Florida Exotic Pest Plant Council
18th Annual Symposium

Success
WHAT DOES IT TAKE?

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June 5-6, 2003
Renaissance Vinoy Resort
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**18th Annual Florida Exotic Pest Plant Council Symposium**

**Thursday - 5 June 03**

7:00 – 8:30 – Registration

8:30 – 8:45 – Opening Comments & Chair Welcome – Mike Bodle

SUCCESS – WHAT DOES IT TAKE??? - Mike Bodle – Moderator

**8:45 – 9:05**

**Forest Restoration in Dade County: A Decade after the Disaster, Joe Maguire, Miami-Dade Natural Areas Management**

Abstract: Approximately 5,447 acres of native forest and wetland occur in Miami-Dade’s 12,000-acre park system, including 1,017 acres of pine rockland and 443 acres of rockland hammock forest. In 1991, the Department established Natural Areas Management to initiate active management of the natural areas under its jurisdiction and funded by an Elizabeth Ordway Dunn Foundation grant, which allowed Miami-Dade Parks, The Nature Conservancy, and Fairchild Tropical Garden to form a conservation partnership. Grants from the U.S. Fish & Wildlife Service and the Florida Department of Environmental Protection (FDEP) also supported NAM. In 1992, following Hurricane Andrew, NAM received a $500,000 grant from the Knight Foundation which made it possible to hire personnel to begin restoring Matheson Hammock, Snapper Creek Hammock, Castellow Hammock, and Addison Hammock. The State of Florida provided a post-hurricane grant of $5.4 million in 1993 which supported the continuation of restoration efforts in these hammocks and expansion into pine rockland forests. In 1996, the residents of Miami-Dade County passed the Safe Neighborhood Parks (SNP) Act, which provided an additional $4 million for natural areas restoration. In FY 2000-01, NAM received $500,000 and FY 2002 received $800,000 from Miami-Dade County. Since 1993, NAM’s crews have spent over 650,000 person-hours on habitat restoration. Currently, NAM has 62 employees and six field crews. NAM’s staff also includes biologists, GIS professional and administrative personnel. NAM’s annual operating budget is approximately $3,000,000. In 2000-01 NAM conducted restoration activities on 91 sites in Miami-Dade County. In 2001-02 NAM conducted restoration activities on 106 properties including 33 park sites, 41 Environmentally Endangered Lands (EEL) Acquisition sites, and 32 sites owned by other agencies.

Bio: Joe Maguire has been the supervisor for the Natural Areas Management Division Park & Recreation Department since the creation of the department in 1991.

**9:05 – 9:25**

**South West Florida – Coordination & Follow Through – The Keys to a Successful Control Program, Roger Clark, Lee County Park & Rec.**

Abstract: The keys to a successful invasive plant management program will be discussed. Coordination between nearby landowners, local, state and federal agencies can be the exception to the rule. How to build this coordination between groups will be covered. Doing what you say your going to do is the next step. Consistent efforts is the only way to get a handle on invasive plants.
Bio: Roger Clark has a Bachelor of Science B.S. in Wildlife Biology from North Carolina State University and has lived in Lee County since 1980. Roger has worked for Lee County since 1984 and is presently the Land Stewardship Manager for Lee County Parks and Recreation. In this position he supervises 7 staff members with the responsibility for protecting the county's preserves including those acquired through Conservation 20/20. This includes approximately 15,000 acres of conservation lands located throughout the county. This work includes applying for grants to obtain funds for land acquisition, resource based park facilities and ecological restoration projects. Roger's certifications include as an arborist, prescribed burner, and a natural areas weed pesticide applicator. Before coming to the county Roger Clark was first permanent director of the Calusa Nature Center and worked for the former Department of Natural Resources (now the Department of Environmental Protection) as first biologist on Cayo Costa State Reserve (now Cayo Costa State Park) and Lee County Aquatic Preserves-Pine Island Sound, Matlacha Pass and Estero Bay.


Abstract: Old World Climbing fern was discovered on the 106,000-acre property in 1999. Initially the infestation was believed to be confined to a few small areas but it was soon discovered to be in a number of areas in very small populations and in a few areas in large populations. A process and procedures were developed to intensely survey all of the high probability sites. A treatment program was instituted to immediately control the outlier populations and to start a treatment program on the large population sites. This presentation will outline this process and procedures used and provide costs and success of control to date. Control and eradication throughout Central Florida can not be accomplished without many agencies both state, federal and nonprofit combining with private landowners to control the spread of climbing fern any further into this region of the state. The second part of this presentation will focus on a strategy to get this objective accomplished.

