

Panel Introduction and Freshwater Invasive Fish Work in SW FL



Michael Sipos UF/IFAS Florida Sea Grant Agent Collier County

A LITTLE BIT ABOUT M

- Herp and aquatic hobbyist
- Attended University of Florida
 - B.S. Zoology
 - M.S. Fisheries & Aquatic Sciences
 - Thesis on hormonal induction of ornamental fish
- Short stint in aquaculture
- Florida Sea Grant agent since October 2019
 - Sustainable fisheries
 - Invasive species
 - Environmental stewardship





THE ROUND UP

- Using anglers as citizen scientists to collect data
- Fishing tournament targeting invasive freshwater fish species
 - Collier, Lee, Charlotte, Hendry and Glades counties
 - Historically they last weekend April/first week of May
 - Starts virtually on Friday, in person weigh in Sunday
 - Teams 14 anglers, adult and junior division
 - Most weight, largest fish, most species
 - \$10 adult registration, lots of fun!
- 2022, 2023, 2024
- Hosted at Bass Pro Shops in Ft. Myers



BEFORE EVENT

- Meetings, advertisements, outreach and education!
- Fliers
- Facebook events/posts
- Educational Ads:
 - Nonnative and Invasive Fish of SWFL Webinar
 - ESPN Reel Talk Radio Program
 - Interview ABC 7
 - News articles
 - Waterline
 - Coastal Angler
 - Florida Weekly
- Outreach with stakeholder groups
 - Angling clubs
 - HOAs etc.



UF IFAS Collier County Sea Grant Extension Program
April 29

Tune in this morning or go check out the podcast after! Tight lines!

Reel Talk Radio
April 27

Tune in on Saturday, April 29th, starting at 7 AM, when Mike Sipos with UF IFAS Collier County Sea Grant Extension Program joins us in the studio.

We'll be talking about the upcoming Cisma invasive fish round up, how to target invasive fish species, what the heck is with Giant African land snails in Florida, environmental ethics while fishing, and a ton more.

Have questions for Mike? Add your questions in the comments below or reach out to us on the text line at 239-337-3776 while we're live on air this Saturday from 7 AM to 10 AM.

Listen every Saturday morning at 98.1 FM/770 AM in Southwest Florida, at espnswfl.com, or by downloading the ESPN Southwest Florida app.

Webinar!
MAY 2 AT 6:00PM!

NONNATIVE AND INVASIVE FISH OF SWFL !

ARE YOU AN ANGLER THAT NEEDS A LITTLE MORE VARIETY IN YOUR LIFE? WELL UNFORTUNATELY YOU'RE IN LUCK!

There are over 160 species of nonnative fish that have been spotted in Florida. By taking a trip to the Everglades or your local golf course pond, you can have a freshwater fishing expedition to the Orinoco in South America, the Nile in Africa or the Mekong River in Asia. Come to this webinar to learn what makes a nonnative into an invasive species, the process of invasion, why Florida is so special, species profiles of some commonly spotted nonnative fish in Southwest Florida and how to target them on your next outing.

REGISTER TODAY AT: [BIT.LY/FISHSWFL](https://bit.ly/fishswfl) OR BY SCANNING THE QR CODE ABOVE

UF UNIVERSITY OF FLORIDA
IFAS Extension

DURING EVENT

- **Data collection**
 - Species, size, distribution
 - 2023-2024
 - Sampling of fillet/flesh of donated fish
- **Educational stations**
 - Live fish with species profiles
 - How to fillet/ FW seafood safety
 - Gytaku Fish Printing
 - 4-H How to measure fish/regulations
 - CISMA Station
 - FWC
- **Prizes! Raffle**
- **Much of the financial support is via discounts and donations**



RESULTS

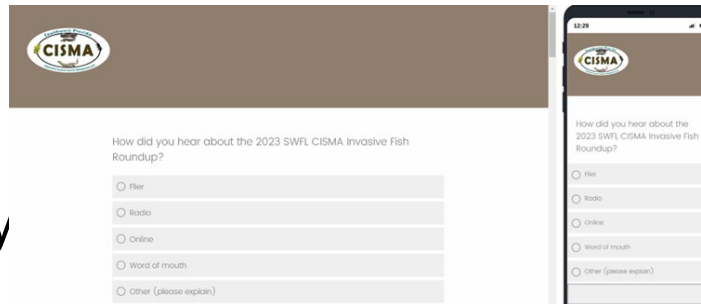
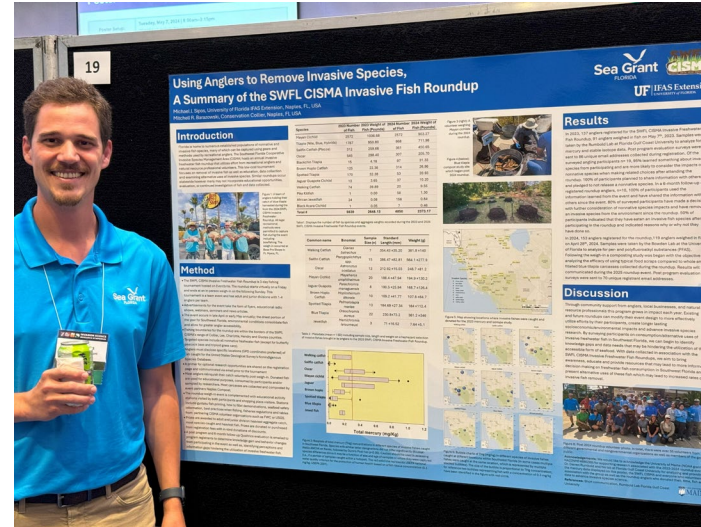
2,373 Pounds

