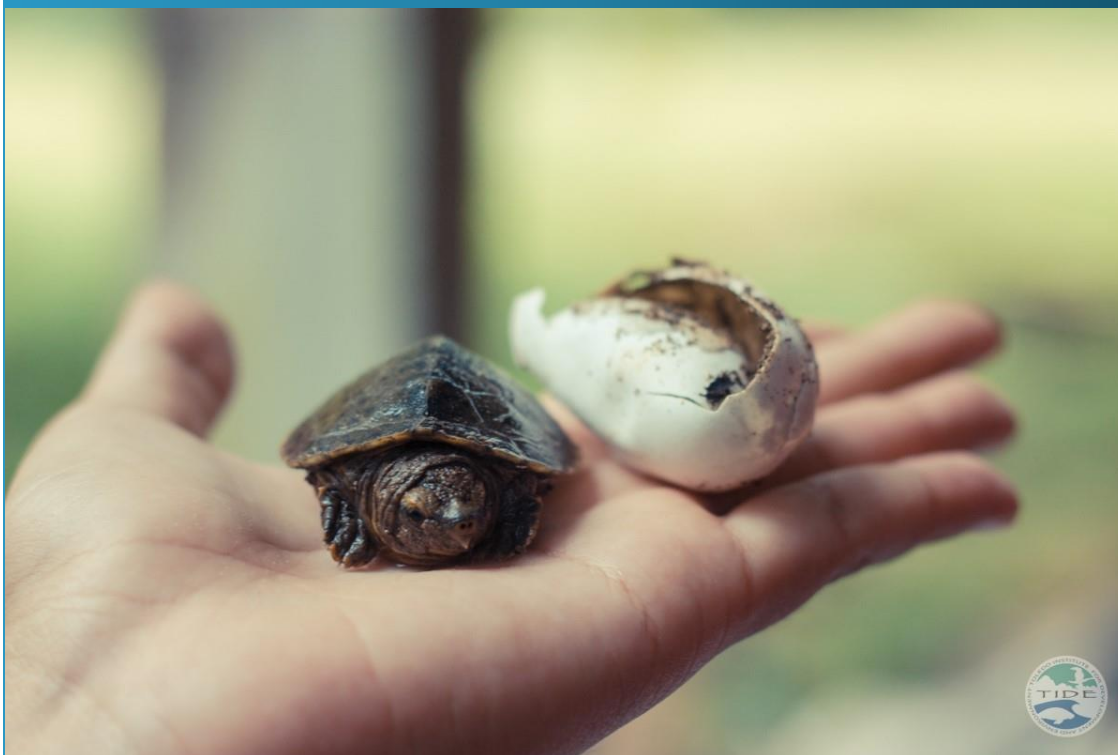


RAISING NATIONAL AWARENESS OF THE
HICATEE (*Dermatemys mawii*) AND
PUBLIC SUPPORT FOR ITS PROTECTION
IN BELIZE



Research and Monitoring Department 2014

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HICATEE REPORT 2017

Table of Content

Acronyms 2

Introduction 3

 Previous hicatee conservation efforts in Belize 4

 Projects rationale, goals and objectives 4

Methodology..... 5

 Conservation Leadership Program project 5

 Turtle Conservation Fund and Conservation International project..... 5

 Turtle Survival Alliance project 6

Project Results 6

Discussion..... 7

Acknowledgement 8

References 8

Figure 1: Hicatee hunters on the Rio Grande, Toledo. 3

Figure 2: Hicatee hunters on the Rio Grande, Toledo, within TIDE’s geographical focal area, the Maya Mountain Marine Corridor. TIDE rangers patrol the Rio Grande and enforce laws to protect the hicatee 3

Figure 3: Three hicatee and a giant Mexican muk turtle captured by TIDE during surveys on the Rio Grande in 2014 (left), and Belize Fisheries Department, TIDE and YCT collaborating on hicatee monitoring on the Rio Grande in 2013 (right)..... 4

Figure 4: Primary school students receiving hicatee education at a TIDE booth during Earth Day celebrations (left). TIDE staff and University of Belize students interviewed 50 hicatee hunters (right) 5

Figure 5: TIDE terrestrial biologist, Elmar Requena, communicating the need to protect the hicatee to tens of thousands of Belizeans via the popular “Belize Watch” show 5

Figure 6: TIDE terrestrial biologist, Elmar Requena, communicated the need to protect the hicatee to tens of thousands of Belizeans via the popular “Belize Watch” show in 2014 5

Figure 7: Discovery of a hicatee nest in danger of being lost 7

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Acronyms

TIDE	Toledo Institute for Development and Environment
NHCN	National Hicatee Conservation Network
UBERI	University of Belize Environmental Research Institute
YCT	Ya'axché Conservation Trust

Introduction

The Central American river turtle (*Dermatemys mawii*), known in Belize as the “hicatee”, is a critically endangered freshwater turtle that is the only representative of the family Dermatemydidae (Iverson and Mittermeier, 1980). The major threat to *D. mawii* is human overconsumption, which has caused massive population declines and local extinction throughout much of the former range.

