

R&PS RESEARCH AND PUBLIC SERVICE NEWSLETTER

UNIVERSITY OF THE VIRGIN ISLANDS

Volume 5, No. 2

News from the UVI Research and Public Service Component

October 2002

UVI AQUAPONICS FEATURED IN JAPANESE DOCUMENTARY

The AES Aquaculture Program was the center of attention during March 17-20 as a film crew from Japan spent four days making a video of the aquaponic systems developed at UVI.

The filming company, Studio UMI, Inc., obtained a contract for the documentary from TV ASAHI, a major Japanese network. The film crew consisted of Mr. Osamu Monden, chief director, Mr. Kiyoshi Namikawa, cameraman, and Mr. Kazuhiko, video engineer. Ms. Junko Nishitani Broom of the V.I. Tourism Bureau served as interpreter.

Mr. Monden conceived the idea of a documentary when he read about UVI's research in the scientific literature. In addition to visiting UVI, the film crew visited other aquaponic facilities in the mainland: a commercial operation in Massachusetts, a demonstration unit at a foundation in New York, and an aquaponics science project at a school in Pennsylvania.

During four days of intensive activity, the crew filmed UVI's seven aquaponic systems from every conceivable angle: aerial shots from a plane with its door removed, underwater shots of fish and plant roots, and close-up shots of the several types of plants, as well as procedures dealing with fish production such as egg collection and incubation, feeding and harvesting.

The crew also filmed several locations on St. Croix to give the Japanese audience some knowledge of a tropical Caribbean island. Members of the Aquaculture Program were

"RESPONSE TO THE DOCUMENTARY IN JAPAN WAS VERY POSITIVE. ONE RESEARCH ENGINEER, MR. NAOKI OGAWA, FROM MITSUBISHI HEAVY INDUSTRIES, HAS ALREADY VISITED UVI TO SEE THE AQUAPONIC SYSTEM. THE PRESIDENT OF AN ENVIRONMENTAL COMPANY PLANS TO VISIT UVI IN THE NEAR FUTURE."



Celebrity for St. Croix aquaculture
A film crew from Japan shoots a closeup as a UVI Agricultural Experiment Station research specialist removes eggs from the mouth of a female tilapia. The crew is filming for a Japanese television program. Page 3

From the *Virgin Islands Daily News* article appearing on March 20, 2002: Film crew director Osamu Monden, left, cameraman Kiyoshi Hamikawa, center, and UVI Research Specialist Eric Thoman, right

shown in the video performing routine operations. Dr. James Rakocy, Program Leader, was given several speaking parts, but when the documentary was aired, he was dubbed and it appeared that he was speaking in Japanese.

The Asian community in St. Croix was excited about this project and extended exceedingly warm hospitality to the Japanese guests. Mrs. Infee Coval and Mrs. Ritsu Slavski invited the film crew to dinners at their homes, while Dr. and Mrs.

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THE CARIBBEAN WRITER CELEBRATES NEW EDITOR, NEW ISSUE

The University of the Virgin Islands has announced the appointment of Mr. Marvin E. Williams as the new editor of *The Caribbean Writer*, an award-winning anthology published under the Research and Public Service component of the university.

Mr. Williams takes over from Dr. Erika J. Waters, who has been the editor since its inception, but who has now retired.

A professor at University of the Virgin Islands, St. Croix campus for the past ten years, Mr. Williams is also a writer and critic, and served as the associate editor of the anthology from 1996-2002.

Mr. Williams brings extensive editorial experience to the journal, having published a collection of his poems, *Dialogue at the Hearth* (1993), and edited *Yellow Cedars Blooming* (1998), a collection of Virgin Islands literature. His work has also been published in many national and international journals, including *The Caribbean Writer*.

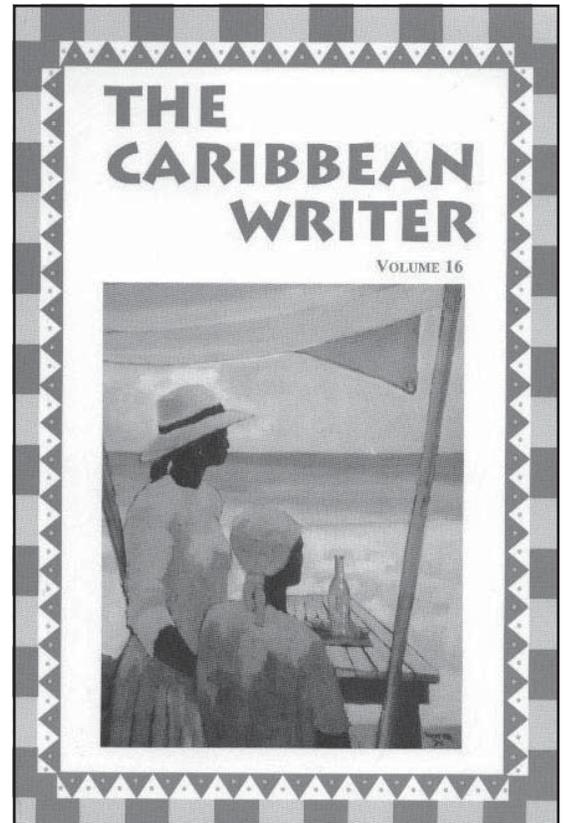
In commenting on Mr. Williams' appointment, Dr. Henry H. Smith, Vice Provost for Research and Public Service at the University, said that the University is very pleased to have Mr. Williams serve in this position. His qualifications and accomplishments attest to his outstanding capabilities and we look forward to him building even further on the great start that Dr. Waters gave to this anthology.

Trinidadian writer V. S. Naipaul's Nobel Prize is celebrated in a special section in the newest volume of *The Caribbean Writer*. Celebrated critics, such as Homi K. Bhabha, Paula Burnett, Selwyn Cudjoe and Bruce King, among others, offer their responses to this award.

Never-before-published artwork by noted Virgin Islander J. Antonio Jarvis, writer and educator, is also featured, besides translations from Cuban poet Nancy Morejon, poetry selections included work by Opal Palmer Adisa, Gabriel DiLorenzo, Howard A. Fergus, Deverita Carty Sturdivant, Ian McDonald, Cecil Gray, Laurence Lieberman, Shaun A. Pennington, Carrol B. Fleming, Marvin E. Williams, Thomas Reiter and Virgil Suarez.

