

# Wildlife & Invasive Species Education

January 25-27, 2022

UF/IFAS Extension Sumter County

Continuing education for Master Naturalists, Master Gardeners, UF/IFAS Extension Faculty, landowners, and others promoting native wildlife and plants and controlling invasive species in Florida.



Funding for this event is provided in part by University of Florida IFAS, Florida Department of Agriculture and Consumer Services Florida Forest Service and the Florida Sustainable Forestry Initiative Implementation Committee.

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**Cover page photo credits:**

Florida softshell turtle, Jim Davis  
 Southern fox squirrel, Jim Davis  
 Male and female queen butterflies, Jim Davis  
 Bumblebee on rosinweed, Jim Davis  
 Non-native Egyptian goose, Jim Davis  
 Hummingbird at Lettuce Lake, Jim Davis

# Wildlife & Invasive Species Education 2022 Agenda

## Day 1: January 25, 8:45 a.m. to 5:00 p.m.

8:15 a.m. On site Registration

8:45 a.m. Welcome Jim E. Davis, (UF/IFAS Extension Director Sumter & Hernando Counties)

9:00 a.m. "The Florida Black Bear" Morgan Lucot, Florida Fish and Wildlife Conservation Commission

10:00 a.m. Break (Visit Booths and IFAS Bookstore)

10:30 a.m. "Invasive and Non Native Plants at Chinsegut Hill and Ongoing Habitat Management" Mike Singer, Hernando Co. Conservation Lands Specialist

11:00 a.m. "Wildlife Corridors" Maxine Hunter, UF/IFAS Extension Marion County Natural Resources Agent II

12:00 p.m. Lunch -- ticket available through Eventbrite registration

1:00 p.m. "Mixing It Up, Adding Flowering Native Plants to Lawns" Brooke Moffis, UF/IFAS Extension Lake County Florida Friendly Landscaping and Commercial Horticulture Agent III

1:30 p.m. "Florida Butterflies" Dr. Jaret Daniels, Curator at the Florida Museum of Natural History McGuire Center for Lepidoptera and Biodiversity and Professor at the Department of Entomology and Nematology Department at the University of Florida

2:15 p.m. Break (Visit Booths and IFAS Bookstore)

2:30 p.m. "Landscaping for Butterflies, Bees, and other Pollinators" Dr. Jaret Daniels

3:30 p.m. "Florida's Invasive Mosquitoes" Dr. Eva Buckner, Assistant Professor and Medical Entomology Extension Specialist at the University of Florida Medical Entomology Laboratory

4:15 p.m. "I Spy...Something Out of Place: Spotting and Reporting Suspicious Species" Dr. Bill Lester, UF/IFAS Extension Hernando County Residential Horticulture/Commercial Horticulture Agent III and Master Gardner Coordinator

5:00 p.m. Survey and Gift (Must complete survey to receive the gift)

## Day 2: January 26, 8:15 a.m. to 5:00 p.m.

8:00 a.m. On site Registration

8:15 a.m. "Florida's Birds as seen from a Wildlife Photographer" Jim E. Davis, UF/IFAS Extension Multi County Director Sumter and Hernando Counties Agriculture, Natural Resources, and Urban Pest Management Agent III

8:45 a.m. "Invasive Vine Removal Techniques for Homeowners", Coral Foster, Biologist UF/IFAS Center for Aquatic and Invasive Plants

9:30 a.m. "Biological Control of Invasive Species" Dr. Emily Kraus, Biological Control Florida Department of Consumer Sciences (FDACS)

10:30 a.m. Break (Visit Booths and IFAS Bookstore)

11:00 a.m. "Insects" Jim E. Davis, UF/IFAS Extension Multi-County Director Sumter and Hernando Counties Agriculture, Natural Resources, and Urban Pest Management Agent III

12:00 p.m. Lunch -- ticket available through Eventbrite registration

1:00 p.m. "Coyotes in Florida Pet Safety and Conflict Resolution Strategies" Catherine Hannan, Biological Scientist IV Florida Fish and Wildlife Conservation Commission

1:45 p.m. Break (Visit Booths and IFAS Bookstore)

2:00 p.m. "Sharks and Rays of Florida" Dr. Dean Grubbs, Associate Director of Research at the Florida State University Coastal and Marine Laboratory

3:00 p.m. "Florida's Native Turtles" Dr. Steve Johnson, Associate Professor University of Florida Department of Wildlife Ecology and Conservation

