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Why Did the Turtle Cross the Road?



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COMING SOON:

22nd Annual Coastweeks:
September 15-October 7

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In the month of December 2006, VI-EPSCoR hosted its first visit from Gaboury Benoit, Ph.D. of Yale University's School of Forestry and Environmental Studies. Dr. Benoit came to St. Thomas to investigate potential avenues for collaboration between UVI and Yale University and to participate in a teleconference to discuss research ideas at the land-sea interface in the USVI. Several on and off-island scientists participated in the teleconference held on December 14, 2006. The proposed long term environmental monitoring project would be a next step in the evolution of VI-EPSCoR's research thrust, and would support environmental education at the K-12, undergraduate and graduate levels.

In March 2007, VI-EPSCoR and the Master of Marine and Environmental Science program had the benefit of working with Benoit and Yale University's School of Forestry and Environmental Studies once more. This time, Dr. Benoit spent a week on St. Thomas with eight students from Yale as a part of their graduate coursework. While visiting, Benoit gave a VI-EPSCoR sponsored seminar to a full house. The audience included members of the local media, government agency directors and staff, developers, and concerned VI residents. The seminar addressed the issue of land development as one of the leading causes of non-point source water pollution, soil erosion, and habitat fragmentation and destruction. Benoit presented a system he has devised to minimize harm, while still allowing for carefully planned growth, which is detailed in a recently published book that he coauthored with Diana Balmori, *Land and Natural Development (LAND) Code: Guidelines for Sustainable Land Development* (2007, Wiley).

The diversity of the audience was evidence of the importance placed on development practices in the USVI. The media produced a number of



Yale group during a field trip to Botany Bay

pieces both in print and on television, which presented the story to the larger USVI audience in a way that both conveyed Benoit's message and aimed at a broader impact in the territory.

In addition, the Yale students spent time touring the Botany Bay Preserve and examining the issues related to the development of this area. While on the tour with Patrick J. Jeffas, the Project Manager of Botany Bay Partners, one student raised the issue of installation of sloped curbing to allow small animals the ability to cross the roads within the development. In Jeffas' weekly report to the developer in Colorado, he mentioned the question brought up in discussions with the students. He suggested that in all future roads at The Preserve at Botany Bay these slopes were installed and within five minutes, he received a positive response. According to Jeffas, "years from now when people ask the question, 'why did the turtle cross the road?' the answer will be 'Because he could....thanks to the person from Yale who asked the question.'"

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Galathea III: Expedition Adventures

A number of Danish Universities and other institutions joined in a major research expedition that begun last August and continued through April 2007. Called Galathea III, the expedition consists of 71 scientific experiments with oceanographic, ecological, geological and other foci. The expedition vessel is being sent around the Globe to provide a platform for scientific research and science communication to students at all levels. The last expedition of this magnitude was called Galathea II and took place over 50 years ago.

The involvement of the University of the Virgin Islands began in 2003 and was formalized by a memorandum of understanding signed between UVI's president and the Rector of the University of Copenhagen in 2004. Several UVI scientists and officials are working with the Danish scientists and expedition leaders to facilitate some of the research and to share educational opportunities. VI-EPSCoR staff members were among this group. In addition to assisting in the organization of the research, we were instrumental in organizing both a formal UVI seminar for the Danish researchers, as well as an informal VI-EPSCoR seminar with a smaller team of researchers from the expedition.

One project in Galathea III is called WINMARGIN. Its goals are to add to the understanding of global climate by uncovering clues about climate change, such as evidence of past hurricanes. This project is being led by Dr. Antoon Kuijpers of the Geological Survey of Denmark Greenland. No stranger to these waters, Kuijpers' last visit was in November 2003 when the islands were being battered by heavy and continuous rains. In spite of the rains and other hurdles, he was able to conduct a preliminary survey that contributed to the planning of WINMARGIN.

WINMARGIN work included multi-channel seismic profiling and occasional plankton tows, additional high-resolution seismic/acoustic profiling and collection of sediment cores and other related observations. Requiring a smaller vessel than the Vaedderen, this study was supported by the Bright Star, captained by Robert Vante of St. Thomas. The Virgin Islands Environmental Resource Station (VIERS) served as base camp for a number of Galathea III researchers working in the waters near St. John. Prior to disembarking from the USVI, the WINMARGIN research team presented several talks on their work in a VI-EPSCoR seminar in March 2007.

The AMLC 33rd Annual Scientific Conference Comes to St. Thomas

As the Director of the Center for Marine and Environmental Studies, Dr. Rick Nemeth has been involved with the Executive Board of the American Marine Labs of the Caribbean (AMLC) for nearly eight years. Two years ago, Nemeth offered to host the 33rd scientific conference of the AMLC, which is held every two years. Additionally, in June 2006, Nemeth was made President of AMLC. The AMLC consists of more than 30 marine research, education, and resource management institutions within the Caribbean region.

