

island resources

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Annual Report for 2003

UPDATE ON THE FOUNDER

Dr. Edward Towle, founder of Island Resources Foundation, has been an environmental leader in the Caribbean for four decades. Among those who know him best, Ed is recognized for his tireless energy, unabashed enthusiasm, resourceful creativity, and longstanding commitment to small islands.

During recent years, Ed has faced significant health problems, which have altered but not diminished his ability to inspire and to challenge. To friends and colleagues who have heard that Ed is now confined to a wheelchair, we assure you that the Foundation's first visionary is still very much on the job, both as chair of IRF's board of trustees and as the Foundation's senior environmental planner.

And for those of us who work closest with him, and have personally observed his amazing courage, it seems appropriate to paraphrase Winston Churchill — this has indeed been Ed's "finest hour".



Ed Towle, 2003

AN AWARD FROM EPA

Island Resources Foundation has received an Environmental Quality Award for 2003 from the U.S. Environmental Protection Agency. These prestigious regional awards are presented to organizations or individuals in New York, New Jersey, Puerto Rico and the U.S. Virgin Islands who have made significant contributions to improving the quality of the environment.

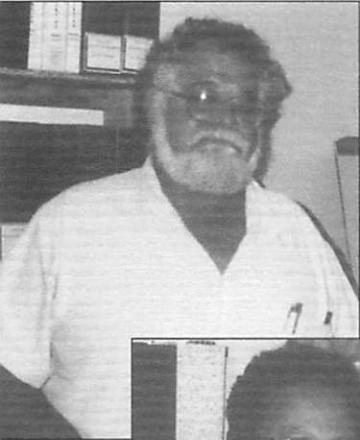
At an April ceremony in New York City, EPA Regional Administrator Jane Kenny (pictured below) presented the Award to IRF president Bruce Potter.



Potter commented that the EPA Award was a great honor for the Foundation, one of the Caribbean's oldest environmental NGOs. "It is also a well-deserved tribute to the energy and spirit of Ed Towle, our founding president and chairman."

The east coast of the Isle of Skye, Scotland, with the Cuilens in the background. Portree, the main port on Skye, was the site of the Annual General Meeting of the members of the Global Islands Network (GIN) in October 2003. IRF's Bruce Potter attended as a GIN board member.

Island Resources Foundation —



Key Participants, "Sandy Cay II" Project

(clockwise from top) **Clive Petrovic**, head of Applied Marine Studies Center, H. Lavity Stoutt Community College; **Esther Georges**, Deputy Director, BVI National Parks Trust; IRF Program Associate and environmental lawyer **Barbara Lausche**; IRF Program Associate and parks specialist **Lloyd Gardner**



Bruce Potter presents a \$1,000 check for the 2003 McFarlane Environmental Leadership Award to **Dr. Brian Cooper** of Antigua

>> **Preserving Natural Area Treasures in the British Virgin Islands** >> For over 40 years, tourism visionary and international conservationist **Laurance S. Rockefeller** has had a special relationship with the British Virgin Islands. Now in his nineties and bringing to an end many of his conservation activities, Mr. Rockefeller has once more focused on the British Virgin Islands. In August, he announced funding for a \$200,000 conservation program in the BVI that is designed specifically to help strengthen parks and protected areas in the Territory.

To help with this new program, Mr. Rockefeller has called on the Island Resources Foundation to coordinate implementation of the program, in collaboration with the **National Parks Trust (NPT)** and the **H. Lavity Stoutt Community College (HLSCC)**.

The new program is linked to Mr. Rockefeller's final planning for the future management of Sandy Cay, a 14-acre undeveloped island in the BVI that has been owned by him personally for more than three decades. Sandy Cay was the focus of several planning studies carried out by Island Resources for Mr. Rockefeller in 2000-2001; these studies examined the island's environment and its natural carrying capacity in the face of increasing tourism pressure.

