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Institute of Food and Agricultural Sciences (IFAS)
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NEWS SFRC

Director's Letter

The School of Forest Resources and Conservation is facing difficult economic challenges as are many organizations statewide, nationally and globally. Last year, UF/IFAS and the SFRC experienced two permanent budget reductions in state general revenue totaling approximately 10% and we are expecting more permanent cuts this year. These budget cuts have been and will be difficult to administer and could impact the ability of the SFRC to deliver the wide range of programs in teaching, research and Extension.

While there are short term challenges, there are many reasons to be positive about both the present and future programs of the SFRC. As examples of recent and current happenings: (1) The merger with Fisheries and Aquatic Sciences (FAS) is complete and faculty in FAS, as well as Geomatics and Forest Resources and Conservation, are building and sustaining excellent programs; (2) The undergraduate majors in both Geomatics and Forest Resources and Conservation have been completely revised to ensure that we are educating students that are both ready to go to work upon graduation and also prepared to embrace the inevitable changes throughout their careers; (3) The undergraduate major in Natural Resource Conservation is currently being revised (see first column on page 2 of this newsletter); (4) We are putting the finishing touches on a non-thesis MS degree designed to make it easier for place-bound, working professionals in natural resources to obtain a Master's degree; (5) With the most graduate students of any unit in IFAS, approximately 150, the SFRC continues to educate scientists and professors of tomorrow; (6) SFRC faculty continue to build excellent research programs that both address the needs of our stakeholders and also achieve outstanding metrics (e.g. external funding and numbers of publications) (see the article below and column two on the next page for examples of new collaborative research efforts); and (7) SFRC Extension programs continue to grow in scope and we have recently streamlined our electronic publication process to ensure that the information is getting into the hands of those who need it as quickly as possible. With regard to the latter, please type the following URL into your favorite browser and query the IFAS electronic database for any topic of interest to you:http://edis.ifas.ufl.edu/index.jsp

The future is bright for the SFRC with many of our programs being aligned to address the most pressing local, national and global needs such as: climate change; energy independence; creation of local jobs; support of rural economies and landscapes; sustainability and health of natural resources; and development of scientific and technological advances. Thus, we believe that the SFRC will emerge from these challenging times ready to continue to build new programs in teaching, research and Extension that directly enhance the lives of students and stakeholders, while fostering the sustainable development and conservation of forests, fisheries and aquatic natural resources in Florida.

Tim White

Upcoming Events

Forest Stewardship Workshop/Hike: Tree/Plant Identification for Landowners
May 19, 2009; 9:00 am – 3:00 pm, Eastern Time;
Morningside Nature Center, 3540 East University Avenue, Gainesville, FL 32641

Join **Alan Long** for a plant identification review! This program will focus mostly on sandhill and flatwoods species, identifying live specimens in the field. We will also learn about how some of these plants are used by wildlife and/or the role they play within the larger plant community and habitat.

This will be a walking event so please wear appropriate clothing and footwear. Ticks will be plentiful so long pants and sleeves are strongly suggested. A hat and sunscreen are always a good idea too. A water cooler is on site – bring a water bottle if you wish to take water to the field. Tick repellent will be available, but if you prefer a particular brand bring it.

This program is free but pre-registration is required. Contact **Anandi Banerjee at (352) 846-2374 or anandibanerjee@ufl.edu to register.** Lunch will be provided but BYO coffee if you need it. Attendance will be limited so please register soon!

Geomatics Alumni Reception at the 2009 Florida Surveying and Mapping Society Annual Conference
Conference Dates: August 19 - 23, Reception Time TBA
Orlando, Florida

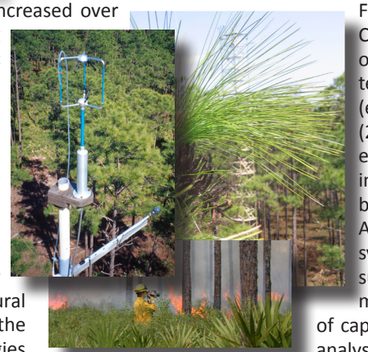
Want to catch up with a few friends from school? Please join us for a our alumni gathering for food and updates from the program.