A play, the second by Cecil "A" Blazer Williams, entitled, "I Don't Want to Bathe," is also included. Short fiction selections include work by Joanne Hyppolite, Authur Scott, Melissa Lugo and Julie Babcock, while the personal essays section features work by Katia Ulysse, Alexandra Migoya and Derick O. Steinmann.

Book reviews are by noted critics Bruce King, Geoffrey Philp, Elaine Savory, Robert D.



Above: The cover of *The Caribbean Writer*, Volume 16, features art by St. Thomas artist Eric Winter

Hamner, Roland B. Scott, H. Nigel Thomas, Maud Pierre-Charles, June D. Bobb, and J. Michael Dash, among others. The cover is by St. Thomas artist Eric Winter and depicts two women looking out to sea.

Volume 16 of *The Caribbean Writer* is currently available at The Bookie, Memories of St. Croix, Magazines and More, Undercover Books and Whim Museum on St. Croix; Tropical Memories and Dockside Bookshop on St. Thomas; and Heritage Books and Arts on Tortola, as well as in both UVI bookstores. Copies can also be ordered directly from The Caribbean Writer's office by calling (340) 692-4152, e-mailing qmars@uvi.edu or orders@thecaribbeanwriter.com, or from our website at www.TheCaribbeanWriter.com.

"TRINIDADIAN WRITER V. S. NAIPAUL'S NOBEL PRIZE IS CELEBRATED IN A SPECIAL SECTION IN THE NEWEST VOLUME OF THE CARIBBEAN WRITER. CELEBRATED CRITICS, SUCH AS HOMI K. BHABHA, PAULA BURNETT, SELWYN CUDJOE AND BRUCE KING, OFFER THEIR RESPONSES TO THIS AWARD."

AIR ARRIVALS PROJECT UNDERWAY

At a time when the airline industry is still suffering from the impact of 9-11, it is very important that the Virgin Islands actively examine the implications for our tourism-driven economy and devise a strategy that will promote a high level of passenger arrivals. Bill No. 24-0150, passed by the 24th Legislature on September 20, 2001, provides the University of the Virgin Islands with an appropriation to do just that.

The appropriation is being administered by the Office of the Vice Provost for Research and Public Service, headed by Dr. Henry Smith. Team leader for implementation is Dr. Paul Leary, who has considerable experience in the area of public policy issues related to the Virgin Islands. Drs. Smith and Leary are working in consultation with a broad-based Community Advisory Group composed of leading members of the private and public sectors. Its executive committee is comprised of Leary, Smith, Pamela Richards (Commissioner of Tour-

ism), Sebastiano Paiewonsky (St. Thomas/St. John Chamber of Commerce) and Davis Mapp (V. I. Port Authority). A Request for Proposals has been published to attract an experienced consultant who is knowledgeable about both the national and Virgin Islands dimensions of the air arrivals issue. Special attention will be paid to the challenges facing St. Croix.

The consultant will be charged with developing a strategy and action plan that will increase the flow of visitors. The results will be presented at public forums on both St. Thomas and St. Croix in January. The plan will then be forwarded to the appropriate parties for implementation.

UVI is committed to using its resources to promote the general economic and social well being of the community in close consultation with all sectors and with the public as a whole. This project is a good example putting this commitment into action.

WRRI: ALTERNATIVE APPROACH TO TREATING WASTEWATER



The alternative treatment system at Coral World treats wastewater and nurtures flowering plants

Disposal of sewage in the Virgin Islands without polluting our fragile ecosystems are a major concern in the Virgin Islands. The University of the Virgin Islands has worked collaboratively with the Virgin Islands Department of Planning and Natural Resources to address this problem by developing and testing systems for alternative on-site treatment of sewage at several places in the Virgin Islands.

These systems have been found to be effective at preventing the discharge of untreated sewage where it not only would be aesthetically displeasing but also very often poses a treat to health. One of these systems has been installed at the Coral World Marine Park on the east end of St. Thomas. Coral World is an ideal site to demonstrate the effectiveness of these systems.

Coral World is located on a small peninsula that is bordered on three sides by pristine seas that are heavily used daily for recreation. In this area, then, discharge of inadequately treated wastewater would not be tolerated. Additionally, the Coral World facility is a major attraction on St. Thomas and any unsightly areas, odors or other unpleasantness would be soon apparent. The wastewater treatment system at Coral World then must always perform effectively.

The alternative treatment system installed at Coral World treats wastewater at the facility without a high energy input, with low maintenance and nurtures a stand of very attractive flowering tropical plants. It blends in with the natural features at this popular site. Any effluent that may remain after the wastewater is treated is suitable for irrigation use on the premises.

The system is being closely monitored by the Water Resources Research Institute at UVI for one year in order to determine ways that the design of these systems may be improved and their operation modified to make them more efficient.

Additional information on the Coral World alternative on-site wastewater treatment system may be obtained by contacting the WRRI at (340) 693-1067 or by emailing hsmith@uvi.edu.



From left to right: Jane M. Kenny, U.S. EPA Regional Director, Mayra Suárez-Vélez, UVI Marine Advisor and William Muszynski, U.S. EPA Deputy Regional Administrator. Picture courtesy of U.S. EPA

VIMAS EDUCATOR RECEIVES EPA AWARD

Mayra Suárez-Vélez, a marine advisor at the University of the Virgin Islands, received a 2002 Environmental Quality Award from the U.S. Environmental Protection Agency (EPA).

Suarez-Velez recently returned from the EPA's New York offices, where she accepted the award for her outstanding commitment to protecting and enhancing environmental quality in the region.

Working from the belief that what we learn to appreciate as children stays with us for life, Suárez-Vélez of the Virgin Islands Marine Advisory Service has focused on educating children in the V.I. about caring for their local environment.

Under her leadership, VIMAS created a comic book with the theme of preventing water pollution, a coloring book on marine conservation and an interactive Caribbean Watershed Non Point Source Pollution model.

SBDC DISSEMINATES ITS FY 2001 ANNUAL REPORT

The Small Business Development Center (SBDC) is proud to announce the completion and dissemination of its FY 2001 Annual Report. This report documents the many successes of the UVI-SBDC, which exceeded its fiscal year's training and counseling milestones and saw a significant increase in its overall economic impact throughout the territory.

