

island resources

FOUNDATION

environmental planning for sustainable island development

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40 years and counting ...

In 1967, Dr. Edward Towle led a marine archaeological expedition to the Caribbean island of Anegada on behalf of his then employer, the Smithsonian Institution in Washington, D.C. Captivated by the Caribbean, Ed relocated that same year to St. Thomas in the U.S. Virgin Islands to head the research arm of the College (now University) of the Virgin Islands. Five years later, Ed left CVI and, with his wife Judith, established a new research and educational NGO that was to be called Island Resources Foundation (IRF).

Some 40 years later, the central mission of that new non-profit organization has remained remarkably consistent — *to support programs that strengthen environmental planning for the sustainable development of small oceanic islands*. Ed and Judith were to build an organization that would have islands — and their sustainable future — as the nexus of all that was to follow. As Ed Towle wrote in the Foundation's organizing prospectus:

Within a small island, no problem or area of study can stand by itself. Islands comprise delicate and fragile networks of highly interdependent relationships — island to island, system to sub-system, island to sea.



IRF Headquarters, 1983 - 1999
The Foundation's "wooden
cottage" office in the USVI

By 1972, Ed had already emerged as an early leader of the Caribbean's embryonic environmental movement. With the establishment of IRF, he expanded this focus to include a new-found fascination with island systems. In this, Towle joined a small group of scientists, practitioners, and island aficionados who globally were beginning to examine the uniqueness of islands and insular eco-systems. The Foundation became one of the earliest institutions worldwide to recognize that a failure to understand the differences between insular and continental systems has unanticipated, and too often undesirable, consequences for islands and islanders.

Today IRF is far from alone in sustaining such programs in the Caribbean, its primary venue for over four decades. Now there are new opportunities for the Foundation to work with and support a regional framework that includes more environmental NGOs as well as more national and regional institutions. (continued page 2)



Ed Towle, 1969



Bruce Potter
IRF president since 1998



A small flock of Greater Flamingo foraging at Red Pond, Anegada, British Virgin Islands

In 2013, IRF published the third volume in its series of Environmental Profiles for the British Virgin Islands. Focused on the island of Anegada, this Profile calls attention to Anegada's "contrariness" — low-lying and flat, dry and mostly devoid of vegetation. Yet, in this seemingly inhospitable environment can be found many exceptional features seen nowhere else in the Virgin Islands.

See page 3 for more on the Anegada Environmental Profile. (Photo Credit: Jean-Pierre Bacle)

40 years and counting ... (continued from page 1)

Indeed, many of the region's current environmental leaders were guided and assisted during their formative years by IRF under its decade-long institutional strengthening program for the eastern Caribbean in the 1980s and 1990s. Under the leadership of its second president, **Bruce Potter** (who followed Ed Towle in 1998), IRF has partially refocused its efforts to contribute more directly to global island initiatives. Bruce has also concentrated on building electronic networks that are primarily directed at sharing capacity for sustainable development among islands and increasing islanders' tools for articulating an "islander perspective" in multiple international fora.

From its original headquarters in the US Virgin Islands, IRF expanded to an auxiliary office in Washington, DC in 1984, a biodiversity program office in Antigua in 1990 (since closed), and a second Virgin Islands office, this one in the British Virgins, in 1999. Many of the Foundation's current programmatic activities are concentrated in the BVI.

With our first four decades behind us, we invite and encourage those who have long supported IRF, or those new to the work of the Foundation, to assist us as we continue forward with the mission first articulated in 1972. If you received this publication by mail, a donation envelope is enclosed for your convenience. Otherwise, please direct your contributions to:

Island Resources Foundation, 1718 P Street Northwest, Suite T4, Washington, DC 20036

[Donations from U.S. tax payers are tax exempt to the full extent of the law]

IRF Partnerships in Western Puerto Rico and St. John, USVI

Understanding the linkages between land use practices occurring within coastal watersheds and their effects on marine water quality has been the focus of a 3-year study in western Puerto Rico implemented by a partnership of Island Resources Foundation, the **University of Texas-Austin**, and the **University of Puerto Rico-Mayaguez**. The study area comprises the **Río Grande de Añasco watershed**, the fifth largest on the island draining westward into Bahía de Mayaguez. Although its land use history follows general island-wide trends, here agriculture remains an important economic activity.

