



Florida Coastal Everglades Long Term Ecological Research

News from the Sloughs



Volume 4, Number 1

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FCE in Throng

More than 100 scientists gathered for a meeting of the minds of FCE-ers at Deering Estate in Cutler, Miami-Dade County last month for two days with a workshop on the third day for researchers working on Everglades biogeochemistry. It was our 14th Annual Meeting and the largest aggregation yet with students making up more than half of the turnout. Our Lead Principal Investigator Dr. Evelyn Gaiser molded the agenda and proceedings to bring forth the discoveries and developments of each of the core working groups and cross cutting working groups driving to address our FCE III hypotheses. With only one year until our next review the timing of the get together was critical and enormously productive.

Important Dates: Student Group BBQ April 27 11am -4pm Crandon Park; CAST angling competition deadline June 1; 2nd Quarter data call upcoming



Take me to your LTER :Spring Address from Lead Principal Investigator Dr. Evelyn Gaiser

Hi Everyone:

Happy Spring! It was so great to see everyone at our 2014 All Scientists Meeting! It's always amazing to hear the breadth and depth of science going on in FCE, and I was impressed by the ability of our working group leads to distill and focus our productivity toward our key objectives. As we move toward into the middle years of our current grant cycle, it's good to keep these objectives fresh in our minds to ensure our large team is working toward common goals. Thanks again to everyone who helped create a fun, efficient and successful meeting, and congratulations to our poster winners (Josh Briethaupt, Asher Williams, Jessica Lee and Nick Schulte) and people of the year (Laura Ogden, Ross Boucek and Mike Rugge) – we are proud of you!

In the upcoming weeks, expect to hear more from our Synthesis Book team on the progress of chapter outlines and our proposal to the publisher. We'll be meeting again at the end of May to solidify those contents, and then we are off to writing during the summer! Also coming up is the annual LTER Science Council meeting, which will be hosted by the Konza Prairie LTER. The theme this year is "*Revisiting the Core Areas: Primary Production*," which is intended to stimulate new thinking on how LTER science has transformed concepts about the dynamics of controls on primary production in a changing world. Each site will present a 3-slide, 5-minute synopsis of their major discoveries regarding controls on primary production, followed by working group discussions directed at moving these ideas into proposals and publications. If this sounds exciting to you, please let me know. FCE will be represented by John Kominoski and myself at this year's meeting, but the activities begun there are meant to engage the entire network in new, exciting science, so we'll provide an update of opportunities for engagement when we return.

Best wishes to all for a fun and productive summer!

Evelyn



Perspectives from the ASM

The Florida Coastal Everglades LTER program held its annual All Scientists Meeting mere yards from the still chilly waters of the shores of the Atlantic. The magic of Deering Estate and the efforts of their staff and crew made the event a tropical, breezy, and easy venue for FCE researchers to get down to business and communicate their annual milestones face to face. The call for participants in December of last year brought a spring flurry March 10-12 with researchers from 7 of our United States of America including beloved Hawaii and from a starburst of researchers located across the state of Florida.

Each day researchers, educators and participants listened to presentations from the working groups followed by data exchange and discussion at picnic tables beneath giant swaying Queen palms in the ambient temperatures of the Bay breezes and the surroundings in their sight dissolved into visions of datasets from each of the pillars and cross cutting themes of the working groups of FCE III.

Highlights of this year's meeting were a huge turnout and the gorgeous surroundings where FCE was honored to have Dr. Steve Pennings who joined us in our meeting from the Georgia Coastal Ecology LTER, our closest fellow coastal site. Dr. Pennings, pictured below with Dr. Kevin Whelan, presented highly relevant research with sea level rise experiments they are conducting at Sapelo Island Georgia.



Working group presenters were flanked by home grown art painted by and then donated by parents of FCE researchers; Dr. Evelyn Gaiser's Mum and Dr. David Lagomasino's Dad, Mr. Carriazo. Huge thank you's to Mrs. Gaiser and Mr. Carriazo for such generous and creative gifts! Our FCE teachers turned out en masses this year too to work with our data manger on facilitating dataset use in the classroom and discussed creative student-dataset engagement practices.

There is a product FCE creates when all together in person-network threads get woven together into new forms and concepts very quickly when our pool of communication

Continued from page 2- Perspectives from the ASM

gets filled. These fibers and threads are data sets, models, theory developments that are freely exchanged between FCE collaborators, students, and educators and as a result our understanding of the Everglades ecosystem blossoms.

