

Department of Earth and Environment Newsletter

Spring 2024, Vol. 1

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**COLLEGE OF ARTS,
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MESSAGE FROM THE CHAIR

Welcome to the Department of Earth and Environment's Spring 2024 newsletter. It is my honor to serve as this department's current Chair. This newsletter is meant to celebrate the activities of the Faculty, Staff, and Students (both current and alumni). And celebrate we should, as your continued efforts have resulted in a successful department that competes for resources, attracts funding, supports our academic pursuits, and meets the needs of our diverse clientele. The success of our faculty and students has made this department a leader among the University in fundamental, applicable, scientific, and societal research and problem solving. Our innovative approach to research and teaching has resulted in a consistent pattern of growth in student success, grants generation, and publications and presentations. We have a global presence with research on multiple continents and attract talented students from around the globe. In all our actions we remain steadfastly committed to creating a diverse, inclusive, and supportive environment where all scholars have the ability to thrive.

I hope you enjoy this issue of our newsletter and look forward to hearing your ideas on what the Department of Earth and Environment means to you.

Sincerely,



Leonard J. (Len) Scinto, Ph.D.
Professor and Chair



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FACULTY NOTES

Congratulations to both **Florentin Maurrasse** and **Grenville Draper** for their years of service and dedication to our department!



50 Years



45 Years



Laurel Collins retired in August 2023. She came to FIU from the University of Michigan, where she was a Research Scientist after graduating from Yale in 1989. She focuses on foraminifera in interpreting past environments, evolution and rates of tectonic uplift. She is on the Board of Directors of the Cushman Foundation for Foraminiferal Research and served twice as its President. She lives in the Redlands with her husband Tim and three dogs, and continues affiliation with the department as Professor Emerita. A surprise retirement party was held in August, and she was really surprised.

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FACULTY NOTES

Patricia Houle retired at the end of the Fall 2023 semester following her career beginning in the Department of Environmental Studies in 2006. Patricia served as Undergraduate Program Director for several years, as Associate Chair of the Department for a term, and served on the University-level Curriculum and Disciplinary committees. She has an M.S. in Nutritional Biochemistry from MIT and an M.S. in Environmental Studies from FIU. Her special interests were curriculum development along with instruction in environmental science and GIS. After retirement she will continue volunteer work at Zoo Miami and other institutions focused on conservation and climate change.



Assefa Melesse is on sabbatical as a National Academies 2023 Jefferson Science Fellow. The 2023-2024 class of Jefferson Science Fellows is the 20th class of Fellows selected since the program was established in 2003 as an initiative of the Office of the Science and Technology Adviser to the U.S. Secretary of State. The Jefferson Science Fellows Program is designed to further build capacity for science, technology, and engineering expertise within the U.S. Department of State and U.S. Agency for International Development (USAID). (<https://www.nationalacademies.org/our-work/jefferson-science-fellowships/fellows>)

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FACULTY NOTES



From left to right: **Prof. Florentin Maurrasse**, José Manuel Torres, Prof. Mihaela Melinte Dobrinescu, Johanset Orihuela at the field trip, Dobrogea Gorge, 18 September 2023.

Florentin Maurrasse and his graduate students **Johanset Orihuela** and **José Manuel Torres** were the guests of the director of the Romanian Institute of GeoEcology and Marine Geology (GeoEcoMar), Professor Mihaela Melinte Dobrinescu in Bucharest. They attended the 14th Romanian Symposium on Paleontology (Sept. 14 – 18, 2023) where Professor Maurrasse chaired the Session on “Cretaceous Anoxic Events and Palaeoceanography” as a member of the ‘Honorary Scientific Committee’ of the Symposium. They also attended the post-symposium field trip in south-eastern Romania.



Left Photo: Katie Mach,
Right Photo: Natajah Fuller



Mike Sukop was awarded an exceptionally large grant from NOAA (\$10 M) to implement a monitoring system for the near-shore subsurface environment. Unlike existing systems that focus on water supply protection from salt-water intrusion, the emphasis will be on subsurface infrastructure.

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FACULTY NOTES

2023 CASE Awards



Left to Right: Jesse Blanchard - Community Engagement; Patricia Houle - Teaching; Krish Jayachandran - Service; Michael Ross - Service; Michael Sukop - Research; Amir Khoddamzadeh, Community Engagement; Jennifer Rehage—Research.