As Rockefeller considered options for the island's future, it became apparent to him that Sandy Cay did not exist in isolation. As he wrote to the Chief Minister in August, "Support for initiatives that assure Sandy Cay will be managed and protected in perpetuity as a unique natural area will be more effective if they are a part of a broader base of support for conservation and sustainable development in the BVI." To accomplish this, the "Sandy Cay II" project was established with grant support from Mr. Rockefeller.

The preliminary program plan, to be executed by Island Resources, calls for a two-year project of conservation collaboration, institutional strengthening and testing of new models for protected areas, often using Sandy Cay as a base for study. Dr. Edward Towle will serve as project director, assisted by deputy project leader Lloyd Gardner; director of the NPT, Joseph Smith-Abbott; and head of the Center for Applied Marine Studies at HLSCC, Clive Petrovic.

Environmental monitoring activities established by Island Resources Foundation at Sandy Cay four years ago will be incorporated into the more expansive "Sandy Cay II" project. Ongoing activities include periodic monitoring for evidence of black rats (*Rattus rattus*), which were eradicated from the island in late 2002 by IRF researchers under a prototypic invasive species control program. During 2003 the IRF monitoring team completed seven visits to the island and concluded that it remains free of rats. Monitoring is currently carried out by HLSCC's Rob Power, IRF's Jean-Pierre Bacle, and a new assistant Marcus Maturine, a recent BVI high school graduate.

>> **2003 McFarlane Environmental Leadership Award** >> The 2003 Euan P. McFarlane Award for Outstanding Environmental Leadership in the Insular Caribbean was presented by Island Resources Foundation in November at the Annual General Meeting of the Caribbean Conservation Association in Barbados. This year's recipient is **Dr. Brian Cooper** of Antigua, who was nominated by Antigua's Environmental Awareness Group.

Dr. Cooper was recognized for his efforts over three decades to promote environmental stewardship and balanced development in the Caribbean, especially in Antigua and Trinidad. In his presentation remarks, IRF's president Bruce Potter noted that Dr. Cooper is a conservationist whose contributions reflect both his vocation and avocation and span service in the public as well as the private sector. "To find such diversity in one individual is unusual," said Potter, "and the Foundation is very pleased to add his name to the roster of Caribbean environmentalists who have been similarly celebrated by the McFarlane Award since 1987."

People & Activities from 2003

>> Inventory of Wetlands in the U.S. Virgin Islands >> Wetland loss and the condition of surviving wetland sites were ongoing concerns in the U.S. Virgin Islands during the decades of rapid economic growth from the 1950s through the 1980s, especially as more and more wetlands were lost to commercial and tourism infrastructure in coastal areas. In recent years, concern for nearshore coral reefs and associated marine habitats has focused new attention on the role of wetlands in maintaining water quality and healthy reef habitat. Additionally, recent studies of flood mitigation practices have reaffirmed the historic role of manmade and natural upland wetlands in flood control.

At the same time, the Virgin Islands Government has long recognized that the absence of a territory-wide statistical baseline for Virgin Islands wetlands impedes strategic planning for the conservation and restoration of surviving sites. As a result of these concerns, the V.I. Department of Planning and Natural Resources (DPNR) awarded \$120,000 to Island Resources Foundation for the first phase of a comprehensive inventory of wetlands and associated riparian areas in the USVI.

The work is being carried out by IRF in partnership with the **University of the Virgin Islands** (UVI) and builds on DPNR's 1998 Unified Watershed Assessment of the USVI and the subsequent development of Watershed Restoration Action Strategies. The current wetlands inventory will support these earlier initiatives by generating detailed wetland habitat data.