4,850 Fish

2024 Invasive Fish Roundup, Number of Fish by Species			2024 Invasive Fish Roundup, Weight by Species (Pounds)		
Species		Number of Fish	Pounds of Fish		
Mayan Cichlid		2572	903.27		
Tilapia (Nile Blue Hybrids)		868	711.98		
Year	Number of Teams	Weight of Fish (lbs)	Number of Fish	Number of Species	
2019	28	2012	3755	11	
2022	29	1884	3413	12	
2023	31	2648	5639	12	
2024	45	2373	4850	12	
Walking Catfish		20	9.55		
Blackchin Tilapia		97	31.33		
Black Acara Cichlid		7	0.46		
Pike Kilifish		58	1.30		
Total #		4850	2373.17		

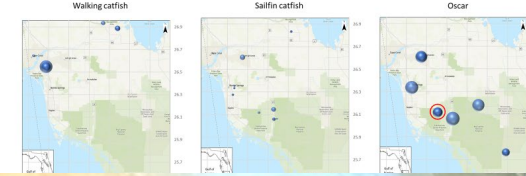
AFTER THE EVENT

- Program evaluation
 - Efficacy of education/success stories
- Sharing of data/continuation of research
 - USGS NAS data base
- Seafood Accessibility Grant
 - “Identifying knowledge gaps and information barriers hindering access to underutilized seafood”
 - Compost/alternative fertilizer
 - Stakeholder perspectives on why or why not they have consumed freshwater invasive species
 - Semi structured interviews with seafood processors/sellers



MERCURY DATA

Fig.3. Bubble charts of THg (mg/kg) in different species of invasive fishes caught at different locations within Southwest



DEVIL FISH STRIPS (SINGLE
INGREDIENT TREAT)

\$15



SILVER CARP CHIPS (SINGLE
INGREDIENT TREAT)

\$15



LIONFISH STICKS (SINGLE
INGREDIENT TREAT)

\$22



- 2
- 2
- PFAS Dr. John Bowden
- Hg Dr. Gretchen Lescord
- Difficult to communicate! Open to suggestions

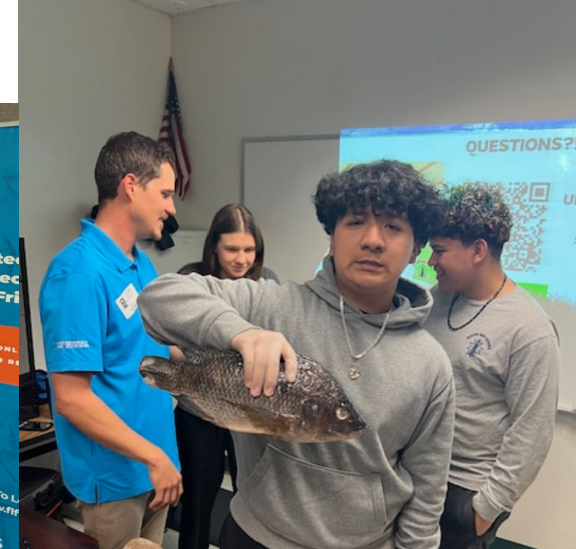
FISH COMPOSTING

- Provide alternative uses for invasive fish, food waste filleted carcasses, red tide fish kills, pond turnover etc!
- Backyard composter scale
- Whole, filleted Blue Tilapia, food waste, feed stock
- Samples collected throughout the process for PFAS degradation
- Penn State compost nutrient tests
- UF SWREC basil growth study
- UF turfgrass study



STAKEHOLDER PERSPECTIVES

- Voluntary survey
 - ~530 group learning participants ~13 events
 - 162 responses collected
 - 106 no they have not consumed or were not sure
 - 71 disclosed why/why not
 - General trends emerged and categorized
 - Lack of knowledge (25%)
 - Don't enjoy seafood (17%)
 - Only eat a specific type of seafood (14%)
 - No opportunity to engage with invasive freshwater seafood (14%)
 - Contamination (11%)
 - Uncategorized (18%)
 - New data to be entered



INDUSTRY SEMI STRUCTURED INTERVIEWS

- Semi structured Interviews to “Perceptions and information barriers hindering access to underutilized seafood species”
- ~14 interviews conducted in September
 - Central to west central Florida
 - Opened my eyes to this underreported and underutilized fishery
 - Overall trends emerged
 - Analyzing responses and coding them now



MOVING FORWARD

- Keep striving for alternative uses of invasive fish
 - Teaching tools (dissection, fillet dummies)
 - Fertilizer/compost efficacy
 - Food
 - Better recommendations for consumption
- Resources
 - Directory of fish houses/freshwater commercial fishermen?
- Education
 - More seminars? Guides?
 - Freshwater commercial fishing seafood safety BMPs?
- More sponsors?
- More buy in from local groups?
 - High school fishing clubs
 - Restaurants?