4:00 p.m. "Invasive Ants" Dr. Faith Oi, UF/IFAS Extension Specialist, Associate Professor Department of Entomology and Nematology and Pest Management University Director

4:30 p.m. "Squirrels of Florida" The Gray and Southern Fox Squirrel Jim E. Davis, UF/IFAS Extension

5:00 p.m. Survey and Gift (Must complete survey to receive the gift)

**Day 3: January 27, 9:00 a.m. to 12:00 p.m.**

(Must be registered for one or both days of WISE)

**Guided Hikes**

Dade Battlefield. Led by Jim Davis and Arthur Clothier (County Forester)

Chinsegut Conservation Center, Led by Dr. Bill Lester and Hana Brinkley, Director of Chinsegut Conservation Center. Chinsegut Conservation Center is an education facility managed by the Florida Fish and Wildlife Conservation Commission that offers environmental education and outdoors skills programs to the public. They are located 7 miles north of Brooksville, nestled within the Chinsegut Wildlife and Environmental Area. The center is open to the public Fridays and Saturdays from 8am-2pm. For more information visit [myfwc.com/Chinsegut](http://myfwc.com/Chinsegut).

Florida Bass Conservation Center, Led by FWC Representative

## W.I.S.E. Presenter Bios and Contacts

### **Lauren Barth**

Wildlife Assistance Biologist, Northeast Region  
Florida Fish and Wildlife Conservation Commission  
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Lauren Barth is the wildlife assistance biologist of the Northeast Region for the Florida Fish and Wildlife Conservation Commission. She has earned a Bachelor's degree from Florida Gulf Coast University and Master's degree in Environmental Studies from Florida International University. She has taught university classes on environmental science and Florida ecology, and has assisted in research of small mammals and birds in Florida, Texas, Nevada, and Utah.

### **Dr. Eva Buckner**

Assistant Professor & State Extension Specialist  
University of Florida IFAS Florida Medical Entomology Laboratory  
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I am an Assistant Professor located at the UF/IFAS Florida Medical Entomology Laboratory in Vero Beach, and I serve as UF's medical entomology state Extension specialist. My appointment is 80% Extension and 20% research. As an Extension specialist, I provide research-based information on medically important arthropods to stakeholders, which include federal and state agencies, mosquito control and public health professionals, county Extension agents, and the public, through Extension publications, in-person and online trainings, and various other interactions. My research program focuses on integrated mosquito management techniques and mosquito insecticide resistance. Over the past 2 years, my lab has been conducting a state-wide survey of the susceptibility of Florida *Aedes aegypti*, *Aedes albopictus*, and *Culex quinquefasciatus*, important domestic mosquito vectors of arboviruses affecting human health, to active ingredients in insecticides commonly used by mosquito control programs.

### **Arthur Clothier**

Sumter County Forester  
Florida Forest Service  
(352) 793-2431  
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Arthur Clothier started with the Florida Forest Service in 1994 and has been the Sumter County Forester since 2010. His work is diversified, but his primary duty is to advise private landowners

and help them achieve their forest land management objectives. During his career Arthur has served as the Pasco County Forester, CARL Lands Forester, Timber Forester on the Withlacoochee State Forest and the Resource Unit Leader on the Citrus Canker Eradication Program in Broward County. He has worked on US Forest Service inventory and recreation projects in Washington State and Minnesota. Arthur is a veteran of the US Coast Guard and a graduate of the College of Agricultural Sciences at Southern Illinois University, Carbondale (B.S. Forest Management).

### **Dr. Jaret Daniels**

Curator

McGuire Center for Lepidoptera and Biodiversity

Florida Museum of Natural History

University of Florida

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Jaret C. Daniels is a Curator at the Florida Museum of Natural History's McGuire Center for Lepidoptera and Biodiversity and Professor in the Department of Entomology and Nematology at the University of Florida. His research focuses on insect ecology and conservation, with a particular emphasis on at-risk butterflies and native pollinators. As part of these efforts, his lab works across a diversity of landscapes from agroecosystems to the built environment and seeks to develop best land management and organism recovery practices. Jaret is additionally a nature photographer, author, and naturalist. He has authored many successful field guides, gardening books, and general interest titles on butterflies, insects, wildflowers, native plants, and wildlife landscaping including *Butterflies of Florida Field Guide*, *Native Plant Gardening for Birds, Bees & Butterflies: Southeast*, *Backyard Bugs: An Identification Guide to Common Insects, Spiders, and More*, *Wildflowers of Florida Field Guide*, *Your Florida Guide to Butterfly Gardening*, and *Insects & Bugs for Kids: An Introduction to Entomology*.

