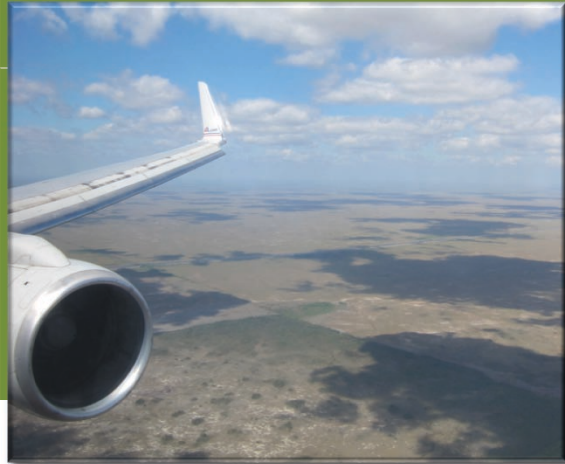


News from the Sloughs

News from the researchers,
students, and educators of FCE
LTER



Volume 2, Number 1

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FCE Surges into 2012!

Start your engine! Hang on tight! We are surging into the transitional phase of FCE III! In an impressive collective cooperative effort of FCE researchers, led by Lead Principle Investigator Evelyn Gaiser, FCE has submitted the FCE III proposal to NSF and we will be looking forward to hearing the outcome, comments, and suggestions over this next quarter. Already this year thirty-two publications have been created by FCE researchers so get out your reading glasses because that brings the grand total to 411! Public datasets that are now available on our web pages are up to 452 with the number of pages downloaded well into the millions and growing by the hour so keep up the great work FCE and to the rest of our newsletter audience-check our website frequently because you will not want to miss a beat.

Note and photo above from the editor



FCE'S Dr. Troxler Working Towards Our Sustainable Future

You may have noticed that you have not seen Dr. Tiffany Troxler as much recently in the Everglades tree islands or in Miami. However if you

have been in Japan, our US East coast's almost tomorrow, and fourteen hours into the future, you may have seen Dr. Troxler climbing the hills of Japan's busy streets commuting to work and soaking up the exotic and ancient Eastern culture. She finds the language challenging yet reflects on the graciousness of the Japanese people has encountered.

She is still working daily with Florida Coastal Everglades LTER researchers on her continued projects but is also officially and relentlessly working at an appointment with the National Greenhouse Gas Inventory program of the IPCC (Intergovernmental Panel on Climate Change). One of the major current tasks is to develop a supplement to the 2006 IPCC guidelines which will provide information to help countries account for carbon emissions and removals associated with wetlands and wetland land use changes (like restoration) in their annual inventories. They are encouraged to use the methodologies presented in

these documents to report to the United Nations Framework Convention on Climate Change (UNFCCC) and, in some cases, under the Kyoto Protocol if they are a Party.

This intergovernment challenge is being met by a population of seventy lead authors, a daunting number of collaborators, charged with the difficult task of enhancing the representation of wetlands in a framework for a globally sustainable future. The authors include wetland scientists from around the world that have been nominated by their governments to participate.

Dr. Troxler has conducted extensive research in Everglades wetlands since 1998 and has been working with Florida Coastal Everglades LTER sites and researchers since its inception in 2000. Her graduate research focused on tree island ecology and more specifically biogeochemistry in the southern freshwater marshes of the Florida Everglades. From bacterial decomposition of soils to hydrology to plant production Tiffany has examined the secrets of the tree islands from many different

angles. Her work has expanded above and below Tamiami Trail, from tree islands in the Water Conservation Areas to soil carbon research in riverine mangroves with a lot of marsh in between. She has balanced her research obligations with developing working relationships with international colleagues through her work on the international US LTER committee. The responsibilities of her new appointment have led her to destinations around the globe including the following meetings in Scotland and Zimbabwe.

1st Science Meeting, Wetlands Supplementary Guidance, 24–26 January 2012, Edinburgh, Scotland

2nd Lead Author Meeting, Wetlands Supplementary Guidance, 14-16 February 2012, Victoria Falls, Zimbabwe

What else is on the calendar for Dr. Troxler this year? Included among her many endeavors and as part of her work with the International US LTER committee: A workshop "Developing an

Story Continued Page 3



Dr. Troxler (pictured middle and rear) with Drs. Guanghui Lin, Chen Guangchen, Dan Alongi, Gail Chmura, Steve Crooks and Hilary Kennedy, Chen Guangchen at the IPCC meeting in Zimbabwe last month.