Copies of the report were distributed to all UVI Board of Trustees, RPS Directors, Government's legislative/ executive authorities, stakeholders and other local and federal entities.

The SBDC takes a high level of pride in the work accomplished and the dedicated services of its own personnel and that of its collaborators. Many thanks are extended to the University for its continued support of the program initiatives.



V.I. dairymen received training on quality assurance

DAIRY PRODUCERS RECEIVE TRAINING

The University of the Virgin Islands Cooperative Extension Service (CES) and St. Croix Dairy Products, Inc. hosted a training seminar on Quality Assurance for Dairy Products. The seminar ran May 28-June 5 at the University of the Virgin Islands, Research and Extension Center, St. Croix campus.

George Nelson, professor emeritus, and Yvonne Nelson, senior lecturer, of the University of Wisconsin-Stout, trained the attendees in proper microbiological laboratory testing procedures and in good manufacturing practices for dairy products.

Personnel from Island Dairies, St. Thomas Dairies, the Dairy Herd Improvement Association program of the Extension Service and the laboratory staff from Roy Lester Schneider Hospital participated in this training.

This seminar is part of an ongoing effort to keep dairy industry personnel in the V.I. up to date on proper quality assurance procedures. This helps guarantee that locally produced dairy products are of the highest quality.

Island Dairies has supplied Virgin Islanders and the Caribbean with fresh dairy products for 42 years. The milk is produced by Holstein cows on four state-of-the-art dairy farms on St. Croix. The milk is trucked from the farms, processed at Island Dairies plant in Sion Farm and delivered to the grocery stores in a matter of hours.

UVI-CES tests all St. Croix dairy herds every month and assists producers with making sound management decisions. For more information on the Dairy Herd Improvement Program, contact Kofi Boateng or Sue Lakos at (340) 692-4066 or (340) 692-4179, or e-mail slakos@uvi.edu.

"THIS SEMINAR IS PART OF AN ONGOING EFFORT TO KEEP DAIRY INDUSTRY PERSONNEL IN THE V.I. UP TO DATE ON PROPER QUALITY ASSURANCE PROCEDURES."

R&PS UNITS HELP CMES RESTORES LAMESHUR BAY



Hurricane-damaged mangroves at Lameshur Bay, St. John

The Center for Marine and Environmental Studies (CMES) has embarked on a project to restore the mangrove forest at Great Lameshur Bay, St. John. This two-year project is funded by a grant from the Virgin Islands National Park Service and will be based out of the Virgin Islands Environmental Resource Station (VIERS), CMES' marine facility on St. John.

The mangrove area in Great Lameshur Bay was severely damaged by a series of hurricanes from 1989 to 1995. Each successive hurricane further damaged the mangrove system and closed off the tidal channel that provided flushing of the lagoon. In 1999, however, Hurricane Lenny reopened the natural tidal channel and positive changes in the mangrove system have already begun to occur.

This project is intended to restore the wetland community in the bay to its original form. Mangroves are important for adjacent coral reefs since they function in retaining sediment eroded from the land and they provide an important nursery habitat for commercially and ecologically important marine fishes and invertebrates.

During the project 500 seedlings of each of three mangrove species will be planted: red mangrove (*Rhizophora mangle*), black mangrove (*Avicennia germinans*), and white mangrove

(*Laguncularia racemosa*). Although the red mangrove seedlings will be planted directly in the sediment, the black and white mangroves will be grown for several months in tree cones before planting.

During this time, a CMES intern, who will be stationed at VIERS for 12 months, will maintain the seedlings and monitor the growth and survival of the newly planted trees. The intern will also be involved in helping VIMAS education and outreach efforts by developing educational materials and delivering presentations to local and visiting school groups.

The Virgin Islands Marine Advisory Service (VIMAS), one of CMES' programs, will play a major part in this project. VIMAS' agents Marcia Taylor and Mayra Suárez-Vélez will coordinate the planting and monitoring activities for the project.

On St. Croix, VIMAS agents are active in doing other mangrove restoration projects such as the Salt River mangrove restoration where 13,500 red and 3000 black mangroves were planted.

Like the Salt River restoration, VIMAS will be seeking volunteers from the community to assist with the mangrove planting. If you would like information on this project or to volunteer, please contact Mayra Suárez-Vélez at (340) 693-1392 or Marcia Taylor at (340) 692-4046. E-mail msuarez@uvi.edu or mtaylor@uvi.edu.

RESTORE MANGROVES

VIMAS WORKS ON THE UVI WETLANDS RESERVE AND PROVIDES HANDS-ON TRAINING FOR YOUTH ON ST. CROIX



*Left: Amaris Chew, 10th grade student at the St. Croix Educational Complex, holds red mangrove seedlings which she has collected
Right: Lamin Jackson, Amaris Chew and Candace Cornwall plant black mangrove seeds into tree cones*

The Center for Marine and Environmental Studies (CMES) has embarked on a project to both provide environmental education and hands-on training to high school students to restore the mangroves at UVI Wetlands Reserve.

The project is funded by USGS through UVI's WRRRI and headed by Marcia Taylor of the St. Croix V.I. Marine Advisory Service (VIMAS).

Mangrove areas are important to wildlife and help maintain the quality of our marine waters. However as much as 50% of the mangrove areas in the V.I. have been destroyed in the last 50 years.

The project seeks to assist in restoring a mangrove area as well as provide hands-on training to St. Croix youth.

This one-year project has three main parts. One, it will provide hands-on training to ten St. Croix high school students on mangrove restoration techniques. Students will collect red and black mangrove seeds and plant the red mangroves directly at the reserve. The black mangrove seeds are germinated

and grown for several months before planting.

The Agricultural Experiment Station (AES) is assisting with the project by providing space in their greenhouses for the seedlings. The new trees will be monitored and replaced as needed.

Two, the project will provide training to students on how to lead educational tours at the reserve and an opportunity to provide tours for other St. Croix youth.

The students will learn about mangroves and teach other youth about the plants and animals at the site and the importance of the major ecosystems found there.

Three, 200 black and 50 red mangroves will be planted at the site which will help to restore the mangroves that were damaged by recent hurricanes.