### **James Davis**

Multi-County Extension Director, Extension Agent III

Sumter County & Hernando County Agriculture/Natural Resources and Urban Pest Management

Florida Master Naturalist Instructor

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Jim Davis is the Multi-County Extension Director for UF/IFAS Sumter and Hernando Counties. Jim has been in Extension for over 15 years and his programming includes, Agriculture, Natural Resources, and Urban Pest Management. Jim's programs have been recognized nationwide and has presented on a state, national, and international level. Jim is a recipient of the Distinguished Service Award from NACAA and FACAA. He is a native Floridian, avid hiker, and wildlife photographer.

**Coral Foster**

Biologist

University of Florida IFAS Center for Aquatic and Invasive Plants

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Coral Foster earned her B.S. degree in Biology concentrating in Ecology and Field Sciences from Mars Hill University while representing her school as a catcher on the university softball team. Over the summers, she spent her time working for MOTE Marine Laboratory and Aquarium in the Benthic Ecology Lab in Sarasota, Florida. She moved to Louisiana to pursue her master's degree in Marine and Environmental Biology at Nicholls State University. Her master's thesis focus involved crucial marsh building plants and their flooding tolerance amidst sea level rise, marsh subsidence, and coastal land loss. During her time here, Coral also assisted Louisiana's National Park Service branch to develop their citizen science program and used GIS mapping to create signage for the parks. Coral, now, works remotely in southern Florida as a research biologist for the University of Florida Institute of Food and Agricultural Sciences Center of Aquatic and Invasive Plants (UF/IFAS CAIP). She hopes to continue using her knowledge of plants responses to anthropogenic and environmental stressors to assist the Center's efforts to understand how invasive species function and aid in finding better ways to manage their growth, spread, and function.

**Dr. R. Dean Grubbs**

Research Faculty III

Associate Director of Research

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<http://www.marinelab.fsu.edu/faculty/deangrubbs.aspx>

Dr. Dean Grubbs is a fish ecologist with >30 years of experience studying the biology and ecology of sharks and rays in coastal, pelagic and deep-sea environs and has taught college courses on the biology of sharks and rays for more than 25 years. He received bachelor's degrees in Marine Science and Biology from the University of Miami and a doctoral degree in Fisheries Science from the College of William & Mary's Virginia Institute of Marine Science. Dean was a post-doctoral researcher and faculty member at the Hawaii Institute of Marine Biology before moving to Florida State University in 2007. He is now a Full Research Professor and the Associate Director of Research at Florida State University's Coastal and Marine Laboratory, where he maintains an active and highly collaborative lab and mentors graduate and undergraduate students. He also serves on numerous federal and international advisory panels such as the NOAA SEDAR Panel of Experts for shark management issues, the NOAA Smalltooth Sawfish Recovery Implementation Team and has been part of the International Union for the Conservation of Nature's Shark Specialist Group since 2001. He is a Scientific Advisor to the Save Our Seas Foundation and the immediate past-President of the American

Elasmobranch Society, the world's largest and oldest scientific society dedicated to the scientific study of elasmobranch fishes.

**Catherine Kennedy Hannan**

Biological Scientist IV  
Florida Fish and Wildlife Conservation Commission  
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Catherine Hannan is a Biological Scientist with the Florida Fish and Wildlife Conservation Commission's Wildlife Assistance Program. Her work seeks to reduce negative human-wildlife interactions and promote coexistence with native wildlife. Catherine serves a 43-county region of north Florida, providing education and outreach services and engaging with Florida stakeholders on a variety of topics related to reducing human-wildlife conflicts.

**Maxine Hunter**

Ag/ Natural Resources Agent II  
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Maxine Hunter is the UF/IFAS Extension Agriculture and Natural Resources Agent in Marion County. She has a Master's degree in Agriculture Education and Communication and a Bachelor's degree in Wildlife Ecology and Conservation both from the University of Florida. Her favorite natural resource topics include invasive plant management, habitat conservation, and wildlife management. Prior to becoming an extension agent, she worked for the UF/IFAS Extension Farm to School Program as the Northeast Florida District Coordinator where she assisted with implementing local food movements, school and community gardens.

