



Broad Creek Project Restores Wetland Area

Tidal creeks and associated mangrove wetlands are among the most important habitats in The Bahamas. They serve as “nurseries” where juvenile fish and invertebrates mature before moving as adults to deeper habitats such as coral reefs. As such, maintaining the connectivity between tidal creeks and the ocean is critical for many fishery species and for overall health of the marine environment.

Unfortunately, tidal creeks and mangrove wetlands are often affected by many human impacts, including direct removal, dredging and pollution. Perhaps the most common problem in The Bahamas is *fragmentation* – some obstruction, typically a road, that blocks the flow of water from the ocean into the wetland. This fragmentation prevents the movement of larval and juvenile fishes between the ocean and tidal creeks and causes drastic changes to the creek environment. One example on Abaco was Broad Creek, which was blocked by the road running to from the Ernest Dean Highway to Camp Abaco. This road had rendered the upstream portion of the creek functionally “dead”. The purpose of this project was to restore tidal connectivity, and thus return the creek to its historic functional state.

The restoration project was conducted in two phases. First, four 30” diameter culverts were installed under the road to allow tidal waters to again flood upstream areas. An excavator was used to remove this portion of the road, and subsequently infill the area around and above the culverts. Large rocks were placed on either side of the rebuilt road to prevent erosion from tidal flow. The excavator also cleared areas on either side of the road so that water could freely flow through the culverts.

The second phase of the project provided the

opportunity to include local students and community members in the restoration. Mangroves that had encroached into the historic tidal channel were removed by hand. Mangroves are critical components of coastal tropical and sub-tropical ecosystems, and their removal is an unwanted activity in almost all situations. However, this project was a focused effort to re-create the historic channel for water to flow freely, and ultimately we removed less than 0.1% of all the mangroves in the system. Approximately 510 Bahamians, mostly students, assisted with the channel creation. Most of the schools on Abaco had a chance to be involved in the project. Classroom lectures were coupled with the field trips to maximize the learning experience for the students.

This was a true “win-win” situation: an extremely valuable project was completed for the environment of Abaco (at relatively low cost), while serving as a core educational tool. Approximately 28 upstream acres were restored. These areas will once again become vital additional “nursery” areas for juvenile fishes and invertebrates. Larvae will ride high tides through the culverts to the upstream “pond” area. The connection with the ocean will allow them to ultimately move back to the ocean as adults and to join the breeding population.

Additionally, the restoration re-created the historic tidal regime in the downstream portion of the creek system, substantially increasing the available area for fish to feed, even in the portion of the system downstream of the road. A suite of surveys, pre- and post-restoration, will be completed to research the effects of the restoration on the ecosystem. The surveys will include birds, aquatic vegetation, fish abundance, growth rates and diet.



Before and after photos of the downstream portion of the creek. The cleared channel will provide for more natural tidal flow throughout the downstream wetland to the ocean, through the culverts and into the formerly blocked upstream areas.

Elbow Cay Learns to BYOB!



Mercedes Lowe of Harbour View Grocery was awarded by FRIENDS for her dedication to the Bring Your Own Bag Campaign. Additionally, she has continued to remind customers to bring their reusable bags since November!

Big kudos to the owners and employees of Harbour View Grocery, Vernon’s Grocery and LVA Convenience store for supporting Bring Your Own Bag (BYOB) Month on Elbow Cay this November! The objective for the program was to cut down on the use of plastic bags in local food stores and encourage residents and visitors to shop with reusable bags. Based on data collected through the International Coastal Cleanup, it has been reported that 4.7 million tons of plastic goes into the ocean each year. That’s about 120,000 tons each day—or the equivalent of 8,572 school buses a day!! This is a global problem, but one that we can all easily take strides to change. Simply make it a habit to carry reusable bags when you go shopping and refuse plastic bags when they are offered.

Upcoming Events:

- March 12th—Reef Ball, Abaco Beach Resort
- April 14th—Earth Day Science Fair at New Vision Ministries. Theme: Fresh Water Resources

To Be Announced:

- Lionfish Derby
- Sustainable Fishermen’s workshops

We encourage you to renew your membership by sending in the enclosed membership envelope or by visiting our website, www.friendsoftheenvironment.org. Thank you in advance for your support – the work of FRIENDS could not be done without you!

