



# COVICRIER

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COLLEGE OF THE VIRGIN ISLANDS, CARIBBEAN RESEARCH INSTITUTE, ST. THOMAS, V.I. 00801

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## Research: Projects And Plans

**RESEARCH GROUP ON CRIME** The Research Group on Crime held a meeting on September 8 at which time it was agreed that Dr. William Harris, Sociologist with the Social Research Center at the Institute, would be principal investigator for the project. It was thought that since the original group consisted principally of teaching faculty with relatively limited time for a research project of this magnitude, it would be better to develop a full-time research capacity within the Institute using the teaching faculty, with their expertise in their various fields, as a support unit.

Dr. Harris has already developed a rough outline for a proposal, listing also outside agencies which might be interested in funding such a project. He will be assisted by Miss Rose Milligan a newly-appointed

Research Specialist in Social Anthropology (see Personnel).

**F'LETED STUDY NEAR COMPLETION** Dr. Jones<sup>a</sup> Hendrickson has completed the first two chapters of a research project on "Economic and Political Profile of Fredriksted" begun in the Fall of '81. The study includes a substantial amount of data and is expected to be a work of some magnitude. When finished it is anticipated that it would serve as a guide for future programs and implementation of policy in the Fredriksted area.

**RESEARCH IN WATER CENTER** During the month of July, Dr. Philip Greeson, President of the American Water Resources Association and Assistant Regional Hydrologist, USGS Regional Office, Atlanta, led a team of USGS Personnel on a visit to the Water Resources Research Center

(WRRRC) at the Institute. The team included Mr. Ferdinand Quiñones, Chief of the USGS Caribbean District, Mr. Ferdinando Gomez-Gomez and two technical assistants of the USGS.

A meeting was held with the three senior USGS staffers, Mr. Arnot Croslin and Mr. Bob Waters of the Physical Plant and WRRRC Staff to review the progress of the Water Resources investigations at the College (see COVICRIER, June 1982).

Mr. Ferdinando Gomez-Gomez and two technical assistants installed several Piezometers on the Golf Course.

LAND CRAB STUDY On the completion of a study into the ecological and economic potential of "ranching land crabs" (COVICRIER September 1981), the Institute was contacted by Mr. Myron Hokin of Chicago and Virgin Gorda who offered a \$5,000 grant to help set up a resident fisherman of Anegada as a trial crab "rancher" CRI staff would carry out local product preparation research and marketing studies.

In a cooperative program with the National Park Service a visiting team of researchers, including Robert Teytaud of St. Croix, Roy Woodbury of Puerto Rico and Peter Weaver studied the terrestrial plant associations on St. John. These studies will be used to determine the recovery rates of disturbed Virgin Islands ecosystems under protection and to help the Virgin Islands National Park in its resource management.

REVERSE OSMOSIS COURSES On August 23rd through September 3rd Fairleigh Dickinson University offered courses in Reverse Osmosis Technology to various government agencies and private industries in the Virgin Islands entitled "Reverse Osmosis Technology Transfer." The courses were attended by Drs. Richard Champney and Owolabi Ajayi of the Water Resources Research Center (WRRRC) of CRI.

The course was a direct response to the increasing reliance of the Virgin Islands on manufactured water particularly with the method of Reverse Osmosis, since it was felt that such training would provide Virgin Islanders with the basics of the field as well as practical experience in operating Reverse Osmosis Plants. Seven days of courses were held on St. Thomas and the last three days on St. Croix at the Fairleigh Dickinson laboratories where sessions were devoted to practical "hands-on" working experience on the experimental Reverse Osmosis Plant that the Fairleigh Dickinson University operates on St. Croix.

Other agencies represented were Virgin Islands Housing Authority, Water and Power Authority and private industry.

## Comings & Goings

### ENVIRONMENTAL STUDIES AT CSA CONFERENCE

conference.

Dr. Michael J. Canoy chaired a session on Environmental Studies in the Caribbean at the Caribbean Studies Association meeting in May. This was another attempt at bringing Natural Sciences into a CSA

### CANOY AT FISHERY MANAGEMENT COUNCIL

In August Dr. Canoy attended the Caribbean Fishery Management Council as a member of its Science and Statistical Committee to discuss the new Comprehensive Virgin Islands reef fish management plan.

### CONSERVATION ASSOCIATION MEET IN NEVIS

The Director attended the Annual General Meeting of the Caribbean Conservation Association held in Nevis from 26-29th August. The Association was started in the Virgin Islands and had its headquarters at the Institute for several years. It is the only regional organization with which the Institute has formed links.

## Outreach Activities

A colloquium on Long-term Ecological Research in the Virgin Islands sponsored by the National Park Service at Maho Bay, St. John, was attended by Dr. Ajayi of WRRRC where he gave a presentation on "Paucity of Data for Water Resources Assessment in the United States Virgin Islands."

Dr. Jones-Hendrickson, Coordinator of the Social Research Center, was interviewed on a local talk show on the topic of "The White Paper Proposals for Constitutional and Independence issues in St. Kitts-Nevis." Dr. Jones-Hendrickson has done several papers and studies on economic issues for the State of St. Kitts-Nevis and because of his expertise in Caribbean economics his input has been solicited on various occasions.