With all of the data discussion and uses discussed at the meeting now is a great time to do spring cleaning on your datasets and send them to Information Manager Linda Powell and to update your researcher profile. All of FCE be preparing for our upcoming review next year for the first half of FCE III so dig in and we will look forward to hearing of everyone's accomplishments.

Story and photos contributed by the editor- Photos in Canon Super Vivid



Left: Drs. Fred Sklar, Mark Rains and Joel Trexler discuss Everglades hydrology in a breakout moment at FCE ASM 2014

Right: Steve Kelly (left) with our FCE teachers (from left) Terri Reyes, Jennifer Gambale, and Cathy LaRoche who attended FCE ASM 2014



FCE's RESSt Students Rock their presentations and will Roll to Bolivia this summer!

Two of our Research Experience for Secondary Students (RESSt see end note) students presented their research on January 11th, 2014 at 2 pm in the Keller Theatre at The Museum of Discovery and Science in Ft Lauderdale. Each presentation lasted about 15 minutes and the audience cheered wildly. Sara Osorio is pictured below and Felipe Tamayo is pictured below right. Both giving their presentations and they truly make us all proud and look like science rock stars on the stage!

In our newsletter this past winter we gave you all the details about who these students are and their advisors. Now we have more great news to share about this dynamic duo. Sara Osorio won 3rd place at the Regional Science Fair last month. Congratulations to Sara for this supreme achievement! Miami-Dade's school system is over 400,000 strong and the four largest in the nation. You go Sara!



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Felipe Tamayo also has great news to share of being selected to travel to Bolivia this summer with the MyCOE <http://www.aag.org/gce>

project along with RESSt Christopher Naranjo for the Global Connections and Exchange 2014 Youth TechCamp. Congratulations to both Felipe and Chris on being selected. We are all proud FCE ers to have these students as our ambassadors from the fringe of the Everglades representing FCE in this venture.

In our Fall issue of News from the Sloughs we will share exclusive photos, interviews and thoughts from the students.

Have safe and fun travels in your learning excursion!



Story Contributed by Nicholas Oehm and Susan Dailey

Pictures taken by Nicholas Oehm

Note: RESSt is an FCE program pairing FCE researchers directly with students for real FCE science.

The program was founded 2001 with over 70 students to date.

FCE Researchers, Educators and Students Bring Science to the Table at the Seafood Festival

CASTing at the Seafood Festival

With FCE Graduate Student Jessica Lee

“The festival was a great experience and a fun new way to share our CAST research to a broad audience. Using a backyard fishing game, we taught kids how to fish while also teaching them about our research in the Everglades. We tagged the plastic game fish with the actual microchip (PIT) tags we use in our fish research. Then, as the kids would catch the plastic fish they would scan it with our handheld tag readers for recaptures, just like a real CAST angler! ? “Jessica Lee



Please spread the word about the CAST Program and the angler deadline of June 1, 2014.

Visit: <http://cast.fiu.edu/tag/fishing/> for more information about the CAST program and developer Jessica Lee



The Lure of the FCE at the Seafood Festival?

A plateful of ecology with a side

of creative fun greeted visitors to the FCE Education and Outreach table at the Deering Estate Seafood Festival last month. Our RESSt students and RET teachers created a magical exhibit adorned with shrouds with phosphorescent marine life, jellyfish, and of course FCE research. In the light the exhibit it was lovely but in the dark, the effect was spectacular! Young visitors entered the exhibit with eyes aglow and learned about bioluminescence in plankton in the Everglades ecosystem. Thank you to our teachers and students for all of the enormous efforts that made the even a success!



Left: Cathy LaRoche before the lights go out

Below: Glowing visitors soak up the FCE ecology

Bottom: LaRoche and Oehm in a black lit Everglades algal soak at night



FCE Student Spotlight: Julia Gehring- New FCE Student Group President

Earlier this month we caught up with our incoming student group president to find out more of the who what why where when and how of Julia Gehring. Questions from Dailey to Gehring are in green.

Who is Julia Gehring?

I am currently a Ph.D candidate in the biology department and Dr.



