# Miami-Dade Extension Connection

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Summer 2019



Florida Sea Grant Extension Agent Ana Zangroniz, center, leads a group of SCUBA divers in an in-water coral identification session earlier this year. See full story on page 6. Photo: Nick Martinez

### Inside this Issue

Letter From the Editor	2
Comings and Goings	3
Tropical Research and Education Center Spotlight	4
SCTLD Observer Training Launches with Swimming Success	6
What Can You do in 4–H?	8
What's New at Miami-Dade Extension?	10
Contact Information	11



# Letter from the Editor

Jeff Wasielewski, Commercial Tropical Fruit Extension Agent

Dear Friends of Extension,

Summer is here and that means that the heat index and humidity are turned up to high. It's important that you don't work or play too hard outdoors as heat exhaustion can be very dangerous. If you want to garden or exercise, take advantage of the slightly cooler morning and evening hours, and always remember to hydrate. In addition to bringing the heat, summer also brings a taste of the tropics in the form of mangos and lychees. Both species of fruit are available in large quantities, and both are grown locally in South Florida, so get some while you can.

As the commercial tropical fruit extension agent, I am happy to see the bounty of South Florida's fruit. This is the time of year when I also get a lot of invitations to share my knowledge of tropical fruit to various clubs and at different events. This summer I have given talks to high school students at BioTech high school, a national group of students at FIU, and the Rare Fruit Council International. Topics included how to fertilize tropical fruit, pruning, pesticides, and South Florida's tropical fruit industry. I very recently gave a pruning talk and demonstration at the Fruit and Spice Park's Tropical Fruit Fiesta. I will also give two talks at Fairchild Tropical Botanic Garden's International Mango Festival. This will be my 24th consecutive year volunteering at this event! These talks and demonstrations are in addition to the programing that I put on for my commercial clients, so summer is always quite busy. Having all the mangos and lychees you can eat makes up for the heavy workload though, so no worries.

Finally, I would like to give special recognition to our vegetable and pesticide Extension agent Dr. Qingren Wang (pronounced wong). All Extension agents need to apply for something called permanent status, and they usually do that after six years. Because of his large body of work and incredible work ethic, Dr. Wang was encouraged to apply for permanent status a full two years early. He recently found out that he was approved for permanent status and he will be moving from a level two agent to a level three. This is an astounding feat and something that should be celebrated. If you happen to run into Dr. Wang, make sure to congratulate him. He is a great Extension agent and a wonderful coworker.

Sincerely,



# **Comings and Goings**

### A Warm Welcome for Rachel Biderman



EFNEP Supervisor Rachel Biderman. Photo: UF/IFAS Extension

Rachel Biderman is our new Expanded Food and Nutrition Education Program (EFNEP) supervisor. She received her Bachelor of Social Work from Appalachian State University, with a concentration in food security and education. Rachel's previous position was with a national nonprofit called Common Threads, that works to empower children and families to make healthy food choices. Her work experience as the senior program manager with Common Threads enabled her to develop community partnerships and reach 29,000 young learners and 8,000 adults through nutrition education within the last four years.

She has a strong nutrition background and many years of experience working with diverse audiences. She has managed and trained a team of chef instructors, interns and volunteers to affect nutrition and health behavior change throughout Miami-Dade County. Rachel currently sits on numerous committees such as the M-DCPS Department of Food and Nutrition Wellness Committee and Live Healthy Miami Gardens Physical Activity and Nutrition Sub Council.

Rachel feels that the work EFNEP has done over the last 50 years is imperative and meaningful, and is excited to be part of the UF/IFAS team. She is thrilled to join Miami-Dade County Extension, and looks forward to continue EFNEP's work with the diverse Miami-Dade community. In her first three months, Rachel has been able to visit and observe many classes taught by her program assistants and is excited to support and supervise such a dynamic team. Please reach out and welcome Rachel to her new position.

