

In this issue

- Mesoscale Weather Modeling Update
- VI-EPSCoR Sponsors Water Resources Conference Feb. 24
- Eudora Kean Outreach Visit to UVI
- NSF EHR/ESIE Outreach Visit
- Program Coordinator's Update
- BCCR Update
- Researcher Highlight: Dr. Nasheed Idrisi

Highlights

- VI-EPSCoR Strategic Planning Workshop
- VI-EPSCoR Semi-Annual Report submitted to NSF EPSCoR
- VI-EPSCoR 1st Qtr 2005 Activities
- VI-EPSCoR results: 2nd call for Incubator Projects
- VI-EPSCoR Welcomes Dr. Nasheed Idrisi to UVI



Mesoscale Weather Modeling Update

Dr. Dave Smith has just returned from the PSU/NCAR Mesoscale Modeling System Users' Workshop held Jan 24 through Jan 28 at the National Center for Atmospheric Research (NCAR) in Boulder, Colorado. The workshop provided a detailed overview of the MM5 weather modeling program and participants had an opportunity to work directly with the many facets of the program during practical training sessions.

Dr. Smith remained at the Foothills Laboratory facility the following week under the NCAR Visitor's Program to work with Dr. Cindy Bruyere on modifying the program for real-time mesoscale weather predictions for the Virgin Islands. Invaluable assistance was also provided by NCAR scientists Dave Gill, Jimmy

Dudhia, and Kevin Manning.

Accomplishments during that week exceeded all expectations. A working nested grid model was developed for the Caribbean area, in which the topography and land use designations for St. Croix and what is termed the "Northern Virgin Islands" (St. Thomas, St. John and the BVI's) were successfully parameterized in the TERRAIN program to a 0.925 km (30") resolution. The REGRID, INTERPF, and MM5 modules were also successfully modified and a 24-hour weather prediction was successfully run using archived global meteorological data.

This was an excellent first step, and now attention turns to installing the program on UVI's

Beowulf cluster. This will require some weeks of configuration work that will be accomplished with the help of UVI computer scientist Dr. Marc Boumedine. Once successfully running, work will begin in several other fronts: 1) development of an efficient system of downloading NCEP global data analysis for initialization of program runs, 2) modification of local SST (sea surface temperatures) data, 3) development of higher resolution grids (0.308 km) for the Northern Virgin Islands, and 4) development of a program for meteorological data collection by local schools and the public.

In addition, work will soon begin on the task of publishing the forecasts to the public. This will be done through web site development and collaboration with local weather services.

Outreach Activities Update by Eugene Gottlieb Jr.

The VI-EPSCoR program in conjunction with the Center for Marine and Environmental Studies (CMES) sponsored an outreach visit for honors biology students from Eudora Kean High School on January 27, 2005. The students met with UVI researchers, faculty, and staff to learn about research programs in Biology/Marine Science at UVI. The VI-EPSCoR program coordinated the event and recruited participants from UVI's Biology and Marine Biology faculty.

A total of 12 students in the honors biology class attended and were provided presentations from the following UVI Faculty and Staff: Dr. Teresa Turner, Dr. Richard Hall, Dr. Sandra Romano, Professor Roy Watlington and Ms. Judy Roland.

The VI-EPSCoR program is happy to announce an official NSF Outreach visit from Mr. John Cruickshank of the Education and Human Resources (EHR) directorate. He will be visiting The St. Thomas Campus of UVI on April 22 & 25, 2005.

We will be scheduling small group discussions with Mr. Cruickshank to discuss upcoming NSF solicitations, program management, proposal processing, and emerging areas of interest for NSF. Mr. Cruickshank will also meet one-on-one with individuals to discuss specific proposal ideas. Please mark your calendar for this important NSF Outreach event. More details to follow shortly.

WRRI Conference

The Virgin Islands Water Resources Research Institute (WRRI), in collaboration with VI-EPSCoR is sponsoring the 2005 Water Resources Conference. The conference will be held on February 24, 2005 in the mezzanine of the Sports and Fitness Center on the St. Thomas campus of the University of the Virgin Islands.

Presentations will be based on research projects that were funded by the United States Geological Survey (USGS) through WRRI. In addition, local government agencies having water resources responsibilities will participate in this conference. A major conference objective is for participants to become better acquainted with ongoing and planned water resources activities in the territory.

Coordinator's Update by Camille McKayle

This quarter has been quite productive. We held a strategic planning workshop and we're making progress on our strategic plan. A semi-annual report was recently submitted to NSF EPSCoR. We had an overwhelming pool of applicants to our request for incubator proposals. Four incubator proposals were chosen for funding:

- A Preliminary Assessment of the Relationship between Habitat and Parasite Infestation among Managed Reef Fishes of the USVI—Sikkel, Murray

State University, with UVI collaboration.

