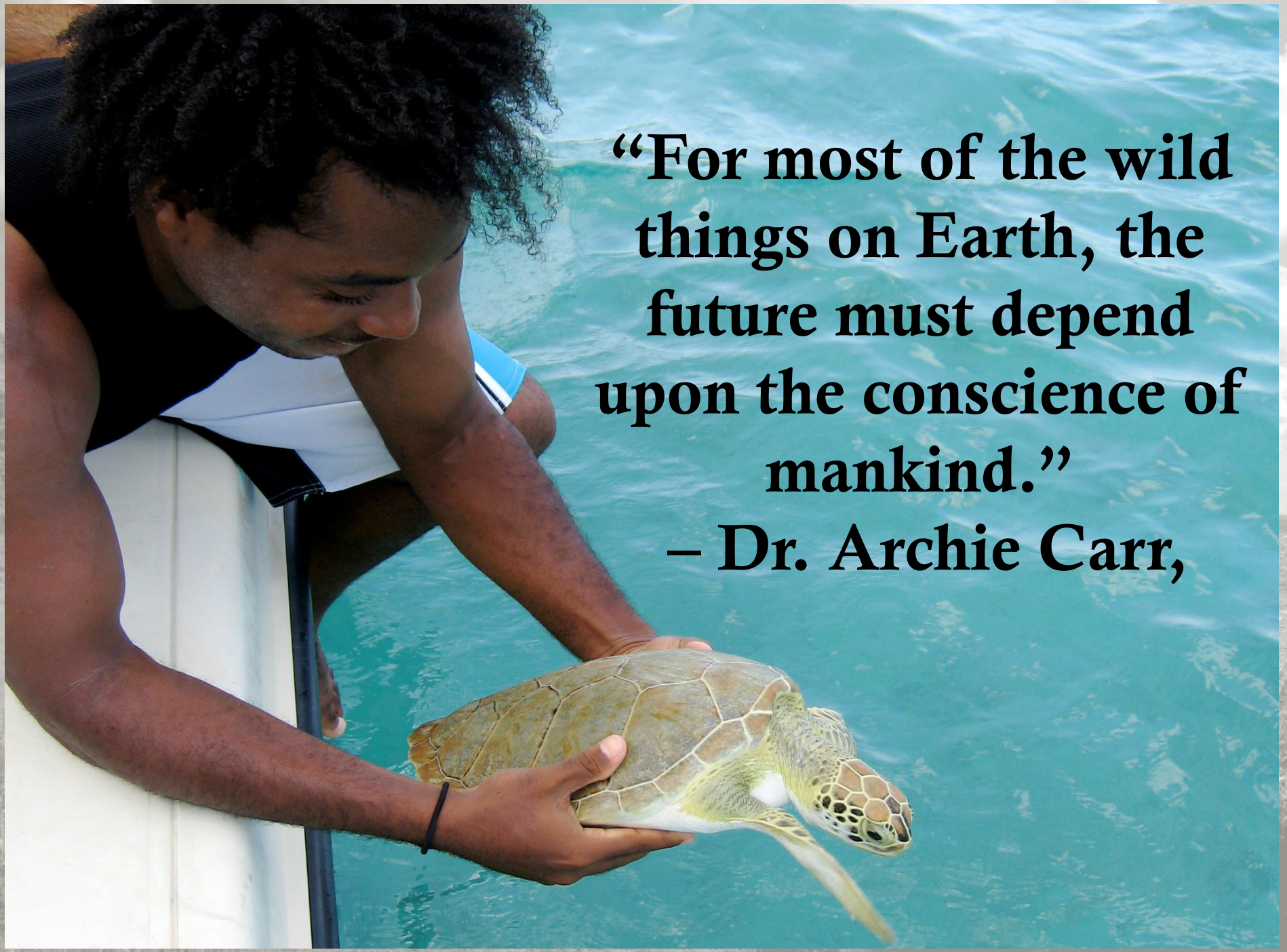
Sea Turtle Conservation at St. Croix's Jack and Isaac Bay Preserve

