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## Thrips Take on the Invasive Brazilian Pepper

By Michelle Leonard-Mularz,  
UF/IFAS Environmental Horticulture Agent

Brazilian Pepper, *Shinus terebinthifolia*, is native to Brazil and was introduced into Florida, first in the 1890's at the port of Miami and then later a separate introduction in 1926 in Punta Gorda by Dr. George Stone. It was originally brought over as the southern equivalent for English Holly, *Ilex aquifolium*, and its ornamental beauty which is evident by some of its common names Christmasberry and Florida Holly. Brazilian Pepper now covers over 700,000 acres in Florida and is listed as a Florida Noxious Weed and also listed as a category I invasive plant by the Florida Exotic Pest Plant Council. That designation means the plant is altering native plant communities by displacing native species, changing community structures or ecological functions.

Brazilian Pepper (BP) is a multi-stemmed, woody shrub with alternate, compound leaves that have a turpentine or peppery aroma when crushed; unisexual, white flowers, dioecious (separate male and female plants); with bright red fruit (drupes) that are present from November through February. Interestingly, this growth habit seen in Florida, does not occur in its native range and the reason for this is not fully understood. One reason could be that the natural predators that interact with the plant in Brazil, aren't here. Also, there are two distinct genetic types in Florida, Type B, the one introduced in Miami from northern Brazil, and Type A, introduced in Punta Gorda from southeastern Brazil and they have extensively hybridized since being introduced in the State. There is almost 500 miles between these two genotypes in its native range and thus have not hybridized in Brazil. This also contributes to its invasive properties.



(above) BP Thrips, *Pseudophilothrips ichini*  
Credit: Terry Raun

Brazilian Pepper is a prolific seed producer and is predominately dispersed by birds, especially the American Robin, which winters in Florida, when the plant is fruiting. Also animals like opossums and raccoons are considered important in seed dispersal. Fruits can remain viable for up to six months, however, need to be ingested for germination. Seeds that have not been ingested (passed through the digestive tract of animals) have very little chance of germinating.

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### Did You Know?



You can request all your Amazon Shipments to be plastic free with minimal packaging by following these simple steps:

1. Open your Amazon Account
2. Go to 'help/customer service'
3. Use their chat option
4. On the chat, request to make all future orders plastic-free with minimal packaging, also request that they use only degradable packaging materials
5. This information will be saved on your account and used on future orders

Small changes make a HUGE difference!



# Sea Grant News

Shelly Krueger  
UF/IFAS Florida Sea Grant Agent

Shelly recently accomplished the following activities:

- Shelly is working with the Florida Keys National Marine Sanctuary Water Quality Protection Program technical advisory committee to identify and rank priority water quality action items through the priority working group.



- Shelly is one of 3 co-leads for the Florida Coral Disease Outbreak Response and the point of contact for the Rescue Team. This month we released the winter Florida Stony Coral Tissue Loss Response Bulletin and developed the Collaborative Communications Process to facilitate communications between the 9 teams.



- Shelly was invited to review the online content for the Gulf of Mexico Fishery Management website about species-specific fisheries regulations.

Florida Stony Coral Tissue Loss Bulletin Winter 2019/2020  
[https://www.agrra.org/wp-content/uploads/2020/03/Florida-SCTLD-Response-Bulletin\\_Winter-19-20.pdf](https://www.agrra.org/wp-content/uploads/2020/03/Florida-SCTLD-Response-Bulletin_Winter-19-20.pdf)



**Due to the COVID-19 outbreak all in-person plant clinics have been cancelled until further notice.**

The Environmental Horticulture Program and Master Gardener Volunteers remain dedicated to helping you with your plant related questions.



**CALL OUR OFFICE:**  
(305)292-4501

**We have many different ways we can assist!**

**ZOOM PLANT CLINICS:**

Dates and Times will be announced on our Facebook Page. Private Zoom Meetings with our Master Gardeners upon request.

**EMAIL YOUR QUESTIONS TO:**  
mastergardener@monroecounty-fl.gov

Please include a detailed description of the problem and photos if available

**FACEBOOK PAGE:**

Visit our Facebook page for updates, requests, information and so much more!

<https://www.facebook.com/MonroeCountyExtension/>

# Horticulture News

Michelle Leonard-Mularz  
UF/IFAS Environmental Horticulture Agent

Michelle recently accomplished the following activities:

- Installation of the wildflower garden at the gato building began March 7<sup>th</sup>. Though completion of the garden is on hold for now, as soon as it is safe to do so, we will resume planting the garden. To date, 27 different native species, totally over 160 plants have been installed.



(above) Rougeplant, *Rivina humilis*, bloming in the garden

- Monroe County Extension Service, along with USDA researchers, released 6,000 Brazilian pepper thrips, funded through the Comprehensive Everglades Restoration Plan, in an effort to help slow the growth of Brazilian Pepper in the County. Additional releases will continue depending on availability of the thrips.