**Dr. Steve A. Johnson**

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Dr. Steve A. Johnson is an Associate Professor of Wildlife Ecology at the University of Florida in Gainesville. He holds a Ph.D. from the University of Florida and B.S. and M.S. degrees from the University of Central Florida. Dr. Johnson's area of expertise is natural history and conservation of amphibians and reptiles. He, his students and his collaborators conduct research on invasive species—their studies have focused on Cuban tree frogs, cane toads, coqui frogs, rhesus



macaques, tegu lizards, and others. He and his students have also conducted research on sea turtles, gopher frogs, diamond-backed terrapins, pine snakes, and Amazonian river turtles. Dr. Johnson's outreach program emphasizes invasive species education, and he has authored numerous "fact sheets" on invasive vertebrates in Florida. In 2018 he received the Paul Moler Herpetological Conservation Award from the Florida Chapter of TWS for his career-long commitment to conservation of amphibians and reptiles. Steve is a native Floridian and enjoys being outdoors.

### **Nancy Kolkebeck**

Certified Florida Master Naturalist

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Nancy Kolkebeck is a Florida Master Naturalist who is passionate about educating people about Florida's native plants and animals. She works closely with Jim Davis, UF/IFAS Multi-County Extension Director, Sumter County and Hernando County leading nature walks and classes focused on our "Natural Neighbors". Prior to moving to Florida she was a docent at the University of Pennsylvania's Morris Arboretum where she led tours of the Arboretum's temperate zone collection of trees.

### **Dr. Emily Kraus**

Biological Scientist IV

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Emily Kraus is a Biological Scientist IV and currently heads several mass rearing programs studying plant-insect interactions and plant defense physiology. Her research includes laboratory, field, and collaborative efforts with other research institutions. She has a B.S from Purdue University, M.S. from Kansas State, and PhD in induced plant responses to herbivory from Louisiana State University. She has presented at the University of Florida, the Annual meeting of the Entomology Society of America and the biannual meeting of the International Congress for Biological Control. She is the recipient of an FDACS Citation of Special Recognition.

Websites:

<https://www.fdacs.gov/Divisions-Offices/Plant-Industry/Bureaus-and-Services/Methods-Development-Biological-Control/Biological-Control/Air-Potato-Vine-Biological-Control>

<https://www.fdacs.gov/Divisions-Offices/Plant-Industry/Bureaus-and-Services/Methods-Development-Biological-Control/Biological-Control/Asian-Citrus-Psyllid-Biological-Control>

**Dr. William Lester**

Extension Agent  
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Dr. William Lester holds a graduate degree in Plant Medicine from the University of Florida and currently works for UF/IFAS Extension in Hernando County, FL. Combining a mix of horticultural knowledge and management skills, his current responsibilities include teaching the public and working closely with county and professional clients. As a frequent guest on radio and writing for local newspapers, his goal is to put complex scientific findings into language that can be understood by school age children and the public alike.

**Morgan Lucot**

Area Bear Biologist  
Florida Fish and Wildlife Conservation Commission  
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Morgan Lucot is a Michigan State alumnus who received a BS in Ecology, Evolution, and Organismal biology. She is current an Area Bear Biologist working for Florida Fish and Wildlife Conservation Commission in the Bear Management Program. Her area of responsibility encompasses 7 counties in central Florida. Her role with FWC focuses largely mitigating human-bear conflict in her area. In order to accomplish this goal Morgan works with other biologists as well as supervises a group on Bear Response Contractors to assist Florida residents to live alongside black bears.

**Brooke Moffis**

Commercial Horticulture/FL Friendly Landscaping/4-H Youth  
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Brooke Moffis is the Commercial Horticulture Agent with UF/IFAS Extension Lake County and a PhD student with the School of Natural Resources and Environment. With 20 years of horticulture experience, she teaches residents, professionals, and municipalities Florida-Friendly Landscaping principles and provides plant diagnostic services.

**Dr. Faith M. Oi**

Associate Extension Scientist  
Director of Pest Management University  
University of Florida IFAS Entomology and Nematology Department  
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Dr. Faith Oi is the urban entomologist and Extension specialist. She is the Director of Pest Management University, an academy that provides state-of-the-art education and hands-on training for the industry. As a faculty member in the Entomology and Nematology Department at the University of Florida, she works at a “grassroots-level” and does applied research to solve industry problems. Her latest efforts also involve working with county faculty to direct market IPM to residents through existing programs. She received her Ph.D. from the University of Florida and her M.S. and B.A. degrees from the University of Hawai‘i, Mānoa.