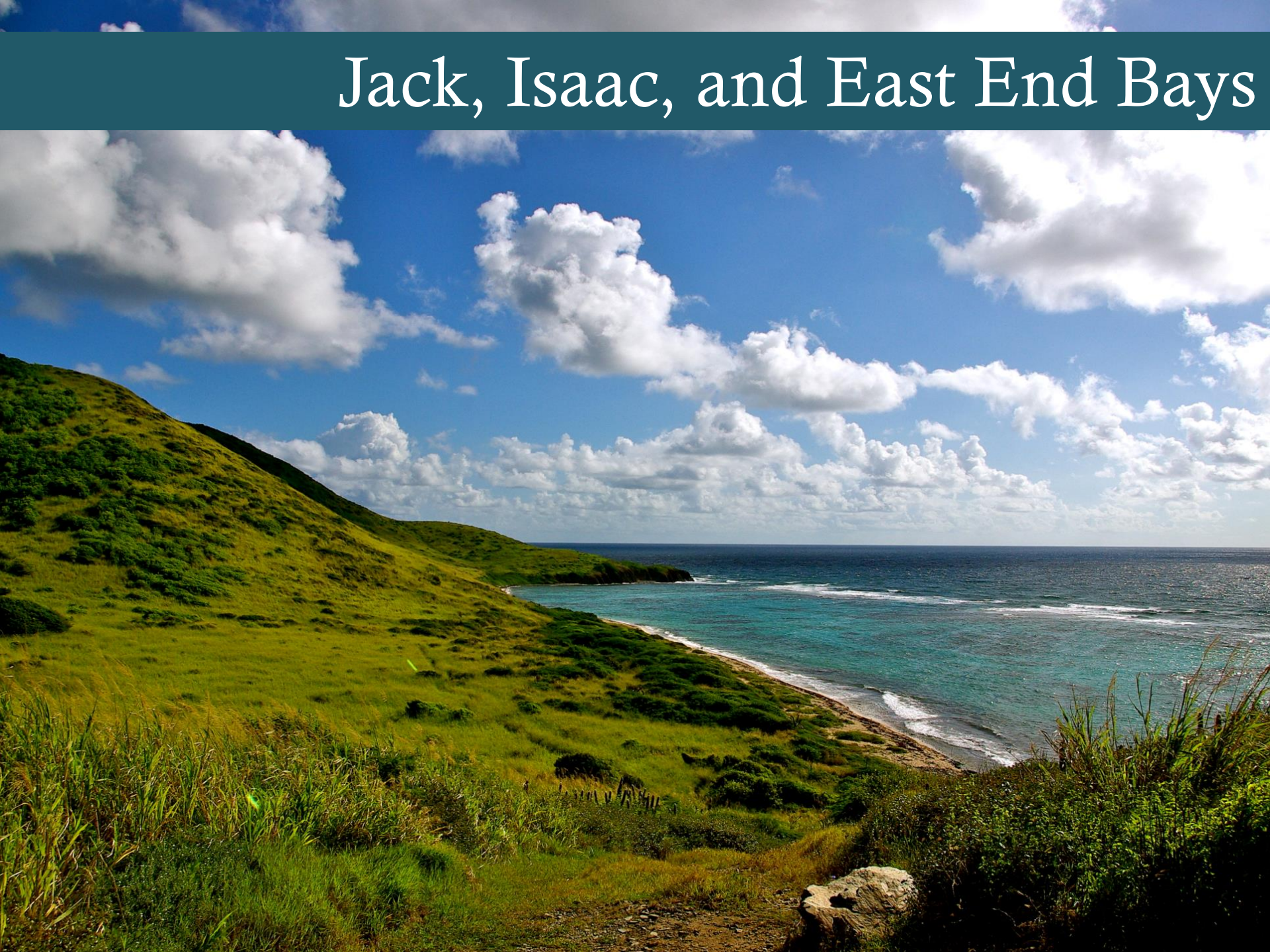
Kemit-Amon Lewis

WIDECAST Annual Meeting
Matura, Trinidad 2018

The Nature Conservancy
Caribbean


“For most of the wild things on Earth, the future must depend upon the conscience of mankind.”
– Dr. Archie Carr,

Jack, Isaac, and East End Bays



Jack, Isaac, and East End Bays

The Jack and Isaac Bay Preserve on the east end of St. Croix was acquired by The Nature Conservancy in 1999

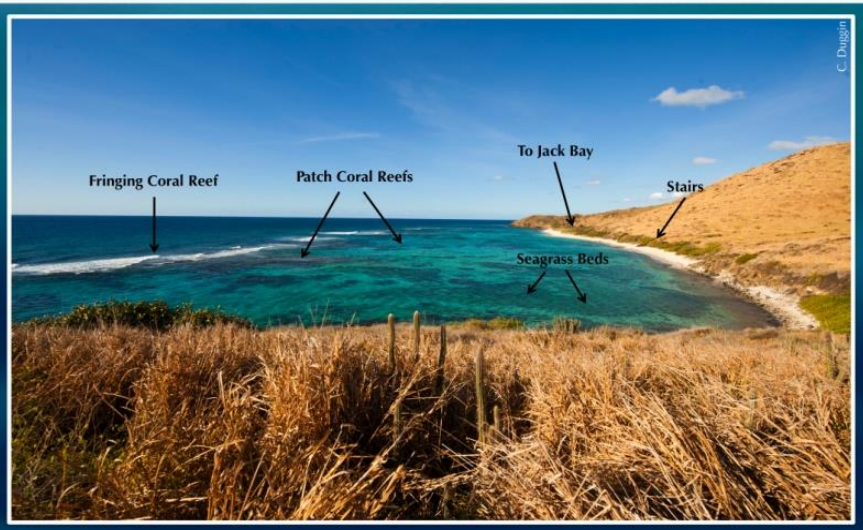
managed to preserve the land in its natural state and to protect the nesting population of green and hawksbill sea turtles that utilize the adjacent beaches

TNC-maintained trails provide access to the bays

Interpretive signs provide information on the bays, rules, and some of the commonly observed plants and wildlife species

Although, some degree of beach monitoring occurs yearly, the occurrence of active nighttime monitoring has been based on funding availability

Jack and Isaac Bay Preserve



Help Protect Marine and Coastal Wildlife!

