



### Toledo Institute for Development and Environment (TIDE)

The Toledo Institute for Development and Environment (TIDE) was founded in 1997 to meet the growing environmental and development needs of the Toledo District, the southernmost district of Belize. TIDE was conceived as a grassroots initiative in response to the negative environmental effects from activities such as manatee poaching, illegal fishing, illegal logging, destructive farming methods, and other types of unsustainable development. Initially started by volunteers, TIDE has now grown to include 20 paid staff.

TIDE's mission is to research, monitor, and help manage Toledo's natural resources. The Maya Mountain Marine Area Corridor stretches from the lush pristine forests of the Maya Mountains to the white sand beaches and spectacular array of colors of the Belize Barrier Reef

System World Heritage Site. In addition, TIDE assists planning responsible tourism and other environmentally sustainable economic alternatives by providing training and support to local residents.

Toledo Institute for Development and Environment (TIDE) also leads ecotourism expeditions throughout Belize, in addition to other wildlife conservation and monitoring activities.

#### Contact Information:

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[www.tidebelize.org](http://www.tidebelize.org)



The Programme for Belize (PFB) is a Belizean, nonprofit organization, established in 1988, to conserve the natural heritage of Belize and to promote wise use of its natural resources. The Rio Bravo Conservation and Management Area (RBCMA) is its flagship project where Programme for Belize demonstrates the practical application of its principles.

Since its inception, PFB has secured 260,000 acres of forest in northwestern Belize that was otherwise destined for clearance. The RBCMA represents approximately 4 percent of Belize's total land area and is home to a rich sample of biodiversity including: 400 species of birds, 200 species of trees, 70 species of mammals and 12 endangered animal species. On the

RBCMA, PFB conducts research, conservation education, professional training and promotes environmental awareness among visitors. In addition, the forests of the Rio Bravo Conservation and Management Area are important sites for a carbon sequestration project. Here, four million tons of carbon will be sequestered for generations to come.

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Photos thanks to B. Rodriguez, S. Weinreb, D. Larson, R. Laubach, K. O'Neill, M. Vokey.

# BELIZE CONSERVATION FUND



## NEWSLETTER

January 2010

The **Belize Conservation Fund** provides important financial support for conservation work in Belize. By supporting the Belize Conservation Fund, you will directly help the important conservation work of the following two Belizean organizations with which Mass Audubon has partnered for many years:

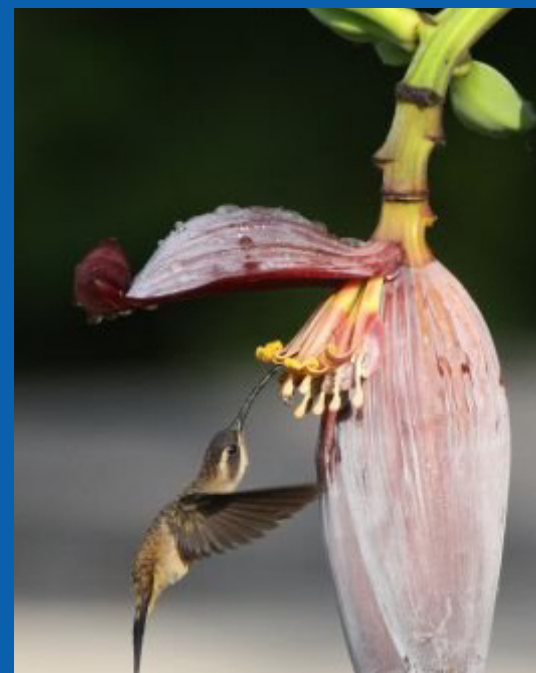
#### Programme for Belize (PFB)

Founded by Mass Audubon in 1988, PFB's mission is to preserve and protect 262,000 acres of tropical forest in northern Belize, known as the Rio Bravo Conservation and Management Area (RBCMA). This vitally important area represents approximately four percent of Belize's total land area and is the most diverse protected area in Belize. PFB operates two facilities for visitors and researchers: La

Milpa and Hill Bank field stations. PFB is striving for financial self-sufficiency for this protected area through earned revenue from sustainable forestry, carbon sequestration, and ecotourism.