Suzanne Koptur's lab at FIU. I hail from Ohio and am the daughter of beekeeper and naturalist parents. I attended Brown University for my undergraduate degree in developmental and evolutionary biology. In the years between Rhode Island and Miami, I worked as a

conservation biologist for the Toledo Zoo, reintroducing federally endangered butterflies back into the Midwestern Oak Savannas and helping to develop husbandry techniques for endangered Cuban Rainbow boas. I also worked for the National Park Service at Lake Mead and Death Valley on the floristic Inventory & Monitoring project. I spent a short time working for non-profit groups doing outreach and raising money for cultural and environmental programs in the downtown areas of Paris, France and Toledo, Ohio. I moved to Florida to be an intern in the plant ecology lab at Archbold Biological Station. That experience in the Florida Scrub, really solidified my commitment to the

conservation of biodiversity through research, land management, and education outreach.

What brought you to South Florida and FCE?

I actually met both my advisor, Dr. Suzanne Koptur, and Dr. Evelyn Gaiser at Archbold Biological Station in Venus, Florida. They both immediately really impressed me as educators and researchers. After that I looked into the faculty and research occurring at FIU, and decided it would be a great fit. Plus, who could pass up an opportunity to study the Everglades?!

There are "Big shoes to fill" from former FCE Student President, David Lagomasino, and current FCE Student President Ross Boucek- What are you bringing to the table for the student organization- any hints?

Both David and Ross leave huge shoes to fill--they have built such a strong student group along with the other members of the e-board. I hope to continue their legacy of collaboration within and across sites, as well as their educational and outreach projects. I am hoping to get every student in FCE to be involved with at least one outreach program by the end of next year. Our students are amazing thinkers and teachers, and I think we could have a large effect in the school systems and in guiding policy changes. I am also eager to facilitate student-contributions to the FCE book, student-run working groups at the National ASM, and student spear-headed papers. The new executive board is open to involvement from everyone, and we are hoping to strengthen the established, collaborative efforts of FCE. I'm really looking forward to next year, we have an incredibly enthusiastic e-board coming in: Sean Charles (Vice President), Shelby Servais (Treasurer), Nick Shulte (Secretary), Sarah Bornhoeft (Biscayne Bay Campus Representative), and Josh Breithaupt (University of South Florida Representative).

Thank you Julia!

And giant FCE e-welcome and congratulations to you and the new e-board!

Hats off and a huge FCE THANK YOU! to our outgoing FCE Student Group e board!

President Ross Boucek

Vice President-Kristie Wendelberger

Secretary Julia Gehring

Treasurer Jennifer Seatman

BBC Representative Mike Bush

Check out the presentation from Ross Boucek at our FCE All Scientists Meeting describing the annual accomplishments of the FCE Student group!

Everglades Foundation and FCE Researchers collaborate with Bob Graham to promote Everglades Restoration



On Saturday March 22, former U.S. Senator and Florida Governor Bob Graham and the Everglades Foundation’s Wetland Ecologist Dr. Stephen Davis held a workshop focused on empowering college students to become more actively engaged in promoting Everglades Restoration. The workshop, titled “Everglades Service-to-Activism”, was held at the Bob Graham Center for Public Service at

Pictured Left: Former U.S. Senator and Florida Governor Bob Graham and Everglades Foundation’s Wetland Ecologist Dr. Stephen Davis (and FCE Researcher!) with FCE Graduate Student Edward Linden

the University of Florida and was modeled after Sen. Graham’s recent book titled “America, The Owners Manual, Making Government Work For You”.

Twenty-five graduate and undergraduate students with backgrounds in policy, science, and law participated in the workshop including FCE graduate students Edward Linden (Graduate Advisor Dr. Rene Price) and Christine Beck (Graduate Advisor Dr. Jennifer Rehage) Experts from the Everglades Foundation, Florida Coastal Everglades LTER, University of Florida, Florida International University, Arthur R. Marshall Foundation for the Everglades, and U.S. Geological Survey, provided presentations on Everglades ecology, restoration, climate change, litigation, and policy issues. Sen. Graham and Chris Hand, his co-author and former Chief of Staff, led an afternoon interactive session with students to illustrate the skills needed to communicate with decision-makers in both Tallahassee and Washington, D.C. Breakout groups also discussed strategies for developing fund-raising campaigns and advancing restoration of the greater Everglades ecosystem with uncertainties of climate change and sea level rise.