"Working with the interns has really been delightful" remarked Marcia Taylor, marine advisor for the project.

"They are all enthusiastic and are able to effectively convey information they have learned to other students.

Most of the interns want to major in science when they attend college and some want to pursue degrees in marine biology. This project is providing a great way for them to gain experience in the field," she said.

If you would like to get more information on this project or VIMAS, you can call VIMAS at (340) 692-4046 or e-mail mtaylor@uvi.edu.

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Neldra Flint trained elementary school teachers how to implement the mini-society® program in the territory

USVI PROFESSIONALS TRAINED IN MINI-SOCIETY®

Representatives from the Boys' and Girls' Club, elementary schools, community programs, churches, the housing community, and the local government converged on UVI recently to learn about the Mini-Society®, an experience-based instructional system that teaches 8-12-year-old students entrepreneurship, economics, and citizenship.

Neldra Flint of the Kauffman Center for Entrepreneurial Leadership trained 29 St. Croix and 20 St. Thomas/St. John individuals to implement the program. The Mini-Society® was made possible through a grant of \$50,000 obtained by Kofi Boateng of UVI-CES.

The USVI was the first U.S. territory to incorporate the Mini-Society®, which already exists in 43 states. The program was introduced in the 2001 UVI-CES summer camps. Through the training, this program information will be included in local schools' curricula and may be used by other agencies, as well. The highly motivating, creative and self-directed program makes academic classes more meaningful and emphasizes skills. Children learn the value of working cooperatively, practicing setting and achieving goals, using organizational skills, practicing good time management, understanding how natural/logical consequences work, and learning responsibility/accountability. They will also be exposed to possible careers for the future and have fun.

The Mini-Society® is a ten-week program, but it will generate "teachable moments" that will help teachers and students move naturally through the curriculum. Instead of learning in a vacuum, students will be able to relate their education to practical, real-life experiences. From other established programs, we have learned that the Mini-Society® is a win-win situation for both teachers and students, but in the final analysis, the community will be the biggest winner. For more information, call Kofi Boateng at (340) 692-4066, or e-mail kboatn@uvi.edu.

UF GRADUATE STUDENT CONDUCTS HIS THESIS RESEARCH AT UVI-AES

Brian Becker, a University of Florida graduate student in the School of Forest Resources and Conservation, is currently conducting a thesis research on medicinal plants as part of the requirements for a Master's degree in Agroforestry.

Brian first came to UVI in March 2002 for a brief visit and orientation on the activities of the Agricultural Experiment Station. He returned this summer to conduct his field research under the supervision of Dr. Manuel Palada, Research Associate Professor of Horticulture.

The thesis research is supported by a grant from the Center for Subtropical Agroforestry, University of Florida. The research is also a part of UVI subcontract with University of Florida under the USDA Initiative for Future Agriculture and Farming Systems (IFAFS).

Brian's thesis focuses on the integration of high value horticultural crops such as culinary herbs, medicinal plants, hot peppers, and papaya into an agroforestry system consisting of medicinal trees.

He is studying the establishment and productivity of these crops when grown in association with medicinal trees in the Virgin Islands.

On-farm trials are established to evaluate agronomic and economic performance of local medicinal plants and culinary herbs intercropped with Morinda (Noni) and Moringa (drumstick tree). Medicinal plants and culinary herbs are grown by farmers in their home gardens in a mixed cropping system.

These plants are considered non-timber forest products (NTFP), and their economic significance is not well documented in the Virgin Islands. Brian will be the first one to conduct this study and collect agro-economic data to evaluate the potential role of these plants in the Virgin Islands' economy.

"BRIAN'S THESIS FOCUSES ON THE INTEGRATION OF HIGH VALUE HORTICULTURAL CROPS SUCH AS CULINARY HERBS, MEDICINAL PLANTS, HOT PEPPERS, AND PAPAYA INTO AN AGROFORESTRY SYSTEM CONSISTING OF MEDICINAL TREES."



Brian Becker, graduate student, University of Florida, gives instructions on field layout and planting of medicinal plants at Estate Rattan, St. Croix

At Estate Rattan, plots have been established to cultivate local herbs such as "Japana," "Inflammation Bush," "Worrywine" or Blue Verbena, Lemongrass, and Wormgrass in between hedgerows of Moringa (*Moringa oleifera*). Brian will collect plant growth data, including establishment, height, leaf area and fresh weight of marketable parts. After assembling the agronomic data he will conduct economic analyses to determine productivity and profitability of this unique agroforestry system.

Brian is expected to complete his study by the end of the fall semester and will present the results in a seminar. Brian was a former Peace Corps Volunteer in Nepal, and he shared his experiences in Nepal when he gave a seminar last March at UVI-AES, St. Croix campus.

Brian is the second graduate student conducting a thesis research in the Vegetable Crops Program. Dr. Palada also supervised the dissertation research of Maurice Yabba, who conducted his field research at UVI and completed his Ph.D. degree last summer at Michigan State University.

Dr. Palada has been granted a Courtesy Associate Professor position in the School of Forest Resources and Conservation at the University of Florida, Gainesville.

VI-EPSCoR PLANNING UNDERWAY

UVI is pursuing an opportunity to improve Virgin Islands society and quality of life through the Experimental Program for the Stimulation of Competitive Research (EPSCoR). EPSCoR, made available through the National Science Foundation (NSF), fosters research at the university level and in the private and public sectors. VI-EPSCoR is administered by the University of the Virgin Islands with the encouragement of the Virgin Islands Government.

The NSF started EPSCoR over two decades ago to allow states and territories to upgrade their research infrastructure and improve their competitiveness for research grants from the NSF and other government agencies. It seeks to support high-quality research that serves the needs of the community by building its economy.

A planning grant recruited from the NSF by VI-EPSCoR Program Director Dr. Henry H. Smith will support work over the next nine

months. Former St. Thomas campus chancellor Roy A. Watlington is VI-EPSCoR coordinator.

On August 29, the VI-EPSCoR Planning Committee met to begin preparing for a multi-year implementation of the grant. Several task forces will begin the process: The Interests and Strengths Task Force will canvas the university community to identify the interests of UVI researchers and the University's developable research strengths. The Community Linkage Task Force will engage interested members of the Virgin Islands community in research activities that can benefit Virgin Islands society and economy. The Research Focus Selection Task Force will establish processes and criteria for selecting research areas to be pursued.