The challenge of organizing this conference was assumed in part because of the numerous programs developing here at the University of the Virgin Islands (UVI), as well as the extensive renovations nearing completion by 2007. June 4-8, 2007, the conference was held on the St. Thomas campus of UVI, which provided an opportunity to highlight the marine research program and facilities to other marine scientists who were visiting from around the Caribbean. Participants were able to take part in activities and

field trips around the USVI, including a trip to the Virgin Islands Environmental Research Station on St. John.

VI-EPSCoR staff assisted in the daily logistical support needed for the conference. Likewise, VI-EPSCoR hosted a table at each of the VI-EPSCoR sponsored poster sessions to promote the work of the program. Several of our Biocomplexity of Caribbean Coral Reef (BCCR) incubator researchers presented their research during the conference sessions. In exchange, VI-EPSCoR covered the registration fees for these researchers. Likewise, VI-EPSCoR contributed funds towards student travel to the conference, along with a variety of additional conference expenses.



MacLean Marine Science Center dock on Brewer's Bay

This year's AMLC conference was the largest, with over 200 participants. There were approximately 110 oral presentations in the areas of Marine Ecology, Connectivity, Resources Management and Global and Regional issues. Of these, 21 presentations were VI-EPSCoR BCCR research related. In addition, 20% of the presentations in the poster sessions were VI-EPSCoR BCCR related.

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In the process of showing students the ways in which developers are working to face the issues that are a reality of development in the VI, one simple suggestion led to creative action. As Elizabeth Ban, VI-EPSCoR's Program Coordinator said, "It is that kind of openness and concern that will help

keep St. Thomas beautiful." Sometimes solutions arise from the simple act of making a statement, raising a question, and offering an idea. In this case, small animals in The Preserve at Botany Bay and the ecosystem to which they belong will be the beneficiaries.

Masters of Marine and Environmental Science (MMES)

The new Masters of Marine and Environmental Science (MMES) program at UVI was approved by the Board of Trustees in November 2006, and the first cohort of students matriculated in August 2007. The inaugural class of nine MMES students includes six Virgin Islands residents and three US mainland residents whose research interests range from coral reef and native plant restoration, to environmental attitudes of Virgin Islanders, to watershed management, among other topics. Several of the students already work in natural resource management within the VI. Department of Planning and Natural Resources and the National Park Service. Students are supported financially by a variety of mechanisms, such as a Research Assistantship sponsored by NOAA, Teaching Assistantships within UVI's Division of Science and Mathematics, the federally-sponsored Student

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UVI Scientists, Student Work With NOAA

University of the Virgin Islands' scientists Kevin Brown, Tyler Smith and Nasseer Idrisi, all from the Center for Marine and Environmental Studies, and Ashley Beebe, a UVI student majoring in marine biology, participated in a research cruise on the National Oceanic and Atmospheric Administration's (NOAA) ship, The Nancy Foster, from March 30 to April 10, 2007.

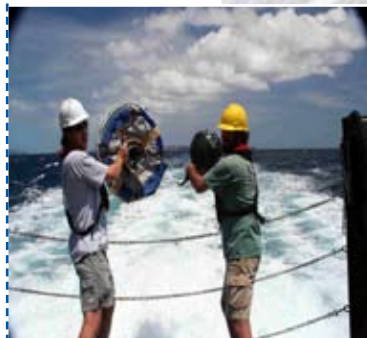
This research was conducted in collaboration with the NOAA Atlantic Oceanographic and Meteorological Laboratory (AOML) and the NOAA Southeast Fisheries Science Center (SFSC) based in Miami, Florida.

The cruise activities included the deployment of a conductivity-temperature-depth profiler (CTD), multiple opening/closing nets and environmental sensors system, and drifters.

The objective of the research is to integrate physical and biological oceanography to determine the early life history of commercially important fish species on spawning grounds off the Lesser Antilles.



(above) Kevin Brown (CMES/UVI) and chief scientist Ryan Smith (NOAA/AOML) deploying the CTD.



(left) Tyler Smith and Nasseer Idrisi (both CMES/UVI) deploying a surface drifter.



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Hannah Gray, Graduate Student in the MMES program

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Career Experience Program (SCEP), the National Guard, and private scholarships. The program is offered through the Division of Science and Mathematics, in conjunction with the Center for Marine and Environmental Studies, with significant intellectual, administrative and financial support from VI-EPSCoR.

Stay tuned, for we expect great things from these future environmental leaders!

For more information about the MMES program, log onto <http://mmes.uvi.edu>.

Please visit us on the web at <http://epscor.uvi.edu>

WHAT IS VI-EPSCOR?

EPSCoR stands for **Experimental Program to Stimulate Competitive Research** (EPSCoR). EPSCoR, a program of the National Science Foundation, is designed to increase research and education capacity in science and engineering within a state or territory of the United States that has traditionally been under funded in these areas. The overarching idea is that individuals with training in the areas of science, math, and technology are better able to have a positive impact on a region's management and development. The Virgin Islands received its first EPSCoR grant in 2004 and is presently in its fourth year of funding. Virgin Islands-EPSCoR is hosted by the University of the Virgin Islands on behalf of the people of the Virgin Islands, and receives its guidance from a Governing Committee that includes representatives of both the public and the private sector.



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