- Highly Selective Materials for Radionuclide Collection and Concentration—Latesky, UVI
 - Elucidation of chemical cue leading to spiny lobster group formation—Ratchford (UVI) and Hardege (UK collaborator)
 - Strategic research and public outreach for the conservation of priority bird habitats in the Virgin Islands—Corven and Ray, UVI.
- We were pleased with the varied nature of the proposals,

and will continue to guide applicants, even though not funded, to other funding opportunities.

We also welcome a new researcher, Dr. Nasseer Idrisi. You can read about him and his research in this newsletter. He will join the strong team of researchers in the Biocomplexity in Caribbean Coral Reefs Research Focus Area.

This quarter, we will be making our presence known at a variety of events:

- The Virgin Islands

Agricultural Fair, February 19 – 21, 2005

- VI-EPSCoR-VI Water Research Resource Institute Conference, February 24, 2005 at UVI Sports and Fitness Center
- UVI Afternoon on the Green, March 9, 2005
- The St. Croix Spring Research Symposium, March 19, 2005

We do hope that you will look for us there.

We are pleased with the strides that were made in year one, and look forward to a productive year two.

VI-EPSCoR Governing Committee:

* Frank Schulterbrandt, Esq., Chair of the Governing Committee

* LaVerne Ragster, PhD, Vice-chair of the Governing Committee

* Hon. Donna Christensen, MD, Member of Congress

* Hon. Lorraine Berry, President V.I. Legislature

* Anna Hector, President, St. Croix Chamber of Commerce

* Hon. Noreen Michael, PhD, Commissioner, Department of Education

* Richard Nemeth, PhD, Director, Center for Marine & Environmental Studies

* Hon. Dean Plaskett, Esq., Commissioner, Department of Planning & Natural Resources

* David Sharp, President &

CEO, Innovative Telephone

* Henry H. Smith, PhD, UVI Interim-Provost and VI-EPSCoR Project Director

* Robert Stolz, PhD, UVI Faculty Representative, St. Thomas

* Thomas N. Taylor, PhD, Kansas EPSCoR

* President, St. Thomas/St. John Chamber of Commerce

* T.H. Lee Williams, PhD, Oklahoma EPSCoR

* Richard Moore, PhD, Economist

VI-EPSCoR begun its Spring seminar series which was kicked off with a lecture by Dr. Rick Nemeth on the transition of pelagic larval reef fish to the coral reef environment.

Renovations in the MacLean Marine Science Center have begun in earnest. The Coastal Zone Management (CZM) permit for the construction of the compressor shed was approved and work will begin soon. Currently the floor, wall and ceilings are being prepared for painting, improved lighting, floor tiling and installation of new lockers. The new lab

benches have been ordered and are being manufactured at the factory.

New equipment is coming in, and really expanding the nature of our research. The new research vessel is slated for delivery in April, 2005. The vessel was named the "Garuppa" which means large grouper in South American Indian dialect. Acoustic Doppler Current Profilers (ADCP) were received in November 2004. Three of the units were calibrated and deployed in 140 ft depth on three grouper and snapper

spawning aggregation sites along the shelf edge south of St. Thomas. The ADCPs will collect baseline data on water temperature, current speed and direction for the entire water column (bottom to surface). These data will be used to predict the direction of transport of eggs and larvae from the spawning aggregation sites using a computer model which is designed to calculate current patterns.

New to our team is Dr. Nasseer Idrisi, whom you can read about below.



Dr. Nasseer Idrisi calibrating an Acoustic Doppler Current Profiler (ADCP) with BCCR technician Kevin Brown.

Researcher Highlight: Dr. Nasseer Idrisi

Joining the VI-EPSCoR research staff is Nasseer Idrisi, Ph.D. Dr. Idrisi received his Ph.D. from the State University of New York, College of Environmental Science and Forestry, (1997), with research on the impact of the zebra mussel (*Dreissena polymorpha*) on the lower trophic levels of a large shallow eutrophic lake. His Masters of Science is from the University of Basrah, Iraq, where his work was in production and partial energy budget of the early ontogenetic stages of *Caridina babaulti basrensis* (Al-Adhub and Hamzah, 1987) (Decapoda, Atyidae) in the Shatt al-Arab river system.

Dr. Idrisi comes to us from Rosenstiel School for Marine and Atmospheric Science (RSMAS) at the University of Miami where he was a research scientist studying biological oceanography of the Indian Ocean and developing coupled Eulerian and Lagrangian biological models integrated into a general ocean circulation model for the region. Part of the research included bioenergetics of juvenile billfish caught from the Gulf Stream off the southern coast of Florida.

In addition to Nasseer's

scholarly work, he was also quite active in the community, developing an environmental education program for Youth CO-OP, Inc. in Miami, FL for underprivileged young adults seeking to enter the workforce and with an interest in the environmental sciences.