**Brittany Scharf**

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Brittany Scharf is the Florida Sea Grant Agent with UF/IFAS Extension Hernando County. Scharf oversees coastal and marine programs addressing fisheries, habitats, water quality, and sustainable economic resource activities. She was formerly a fisheries biologist for the Florida Fish and Wildlife Conservation Commission’s Fish and Wildlife Research Institute and an adjunct professor for the University of Tampa. She holds a B.S. in Biological Science and a Coastal and Marine Science Resources Certificate from Florida State University, and an M.S. in Biological Oceanography from the University of South Florida.

**Mike Singer**

Conservation Lands Specialist  
Hernando County Environmentally Sensitive Lands Program  
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Mike Singer, Conservation Lands Specialist for Hernando County’s Environmentally Sensitive Lands Program, is a Florida native and has worked for Hernando County since 7/2017. He earned his B.S. from Saint Leo University in 2009, with a major in Biology and minor in Chemistry. Prior to his work with Hernando County Mike worked for the Fish and Wildlife Conservation Commission for 8 years.

# Got Invasives? Get Assistance.

**Invasive species problem?  
Find assistance at [FloridaInvasives.org](http://FloridaInvasives.org).**

Have an invasive species problem on your property? Use [FloridaInvasives.org](http://FloridaInvasives.org) to find private land owner assistance programs and connect with your local Cooperative Invasive Species Management Area (CISMA).

[FloridaInvasives.org](http://FloridaInvasives.org) is hosted by the Florida Invasive Species Partnership (FISP) with the goal of connecting landowners with information and resources to help in their fight against problematic species. This resource takes the guesswork out of finding the agencies or organizations offering assistance and will direct you to available programs.

## Why was [FloridaInvasives.org](http://FloridaInvasives.org) developed?

Public and private land managers have identified the high ecological and economic cost of invasive species as a statewide problem in Florida. FISP is a collaboration of federal, state, and local agencies, along with nongovernment organizations, formed to link efforts at preventing and controlling infestations of invasive species across agency and property boundaries. FISP has developed and maintains an online Landowner Assistance page of available programs to make it easier for landowners and land managers to find them.

## How does [FloridaInvasives.org](http://FloridaInvasives.org) help you?

Each year, multiple agencies and organizations provide cost-share programs, grants, and/or technical assistance to help landowners and land managers with various agriculture or natural resource management practices. Invasive species management is an important practice covered within many of these programs.

[The Landowner Assistance page](http://FloridaInvasives.org) at [FloridaInvasives.org](http://FloridaInvasives.org) provides the information to connect you directly with available assistance programs all in one location for your convenience.

[FloridaInvasives.org](http://FloridaInvasives.org) also serves to connect you with your regional CISMA, a local network of agency, non-profit, and private land managers actively working on invasive species issues. CISMAs address prevention, early detection and rapid response, monitoring, management, and education and awareness on the local level and are a great resource for information and technical assistance.

Go to [FloridaInvasives.org](http://FloridaInvasives.org) to find out more.

Species Shown from top to bottom:  
Mexican Petunia, mimosa, Boston Fern, cogongrass, camphor



Type here!



*Think Locally, Act Neighborly*  
invasive species know no boundaries!

# Do you want to be a Master Gardener?



## Why Would I Want to Be a Florida Master Gardener?

Are you someone that enjoys plants and gardening or want to know more about gardening in central Florida? Do you enjoy volunteering in your community? Are you interested in the environment and water quality in Florida? Are you someone that looks forward to learning new skills through workshops or classes? And, do you enjoy sharing what you know with others? If you answered yes to any of these questions, the Master Gardener program could be for you!

## How do I become a Master Gardener?

Here's how you apply to the Sumter County Master Gardener program:

- Complete and send in the Sumter County Master Gardener Application by July 1 and submit it to UF/IFAS Sumter County Extension, ATTN: Donna Lester, 7620 SR 471, Suite 2, Bushnell, FL 33513
- Interviews will start in July
- Pay Class Fee
- Complete a background check
- Complete over 50 hours initial training (which includes completing Green Industry Best Management Practices certification)
- Complete 75 volunteer hours and 10 hours of continuing education within the first year of certification through the Sumter County Extension office

The Florida Master Gardener Volunteer Program offered by UF/IFAS Sumter County Extension provides a program Classes will be held on Fridays from 9 am to 3:30 pm at the Sumter County Extension Office.

Formal classroom work consists of more than 75% of the intensive initial training. You'll learn about basic botany, soils, fertilizers, vegetables, entomology, citrus, turfgrass, use of (and alternatives to) pesticides, ornamentals, diseases and other related topics. All information is based on knowledge and research from University of Florida.