To prepare, Smith and Watlington participated in a national EPSCoR forum in Anchorage, Alaska. To learn more about EPSCoR, visit the NSF's EPSCoR web page at www.ehr.nsf.gov/epscor/. UVI expects to mount its own EPSCoR web page soon.

SBDC PARTAKES IN WORLD MUSEUM CONFERENCE AND EXPO

The Small Business Development Center (SBDC) was pleased to be invited to participate in the 1st Annual World Museum Conference at the Wyndham Sugar Bay Resort, St. Thomas. Seventy-five percent of all museums are technically small businesses and many of them are museums/businesses for profit.

As one of the featured panelists, SBDC spoke on the ways a small business/museum could obtain funding, correct cash flow problems and improve its operations.

SBDC also discussed recommended management and training techniques that a museum (small business) can adopt to help make the business work more efficiently. This was a great opportunity for the University to have initial participation with such global influences.

WRRI PROFILES CISTERN WATER QUALITY

Cisterns are required by law in the Virgin Islands and are the preferred source of water for many persons here.

However, treatment of cistern water is not required by law and varies from household to household. Cistern water quality may then be a significant threat to the health of users. The the Virgin Islands Water Resources Research Institute (WRRI) is currently monitoring the quality of cistern water at several sites in the Virgin Islands to determine how this quality changes with varying environmental factors affecting cistern systems.

In this U. S. Geological Survey-funded study, the WRRI is developing profiles of water quality in cisterns influenced by diverse factors, including access by birds

and other animals to the catchment areas serving the cisterns and proximity to roads, shorelines and other potential sources of airborne pollutants.

The data collected over time will also reflect changes in water quality due to variations of rainfall input because of seasonal fluctuations.

The data gathered in this study will assist in refining water quality management practices for cistern systems. Combined with data obtained in other WRRI studies, the findings of this investigation will aid in developing an understanding of the quality dynamics in these systems.

Contact the WRRI at (340) 693-1062 or hsmith@uvi.edu for more information.

WRRI OFFERS WATER TOPICS SEMINARS

Disseminating information on water resources issues relevant to the Virgin Islands is an integral part of the mission of the Virgin Islands Water Resources Research Institute (WRRI). Two such seminars were recently held.

On June 4, 2002, Dr. Amos Winter of the University of Puerto Rico presented "Precipitation Patterns in the Caribbean and Climate Change," a seminar based partly on his analysis of century-long patterns of Caribbean rainfall data.

Dr. Winter spoke about reasons for the annual bimodality in our precipitation data and pointed out that while one of the peaks may have a relationship to El Nino, the second is more related to sea surface temperatures in the north tropical Atlantic.

Ms. Marcella Jennings discussed "Maintaining Water Quality in Cisterns," on July 16. Cisterns are a principal water source in the USVI and are required by law.

Ms. Jennings has operated a water-testing laboratory in St. Thomas for over 15 years. Participants included representatives from government agencies, water professionals and cistern users concerned about the quality of the water they use on a daily basis.

All water seminars are conducted simultaneously on the UVI St. Croix and St. Thomas campuses using the University videoconferencing facilities. Persons with suggested topics for future seminars should contact the WRRI at (340) 693-1062 or hsmith@uvi.edu.

AQUAPONICS

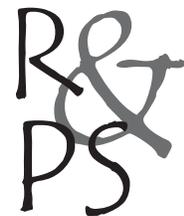
Continued from p. 1.

Yum San Chiu provided lunch one day.

The documentary aired May 14 in Japan on Channel 10 in a 30-minute program called "Spaceship Earth." Mr. Monden estimated that the audience was approximately 5 million people. The Aquaculture Program received a copy of the video, which will be shown in the next aquaculture seminar.

Response to the documentary in Japan was very positive. One research engineer, Mr. Naoki Ogawa, from Mitsubishi Heavy Industries, has already visited UVI to see the aquaponic system. The president of an environmental company plans to visit UVI in the near future.

And another individual, Matsua Takuya, was so inspired by the documentary that he already built a prototype aquaponic system in Tokyo, in which he is raising koi carp, broccoli, jute and okra. In a recent communication to an aquaponics Internet news group, he wrote, "We have a dream of operating the first commercial aquaponics farm in Japan and hope to spread the technology all over Japan and other Asian countries." This is a stunning example of the influence UVI has on the global community.



SBDC LOOKS TO THE FUTURE THROUGH YOUTH OUTREACH PROGRAMS



SBDC staff made presentations to a variety of youth programs

Knowing that the USVI's future economy is directly tied to today's youth, the SBDC is committed to its Youth Outreach Program. Its objectives are to start exposing young adults in the schools and other organizations, to future business and entrepreneurial opportunities while emphasizing the absolute need of success in academic performance.

During National Small Business Week, the SBDC worked with many of the territory's schools including the Ricardo Richards Elementary School, where a presentation was made stressing "The Three R's - Reading, wRiting and aRithmetic." Over the course of a day, SBDC spoke to 5th and 6th graders and their teachers, numbering about 200. The SBDC stressed the need to understand that knowledge today is the key to tomorrow's success.

In addition, the SBDC has developed and enhanced the educational presentation for the Youth Outreach Program, through other block segments that include junior high and high school levels. In July over 50 students between the ages of 12-16 (in several St. Croix School-To-Work and Career Development Summer Programs) received training by the SBDC. The staff also made presentations to the Arthur A. Richards Junior High School "School-To-Work Summer Academy" and the Career Directions, Inc. "Career Awareness Summer Program" on "What is An Entrepreneur and Entrepreneurship?"

This is all part of our incentives designed to train tomorrow's small businesspersons in their entrepreneurial growth and economic development. The SBDC intends to continue reaching out to all educational levels at the various schools throughout fiscal year 2002-2003.

ECONOMIC DEVELOPMENT SEMINAR

Nadine Marchena, Assistant Chief Executive Officer of the Economic Development Authority (EDA), led a very informative discussion to a capacity crowd at the SBDC's Training Facility in June 2002.

Approximately 60 individuals attended this seminar which concentrated on providing insight on the various economic benefits and privileges available to small businesses, including its eligible Virgin Islands supplier program, IDC and trade benefits, etc. Ms. Marchena, a proven and very experienced economic development officer, provided many helpful hints.