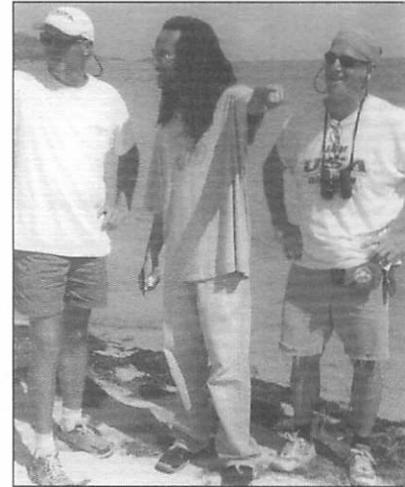
In recent months, several different approaches to wetland characterization have been tested by the IRF/UVI team, ranging from development of an index of biological integrity based on GIS mapping to basic water quality testing using both conventional laboratory analysis and high-tech instrumentation. Bruce Potter is the project director, and Dr. Barry Devine of the UVI serves as senior scientist.

>> Integrating Science and Management in the Caribbean >> The integrity of coral reef ecosystems is under threat worldwide as a consequence of numerous stresses that include sediment loading, nutrient enrichment, climate change, over harvesting, and storm activity. In response to the continued decline of coral reef health, the U.S. National Oceanic and Atmospheric Administration's Coral Reef Ecosystem Studies Program (NOAA-CRES) has funded a new research program that brings together a multi-institutional and multi-disciplinary study team led by scientists at the **University of Puerto Rico** (UPR). The objective of these investigations is to provide science-based recommendations for management of the resource.

Island Resources Foundation is a part of this team and has been awarded a two-year grant in the amount of \$143,000 to support the effort. IRF's principal investigator for the project is no stranger — he is Carlos Ramos-Scharrón, who has worked with the Foundation for over five years. Carlos was lead investigator for IRF's erosion and sediment reduction studies on the island of St. John in the USVI, in particular, at Fish Bay where the Foundation owns 50 acres of protected green space.

As part of the St. John study, Carlos developed an erosion and sediment yield model. Application of the model indicated that actively used *unpaved* roads are the dominant source of sediment delivery into Fish Bay, with road cutslopes and streambanks playing a secondary role in total sediment yields and undisturbed hill slopes contributing only minimal amounts. This work is also the subject of his doctoral dissertation being submitted to Colorado State University in 2004.

IRF field investigations under the collaborative UPR project will focus on La Parguera, Puerto Rico, where Carlos and his assistants from UPR-Mayaguez and Universidad del Este are quantifying the rate of sediment production from a variety of sources. These results will be linked to other project components to provide improved, scientifically based, best management practices.



USVI Wetlands Survey Team (l-r): **Dr. Barry Devine**, University of the Virgin Islands and IRF's **Kevel Lindsay** and **Jean-Pierre Bacle**, during field survey exercises, St. Croix. **Henry Tonnemacher** and **Richard Brey** (not pictured) also assisted with water quality sampling at wetland sites in St. Croix.



Carlos Ramos at road erosion study site in La Parguera, Puerto Rico



Dr. Edward Towle (center) converses with **Dr. Charles Wheatley** (l), president of H. Lavity Stoutt Community College, while **Dr. LaVerne Ragster**, president of the University of the Virgin Islands, looks on, at a reception in January hosted by the Community College in Tortola to honor Dr. Towle's contributions to the BVI and the Caribbean. Dr. Ragster spoke at the ceremony about her personal and professional relationship with Towle, exhorting the IRF founder "to never forget that you have made a difference, for all of us and for the Caribbean."

Island Resources Foundation, 2003

>> **Update on Caribbean E-Groups** >> For over three decades, Island Resources Foundation has developed its programs based on the premise that *information* is the key to informed decision making about the environment. Director of IRF's information management programs is president Bruce Potter, who currently moderates more than 30 electronic discussion groups, subscribing more than 1,500 members.

These E-Groups reflect IRF's traditional interests—the insular Caribbean, the NGO community, biodiversity conservation, marine and coastal resource development. Information on the full spectrum of E-Groups can be obtained from our web site at <http://www.irf.org>. The following are a few of the more active discussion groups.