- Enjoy the wildlife, but do not take or damage plants or animals in the Preserve
- Keep your dog leashed
- Please pack your trash or use the bags provided

The bays here are sheltered by fringing reefs. Snorkeling just inside these protective reefs, you'll see seagrass beds and coral reefs and all the fishes and animals that thrive in these clear waters.

REMEMBER THE RULES
NO FISHING OF ANY KIND
NO CAMPING OR FIRES

East End Plants and Wildlife

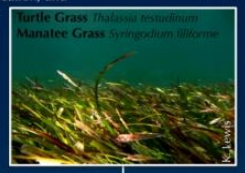
Coral reefs provide food and shelter for a number of marine fishes and other organisms and are also relied upon by millions of people worldwide for food, jobs, recreation, and coastal protection.

These endangered mariners commonly feed in seagrass beds and nest on the beaches of Jack and Isaac Bays.

These bays are home to the endangered elkhorn coral. Thanks to proper land management and trail maintenance, these corals benefit from reduced sedimentation from stormwater runoff.

Once endangered in the United States, Brown Pelican populations have increased as a result of positive human actions.

The Ginger Thomas is the state flower of the US Virgin Islands. Many are found here at Jack and Isaac Bays.



These true plants are important food sources for green sea turtles. Seagrasses also trap sand – preventing beach erosion and improving water quality.

These herbivores remove algae from substrate providing space for coral larvae settlement.

These non-native invasive rodents were introduced to the islands to control snakes and now decimate sea turtle and seabird nests.

When hermit crabs out-grow their shells, they search the beach for another, discarded by a marine snail or other hermit crab; *A perfect reason to leave shells on the beach!*

The Nature Conservancy
Protecting nature. Preserving life.™

EMERGENCY 340-772-9111; The Nature Conservancy 340-718-5575; St. Croix End Marine Park 340-718-3367; Sea Turtle Assistance and Rescue (STAR) 340-690-0474; DPNR Environmental Enforcement 340-773-5774

The Isaac Bay stair platform & low-impact trail leading from Point Udall are made possible through a Coastal Restoration grant to VI RC&D funded by the National Oceanic and Atmospheric Administration through the American Recovery and Reinvestment Act of 2009