Bio: Scott Penfield has been with the U.S Air Force for 25 year with most of that time spent at the Avon Park Bombing Range as the Environmental Section supervisor.

9:45 – 10:05 West Florida – Committed to Cogon Grass; The long path to success at the Withlacoochee State Forest, Andrea Van Loan, DACS – Division of Forestry

Abstract: Located in west central Florida near Brooksville, the 157,000-acre Withlacoochee State Forest is representative of many public lands in Florida in its diversity of both opportunities and challenges in land management. Regional issues and past management practices have both contributed to successful invasion of the forest by a range of non-native species. The first such species to gain recognition and receive attention was cogon grass. Foresters began research and implementation of a cogon grass management program in 1993 upon recognition of the plant's invasiveness. Expanding from 3 acres treated in 1993 to 250 acres treated in 2002, the success of this program is measured in the identification and treatment of sites, commitment to 100% follow-up, prevention of spread, and use of adaptive management. Education of local district personnel has been a significant component of both preventing spread of the plant and identification of new infestations. 82% of personnel interviewed, representing all job classes, demonstrated at least basic knowledge of cogon grass and its impacts. In addition 67% indicated that cogon grass affected some component of how they perform their job duties. Grant funding has also played a major role in field accomplishment as well as raising awareness and support from the district administration. Cooperative support of several different research projects assessing cogon grass management, biocontrol, biology, and ecology has enabled staff to readily adapt to and utilize project results in forest-wide planning.
Bio: I have worked for the Florida Division of Forestry for the past 8 years, first as the Forest Ecologist on the Withlacoochee State Forest, and presently as a Biologist (focused on invasive plant management) with the Division's Forest Health Section in Gainesville. I am currently pursuing a Masters degree at the University of Florida, and am evaluating the biology and management of Lygodium japonicum in forested settings. In our free time, my husband Chris and I enjoy mountain biking, surfing, kayaking, and home construction projects, as well as baby steps of success with our two new dogs from the local shelter.

10:05 – 10:25 Brazilian Pepper-tree Genetic Diversity Survey in Florida, Ken Gioeli, UF, IFAS, St. Lucie County Cooperative Extension Office

Abstract: Ken Gioeli and Dr. Jim Cuda will discuss the Brazilian pepper tree Genetic Diversity Survey being conducted throughout Central and South Florida. An understanding of Brazilian pepper-tree's genetic diversity 1) will help to better target future exploration efforts in South America for highly specific biological control and 2) may be useful in the deployment of the Brazilian Pepper-tree thrips, which will soon be released. Conference participants will be solicited to assist with sample collection.

Bio: Ken Gioeli joined the UF/IFAS program as a Natural Resources Extension Agent in September 1993 in St. Lucie County. In this position, he has had the opportunity to provide general certification standards training for restricted use applicators on a variety of subjects including aquatic plant management and invasive plant control. Currently, Ken has a public aquatics and right of way licenses.

10:25 – 10:40 – Break

UPLAND INVASIVE PLANT ID – Kathy Burks – Moderator

10:40 – 11:10 Bad Plants that look like Good Plants, Kathy Burks, DEP – Invasive Plant Management and Ken Langeland, UF, IFAS – Center for Aquatic & Invasive Plants

Abstract: Telling the difference between the bad and good guys in the plant world can get difficult. Techniques and terminology will be shared to help the field biologist to be able identify quickly that new plant that showed up in the survey. Dried and live specimens will be used to assist with the identification. This section will focus on flowering plants and trees.


Bio: Ken is currently Professor and Specialist in Aquatic and Invasive Plants at the University of Florida's Center for Aquatic and Invasive Plants. He specializes in weedy plants in aquatic and natural areas. He received his B.A. from the University of South Florida (Botany) in 1971, his M.A. from Virginia Polytechnic Institute and State University (Weed Science) in 1978, and his Ph.D. from University of Florida (Agronomy) in 1982. After three years with North Carolina State University, Ken joined the Agronomy Department of the University of Florida in 1986, reaching the rank of full professor in 1994.
11:10 – 11:35  **Nephrolepis – the good & bad, & Legume ID**, Ken Langeland, UF, IFAS – Center for Aquatic & Invasive Plants

Abstract: The legumes – the Rodney Dangerfield’s of the plant world. Ken will cover key characteristics and ways to differentiate these under appreciated yet important part of the plant world.

