



News from the Sloughs

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

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FCE researchers and the Halloween Pennant pictured above are like peas and carrots in the stiff breezes and deep blue skies of the Everglades in Fall. FCE researcher Franco Tobias captured this lovely insect aka *Celithemis eponina* with his camera in Shark River Slough at SRS 2 using a Canon Eos Rebel Xsi with 100mm macro lens. Franco explained “I decided to take a photo of one of the dragonflies patrolling the area near where we were sampling. Its orange colors stood out sharply in the sun, and the constant flights were a comfortable sight; we knew it was doing its job of keeping the mosquitoes from bothering us. These "darning needles" are like little bug-catching jewels, and are a welcome sight any day.”

For more of Franco Tobias’ stunning photos visit: <http://francotobias.smugmug.com/> and check out his panoramic Shark River Slough picture on 10 page of this newsletter



How black is natural dissolved organic carbon? Estimating the global riverine load of dissolved pyrogenic carbon

Natural fires and combustion of fossil fuels produce carbon residues (charcoal) ranging from charred vegetation to soot particles. Global biomass burning has been estimated to generate 40-250 Mt/yr of BC, leading to elevated abundances of BC in soils worldwide. However, the loading of this black carbon

riverine export of dissolved black carbon (*ca.* 26 Mt/yr). In addition, we provide evidence that the translocation of charcoal from soils to the dissolved phase and its mobilization is enhanced by and coupled to dissolved organic carbon respectively. In the FCE close to 20% of the DOC



in terrestrial environments has been determined to be smaller than mass balance estimates suggest. FCE graduate student Yan 'Jenny' Ding's dissertation work, in collaboration with colleagues at the Max Planck Institution in Germany and the University of Helsinki in Finland, has shown that on a global scale, a significant portion of soil charcoal is lost through

was found to be dissolved black carbon, while globally it represents about 11% on average. Our data not only confirms that the dissolved organic matter pool is an important environmental intermediate for both transfer and storage of black carbon, but also provides an estimate of the

missing link between soil and oceanic black carbon pools in the global black carbon budget.

Story by Rudolf Jaffe, Ph.D.

Photo by Cristina Santin-Nuno

Student Musings from the LTER ASM

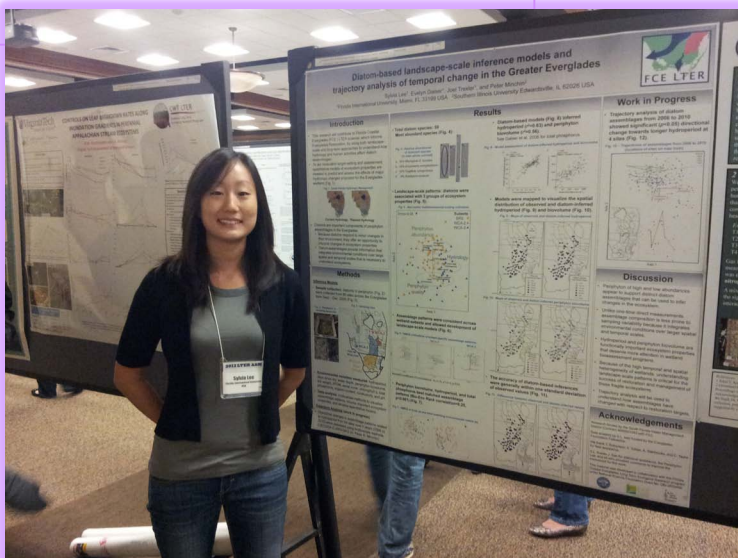
FCE researchers thronged to the Rockies for the triennial LTER ASM meeting in September at the YMCA in Estes Park. Among the 800 plus attendees from all the LTER sites across the nation our students shined out and actively engaged in both the scientific proceedings and fun activities in this astounding setting. We had a total of 28 FCE folks at the meeting who included: 2 Undergraduates, 8 Graduate Students, 2 Post Docs, 14 Collaborators/Principle Investigators, our Information Manager, Linda Powell and our Education Coordinator, Nick Oehm. We asked students to share some of their experiences and here is what they shared.

FCE Student Mari Soula, REU from Dr. Jenn Rehage's lab

“Many people came by to discuss my research with me at the poster session at ASM. I told them my FCE REU was great and that it gets us undergraduates involved with actually doing research activities that really matter- and that it opens doors. A lot of people said that they offer it at their universities but cannot offer enough REU programs to get enough undergraduates involved.”