US Virgin Islands RC&D Council Inc

Day Time Monitoring

Nighttime Monitoring

Nighttime Monitoring

Threat Reduction

Poaching
Reduced by presence on the beaches during nesting season

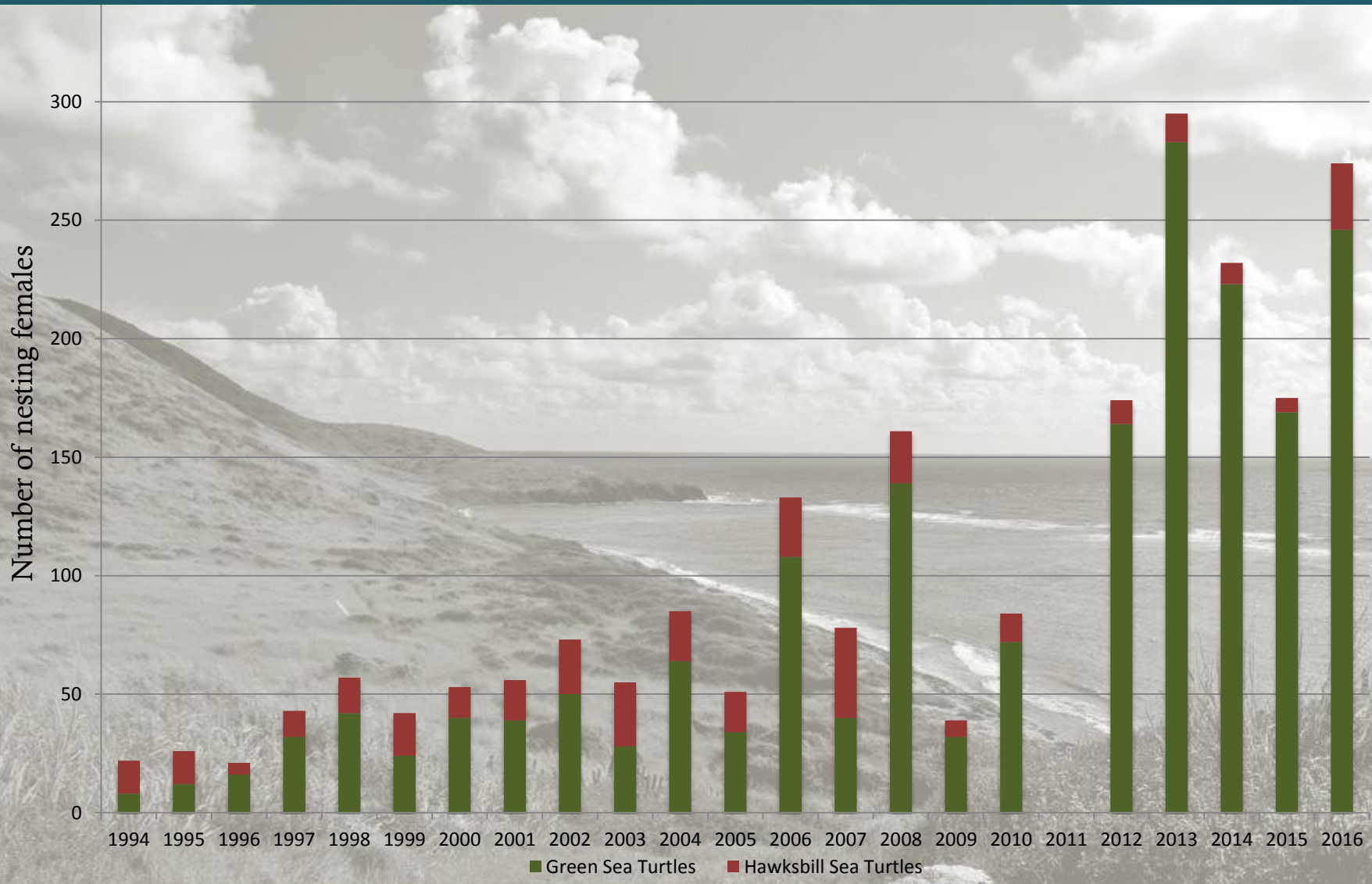
Mongoose
Reduced by trapping project (TNC, DPNR-DFW, USFWS, and USDA partnership)

Artificial Lights
Jacks Bay – Working with the Grapetree Home Owners Association; more compliance needed

Fishery and Boating Interactions
Jack, Isaac, and East End Bays are also a part of the St. Croix East End Marine Park. The marine habitats are now designated as a Turtle Wildlife Preserve.