- Group Name: caribbean-biodiversity@yahoo.com — forum for exchange of Caribbean biodiversity information
- Group Name: BVI-sediment@yahoo.com — information sharing about best management practices for sediment reduction and erosion control
- Group Name: carib-territories@yahoo.com — promotes information exchange among non-sovereign small islands in the Caribbean
- Group Name: MAC-Caribbean@yahoo.com — E-group for the Museums Association of the Caribbean
- Group Name: carib-coral-reefs@yahoo.com — unofficial source of information and discussion about issues affecting coral reefs in the Caribbean
- Group Name: grenada-history@yahoo.com — discussion of topics related to Grenada's history and culture

To subscribe to any Group, send a blank email to:
groupname-subscribe@yahoo.com,
replacing "groupname" with the actual name of the E-Group

>> **Potter and Towle Receive Coastal America**

Awards >> As members of the U.S. Virgin Islands Marine Park Advisory Committee, IRF's Bruce Potter and Edward Towle are recipients of 2003 Partnership Awards from **Coastal America**, a unique partnership of federal agencies, state and local governments and private organizations working together to restore coastal areas in the United States.

The more we degrade and destroy the natural environment through selfishness and short-term planning, the more we depend on prosthetic devices of engineering ... to maintain the equilibrium that the natural world provides for us scot-free, and the more we turn this planet into a literal Spaceship Earth, in which our existence depends upon our continuing alertness and ingenuity, pushing the right buttons, pulling the right levers, monitoring every square kilometer, just to keep things going because we destroyed the natural base that kept it that way for billions of years until our own species arrived.

Edward O. Wilson, September 2003
(from his remarks at Cornell University)

>> **Archaeological Reconnaissance at Fish Bay** >>

In July an archaeological field team from the University of Southern Maine, under the leadership of Dr. Dave Davis, undertook an initial reconnaissance of historic ruins and a reported pre-Columbian site on the Foundation's property at Fish Bay, St. John, USVI. A report of preliminary findings was issued by investigators to the Foundation.

For more than 20 years, IRF has held as green space approximately 50 acres of coastal, dry evergreen woodlands at Fish Bay, adjacent to the Virgin Islands National Park. For the last ten years, the Foundation has collaborated with several Virgin Islands institutions and community groups in a long-term program to reduce erosion and control sediment discharge into coastal waters at Fish Bay. The recent archaeological investigations add a new dimension to these ongoing research activities at Fish Bay.

>> **Report on Invasive Species Control in the BVI** >>

In March, Island Resources Foundation issued its final report on a rat eradication program implemented during a 30-day period in late 2002 at Sandy Cay in the British Virgin Islands. The report describes the methodology employed in removing the invasive species *Rattus rattus* from the island and steps taken to prevent reinvasion. (See Karen Varnham, "Eradication of Black Rats from Sandy Cay, BVI: An Invasive Species Control and Monitoring Program of Island Resources Foundation, Implemented on Behalf of the Owner of Sandy Cay".)

The follow-on monitoring program currently underway at Sandy Cay provides an excellent opportunity to monitor the recovery of native species following the removal of black rats, known to exploit a wide range of food sources including many plants and invertebrates. Experience on similar islands in the region has shown marked, though largely anecdotal, increases in the number of nesting sea-

birds and sometimes in vegetation cover following rat removal. Ongoing monitoring at Sandy Cay will include a range of taxa likely to have been affected by the presence of rats.

At the end of 2003, researchers reported the island remains free of rats, with no evidence of the once well-developed network of "rat trails".

ISLAND RESOURCES FOUNDATION — ENVIRONMENTAL PLANNING FOR ISLAND DEVELOPMENT

Your U.S. tax-exempt donation to ISLAND RESOURCES FOUNDATION will assist the Foundation to:

- Apply sound science to environmental problem solving in islands
- Strengthen the technical skills of islanders and the collaborative capacities of island institutions
- Improve the availability of information resources for and about islands
- Educate international agencies and donor institutions about the uniqueness of islands

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