The overall program was a tremendous success. The SBDC coordinated this program as part of its continued collaborative initiatives with partnering government agencies that are committed to the improvement of the small business sector of the community.

SBDC JOINS UVI BUSINESS STUDENTS AT LAS VEGAS TRADE SHOWS

After learning of the invaluable annual Associated Surplus/Associated Merchandise (AMD/ASD) Jewelry/Gift Trade Shows in Las Vegas via former UVI professor Dr. Patricia Cummins, SBDC sent a representative to attend. In so doing, SBDC gained tremendous insight into wholesale buying, found new and interesting products to extend or compliment various product lines, met hundreds if not thousands of manufacturers, distributors, suppliers from all over the world including the U.S., Taiwan and Korea, Hong Kong, and China.

Additionally, the SBDC counselor witnessed the creation of international partnerships for a global economy and better identified with how the supply chain works. Also seen at the trade show was the latest technology for marketing/promoting products.

Several hundred brochures/business cards from the various manufacturers and distributors were obtained. Being so directly linked to the small business sector of the V.I. community, this trip afforded the SBDC the opportunity to gain first-hand exposure to the mainstream distributors, suppliers, wholesalers, and manufacturers in the U.S. and international markets.

By meeting these industry leaders/participants, the SBDC obtained a significant level of insight and pertinent information which we will continue to use at regular client counseling sessions.

SBDC PARTICIPATES AT VI FBLA STATE LEADERSHIP CONFERENCE

Virgin Islands Future Business Leaders of America (FBLA) conducted its 2002 State Leadership Conference earlier this year in April at Marriott's Frenchman's Reef Beach Resort. SBDC conducted an all day seminar called "How to Write a Business Plan." This seminar gave the student delegates an opportunity to engage in brainstorming a business idea in addition to writing and presenting a mini-business plan.

State Chair Cecilia M. Walters-Smith and State Adviser Maria Thomas-Lewis, were very pleased with our high energy participation, and together we are both looking forward to a continued cooperative relationship.

SBDC OFFERS PRESENTATION ON STARTING A BUSINESS IN THE VIRGIN ISLANDS

The Global Life Church, located at 5-2 Estate Raphune in St. Thomas, USVI, held its first annual Financial Conference earlier this year. The church's pastor and founder, Oral F. Hazel, invited the UVI-SBDC to participate by conducting a presentation on the basic principles and procedures of starting a business in the U.S. Virgin Islands.

SBDC served as the key lead presenter for that evening and led discussions on the basic steps toward successfully starting a business in the Virgin Islands. Topics included different forms of ownership, licensing requirements, how to prepare a winning business plan, the significance of one's personal credit history, and common myths about the overall process.

Pastor Hazel has committed to empowering his congregation with entrepreneurial insight and the SBDC was delighted to participate in this inaugural event. The interactive session was conducted for approximately two hours and was recorded as part of the SBDC's outreach counseling initiatives. The workshop was very well received and requests have already been made for similar programs in the future.

SBDC OFFERS TRAINING ON TAX COMPLIANCE & RECORD KEEPING



Alonzo Brady talks taxes before the capacity crowd

The SBDC scheduled a series of workshops focusing on empowering existing and potential entrepreneurs with the skills and information needed to ensure effective record-keeping practices and compliance with the tax laws.

On July 18, 2002, the first program in this three-part series was held at the SBDC Training Facility in St. Thomas.

Mr. Alonzo Brady, Revenue Agent III and 19-year veteran at the V.I. Internal Revenue Bureau, served once more as the lead presenter and provided information on applicable tax laws, discussions on gross receipts and excise taxes, etc.

Mr. Brady has been an invaluable asset to the SBDC and this community as evidenced by his many in-kind presentations delivered at SBDC's training programs.

The series continued with a seminar featuring the V.I. Department of Labor, followed by a workshop which focused on the Lieutenant Governor's Office with special emphasis on the Corporations and Trademarks division.

SBDC CONTINUES OUTREACH TRAINING TO ST. JOHN RESIDENTS

As part of the ongoing fiscal training initiatives of the Small Business Development Center (SBDC), a SBA ProNet/Procurement & Purchasing seminar was presented in collaboration with the U.S. Small Business Administration (SBA) in June 2002 for the St. John community.

Carl Christensen, SBA Project Officer of the USVI, joined SBDC in leading the discussion on the various components/benefits of the SBA's ProNet resource at the V.I. Legislature's Conference Room in Cruz Bay, St. John.

Many of the SBA's current programs and services were highlighted and reinforced. Mr. Christensen encouraged all business owners to visit the SBA's website at www.sba.gov to register their business(es) under the SBS ProNet program. This will afford many businesses the opportunity to be aligned with various applicable federal projects that may be in need of contracted vendors.

Mr. Christensen also highlighted the various guaranty lending programs available for loan consideration via the conventional local lending institutions.



Some 160 foresters participated in joint meetings held on St. Thomas in June

FORESTERS: FUTURE OF TREES IN THE CARIBBEAN

Some 160 foresters, scientists and environmentalists from the Caribbean and the U.S. mainland met on St. Thomas to discuss the future of trees in the Caribbean. The gathering, held at the Marriott Frenchman's Reef Resort June 9 - 14, was the first joint meeting of the Caribbean Urban Foresters and the Caribbean Foresters.

According to Dr. Louis "Akil" Petersen, conference co-chair, the primary benefit was networking. He said it brought the region closer together to exchange information on all fronts. "This was an historic occasion. Both groups of foresters were meeting for the first time for the 7th Annual Caribbean Urban Forestry Conference and the 11th Caribbean Foresters Meeting. Foresters are concerned with the need to strike a balance between the productive use of the forest for human purposes and the sustainable existence of the forest. Urban foresters are concerned with the use and maintenance of trees in the urban setting. It is my hope that this joint meeting will bridge the divide between urban and natural forest areas, because the divide is a human delineation, not a natural one."

Petersen said that the conference was primarily for foresters and forestry personnel. However, one of the conference's objectives was to help educate and inform the public about the importance of trees to the environment.

Presentations during the week included sessions on the use of native plants on restoration projects, native urban forests of the Virgin Islands, remarkable big trees of cultural interest in the U.S. Virgin Islands, and native trees and their growth and development.