SFRC Alumni Reception at the Society of American Foresters National Convention
October 1, 2009; 7:00 pm - 9:00 pm, Eastern Time
Walt Disney World Coronado Springs Resort, Orlando, Florida

This year the SAF National Convention is being held in our own back yard. Please join your fellow alumni, faculty, and staff from the School for an evening of food, friends and updates from the School. More information coming soon.

Global Climate Change & the SFRC

Global carbon dioxide (CO_2) concentration has increased over 30% since the world began using fossil fuels, resulting in the largest human-caused alteration of atmospheric chemistry in history. National governments worldwide are committed to mitigating rising atmospheric CO_2 through programs such as cap-and-trade, designed to reduce fossil fuel CO_2 emissions, and enhance biological uptake and storage of CO_2 by natural and managed ecosystems. Forest ecosystems will be critical to these carbon offset programs; for example, annual uptake and storage of CO_2 by forests already offsets 11 to 16% of U.S. greenhouse gas emissions, and greater potential for more carbon mitigation exists. Agricultural production systems are currently a net CO_2 source in the United States, but existing and emerging technologies can be applied to greatly reduce the carbon footprint of our food and fiber production systems. The Carbon Resources Science Center (http://carboncenter.ifas.ufl.edu) was recently funded by the IFAS Dean for Research and SFRC to provide the science necessary to develop and evaluate forestry and agricultural technologies to reduce the rise in atmospheric CO_2 concentration.



Current research being conducted at the SFRC's Austin Cary Memorial Forest to assess forested ecosystems effect on CO_2 levels .

More than 40 scientists from 10 departments at the University of Florida form the integrated science team of the Carbon Resources Science Center to: (1) Develop optimum forest management regimes for sequestering carbon in the southeastern United States (e.g., rotation length, thinning, prescribed fire); (2) Discover technologies for decreasing carbon emissions from agricultural production systems in the region (e.g., conservation tillage, manure biogas production, pasture management); (3) Advance agricultural and forest management systems to produce carbon-neutral biofuels to substitute for fossil fuels; (4) Create efficient methodologies for cost effective implementation of cap-and-trade systems; and (5) Conduct life-cycle analyses with full-cost accounting of alternative policies, incentives and management regimes for biofuels, carbon offset systems and cap-and trade programs. The signature approach of CRSC will be the use of integrated ecological, social, policy and economic analyses to quantify local, regional and global impacts and ensure whole-system sustainability.

The ***School of Forest Resources & Conservation*** Newsletter is published to inform alumni and friends. Comments and information to share should be directed to the Main Office: phone - (352)846-0850, fax - (352)392-1707, email - sfrc@ifas.ufl.edu. Visit our website at ***www.sfrc.ufl.edu***.

UF UNIVERSITY of FLORIDA IFAS

Fulfilling Our Mission...

Instruction

The SFRC has approximately 140 undergraduates studying one of three majors: Forest Resources & Conservation, Geomatics, or Natural Resource Conservation. The SFRC has approximately 150 graduate students pursuing masters and doctoral degrees.

Major Revision

The Natural Resource Conservation (NRC) major has thrived since its origin in the 1970's. The degree has served over 1000 graduates who now have successful, varied careers. Students have the unique opportunity to flexibly tailor the degree to their particular interests under expert faculty guidance.

The landscape of natural resources and conservation is changing at the University of Florida and across the state and nation. Natural resource challenges are diversifying as growing human populations have an increasing impact at local and global scales. The basic elements of our toolbox have also expanded with the advent of new technologies such as Geographic Information Systems (GIS). In addition, the demographics of NRC students have changed as the degree is now available off-campus at the West Florida and Gulf Coast Research and Education Centers. The recent merger of the Department

of Fisheries and Aquatic Sciences with the SFRC provides the opportunity to grow in the area of water resources.