Both Graham and Davis were pleased with the turnout and content, but they are already looking for ways to improve the workshop. “20+ students on a Saturday is impressive—especially when the Gators were scheduled to play their Round 2 game in the NCAA tournament!” claimed Davis. “The students were clearly interested in the Everglades and excited to spend a day learning from Sen. Graham, a leader in environmental conservation and promoting civic engagement”. Both would like to repeat the workshop at Florida International University, where there is an established research program in Everglades science and policy. A Miami workshop would more easily allow students from other universities across south Florida to attend.



Story and photos by Stephen Davis, Ph.D.

Art in Science and Diatom Exhibit at In Deep

The Tropical Botanical Artists have constructed another milestone of their endeavors in capturing the beauty in Florida Coastal Everglades LTER research. We send a huge congratulation to the Tropical Botanical Artists for their Diatom exhibit at the 2014 In Deep art and talent extravaganza at Deering Estate.



This extraordinary collection evolved working with FCE's Lead Principal Investigator Dr. Evelyn Gaiser in her lab at the main Florida International Campus in Miami. The artists learned about the ecology of the Everglades and the importance of periphyton and algae in the Everglades ecosystem. The artists did not go out in the field but they did take a voyage to the tiny land of algae up close and personal- and still alive!- through the microscope. The microscope is still our best ticket to seeing algae and the curious and alien yet oddly familiar geometry of these organisms floods vision through monocular lenses.



“The artists visited the lab a few times to look through the microscope and we made all sorts of pictures available to them, including through our image database. They each picked a taxon out of the database to work with, and then learned about their ecology, too. Each of them wrote descriptions of their diatom to accompany their piece. They passed these by me before printing them for the exhibit. It's been fun!” reported Dr. Gaiser.

The tropical botanical artists learned the ecology of the Everglades and the role of algae and even went away with a bit of Latin. I was amazed when tropical botanical artist Pauline Goldsmith spouted Latin names of the species' drawings and paintings the group has created as a collection from the experience.

The artists are helping build a new bridge in our South Florida community –a new public outreach of art-ecology. Art in science is as old as science itself and certainly older than when the term ecology was coined. Art and ecology rooted and steeped in history from the first cave paintings and the predator prey relationships of years gone by from earlier humans and their hunts. Why? Because since we began to explain and communicate, we have drawn pictures. Because of this there is a symbiotic organic relationship between artist and ecologist- whether shark ecologist, plant ecologist, microbial ecologist, biogeochemist, hydrologist, organic chemist or modeler. These artists are learning the aquatic primary producers from an angle that few scientists have explored or even dreamed about- in technical-color!

There is a long-standing and continually developing relationship between the Tropical Botanical Artists and educators and researchers of FCE that resulted in another exhibit inspired by working with Dr. Ligia Collado on seagrasses and macroalgae. What is their next focus for inspiration? At our All scientists meeting last month artists Beverly Borland and Pauline Goldsmith met plant ecologist Dr. Jennifer Richards who suggested sedges as an art study subject, including the most famous sedge- sawgrass- which Dr. Richards informed us that it almost was named “Sawsedge”. Sawsedges, soils, mangroves, bull sharks, alligators or thousands of other Everglades inspirations await the Tropical Botanical Artists and FCE researchers and whatever the focus of the artists? Count and Color FCE in!

To learn more about the Tropical Botanical Artists, Diatoms and algae and the In Deep Exhibit visit <http://cas.fiu.edu/events/>



http://www.tropicalbotanicartists.com/www.tropicalbotanicartists.com/Tropical_Botanic_Artists.html

You can also Dr. Gaisers Virtual Periphyton lab at

<http://algae.fiu.edu>

Story contributed by Susan Dailey, Ph.D.