During the latter part of June VIERS was the site of a two-day workshop for the science teachers and Environmental Studies resource personnel from Sibilly School.

The CVI Student Affairs Office held a retreat and training workshop at VIERS in August prior to the new semester.

## Personnel

Mr. Owolabi Ajayi who joined the Institute in January of this year is now Dr. Ajayi having completed his studies. He was awarded the Ph.D by the University of Tucson, Arizona in May. His dissertation is entitled "Institutional Models for Water Resources Administration

in Developing Countries: Case Example, Nigeria." Dr. Ajayi is one of the few (and perhaps the only) professional hydrologist in the Virgin Islands.

Rose Milligan is the new Research Specialist at the Institute. Born in Fredriksted, St. Croix, Miss Milligan was graduated cum laude from CVI's class of 1977. Her major was Economics and Political Science.

She obtained her Masters Degree in Anthropology from the University of Connecticut in 1981 and is now a candidate for the Ph.D in Anthropology from the same University.

Miss Milligan specialized in "Research in the Dynamics of Social Transformation and the Political Economy of the Eastern Caribbean."

She did research in labor migration in the Eastern Caribbean at the University of Connecticut and has served in an administrative capacity at the International Center of the University of Connecticut.

## Publications

The completed project on the ecological and economic potential for shark as a fishery species by Dr. Michael Canoy (COVICRIER September 1981) highlights some interesting facts.

Sharks, one of the oldest existing fishes, are common in all world seas. They are seldom seen because they are usually shy and many feed at night or in deep water. They are particularly common in tropical waters. While there is little solid data on their reproductive or growth rates, we know there are existing large populations both north and southeast of the Virgin Islands.

Even though shark is seldom eaten locally it is highly prized in many countries. In 1980-81 the world market had a short fall of demand over supply for shark meat and fins of 29,000 metric tons, or nearly 54 million pounds. At a dollar a pound dockside \$54 million was lost. This does not include "other products." The shark is a very versatile fish and virtually every part can be marketed. Besides the edible meat and fins (at \$7.00 a pound) the hide makes one of the world's best leathers, the jaw and teeth are prime tourist items, the oil from the liver is used for vitamins, plastics, and cosmetics, and the "waste" is processed to highly nutritious fish meal. The processed end product value of a 5-foot shark is about \$113.

By using a mixture of experimental fishing and statistics we find that over half of the weight of fish caught by long lines and set bottom lines may be shark. In the annual long line effort done by the United States National Marine Fishery Services more shark are caught than any other fish.

Processing plants may run between \$300,000 and \$600,000, cost \$200,000 annually to operate, and employ up to 80 people to process a half million pounds of shark a year. Once the processing is available a fisherman or co-operative could invest \$150,000 in boat, gear, and operations for gross sales of \$80,000-\$100,000 per year. This could be done while carrying out a trap fishery.

This fishery clearly has potentials. There remains only to (a) set up an experimental fishing program; (b) get sufficient governmental and private support to set up a production program; and (c) continue monitoring the fishery to avoid over-exploitation.

The Institute is now in the process of preparing several working papers for publication, one of which is, "Shark as a potential fishery resource for the Caribbean." This twenty-page paper will give a more detailed analysis of shark fishing for profit. Publication of the working paper is expected around the end of this year and will be made available to the public.

Director: Norwell Harrigan, Ph.D

Editor: A.M. Brown-Comment

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## Publications Available at CRI

- Bandler, Beverly G. Proceedings of the Conference on the Virgin Islands Environment. "OUR TROUBLED ENVIRONMENT--CAN WE SAVE IT?" 1974. 83 pp. \$2.50.
- Bliss, Leonard B. Virgin Islands of the United States Public School Basic Skills Achievement Survey TECHNICAL REPORT #1 VALIDATION OF THE USE OF THE STANFORD ACHIEVEMENT TEST WITH USVI STUDENTS 1982. 46 pp. \$2.00
- Canoy, Michael J. and Klos, Ann M. A Literature Survey and Technology Assessment of the Treatment and Utilization of Rum Distillery Wastes 1978. 109 pp.
- Jones-Hendrickson, S.B. Proceedings of a Seminar on FORECASTING IN MICROSTATE ECONOMIES 1978. 115 pp. \$3.00.
- Jones-Hendrickson, S.B. An Econometric Analysis Of Life Expectancy 1982. 28 pp. \$1.50
- Peebles, Prat and Smith WATERPLAN: A Comprehensive Water Management Framework for the U.S. Virgin Islands, 1979. 42pp \$2.00.
- Varlack, Pearl and Harrigan, Norwell. The Virgins: A Descriptive and Historical Profile 1977. 71pp. \$3.50

*The Caribbean Research Institute is a division of the College of the Virgin Islands. It was established in 1966 to provide a central research agency in the Virgin Islands and to encourage research in the Caribbean basin. It pursues a broad spectrum of investigation in the natural, physical, social and economic sciences.*