Ladies and Gentlemen: The Beetles!
USDA releases first melaleuca biocontrol

Melaleuca Fields Forever?
The melaleuca snout beetle (Oxyops vitiosa) made its long-awaited debut in western Broward county on Saturday, April 26. The first releases were made by several honored dignitaries including Congressman E. Clay Shaw (R - Ft. Lauderdale), Deputy Secretary of Agriculture Richard Rominger, U.S. Army Corps of Engineers Colonel Terry Rice and South Florida Water Management District Executive Director Sam Poole.

Col. Rice charged the little foot soldiers by declaring “The enemy is engaged, we are now ready for battle!” “Bon Appetite!” added Congressman Shaw. The beetles will feed on tender new melaleuca growth - slowing the tree’s ability to flower and produce seed.

Go Forth and Multiply...
Project leader Ted Center reports that the Ft. Lauderdale USDA, ARS Aquatic Plant Control Lab has begun large scale rearing and release. Eleven releases - totaling 950 adults and 500 larvae - have been made at 7 sites throughout south Florida.

The first beetles produced as a result of this effort have begun to emerge within the past few weeks. All adults were marked prior to release so researchers can distinguish them from field-produced progeny. The larvae presumably migrate from the foliage to the ground when they are fully grown. They then pupate in the soil, but will apparently drown if the pupal chamber fills with water. So...one big question about this insect was whether or not it would survive in saturated soil. Several unmarked adults were found at the first release site in fairly wet conditions.

...one big question about this insect was whether or not it would survive in saturated soil.

This indicates that they have survived through at least one generation. Although researchers don’t want to jump to any conclusions, this is a very promising development.

Evaluation of the impacts of this insect is being conducted by Dr. Thai Van and Dr. Min Rayachhetty. They are monitoring stand dynamics, litter throughfall, and seed budgets at six sites representative of wet, seasonally-wet and dry habitats. For more information on this project, contact Dr. Ted Center or Allen Dray at (954) 475-0541.

Inside This Issue:

PLANTS BEHAVING BADLY

BIZARRE: Spotted in the Everglades!

IFAS Brazilian Pepper Control Insert

What's Next?
Dr. Dale Habeck (University of Florida) reports that he is very close to gaining permission to release the state’s first Brazilian pepper biocontrol - the Brazilian pepper sawfly. Stay tuned...
Welcome New Florida EPPC Members

Student
Eric Johnson
Tony Koop
Carolyn Moore
Greg Scottow
Fran Wingard

General
Individual
Trace Wolfe
Robert Irving
Beth Wertschnig
David LeL
Jeff Holland
Rebecca Gubert
Patricia McNeese
Charliee Chase
Jayne Bergstrom
James Robb
Doug Callihan
Edward Freeman
Patricia Howell
John Hammerton
Todd Sumner
Jon Blanchard
Juan Fernandez
Alyssa Zaborock
Rick Armstrong
Scott Glasscock
Dick Sprong
Carla Kappmeyer-Sherwin
Joseph McCaffrey
Jim Weimer

Contributing Individual
Steve Lubbers

General Corporate
Disney’s Animal Kingdom

New EPPC Task Forces
Get Involved!!
Masses of Grasses...
Joe Maguire (Dade County Natural Areas Management) is interested in cranking up an Exotic Grasses Task Force to prioritize, and track invasive exotic grasses statewide. Call or email Joe at: (305) 257-0933 nam@itd.metro.co.dade.fl.us for more information.

Whew, Skunked!
Sheryl Bowman (Hillsborough County Resource Management) is interested in putting together a Paederia Task Force to develop educational and control materials for these stinky vines. Call or email Sheryl for more information. (813) 744-5610 or resmgnt@scfn.thpl.lib.fl.us

Help!!
Mike Bodle (Native Plant Society local arrangements and program chair) and Tony Pernas (EPPC program chair) need help with the 1998 joint meeting. The EPPC/NPS meeting will be held during the first week of June in Palm Beach Gardens...Looking for ideas for a theme, a keynote speaker, raffle items, and paper titles. The boys are also enlisting field trip leaders - Show us your good, your bad, and your ugly!!