“Platform for Socio-ecohydrological Research in North America” at the Chamela Field Station, Jalisco, Mexico October 8 – 13, 2012. This workshop is supported by an NSF *Catalyzing New International Collaborations* grant (PI: Bill McDowell, UNH; Co-PIs Chuck Redman, Tiffany Troxler, and Kristin Vanderbilt) and a pending grant from CONACYT to LTER scientists in Mexico.

She also has collaborated with other researchers for an INTECOL session proposal that was just accepted. It is entitled "*International perspectives from long term research on ecosystem carbon budgets*" for the 11th INTECOL Congress to be held in London from 18-23 August 2013.

Dr. Troxler has worked in the most challenging habitats of the Everglades, skirting goliath bull gators and fighting through sawgrass taller than she

is. Whatever the challenges she faces in her new appointment, continuing ongoing FCE research, and developing new projects, it is certain she will succeed.

Tiffany will be attending our FCE All Scientist Meeting in March and when you see her, shake her hand and thank her from all of us for the work she is doing for our future.

For more information about the IPCC visit:

<http://www.ipcc-nggip.iges.or.jp/>

For more information about the UNFCCC visit:

<http://unfccc.int/2860.php>

Story written by S. Dailey, Ph.D.



Mike Rugge Puts THE MAN in Manager

FCE researchers have a secret weapon- his name is Mike Rugge and he is our Project Manager. We do not call upon this mighty force for everyday tasks because he is already doing them- and very well. We call him when we have a difficult question; implement a new project, need to figure out a new way to present scientific information, need help with a technical issue or need assistance with a hundred other issues that can arise with a grant, proposed project, or field operation in FCE LTER.

When you call the FCE operations office at Florida International University Mike answers the phone with a calm

Above: Mike Rugge and his cat Zoe

and helpful tone even though he may be multitasking and focusing on twenty different demanding jobs at the time. If you ask him something he does not know immediately he will send you a bounty of information to your email within an astoundingly short period of time that is proves useful.

Mike came to us fresh from receiving his M.S. in Biology from the University of Michigan with a specialization in botany. Before FCE was established as an LTER site he was both Lab and Field Manager for Dr. Dan Childers' Ecosystems Ecology Lab. If you were fortunate enough to work with Mike out in the field

on you knew you were going to get your work done quickly and efficiently.

There is another side to Mike that you may or not have had time to get to know. These days it seems exponentially unlikely that there will be time for you to get to know Mike on a personal level because of the daily workload that you both share. When I was researching through fun pictures for this edition of the newsletter I found Mike's face in at least one shot of each of the social gatherings over the years gone by. His quiet and intelligent sense of humor is always lurking beneath the surface of his serious expression. Mike is creative and endearing in many ways that may surprise you. Over all these years of having worked with him I feel

extremely wealthy to call him my friend.

Mike took time out of his extraordinary schedule to answer a few of the questions I sent him to do a story about him for this issue and here are his responses (in italics):

What is a 'typical day' for you as FCE LTER Program Manager? Is there a typical day for you as FCE LTER Program Manager?

I'm not sure I have typical day; I think my job starts getting typical on yearly time scale. I spend some time each week entering and updating personnel, publication, and/or project information in the database, making updates to the website, and running backup scripts. I spend most of my time on different projects

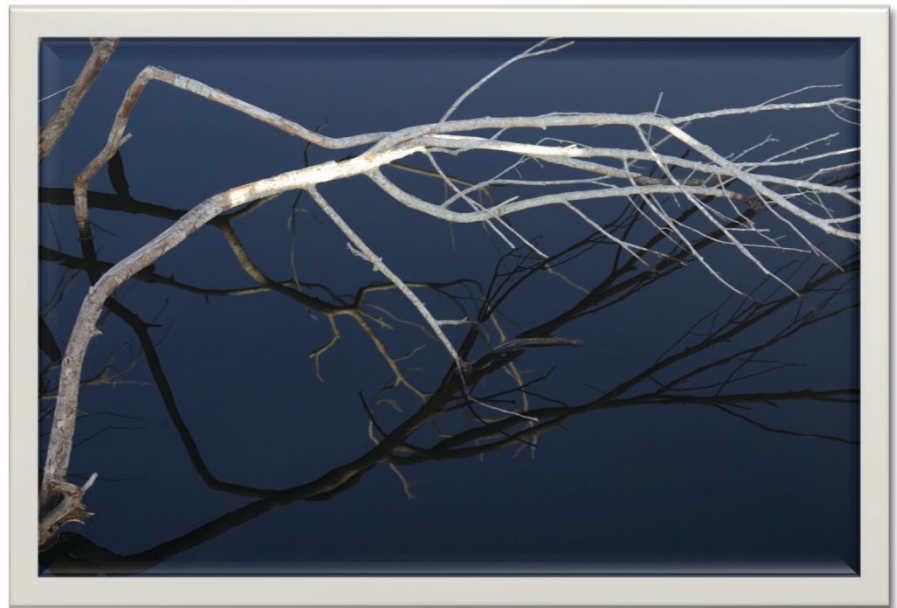
during the year, such as preparing for the FCE All Scientists Meeting, helping compile information for proposals and reports, and working with Linda Powell on the website development and information management projects.