## **What do Master Gardeners do?**

Master Gardeners are educators who answer horticultural questions for county residents, sharing unbiased, research-based information with the public. Other activities include:

- disseminating science-based information by phone, email, through plant clinics and event booths
- write newsletter or newspaper articles
- develop and deliver presentations for garden clubs, civic organizations and MG speaker series
- support youth programs
- garden in the Florida-Friendly Demonstration Garden in Bushnell
- become more knowledgeable through advanced educational opportunities

After Master Gardener Interns complete their first year, as Master Gardeners they will annually renew their recertification by completing 35 volunteer hours and 12 continuing education hours.

For any additional information or questions call Lisa Sanderson, the Sumter County Residential Horticulture Agent II and Master Gardener Coordinator at 352-569-6862.

UF/IFAS Extension programs are open to all persons without regard to race, color, sex, age, disability, religion, or national origin.

# Do you want to be a Master Naturalist?

## The Florida Master Naturalist Program

The Florida Master Naturalist Program (FMNP) is a University of Florida/IFAS Extension environmental education program developed for adult audiences. FMNP courses are provided by Certified Instructors throughout the state of Florida at Extension offices and other environmental education organizations.



The goal of the FMNP is to promote awareness, understanding, and respect of Florida's natural world. Students of the FMNP promote this goal by sharing their knowledge with family, friends, and through both formal and informal environmental education programs as employees or volunteers at parks, nature centers, eco-tour operations, and other organizations.

## FMNP Students and Instructors

FMNP students include anyone over the age of 18 interested in learning more about Florida's environment. Those who benefit include environmental educators, natural resource managers, volunteers, eco-tour guides, teachers and anyone wishing to expand their knowledge of Florida's natural world. Professionals and teachers have obtained CEUs and in-service credit.

FMNP Instructors include individuals from the University of Florida/IFAS Extension, environmental educators, natural resource managers, teachers, professors and others. All FMNP Instructors receive training and are certified by the FMNP.

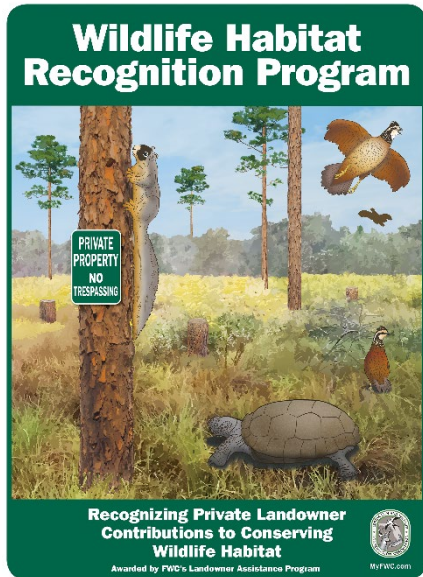
## Core Modules

FMNP Core Modules provide a holistic approach to understanding Florida's ecology, natural history, and environmental issues. There are three Core Modules: Freshwater Wetlands, Coastal Systems, and Upland Habitats. Training includes ecosystem processes, identification of key plants and wildlife, the role of humans in shaping Florida's environment, interpretation skills, and environmental ethics.

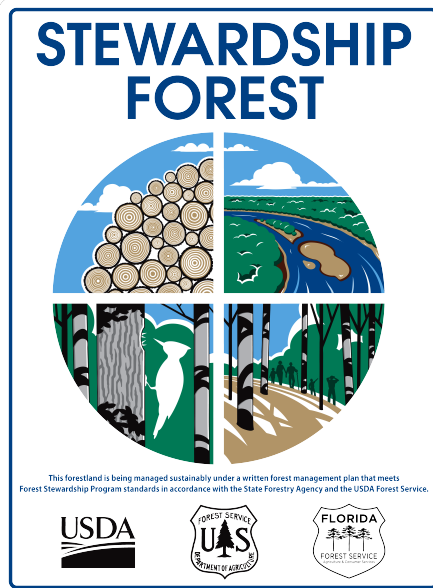
Each Module is 40 contact hours and includes classroom presentations, discussions, videos, field trips, and practical experience in interpretation. Students receive detailed course manuals and, upon completion, certificate of achievement, patch and pin, and registration in our online student database. Students who complete all three Modules are designated Florida Master Naturalists and receive a plaque and special recognition in an online database.

See <https://masternaturalist.ifas.ufl.edu/> for more information!

