of human "transplants," Florida particularly suffers from the introduction and unchecked growth of exotic plants. Almost half (1,180) of the 3,834 plant species found in Florida have arrived here since European occupation.

Because plants are the base of the food chain, exotic "takeovers" can jeopardize plant-dependent wildlife and the whole ecosystem. The Florida Exotic

Pest Plant Council (FLEPPC) has identified 64 non-native invasive (Figure 1) species that are invading and disrupting native plant communities (1999 list). Plant pests include hydrilla, old world climbing fern, and melaleuca.



Figure 1. Hyacinth

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2. Nancy Peterson, Program Coordinator

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Control

Management of invasive plants include mechanical removal, herbicides, fire, pathogens (often fungal plant-eaters), and biocontrol (using species-specific natural enemies -- often insects).

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Web Sites

UF/IFAS Center for Aquatic & Invasive Plants
<http://aquat1.ifas.ufl.edu>

The Florida Exotic Pest Plant Council
<http://fleppc.org/>

Bureau of Invasive Plant Management
Florida Dept. of Environmental Protection (FDEP)
<http://www.dep.state.fl.us/lands/invaspec/index.htm>

Plant Protection & Quarantine
U.S. Dept. of Agriculture (USDA)
<http://www.aphis.usda.gov/ppq/>

Division of Plant Industries
Florida Dept. of Agriculture Consumer Services
(FDACS)
<http://doacs.state.fl.us/~pi>

Wildlife

In Florida, at least 60 species of exotic birds have bred in the wild. Despite this fact, the chance of persisting survival of non-indigenous birds is

uncertain. Among those species which have survived and thrived as pests are muscovy ducks, rock doves, European starlings, house sparrows, and monk parakeets.

Though troublesome in other respects, some species (such as feral pigs) are important as prey for native predators (Florida panthers) and serve as an attraction for hunters. However, negative impacts from invasive species include habitat destruction, competition with native species, predation, hybridization, disease and parasites. Florida mammal pests include the Norway rat, roof rat, house mouse, and feral pig.



Figure 2. The Cuban treefrog: One of thousands of species invading Florida's ecosystem.

Control

While dealing with management of invasive wildlife, emphasis has been on preventing future invaders (such as the mongoose) from settling.

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Web Sites

U.S. Fish & Wildlife Service,
<http://www.fws.gov>

Insects

Annually, insect pests cause an estimated \$1 billion in damages in Florida, and many of the worst pests are non-indigenous. According to entomologist Dr. John Capinera, 12-18 invading species become established in Florida annually. These non-natives arrive by flying, walking, swimming, rafting and by stowing away on cargo (often on infested plants commercially imported).

Control

Management of exotic pests includes slowing their influx by tightening inspection at the borders and finding other environmentally benign means of control.

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Web Sites

Division of Plant Industry, FDACS
<http://www.doacs.state.fl.us/~pi/>

Featured Creatures, UF & FDACS
<http://creatures.ifas.ufl.edu/index.htm>

Pest Alert, UF/IFAS
<http://extlab1.entnem.ufl.edu/PestAlert/>

Pest Exclusion, APHIS: USDA Animal & Plant Health Inspection Service
<http://www.aphis.usda.gov/>

Books & Articles

Strangers in Paradise
Simberloff, Daniel, ed. Washington, D.C.: Island Press, 1997.

Extension Digital Information System (EDIS),
UF/IFAS
<http://edis.ifas.ufl.edu/>