Contact Mike Bodle (561)687-6132, mike.bodle@sfwmd.gov or Tony Pernas (941) 695-4111 x23, tony.pernas@nps.gov

THANKS to everyone that “manned” the registration table at the Annual Meeting. Allen Dray (pictured seated with Jayne Bergstrom) was especially appreciative of help from Jayne Bergstrom, Stephanie McCarty, Mike Bodle and Jackie Smith.

Show your support for Florida EPPC!
EPPC T-shirts and hats are now available. Contact Jackie Smith (561) 791-4720.

Thank You
The following companies were generous sponsors of breaks and socials at the Annual meeting:

American Cyanamid
Chemical Containers, Inc.
Novartis

Brewer International
DowElanco
Riverdale Chemical
**Botanical Baubles**

**THE MED FLY** - It's after more than O.J....the fly also feeds on some of our least favorite plants. It will wreak fruiting exotics like Brazilian pepper, Java plum and strawberry guava. But that's not all...Before you slap a "save the Med Fly" sticker on your car, know that it also feeds on many of our fruiting natives like pond apple, seagrape and gopher apple.

**Good Gourd Almighty!** - Lake Okeechobee, that alien craft-landing crater in the middle of peninsular Florida harbors many unique wonders....The endangered Okeechobee gourd (Cucurbita okeechobeensis) - feared extirpated from Okeechobee after several years of high water - has re-appeared around the Lake's southern islands. "It's not a mighty redwood, and you can't even eat the fruit, but this gourd-uous gourd is back, and those that value biodiversity are happier for it," exclaimed an excited water management district biologist Mike Bodle. The gourd likes to vine upward, bloom a characteristic whitish-yellow flower, and set fruit that may hang overhead for months before falling.

**Know Thine Enemy!**

Dr. Ken Langel (University of Florida - IFAS) is wrapping up the long-awaited "Most Invasive Plants of Natural Areas in Florida" field identification manual. This manual includes color photos, and information on identification, invasiveness, and distributions for each EPPC Category I plant. A truly Heraclean task!

**Kudzu - Forty years (and counting) in Broward County.**

Many scoffed, some rebuffed, but all were finally convinced that it was kudzu (Kudzu montana) growing in Broward county - well south of what was thought to be its southernmost limit (although we now know - thanks to Roger Hammer - that it’s also been reported in Dade county). Planted in the 1960s by the Soil Conservation Service, kudzu was "discovered" in 1992 on the edge of the Broward Everglades after mowing frequencies decreased. Water managers thought they had the monster beat with several repeat herbicide applications. But a June 1997 plant survey conducted by Institute for Regional Conservation botanist Keith Bradley found three vigorous kudzu sites on the same Everglades levee. Water management district plant managers are re-loading their herbicide sprayers, and look to a future that will include keeping their eyes peeled for kudzu....

**The Town of Gulfstream**

Inexplicably yanked thier planted Australian pine and re-planted the area with a nice mix of coastal natives - buttonwoods, stoppers and Jamaican capers. Go figure.

**What's in a name?**

Gianni Versace's now-famous South Beach mansion is named Casa Casuarina. It was built by a landscape architect in the 1920s - named for "The Casuarina Tree," a collection of William Somerset Maugham's short stories. And I thought he had taste....