Bio: see above

11:35 – 12:00  **Grass ID & a New Bunch of Bad Ones**, Kathy Burks, DEP – Invasive Plant Management

Abstract: Grasses seem all alike and can be confusing even to the best biologist. A case in point for correct identification – paragrass was identified as American cupscale for several years on an annual survey, which allowed the plant to spread through the system. The error was corrected but identification came down to the ligules. Kathy Burks will go over the minute details that separate the good from the bad ones in the grass family.

Bio: see above

12:00 – 1:30 – lunch

1:30 – 1:50  **Non-Native Plant Student Outreach Program**, Amy Raub, Seminole County Natural Lands Program

Abstract: Seminole County Natural Lands Program is a land acquisition and management program, which was founded in 1990 by a voter approved referendum. The Program has purchased, to date, over 6,500 acres of land in Seminole County for the purposes of preservation, recreation and education. In keeping with our purpose, the Seminole County Natural Lands Program applied for and was awarded a grant in 2002 for a "non-native plant student outreach program". Amy Raub, Volunteer Program Manager of the Natural Lands Program will briefly outline the Natural Lands Program in general, the grant-funded outreach program and the final event, the Air Potato Raid.

Bio: Amy Raub graduated from Mercer University, in Macon, Georgia, earning a B.S. in Environmental Systems and Minors in Environmental Management and Technical Communication, with a concentration in environmental health issues. She subsequently received her J.D. from Mercer University School of Law in 2000, where she served as the President of the Environmental Law Society and on the Student Bar Association. After practicing real estate and corporate law for two years, Amy left the practice of law to join the Natural Lands Program in 2002. Her primary responsibilities with the Natural Lands Program include public outreach activities, implementing and coordinating a formal volunteer program and facilitating environmental education presentations and field trips.

1:50 – 2:30  **EQUIPMENT – HOW TO USE & MAINTAIN IT**

Todd Olsen – Aquatic Vegetation Control, Inc.
Chemical Container Corp.
2:30 - 3:00  HOW TO PLAN A CONTROL PROGRAM: Herbicides, what, when why, where, how, Phil Waller, BASF

Abstract: Phil Waller will go over the equipment, type of herbicide and rates for various upland treatment scenarios and will provide real-world situations that he has had to tackle in his career in vegetation management.

Bio: Currently employed by BASF as a Vegetation Management Specialist. Received his BS in forestry from Steven F. Austin University in Texas. Phil has worked for the USDA, Soil Conservation Service and a private landscaping company. Phil also worked as a system forester for 18 years with an electric utility managing right of ways.

3:00 - 3:15  Break

BIOLOGICAL CONTROL – Good News - Jim Cuda - Moderator

3:15 - 3:30  The First Biological Control Agent Released in Florida for Tropical Soda Apple, Julio Medal, UF – Entomology & Nematology Department

Abstract: J. Medal¹, D. Gandolf², and J. Cuda¹
¹University of Florida-Department of Entomology & Nematology.
E-mail: medal@mail.ifas.ufl.edu
²USDA-ARS South American Biological Control Laboratory. Hurlingham, Argentina.

Tropical soda apple, Solanum viarum (Solanaceae), is a perennial prickly weed native to South America, that has been spreading rapidly in the USA during the 1990s. First detected in Glades County, Florida in 1988, it has already invaded more than 1 million acres of improved pastures and woody areas in nine states. The South-american leaf beetle Gratiana boliviana (Chrysomelidae) was evaluated as a potential biocontrol agent of tropical soda apple. Results from the fields surveyed in Argentina, Brazil, Paraguay, and Uruguay, the Florida and Mississippi quarantine host-specificity tests, the open-field tests (choice and no-choice) in Argentina, and the lack of unfavorable host records in the scientific literature indicated that this leaf beetle is highly specific and safe for biocontrol of tropical soda apple. A petition submitted for field release to the Technical Advisory Group (TAG) for Biological Control Agents of Weeds was unanimously approved in April 2002, and a field release permit was issued by USDA-APHIS-PPQ in May 2003. First field release of the beetle was made in Polk County on 14 May 2003, and additional field releases in collaboration with state and federal agencies will be made soon.

Bio: Dr. Julio Medal received his PhD from the University of Arkansas in 1994 and is a faculty member of the UF Entomology and Nematology Department in Gainesville, FL.