GRADUATE STUDENT NOTES

FALL 2023 GRADUATION



Dr Jonathan Rodemann's dissertation was *"How do Fish use Seascapes: Drivers and Consequences of Spatial Patterning of Submerged Habitats in Florida Bay"*.

Dr Nicholas Castillo's dissertation was *"Examining the threat of pharmaceutical contaminants to bonefish (*Albula vulpes*) throughout south Florida and the Caribbean Basin"*. He is a postdoc at FIU.



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Fall 2023 PhD graduates and Faculty Advisors: Front row, left to right: Nick Castillo, Jennifer Rehage, Jonathan Rodemann; Second row left to right: Mike Sukop, Martina Rogers; Third row, left to right: Krishnaswamy Jayachandran, Jazmin Locke-Rodriguez; Fourth row, left to right: Len Scinto, Samuel Kent. Last row, left to right: Adrian Figueroa, Joel Heinen, Steffanie Munguia (Photo: Nick Castillo)

Dr Adrian Figueroa, whose passion for conservation biology has propelled him through a remarkable journey, completed his dissertation titled *"Seasonal Differences in Diet Specialization, Frugivory, and Seed Dispersal in a Subtropical Population of Gopher Tortoise"* in December 2023. Now a Post-Doctoral Researcher at the Florida Invasion Ecology Lab at the University of Florida, Adrian is leading the development of innovative solutions for environmental challenges. He is creating a user-friendly digital tool using R Shiny to help decision-makers manage nonnative species in the Everglades. This tool combines scientific research with practical considerations, such as socioecological impacts and restoration efforts, to support comprehensive Everglades restoration initiatives. By integrating a wide range of data, Adrian's work will support county, state, federal, and tribal agencies engaged in safeguarding this unique ecosystem. Adrian is contributing to vital conservation efforts and paving the way for future ecological restoration.



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Dr Martina Rogers completed her dissertation (*“Modeling long-term and dynamic groundwater-seawater interaction and groundwater-level drivers in Southeast Florida”*). She works as a groundwater modeler at Miami-Dade County Water and Sewer Department.

Dr Samuel Kent’s dissertation was *“Agricultural Nurseries-Based Pollution Dynamics and Source Apportionment in the Canals of Miami-Dade, Florida”*. He works as a Hydrogeologist for the Miami-Dade County Department of Environmental Resource Management.



Dr Jazmin Locke-Rodriguez completed her dissertation (*“Harnessing Bioeconomic Potential: Cultivating Market Crops on Floating Treatment Wetlands For Enhanced Water Remediation”*). She and her work were featured in a video on FIU news: <https://news.fiu.edu/2024/flowers-grown-floating-on-polluted-waterways-can-help-clean-up-nutrient-runoff-and-turn-a-profit>. She is now a post-doc at FIU.

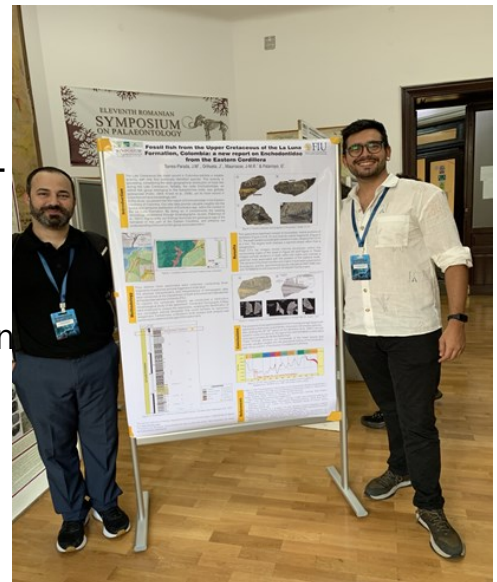
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Dr Steffanie Munguía completed her dissertation (*“Ramsar Convention Implementation in Coastal Wetlands of the Caribbean”*). She is currently working as the Student Engagement Director for Citizens' Climate Lobby and continuing her community outreach and advocacy efforts (as covered in FIU News here: <https://news.fiu.edu/2021/her-free-time-is-for-the-birds>). She recently returned to FIU to speak as part of the Earth & Environment Graduate Seminar on the role that graduate students can play in the environmental movement.

CURRENT GRADUATE STUDENT ACTIVITIES

PhD graduate students **Johanset Orihuela** and **José Manuel Torres** attended the 14th Romanian Symposium on Paleontology in Bucharest, Romania (14 – 15, September 2023) where they presented the preliminary results of their dissertation research projects.