# Tropical Research Education Center Spotlight

## Improving Our Understanding of Miami-Dade's Stormwater Ponds

Steve Hohman, Master's student, UF/IFAS Soil and Water Sciences Department
Ashley R. Smyth, Assistant Professor, UF/IFAS Tropical Research and Education Center
Alexander J. Reisinger, Assistant Professor, UF/IFAS Soil and Water Sciences Department



Left: Collecting sediment cores in the field. Photo: Daniella Daniele, Right: A stormwater pond located in Miami-Dade County. Photo: Christina Currais

Do you know those ponds and lakes you see around Miami-Dade County? Maybe you have gone fishing in them, canoed on them, or even seen your favorite animals hanging around near the water. These ponds are in fact part of the counties stormwater management infrastructure and are designed and built to reduce flooding risks in developed landscapes. Stormwater ponds can either be 'wet ponds' that permanently have water and are intended for flood protection or 'dry ponds' that only temporarily hold water and primarily intended for water quality protection.

Although wet stormwater ponds are primarily intended for flood protection, they can also be beneficial for the environment, providing habitat for plants and animals, or by removing excess nutrients (like nitrogen and phosphorus) and other pollutants (like sediment) from urban runoff before it is discharged to natural waterways. City managers are especially interested in nitrogen because it can be permanently removed by microorganisms living in the sediment and water. Stormwater ponds represent a buffer between developed landscapes and natural ecosystems and are expected to play a pivotal role in helping to improve water quality and mitigate unhealthy and unsightly algal blooms.

Since January 2019, we have been working on a project to better understand nutrient dynamics in storm—water ponds. In order to do this, we collect sediment cores from stormwater ponds throughout Miami–Dade County and the city of Gainesville, ranging in age from 10 years old to 30 years old. We bring the sediment back to the lab where we set up our experiment. For the next few days we measure nutrient concentrations in the water and how it is affected by sediment from different ponds. Ultimately, we will use these results to estimate how much nitrogen and phosphorus each pond removes.

# Tropical Research Education Center Spotlight

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Preliminary results from January suggest that these ponds have the potential to remove nitrogen from runoff, particularly when nitrogen concentrations are high. In our study, older ponds also removed more nitrogen than younger ponds, suggesting that pond age may play a role in these ponds ability to remove nutrients from runoff. We are currently analyzing samples from June to compare seasonal differences in nutrient dynamics, and we hope to identify specific factors about the ponds that control nutrient removal. If we can identify these factors, we can develop recommendations for better ways to design and manage stormwater ponds to maximize nutrient removal. For example, if ponds with more organic matter in the sediments have higher nutrient removal rates, it would suggest that pond management should prioritize practices that increase organic matter in the system.



Collecting water samples for analysis. Photo: Asher Williams

1,000 people are moving to Florida each day. As new neighborhoods continue to be built across Florida. infrastructure will be needed to minimize impacts on flooding and water quality. Ponds are the most common infrastructure used for stormwater management and therefore, it is increasingly important

to better understand the drivers of nutrient removal in these ponds to protect the water quality, habitat, aesthetics, and recreational opportunities of our natural waterways. Overall, this research will help provide scientists, managers, and engineers a better mechanistic understanding of nutrient availability within stormwater ponds, allowing for development of targeted management actions for enhanced nutrient removal.

### SCTLD Observer Training Launches with Swimming Success

### Ana Zangroniz, Florida Sea Grant Extension Agent



The members of Divers for Education and Environmental Protection (DEEP) Foundation celebrate following the successful completion of their SCTLD in-water training in June. Student ages ranged from 12 to adult. Photo: Ani Gonzalez

effort, we joined the Citizen Engagement team, one of the 11 response teams that are part of a 40+ partner endeavor to understand and respond to the disease event.

We determined that our objectives were two-fold: increase the level of understanding of the disease event within the recreational SCUBA diving community, and create an observer training program to engage SCUBA divers to identify SCTLD and perform roving diver surveys to report disease presence/absence and coral recovery. These objectives were of critical importance, as the FRT is over 300 miles long and extends through five counties: Monroe, Miami-Dade, Broward, Palm Beach, and Martin.

