

Florida Agricultural and Mechanical University

College of Engineering Sciences, Technology and Agriculture
Center for Water and Air Quality
Tallahassee, FL 32307-4100



The Flow

Volume 7 Issue 2

Water and Air Quality Newsletter

Fall 2009

Center for Water and Air Quality Advisory Council Meeting set for December 4, 2009...

The semi-annual meeting of the advisory council for the Center is scheduled for Friday, December 4, 2009, from 8:30 a.m. To 3:30 p.m. The meeting will be held at the FAMU Teleconference Center, corner of Osceola and Pinder Street.

Forest Service Station Director Visits the Center...

Dr. Jimmy Reaves, Station Director, Southern Research Station, US Forest Service (FS), Asheville, NC and Ms. Cheryl Jefferson, Station Civil Rights Director, visited the Center to discuss the existing cooperative research agreements between FS and FAMU to conduct research on isolated wetlands in the Apalachicola National Forest.



Drs. Jimmy Reaves and Katherine Milla (left). Dr. Reaves and Ms. Jefferson with faculty from the center (right).

Dr. Reaves and Ms. Jefferson also held discussions with the Dean, Dr. Makola Abdulla and other administrators of the college to further enhance the existing FS relationship with FAMU. Mr. Ted Willis, FS Liaison Officer at FAMU facilitated the visit.

Research Symposium Session at the National Water Quality Meeting...

Katherine Milla, Ph.D.

The Center for Water and Air Quality at Florida A&M University has been selected to organize and host a special symposium at the 2010 Land Grant and Sea Grant National Water Quality Symposium on isolated wetlands. The symposium will be held at Hilton Head, SC from the February 21-25, 2010. The following speakers have been selected to present their work: Katherine Milla, Andrew Rasmussen, Amita Jain and Kenneth Livingston, all from FAMU; Mike Vepraskas, NCSU; Ge Sun, USDA Forest Service; William Correr, Clemson; Devendra Amatya, USDA Forest Service; and Joyce Marie Klaus, UCF.

The Center Receives NASA Grant...

The center recently received a major competitive grant from NASA for \$400, 000 to conduct a two year study to "Enhance NASA's COAST Online Application for Agricultural Best Management Practices Decision Support." The project involves interfacing of COAST and WAM (a watershed management model developed by SWET) to assist stakeholders and end-users in better implementation of Best Management Practices (BMPs). Florida Department of Agriculture and Consumer Services Office of Agricultural Water Policy is an active partner in this study. Drs. Katherine Milla (PI), Sunil Pancholy and Margaret Gitau will work on the project. For further information, please contact:

s.pancholy@fam.u.edu or
katherine.milla@fam.u.edu

Center Seminar Series...

The Center Seminar Series continues to draw a good audience comprising of center faculty and students, faculty and students from other colleges at FAMU and some of the stakeholders. Since the month of May this year, the following speakers presented their work:

Dr. Steven Herrington, Director, Freshwater Program, The Nature Conservancy, "From Water Wars to Waters Restored: The Nature Conservancy's Approach to Freshwater Conservation in Florida", August 2009.

Dr. Steven Morey, Reserch Scientist, Oceanography, FSU, "Apalachicola River Variability and Impacts on the Offshore Marine Environment", September 2009.

Christy Crandell, Hydrologist, US Geological Survey, "Nitrate in Surface Water/Groundwater Interaction in the Chipola River System", October 2009.

The Soil and Water Analysis Lab Extends Programs...

The Soil and Water Analysis Lab of the Center continues to enhance its analytical capability. To the current list of analysis of physical, chemical and mechanical properties of soil and water, the microbiological analysis was added. Specifically, it includes: Total coliform, fecal coliform and *E.coli*. Currently, one graduate and two undergraduate students are receiving training in the lab. We are now testing the feasibility of using the rapid analysis kits under *in situ* conditions on small farms and organic farms.

Summer Camp for Teachers...

Katherine Milla, Ph.D.

Katherine Milla and Crystal Carter conducted a 2 week summer program for high school and middle school teachers in the area of environmental education. Nine teachers from north Florida coastal

communities participated in a number of experimental learning activities including, Project Wild Aquatic, use of GIS and GPS, collection of aquatic insects, watershed studies and setup and updating of a web page. This project was funded by the Dauphin Island Gulf of Mexico, under the NOAA Environmental Education Program.