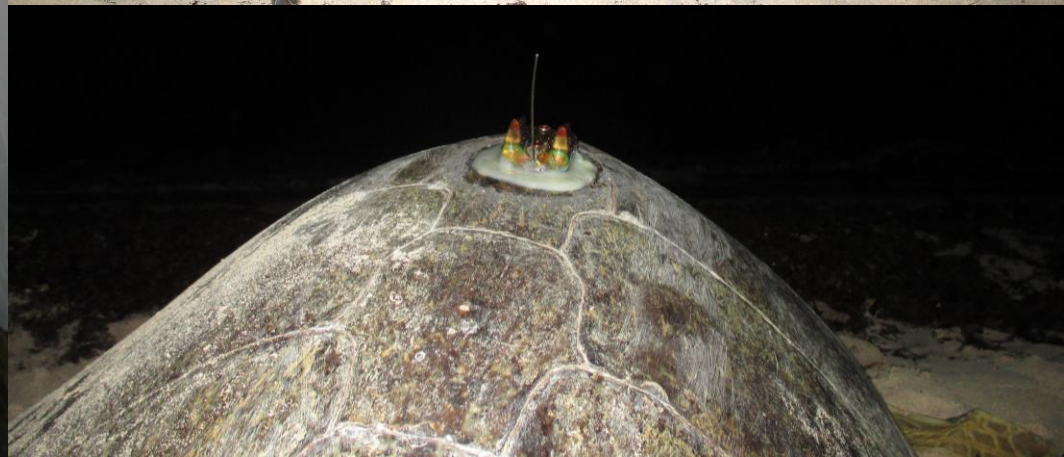
Threat Reduction

Annual total observed individual nesters

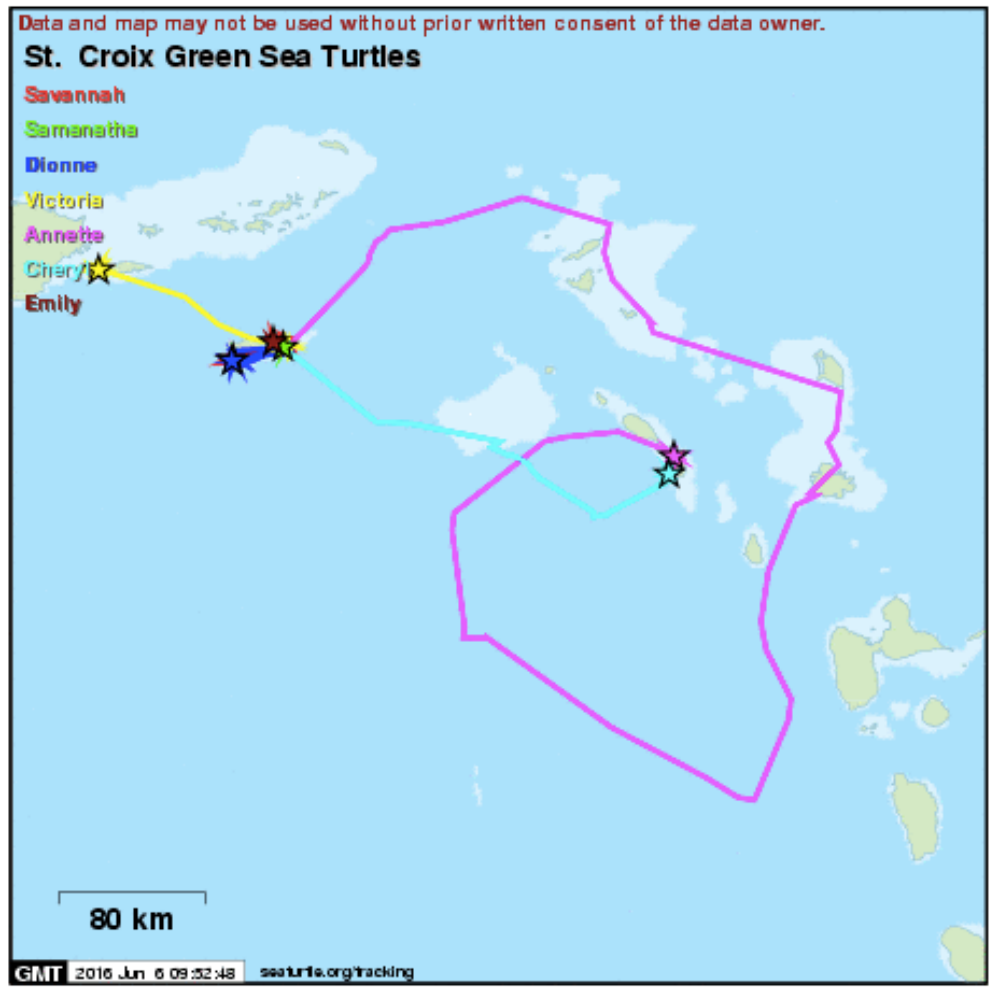


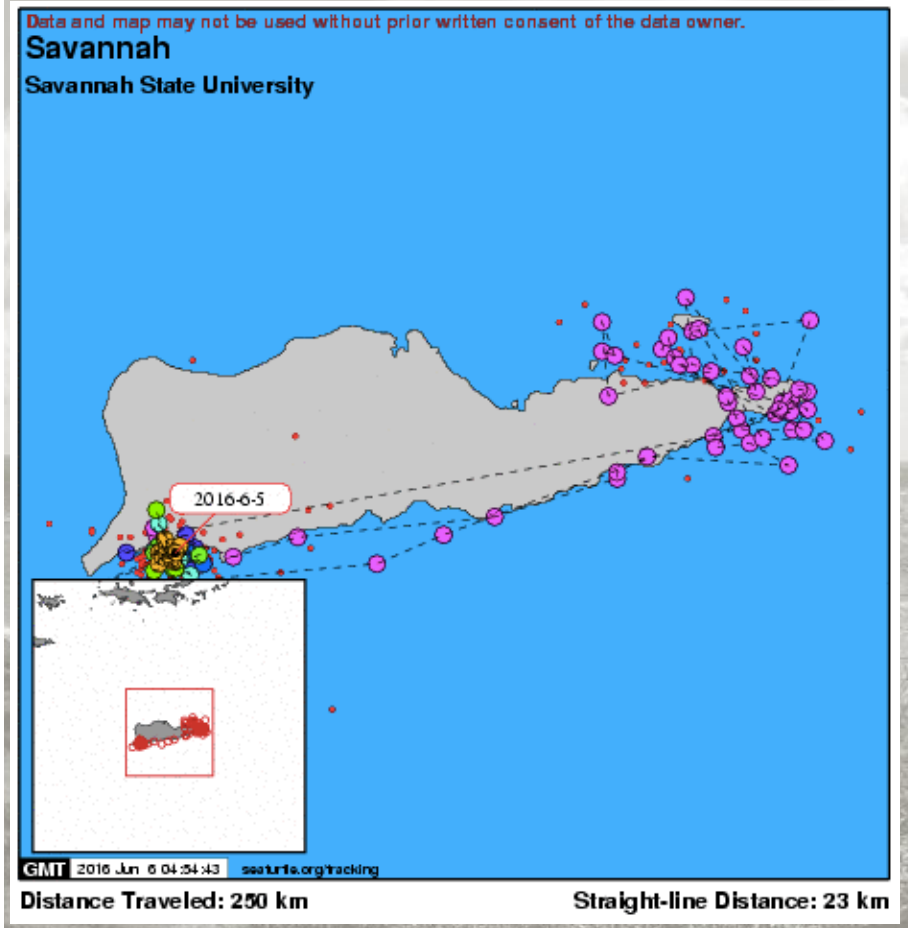
* Incomplete nightly monitoring between 1994-2000
* Only day time monitoring occurred in 2011

