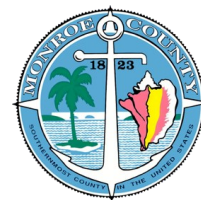


# Educating with Extension



By Brynn Morey, Extension Coordinator, and in collaboration with  
Alicia Betancourt, Shelly Krueger, and Maria Quirico

Volume 23 Issue 8

University of Florida, Institute of Food and Agricultural Sciences (IFAS), Monroe County

August 2023

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## AUGUST HAPPENINGS



### National Water Quality Month

### Every Thursday

Marathon Garden Club

Ornamental and native shrubs & trees for sale! 5270 O/S Hwy.  
9:00AM-12:00PM



**August 3rd**  
National Watermelon Day!

### August 6th

Lobster Season Opens!  
Visit myFWC.com for Regulations



**July 24th - August 6th**  
Back-to-School Sales Tax Holiday!



**August 10th-13th**  
26th Annual Key West  
Lobster Festival!

<https://keywestlobsterfest.com/>

### August 19th

National Honey Bee Day!



## Florida's Coral Reef and the 2023 Marine Heat Wave

By Shelly Krueger  
Sea Grant Agent

Imagine you are accustomed to eating 2,000 calories per day. What if your diet was suddenly cut by 85% to only 300 calories per day? You could survive on 300 calories per day, but for how long? This is the issue facing the bleached corals living on Florida's Coral Reef during the current marine heat wave, Summer 2023.

### What is coral bleaching?

Corals are animals that live in a symbiotic relationship with microscopic algae called zooxanthellae. Zooxanthellae are unicellular golden-brown algae that live inside coral tissues and belong to the algal group called dinoflagellates. Each coral polyp is like a condominium for the zooxanthellae to live in. The coral provides housing, a terrific security system of stinging tentacles, and the zooxanthellae use the carbon dioxide and water released from the coral's respiration for photosynthesis to produce the food they need. In return, the zooxanthellae provide the corals with the sugars and amino acids they use as the building blocks for food, which supplies the majority of the coral's nutrition (>85%).

*Photo below: Bleached grooved brain coral with living polyps. Photo Credit: FWC Fish and Wildlife Research Institute, Katy Cummings*



Just like humans, corals become uncomfortable and stressed when they are outside of their thermal tolerance zone. The corals in the Florida Keys are most comfortable when water

## Plant Clinics

Wednesday, August 2nd

### Plant Clinic

9 a.m. to 12 p.m.

Key Largo Library

1014850 O/S Hwy.  
Key Largo

Thursday, August 3rd

### Plant Clinic

11 a.m. to 1 p.m.

Key West Garden Club

1100 Atlantic Blvd.  
Key West

Saturday August 5th

### Plant Clinic

9 a.m. to 12 p.m.

Grimal Grove

258 Cunningham Lane  
Big Pine Key

Saturday, August 19th

### Plant Clinic

9 a.m. to Noon

Marathon Home Depot

4555 O/S Hwy,  
Marathon

### Plant Clinic

9 a.m. to Noon

KW Botanical Garden Nursery

Cancelled, will resume in  
November

Tuesday, August 15th

### Plant Clinic

9 a.m. to 11 a.m.

Garden Club of Upper Keys

94040 O/S Hwy.  
Tavernier

Thursday, August 24th

### Plant Clinic

9:30 a.m. to 12:30 p.m.

Island Home Nursery

88720 O/S Hwy,  
Islamorada

...Continued on page 3

# Sea Grant News



Shelly Krueger  
UF/IFAS Florida Sea Grant Agent

Shelly recently accomplished the following activities:

- Shelly collected floating cyanobacteria mats from a local marina for analysis at the University of Florida Fort Lauderdale Research and Education Center after a call from a concerned citizen. Kate Rose, Collier County Extension Agent, wrote a very interesting blog about these algae that are often found floating in marinas. Link to blog: <https://blogs.ifas.ufl.edu/charlotteco/2023/07/14/oh-poop-is-that-what-i-think-it-is/>

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**Fort Lauderdale  
Research and  
Education Center**