Teachers and faculty facilitators during the summer teacher's camp.

Visiting Scientists...

Manuel Pescador, Ph.D.

Dr. Peter M. Grant, Berhardt Professor of Biology at the Southwestern Oklahoma State University, spent the past summer in the Aquatic Entomology Lab of the Center working with Dr. Pescador and Rasmussen on the taxonomic revision of the mayfly genus *Thraulius*. In a letter of appreciation to Dr. Pescador, Dr. Grant, acknowledged the great resource that the center has in the aquatic insects program at FAMU.

Dr. Maria Marleny Chacon, Professor of Tropical Ecology, University of de los Andes, Venezuela, completed her 10 month sabbatical leave in the Aquatic Entomology Lab studying the systematics and distribution of the mayfly fauna of Venezuela and completed two manuscripts.

Aquatic Insects Workshop Brings in Many Participants...

Manuel Pescador, Ph.D.

The Center for Water and Air Quality and the Florida Department of Environmental Protection jointly sponsored a three-day Aquatic Insect Taxonomy Training Workshop. The workshop was held September 22-24, 2009 at the FAMU Teleconference Center. The main purpose of the workshop was to assist the participants in identification of indicator species and thus in the biomonitoring of the streams. Participants, approximately 30 or so, came from FDEP, St. Johns River Water Management District, Alabama A&M University, Leon County Health Department, Fish and Wildlife Commission, Water and Air Research Inc. and others.



Participants in the Center's Aquatic Insect Taxonomy Training Workshop.

Student News...

Master Thesis Defense: Two students successfully defended their Master Thesis.

Iwona Gajewska reported her work on Hydrology, Salinity Regime and Plant Zonation in two Coastal Marshes in Northwestern Florida". Her Major professor is Dr. Y. P. Hsieh.

Gideon Nnaji from FAMU/FSU College of Engineering completed his work "Hydrological Analysis of Extreme Flood and Low Flow in Suwannee River." His major professor is Dr. Margaret Gitau, BASE.

Kenneth Livingston, a graduate student in the Center for Water and Air Quality is a recipient of the **Doris Duke Conservation Fellowship**. The fellowship is awarded by the Woodrow Wilson Foundation to graduate students working in environmental conservation.

Faculty News...

Dr. Cassel Gardner became the new chair of the National Water Program for Committee for Shared Leadership (CSL). This committee is responsible for coordinating the NIFA-USDA water program activities.

Dr. Gardner also presented a paper at the National Small Farm Conference recently held in Spring Field, Illinois. The title of his presentation was, "Use, protection and management of water: A vital natural resource."

Dr. Margaret Gitau received the Journal of Soil and Water Conservation Honorable mention Research Award for Research Quality and Impact, 2004-2008. The paper was entitled, "A tool for estimating BMP effectiveness for phosphorus pollution control. Journal of Soil and Water Conservation, 60(1):1-10.

Dr. Odemari Mbuya is serving as the chair of the ASA-Minority Committee for the Agronomy Society of America, Crop Science Society of America and Soil Science Society of America.

Center Faculty...

Faculty

Sunil K. Pancholy, Ph.D., Prof/ Director, s.pancholy@famuedu
Cassel S. Gardner, Ph.D., Professor, cassel.gardner@famuedu
(In cooperation with the Extension Program)
Yuch P. Hsieh, Ph.D., Professor, yuch.hsieh@famuedu
Odemari S. Mbuya, Ph.D., Professor, odemari.mbuya@famuedu
Katherine Milla, Ph.D., Professor, katherine.milla@famuedu
Manuel L. Pescador, Ph.D., Professor, manuel.pescador@famuedu

Research Associates

Glynnis Bugna, Ph.D. Research Associate, glynnis.bugna@famuc.edu
Amita Jain, Ph.D., Research Associate, amita.jain@famuc.edu
Andrew Rasmussen, Res Assoc. Ph.D., andrew.rasmussen@famuc.edu

Affiliated Faculty (BASE Program)