President's Message



I am honored and humbled that the board of Friends of the Environment has elected me as president for the next two years. I would like to take this opportunity to thank each past leader of FRIENDS for their excellent leadership during the past 22 years. As I write this message FRIENDS continues to grow through commitment from an amazing staff and Board, as well as continued dedication from our members, donors and volunteers. Your participation is essential! Secondly, I would also like to take this opportunity to welcome the newly elected members to FRIENDS Board of Directors. It is exciting to look to the future with incredible Board members and a superior staff, comprised of a wonderful and diverse group of individuals, who are dedicated to fulfilling FRIENDS mission to protect and preserve Abaco's fragile environment.

Although 2011 has just begun, FRIENDS has been extremely busy. I am happy to report that each member of the Board and staff took their valuable time to participate in a two day board retreat this January. While developing a 2 year strategic plan, we all pledged to renew our commitment to FRIENDS to continue working in five different committees; education, marine, terrestrial, waste management and sustainable development. The programs within each of these committees include diverse activities, such as: field trips and visits to every school in Abaco, annual science fairs, summer camps, mooring maintenance, reef checks, water quality testing, lion fish derbies, coordinating proposals and research for protected areas, bird counts, plant fairs, recycling, "green bags", and sustainable development workshops. FRIENDS is also known for helping visiting scientists and schools with logistics as well as partnering with other organizations when environmental threats arise.

In addition to all of the practical work, FRIENDS continues to sponsor exciting fundraising events, including two fantastic "Reef Balls". These annual fundraisers are incredibly important, as they allow FRIENDS education program to continue.

You, all of our contributors, along with the staff and Board, will be proud to know that FRIENDS was one of three finalists for The Bahamas' prestigious Cacique Award in Sustainable Tourism. "The Cacique Awards recognize the roles played by those individuals and organizations whose performance or products have consistently made a positive impact on the quality and the growth of tourism in The Bahamas." It is truly rewarding to be recognized in this manner. If this year continues as it has begun, we can count on a productive year doing what FRIENDS does best; helping to preserve and protect Abaco's environment, this amazing place we all cherish. A great big thank you to all FRIENDS members and contributors who believe in FRIENDS and the importance of protecting Abaco's pristine environment. We truly could not do it without your support.

THANK YOU!
Cha Boyce

Please check FRIENDS' website to see those **BUSINESS DONORS** who have so generously given their support this year.

Pride Campaign Update

For the last two years, d'Shan Maycock, FRIENDS Education Officer and 'Size Matters' Campaign Manager has been busy working with the community to reduce juvenile lobster fishing in Abaco. Using a multi stakeholder approach, d'Shan engaged residents in Abaco from school aged children, community leaders, and fishermen, to commercial exporters, and law enforcers from the Department of Marine Resources.

With the support of Virginia based conservation organization Rare, FRIENDS was able to launch a social marketing campaign that used a variety of marketing materials such as bumper stickers, billboards, t-shirts, posters, and key chain measuring tapes to get the campaign message out to the Abaco community: lobster tails need to be at least 5 1/2 inches before fishing them. Rare trains conservation leaders around the world to launch Pride Campaigns in their communities, and has successfully helped launch more than 160 campaigns in four regions around the world.

d'Shan spent a total of 18 weeks over the last two years in the University phase of the program and successfully completed requirements for a Masters degree in Communications from the University of Texas, El Paso. In fact, d'Shan trained with 8 other campaign managers from around the world and was one of the first in Rare's history to receive a Masters Degree upon completion of their training program.

To date this campaign has been very successful in getting stakeholders engaged in protecting Abaco's lobster populations. It has even attracted national and international attention and is considered a key activity in the national Fishery Improvement Project of The Bahamas. Internationally the campaign has been featured in many print and web based articles—including a listing on National Geographic's Eco

Atlas website as a global example of how local communities can play a role in protecting valuable marine resources.

The Size Matters Campaign has extended beyond the bounds of what we could have imagined. "Size Matters" has also become a household name in Abaco. Nearly everyone on the island has read the campaign message on a bumper sticker, heard the campaign song or seen our mascot "Spike".

All of the valuable knowledge and procedures that d'Shan learned as part of the program are being integrated into every aspect of FRIENDS in order to make us more efficient and to improve our community outreach. Campaign follow up activities will continue this year and will include restaurant workshops, sustainable training workshops with fishermen, voluntary stock assessment data collection and community outreach. To learn more about the campaign and how you can support sustainable fishing practices, email:

dmaycock@friendsoftheenvironment.org
or visit the campaign's page on our website by clicking the 'Size Matters' logo or join us on Facebook.



Help bring back the Reef Check Program!