#### Toledo Institute for Development and Environment (TIDE)

was founded in 1997 to meet the growing environmental needs of the Toledo District in southern Belize. Mass Audubon partners with TIDE to protect the Port Honduras Marine Reserve and the Paynes Creek National Park. The reserve is recognized for high biodiversity with a robust belt of mangroves and sandy coasts providing a critical link between terrestrial and marine environments. The reserve encompasses estuarine communities and protects fringing reefs and associated habitat. Approximately 4,500 people live in adjacent communities with additional fishing pressure stemming from poachers. TIDE provides education, training, and sustainable economic alternatives for the local communities.



#### TO HELP:

Please send contributions to  
**Belize Conservation Fund**  
c/o Massachusetts Audubon Society  
208 South Great Road,  
Lincoln, MA 01773  
Or call Bancroft Poor /Karen O'Neill  
at 800-289-9504

In the past year, the Belize Conservation Fund has funded several projects at TIDE and PFB. For instance, a recent grant allowed TIDE to upgrade and repair the solar energy system at the Abalone Caye Ranger Station. This ranger station, visitor center, and surveillance tower is home to TIDE rangers on duty in the Port Honduras Marine Reserve, as well as scientists, interns, and volunteers conducting monitoring and research. An additional award to TIDE enabled the organization to pay for one year of high school for a promising local student (high school is not free in Belize).

Small grants to PFB also assisted six students from communities adjacent to the RBCMA to attend high school. \$3,000 was donated to each of the field stations to purchase needed equipment such as stoves for the guards at the three entry gates, hand held radios for the rangers, life jackets for tourists, picnic tables, solar pathway lighting, and fire extinguishers.

JANUARY 2009

\$25,000 was received by Belize Conservation Fund from the Wallace Research Foundation for repairs and improvements to the kitchen and dining facilities at PFB's La Milpa Field Station. For those who have visited La Milpa in the past, the delicious fare was always a highlight. We are proud to say that this great food will now be prepared in a wonderful new kitchen

Keeping the researchers and ecotourists coming to PFB's La Milpa facility is essential for the ongoing support and protection of the forest. The kitchen enhancements will improve the quality of the visitors' experience. Almost 30% of the revenue of PFB comes from ecotourism, a percentage that PFB hopes to increase as it strives for financial self-sufficiency over time.



JULY 2009

Based on the success of the grant listed above, the Belize Conservation Fund received a second grant of \$85,000 from the Wallace Research Foundation. These funds allow the La Milpa staff to make many renovations to staff housing units, the visitor dormitory and cabanas, the gift shop, and the maintenance facility. Work is currently underway and is anticipated to be completed prior to the 2010 tourist season. When these repairs are completed, there will be only a few major projects remaining at the La Milpa station:

- Upgrading the photovoltaic system to minimize the need for use of the diesel generator (\$20,000)
- Improving and expanding interpretation on trails and constructing a small observation tower (\$10,000)
- Re-building and improving the education center, including a small library and museum (\$20,000)

The Belize Conservation Fund will seek funding to assist PFB in making these final improvements. Any suggestions for funders are most welcome! We hope you will visit La Milpa to enjoy these new facilities and to see the wildlife and ruins. Please help spread the word to fellow travelers and supporters!

DONATIONS GO A LONG WAY IN BELIZE



NEWS FROM HILLBANK STATION

Located on the banks of the New River Lagoon, the Hill Bank Field Station serves as a research base for sustainable forest management and specialized tourism, which incorporates research activities into the visitors' forest experience

With a workforce of up to 30, Hill Bank is home to a diverse crew of rangers, forestry personnel, and a host of others committed to tropical forest protection. Visitors include active researchers and college students taking Tropical Forestry classes. If you have the opportunity to stay at Hill Bank you will become part of our field station community, learning about tropical forest conservation activities.

Hill Bank is the central base for the rangers who patrol and protect the boundaries and wildlife in the Rio Bravo Conservation and Management area. These rangers have the very difficult task of patrolling the entire 262,000 acres of the reserve, tracking down bird and wildlife poachers, and stopping illegal logging operations.

They also enforce the boundaries to keep local farmers from cutting into the forest for more agricultural land. With their dangerous and demanding job, these rangers are to be applauded for their many successes.

However, insufficient funding and the lack of transportation has created some difficulties in recent years. It takes two rangers five months (February to June) to continuously patrol the Rio Bravo savannah land that is home for the Yellow Headed parrots. Despite many years of success, the lack of funding in 2009 constrained the ability of the PFB staff to protect the nesting area constantly. The nests were all robbed of the chicks by poachers in this season.