THANK YOU!



Thank you to all our amazing volunteers and anglers who participated!

QUESTIONS?



If you would like
to get involved
next year, please
reach out!



Michael Sipos
UF/IFAS Collier County
Extension Office
sipos624@ufl.edu

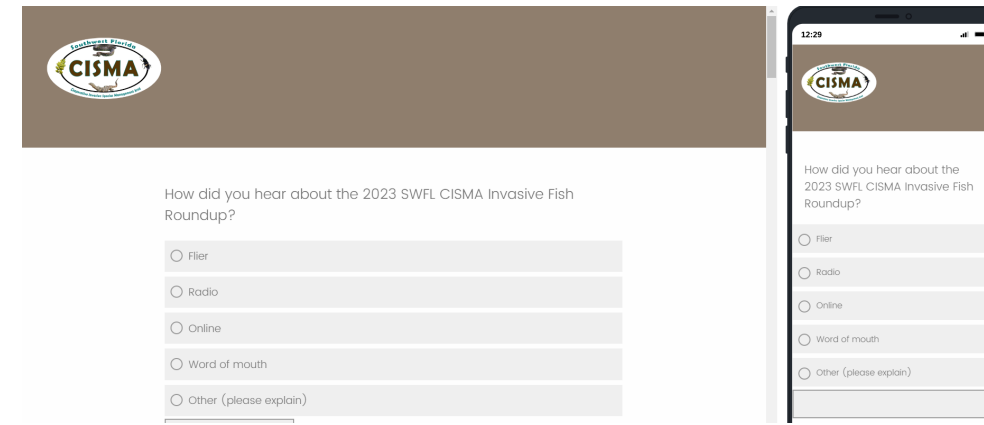


An Equal Opportunity Institution. UF/IFAS Extension, University of
Florida, Institute of Food and Agricultural Sciences

- I would like to see the fishes utilized for food instead of compost. I have talked with a church in Naples that would gladly be willing to accept some of the fishes providing they are healthy and unspoiled. They would like to be able to provide the fishes as food for needy families in our communities. Please consider this and contact me for the organizing of this if possible.
- I feel like 1 of these events a year isn't enough. I don't catch invasive fish on purpose usually because I don't have a reason to. We caught almost 3000 lbs this year, but now they have a whole year to repopulate. This event was fun, exciting, it got the younger generation into conservation. We need more of it
- My team and I fished the invasive roundup for the first time this year although we have been targeting invasive species for quite some time now. I noticed in the 3 days we fished for the tournament some of the areas we frequent quite often on our fishing outings where we usually go to target invasives mainly (Oscar, Mayan cichlid, and pike killifish) in that specific area that we didn't catch the first Oscar or pike killifish and the Mayan cichlids were very few compared to past trips and that the native fish were making a great comeback in that area we caught many bass, bream, warmouth, and a few shell cracker. I do believe the efforts put forth by y'all's organization and individual anglers such as myself are paying off in some areas even though there's still a long way to go in the fight against the invasives. I just thought you would like to hear some positive feedback from a lifelong angler of South Florida that has seen what these invasives have been doing for years.
- I would like to see an event like this more often. Maybe bi-annually or even tri-monthly. I believe with the participation we receive yearly, we'd yield about the same results doing it a little more frequently. With the amount of participation I think most teams who attended would agree the competition is fun, but it's about the greater good of the environment and removing these invasive species to give our native species a better chance. I'm happy with the prizes, but even if there weren't prizes I think we'd still have a good amount of people attend.

2023 EVALUATION

- Qualtrics survey sent to registrants
 - 86 emails 19 responses
 - Answer for other members 10 indicated yes, 4 responses, +9 n
 - 95% reported increasing their knowledge of invasive species and their impacts on the environment, are more likely to consider impacts of nonnative/invasive species when making related choices after the roundup
 - 84% are more likely to remove or reporting sightings after participating in the roundup
 - 100% Plan to share info and pledged
 - Interesting comments
 - 2022 6 month follow up data



9 - Are you more likely to remove or report sightings of invasive species after participating in the 2023 SWFL Cisma Freshwater Invasive Fish Roundup? (lv... Page Options ▾



#	Field	Minimum	Maximum	Mean	Std. Deviation	Variance	Count
1	Are you more likely to remove or report sightings of invasive species after participating in the 2023 SWFL Cisma Freshwater Invasive Fish Roundup? (lv...	1.00	3.00	1.32	0.73	0.53	19