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## Extension Director's News

Alicia Betancourt  
 UF/IFAS Family and Community Development Agent and  
 Monroe County Extension Director

Alicia recently accomplished the following activities:



- Alicia held a training on the Climate Smart Floridians Program for 23 Extension professionals. The training included 9 learning modules. 100% of participants reported learning new ideas and they were provided with material to hold the program in their community.

- Alicia held a training for 41 Hallandale Beach officials and staff on climate change and sea level rise with Dr. Colin Polsky at FAU. This training was part of a day long staff workshop that included a simulation "Game of Extremes" where participant looked at a community to determine risks and critical assets. 87% of participants reported knowledge gain through pre and post surveys.



- Alicia participated in formation of a new Nation Climate Extension initiative. At the first meeting 57 climate program agents and specialists developed a scope of work that will allow regional and national collaboration on climate issues and program resources.
- Alicia met 18 times with Monroe County, UF IFAS administration and national program leaders on Covid-19 response including program cancellations, departmental policies and UF policies to ensure the safety of staff and continuity of service to the community.

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Another problem is the plant has allopathic properties, which means chemicals released from the foliage and roots have been shown to inhibit the growth of our native plants, giving Brazilian Pepper the competitive advantage.



(above) damage caused to growing tip by BP thrips

We now have biological control agents in our arsenal to combat the spread of Brazilian Pepper. Already released in the state, BP Thrips, *Pseudophilothrips ichini*, both adults and immature stages feed on the growing tips of BP and can cause flower abortion, hopefully making them less competitive to our native plants and possibly further exposing them to plant pathogens. The BP yellow leaf galler, *Calophya latiforceps*, will be released later this year. The entire life cycle of the leaf galler is spent in the canopy of the tree, unlike the BP thrips with three pupal stages occurring in the soil.

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On Thursday, March 5<sup>th</sup>, along with USDA researchers, Monroe County Extension Service released 6,000 BP thrips in and around Key West, making it the largest single release by the researchers to date. This is part of the CERP program (Comprehensive Everglades Restoration Plan) with the USDA. On March 18<sup>th</sup>, these locations were inspected and larva were present at most release sites, indicating the releases were successful. These populations will continue to be monitored and we will continue to do releases in the County, depending on the availability of the thrips.



Be sure to "Like" us on [Facebook](#) and follow us on [Twitter](#) and [Instagram](#)!



**UF/IFAS/MONROE COUNTY EXTENSION**

1100 Simonton Street, Suite 2-260, Key West, FL 33040  
102050 Overseas Hwy., Suite 244, Key Largo, FL 33037

KW Phone: 305-292-4501 KL Phone: 305-453-8747  
KW Fax: 305-292-4415 KL Fax: 305-453-8749

General e-mail: [monroe@ifas.ufl.edu](mailto:monroe@ifas.ufl.edu)  
County Extension Director: Alicia Betancourt  
Newsletter Editor: Liz Yongue, Extension Coordinator

This newsletter can be accessed online at:  
<http://monroe.ifas.ufl.edu/newsletter.shtml>

We're on the Web at: <http://monroe.ifas.ufl.edu>



University of Florida (UF)  
<http://SolutionsForYourLife.ufl.edu>  
<http://ufl.edu>  
Electronic Data Information Source (EDIS)  
<http://edis.ifas.ufl.edu>



UF/IFAS Extension is  
Putting Florida First

Scan this code to go directly to our UF/IFAS Website for more information!



**Reduce your waste!**

In honor of Earth day we have created an Amazon shopping list of 10 affordable items that can help to reduce your waste.

- Bamboo Toothbrushes \$8
- Bamboo reusable utensil set \$10
- Silicone reusable food storage bags \$12
- Nalgene reusable water bottle \$10
- Beeswax reusable food wraps \$13
- Reusable collapsible silicone straws \$5
- Reusable shopping cart bags \$25
- Amber glass spray bottles \$13
- Kitchen stainless steel compost bin \$23
- Eco Friendly compact lunch box set \$12

*An Equal Opportunity Institution. UF/IFAS Extension, University of Florida, Institute of Food and Agricultural Sciences, Nick T. Place, dean for UF/IFAS Extension. Single copies of UF/IFAS Extension publications (excluding 4-H and youth publications) are available free to Florida residents from county UF/IFAS Extension offices.*

## Have some extra free time?

Take the FREE Florida Friendly Fishing Guide Certification Course!!!!

Florida Friendly Fishing Guide Certification  
<https://www.flseagrant.org/news/2019/12/fishing-guides-can-now-be-certified-as-environmentally-friendly/>



### UF/IFAS/MCES QUARTERLY CONTACTS

	Jan	Feb	Mar	Totals
Phone calls	49	80	70	199
Office visitors	28	15	8	51
Visits to clients	4	8	12	24
Learning events	24	31	39	94
Participants	640	888	719	2247
Media submissions	5	7	9	21
Publications distributed	306	351	151	808
<b>TOTAL contacts</b>	<b>1,056</b>	<b>1380</b>	<b>1008</b>	<b>3444</b>