3:35 - 3:55  Biological Control of Melaleuca: Research, Implementation & Future Prospects, Cressida Silvers, USDA/ARS and Paul Pratt, USDA/ARS

Abstract: Biological control of the invasive tree Melaleuca quinquenervia began in 1986. After a decade of exploration, host range testing in quarantine and petitioning for release, the melaleuca weevil Oxyops viliosa was the first biological control agent developed by the program for introduction into Florida. In spring of 2002, the second agent, the melaleuca psyllid Boreoglycasps melaleucae, was released on both the east and west coasts of the state. Both insects have established at multiple release sites and are dispersing throughout the state's Melaleuca-infested areas, with assistance from on-going redistribution efforts. Post-release research on their dispersal rates, population dynamics, and impacts on seedlings, mature trees and regrowth indicate both agents are having a negative impact on field populations of M. quinquenervia. Research results are being used to improve efficiency of releases and to develop management plans that integrate these biological control agents with current chemical and mechanical control practices. Outreach and demonstration programs such as TAME Melaleuca...
(The Areawide Management Evaluation of Melaleuca) are underway to illustrate and promote inclusion of biological control agents in land management plans. In addition to these two successful biological control agents, several more, including the gall-forming fly Fergusonina sp., are under investigation for possible release in the near future.

Bio: Cressida Silvers received her bachelor's degree in biology from Swarthmore College in 1992. Her studies there focused on plant physiology and ecology. After several years working in agricultural pest management in California, she attended the University of California at Riverside, graduating in 2000 with a master's degree in entomology and a focus on biological control. Ms. Silvers then spent two years as a research associate for an agricultural policy group in Washington, DC. Ms. Silvers recently started a new position with the USDA Agricultural Research Service in Fort Lauderdale, FL as project coordinator of the area wide management program for Melaleuca quinquenervia.

Bio Paul Pratt: Paul Pratt received his Ph.D. in Entomology in 1999 from Oregon State University, Corvallis OR. His study emphasis was on Integrated Pest Management with a minor in Integrated (Horticulture, Plant Pathology, and Statistics). He received his M. S in Entomology in 1997 from Oregon State University, Corvallis OR with emphasis in Integrated Pest Management and a minor in Integrated (Horticulture and Statistics). Paul received a B.Sc., Crop and Soil Science in December 1995 from California State University, Chico with an emphasis in Insect-Plant interactions. Currently, Paul is Research scientist, at the Invasive Plant Research Laboratory from October 1999 to the present. He is also a courtesy Assistant Professor with the University of Florida. From 1996 to 1999, Paul was a graduate research assistant for the OSU, Entomology Department. From January 1998 to October 1999, Paul was adjunct faculty at Chemeketa Community College.


Abstract: Jim Cuda will discuss the Melaleuca Snout Beetle and diffusion methods used to convince private and public land managers to adopt their use as part of an integrated pest management approach to partially control Melaleuca.

Bio: James P. Cuda is an assistant professor in the Entomology and Nematology Department at the University of Florida, Gainesville, and a consultant to the University's Center for Aquatic and Invasive Plants. His research deals with key elements of classical biological control of aquatic and terrestrial weeds, including foreign exploration, host specificity testing, and release/evaluation of promising natural enemies of exotic weeds that have invaded Florida and threaten the southeastern United States. He is a member of the S-303 regional project, "Biological Control of Selected Arthropod Pests and Weeds" and is developing an extension program on biological control of insect pests and weeds in Florida.

4:15 – 4:35 Role of a Multiple-Pathogen Bioherbicide System in the Integrated Management of Torpedograss, S. Chandramohan, UF – Department of Plant Pathology