**Paul James - Home and Garden Television (HGTv)'s "Gardening by the Yard" host enthusiastically recommended Imperata cylindrica and Arundo donax as showy ornamental grasses on a recent show. Ugh.**

**BIGFOOT - The Swamp Ape's been spotted in Big Cypress National Preserve recently by several tourists, airboat drivers and Ochopee's fire chief. Chief Doerr reported something large and hairy running across the road on two legs. Tony Pernas is wondering if he can give the thing a machete and a squirt bottle. Hey...Wasn't Jubinsky down there recently?**

**Has anyone noticed...Norfolk island pines (Araucaria heterophylla) are dropping needles and dropping dead all over the state. Although this Australian tree is not considered invasive, it sure is ugly... Better watch your Theodore Geisel (aka Dr. Seuss) memorial garden!**
Florida EPPC Board of Directors Meeting  
May 10, 1997 Ft. Myers, FL  
Minutes
Chairman Greg Jubinsky called the meeting to order at 9:00 a.m. The following Officers and Board members were present: Allen Dray, Dan Thayer, Roger Hammer, Amy Ferriter, Ken Langeland, Jackie Smith, Francois Laroche, Doria Gordon, Bill Snyder (proxy for Tony Pernas), and Doug Devries (proxy for David Jones). Also present: Ed Freeman, Mike Bodle, Keith Bradley, Kathy Burks, Dan Clark, Jim Duquesnel and Don Schmitz.

I. Minutes  
Motion (Laroche/Dray) to accept the minutes of the January 22, 1997 meeting. Passed.

II. Correspondence  
Letter from Dan Thayer for FLEPPC expressing the need for the Bureau of Aquatic Plant Management to be kept in the Department of Environmental Protection.

III. Treasurer’s Report - Allen Dray  
At the time of the meeting FLEPPC has approximately $26,000. There was a discussion about the Council’s tax exempt status. At this time, EPPC is federally tax exempt, but not state tax exempt. EPPC does not have a state tax licence.  
Motion (Dray/Smith) to move forward with setting a state tax exemption and acquiring a state tax licence. Passed.  
Motion (Laroche/Thayer) to accept the Treasurer’s Report. Passed.

IV. Editor’s Report - Amy Ferriter  
At this time we have 280 members. There are 35 people on the complimentary list. A discussion followed concerning who should be included on the Comp. list. It was decided that Erik Johnson, editor of the Resource Management Notes, would receive a copy of the newsletter and he would determine what parts of the newsletter will be included in his publication. It was also decided that the head of each DEP Division of Parks and Recreation would receive a copy of the newsletter. We are also going to include the House and Senate Natural Resource Committees on our comp. Mailing list.

“Notes from the Chairman” are to be a regular item in the newsletter.

It was noted that Florida EPPC has signed a contract with Outdoor Tech to publish Wildland Weeds magazine. Amy Ferriter has agreed to edit the magazine. All newsletter duties will fall to the Council’s Secretary. Amy will work with the Secretary to transition this responsibility.

There was discussion about the creation of an Editorial Board for Wildland Weeds. It was determined that the Editor should select the members of this standing committee.

Outdoor Tech has put together a media package for the magazine. If anyone has potential advertisers, they need to get the information to the publisher as soon as possible.

Motion: To accept the Editor’s report (Laroche/Gordon). Passed.

V. Committee Reports  
- Publications - Ken Langeland
The publications committee is working on three publications.
1. A Weed Control Guide. Dr. Langeland is awaiting final signature. It will be distributed on the Internet and will be available for sale.
2. Public Information Circular. Dr. Langeland will be sending this out for review soon.
3. The ID manual for Category I plants. Dr. Langeland is wrapping this publication up. It will either be spiral-bound or three hole punched so it can be put in a binder. Dr. Langeland will work on prices for the manual. He is going to check on the price for plain and waterproof paper. The book will be between 70 and 140 pages long.

Dr. Langeland is also putting together two in-service invasive exotics training classes for extension agents.

EPPC List Committee - Dan Austin  
The 1997 List is out. The Committee met in Gainesville in March. There were two additions to the Category I list. There were also two additions to the Category II list. Kathy Burks noted that that they need to get herbarium specimens for many of the counties that have been reported on the Field Reporting Forms. Roger Hammer noted that we need to make sure that the species names on the list are consistent with the ID manual. Dr. Langeland noted that the new plants that were added to the list will be added to the ID manual.