New Research



Tagging Results





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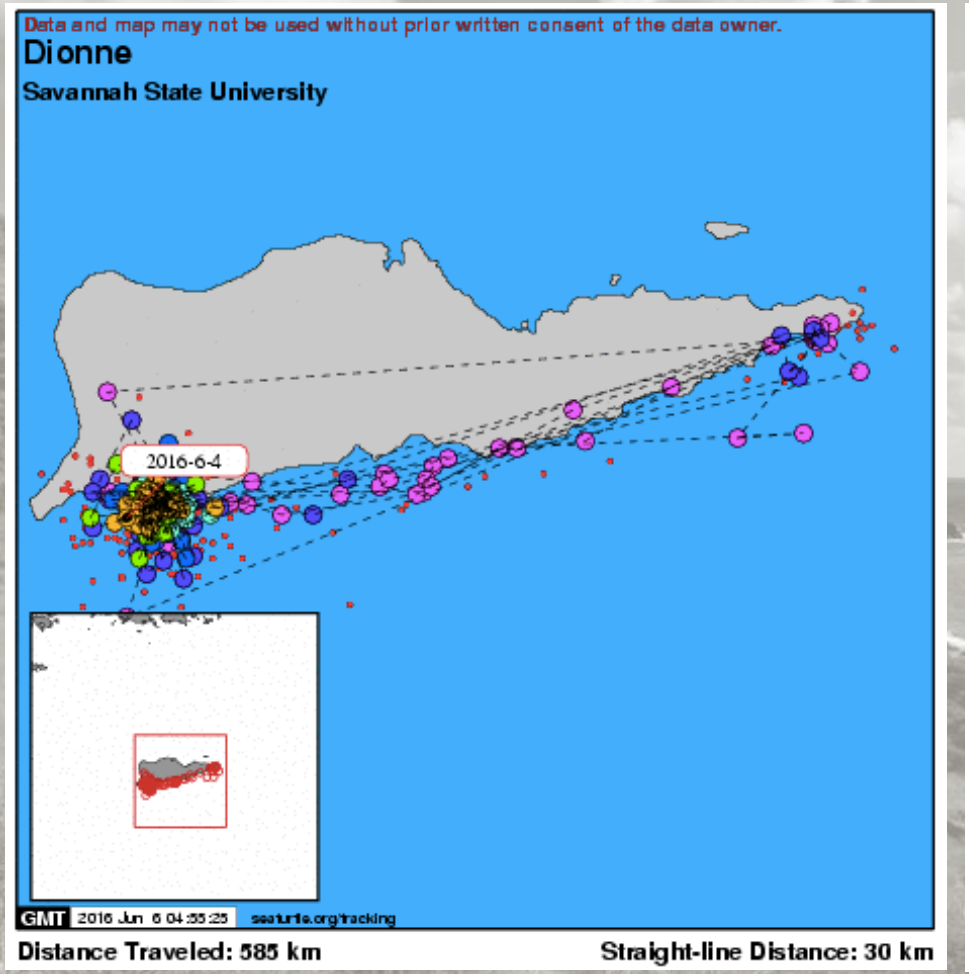
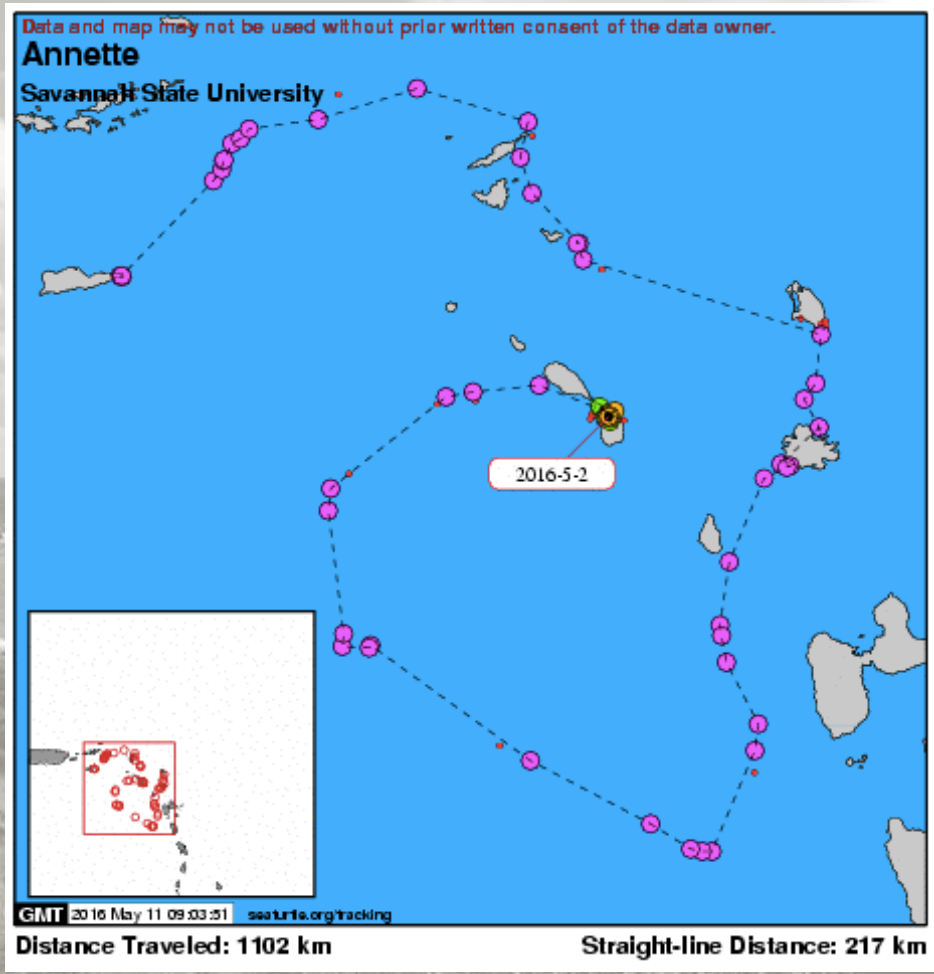