Non-point sources of pollution such as terrestrial sediments represent some of the major stressors affecting the coral reef systems of Puerto Rico as well as the entire Caribbean. This study has identified particular reef systems affected by land use in the Río Grande de Añasco watershed and will help guide erosion mitigation strategies that are of interest to the Puerto Rico Department of Natural and Environmental Resources, NOAA's Coral Reef Restoration Program, and the U.S. Natural Resources Conservation Service, among other agencies and stakeholders.

IRF's **Dr. Carlos Ramos-Scharrón** heads the project assisted by Dr. Fernando Gilbes-Santaella (UPR-Mayaguez), IRF Research Associate Damaris Torres-Pulliza, and Dr. Mario Cardozo (UT-Austin).

Beginning in 2013, a new study site, **Coral Bay** at the eastern end of St. John (USVI), emerged as the focus of Dr. Ramos-Scharrón's ongoing research. Here he continues to evaluate how land use practices, including those associated with new or existing development as well as watershed restoration activities, affect the generation and delivery of terrestrial runoff into coastal waters. This new research is funded by NOAA's Coral Reef Restoration group and is implemented through a collaboration of IRF, the **University of San Diego**, and the **University of Texas-Austin**.



Sediment plume in Coral Bay generated by runoff from an unpaved road.

The photo below of IRF president **Bruce Potter** (left) and **Dr. Michael O'Neal**, then the chair of the board of the **National Parks Trust (NPT)**, British Virgin Islands, was taken during activities marking the transfer of the island of **Sandy Cay** from **Laurance Rockefeller** to the NPT in 2008. For eight years prior to transfer, IRF collaborated with the NPT and the Rockefeller Estate to facilitate the transfer of the island to the custody of the Trust as a protected area. Following the transfer, the Rockefeller Estate provided additional funding to support caretaking, maintenance and invasive species monitoring at Sandy Cay for five years. IRF's **Jean-Pierre Bacle** helped to coordinate these activities from 2008-2013, with IRF's direct participation to terminate at the end of 2013.

The Sandy Cay project has been an extraordinary one for IRF, giving the foundation the unique opportunity to influence natural resource management and protection not only for Sandy Cay but for the larger British Virgin Islands territory.



2013 McFarlane Award

Patricia J. Turpin is the most recent recipient of the *Euan P. McFarlane Award for Outstanding Environmental Leadership in the Insular Caribbean*.

Ms Turpin was recognized for over 40 years of leadership for conservation and sustainable development efforts on the island of Tobago (Federation of Trinidad and Tobago), culminating with her service as the founding director (1996) and current president of "Environment Tobago," the island's leading environmental NGO,



Patricia J. Turpin

When accepting the award, which includes a \$1,000 grant, Ms. Turpin stated, "It has been a privilege working with so many like-minded colleagues — locally, nationally and regionally. I intend to continue as long as I am needed and capable." Her current agenda includes an ongoing reforestation project and climate change adaptation efforts for Tobago.



Euan P. McFarlane

Pat Turpin is the 24th McFarlane Fund honoree. The award is named for **Euan P. McFarlane**, who, until his death in 1983, was actively involved in Caribbean conservation. The fund was endowed by business-

man and conservationist **Laurance S. Rockefeller** and has been managed by IRF since its inception in 1987.



Laurance Rockefeller

CREATING ENVIRONMENTAL PROFILES for the BVI



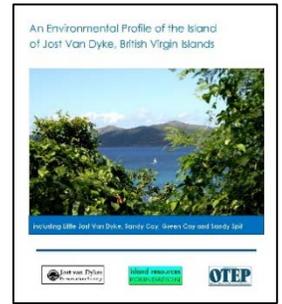
Field research for the Anegada Environmental Profile: (top) Investigating the Budrock Pond area on the east end of Anegada; (left) biodiversity scientist **Kevel Lindsay** photographing a patch of rare native Dwarf Palms on the northwest side of the island; (right) IRF's **Jean-Pierre Bacle** photographing a Puerto Rican Racer snake at the east end of Anegada.