Research - Ted Center  
The first melaleuca biocontrol has been released in South Florida. Ted Center has requested direction from the Board for his committee.
Brazilian Pepper-tree Control

Ken Gioeli and Ken Langeland

- Brazilian Pepper-tree
- Schinus terebinthifolius, Raddi
- Anacardiaceae, Sumac Family

Florida's natural ecosystems are being degraded by an invasion of non-native plants. This invasion is partially responsible for declining numbers and quality of native biotic communities throughout Florida.

Brazilian pepper-tree is one of the most aggressive of these non-native invaders. Where once there were ecologically productive mangrove communities, now there are pure stands of Brazilian pepper-trees. Scrub and pine flatwood communities are also being affected by this invasion. Nearly all terrestrial ecosystems in central and southern Florida are being encroached upon by the Brazilian pepper-tree.

Land managers and home owners now are realizing the need to remove and stop the spread of Brazilian pepper-trees.

HISTORY

Brazilian pepper-tree is a native of Argentina, Paraguay, and Brazil. It is thought to have been introduced into Florida around 1842-1849 as a cultivated ornamental plant. Schinus is the Greek word for mastic-tree, a plant with resinous sap, which this genus resembles. The species name terebinthifolius is a combination of the genus name Terebinthus and the Latin word folia, leaf. It refers to the leaves of Brazilian pepper-tree that resemble the leaves of species in the genus Terebinthus.

HABITAT

Brazilian pepper-tree is sensitive to cold temperatures, so it is more abundant in southern Florida and protected areas of central and north Florida. Brazilian pepper-tree successfully colonizes native tree hammocks, pine flatlands and mangrove forest communities.

IDENTIFICATION

Seedlings

The cotyledons are simple with both the apex and the base having an obtuse outline. The margin is generally curved inward on one side. The first true leaves are simple with a toothed margin. The later leaves are compound (Figure 1).

1. This document is SS-AGR-17, one of a series of the Agronomy Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. First printed April 1997. SS-AGR-17 was previously published as "Plant Growth Retardants Used in Turf Grass Management." Please visit the FAIRS Website at http://hammock.ifas.ufl.edu.

2. Ken Gioeli, courtesy extension agent I., St. Lucie County and Ken Langeland, professor, Agronomy Department, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, 32611.

The use of trade names in this publication is solely for the purpose of providing specific information. It is not a guarantee or warranty of the products names, and does not signify that they are approved to the exclusion of others of suitable composition.
Brazilian Pepper-tree Control

Mature Plant

Brazilian pepper-tree is a shrub or small tree to 10 m (33 ft) tall with a short trunk usually hidden in a dense head of contorted, intertwining branches. The leaves have a reddish, sometimes winged midrib, and have 3 to 13 sessile, oblong or elliptic, finely toothed leaflets, 2.5 to 5 cm (1 to 2 in) long (Figure 2). Leaves smell of turpentine when crushed. The plants have separate male or female flowers and each sex occurs in clusters on separate plants. The male and female flowers are both white and are made up of five parts with male flowers having 10 stamens in 2 rows of 5 (Figure 3). Petals are 1.5 mm (0.6 in) long. The male flowers also have a lobed disc within the stamens. The fruits are in clusters, glossy, green and juicy at first, becoming bright red on ripening, and 6 mm (2.4 in) wide. The red skin dries to become a papery shell surrounding the seed. The seed is dark brown and 0.3 mm (0.1 in) in diameter.

Biology

Seedlings are flood tolerant, but rapid change of water level up or down causes some mortality. About 20 percent of seedlings exposed to fire resprout. Flowering occurs predominantly from September through November. Male flowers last only 1 day. Female flowers last up to 6 days and are pollinated by insects. Fruits usually are mature by December. Birds and mammals are the chief means of seed dispersal. Seed viability is 30 to 60 percent and can last up to 2 months, but declines to 0.05 percent at 5 months. Many native species have a lower percentage of germination than Schinus. The high seed viability combined with animal dispersing agents may explain colonization by Brazilian pepper-tree in our native plant communities.