Distance Traveled: 585 km

Straight-line Distance: 30 km



Distance Traveled: 1102 km

Straight-line Distance: 217 km

Rescue and Rehabilitation

A network of sea turtle biologists, volunteers, and veterinarians that rescue and provide rehabilitation services to injured sea turtles. STAR also gathers information on dead sea turtles through necropsies and dissections. This network is 100% volunteer-based and the rescue hotline rotates between it's members.

Rescue and Rehabilitation

Rescue and Rehabilitation

Community Engagement

"Sea Turtle 101": Educating and Engaging a Local Community through an In-Water Sea Turtle Research Project at John Brewer's Bay, St. Thomas, US Virgin Islands

Kemit-Amon Lewis[1] and Paul Jobsis[2]
[1] US Virgin Islands Coastal Zone Management Program
[2] University of the Virgin Islands

2008 Volunteers
Chalaine A. Barry
Elizabeth F. Gibbs
Giselle Auguste
Jan-Alexia Barry
Melissa Lezon
Jonathon Callwood
Gail Alexander
Isha Hodge
James Gibbs
Kavita Balkaran
Leandra Figueroa
Rosanna Dohm
Zoya Alimi
Linda Starr
Adam Gusman
Adam Ringel
Adrian N. Bistol
Elizabeth Lapon
Fiona Stuart
Gaynlin Vogel
Jessica Hornbeck
Francis R Glador, Jr.
Christopher Niebuhr
Kaitlyn Fuller
Kathryn Tannenbaum
Michael A. Thomas
Rosalie Dance
T'Challa Holder
Anthony D'Andrea
Blair Lampert
Brittany Sanderford
Caryl Dussanlt
David Lanclos
Evan Summers
Judy Frazee
Max Laite
Karrisa Cave
Jodi Cole
Kafi Gumbs
Kevin Gleason
Luciano Nibbs
Jennifer Valiulis
Hariyal dan-Fooho
Mckenzel Green
Melanie Feltmate
Joneisa M. Smith
Robert Rodriguez
Ronald Martin
Shelleses Cannonier
Shern Jules
William Bailey
William Bailey
Alicia Holmes
Asa Martin
Bayley Garbtt
Brandi Barry
Diane Ringel
Karl Callwood
Kathy Callwood
Nicola Karen Abram
Penny Morgan
Robert Rodriguez
Tiffany Bernier
Jan-Alexis Barry

INTRODUCTION

Sea turtles have been and are still hunted for a number of historically cultural and medicinal uses in many countries. Additionally, interactions with fishing gear and vessels, loss of nesting habitats, poaching, degradation of foraging habitats, pollution, and diseases have all contributed to global declines and are among the top local conservation issues in the US Virgin Islands. The three species (leatherback, green, and hawksbill sea turtles) commonly found in the United States Virgin Islands are all federally protected under the US Endangered Species Act of 1973 and locally protected under the Indigenous and Endangered Species Act of 1990. As keystone species in their individual habitats, most on or adjacent to coral reefs, their continued existence is important to the stability of those areas. These habitats, coral reefs and sea grass meadows, are important to both commercial and recreational activity throughout the USVI, in-turn making them important to the economy. The local comprehensive, long-term sea turtle studies have all been focused on nesting beaches. The most recent in-water study by Lewis and others, conducted in 2005, identified John Brewer's Bay as a key recruitment and foraging site for green sea turtles. The current in-water research project was designed to study the foraging population of green and hawksbill sea turtles at John Brewer's Bay while engaging the local community through education and participation.