- Shelly is the co-lead of the Florida's Coral Reef Resilience Program Disturbance Response Communication Team. This is the new iteration of the former Florida Coral Disease Outbreak Response that was focused primarily on stony coral tissue loss disease. The program has evolved to include events like coral bleaching, sea urchin die-offs, and hurricanes. The communication team has been very busy this month meeting and sharing information with the public and state and federal agencies as we collaborate on communication products regarding the current marine heat wave that is driving coral bleaching from Key Largo to Key West. For more information on the marine heat wave and coral bleaching, read Shelly's blog: <https://blogs.ifas.ufl.edu/monroeco/2023/07/27/floridas-coral-reef-coral-bleaching-and-the-2023-marine-heat-wave/>

- Shelly hosted two internationally renowned sponge scientists, Drs. Shirley Pomponi and Cristina Diaz. We are collaborating on an EPA grant to create a Florida Keys sponge identification field guide for 30 nearshore sponge species. Sponges were photographed and described, and 43 specimens were preserved for a museum collection and also sent to France for DNA analysis to update a global sponge taxonomy system for Spongiids. Shelly was very honored to receive a Pomponi Lab sponge divas hat from Shirley!



Photo left: Sea Grant Agent, Shelly Krueger

**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!**

**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>

**VISIT OUR OFFICE:**

Email [Monroe@ifas.ufl.edu](mailto:Monroe@ifas.ufl.edu) or  
Call (305)292-4501 to schedule an appointment



# Horticulture News



Maria Quirico  
UF/IFAS Environmental Horticulture Agent

Maria recently accomplished the following activities:

- This month, Maria Quirico focused on enhancing environmentally sustainable horticulture practices for Monroe County through our successful plant clinics. These clinics saw participation from 4 to 10 people at each location, providing valuable advice to the community about their plant-related questions. The Key Largo Garden Club Plant clinics received new educational materials, including "Growing Up Florida Friendly" books and extension documents, contributing to our mission of promoting sustainable gardening practices.



- Maria Quirico prepared for upcoming events, such as the Green Industries Best Management Practices (GI-BMP) training scheduled for September 13th in Key Largo. This training, led by our Environmental Horticulture program, Cesar Peralta, and Master Gardener Laurie Brooks, promises to provide valuable insights to participants.

- Maria Quirico actively engaged with the community through presentations, site visits, and meetings. From discussing tree recommendations with the City of Key West Urban Forestry Manager to educating The Big Pine Boys and Girls Clubs about pollinators, we continued to impact and enrich the community's horticultural knowledge.



**BOYS & GIRLS CLUBS**

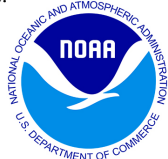
## Extension Director's News

Alicia Betancourt

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

Alicia recently accomplished the following activities:

- Alicia has been invited to join the leadership of the state-wide Community Voices, Informed Choices; CIVIC Coordinating Committee. The committee is developing a \$1 million-dollar NOAA grant application under NOAA, Climate Resilience Regional Challenge. This application includes collaborative efforts to reduce risk and build capacity for climate adaptations in disadvantaged communities using the CIVIC framework for community engagement.
- Alicia is working with the Southeast Florida Climate Compact as county lead on an application for funding under the Climate Pollution Reduction Grant. This \$999k grant will build on the regional greenhouse gas inventory and advance shovel-ready projects in compact counties resulting in a regional Priority Climate Action Plan (PCAP) and Comprehensive Climate Action Plan (CCAP) that will include emissions from all sectors. The grant is being managed by Miami-Dade County.
- Alicia had been invited to contribute to professional credentialing by sitting on the Association of Climate Change Officers, Board of Directors. This board will define the future of the Certified Climate Professional Credential and Candidate programs.
- Alicia is preparing to teach the Sustainable Living and Leadership Series, a fall online class. This class will be exploring topics such as energy, water, and food and learning how these work together as a system. Participants will delve into the U.S. economy and understand how our consumption of goods impacts our world. They will discover ways to take action in their home and community to reduce their footprint and increase their handprint. Participants will earn a digital badge when they complete the course. The class starts Sept. 13, 2023, but you can [sign up now for \\$125 here](#).



Continued from page 1

temperatures are between 73-84° Fahrenheit. Once the temperature exceeds 88°F, corals may start to expel the zooxanthellae from their living tissues. In addition to providing most of the coral's nutrition, the zooxanthellae are what provides the coral's color. This is why [coral bleaching](#) turns the individual coral polyps transparent and you can see the white mineral skeleton underneath.