Pictured above: Mari at the 2012 LTER ASM poster session with the Rehage lab. From Left to Right are Chris Edwards, Dr. Jenn Rehage, Mari Soula, Dave Gandy and Ross Boucek.



FCE Student Sylvia Lee from Dr. Evelyn Gaiser's Lab pictured at left in front of her poster at the LTER ASM:

The LTER ASM poster session was a great opportunity to see the diversity of science being conducted by researchers and students, all with a common goal of understanding long-term and ecosystem-scale patterns. It was a little unfortunate that there were not enough volunteers for judging the student posters, so the poster competition was cancelled at this meeting.

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From Mari Soula, REU from Dr. Jenn Rehage's lab

"I attended the plenary session that Dr. Bob Kates gave at the LTER ASM- "Does LTER Include Sustainable Science?" and during his talk he asked if we considered ourselves sustainable scientists. I thought about this and realized and that the research I am doing has a greater impact than just looking at fish movement in the Everglades. Before I started my REU I was trying to get a biomedical research grant on vitamin D synthesis so I here is my bigger picture perspective on the greater impact of the research I am doing in Dr. Rehage's lab. People need to get outside for sunshine and healthy living. Sport fishing is a great way to enjoy the outdoors but people need to have an incentive and there needs to be a good population of sport fish like Snook. If the research we are doing can affect policy that improves water flow to the Everglades and Florida Bay and that makes our fishing industry better we will make a better community and healthier happier people. So yes I consider myself a sustainable scientist."



FCE graduate student Sylvia Lee pictured above on an afternoon hike during one of the breaks. "The weather was great and the mountains were gorgeous."

Sylvia added, "I think the beautiful natural scenery added to the energy and excitement of the LTER members to work together and get to know each other better in order to form collaborations. Not to mention, the preservation of such natural treasures is at the heart of LTER science."

Drs. Price and Fourqurean at the Gordon-like Conference

Two FCE scientists, Drs. Rene Price and James Fourqurean attended a Gordon-like Conference sponsored by the Europole Mer on "Land-Ocean Connectivity-from Hydrological Ecological Understanding of Groundwater Effects in the Coastal Zone". The conference was held in L'Aber Wrac'h, Brittany, France from 24-27 September 2012. The conference was attended by 55 participants from over 15 countries, representing diverse fields of hydrology, oceanography, ecology, economics, and sociology. The interdisciplinary meeting was geared towards stimulating contacts and research related to groundwater discharge and its ecological effects in the coastal zone. The highlight of the conference was a field trip to a nearby oyster farm where the participants got to taste two species grown in the nearby estuary.



Photos and story contributed by FCE Researcher Dr. Rene Price

For more information about the Gordon-like conferences visit:

<http://www.europolem.er.eu/gordon-like-conferences.php>



Drs. Rene Price and James Fourqurean sampling oysters and coastal ambience at the Gordon-like Conference in Brittany, France.

FCE Bloggers get a Flood of Visitors

Using social media as a means to share scientific ideas, principles, and results is becoming increasingly popular. Facebook, twitter, tumblr and other outlets are often seen as tools for procrastination but in reality, these mediums can be useful sources of information. The FCE LTER has been active in social media for some time, with pages on facebook and twitter, but the student group realized there was avenue that was still untouched: blogging. This summer the group created a blog called Wading Through Research and since its debut, has been viewed nearly 4000 times from individuals from 10 ten different countries. Topics discussed range from field stories to preliminary results to trials and tribulations of being a graduate student. The blog will also be hosting "guests"

from other widely popular scientific blogs to expand their audience and learn about systems outside of the south Florida. At the LTER ASM, the blog caught the attention of the national LTER student group and they have also decided to develop their own blog. The attention and support the blog has received is what keeps us posting every week and searching for new stories to share with our audience. We are always open to new ideas (and contributors) so if you'd like to contact us or share a post as a "guest blogger" please do so!

Story by Ann Hijuelos

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Ann is the editor of the blog and one of eight contributors to the FCE student groups's blog. They are inviting new bloggers to join the team with exciting stories about their research.