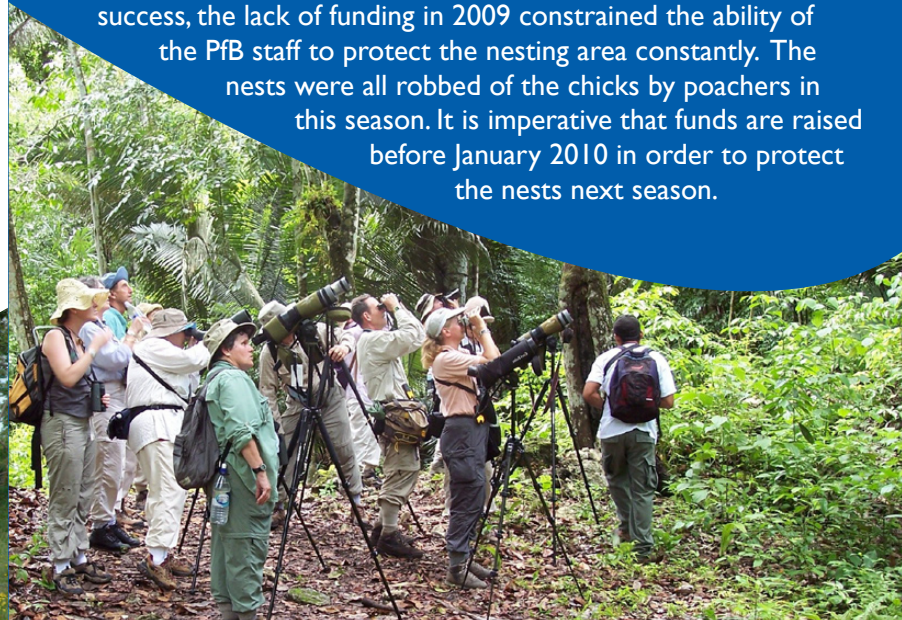
**It is imperative that funds are raised before January 2010 in order to protect the nests next season.**



YELLOW-HEADED PARROT PROTECTION

The Belize Conservation Fund recently made a \$40,000 grant to TIDE for yellow-headed parrot protection in southern Belize and specifically in Payne's Creek National Park, managed by TIDE for the Government of Belize. The parrot is a key indicator species for this ecosystem and therefore its wellbeing attests to the overall health of the pine savannah habitat. This is a key objective in TIDE's long term goal to conserve vital ecosystems and species in southern Belize, from the ridges of the Maya Mountains to the reefs of Port Honduras.

In Northern Belize, it takes two rangers five months (February to June) to continuously patrol the Rio Bravo savannah land that is home for the Yellow Headed parrots. Despite many years of success, the lack of funding in 2009 constrained the ability of the PFB staff to protect the nesting area constantly. The nests were all robbed of the chicks by poachers in this season. It is imperative that funds are raised before January 2010 in order to protect the nests next season.



MAKE A DONATION

To make a donation to the Programme for Belize (PFB) or to The Toledo Institute for Developmental and Environment (TIDE), please complete this form and return to:

Massachusetts Audubon Society  
Belize Conservation Fund  
208 South Great Road  
Lincoln, MA 01773

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State ZIP \_\_\_\_\_

Phone \_\_\_\_\_

E-mail \_\_\_\_\_

Yes, I would like to make a donation

Donation Information

Enclosed check \_\_\_\_\_  
Checks should be made payable to  
Mass Audubon -Belize Conservation Fund  
or please charge my credit card for the amount of \_\_\_\_\_