At an awards luncheon on Tuesday, June 11th, three groups were recognized for their contribution toward the promotion of urban forestry in the U.S. Virgin Islands. Awards were given to the UVI Physical Plant, St. Thomas-St. John Anti-Litter and Beautification and the Levitt Homes Corporation in Puerto Rico.

Foresters and local residents enjoyed the field trip to St. John. The field trip included a self-guided trail to the Virgin Islands' National Park at Cinnamon Bay, which featured an old sugar mill site and native tropical forest. Presentations were made by the National Park Rangers and local artisans.

Conference participants also toured an exhibit of locally made products. Artisans such as Avelino Samuel from St. John, Bien Brignoni, Stephen Walsh, Carol Spanner, Al Henry, Albion George and Justin Todman displayed a variety of wood products made from the local forests.

The conference was sponsored by the UVI Cooperative Extension Service, USDA Forest Service-IITF, Puerto Rico Conservation Foundation and the V.I. Department of Agriculture.

SBDC CELEBRATES NATIONAL SMALL BUSINESS WEEK 2002

Annually, the President of the United States declares National Small Business Week to recognize the distinguished contributions of small businesses throughout the U.S. and its territories.

This year, National Small Business Week 2002: Small Business Where America Works was acknowledged by the UVI-SBDC and its cooperative partner, the U.S. Small Business Administration, by a series of events and programs May 5-11.

The SBDC and the SBA were featured on various television and radio programs highlighting the services and resources available to small businesses in the Virgin Islands.

The week included seminars on business planning territory-wide. An open house with collaborative partner JPMorgan Chase was held in St. Thomas and St. Croix. Additionally, the SBDC engaged in providing youth outreach through presentations to many of the territory's schools.

The highlight of National Small Business Week is the traditional awards ceremony that honors entrepreneurs and institutions. This year the SBDC collaborated with the St. Thomas and St. Croix chapters of the Chamber of Commerce and coordinated business casual environments (mixers) in conjunction with their Business After Hours social events. Over 300 persons witnessed the recognition of the award recipients, who were recognized for their individual and corporate successes and contributions to the small business community.

In order to set the atmosphere for the



SBA Small Business Person of the Year Alphonso Boyce, Gonzi's Limo and Dignitary Service, pictured with wife and co-operator, Mrs. Carla Frett Boyce

Business After Hours event, the lights twinkled softly over the Pentheny Building Courtyard in Christiansted, St. Croix, where beautiful jazz tunes echoed from the Central High School Jazz Combo while culinary students from the St. Croix Educational Complex served a feast to please attendees' palates.

Over 125 persons turned out to discuss the present economic issues affecting St. Croix and join together with the SBDC to honor some important people and organizations in the community.

The SBDC awarded honors and congratulations to John Demo and Don Siener as "SBDC Small Business Persons of the Year" for the economic stimulus and contributions they have provided to the islands. Not only have they expanded their jewelry stores Larimar on the Waterfront and The Caribbean Bracelet Company throughout the islands, but they were very instrumental in bringing a radio promotional person/program, "Rock and Roll Re-Wind," to St. Croix as its home base. This program reaches out to the entire continental USA as well as 18 countries worldwide. During three hours of weekly programming, it constantly promotes the USVI, especially St. Croix.

Important recognitions were also awarded to JP Morgan Chase Bank for "SBA Bank of the Year" and the V.I. Small Business Development Agency as "SBDC Financial Services Advocate of the Year" on St. Croix. Their respective support in local investments to small and new businesses has a great impact in growth for those who might not otherwise have taken the "entrepreneurial leap" in today's economy.

With the blend of successful businesses, the excitement of the youths in attendance, great food and music, this was truly a night to remember.

DELEGATES ATTEND NATIONAL 4-H EVENT

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delegates from all over the world were represented, including individuals from as far apart as Japan, Tobago and Russia. These delegates represented the 6.8 million members worldwide and more than 600,000 adult leaders.

As part of the observance, 100 individuals who made significant contributions to 4-H were honored by induction into the 4-H Hall of Fame, accessible exclusively through cyberspace on the national 4-H website.

The UVI delegation included Lois Sanders, assistant director of the 4-H/ Family & Consumer Sciences Program; Donna Athill, adult volunteer; and three youth, two from St. Croix, O'Neal Doward and Kendall Richmond; and Audrey Malone of St. Thomas. The Virgin Islands was one of two Caribbean nations represented. Tobago attended for the first time.

All of the workshops, consulting groups and assemblies were designed with youth in mind, from the planning to implementation of the entire conference. It was a wonderful opportunity to see youth encouraged to work to their fullest potential and take leadership roles in making sure conference goals at every level were met.

The adults assisted in working with the youth, but all activities were youth-driven. Some of the most exciting activities included the Share Fair where representatives set up booths and displayed success stories in their locale. A very popular event was the pin swap where participants exchanged pins indicative of their country, territory or county.

One emphasis of the content areas was on the changing perception of 4-H, which has historically been seen as an organization for rural youth to learn about "cows, cooking and sewing." There are clubs that have these areas as prominent activities for teens; however, science and technology, personal development and leadership, communication and expressive arts are highly valued by today's youth, as well.

Only 11 percent of 4-Hers in the U.S. live on a farm, and 23% live in central cities, according to the U.S. Department of Agriculture, 2001.

This was probably one of the most memorable and meaningful conferences in the history of 4-H. For further information, contact Ms. Lois Sanders at (340) 692-4096, or e-mail lsander@uvi.edu.

AWARD RECIPIENTS

SBDC Small Business Person(s) of the Year

- John Demo & Donald Siener, Caribbean Bracelet Company (STX)
- Pamela Jurgen-Abdillahi, Hi-Tek Beauty in Nail City (STT)
- Rosemary Sauter, Century 21/Sauter & Associates (STT)

SBDC Financial Services Advocate of the Year

- JPMorgan Chase Bank (STT)
- Small Business Development Agency (SBDA)/Government Development Bank (STX)

SBA Small Business Person of the Year

- Alphonso Boyce, Gonzi's Limo and Dignitary Service (STT)

SBA Small Business Advocate of the Year

- Cynthia Jerry, New Image Foundation Corporation

SBA Bank of the Year

- JPMorgan Chase Bank



The 7th annual V.I. Nonpoint Source Pollution Conference was well-attended

NONPOINT SOURCE CONFERENCE HELD

"Protecting land, sand and sea for a healthy environment and economy" was the theme for the 7th Annual V.I. Nonpoint Source Pollution Conference, May 16-17. More than 150 people from the U.S. and British Virgin Islands, Puerto Rico and the U.S., including many government agency representatives attended the conference at the Westin Resort on St. John.