In 2008 FRIENDS became an affiliate of Reef Check International, which provided a method for monitoring the health of the local reefs and a vehicle for funneling that information into understanding the larger picture of the health of Caribbean reefs. Maintaining a data collection regime at local reefs allows us to both to be aware of changes as they occur and to help identify the cause of those changes. The more we know about our reefs, the better we can mitigate any adverse threats to them.

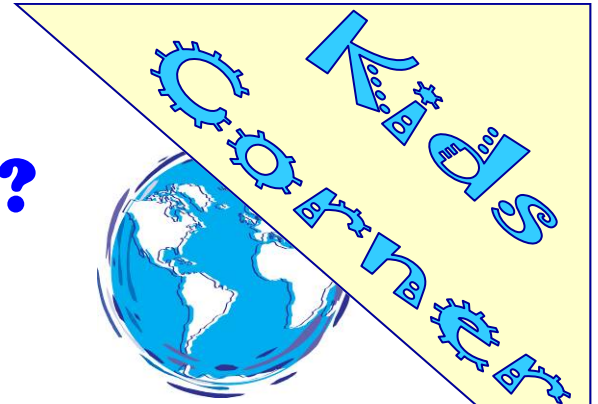
Wayne Mitchell, a former NAUI SCUBA instructor and business partner of Abaco Dive Adventures, was helping to fund the program, in cooperation with NAUI International. But at his untimely death last year funding for the program stopped.

FRIENDS has explored other avenues of funding without success. If there are any organizations, individuals or businesses who would like to work with FRIENDS to adopt a local reef it would be an important step in working to keep Abaco's reefs healthy and beautiful for all to enjoy. Adoption would be \$1,000 a year and funds would be used to organize dive trips to the reef at least twice a year to do fish and invertebrate counts, assess coral cover and health, collate the data, send it to Reef Check International and report back to the community on the health of the reefs.



What's New with the Education Program?

Size Matters Campaign and Spike the Spiny Lobster visit Abaco Schools, Discovery Club Explorers complete Scary Creatures badge, Spotlight Abaco: Environmental Film Competition, Early Childhood Education Workshop



Lauren Yeager of FIU gave a presentation to Man-O-War Primary School about Broad Creek Restoration.



Central Abaco Primary got really hands on at Broad Creek! Here's the muddy proof!



Left: Spike the Lobster visited Abaco schools (with Education Officer d'Shan Maycock) to spread the word about the "Size Matters" campaign.

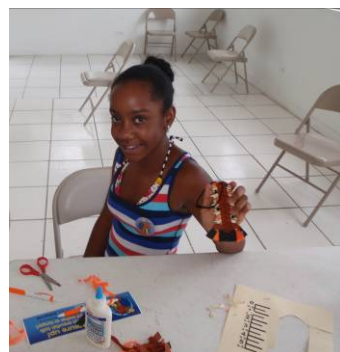
Right: Those mangrove roots sure are hard to pull up! No wonder they provide such good protection to the land!



Students of ACH helped refine the channel and tamp down the dense mat of mangrove roots by walking over them.



Students visited our Size Matters display at many local events to learn some more facts about Spiny Lobster.



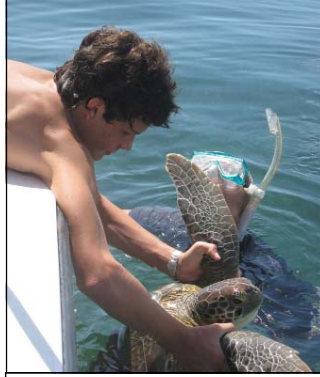
Summer Campers made their own crawfish tail crafts—making sure that they were at least the minimum size



Sandy Point Campers and volunteers share their excitement after a fun snorkel at Mermaid Reef in Marsh Harbour!

Spotlight Abaco: Environmental Film Competition

James Boyce, a 9th grader at Forest Heights Academy is the winner of the first Spotlight Abaco Film Competition. Spotlight Abaco is a partnership between FRIENDS and Loggerhead Productions to inspire Abaco's youth to share their passion about the environment through film. James' proposal focuses on sea turtle conservation and the discussion surrounding the legislation recently passed in The Bahamas which outlaws sale or capture of turtles or turtle products. James also plans to use the film to raise awareness of sea turtle biology. James will be working side by side with Loggerhead Productions to create a 5 minute film which will be used for educational purposes throughout Abaco, and beyond. The first runner up was James Albury who proposed a film about the



Above: James helping Thomas Bethel tag a turtle

Hole in the Wall Light station and the history and environment surrounding it. Second runner up was Team Eco-Troopers of Brian Higgs and Lyndiesha Curry who wished to raise awareness of the threat of excess nutrients in runoff to coral reefs in Abaco. All the students who submitted a proposal to the competition did a great job and we hope that they continue following their passion with the environment and consider entering the competition again next time!