VISA \_\_\_ MC \_\_\_ Card Exp: \_\_\_\_\_

Signature \_\_\_\_\_

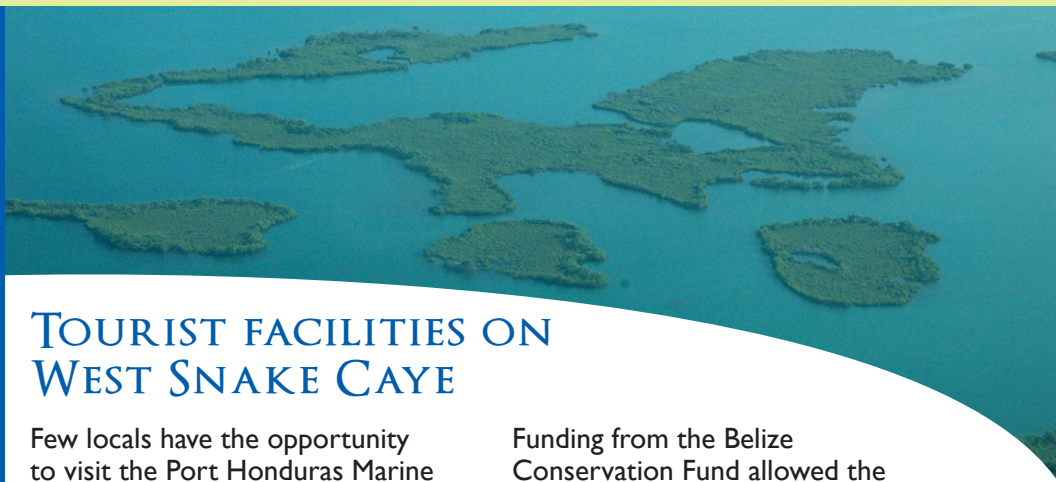


ABALONE CAYE RANGER STATION

YOUR SUPPORT KEEPS SOLAR POWER GOING STRONG!

With financial assistance provided through the Belize Conservation Fund, TIDE was able to upgrade and repair to the solar powered energy system at the Abalone Caye Ranger Station. This Station and tower is home to TIDE rangers on duty in the Port Honduras Marine Reserve and home to scientists, interns, and volunteers conducting monitoring and research.

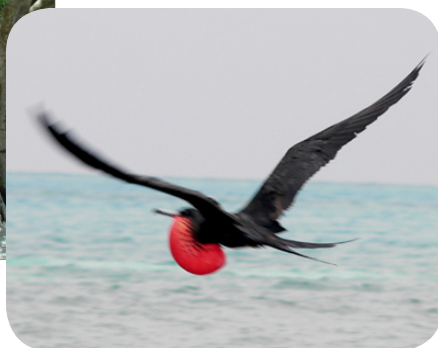
The power system at the Abalone Caye ranger station has been operating for eight years and is a generally good system but deterioration over time required these needed repairs and upgrades. With care and good maintenance, the system should provide good, clean energy for the future.



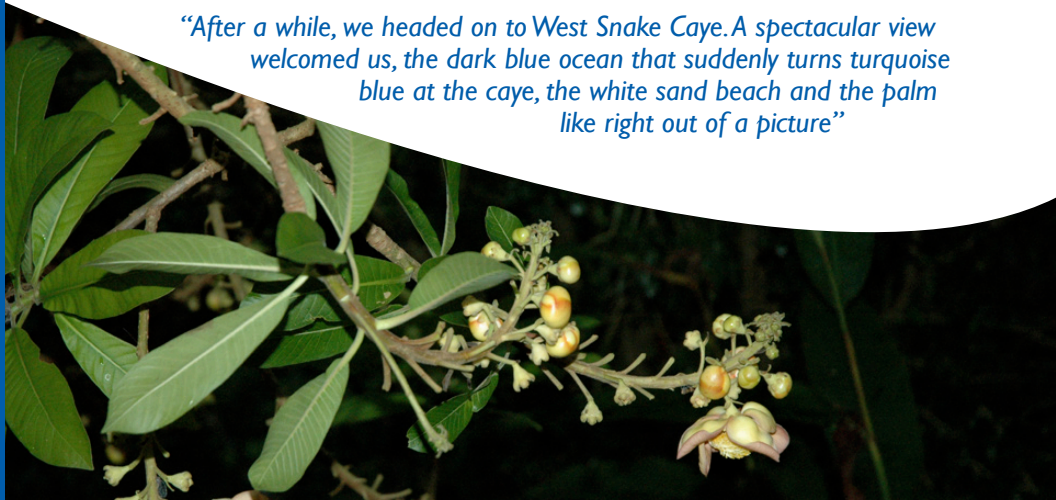
TOURIST FACILITIES ON WEST SNAKE CAYE

Few locals have the opportunity to visit the Port Honduras Marine Reserve despite its close proximity to the town of Punta Gorda and other nearby villages. In part, this is because there are very few cayes (islands) in the reserve that are suitable for visitors. One of these is West Snake Caye. With 90 feet of shifting white beach and snorkeling on the fringing reefs, West Snake Caye is an ideal place for visitors to enjoy and learn to appreciate the reserve.