What do you enjoy most about being Program Manager for FCE LTER?

I enjoy the variety of projects and tasks I do throughout the year and all of the opportunities I have to learn new things. I also enjoy interacting with the consistently great groups of people in the FCE, FIU, and LTER Network communities.

Did you teach yourself how to do all the tasks that you undertake in a typical day's work or is there a network of the folks who work as project managers similar to the one for information managers?

While I've taught myself how to do some of the tasks I do everyday, I've usually found help from others in online tutorials and forums, the LTER Information Management community, and various communities and departments at



FIU. I'm not aware of a network of project managers in the LTER Network.

What is your favorite way to unwind from the mind blowing duties you have as our program manager?

I listen to podcasts to unwind on the way home. Some of my favorites at the moment are Radiolab, This American Life, The Moth, and 99% Invisible. Once I'm home, I enjoy relaxing with my wife and playing with our four cats.

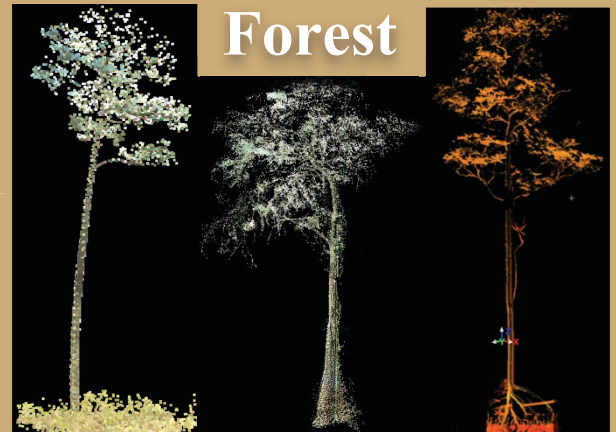
Mike, you are also an avid photographer, what do you like to take pictures of in the Everglades?

I tend to take pictures of plants and other subjects that don't move very fast. I like to focus on details, textures, and patterns.

Story written by the editor Photos by Mike Rugge

Emanuelle Feliciano Sees the for The Trees

From left to right, a Pine tree point cloud, a Bald Cypress tree point cloud and a Red mangrove tree point cloud.



Graduate student FCE researcher Emanuelle Feliciano is adding high tech to the forestry equation. For the last century scientists have been developing better methods to determine tree density and biomass in forestry and Emanuelle is taking a three -point space age approach. He is conducting his research in the Everglades.

Wetland ecosystems, such as the Everglades National Park (ENP) have greater trees biomass and carbon storage sequestration capabilities than even tropical forests. Due to natural changes and human intervention more than half of the original Everglades has been lost and it is vital to monitor continued forest changes.

Emanuelle is on task and has been awarded an NSF - Graduate Research Fellowship for three years and it is a NASA Water SCAPES project. This fellowship is funding his research and travel. Before his NSF-GRFP fellowship, his research was also funded by NASA WaterSCAPES, which is a group of 4 University Research Centers Sponsored by NASA's Goodard Space Flight Center. The main URC is Florida International University.

Emanuelle is working on this research with his advisor, Dr. Shimon Wdowinski (University of Miami), Dr. Matthew Potts

(University of California at Berkeley) Dr. Rene Price (FIU), and David Lagomasino (FCE Student Group Secretary). Emanuelle also wanted to give credit to Dr. Fernando Miralles-Wilhelm (FIU). He is the Director (P.I.) of the FIU URC WaterSCAPES project.