After piloting the training program at Florida Keys Community College, we moved forward with hosting training events locally. I have now hosted four events, training close to 40 divers. Shelly has trained more than 15 divers, including inter–agency partners who are teaching others to identify corals and characterize coral condition. The classroom–based training delivers comprehensive information about the disease outbreak, stony coral and other organism identification,

The Florida Reef Tract (FRT) has an asset value of \$8.5 billion per year and supports 70,400 jobs in South Florida. Unfortunately, an outbreak of stony coral tissue loss disease (SCTLD) has devastated more than 20 species of reef-building corals since 2014. Since the outbreak is unprecedented in scale and duration, it is vital to increase the underwater monitoring network. Late in 2018, my colleague Shelly Krueger and I were contacted to engage the recreational SCUBA diving community in disease monitoring

efforts. Rather than duplicating



Florida Sea Grant Extension Agent Ana Zangroniz, left, reviews the SCTLD in-water training process with student Edwin Gonzalez. Photo: Christina Velez

# SCTLD Observer Training Launches with Swimming Success

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coral condition identification techniques, and underwater survey protocol. Where funding is available, an in-water training was offered to give the participants guided practice opportunities. Participant David Adams says, "One of the things I most enjoyed about the coral disease training was how easy [Ana] made it to differentiate between the various species of corals. This can be a challenging task, especially for the layperson."

One of the most significant results from this program so far was that one of the observers we trained early on identified and reported a sighting of SCTLD on a reef off of Key West, which was later confirmed as SCTLD, indicating that the disease boundary had made it to Key West. As the spring turns into summer, we hope to have this network of observers throughout the FRT, continuing to monitor the disease spread and very importantly-the recovery in areas where the disease has already moved through.

If you are an interested SCUBA diver and would like to request a training event for your group, please contact me at: azangroniz@ufl.edu

For more information on the SCTLD outbreak, please visit: https://floridakeys.noaa.gov/coral-disease/.



Members of the University of Miami Scuba Club following their classroom session. Photo: UM Scuba Club

### What Can You do in 4-H?

### Kimber Sarver, 4-H Extension Agent

The Everglades National Park, Biscayne Bay, and Washington DC are all destinations Miami-Dade County 4-H members visited in just the first few months of 2019.

On January 3, 2019, seven 4–H members and their families explored one of our country's National Parks – The Everglades. 4–H Agent Kimber Sarver began planning the event in November. Gratefully, Florida Sea Grant Extension Agent Ana Zangroniz and UF/IFAS Tropical Fruit Extension Agent Jeff Wasielewski assisted and educated the interested 4–H'ers on their adventure in their own backyard!

All plans were in place until the beginning of the new year rolled around and the government experienced a shutdown. However, instead of allowing the shutdown to sour their much-anticipated adventure, the group turned lemons into lemonade and decided to explore the Park anyway without some of the facilities or any of the park rangers being available. They were so glad they did, as the scavenger hunt prepared by Zangroniz was the catalyst for the families to discover many plants, animals, and important landscape features. After spotting gators, anhingas, turtles, and more from the boardwalk at the Anhinga Trail, the group drove to

Long Pine Key to enjoy their sack lunch



Jeff Wasielewski, center, points out features on the Long Pine Key trail at Everglades National Park. Photo: Miami-Dade 4-H

and an energizing walk on the trail. Perseverance paid off as they all had a great time learning together in one of our nation's treasures – The Everglades National Park.

On February 10, members of Miami-Dade County 4-H and the 4-H Ocean Explorers from Monmouth County New Jersey met at Biscayne Bay aboard a research vessel, the RV Garvin. New Jersey 4-H spent a week in the Bay to explore their marine ecosystem, and were gracious enough to invite Miami-Dade County 4-H to spend the day with them. The group started with introductions, pre-launch photos, and raising the 4-H flag, which looked majestic on the RV Garvin's mast.

The crew of the Garvin began to teach the group about Biscayne Bay's unique ecosystem and the local marine life. Then, things got really exciting as 4-H'ers learned to bait lines and cast them into the water in an effort catch sharks and tag them!



Miami-Dade County 4-H members aboard the R/V Garvin. Photo: Miami-Dade 4-H

# What Can You do in 4-H?

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They set ten longlines and eventually caught four lemon sharks. All of the sharks were very healthy; two of the sharks had already been tagged and they tagged the other two. Tagging a shark involves taking their measurements, obtaining a blood sample, observing their overall body condition, and then placing a semi-permanent tag on their fin. Each shark was released immediately after the samples and measurements were taken. These new, young marine biologists pulled up the last longline, and the Garvin headed back to the marina. This was a fun-filled Sunday that ended in sharing a "boat-cooked" meal with everyone aboard the vessel.