IRF's **Environmental Profile Program for the British Virgin Islands** was established in 2008 to provide an expanded environmental information base to guide the choices of public and private sector stakeholders and decision-makers in the BVI. Three island-specific profiles have been prepared to date: **Jost Van Dyke** (2009, 135 pp.); **Virgin Gorda** (2012, 255 pp.); **Anegada** (2013, 289 pp.). Dependent on the availability of funds, the Foundation hopes to begin work on a profile for Tortola in 2014. URLs for downloading the finished profiles are provided to the right of this text.

Prior to the profiles, there was no consolidated publication or integrated resource that provided ease of access to BVI environmental information. The profiles fill this need by consolidating data, analyzing priority issues, and assessing the impacts of growth on the environment.

Each profile provides a current-state description and analysis of the island's natural resource base and its historical and cultural resources. Major issues and conflicts threatening sustainable development are identified along with a discussion of effective responses and an evaluation of those resources requiring special protection because of their vulnerability to environmental degradation and natural disasters. A multidisciplinary team was assembled to develop the profiles, including: **Jean-Pierre Bacle** (biodiversity, pollution risks), **Rosemary Delaney Smith** (community liaison), **Lloyd Gardner** (protected areas), **Dr. Michael Kent** (historical resources), **Kevel Lindsay** (biodiversity), **Charlotte McDevitt** (waste management), **Clive Petrovic** (marine resources), **Bruce Potter** (project blog site), **Cynthia Rolli** (natural hazards, GIS), and **Judith Towle** (institutional framework). The profile team works under the leadership of Judith Towle, program director, and her deputy, Jean-Pierre Bacle.

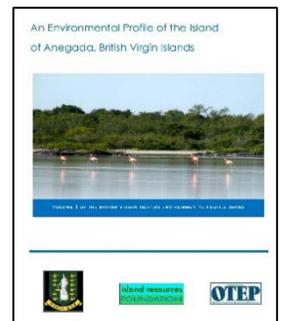
Several individuals, foundations, and public organizations provided support for the first three profiles, with the UK Government's **Overseas Territories Environment Programme** providing support for all three profiles. Additional donors for the Virgin Gorda and Anegada profiles were: the **Government of the BVI** (Premier's Office), the **Dave Hokin Foundation**, the **J.A. Woollam Foundation**, the **Houwer family** of Virgin Gorda, and **Sir Richard Branson** of Mosquito and Necker Islands in Virgin Gorda. The Jost Van Dyke profile project was carried out in collaboration with the **Jost Van Dykes Preservation Society**.



http://j.mp/BVI_JostVanDyke



http://j.mp/BVI_VirginGorda



http://j.mp/BVI_Anegada



Attendees at Launching Ceremony for the Virgin Gorda Environmental Profile in May of 2012, clockwise from upper left: BVI Minister of Natural Resources and Labor **Dr. Kedrick Pickering** (left) with **Justin Hokin**, whose family is a major contributor to the profiles; **Dr. Karl Dawson**, president of H. Lavity Stoutt Community College, MC for the ceremony at the Bitter End Yacht Club; members of IRF's profile team who were present at the Virgin Gorda ceremony, with **BVI Governor W. Boyd McCleary** (second from right); **Bert Houwer** of Virgin Gorda, contributor to the Virgin Gorda and Anegada profiles; profile program director **Judith Towle** with **Ryan West**, representative of **Sir Richard Branson**, another major donor to the Virgin Gorda and Anegada profile projects.

◆ In memory of her husband, Judith Towle donated a dialysis machine to the **Peebles Hospital in Tortola, BVI** in February 2013. Her gift was made through a memorial fund, the *Edward L. Towle Fund for Sustainable Islands*, established at the **Community Foundation of the Virgin Islands (US)** in recognition of the multifaceted career and contributions of Edward Towle — as a naval officer, historian, educator, environmental leader, island advocate and Caribbean conservationist.

During a ceremony at Peebles Hospital, Mrs. Towle stated that the very professional and caring treatment afforded her husband at the BVI's Dialysis Unit during his last years made it possible for Ed to continue to work in the Caribbean. "I shall always be grateful to the BVI and to the excellent staff at its Dialysis Unit," stated Mrs. Towle, "and wanted to say 'thank you' in a way that could expand health services in the territory."

◆ IRF environmental biologist **Kevel Lindsay** spent five weeks in **Antigua** in 2013 assisting the country's **National Parks Authority** to survey wild plants at three park sites: Nelson's Dockyard National Park, Fort Barrington National Park, and Devil's Bridge National Park. In this task, he collaborated with **Dr. Brian Cooper**, who heads the Parks Authority's fledgling Environment Unit, now charged with overseeing natural resource management at national park sites.