Emanuelle and his colleagues used a ground-based Light Detection and Ranging (LiDAR) a.k.a Terrestrial Laser Scanner (TLS) to assess the capability to measure tree volume from its 3-D point cloud. They surveyed five plant communities (*Rhizophora mangle*, *Laguncuria racemosa*, *Avicennia germinans*, *Pinus elliottii*, *Taxodium distichum*) that best resemble the spatial distribution of the vegetation in the ENP. A total of 54 scans were collected with a Leica ScanStation C10 TLS.

In addition, they collected tree-specific dry-wood density cores to calculate above-ground biomass with the TLS-derived tree volume. From the TLS data they obtained basic vegetation attributes, including: canopy height, canopy surface area and diameter breast height (DBH). From the 3-D point clouds they found that trees behave as a combination of tapered solid of revolution surfaces called frustums. The volume of the various geometric

frustums can be estimated using specific mathematical formulas. The long-term goal of this project is to use Synthetic Aperture Radar (SAR) data to produce biomass maps of the Everglades National Park.

Emanuelle recently received the NSF NCALM award. The NSF-NCALM award is important because now they are going to have coverage from every area: **a) Below Canopy/ground:** Terrestrial Laser

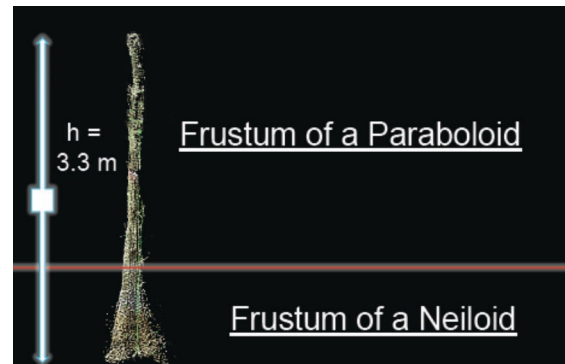


Above: Leica ScanStation C10 TLS and targets in Pine site.

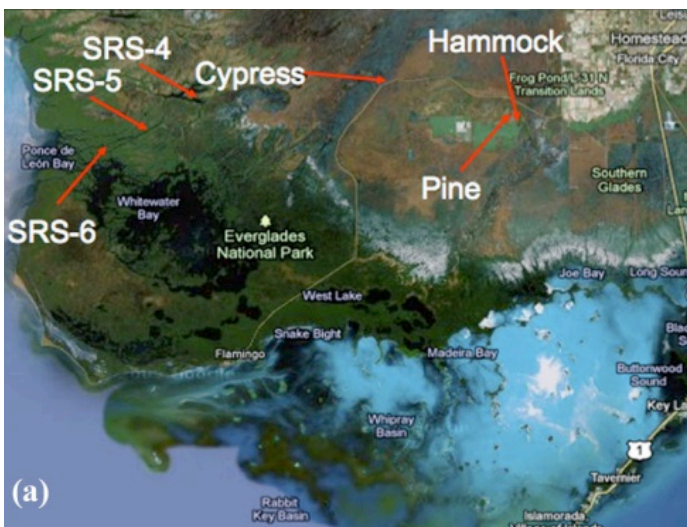
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Scanner, **b)Above Canopy/airborne:** Airborne LiDAR data from the NCALM award, **c) Spaceborne:** Synthetic Aperture Radar (SAR) Satellites

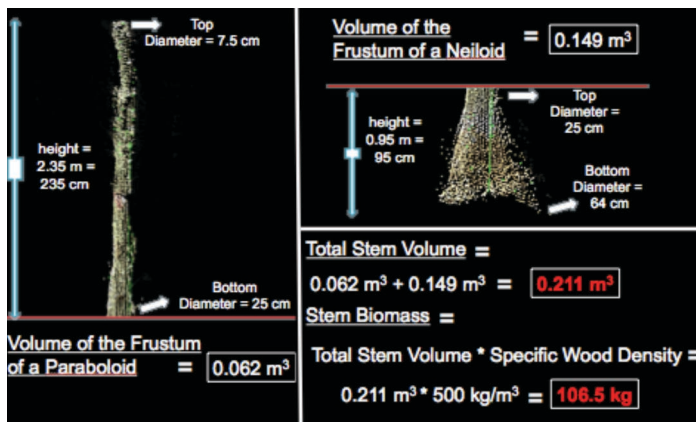
The Ground-based LiDAR a.k.a Terrestrial laser Scanner that we used was provided by UNAVCO. Although my advisor paid for the LiDAR rental, equipment and services; UNAVCO is a non-profit university-governed consortium that facilitates geoscience research and education using geodesy. The core sponsors of UNAVCO funding is provided by **the National Science Foundation (NSF)** and National Aeronautics and Space Administration (**NASA**).