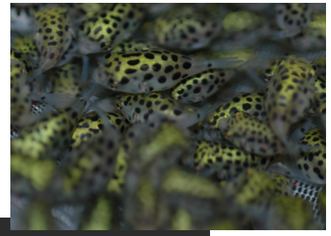
In response to these changes, Director Tim White (SFRC) and Chair John Hayes (Wildlife Ecology and Conservation-WEC) appointed a committee of nine faculty from both units to examine the NRC degree. The team has discussed who is served by the NRC major, what careers NRC majors pursue, and guiding principles as we revise the NRC curriculum. This process is on-going but should conclude in the next six months. We welcome your thoughts on the topic. **Shirley Baker**, SFRC (sbaker25@ufl.edu) and **Debbie Miller**, WEC (dlmi@ufl.edu).

Research

The SFRC has more than 50 faculty who are awarded approximately $8 million annually in external grants and contracts to conduct problem-solving research in geomatics, fisheries and aquatic sciences, and forest resources and conservation.

Breeding Method for Puffer Fish

SFRC researchers **Craig Watson**, **Amy Wood** and **Scott Graves** at UF's Tropical Aquaculture Laboratory in Ruskin have created the first commercial breeding method for spotted green puffer fish that could benefit the tropical fish industry and genetics research. Up until now the fish could only be collected from the wild; as a result supplies were often times limited and the fish could not be studied by geneticists because only juveniles and adults were available.



The spotted green puffer fish has the smallest genome of any vertebrate that has been mapped and could open doors for geneticists. The new breeding method could allow researchers to study the fish for several generations looking at inherited traits. Researchers could also introduce a reporter gene into a specific gene sequence in a developing fish and track when it appears in development; this will indicate to researchers the function of the specific gene sequence.

The method for breeding is known as ovarian lavage and is an updated version of an older breeding method used to breed commercially viable fish that would not breed in captivity. This method uses a chemical that is injected into the female that stimulates egg development. The eggs are then removed and fertilized. After several tests the researchers were able to reach nearly a 100 percent success rate in fertilization and hatching. The demand for the fish is unknown at this point; but one thing is certain, there never has been a large enough supply.

Extension

The SFRC has 15 Extension Specialists throughout the state who implement a diversity of programs aimed to help stakeholders and policy makers better understand how to manage and conserve natural resources. You can search the following database for topics of interest to you: http://edis.ifas.ufl.edu/index.jsp.

Geomatics Certificate

Since summer 2008 the SFRC has offered an online Certificate in Geomatics. Headed by **David Gibson**, this selective curriculum is geared towards working professionals desiring to further their knowledge of the field of Geomatics, which includes: boundary surveying, mapping, GIS, photogrammetry, and other methods of land-related measurement and analysis. This certificate has the flexibility to be offered not only to Florida students, but also nationally and even internationally. Numerous students have already taken advantage of this exceptional distance education opportunity. The Certificate is offered through UF's Division of Continuing Education and requires the completion of 15 online course credit hours. For more information visit http://geomatics.dce.ufl.edu/.

Online Prescribed Fire Training

Leda Kobziar and **Alan Long** have partnered with the Prescribed Fire Training Center in Tallahassee to offer a course to working professionals about the impacts and use of prescribed fire in the South. Fire management professionals from around the country are gaining hands-on experience while completing online coursework available through the SFRC for college credit. This course is the first in a new program being offered through the SFRC geared towards federal employees in the Interagency Fire Program who are

required to have a bachelors' degree or to obtain 24 credit hours from a university to maintain current positions. These managers deal with increasingly complex resource problems and will benefit greatly from the additional training in natural resource policy and management. The SFRC program is one of the first in the nation working to offer the needed coursework to these federal employees. So far, 12 students have completed the course.

Students

Spring 2009 Scholarships and Awards Recipients

Spring 2009 Undergraduate Scholarships:

- Geomatics Initiative Scholarship: **Kenneth Bryant**, **Katie Correll**, **Chad Plant**, **William Pyle**, **Phillip Smith**, **Andrew Smith**, **Ryan Weaver**, **Kent Willingham**, **David Lechner**, **William Dueease** and **Sarah Smith**
- Florida Surveying and Mapping Scholarship: **Kimberly Atchison**, **Charles Baxley**, **Michael Larson**, **Tyler Tracz**, **Matthew Barksdale**, **Jonathan Flowers**, **Nick Klimas** and **Jacob Schaffner**
- Leigh A. Walker Memorial Scholarship: **Justin Phillips**
- Louis F. Conde Memorial Scholarship: **Chelsea Heatherington**
- William James Menear, Jr. Scholarship: **Benjamin Gifford**
- Newins-Ziegler Scholarship: **Elizabeth Ramirez**
- Forest Landowners Foundation Scholarship: **Derek Blackmon**
- James H. & Joh-Nana Lybass Scholarship: **Mary Hudson**, **Joshua Havird** and **Leland Taylor**
- J.B. Adkins Memorial Scholarship: **Dana Baucon**, **Lara Colley**, **Shannon McGee**, **Sparkle Malone**, **Allen Milligan** and **Eli Bacheldor**

Miriam Wyman and **Dana Baucom** were selected as the Outstanding Teaching Assistants of the year by the seniors and juniors respectively.

The SAF Rising Senior Scholarship was awarded to **Mary McKenzie**. The SAF Graduating Senior Award went to **Dana Baucom**.

Lara Colley was awarded the 2009 Xi Sigma Pi Regional Scholarship.

SFRC Outstanding Students of the Year

Geomatics: **Katie Correll**

Natural Resource Conservation: **Mary McKenzie**

Forest Resources & Conservation: **Dana Baucom**

Fisheries & Aquatic Sciences:
Master's of Science: **Felipe Carvalho**
Advisor: **Debra Murie**
Ph.D.: **Jenney Lazzarino**
Advisor: **Dan Canfield**

Outstanding Master's Thesis: **Brianna Miles**
Advisor: **Gary Peter**

Faculty and Staff

Matias Kirst received the Richard Jones Outstanding New Faculty Research Award from IFAS.

Eric Jokela received the Award of Excellence in Research at the Southeastern Society of American Foresters Annual Meeting.

Eric Jokela and **Alan Long** were selected as the Outstanding Teachers of the Year by the juniors and seniors respectively.

Marie Meldrum was awarded an IFAS Superior Accomplishment Award for her excellent work as a program assistant.

Cortney Ohs (center) was awarded an IFAS Superior Accomplshment Award for his work as an Assistant Professor at the Indian River Research & Education Center.

Willie Wood was recognized as the SFRC Supporting Staff Member of the Year by the students.

Congratulations to **Jenny Seitz** and **Larry Korhnak** (left) for being recognized as the Outstanding SFRC Staff Members of the year.

Don Rockwood retired from the School in February 2009 after 35 years of service (although he can still be found working in his office) and has been awarded the title of Emeritus Professor.

Appreciation for our Supporters

Without the support of friends we could not maintain our level of academic excellence.

Thank you to the following for their contribution to the School's Unrestricted Fund: **Timothy La Belle** ('77), **Roger** ('61) & **Janie Bollinger**, **Kevin** & **Susan** ('82) **Kett**, **Janet** ('74) & **Lowell Hinchee**, **William MacKay** ('57), **Philip Moses & Company, Inc.**, **Norma Horan**, **William Bennett** ('54), **Till** & **Kathleen Lybass**, **Bill Harrell** ('00), **Paul** ('67) & **Carole Mott**, **Mark** ('74) & **Anne Miller**, **Donna Legare** ('75), and **Joseph Walthall** ('76).

Thank you to **Paul Zajicek** for his support of the Tropical Aquaculture Laboratory in Ruskin. Thank you to **Wayne Smith** & **Mitzi Austin** for their support of the Wayne Smith Student Leadership Fund and the John Gray Endowment for Excellence in Forest Resources and Conservation. Thank you to **Jim** & **Joh-Nana Lybass** for their support of the 2009 James H. & Joh-Nana Lybass Scholarships. Thank you to **Patrick Thomas** and **Anheuser-Busch, Inc.**, for their support of Tom Frazer's research. Thank you to the **Florida Forestry Association's Sustainable Forestry Initiative** for their support of Project Learning Tree.

Give a Gift!

Your support can be used for student scholarships and travel to conferences, purchasing of new equipment to keep us up-to-date, as well as many other uses.

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Makes checks payable to the University of Florida Foundation, Inc. and designate the SFRC.

Thank you!