Finally, from February 15–18, two Miami–Dade Healthy Living Ambassadors flew to Washington D.C. to teach other 4–H'ers across America how to incorporate healthy living components into their daily lives. These two teen ambassadors, Christopher Rogne and Hannah Sarver, collaborated with 17 other 4–H'ers throughout Florida, forming a delegation for this amazing experience. The Florida delegation taught over 100 youth with its specialized three–day workshop. The four components of this program began with performing the 4–H pledge via a yoga sequence. Next, to increase the fun factor and heart rates, youth taught several high energy dance routines. The third segment was just as fun and just as challenging: partner strength training exercises. Finally the program concluded with 5–7 minutes of meditation. The entire routine took about 45 minutes in total, but of course, each segment can be completed separately. The delegation designed and taught fun ways to be healthy as an individual and to include your friends in the process.

But it wasn't "all work and no play". The Florida team lit up the night at an evening dance, visited workshops taught by other youth, assisted in a service learning opportunity benefiting our nation's homeless population, and went on a night tour of D.C.'s memorials and monuments.

It's easy to see that there's a lot of fun to be had when you are a member of the Miami-Dade County 4-H; what might not be so easy to see is all the learning that occurs. It may hardly be realized by our youth, but is very intentional by the 4-H Agent: that is the beauty of 4-H. Life skills such as critical thinking, goal setting, community service, effective communication, and much more are learned in a fun, non-formal manner.

If you would like more information about Miami-Dade County 4-H, please visit the UF/IFAS Extension Miami-Dade website: http://sfyl.ifas.ufl.edu/miami-dade/4-h-youth-

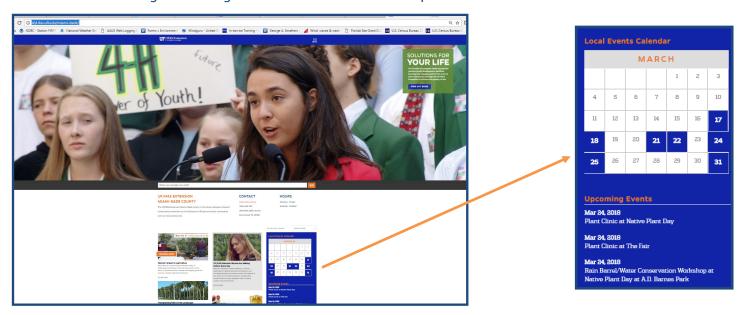
development/.



Miami-Dade County 4-H members meditate. Photo: Miami-Dade 4-H

# What's New at Miami-Dade Extension?

Check out our new website! To access our Extension Calendar, please visit our website: <a href="http://sfyl.ifas.ufl.edu/miami-dade/">http://sfyl.ifas.ufl.edu/miami-dade/</a> and scroll through the calendar. There, you will find all event information including how to register for classes and workshops.



### What is UF/IFAS Extension?

The **UF/IFAS Extension Service** is the liaison between research conducted at the University of Florida, other institutions of higher learning, other universities, and stakeholders in Miami-Dade County. Our clientele includes growers (agricultural and horticultural), homeowners, youth, people interested in family issues or food and nutrition, and marine industries.

UF/IFAS Extension Miami-Dade County receives direct funding from the <u>University of Florida's Institute of Food and Agricultural Sciences (IFAS)</u> and <u>Miami-Dade County's Parks, Recreation and Open Spaces</u>
Department,

The United States Department of Agriculture (USDA) is the third partner in this cooperative agreement. The Miami-Dade County offices are part of a nationwide system of information, outreach, and education offered by county governments and land-grant educational institutions in each state.

### Get Social With Us!

Follow us on our various social media outlets:



Like our FB Page: <u>UF IFAS</u>
<u>Extension Miami-Dade</u>
<u>County</u>



Check out our various informative videos on our YouTube channel: <u>UF/IFAS</u> Extension Miami-Dade



Tweet with our agents and programs on Twitter:

<u>@sflhort</u>

<u>@MiamiUCU</u>

<u>@miamidade4h</u>

@evcampoverde

This newsletter is edited by Jeff Wasielewski and Ana Zangroniz. If you have any questions or concerns, please contact us at sflhort@ufl.edu or azangroniz@ufl.edu.

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