Funding from the Belize Conservation Fund allowed the Toledo Institute for Development and Environment (TIDE) to build a palapa on West Snake Caye. This structure provides shade and comfort to local visitors. On West Snake Caye snorkelers, bird watchers and weekend recreational visitors have experienced and enjoyed the vital and precious the marine reserve. The palapa provides a place to rest, enjoy a picnic, change clothes and enhances the experience of the visitor and local resident to Port Honduras Marine Reserve.



“After a while, we headed on to West Snake Caye. A spectacular view welcomed us, the dark blue ocean that suddenly turns turquoise blue at the caye, the white sand beach and the palm like right out of a picture”



JAGUAR RESEARCH AT RBCMA

Non-invasive tracking of jaguars and other feline species in Belize has been conducted in Rio Bravo’s subtropical forests by Virginia Polytechnic Institute and State University and Dr. Marcella Kelly. Using camera “traps,” her team has identified population numbers and densities for large mammals. In the summer of 2009, they counted 9 jaguars, 18 pumas, 9 ocelots, and 1 margay. The research team is currently analyzing thousands of photos to get additional estimates on these populations.

Jaguars and wild cat populations are threatened primarily by habitat loss and fragmentation. Due to human presence, forest areas have disappeared and reduced to isolated patches. Isolated populations have a decreased level of dispersal of breeding individuals impacting the genetic divergence of populations. So the viability of the jaguars is further threatened. Rio Bravo is one of the few large, extensive, continuous tropical forest areas available to jaguars and other large cats.



PROJECTS AT THE PROGRAMME FOR BELIZE SUSTAINABLE FORESTRY IN BELIZE

Timber is one of the most important forest products in Belize. In theory, it is possible to manage sustainable extraction of timber without compromising environmental values. In reality, however, there are very few practical examples of such management around the world. Integrating timber and conservation management is one of the great challenges for tropical forest protection on a large scale.

The Programme for Belize staff, centered at the Hill Bank station, is leading the way for researching and managing responsible timber extraction. With experiments and rigorous monitoring of forestry impacts, the Programme is building an important understanding of responsible forestry.

These operations are conducted in a special zone covering less than 20% of the RBCMA and buffering the fully protected core that constitutes the bulk of the property. The operation is subjected to annual external audit. The timber is certified by SmartWood and WoodMark under the rules set down by the Forest Stewardship Council. This acts as an assurance to PFB, its many supporters, and the purchasers of its timber products that RBCMA timber operations are of the highest environmental quality. And most importantly, PFB’s work serves as an example that others can imitate.

Forestry provides approximately 30% of the income for PFB, assisting in its drive for self-sufficiency.

COMMUNITY INVOLVEMENT

Successful conservation for the Rio Bravo area depends on what is done outside the reserve, as well as what is done within the conservation lands themselves.

Keeping local communities around the reserve informed and involved is vitally important.

Efforts included:

- Providing local schools with needed resources
- Educating local Belizean students about the value of the reserve – including giving them opportunities to stay at La Mila and take birding and wildlife walks.

Efrain Cocom, station manager at Hill Bank Field station, has a busy job. He manages the dormitory and kitchen staff and facilities. He also takes care of the visiting researchers and tourists and provides supervision of the ranger team. Efrain also works on the landscaping and building repairs. Somehow, while doing all this, he also finds time to enhance the relationships between Programme for Belize conservation efforts and the needs of the villages around the conservation area.

This year, Efrain made picnic tables and donated 15 chairs/desks, and picnic tables to the local primary school in neighboring Rancho Dolores village. As connections are built, the schoolchildren are encouraged to learn about the biodiversity of the area and the importance of conservation.

In addition, foreign student groups that come to Hill Bank for the Tropical Forest course are encouraged to donate and contribute to the local Belizean villages. Some of these college students from the US and UK have painted local schools, donated books, and installed solar systems for Belize primary schools that did not previously have electricity.



PfB staff help Belizean school children plant mahogany trees.

The Programme for Belize demonstrates the importance of conservation—and the value of helping local communities as well the forests. The wildlife cannot and will not be safe unless the local people in the surrounding communities understand and are equally invested in preserving the conservation area.