## Assistance and Recognition Programs for Landowners



Private lands play a critically important role in the fate of Florida's vast wildlife resources. The efforts of private landowners to manage their land to benefit wildlife by providing food, water, shelter, and space will help ensure that future generations have the opportunity to experience and enjoy wildlife as much as, or even more than, we do today. To show appreciation for the accomplishments by landowners to conserve our state's wildlife, FWC's Landowner Assistance Program (LAP) created the **Wildlife Habitat Recognition Program**. This program honors landowners who have satisfactorily completed habitat management practices that benefit wildlife and/or their habitat by awarding them with a sign to display on their property and a certificate recognizing their habitat restoration efforts. For more information, see <http://www.myfwc.com/conservation/special-initiatives/lap/>



The **Forest Stewardship Program**, developed by state forestry agencies, like the Florida Forest Service, provides educational and technical assistance for private landowners. Forestry and natural resource professionals cooperate to help private forest landowners develop and implement a plan designed to increase the economic value of their forestland while maintaining its wildlife habitat value and environmental integrity for future generations. Landowners who demonstrate good forest stewardship are recognized with a Stewardship Forest sign. For more information, see <https://www.fdacs.gov/Forest-Wildfire/For-Landowners/Programs-for-Landowners/Forest-Stewardship-Program>



The **American Tree Farm System (ATFS)** Standards of Sustainability guide and ensure that forest benefits are enhanced and available for future generations. Landowners can enroll and be certified in the ATFS to improve access to sustainable forest product markets and educational opportunities. The Florida Tree Farm Program is a nonprofit organization and state affiliate of the ATFS that promotes sustainable forest management and educational outreach to private forest landowners. For more information, see <https://www.treefarmssystem.org/florida>





## **Native Species in Florida — Online Resources**

Supplement to WISE Workshop—January 2022

Prepared by Chris Demers, School of Forest, Fisheries, and Geomatics Sciences  
University of Florida IFAS, [cdemers@ufl.edu](mailto:cdemers@ufl.edu)

### **Plants & Pollinators**

Native Florida Plants Topic Area: [https://edis.ifas.ufl.edu/topic\\_native\\_plants](https://edis.ifas.ufl.edu/topic_native_plants)

Butterfly Gardening, Landscaping Topic Area: [https://edis.ifas.ufl.edu/topic\\_butterfly\\_gardening](https://edis.ifas.ufl.edu/topic_butterfly_gardening)

Bees and Beekeeping Topic Area: [https://edis.ifas.ufl.edu/topic\\_beekeeping](https://edis.ifas.ufl.edu/topic_beekeeping)

### **Forests**

Forest Management and Stewardship:

[https://edis.ifas.ufl.edu/topic\\_forest\\_management\\_and\\_stewardship](https://edis.ifas.ufl.edu/topic_forest_management_and_stewardship)

### **Amphibians and Reptiles**

Reptiles and Amphibians Topic Area: [https://edis.ifas.ufl.edu/topic\\_reptiles\\_and\\_amphibians](https://edis.ifas.ufl.edu/topic_reptiles_and_amphibians)

### **Mammals**

Florida Panther: <https://edis.ifas.ufl.edu/uw402>, <https://edis.ifas.ufl.edu/uw390>

Florida Black Bear Topic Area: [https://edis.ifas.ufl.edu/topic\\_bears](https://edis.ifas.ufl.edu/topic_bears)

Other Mammals Topic Area: [http://edis.ifas.ufl.edu/topic\\_mammals](http://edis.ifas.ufl.edu/topic_mammals)

### **Other Wildlife**

Wildlife Topic Area: [https://edis.ifas.ufl.edu/topic\\_wildlife](https://edis.ifas.ufl.edu/topic_wildlife)

Safe Harbor Agreements for Endangered Species: <http://edis.ifas.ufl.edu/uw403>

## **Invasive Plants and Control Techniques**

Management of invasive vegetation in natural areas requires control methods that will minimize damage to non-target vegetation and soil. Control methods include cultural, preventative, manual, and mechanical removal, biological control, physical controls, and herbicides. Generally, these tools are utilized as part of a comprehensive management plan that considers a wide range of issues to control invasive plants and protect the native plants of a given natural area. These tools are not silver bullets and cannot be expected to solve invasive plant problems with a one-time shot. Eradication, which is the complete elimination of all living propagules of a species, is extremely difficult and often infeasible for well-established invasive plants. Without a clear management plan and long-term commitment, most single invasive plant control efforts result in short-lived success.