Charles James Gibson, a professional land-use planner from the University of Connecticut's Cooperative Extension Service and a featured speaker at the conference, discussed the need for comprehensive planning, conservation and development as it relates to nonpoint source pollution.

Gibson has put together a program called Nonpoint Education for Municipal Officials. The program helps scientists and regulators to find ways to help government officials and people who serve on boards and commissions understand the issues of nonpoint pollution.

Also attending the conference were Senators Adlah Donastorg and Donald Cole. Cole, who chairs the Senate Planning and Environmental Protection Committee, said in his welcome remarks that he recognizes the challenges of balancing development with conservation.

The conference also focused pollution prevention on construction sites, marine water quality monitoring, land-use effects on coastal waters and infrastructure in Puerto Rico and providing alternative solutions to wastewater disposal problems.

The conference was sponsored by V.I. Department of Planning and Natural Resources, UVI Cooperative Extension Service, Conservation Data Center and the V.I. Marine Advisory Service.

CES CLOTHING CONSTRUCTION WORKSHOP

A seven-week program on clothing construction sponsored by the Cooperative Extension Service culminated on June 20, 2002. The 18 participants included a cross-section of the St. Croix community.

Ms. Rosalind Browne, Extension Assistant spearheaded this workshop, designed to acquaint participants with information on the parts and functions of a sewing machine and how to operate it. Participants quickly learned about zippers, pockets, appliques, fabric texture, collars, buttons, hems and other aspects of clothing construction.

Their efforts resulted in several garments ranging from casual T-shirt fabric to two-piece skirt and top sets to evening attire.

For more information, contact Ms. Browne at (340) 692-4098 or e-mail rbrown@uvi.edu.

AQUACULTURE SHORT COURSE ATTRACTS LARGEST CLASS EVER

The AES Aquaculture Program held its 4th Annual Aquaponics and Tilapia Aquaculture Short Course in June. Twenty-four students from the Virgin Islands and around the world participated in the seven-day course.

The course provided intensive study of the aquaculture technology that has been developed at UVI, namely aquaponics and greenwater tank culture. Aquaponics is the combined culture of fish and hydroponic plants in recirculating systems while greenwater tank culture is a bacterial-based system that intensifies fish production greatly and produces a nutrient rich slurry that can be used to irrigate and fertilize field crops.

Instructional staff consisted of Dr. James Rakocy, Mr. Donald Bailey, Mr. Eric Thoman and Mr. Charlie Shultz. Each instructor lectured daily in his area of expertise.

Students came from six countries and the U.S.A., including such distant locations as South Africa, Lebanon and Hungary. Other countries represented were Mexico, Canada, and Antigua. U.S. students came from eight states (California, Washington, Utah, Colorado, Alabama, Georgia, New Jersey, and Massachusetts) and two territories (U.S. Virgin Islands and Puerto Rico). This group represented a great diversity of experience and training, ranging from beginners to seven people with Ph.D.s.

This year's class included four students from the Virgin Islands, three from St. Croix and one from St. Thomas. The St. Croix students are already involved in agriculture and are looking for ways to incorporate aquaculture into their operations.

The Aquaculture Program has outstanding facilities for conducting this course, including seven aquaponic systems and ten greenwater tank systems. Among these systems is one commercial-scale aquaponic system and one commercial-scale greenwater tank system capable of annually producing 11,000 and 15,000 lbs of tilapia, respectively.

Each day of instruction included a half-day of lecture and a half-day of fieldwork. The fieldwork included all of the activities the students needed to design, construct and operate their own systems. The students were assigned tasks that included egg and fry collection, fingerling sorting and stocking and marketable fish harvesting.

They also worked with all aspects of vegetable crop production such as mixing planting media, seeding, transplanting and harvesting. This hands-on experience allowed the students to apply the concepts taught in the morning lecture to the reality of farm production.

Through classroom lecture and field experience the students received a well-rounded education on UVI's aquaculture systems. They left St. Croix with the ability to either practice aquaculture as a hobby or on a commercial scale. They can also serve as extension educators or initiate research programs in aquaponics and greenwater tank culture at their home institutions.

"STUDENTS CAME FROM SIX COUNTRIES AND THE U.S.A., INCLUDING SUCH DISTANT LOCATIONS AS SOUTH AFRICA, LEBANON AND HUNGARY. OTHER COUNTRIES REPRESENTED WERE MEXICO, CANADA, AND ANTIGUA."



A delegation of UVI-CES personnel, a volunteer leader and three territory youth attended the centennial celebration

4-HERS ATTEND NATIONAL CONFERENCE & CENTENNIAL CELEBRATION

The National 4-H Conference and 100th year observance was held in Washington, D.C., April 7-13, 2002, at the National 4-H Center. This centennial commemoration was entitled, "Building A Global Community: The Power of Youth." More than 350

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RESEARCH & PUBLIC SERVICE UPCOMING EVENTS OCTOBER – NOVEMBER 2002

OCTOBER

1-12
10
24
29

COAST WEEK CLEAN UP STX/CMES
CUSTOMER SERVICE EXCELLENCE/STT/SBDC*
SELECTING A LEGAL STRUCTURE FOR YOUR BUSINESS STX/SBDC
LANDLORD OR TENANT: WHO'S IN CHARGE?/SBDC

NOVEMBER

5-7
7
13
14
19-21

WRITING A WINNING BUSINESS PLAN STX/SBDC
CHECKLIST FOR GOING INTO BUSINESS/SBDC
IT'S ALL ABOUT YOUR ATTITUDE, NOT YOUR ALTITUDE STX/SBDC
SELECTING A LEGAL STRUCTURE FOR YOUR BUSINESS/SBDC
WRITING A BUSINESS PLAN/SBDC

**for more information on these events, contact the sponsoring department.*



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