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Miguel Valencia, PhD graduate student, has been reelected to the Geological Society of America's Advisory Council. The chair of the GSA Student Advisory Council (SAC) serves on GSA Council as a full voting member. The SAC is comprised of student representatives on GSA Divisions, Sections, or Standing Committees. GSA Leadership:

https://www.geosociety.org/GSA/GSA/About/Officers_Councilors.aspx

Jahna Brooks, a student in Cohort 8 of the Professional Science Master's in Environmental Policy and Management, began a new position as the Fairchild STEM Challenge Program Manager at Fairchild Tropical Botanical Gardens. She will be working to implement the Fairchild STEM Challenge, and will use her PSM-EPM Professional Practicum to expand the program statewide. See [PSMEPM.fiu.edu](https://psmepm.fiu.edu) for more information.



Florencia Pigni, a student in Cohort 8 of the Professional Science Master's in Environmental Policy and Management, began an internship at the Deering Estate under the tutelage of FIU E&E Alumna **Ana Rojas**, who recently started as a Conservation and Research Specialist at Deering Estate. See [PSMEPM.fiu.edu](https://psmepm.fiu.edu) for more info.

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Joey Navarro (MS Agroecology's) presented his SARE project to USDA in San Juan (this is the same grant that he and **Blaire Kleiman** received last August). It is important to note that Joey's project is the first USDA Student SARE to be awarded in Puerto Rico.

Dafrosa Kataraihya, was awarded 1st Place Winner in the Poster Presentation Category of the 22nd Symposium on the Coastal Environment at the 2024 AMS Annual Meet-



The **Earth and Environment Graduate Symposium** was held on February 16th, 2024 in the MARC Pavilion. While all of the talks and posters were wonderful, there were a few notable standouts!

Graduate Symposium Winners

Not pictured:

Johanset Orihuela, 3rd Place, Poster-PhD
Anurag Sharma, 2nd Place, Oral-3MT-PhD
Erika R. Guimaraes, 3rd Place, Poster-MS

Denise Garcia, 3rd Place, Oral-3MT-PhD
Noah Frade, 2nd Place, Poster-MS

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Md Tanvir Hossain, 1st Place,
Poster-MS



Pedro Gonzalez, 1st Place, Oral-
MS



Milagros Munoz Salas, 2nd Place,
Poster-PhD



Jordan Prats, 1st Place, Poster-
PhD



Anurag Sharma, 2nd Place, Oral-
3MT-PhD



Dafrosa Kataraihya, 1st Place,
Oral-3MT-PhD



Mason Bradbury, 3rd Place,
Oral-PhD



Chloe' Vorseth, 2nd Place, Oral-
PhD



Mekdelawit Deribe, 1st Place,
Oral-PhD

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UNDERGRADUATE STUDENT NOTES

Earth and Environment Clubs: Society for Sustainable Souls, Geology Club, Garden Club, and Meteorology Club

The student clubs in Earth and Environment have made a meaningful impact in our local environment. Congratulations to our clubs for having an impact in the community!



Sustainable Souls: From beach clean-ups to preserving gardens and nature reserves, our members have actively volunteered alongside Aiesec in Miami, Citizens for a Better South Florida, and the Green Haven Initiative, contributing to the betterment of South Florida.



Geology Club: Volunteering at a middle Miami-Dade Public School to discuss the rock cycle, Nature Preserve cleanup and exposure of Miami Limestone Project, testing Artificial Reality at the Ziff Education Building,

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Pumpkin Composting: Collaborating with the Garden Club, Sustainable Souls hosted a successful pumpkin composting event last semester. Not only did this initiative divert Halloween pumpkins from landfills, but it also educated FIU students on composting practices in our organic garden.

ALUMNI NOTES

We love to hear from our Alumni! Please send us an update, current photos, etc., and keep in touch!

Anamaria Sarmiento (BS, Geoscience) Anamaria Sarmiento, P.G., Supervising Hydrogeologist, Specialized Solutions – Government & Environment Sector, Black & Veatch, SarmientoA@BV.com

Felipe Frango, BSc Geoscience. Hydrogeologist, Water, Black & Veatch, FrancoF@bv.com

Franklin Feliz (BS 2023, Geoscience), Staff Geologist, Langan Engineering and Environmental Services, LLC. As an environmental staff geologist, his work at Langan includes executing field investigations into the soil and groundwater, identifying and solving field and laboratory problems, conducting environmental site assessments, and assisting in the preparation of technical reports.