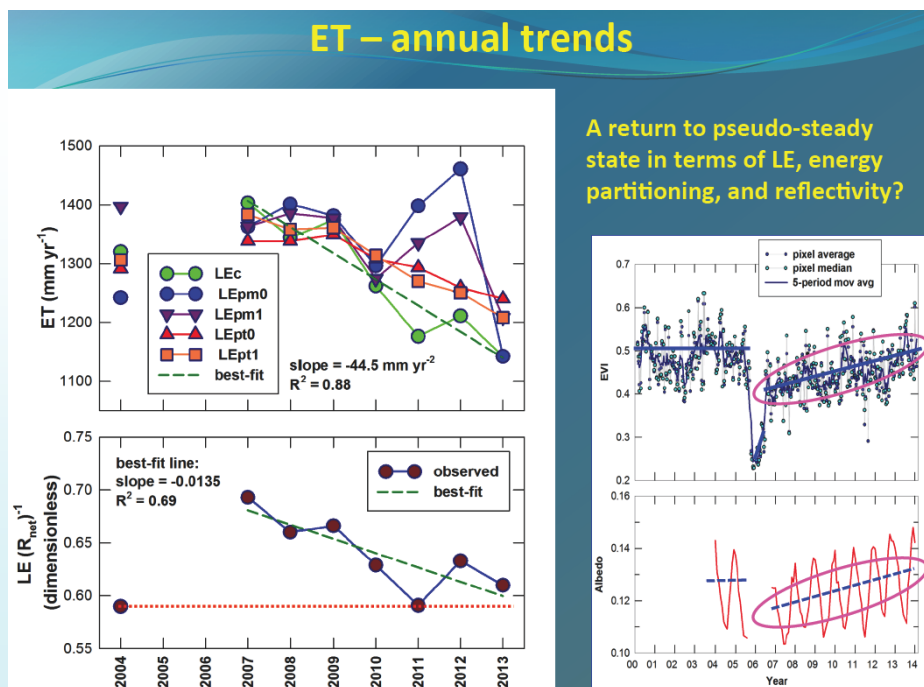
FCE's Short Announcements:

Highlights of research accomplishments this Spring

I wish to share the news with you that this month Jordan Barr et al. made an outstanding presentation at a conference in North Carolina Part of the excitement of the reported research is the unique aspects of the processes controlling evapotranspiration at the SR6 site following disturbances. With the data sets we now have it is possible to investigate ecosystem responses to disturbances created by tropical storms. This research provides fabulous evidence on the importance of long-term studies. These results will be included in a special issue of a journal that Jordan and I are co-editing.

Best to all.

Jose D Fuentes



From Dr. Jennifer Rehage:

I am happy to share with you a new paper by Ross Boucek in my lab, out in early view in *Global Change Biology*, [http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1365-2486/earlyview](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1365-2486/earlyview) & attached. The paper examines the effects of the 2010 cold snap & 2011 drought on coastal fish communities using a functional trait approach, and also quantifies the severity of the 2010 cold snap, the most severe on record (since 1928). Congratulations Ross!

Congratulations to Troxler et al. just received Florida Seagrant funding for a big SLR-peat collapse project in the glades!

Dr. Rene Price's new sea level rise paper just came out in *Nature Communications* April 14.

Below are links to the press release for the paper at NSF as well as a link to the paper itself.

http://www.nsf.gov/news/news_summ.jsp?cntn_id=130896

<http://www.nature.com/ncomms/2014/140414/ncomms4635/full/ncomms4635.html>

Cheers to Dr. Price!

(Monday, April 21) at 4:45, Comprehensive Everglades Restoration Program's System Status Report was held at F.I.U. FCE researchers including Evelyn Gaiser, Jennifer Rehage, Tiffany Troxler, Mike Ross, and Joel Trexler presented their contributions to the report. The System Status Report is a technical report that provides input into the five year Everglades Restoration Progress Report mandated by the US Congress to update the public on the progress made to achieve Comprehensive Everglades Restoration Plan (CERP) from. The Draft report can be found at http://www.evergladesplan.org/pm/ssr_2014/ssr_main.aspx and the public comment period is open until April 29.

The FCE Student Group is holding their annual end of the year BBQ at Crandon Park April 27 from 11 a.m. to 4 p.m. Be there or B²!

If you have questions or comments or would like to learn more about any of the short announcements please contact the editor. Thank you!

Snake on a plane? In the Mangroves? In Shark River? Gulp!



While the rest of the nation was scurrying with tax deadlines, a Burmese Python on a hydroplane in the Shark River greeted the eyes of FCE Researcher Phil Match while conducting field work. Where will these beautiful and highly successful predators turn up next?

In our Upcoming Newsletter issues look for these stories and MORE!

Take me to your LTER addresses from FCE Lead P.I. Dr. Evelyn Gaiser
Research Highlights
New Collaborator features
Student Spotlights
Stories from the Field
FCE Research Digestions (urp!)
FCE's Short Announcements

And YOUR CONTRIBUTION HERE

For more Florida Coastal Everglades LTER News and our older newsletters- Check out our webpages under **About Us** <http://fcelter.fiu.edu/>

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

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

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

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Please note: FCE ALL

Please send any comments and contributions for the next FCE Newsletter by June 2, 2014 to drskdailey@gmail.com

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