Belize now contains the last strongholds for the species, possessing relatively healthy populations in a few remote areas (Rainwater et al. 2012), namely sites in the Belize River Valley, and rivers in the southernmost Toledo District – the Temash River and the Rio Grande, the latter lying within TIDE’s geographical focal area.

Despite its critically endangered status, *D. mawii* is still hunted at unsustainable levels in Belize. Currently, the hicatee closed season lasts only one month, from 1st to 31st May. There is a size limit on females but none on males. There are bag limits of three animals per hunter and five per vehicle. The possession or use of net to take hicatee is prohibited. No trade in hicatee is permitted and hunting is prohibited in certain areas. Yet these regulations are thought to be insufficient to prevent population decline since even an off-take rate of 5% per annum is predicted to reduce populations by over 80% after three generations (Vogt et al. 2006). A moratorium may be required until populations can be assessed and sustainable quotas determined.

The hicatee is a traditional food in Belize, considered a cultural delicacy. It is hunted year-round and consumed mainly around national holidays – Christmas, Easter and La Ruta Maya, a canoe race down the Belize River, which occurs in March. Combined with habitat loss, hunting threatens to drive the hicatee to extinction.



Figure 1: Hicatee hunters on the Rio Grande, Toledo.

Previous hicatee conservation efforts in Belize

The Belize NHCN, formed of the Belize Fisheries Department, Belize Audubon Society, TIDE, UBERI and YCT, has identified widespread monitoring, strengthening legislation and raising awareness as the most important short-term solutions to the problem.

The NHCN coordinates efforts to save the hicatee as follows: UBERI and TIDE have done social surveys of attitudes toward hicatee consumption. YCT initiated a national awareness campaign in 2012 through a grant awarded by the Turtle Conservation Fund, which raised awareness and provided important lessons to improve future campaigns. Belize Audubon Society, TIDE and the Fisheries Department conduct law enforcement. TIDE educated children and hunters in communities buffering the Rio Grande and conducting ecological research on this data deficient species with a grant from the Conservation Leadership Program (Requena *et al.* 2015).



Figure 3: Three hicatee and a giant Mexican mud turtle captured by TIDE during surveys on the Rio Grande in 2014 (left), and Belize Fisheries Department, TIDE and YCT collaborating on hicatee monitoring on the Rio Grande in 2013 (right)

Projects rationale, goals and objectives

Given the need to strengthen legislation to protect *D. mawii* and the low level of public awareness of the threat of its extinction, a public awareness campaign was urgently needed to build the necessary public support and political will to safeguard the species.

The overall goal of the project was to reduce hunting pressure on hicatee and allow the species to recover. There were initially two project objectives:

1. Awareness of the conservation status of the hicatee and the current laws is improved among stakeholders (young people, hunters and consumers) in six communities near the Rio Grande where hicatee is consumed (Cattle Landing, Elridge, Forest Home, Jacintoville, Big Falls and San Marcos).
2. The majority of the Belizean public is aware of the conservation status of the hicatee and supports stronger regulations.

To achieve these objectives funding was provided by the Conservation Leadership Program, the Turtle Conservation Fund and the Turtle Survival Alliance.

Methodology

Conservation Leadership Program project

Using cost savings from its Conservation Leadership Program hicatee project (Requena *et al.* 2015) TIDE was able to accomplish local education activities. A hicatee mascot (Hubert the Hicatee) was created and TIDE gave presentations at schools and events. TIDE also interviewed 50 hicatee hunters in six communities near the Rio Grande, where hicatee is consumed (Cattle Landing, Elridge, Forest Home, Jacintoville, Big Falls and San Marcos).



Figure 4: Primary school students receiving hicatee education at a TIDE booth during Earth Day celebrations (left). TIDE staff and University of Belize students interviewed 50 hicatee hunters (right)

Turtle Conservation Fund and Conservation International project

This project was built upon the success of the outreach campaign conducted in 2011-2012 by the NHCN, in particular YCT. During that campaign, YCT produced a radio commercial featuring a hicatee awareness poem performed by a popular local artist in Creole. YCT identified this to be the most cost-effective means of communication on the matter. Hence, TIDE decided to air the same commercial during this project.

Radio commercials: TIDE's media manager added a 5 second message at the end of the 55 second commercial, encouraging listeners to show their support for the hicatee by joining the Save the Hicatee River Turtle Facebook page. TIDE aired the radio commercial on two national radio/TV stations, Love FM and Plus TV. The commercial was aired during the La Ruta Maya Canoe Race, the most popular season for hicatee consumption.