Main stem of a Bald Cypress tree that can be divided in two geometric frustums; paraboloid (top) and Neiloid (bottom).



Above: (a) South Florida Everglades National Park map showing TLS surveyed sites in our April 2010 and April 2011 campaign. Vegetation communities include: (b) Pine, (c) Hammock, (d) Cypress, and (e) SRS Sites indicate various mangrove communities along the Shark River Slough.



Example of tree volume and biomass estimation with a Bald Cypress tree.

Emanuelle is presenting his research in the poster session of the FCE All Scientists Meeting March 16, 2012 and his poster will be posted on the FCE LTER webpage under Meetings, ALL Scientists Meeting 2012 under posters. If you would like to contact him to learn more about his research:

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Rebecca Garvoille Gets the Grant

The NSF Dissertation Improvement Grant is one of the most sought after grants that exist for graduate students. The number of applicants could fill a small town and the competition is steep. FCE Graduate student Rebecca Garvoille was awarded one last month!

Doctoral candidate, Rebecca I. Garvoille (Florida International University), with the guidance of her advisor Dr. Laura A. Ogden, will undertake research on the cultural consequences of ecosystem restoration. The focus of her research will be the effects that restoration initiatives may have on local identities, environmental attitudes, and long-term expectations for regions and their management. The research is important because governments and development organizations around the world are increasingly choosing ecosystem restoration as a means to rehabilitate degraded environments. To address these questions, Garvoille will conduct 12 months of research in the southern Florida Everglades, at two sites affected for several decades by various Everglades restoration plans. Everglades restoration has cost billions of dollars and is affecting local lives and livelihoods in significant ways, which makes it an excellent site for this project. Garvoille will gather data using multiple social science research methods, including participant observation, semi-structured

Continued on Page 9



A swamp buggy excursion into the Big Cypress National Preserve with research assistant, Riley.



Above: Pausing for a picture on a ride through the immense prairies of “airboat country” to visit a longstanding backcountry airboat camp in the Big Cypress National Preserve.



Left: All in a day's fieldwork at backcountry camp, “Bear's Den,” in the Big Cypress National Preserve

interviews, and archival research. Participant observation will be conducted at locally significant venues, such as those associated with majority culture outdoorsmen and local indigenous peoples, as well as at public meetings held by state resource management agencies. Semi-structured interviews will be carried out with indigenous peoples, outdoorsmen, state officials, and environmental NGO staff.

Archival research will complement and contextualize the interview data. Findings from this research will contribute to theories of the social dimensions and tradeoffs of ecosystem restoration projects. Findings also will help planners better anticipate as well as respond to social and cultural effects of deliberate landscape transformation. Supporting this research also supports the education of a social scientist.

Story from NSF Award Announcement



Above: Rebecca Garvoille on the lookout for outdoorsmen to interview at the Concho Billie trailhead in the Big Cypress National Preserve.

Right: Rebecca swapping stories and interview questions with lifelong outdoorsman and backcountry camp owner, Karl Greer, about the history of his camp in the Big Cypress National Preserve and the construction and use of his swamp buggy.



FCE Student Group Awards and Announcements: ACCOLADES ARE ACCUMULATING

FCE Student Group Executive Board Elections 2012

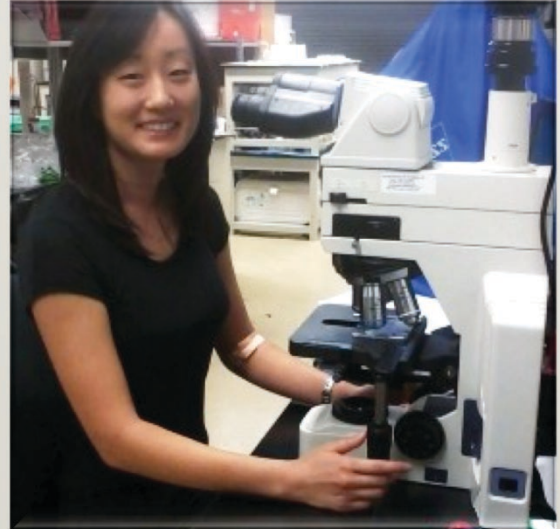
During the FCE All-Scientists Meeting at the Deering Estate, the FCE Student Group will hold a meeting to elect new Executive Board members for 2012-2013 to the positions of President, Vice-President, Secretary, BBC Representative, and Treasurer. Student members are encouraged to nominate outstanding candidates before the meeting.