Seedlings have a high rate of survival and some can be found all year. Any break in the tree canopy can be exploited by seedlings. Reproduction can occur 3 years after germination. Some trees can live for about 35 years.

CONTROL

Using Herbicides

Herbicides are available that aid in the control of Brazilian pepper-trees (Table 1). Only those herbicides that are recommended for Brazilian pepper-tree control should be used. They are safe and effective when used correctly. It is illegal to use a herbicide in a manner inconsistent with the label's instructions. Therefore, read the label carefully and follow the instructions.

Herbicide Application to Cut-Stump

Brazilian pepper-trees can be controlled by cutting them down and treating the stumps with herbicide. A saw should be used to cut the trunk as close to the ground as possible. Within 5 minutes, a herbicide that contains the active ingredient glyphosate or triclopyr should be applied as carefully as possible to the thin layer of living tissue, called the cambium, which is just inside the bark of the stump (Figure 4).

The best time to cut Brazilian pepper-trees is when they are not fruiting because seeds contained in the fruits have the capability of producing new Brazilian pepper-trees. If Brazilian pepper-trees that have fruits attached are cut, care should be taken to not spread the fruits to locations where they can cause future problems. Fruiting Brazilian pepper-trees can be controlled using a basal bark herbicide application. Information about basal bark herbicide applications is described in the next section.

A glyphosate containing herbicide that has proven effective for the cut-stump control method is Super Concentrate Roundup® (41% glyphosate). Rodeo®, a herbicide containing glyphosate, that is registered for aquatic use should be used if the trees are in water.
A triclopyr (amine) containing herbicide called Garlon 3A® is an effective herbicide for Brazilian pepper-tree control using a cut-stump method. Brush-B-Gon® and Brush Killer® also contain triclopyr (amine) but are lower concentration and may be less effective. Two other forms of triclopyr (esters), Garlon 4® and Pathfinder II®, can be applied to the stump up to 24 hours after cutting.

**Caution.** Avoid touching the tree's cambium. A rash can result. Use proper protective gear when sawing the tree and applying the herbicides.

**Basal Bark Herbicide Application**

Brazilian pepper-trees can be controlled using basal bark herbicide application. An application of the herbicide triclopyr (ester) is applied to the Brazilian pepper-tree's bark between one half and one foot from the ground. Two forms of triclopyr, Garlon 4® and Pathfinder II®, are effective. Garlon 4® should be mixed 1:10 with a penetrating oil. Pathfinder II® is premixed with a penetrating oil. The herbicide will pass through the bark. Therefore, girdling the tree's trunk is not necessary and may, in fact, reduce the effectiveness.

Once the basal bark treatment has been completed, it may take several weeks before there is evidence that the tree has been controlled. Defoliation and the presence of termites is an indicator that the treatment has been successful.

Basal bark treatments are most effective in the fall when the Brazilian pepper-trees are flowering. This is due to the high level of translocation occurring within the tree. Fruiting occurs during winter, and Brazilian pepper-trees that have been controlled using a basal bark treatment may retain their fruit. This situation will require that the area be checked for seedlings on a regular basis.

**Foliar Herbicide Application**

Foliar herbicide application can be used on Brazilian pepper-tree seedlings. A herbicide containing triclopyr or glyphosate is applied directly to the tree's foliage. Results of a foliar application will be wilting of leaves. The herbicide will be translocated to other parts of the tree thus effectively controlling the Brazilian pepper-tree.

**Caution:** Foliar applications require considerably more herbicide to control Brazilian pepper-tree. Also, damage to nearby plants resulting from wind drift of the herbicide should be avoided.