11th Annual Reef Ball Fundraiser

Saturday, March 12, 2011
The Abaco Beach Resort Pavilion

Doors open at 6:30pm
Live & Silent Auction, Martini Bar, Live Band

All funds go towards environmental education in Abaco!

FRIENDS does its best to provide logistical support to visiting scientists to assist in their field research, which ultimately helps our environment. FRIENDS is now looking for a new vehicle to assist our programs and which the scientists can use, as the current one is succumbing to the elements. If you, or someone you know, would like to donate an old (or new) truck to a good cause, please contact FRIENDS.

FRIENDS' Mission: To preserve and protect Abaco's terrestrial and marine environments in order to achieve sustainable living for the wildlife and people of Abaco, Bahamas.

Officers:

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Program Coordinator, Olivia Patterson
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Marine Conservation, Cha Boyce
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Waste Management, Bernadette Hall
Sustainable Development, Charlotte Dunn
Data Coordinator, Nan Kenyon
Internal Affairs, Cha Boyce
Reef Ball, Cha Boyce
Website, Robert Bethel

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e-mail: info@friendsoftheenvironment.org

website: www.friendsoftheenvironment.org

Mailing Address:

PO Box AB-20755
Marsh Harbour, Abaco, Bahamas

FRIENDS has an Intern!

Chamon McIntosh, a graduate of Forest Heights Academy in Marsh Harbour, Abaco has just joined the work force of FRIENDS as an intern. Having just finished a semester on the island of Eleuthera, at The Island School, we hope to extract his experiences and new found knowledge of the environment and use it to help reduce the carbon footprint of our organization. He will be helping out in the office as well as giving presentations at local schools in Abaco about the Bahamas Environmental Steward Scholars' program. Chamon will be with FRIENDS until April. Visit Chamon's blog at www.bessinternship.wordpress.com/ to follow his experience!



FRIENDS thanks Friends

Cruiser's Net Announcements: Pattie Toler, Oll Wireless

Broad Creek Restoration: Big Cat, Schooner Bay, Serenity Point, Camp Abaco and Pastor Symonette, Rotaract, Adele & Timmy McDonald, Ministry of Works

Recycling: Every Child Counts, Oasis Services,

Internal Affairs: David Price, Attorney at Law

Moorings Maintenance: Mark Gonsalves, Tim Higgs, Froggies Out Island Adventures, Dive Guana, Baker's Bay Golf and Ocean Club, Bahamas National Trust

Size Matters Pride Campaign: Marsh Harbour Importers and Exporters, JA Pinder, North Abaco Fishing Cooperative, The Bahamas Marine Exporters Association, Laterah Reitsma, Cindy Carroll, Abaco Central High, Cyber Learning Center, S.C. Bootle High, The North Abaco Fishing Cooperative, Pedro Maycock, Michael Johnson, Bradley Fox, Mr. Roscoe Thompson, Roosevelt Curry, Spring City Rockers, and All Supporters of T-Shirt Day

Discovery Club: Alana Carroll

Summer Camp: Chelsea Renn, Dinorah Chacin, Christina Acevedo, Young Bahamian Marine Scientists, BMMRO, Aly Boyce

Christmas Bird Counts: Woody Bracey, Reg Patterson, David Knowles and all volunteers

Early Childhood Education Workshop: Enzil Cooper

Sea of Abaco Dolphin Research: Bahamas Marine Mammal Research Organisation, John Durban, Holly Fearnbach, Marsh Harbour Importers and Exporters, Conch Inn Marina, Abaco Petroleum, Sea Spray, Lighthouse Marina,

Wild & Scenic Environmental Film Festival: Hope Town Harbour Lodge, New Vision Ministries, Colin Lightbourn, Amy Smith, Kim Roberts, Abaco Pathfinders, The Bahamas National Trust, Candace Key

BYOB Campaign: Mike and Carol Muscato, Harbour view Grocery, LVA Convenience Store, Vernon's Grocery, Hope Town School "Plastic Police"

FRIENDS is a not for profit Society incorporated under the Bahamas Companies Act of 1991. FRIENDS is also a registered 501 (c) 3 organization; that means gifts to FRIENDS are tax deductible in The United States.