Stellar Graduate Student Achievements

1. Greg Koch recently published on his stellar dissertation research in *Estuaries and Coasts*:
Koch, G.R., D.L. Childers, P.A. Staehr, R. Price, S.E. Davis, and E. E. Gaiser. 2012. Hydrological conditions control P loading and aquatic metabolism in an oligotrophic, subtropical estuary. *Estuaries and Coasts* 35: 292-307.
2. David Lagomasino and Stephanie Long were named NASA Student Ambassadors (Cohort IV)
3. Emanuelle Feliciano received the NSF Graduate Research Fellowship
4. Adam Rosenblatt received the Frederick H. Stoye Award and was awarded the Best Student Presentation Prize at the 2011 Joint Meeting of Ichthyologists and Herpetologists
5. Kristie Wendelberger received the prestigious 2011 National Park Service George Melendez Wright Climate Change Fellowship
6. Rebecca Garvoille was awarded a NSF Dissertation Improvement Research Grant

FCE Student Group Travel Grant Recipients

This spring, four exceptional FCE students, out of a large pool of applicants, were awarded travel grants (\$500) to help assist in conference travel to the 9th INTECOL Annual International Wetlands Conference in Orlando, FL. This is a special meeting because the Society of Wetland Scientists and the Greater Everglades Ecosystem Restoration Conference will be held in combination with INTECOL and will be a great opportunity and experience for these honorable students. The four awardees were PhD candidate Rebecca Garvoille who will be presenting a talk entitled "*Encountering Culture in Restoration: Understanding Cultural Tensions in the Florida Everglades and Beyond*"; Masters student David Gandy who will present a poster entitled "*Nonnative Fishes in Freshwater Canals of the Florida Everglades: Implications for Better Management*"; PhD student Sylvia Lee who will present a poster entitled "*Diatom-based Assessment of Hydrology and Calcareous Periphyton Abundance in a Subtropical Wetland*"; and Joshua Breithaupt, a Masters student from USF, will present a poster entitled "*Organic Carbon Burial Rates in Southwestern Everglades Mangrove Sediments*" and a talk entitled "*Strengthening the Century-Scale Global Estimate of Mangrove Organic Carbon Burial Rates*". Story continued on Page 11



FCE Graduate Student Travel Grant Awardees Joshua Breithaupt and Silvia Lee

Congratulations to the winners! We appreciated the large pool of applicants this semester. The FCE Student Group E-board will begin accepting applications for the Fall 2012 travel grant funding cycle in August/September 2012. Please look for the program announcement on the FCE-STUDENTS list-serv, the FCE Student Group website and the FCE Student Group Facebook page.

FCE Participation in FIU Scholarly Forum

Three FCE students showed off their intriguing research at the FIU Scholarly Forum during Graduate Student Appreciation Week. Bryan Dewsbury, a PhD student, presented his pseudo-Everglades research exploring the spatial distribution of primary producers and nutrients in Biscayne Bay; PhD student Elizabeth Harrison presented some of her research involving the source and evolution of Mayan Cichlids in south Florida; and David Lagomasino presented his research linking water quality in the surface and subsurface with spectral reflectance of coastal mangroves in the southern Everglades. A special thanks to these three outstanding students for showcasing their research to the larger FIU academic community.

Thank You David!

Thank you to FCE Student Secretary David Lagamisino for contributing these stories! David has also done a fantastic job keeping FCE researchers aware of First Fridays and many other festive and engaging activities!



RESSts Shine at Science and Engineering Fair

Heithaus Lab *Research Experience for Secondary Student (RESSt)* intern, Jamie Odzer, received a Superior rating in *Environmental Management* at the 2012 *SFRSEF* for her poster entitled: *The impact of varying productivity levels on abundance and feeding patterns of Callinectes sapidus: What does blue crab behavior tell us about Everglades restoration?* Congratulations and thanks to Adam Rosenblatt and the Heithaus Lab for an outstanding job in mentoring Jamie. Thanks also to Jennifer Tisthammer and our educational partners at *The Deering Estate at Cutler* for their assistance and support of Jamie's project.

Jamie Odzer working on her project in the field and lab.