Abstract: Chandramohan, S.¹, Charudattan, R.¹, DeValerio, J.T.¹, and Hanlon, C.² ¹University of Florida – Department of Plant Pathology, 1453, Fifield Hall, PO Box 110680, Gainesville, FL 32611-0680; ²South Florida Water Management District, P.O. Box 24680, West Palm Beach, FL 33416-4680.
Torpedograss (*Panicum repens*) is susceptible to three indigenous fungi, *Drechslera gigantea*, *Exserohilum longirostratum*, and *E. rostratum*. To determine the feasibility of biological and integrated control of torpedograss with this bioherbicide mixture under field conditions, an experiment was designed (randomized split-plot design; three replicates per main-plot and subplot treatments) and done twice at a site with dense, uniform growth of torpedograss (Mar. 2002-Apr. 2003; Sep. 2002-Apr. 2003). The main-plot treatments were: 1) chemical herbicide, imazapyr (Arsenal) at 64 oz per acre, 2) mowing, once, and 3) not mowed, no chemical herbicide applied. The sub-plot treatments were: 1) the bioherbicide mixture in an emulsion (30% Sunspray 6E in water, spores of each fungus at 1:1:1 v/v, final total spore concentration 1x10^6 per ml; BHE), 2) control emulsion only (E), and 3) untreated torpedograss (U). The chemical herbicide treatment was applied aerially (Trial 1), or manually (Trial 2), and the bioherbicide mixture with a CO2-propelled backpack sprayer set at 20 psi pressure. The bioherbicide was reapplied twice (Trial 1) or once (Trial 2) at three to five weeks after the initial application (WAI). At different time intervals, healthy plant species present every 10 cm along a diagonal transect of 3.5 m in each plot were counted. Chemical herbicide application killed all plant species present at the site by 19 weeks after chemical application (WAC) (Trial 1) or 8 WAC (Trial 2), compared to plots not treated with chemical. The BHE treatment (foliar sprays) provided maximum level of damage severity on both mowed and unmowed torpedograss (70-72% (Trial 1); 60-65% (Trial 2)), and was safe to the native plant species present. In both mowed and no treatment (unmowed) plots at 8 WAI (Trial 1) and 9 WAI (Trial 2), torpedograss population was significantly reduced, when treated with the bioherbicide mixture in emulsion. Simultaneously, numbers of total native plant species censused increased. The chemical control (nonselective) of torpedograss lasted for about 6 months, and bioherbicidal control (selective) for 7 to 9 months without any significant regrowth of torpedograss. Thus, the bioherbicide agents have potential to be used in integrated management of torpedograss.

Bio: Dr. Chandramohan has a PhD in plant pathology from the University of Florida and is working as a postdoctoral research associate at the University of Florida developing a bioherbicide for weedy grasses.
bioherbicide. The use of this indigenous pathogen represents the augmentation strategy of biological control.

Bio: Dr. R. Charudattan received his PhD from the University of Madras, India in 1968 and has spent the last 20 years in the development of the biocontrol field, emphasizing both basic and applied aspects of research. Pathogens of aquatic weeds such as water hyacinth, hydrilla, and others are also a major line of work in his lab. He, his students and staff have developed and patented five biocontrol agents to control major weeds in aquatic and agricultural sites. Cercospora rodmanii, a fungal pathogen of water hyacinth developed by his group is now well established throughout Florida, contributing to a natural biocontrol process in which host-specific insects are also involved. A large culture collection (~ 4000) of fungi and bacteria from various weeds, soil, and water samples, assembled over several years, serves as a valuable resource to screen for biocontrol agents and pesticide metabolites. Currently, this group includes five students who are studying topics such as discovery and development of bioherbicides for grassy weeds in citrus, nutsedges, cogongrass, melaleuca, tropical soda apple, hydrilla, pigweeds, and molecular characterization of Cercospora populations.

FRIDAY – 6 June 03
8:00 – 9:00 – Annual Business Meeting

9:00 – 10:30 RUP CORE TRAINING, Ken Gioeli, UF, IFAS – St. Lucie County Cooperative Extension and John Alleyne, UF, IFAS – Pinellas County Cooperative Extension

Abstract: Ken Gioeli and Dr. John Alleyne will familiarize participants with applicator licensing rules and regulations and encourage participants to adopted practices which will enable them to apply pesticides in a manner which minimizes hazards to themselves, others and the environment.

Bio: Ken Gioeli joined the UF/IFAS program as a Natural Resources Extension Agent in September 1993 in St. Lucie County. In this position, he has had the opportunity to provide general certification standards training for restricted use applicators on a variety of subjects including aquatic plant management and invasive plant control. Currently, Ken has a public aquatics and right of way licenses.

10:30 – 10:45 – Break

10:45 – 11:10 – RUP Core Training Continued

11:10 – 11:30 Panel Discussion – Where do we go from here, Mike Bodle, Panel Mediator Panel Participants: Kathy Burks, Joe Maguire, Roger Clark, R. Scott Penfield, Andrea Van Loan, Todd Olsen, Phil Waller

11:30 – 12:00 – Closing Statements – Mike Bodle

The Restricted Use Pesticide Licensing tests will be given after lunch.
CONTINUING EDUCATION UNITS AVAILABLE

*CORE* - 1.5

NATURAL AREAS - 7.5
AQUATIC PEST CONTROL - 7.5
DEMO & RESEARCH - 7.5
FORESTRY PEST CONTROL - 7.5
PRIVATE APP AG PEST CONTROL - 7.5
RIGHT-OF-WAY PEST CONTROL - 7.5

TOTAL ALLOWABLE CEU'S/PERSON - 9
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