From the Center’s Director

Robert R. Bradford, Ph.D.

About Our Students...

A successful research program in a university must involve student participation. The Center for Water Quality includes student research and work-study in all program areas. Students majoring in Soil and Plant Science, Forestry, Entomology, and Biological Agricultural Systems Engineering (BASE) are involved. Our objectives are:

(a) To encourage undergraduate agriculture majors to participate in the Center’s research programs as work-study students and
(b) To seek qualified graduate students at the M.S. and Ph.D. levels to conduct thesis research in the Center’s research programs.

At the undergraduate level, students participate as work-study students and work in various research laboratories 10 to 20 hours/week. Beginning students learn laboratory techniques and procedures in their major field of study, while advanced students are encouraged to conduct specific research problems. Advanced students present their research results in college seminars, scientific meetings and competitions.

At the graduate level, each research program recruit graduate students to continue their studies at FAMU. Currently students can be admitted for the Ph.D. degree in Entomology. Each student is expected to complete all course requirements for the advanced degree and conduct research leading to the thesis in one of the Center’s program areas.

Renovation of Wetland Ecology Lab

Sunil Pancholy, Ph.D.

We are now in the process of planning for extensive renovation of the Wetland Ecology Laboratory, Room 118, Perry-Paige Hall and some minor upgrades in the Water Quality Lab, Room 109 and Room 114. The renovation includes: removal of all old lab benches and furniture, removal of fume hoods, installation of new electrical and plumbing lines and installation of new lab benches and fume hoods. The chemical storage and the balance rooms will also receive new furniture. Additional work stations and desks for graduate students will also be incorporated in the new configuration. Approximate time period for the renovation will be a minimum of 3 months, once everything has been moved out of the lab.

Room 109, the Water Analysis Lab, recently received a new fume hood. Other minor updates will be made, as needed.

Room 114, the old GIS Lab, is now occupied by Dr. Mbuya and most of his graduate students. Their work range from chlorophyll index modeling to phytoremediation studies. This lab will up-dated to make it more user-friendly.

Several major pieces of equipment has either been purchased or is on order for the Center for Water & Air Quality. A list of this equipment will be published in the next issue.
Hydrology Summer Camp

Katherine Milla, Ph.D.

In June Dr. Katherine Milla and Dr. Elijah Johnson conducted a summer hydrology camp co-sponsored by CESTA and the Environmental Sciences Institute. Dr. Milla was assisted by Dr. Andy Rasmussen, Mr. Bart Richard and Ms. Jan Peters of the Aquatic Entomology program. During the four-week camp, local high school students learned about the hydrologic cycle through classroom exercises, field experiences and laboratory experimentation. Classroom activities included lectures, mapping of groundwater contamination and hurricane tracking locations, and computer programming. Field activities included collecting water samples for chemical analysis and aquatic insects, and laboratory work included chemical analysis and insect identification.

Aquatic Ecosystem Studies News

M.L. Pescador, Ph.D. and A.K. Rasmussen, Ph.D.

Dr. Manuel Pescador

- Recently received a Smithsonian Visiting Scientist Award to study the mayfly collections from Madagascar deposited at the National Museum of Natural History in Washington D.C.
- Appointed member of Taxonomic Experts for the National Taxonomic Certification Program of the North American Benthological Society
- Invited Panelist at a Comprehensive Wildlife Conservation Strategy North Threats Expert Workshop sponsored by The Nature Conservancy and U.S. Fish and Wildlife, Tallahassee. Feb. 2005. The main objective of the workshop was to become familiarized with planning approach and process, review threats indices and summaries and start identifying threats for terrestrial and freshwater habitats.

Dr. R.W. Flowers

- Recently conducted a 5-day (Jun 6-10, 2005) workshop on Biomonitoring and Identification of Aquatic Macroinvertebrates in Estacion Experimental, Quevedo, Ecuador.

Research Report:

- Pescador, M.L., B.A. Richard, and A.K. Rasmussen. 2004. An Aquatic Invertebrate Survey for the Congaree Swamp National Park, Richland County, South Carolina. Final Report CESU Partner Cooperative Agreement Number w/Florida A&M University: HR000 01 0593. 50 pp. + appendices. The study represents the most comprehensive inventory of aquatic insects conducted in the park. The results provide much needed baseline data on the aquatic insect fauna of the park and will be a vital resource for future biomonitoring and bioassessment of its aquatic environment. The document is available in Pdf file.

Professional Meeting Presentations:

Dry Creek Watershed: Effects of Harvesting on Soil Movement using the Mesh bag Technique

Crystal S. Carter, M.S.

In 2003, Florida A&M University, USDA Forest Service, and International Paper began a cooperative project to evaluate the management effects of forest and streamside management zones (SMZs) on soil erosion movement using a “mesh bag” field method as a part of IP’s Dry Creek Long-term watershed study. Triplicate plots, each 10x10 m, located in Decatur County, Georgia were installed in the reference and treatment watersheds to determine the effects of groundcover type and harvested treatments on soil erosion. Testing of the 20x20 cm mesh bag indicated there was no significant difference (p<0.05) between the slash groundcover and the reference. However, there was a significant difference between groundcover types. Further testing indicated there was no significant difference among the SMZ harvesting treatment. Preliminary findings indicate groundcover is critical to reducing soil erosion and maintaining the SMZs free from surface disturbances is vital to soil conservation.

Professional Meeting Presentations:


Wetland Ecology News

Y.P. Hsieh, Ph.D.

The air sampler pictured is being used in a research study by the Wetlands Ecology. The air sampler collected samples during a prescribed burning at the Dry Creek Watershed in Bainbridge, Georgia.
Student Training

Four undergraduate students and two graduate students have worked through the Center of Water & Air Quality in 2005. Ms. Tresia Walters and Mr. Sterling Copeland are undergraduate students working in the Water Quality Laboratory. Ms. Kelada Bennett and Mr. Gary Newton worked in the Wetland Laboratory before graduating in May 2005. Mr. Kennard Grant is completing his Masters degree under the direction of Dr. Y.P. Hsieh and Mrs. Nadine Gordon-Bradley is completing her Masters degree under the direction of Dr. Oghenekome Onokpise.

New Employees

Ms. RaShunda Kenon was employed as a Senior Secretary in the Center for Water & Air Quality.

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The Water Quality Newsletter is published quarterly by the Center for Water 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, and others.

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This publication is intended for the general public to promote awareness on water quality issues.