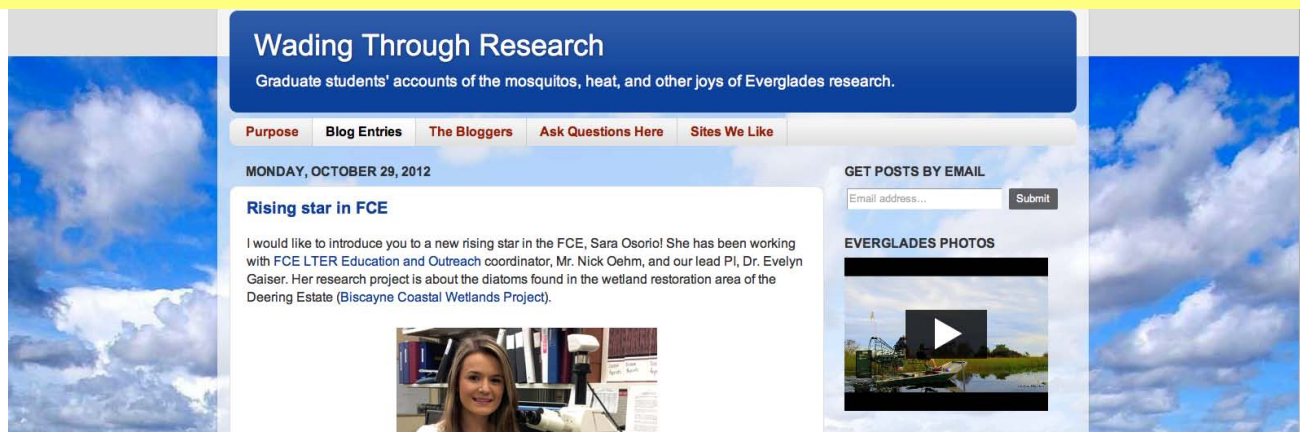
The FCE bloggers are also featured in the FIU news release September 14th

<http://news.fiu.edu/2012/09/fiu-students-wade-through-research-in-the-everglades/44629>

which was reposted in the Gulf Coast Rising News

<http://gulfcoastrising.net/news/florida/students-wade-through-research-in-the-everglades/>

<http://floridacoastaleverglades.blogspot.com/>



Tips for Communicating your FCE Research

From invited professional science communicators at the LTER ASM

Last month there was a targeted working group for Communicating LTER Science at the All Scientists meeting in Estes Park CO. Three invited science communicators, each with a unique skill set for communicating science, presented a wealth of information and tips on how to hone our communications of research. Although it was well attended, I only saw a few shining FCE faces in the audience and I wanted to pass along words of wisdom from the presenters so that you can carry these lessons with you, especially when preparing your FCE research communications with the public media, policy makers, NSF press releases, and for our FCE newsletter.

Cheryl Dybas, from the NSF Office of Legislative and Public Affairs Media presented a package of information on best practices and key elements to keep in mind when preparing material for both popular media and for NSF press releases. Cheryl explained the need to condense the research story to five minutes or less to hold the attention of the audience and that this has become popular across many major scientific societies including ESA. She further explained that the secret to effective scientific

writing is less scientific jargon and more “public filter-feeding” and that for a story to be successful the writer must have a passion for the subject, an exciting and concise presentation, and an awareness of the target audience. Cheryl noted the distinction that in scientific journal articles we are used to putting the conclusions at the end but that in communicating to popular media conclusions and “what matters” needs to be put up front.

Kathy Fallon Lambert, Science and Policy Integration Project Director at Harvard Forest, provided a presentation of best practices and guidelines for communicating with policy makers. Kathy explained that we should think “campaign” to really influence decision makers and to create a long-term strategy. To that end she recommended that we queue up multiple research strategies, maximize steady and sustained exposure and that we should “prepare for the long haul” and rehash the message multiple times.



Kathy Fallon Lambert, Science and Policy Integration Project Director at Harvard Forest, presenting science policy communication at the LTER ASM Communicating LTER Science working group.

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Freelance science journalist Susan Moran from Boulder Colorado is also a radio show host of “How on Earth” on KGNU radio and during the working group she delivered some simple messages to us for communicating to popular media. Susan explained that we should tell a research “story” and wrap the facts of the research in stories about the people and places that produced the facts. She iterated a prescription to show our passion in these stories and show our personality. Other messages were that we should “show- don’t tell” and to give concrete examples and physicality and we should put numbers in context. She recommended that when communicating via radio interview we sometimes need to skirt our comfort zone and speak more broadly, even if it is out of our area of expertise but concurrently stressed the need to use relevant numbers to report our findings. Ms. Moran also recommended “don’t be such a scientist” and that we work on speaking more as a person and not a professional.



TOP TIPS for communicating your research: **TELL YOUR RESEARCH STORY** with passion, flair, and less scientific jargon



Susan Moran (pictured above), freelance journalist and radio show host “How on Earth” from Boulder CO’s KGNU presenting communication tips to participants of the ASM LTER Communicating LTER Science working group.