### **Herbicide Application Techniques for Woody Plant Control:**

<https://edis.ifas.ufl.edu/ag245>

### **Integrated Management of Nonnative Plants in Natural Areas of Florida:**

<http://edis.ifas.ufl.edu/wg209>

### **Controlling Invasive Plants in North Florida Forests:**

<https://edis.ifas.ufl.edu/fr133>

### **Invasive Landscape Plants and Trees:**

[https://edis.ifas.ufl.edu/topic\\_invasive\\_landscape](https://edis.ifas.ufl.edu/topic_invasive_landscape)

### **Biology and Control of Cogongrass (*Imperata cylindrica*) in Southern Forests:**

<https://edis.ifas.ufl.edu/FR411>

### **Cogongrass (*Imperata cylindrica*) Biology, Ecology, and Management in Florida Grazing Lands:**

<https://edis.ifas.ufl.edu/WG202>

### **Efficacy of herbicide active ingredients against aquatic weeds:**

<https://edis.ifas.ufl.edu/ag262>

### **UF/IFAS Center for Aquatic and Invasive Plants:**

<http://plants.ifas.ufl.edu/>

## **Invasive Wildlife**

Many invasive wildlife species are opportunistic and this leads to many problems with the habitats and native wildlife they impact. They can directly compete with many native species and some have become a significant limiting factor for native populations. Some can consume young domestic livestock including poultry, lambs, and goats. When natural foods are scarce or inaccessible, some will readily forage on almost any agricultural crop and feed set out for livestock and wildlife, leading to significant losses. Some will also feed on tree seeds and seedlings, causing significant damage in forests, orchards, and plantations. In Florida and the Southeast, this may be a serious impediment to regenerating and restoring longleaf pine forests. Some non-native fish species have established permanent populations in surrounding ecosystems, spread into other ecosystems, and cause harmful environmental, economic, or human health effects.

**Invasive Wildlife (birds, mammals, reptiles, amphibians, fish):**

[https://edis.ifas.ufl.edu/topic\\_invasive\\_animals](https://edis.ifas.ufl.edu/topic_invasive_animals)

**Wild Hogs in Florida: Ecology and Management:** <http://edis.ifas.ufl.edu/uw322>

**USDA Animal and Plant Health Inspection Service Feral Swine Management Program:**

<https://www.aphis.usda.gov/aphis/ourfocus/wildlifedamage/operational-activities/feral-swine>

**University of Florida Wildlife Extension (Dr. Steve Johnson's lab):**

<http://ufwildlife.ifas.ufl.edu/index.shtml>

**Options for Unwanted Exotic Pets:** <http://edis.ifas.ufl.edu/uw353>

## **Invasive Insects and Diseases**

Our rural and urban landscapes are increasingly suffering from emerging invasive pests and diseases with important economic, ecological, aesthetic and cultural impacts. Introduced tree diseases, like laurel wilt fungus vectored by wood boring ambrosia beetles, have nearly eradicated a number of tree species and are threatening crops such as walnuts, avocados and mangoes.

Though it has not yet been found in Florida, there is tremendous potential for emerald ash borer (EAB) to establish directly or via movement of infested wood into the Florida. Since first recorded in Michigan in 2002, the EAB has broadened its range in the United States and has killed millions of ash trees.

**Emerald Ash Borer:** <https://edis.ifas.ufl.edu/in1141>

**Redbay Ambrosia Beetle and Laurel Wilt Fungus:**  
<https://edis.ifas.ufl.edu/publication/IN886>

**University of Florida Emerging Threats Research and Extension:**  
<https://ffgs.ifas.ufl.edu/sites/emergingthreats/>

**Florida Forest Service Forest Health:**  
<https://www.fdacs.gov/Forest-Wildfire/Our-Forests/Forest-Health>

NOTES

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**UF/IFAS Invasive Species Programs**

**<https://invasivespecies.ifas.ufl.edu/>**

**Florida Master Naturalist**

**<http://www.masternaturalist.ifas.ufl.edu/>**

**Florida Master Gardener**

**<http://gardeningsolutions.ifas.ufl.edu/mastergardener/>**

**Department of Wildlife Ecology and Conservation Extension Programs**

**<http://www.wec.ufl.edu/extension/>**

**School of Forest, Fisheries, and Geomatics Sciences Extension Programs**

**<https://ffgs.ifas.ufl.edu/extension/>**

**Florida–Friendly Landscaping Program**

**<https://ffl.ifas.ufl.edu/>**