Adrienne Cooper, Ph.D., Assoc. Prof., adrienne.cooper@famuc.edu
Margaret Gitau, Ph.D., Assistant Prof., margaret.gitau@famuc.edu

Other Affiliated Faculty

Alex Bolques, M.S. Extension Agent Gadsden County, FAMU Coop Extension Program, alejandro.bolques@famuc.edu
Oghenekome Onokpise, Ph.D., Forestry/Plant Science
Oghenekome.onokpise@famuc.edu
Daniel Solis, Ph.D., Division of Marine Affairs and Policy, Rosenstiel School of Marine and atmospheric Sciences University of Miami, d.solis@miami.edu
Michael Thomas, Ph.D., Environmental Economist, Agri-Business, CESTA, FAMU, Michael.thomas@famuc.edu
Harry Zhong, Ph.D., PHEREC, FAMU, Zhong_h@yahoo.com

Publication & Presentations...

Chacon, M. M., **M. L. Pescador**, M.H. Hubbard, and S. Segnini. 2009. Mayflies (Insecta: Ephemeroptera) from Venezuela. Check List 5(3): 723-231.

Chacon, M. M., **M. L. Pescador**, and S. Segnini. In press. The adult and redefinition of the genus *Prebaetodes* Lugo-Ortiz & McCafferty (Ephemeroptera: Baetidae), with the description of a new species from Venezuela. Aquatic Insects (Oct./Nov. 2009 issue)

Pescador, M. L., B. A. Richard, M.D. Hubbard, and A. H. Staniczek. 2009. Evolution of *Baetiscidae* (Ephemeroptera): current state of knowledge of the family. In *International Perspectives in Mayfly and Stonefly Research*, Proceedings of the 12th Intl. Conf. Ephemeroptera, Aquatic Insects 31, 739 pp.

Merriman, K., **M. Gitau**, I. Chaubey. 2009. A tool for estimating best management practice effectiveness in Arkansas. Applied Engineering in Agriculture. 25(2): 199-213.

Gitau, M. W., L. Chiang, I. Chaubey. 2009. Computational Approaches to Evaluating BMP Scenarios Considering Stochasticity of Weather.

Proceeding of the Association of Research Directors, Inc., 15th Biennial Research Symposium. 1890 Research: Sustainable Solutions for the 21st Century. Pg 123. Available at: <http://www.ard1890symposium.org/15thBiennialSymposium.pdf>.

Nnaji, G. A., **M. W. Gitau**, and W. Huang. 2009. Effects of Hydrological Processes on the Suwannee River Coastal Ecosystem. Proceeding of the Association of Research Directors, Inc., 15th Biennial Research Symposium. 1890 Research: Sustainable Solutions for the 21st Century. Pg 158. Available at: <http://www.ard1890symposium.org/15thBiennialSymposium.pdf>.

Rolle, K. A., **M. W. Gitau**, and G. Chen. 2009. Dissemination of Fecal Coliforms in Juniper Creek Watershed, NW Florida. Annual Conference of the ASABE, Reno, NV.

Gitau, M. W., K. Rolle, E. Muhammad, G. Nnaji, G. Chen, and W. Huang. 2009. Fate and Transport of Various Nonpoint Pollutants in North Florida Watersheds: Current Research and Future Directions. 2009 USDA-CSREES National Water Conference, Feb. 8-12, St. Louis, MO.

If you would like a copy of 'The Flow', Water & Air Quality Newsletter, send your name, postal address and email to the Director,

Center for Water & Air Quality
103 S Perry Paige Building
Florida A & M University
Tallahassee, FL 32307-4100
(850) 561-3594
s.pancholy@famuc.edu

Administration:

Dr. Samuel L. Donald, Interim Dean and Director of Land Grant Programs
Dr. Sunil K. Pancholy, Director of Center for Water & Air Quality
The *Water & Air Quality Newsletter* is published semi-annually by the Center for Water & Air Quality of the College of Engineering Sciences, Technology and Agriculture, Florida A & M University. We acknowledge continuing support received from **Natural Resources Conservation Service, U.S. Forest Service, CSREES/USDA, Florida Dept. of Agriculture, Florida Dept. Environmental Protection, NASA and others.**