For more on the LTER ASM 2012 “Communicating LTER Science” working group, please visit:

<http://asm2012.lternet.edu/working-groups/communicating-lter-science-part-i-and-ii>

Story and photos contributed by Susan Dailey, Ph.D

FCE goes LIVE! On USTREAM TV

<http://www.ustream.tv/channel/florida-coastal-evergaldes-lter>

Thanks to FCE Student President David Lagomasino you can now check out several webcasts and live streaming video of FCE researchers and other scientists presenting their research on USTREAM. Most of the videos on the site are from the FIU Earth Science seminar series but David plans on taking the technology to other venues in the future. David said, "There are some other recordings on that channel from the LTER ASM too. The plan is to broadcast presentations

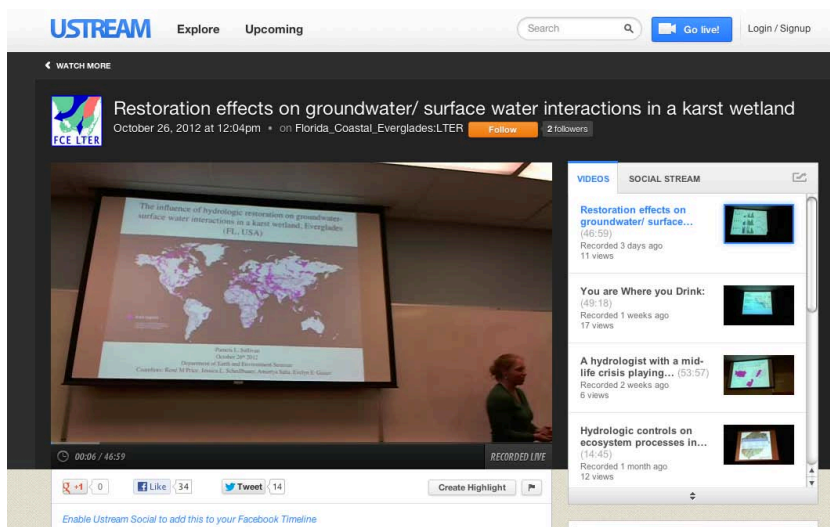
presented : "Tales from my sabbatical: A hydrologist with a mid-life crisis playing in multi-lateral international development banking" on October 12th.

On Friday November 2 from 3-4 pm David plans to broadcast another Earth Science seminar :

Dr. Matthew Redienbach, of University of Virginia will be presenting: "Wave enhanced sediment resuspension within a *Zostera marina* seagrass bed"

You can watch the seminar live or anytime after at <http://www.ustream.tv/channel/florida-coastal-evergaldes-lter>

We are looking for grant opportunities to improve the optical and audio properties of materials that are broadcasted on the channel. Please keep this and mind and contact the FCE LTER office if you see any pertinent RFPs.



whenever I go to them. Anyone can set it up. It is fairly easy."

It is a great way for off campus FCE researchers and the wider scientific community to view developments from FCE so tune in LIVE or visit the site after to watch the recordings.

David wanted us to please note that the USTREAM account is open for ANYONE to use it for seminars, presentations, defenses, etc.

The FCE researchers seminar that are featured thus far are Dr. Pamela Sullivan who presented "Water Balance of Northern Taylor Slough and implications for Everglades Restoration " on Oct. 26th and Dr. Fenando Miralles. who

For more about the FCE researchers featured in the FIU Earth Science Seminars visit:

<http://earthenvironment.fiu.edu/events/earth-science-seminar/2012/>

Story contributed by Susan Dailey, Ph.D.



Title: *Coming storm* by FCE Researcher Franco Tobias

Location: Shark River Slough, near LTER site SRS 2 “I chose this picture because it shows the vastness and beauty of the Everglades, both as an area to work in and to enjoy recreationally. The darker clouds signal the oncoming inclement weather typical of South Florida in the summer, and adds to the thrill of working in such a unique environment. I adjusted the brightness and saturation of the photo so as to enhance the lushness of the vegetation during high water levels.” Equipment used: Canon Eos Rebel Xsi with 18-55mm lens

For more Florida Coastal Everglades LTER News-
Check out our webpages under

About Us- <http://fcelter.fiu.edu/>

and

News- http://fcelter.fiu.edu/about_us/news/

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Please send any comments and contributions for the next FCE Newsletter by December 30th, 2012 to fcslter@fiu.edu

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