Jamie had these words to share about her experience working with FCE in the RESSt program:

“ It has been an amazing experience taking part in Everglades research with Adam! I've learned a lot more about research after working with him. I'd also like to thank Mike for allowing me to participate in my own research endeavors alongside his team. “

In addition to advancing to the *State of Florida Science and Engineering Fair*, Jamie also received the following awards:

--NOAA 2012 Taking the Pulse of the Planet Award

--GENIUS (Global Environmental Issues--US) Olympiad Award and advances to the GENIUS International Olympiad, June 2012

--Most Outstanding Poster at 49th Annual Junior Science, Engineering and Humanities Symposium

--Finalist, advancing to 2012 Florida Junior Academy of Science Competition, Tampa, March 2012

Troxler Lab *RESSt* second year intern, Cindy Saenz, received an Excellent rating at the 2012

SFRSEF in *Environmental Science* for her poster entitled: *Examining the bioavailability of mangrove leachates of Shark River Slough*. Congratulations to Tiffany Troxler and Olga Sanchez for continued success in their mentorship of *RESSt* interns. Cindy also received the Stockholm Junior Water Prize and the invitation to compete at the State of Florida Stockholm Junior Water Prize Competition. Cindy will be presenting a poster of her research at the 2012 FCE LTER All Scientist Meeting (March 15-16) being held at the Deering Estate at Cutler. Be sure to bring your toughest questions and help her to prepare for the upcoming presentation at the State of Florida Stockholm Junior Water Prize Competition. Jamie will be in Tampa for the Florida Junior Academy of Science Competition (State of Florida Science and Engineering Fair) but her poster will be displayed at the meeting so be sure to leave her a

her a question about her research project.

Congratulations to FCE LTER RESSt interns Jamie Odzer and Cindy Saenz for their success at the 2012 South Florida Regional Science and Engineering Fair (SFRSEF)!

Story written by

Nicholas J. Oehm, Jr.
Education and Outreach
Coordinator
Florida Coastal Everglades

FCE PUMPS Out the Publications this Quarter

Book chapters

Gaiser, E.E., J.C. Trexler, P. Wetzel. 2012 (In Press). The Everglades . In Baxter, D., A. Baldwin (eds.) Wetland Habitats of North America: Ecology and Conservation Concerns. University of California Press, Berkeley.

Rivera-Monroy, V.H., R.D. Delaune, A.B. Owens, J. Visser, J.R. White, R.R. Twilley, H. Hernandez-Trejo, J.A. Benitez. 2012 (In Press). Removal of Physical Materials from Systems: Loss of Space, Area, and Habitats . In Wolanski, E., D.S. McLusky (eds.) Treatise on Estuarine and Coastal Science. Elsevier.

Trexler, J.C., D.L. DeAngelis. 2012 (In Press). Modeling the evolution of complex reproductive adaptations in poeciliid fishes: Matrotrophy and superfetation . In Uribe, M.C., H.J. Greer (eds.) Viviparous Fishes II. New Life Publications, Homestead, FL.

Journal articles

Anderson, W., E.E. Gaiser. 2012 (In Press). Understanding paleoenvironmental change in Everglades wetlands. *Journal of Paleolimnology*

Barr, J.G., V. Engel, T.J. Smith, J.D. Fuentes. 2012. Hurricane disturbance and recovery of energy balance, CO₂ fluxes and canopy structure in a mangrove forest of the Florida Everglades. *Agricultural and Forest Meteorology* 153: 54-66.

Belicka, L., E.R. Sokol, J.M. Hoch, R. Jaffe, J.C. Trexler. 2012 (In Press). A molecular and stable isotopic approach to investigate the importance of algal and detrital energy pathways in a freshwater marsh. *Wetlands*

Belicka, L., P. Matich, R. Jaffe, M.R. Heithaus. 2012 (In Press). Fatty acid and stable isotopic composition as indicators of maternal resource investment and feeding ecology of the bull shark, *Carcharhinus leucas*, in the Florida Coastal Everglades. *Marine Ecology Progress Series*

Bramburger, A., J. Munyon, E.E. Gaiser. 2012 (In Press). Water quality and wet season diatom assemblage characteristics from the Tamiami Trail

pilot swales sites. *Phytotaxa*

Calderon-Aguilera, L.E., V.H. Rivera-Monroy, L. Porter-Bolland, A. Martinez-Yrizar, L. Ladah, M. Martinez-Ramos, J. Alcocer, A.L. Santiago-Perez, H.A. Hernandez-Arana, V.M. Reyes-Gomez, D.R. Perez-Salicrup, V. Diaz-Nunez, J. Sosa-Ramirez, J. Herrera-Silveira, A. Burquez. 2012. An assessment of natural and human disturbance effects on Mexican ecosystems: current trends and research gaps. *Biodiversity and Conservation* 21(3): 589-617.