Lindsay reports that he spent his field days at more than 30 locations identifying plants and much of the fauna and assessing environmental issues, threats and impacts, while also photographing species and landscapes. He encountered spectacular scenery, made even more beautiful by some of the island's rare and colorful plants such as the large barrel cacti plants of the Turk's Cap Cactus, pictured at the right.

A number of unknown plants were discovered by Mr. Lindsay that may represent first-time records for Antigua and Barbuda. One example is the coastal morning glory vine (see photo at right), which colonizes dry coastal habitats. It is a member of the family Convolvulaceae, *Jacquemontia abutiloides*, and although the species needs final confirmation by a botanist, its presence on Antigua may be a first for the region.

Like other sites in the Caribbean, these park sites are under serious threats from free-roaming goats, wildfires, unsustainable development, land-clearing and the long-term impacts of climate change sea level rise.

As he undertakes to report on his Antigua findings, Kevel also reminisces about his time on the cliffs of Shirley Heights or Carpenter Rock "as the evening sun slowly immerses itself into the far reaches of the horizon and as the hills become etched in shadows and fading light," and acknowledges anew why it is so important to protect those pieces of undisturbed nature that still remain.



Pictured left to right: **Dee Baecher Brown**, president of the Community Foundation of the Virgin Islands; **Judith Towle**; the **Hon. Ronnie W. Skelton**, BVI Minister of Health and Social Development; and **Dr. Michael E. O'Neal**, IRF Senior Research Fellow, participating in the February 2013 ceremony that witnessed the donation of a dialysis machine to the BVI's Peebles Hospital in memory of IRF founder, Dr. Edward L. Towle.

◆ **Dr. Henry G. Jarecki** — psychiatrist, educator, entrepreneur, and philanthropist — was first elected to the IRF Board of Trustees in 1991. When he tendered his resignation in August of 2012, IRF president Bruce Potter acknowledged with appreciation Dr. Jarecki's 20 years of service to the Foundation, while also noting, "Although he will no longer be on the letterhead, we hope that Dr. Jarecki will remain accessible for occasional advice and counsel in the future."

Replacing Dr. Jarecki on the IRF board is another Dr. Jarecki — this one, **Dr. Lianna L. Jarecki**, who currently heads the science program at the

Jarecki family-owned **Guana Island** in the British Virgin Islands. A long-time resident of the Caribbean, Dr. Jarecki helped to set up the science program at H. Lavity Stoutt Community College in the BVI, joining its faculty in 1993. She is a leading expert on Caribbean wetlands, with her doctoral dissertation from the University of Kent at Canterbury focusing on the salt ponds of the British Virgin Islands.



Dr. Lianna Jarecki (center) during Science Week for Kids on Guana Island, BVI



Large barrel cacti plants, Antigua



Coastal morning glory vine, Antigua

◆ Vice Chair of the IRF Board of Trustees, **Barbara J. Lausche** is lead author of another key publication from the IUCN Environmental Law Centre, this one entitled *The Legal Aspects of Connectivity Conservation* (IUCN Environmental Policy and Law Paper No. 85, www.iucn.org/publications).

The report builds on Lausche's 2011 publication *IUCN Guidelines on Protected Areas Legislation*, which sets out key elements for modern protected areas legislation. The new publication goes beyond the *Guidelines* by analyzing critical law and policy aspects that lie outside protected areas. The authors warn that "protected areas, as part of increasingly fragmented and degraded natural ecosystems, will become isolated 'ecological islands' ... [unless they are] better 'connected' to their broader landscapes and seascape"

◆ IRF Senior Research Fellow, **Dr. Michael E. O'Neal** is the author of a newly published book on BVI social history entitled *Slavery, Smallholding and Tourism: Social Transformations in the British Virgin Islands* (Quid Pro Books, 2012). The book explores the development of a political economy in the BVI, from plantations through the evolution of a smallholding economy to the rise of tourism. O'Neal argues that the demise of a plantation economy in the BVI ushered in a century of imperial disinterest persisting until, more recently, a new 'monocrop' — tourism — became ascendant. The book is now available from Amazon and Barnes and Nobles in both paperback and hardcover.