**Biological Control**

Currently, there are no biological controls that have been released in the United States for Brazilian pepper-tree. Over two hundred insects have been identified that feed on Brazilian pepper-trees in the tree's native land. However, in order for them to be considered as possible biological control agents, scientists must prove that they are specific to Brazilian pepper-trees. Effective biological control agents must be able to reproduce after introduction into the United States.

University of Florida scientists have identified two insect species which may prove to be effective biological control agents, a sawfly and a thrips. The sawfly causes defoliation and the thrips feeds on new shoots. UF scientists expect authorization to release these insects in the future. However, their effectiveness for controlling Brazilian pepper-trees in Florida is as yet unknown.

**Table 1. Herbicides and application methods recommended for Brazilian pepper-tree control.**

<table>
<thead>
<tr>
<th>Cut Stump</th>
<th>Foliar</th>
<th>Basal Bark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garlon 3A</td>
<td>Garlon 3A</td>
<td></td>
</tr>
<tr>
<td>Brush-B-Gon</td>
<td>Brush-B-Gon</td>
<td></td>
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<tr>
<td>Brush Killer</td>
<td>Brush Killer</td>
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<td>Garlon 4</td>
<td>Garlon 4</td>
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<td>Pathfinder II</td>
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<td>Super Concentrate</td>
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<td>Roundup</td>
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<tr>
<td>Rodeo</td>
<td>Rodeo</td>
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</tr>
</tbody>
</table>
Figure 2. Leaves and fruits of mature Brazilian pepper-tree.
Figure 3. Male and female flowers of mature Brazilian pepper-tree.

Figure 4. Brazilian pepper-tree stump showing location of the cambium layer.
Legislative - Don Schmitz
Don Schmitz stated that the 1997 Legislative session was both good and bad. There was a move to send DEP's Bureau of Aquatic Plant Management to the Water Management Districts and the Department of Agriculture and Consumer Services. Both attempts failed. It appears that there is a possibility that this issue will be brought up again in spite of Tom Brown (Bureau Chief)'s resignation.

The Bureau did receive increased funding for exotic plant control.

By-Laws - Francois Laroche
Changes will be made to the Objectives and Types of Memberships sections. Francois Laroche reported that the Council needs to have more proposed changes made that outline the duties of the officers. Any other possible changes need to be reported to him as soon as possible.

Membership and Publicity - Doug Devries
Doug Devries sent out 50 public service announcements to the media about the annual meeting. Doug also talked to a reporter from the Washington Post who wrote an article about EPPC. EPPC was also mentioned on NPR this morning. Motion: (Thayer/Smith) that EPPC charge a $10.00 one-day registration fee for the meeting. Passed.

Internet Home Page - Tony Pernas
It was noted that the Home Page will be running during the meeting.

Symposium - Allen Dray
Allen Dray noted that we have 100 pre-registered - he expects a total of 150.

Vendors - Joe Vissaggio
It was noted that Joe Vissaggio brought in a record 17 vendors and sponsors for this meeting.

Program - Kathy Burks
Kathy Burks was thanked for putting together a great program. There was a call for a new program chair, as Kathy noted that she will be unable to serve as chair next year.

Task Force Reports
The Melaleuca Report is available. The Brazilian pepper Management Plan is due out in August. Other works in progress: Carrotwood, Climbing Ferns and Vines, Chinese Tallow, and Downey Rose Myrtle reports.

It was noted that the management plans are a good way to set priorities, goals and objectives for controlling certain plants. They can be used as a tool for obtaining funding, etc.

VI. Old Business
Julia Morton Memorial Research Fund - Fund will provide small research grants to study exotic pest-plants or for educational activities. There will be a committee set up for this fund. Greg Jubinsky noted that these funds should be kept separate from other EPPC funds. Monies will be generated through raffles and donations. Allen Dray will look into the legalities of setting up a fund of this sort.

Motion: (Dray/Hammer) that the Board recommend to the general membership that we establish the Julia Morton Memorial Research and Education Fund. Passed.