Request reprint

Campbell, J.E., L.A. Yarbro, J.W. Fourqurean. 2012 (In Press). Negative relationships between the nutrient and carbohydrate content of the seagrass *Thalassia testudinum*. *Aquatic Botany* DOI: 10.1016/j.aquabot.2012.02.002

Cawley, K., P. Wolski, N. Mladenov, R. Jaffe. 2012 (In Press). Dissolved organic matter biogeochemistry along a transect of the Okavango Delta, Botswana. *Wetlands*

Koch, G., Childers, D.L., P.A. Staehr, R.M. Price, S.E. Davis, E.E. Gaiser. 2012. Hydrological Conditions Control P Loading and Aquatic Metabolism in an Oligotrophic, Subtropical Estuary. *Estuaries and Coasts* 35(1): 292-307.

Request reprint

La Hee, J., E.E. Gaiser. 2012 (In Press). Benthic diatom assemblages as indicators of water quality in the Everglades and three tropical karstic wetlands. *Journal of the North American Benthological Society*

Layman, C.A., M.S. Araujo, R. Boucek, E. Harrison, Z.R. Jud, P. Matich, C.M. Hammerschlag-Peyer, A.E.

Rosenblatt, J.J. Vaudo, L.A. Yeager, D. Post, S. Bearhop. 2012 (In Press). Applying Stable Isotopes to Examine Food Web Structure: An Overview of Analytical Tools. *Biological Reviews*

Maie, N., Y. Yamashita, R. Cory, J.N. Boyer, R. Jaffe. 2012 (In Press). Application of excitation emission matrix fluorescence monitoring in the assessment of spatial and seasonal drivers of dissolved organic matter composition: Sources and physical disturbance controls. *Applied Geochemistry*

Matich, P., M.R. Heithaus. 2012 (In Press). Effects of an extreme temperature event on the behavior and age structure of an estuarine top predator (*Carcharhinus leucas*). *Marine Ecology Progress Series*

McCarthy, L.C., W.F. Loftus, J.S. Rehage. 2012 (In Press). Species segregation and trophic function in palaemonid shrimp along a subtropical estuary. *Bulletin of Marine Science*

McElroy, T.C., K.L. Kandl, J.C. Trexler. 2012 (In Press). Temporal population-genetic structure of eastern mosquitofish in a dynamic aquatic landscape. *Journal of Heredity*

Moses, C., W.T. Anderson, C.J. Saunders, F.H. Sklar. 2012 (In Press). Regional climate gradients in precipitation and temperature in response to climate teleconnections in the Greater Everglades system of South Florida. *Journal of Paleolimnology*

Onsted, J., K. Clarke. 2012 (In Press). The inclusion of differentially assessed lands in urban growth model calibration: a comparison of two approaches using SLEUTH. *International Journal of GIS*

Pearce, C., H. Cremer, E. Lammertsma, F. Wagner-Cremer. 2012 (In Press). A 2,500-year record of environmental change in Highland Hammock State Park (Central Florida, U.S.A.) inferred from siliceous

microfossils. *Journal of Paleolimnology Online First*: DOI: 10.1007/s10933-011-9557-2.

Quillen, A., E.E. Gaiser, E. Grimm. 2012 (In Press). Diatom-based paleolimnological reconstruction of regional climate and local land-use change from a protected sinkhole lake in southern Florida, U.S.A. . *Journal of Paleolimnology Online First*: DOI: 10.1007/s10933-011-9558-1.

Saha, A.K., C. Moses, R.M. Price, V. Engel, T.J. Smith, G. Anderson. 2012. A Hydrological Budget (2002-2008) for a Large Subtropical Wetland Ecosystem Indicates Marine Groundwater Discharge Accompanies Diminished Freshwater Flow . *Journal of Estuaries and Coasts* 35(2): 459-474.

Request reprint

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This material is based upon work supported by the National Science Foundation through the Florida Coastal Everglades Long-Term Ecological Research program under Cooperative Agreements [#DBI-0620409](#) Any opinions, findings, conclusions, or recommendations expressed in the material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

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