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ALUMNI NOTES

Vanessa Londono, PhD (Spring 2023) started her new full-time employment with the USGS Mineral Division in August. Congrats, Vanessa!

Daniela Villalba, MS, GIT, Survey/CAD Technician, Land and Sea Surveying Concepts, Inc. 1605 Chase Hammock Road, Merritt Island, FL 32953

Nick Charles MSc, Environmental Scientist at Geosyntec Consultants, Greenville, South Carolina, United States, Nick graduated with M.Sc. (env studies) in 2019, with a focus on Agroecology.

Christina Estela Brown, PhD., Research Agricultural Economist, USDA - Economic Research Service, Conservation and Environment Branch, Christina.Brown2@usda.gov, Christina graduated around 2019.

Jeremy Katz, PhD (2022), Meteorologist at the National Weather Service at Brownsville, Texas. His duties include generating Forecast Discussions, writing up social media posts discussing current weather and potential weather hazards, issuing weather warning, watches, and advisories, collecting climate data, and providing Impact-based Decision Support Services briefing. Jeremy also leads the effort in a local journal Coastal Breeze Newsletter for the Brownsville National Weather Service.

Marco Paredes, MS (2022), Tropical meteorologist for the 4th largest weather consultation company in the world — StormGeo in Houston, Texas. He actively monitors and issues forecasts for tropical cyclones. In addition, he works with business partners such as Apple and Target, to develop emergency plans to ensure seamless business continuity before, during, and after a storm.

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SEMINARS

The Department's robust seminar program is being led by **Cara Rockwell** this Spring semester. Check out the talks and join us at 3:00 on Friday afternoons when you can. You can check out past seminars by visiting the [E & E YouTube Channel](#).

Date	Name	Institution	Presentation Title/Subject
Jan 12, 2024	Kwun Yip Fung	Univ. Miami RSMAS/NOAA Atlantic Oceanographic and Me- teorological Laboratory	Utilizing urban overheating miti- gation strategies to reduce heat stress and improve equity
Jan 19, 2024	Marconi Campos Cerqueira	Rainforest Connection	"Eavesdropping on nature - how ecoacoustics can help us con- serve species and habitats"
Jan 26, 2024	Wei Huang	FIU Earth & Environment	Studying storm-driven hydrody- namics in a semi-enclosed estu- ary by field measurements and numerical simulations
February 2, 2024	Jim Sanderson	Re: wild/Wildlife Conser- vation Network/IUCN Cat Specialist Group	Conserving small wild cats: An end-to-end view
February 9, 2024	Chris Malinowski	Ocean First Institute	Atlantic Goliath Grouper recov- ery, controversy, and policy: where to go from here?
February 23, 2024	Ben Rostron	University of Alberta	Groundwater and native or- chids: Is there a link (and why might anyone care)?
March 8, 2024	Elana Karshmer	FIU Green Library Infor- mation & Research Ser- vices	"Understanding the ethics and expectations of publishing"

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SEMINARS

Date	Name	Institution	Presentation Title/Subject
March 15, 2024	Steffanie Munguia	Citizens' Climate Lobby	<u>"Out of the classroom, into the community: The role graduate students can play in the environmental movement"</u>
March 22, 2024	Tal Ezer	Old Dominion University Center for Coastal Resiliency	<u>"Prediction of local sea level rise and extreme flooding"</u>
March 29, 2024	Sharon Jean Philippe	Sharon Jean Philippe	<u>"Branching out and going out on a limb: How urban forestry changed my path!"</u>
April 5, 2024	Caroline Arantes	West Virginia University Davis College of Agriculture, Natural Resources & Design	<u>"The ecology and conservation of large floodplain rivers in the Amazon"</u>
April 12, 2024	Rachel Silverstein	Miami Waterkeeper	<u>"Science and Advocacy in Non-Profit Space"</u>
April 19, 2024	Jerry Lorenz	Audubon Florida	<u>"Audubon Florida"</u>

Learn about the history of the Earth and Environment Department by watching this presentation by [Dr. Florentin Maurrasse and Dr. Joel Heinen](#).

We are always looking for new content that highlights the department's achievements. Want to contribute to future volumes? If you have contributions or suggestions, contact Rodolfo Rego at rrego@fiu.edu. Thank you!