American Cyanamid donated $1,000 toward the fund. Clyde Butcher has donated a framed print that will be raffled off at the meeting. All raffle proceeds will be donated to the fund.

1998 Program Chair - Francois Laroche volunteered to serve as 1998 Program Chair.

1998 NPS/EPPC meeting - The meeting will be held in West Palm Beach. It will be a joint meeting with the Florida Native Plant Society (NPS). Mike Bodle is the local arrangements chair for NPS.

National Geographic - A reporter for National Geographic will be touring Florida to study exotic plants. Greg Jubinsky will be setting up a tour.

Date and location of next Board Meeting:
Archbold Biological Station.
August 21 and 22.
PLANTS BEHAVING BADLY
If it's any consolation (and it probably isn't...), Florida is not the only place that's overrun with exotic pest-plants. The following plants are misbehaving somewhere in the world. Some may be familiar because they're pests in Florida, others may be familiar because they're native to the United States. Black-eyed Susan, you naughty girl...

- Albizia lebbeck - Woman's Tongue
  Origin: Tropical Asia
  Region Invaded: South America, Caribbean, Florida

- Ardisia elliptica - Shoebutton Ardisia
  Origin: South Asia
  Region Invaded: Hawaii, Florida

- Cinnamomum camphora - Camphor tree
  Origin: China, Japan
  Region Invaded: Australia, South Africa, Florida

- Lantana camara - Lantana
  Origin: New World Tropics
  Region Invaded: Hawaii, Australia, India, Florida

- Ligustrum sinense - Hedge privet
  Origin: China
  Region Invaded: Australia, Florida

- Padus cattleyana - Strawberry guava
  Origin: South America
  Region Invaded: Hawaii, Polynesia, Florida

- Schinus terebinthifolius - Brazilian pepper
  Origin: South America
  Region Invaded: Hawaii, Australasia, Florida

- Baccharis halimifolia - Saltbush
  Origin: Eastern North America
  Region Invaded: Australia

- Opuntia stricta - Prickly Pear cactus
  Origin: North America
  Region Invaded: Australia

- Rubus argutus - Florida Blackberry
  Origin: North America
  Region Invaded: Hawaii

- Rudbeckia laciniata - Black-eyed Susan
  Origin: North America
  Region Invaded: Japan

Figs spreading in New Zealand
The Australian fig trees Ficus macrophylla and F. rubiginosa are commonly cultivated in Northern New Zealand. Both have now acquired their pollinating wasps, apparently by long-distance dispersal. Pleistodontes imperialis, the wasp specific to F. rubiginosa, arrived within the last 20 years or so, and naturalized plants are now found near parent trees. The wasp specific to F. macrophylla, P. foggatti, is newly recorded in New Zealand, and naturalization of this fig seems inevitable.

Source: Gardner and Early, The Naturalization of Banyan Figs and their Pollinating Wasps in New Zealand. New Zealand Journal of Botany March, 1996 (v.34 no.1)

Florida is being homogenized, and everyone, for all time to come, will be the poorer for it.
-E.O. Wilson, 1997

UNIVERSITY OF FLORIDA
Agronomy Department Graduate Research Assistantship Research project - "Integrated Management of Exotic Invasive Plants in Southeastern Pine Forest Ecosystems." - is funded by the US Forest Service. This project provides an excellent opportunity to work on a multi-disciplinary team integrating known control technologies into an effective management system for cogongrass (Imperata cylindrica) in southeastern pine forests.

Contact Donn Syhilling, University of Florida Agronomy Department for more information (352)392-1823.

OINK!
DEP biologists are trying to document the negative effects of feral hogs on rare plants. Send your observations, comments and recommendations to:
Florida Park Service: District 3 Administration,
1800 Wekiwa Circle, Apopka, FL 32712 Scottsmith_s@ngw.dep.state.fl.us
**Florida EPPC**

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Visit Florida EPPC's Web Site at: www.fleppc.org

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