Corals use their tentacles to capture zooplankton but this is a small percentage of their diet (<15%). This is why short-term coral paling and bleaching does not usually lead to coral mortality; the coral polyp is still able to find food, just not enough to survive more than a couple of weeks of above-average water temperatures. When the food deficit lasts longer than the corals can tolerate, these corals are subject to dying from starvation.

### What is the extent of the bleaching you have seen?

As of July 24, 2023, coral bleaching has been documented from Key Largo to Key West, Florida in waters less than 30 feet. Underwater temperature gauges at many sites within the Florida Keys National Marine Sanctuary are recording temperatures over 93°F. According to [NOAA](#), the current sea temperatures in many locations are the warmest water temperatures ever recorded in July since water temperature readings at the reefs began in 1981. The current marine heat wave is concerning because it started early in the season and NOAA forecasts a 70-80% probability that above-average ocean temperatures could persist until October 2023.



(photo left) Elkhorn coral beginning to pale and bleach. Photo Credit: FWC Fish and Wildlife Research Institute, Katy Cummings

### What can I do?

Ultimately, reducing the greenhouse gas emissions that contribute to climate change is the number 1 priority. Supporting policies and making personal decisions to decrease your personal carbon footprint are very valuable.

#### 1. Report coral bleaching and healthy corals! Your photographs are an important tool used by scientists!

The Florida Department of Environmental Protection Southeast Florida Action Network has a citizen reporting tool at [SEAFAN.net](#). You can submit photographs to report bleached corals and healthy corals. Data showing where corals look healthy is just as important as knowing the locations where they are bleached or paling. Your data will be available to scientists and there is a public [BleachWatch dashboard](#) where you can see your report. You can submit up to 10 photos and there is a map to set a pin with the location of your observations. You can also report other marine incidents on SEAFAN.net or call 1-866-770-7335 to let them know about marine debris, algal blooms, anchor damage, fish kills, injured marine mammals, photos of tagged corals, and other incidents.

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



# UF IFAS Extension

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## UF/IFAS/MONROE COUNTY EXTENSION

1100 Simonton Street, Suite 2-260, Key West, FL 33040  
88800 Overseas Hwy., Suite 6, Plantation Key, FL 33070

KW Phone: 305-292-4501 PKS Phone: 305-852-7177  
KW Fax: 305-292-4415

General e-mail: [monroe@ifas.ufl.edu](mailto:monroe@ifas.ufl.edu)

County Extension Director: Alicia Betancourt

Newsletter Editor: Brynn Morey, 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>



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University of Florida (UF)

<http://SolutionsForYourLife.ufl.edu>

<http://ufl.edu>

Electronic Data Information Source (EDIS)

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

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



UF/IFAS Extension is  
Putting Florida First

*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.*

<https://ics.ifas.ufl.edu/ufifas-diversity-and-legaleeo-statements/>

## UF/IFAS/MCES QUARTERLY CONTACTS

	May	June	July	Totals
Phone calls	28	42	88	158
Office visitors	42	38	41	121
Email Consultations	48	57	195	300
Learning events	18	18	23	59
Participants	291	314	281	886
Media submissions	3	3	6	12
Publications distributed	183	155	237	575
<b>TOTAL contacts</b>	<b>613</b>	<b>627</b>	<b>871</b>	<b>2,111</b>

## GREEN INDUSTRIES

# BEST MANAGEMENT PRACTICES

## GI-BMP COURSE

The GI-BMP program is a science-based educational program for lawn and landscape professionals. It is required for FDAOS certification.

### EVENT DETAILS

\$30 per person

Beverages & Lunch Provided

Register through Eventbrite

### JOIN OUR EVENT

SEPTEMBER 13, 2023  
8 am - 5 pm

Murray Nelson Govt. Center  
102050 O/S Hwy. (conference room)  
Key Largo, FL 33037



(photo above) Master Gardener Volunteers and Environmental Horticulture Agent, Maria Quirico assist visitors with plant and insect questions at the Marathon Home Depot Plant Clinic which takes place on the 3rd Saturday of every month.

To register please call (305) 292-4501 or email us at [monroe@ifas.ufl.edu](mailto:monroe@ifas.ufl.edu)