METHODS

Volunteers gathered at the UVI Center for Marine and Environmental Studies on six separate occasions throughout 2008. A brief lesson was prepared that gave an overview of the biology of the locally found sea turtle species, historical uses, and conservation issues. Video of a previous in-water capture was used to demonstrate how to safely catch a sea turtle. Captured sea turtles were measured, weighed, and tagged. Sea turtles were scanned for injuries and tumors, tissue samples were collected, and photographs taken. Turtles were then released at John Brewer's Bay. Volunteers of the project were asked to complete a short survey to assess the community's perspective of the project and of sea turtle research in general.

RESULTS AND DISCUSSION

Over 100 volunteers (from age 10 to over 70) have assisted in or observed the successful free-dive capture, processing, and release of 53 sea turtles (38 greens and 17 hawksbills). As a result of the project the "UVI Turtle Squad" was also formed, which has conducted thirteen swim surveys. The swimmers observed an average of 6.5 green and 1.7 hawksbill sea turtles per hour swim.

Participant Survey

Twenty-four volunteers completed the participant survey. The majority of the volunteers (63%) found out about the project from a friend; others from an email list created by the organizers. Eighty-three percent of the volunteers had no previous experience in sea turtle research; four individuals had been previously involved in sea turtle research projects. Most of the volunteers (74%) thought that the introduction talk was helpful. In fact, only 37% were comfortable attempting to catch a sea turtle before the introduction talk. After the talk, 88% were comfortable attempting to catch a sea turtle. Fifty percent of the volunteers were successful in catching a sea turtle and 54% participated in more than one sampling event. Ninety-six percent would consider participating in future sampling events and would recommend participation to a friend. There were three main themes most remembered from the introduction talk. The first was habitat use and migration and the second was Green Turtle Fibropapillomatosis, its impacts on sea turtles, and its presence on nearby populations. The last remembered theme was the feeding ecology of sea turtles, papillae, and the susceptibility of sea turtles to suffocate on ingested plastics. Two suggestions were given that may improve the project. The first was to better organize volunteers once in the water and second was to provide more incentives for participation.

Future Work

We plan on expanding this project to other local sites and to add acoustic tracking technologies to better understand the foraging populations and migratory behaviors of sea turtles throughout the US Virgin Islands. Analysis of the participant survey indicates that most of the volunteers benefitted from project through the gain of knowledge and enjoyed the hands-on experience. It is our effort to continue to involve the local community towards fostering a better appreciation for sea turtles and their local, regional, and global importance.

ACKNOWLEDGEMENTS

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Community Engagement

"For most of the wild things on Earth, the future must depend upon the conscience of mankind." – Dr. Archie Carr

Jack and Isaac Bay Sea Turtle Hikes

The Nature Conservancy's US Virgin Islands Program's guided interpretive hikes to Jack and Isaac bays

Schedule
Wednesday, October 3, 2012 8-10 PM
Saturday, October 6, 2012 8-10 PM
Wednesday, October 10, 2012 8-10 PM
Saturday, October 13, 2012 8-10 PM

For more information or to reserve a spot on one of these hikes, contact Kemit-Amon Lewis (340) 718-5575 or klewis@tnc.org

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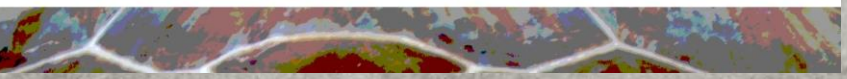

The Nature Conservancy

TURTLE TALK

The Nature Conservancy
invites you to join us for

TURTLE TALK
with Kemit-Amon Lewis
Caribbean Coral Manager

Tuesday, February 7th
5:00 pm – 7:00 pm
Estate Little Princess
52 Little Princess
Christiansted, St. Croix

Evening hosted by:
Susan Smith, *Trustee*
Kathleen Newman, *Volunteer Ambassador*

Crucian cocktails and light hors d'oeuvres

Please RSVP:
Barbara Henszey
barbara.henszey@tnc.org
340-718-5575

Beyond Sea Turtle Conservation

The Virgin Islands Reef Resilience Plan: A multi-faceted approach to coral reef conservation in the United States Virgin Islands

Kemit-Amon Lewis
Caribbean Coral Conservation Manager

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Thank You