In May, as part of the Green Wave Initiative (established by the

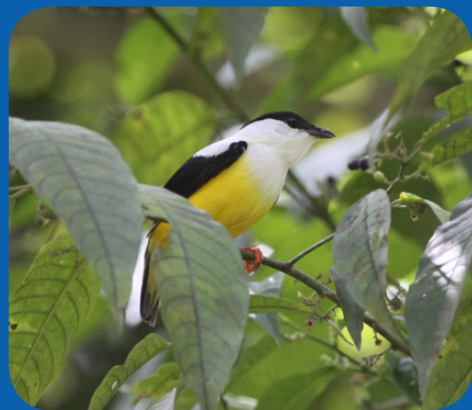
United Nations Convention on Biological Diversity,) the PFB staff visited 15 primary schools to give presentations, awards and help each school planted a mahogany tree at the end of the program.



**DID YOU KNOW ??**

Victoria Peak in Belize is only 3675 feet in elevation. Yet it challenges the most fit hiker and takes 3 days to climb. The peak is located in the Maya Mountains within the Cockscomb Basin Wildlife Sanctuary. These mountains and foothills are among the oldest surface rock formations in all of Central America. Vladimir Rodrigues, station manager at La Milpa, recently repeated his trek to the summit of Victoria Peak. It is a difficult climb, he reports, because of the thick tropical forest and rough trails. Guiding and permits are available from the Belize Audubon Society, which manages the Cockscomb Basin Wildlife Sanctuary.

Cockscomb Basin Wildlife Sanctuary is recognized internationally as the world's first jaguar preserve. It is also known for its spectacular waterfalls, mountain views, nature trails, and rich diversity of neotropical birds.



**NEWS FROM TIDE**

**TOLEDO INSTITUTE FOR DEVELOPMENT AND ENVIRONMENT**

TIDE continues to lead communities in conservation by:

- Creating innovative ways to engage schools and communities through the Fish Fest, the Youth Conservation Competition, the Freshwater Football League and essay contests. In addition they provide training for community educators, teachers and children
- Engaging locals with the Community Stewards Program
- Implementing the goals of the Maya Mountain Marine Corridor Conservation Action strategy
- Protecting the resources of the Port Honduras Marine Reserve, Payne's Creek National Park and the TIDE Private Protected Lands
- Conducting crucial research and monitoring biodiversity from Ridge to Reef within the Maya Mountain Marine Corridor

*The Belize Conservation Fund seeks funding to assist TIDE in its important conservation mission in southern Belize.*

**UPDATING THE PORT HONDURAS MARINE RESERVE MANAGEMENT PLAN.**

1 October 2009

TIDE has received funding from the National Oceanic and Atmospheric Agency (NOAA) to complete the update and revision of the Port Honduras Marine Reserve Management Plan. Activities began in January this year with a literature and organizational review and continued with an adaptive management survey conducted by interns Rob Ferguson, Glennis Padilla, and Lisa Gualtieri. Alastair Daly is the new TIDE volunteer and will also be working on this project.



Did you know there are 566 species of birds reported in Belize!



**RANGERS AT THE PORT HONDURAS MARINE RESERVE:**

The Port Honduras Marine Reserve in southern Belize is a vitally important resource for all of Central America. The Toledo Institute for Development and Environment (TIDE) is responsible for the protection and preservation of this resource.

*The rangers who work for TIDE are on the frontline for conservation.*

Carlos "Cash" Ramirez is the head ranger for Toledo Institute for Development and Environment (TIDE). Born in Guatemala and brought to Belize when he was just 5 years old, Cash was raised on the islands of Head Caye and has lived his entire life in what is now the Port Honduras Marine Reserve.

As Cash was growing up, residents of these islands had only sailing dories to get from place to place. "If the wind was not favorable, sometimes we would be stranded at sea and it would take days to get home" said Cash. Fishing was the livelihood for his family, yet as he got older, he became aware of the dangers of exploitation of natural resources. He observed that illegal fishing, gill nets, and other practices damaged the health of the reserve.

Cash became a ranger and now spends his days patrolling the borders of the reserve and the "no-take preservation zones." These zones are completely restricted and protected from human activity.

Educating people about the laws and the benefits to conservation is an important part of his work and Cash takes time to talk with fishermen and residents in the area. Cleaning up trash on the water and cayes is also an important responsibility.

There are only 2 boats and 4 rangers on duty and the work is difficult and can be dangerous; however, Cash believes his work and that of the other TIDE staff is making a difference. The Black tipped and Hammerhead sharks are back and there are reports of turtles increasing in numbers. Over time, TIDE hopes the reserve will have an increase in all kinds of marine life.