TV show: TIDE's terrestrial ecologist succeeded in organizing an episode of "Belize



Figure 5: TIDE terrestrial biologist, Elmar Requena, communicating the need to protect the hicatee to tens of thousands of Belizeans via the popular "Belize Watch" show

Watch”, a prime time Belizean show that looks at cultural and social matters, dedicated entirely to hicatee conservation.

Turtle Survival Alliance project

Radio commercials: TIDE aired a 60 second radio commercial informing Belizean people that the hicatee is in danger of extinction, and calling on them to show their support for hicatee conservation by liking the “Save the Hicatee” Facebook page. The commercial was aired at least 24 times on Love FM (the most popular station in Belize) during the Belize National Cross County Cycling Classic, Belize’s most popular sporting event, and coincided with the time when hicatee is traditionally eaten during the Easter weekend.

Billboards: TIDE updated the visual communications materials previously displayed by YCT. TIDE printed and displayed three (10x4 feet) banners for at least three months. These banners were displayed at popular areas around the country. Banners were installed at the entrance to Punta Gorda Town, at the road near Community Baboon Sanctuary in the Belize River Valley area and at the Guanacaste Junction outside of Belmopan (one of the busiest intersections in Belize). One billboard (6x10 feet) was printed and displayed on the Philip Goldson Highway, the northern entrance to Belize City. The banners and billboard were printed on Vinyl to be re-usable in the future. TIDE coordinated with the Belize Fisheries Department and the Belize Audubon Society to install the banners in the northern and central locations of the country.

Project Results

1. Awareness of the conservation status and laws pertaining to the hicatee among hicatee hunters and consumers in Belize increased due to the radio commercial on Love FM and Plus TV during La Ruta Maya Weekend, and the Belize Watch TV show. The two-hour show highlighted TIDE’s hicatee conservation on the Rio Grande, and sent out a strong message that we Belizeans must protect the hicatee before it disappears. Presenter Rene Villanueva vowed never to eat hicatee again. The show was viewed by an estimated 40,000 people (over 10% of Belize’ population) listened to the radio commercials and show.
2. Support for hicatee conservation increased nationally, as indicated by membership of the Save the Hicatee River Turtle Facebook page (<https://www.facebook.com/hicatee>) increasing from 73 to >350 people after the Turtle Conservation Fund project, and then doubled in the amount of “likes” from 351 to 678 after the Turtle Survival Alliance project.
3. Dialogue with hunters in Rio Grande buffer communities found that the majority of hunters actually supported stronger regulations, and generated interest among hunters in partnering with TIDE to design and implement a Rio Grande hicatee recovery plan.
4. The public interest generated and presentation of the results of the hunter surveys to the Belize Fisheries Department via the NHCN resulted in the Fisheries Department considering revising the hicatee regulations. The Fisheries Department requested recommendations for revised regulations from the NHCN. The recommendations given were: a) to extend the closed season from one month to ten months of the year; b) to decrease the bag limit to one per person and three per vehicle; c) to introduce size limits for males.

Discussion

Facebook “likes” were a convenient, low-cost M&E technique but almost certainly did not capture the full impact of the project since we cannot assume that all Belizeans have Internet access, especially hicatee hunters from poor rural villages.

The regulations were included within the revised Fisheries Act (officially called the Living Aquatic Resources Bill), which was presented to Cabinet in 2014 but unfortunately it has not been approved.

The main threats to the hicatee are over-exploitation and habitat degradation. These threats are being addressed by TIDE and the NHCN as follows:

- Management of protected areas, such as the TIDE Private Protected Lands along the Rio Grande, the Sarstoon-Temash National Park along the Temash River and Crooked Tree Wildlife Sanctuary, which protects several lagoons in the Belize River Valley.
- Advocating for a revision in the hicatee regulations to extend the closed season to ten months per year (open season in March and April for cultural reason), decrease the bag limit and introduce size limits for males.
- Enforcement of hunting regulations within and outside of Protected Areas as part of TIDE and NHCN strategic plans through patrols.
- Monitoring populations and habitat to provide evidence for the need to strengthen legislation and to protect key sites, especially along the Belize River and Rio Grande.
- Maintaining riparian forest buffers, important for protecting water quality and hicatee habitat. TIDE is reforesting its own Private Protected Lands and working with two Maya community based organizations to reforest the banks of the Rio Grande. One of our long-term goals is to maintain a forested riparian corridor along the entire Rio Grande and ultimately to introduce conservation easements for farmers to maintain riparian buffers nationally.
- Raising public awareness to decrease demand for hicatee meat and increase support for hicatee conservation, including tougher hicatee regulations.
- Communicating with Rio Grande hunters to build support for a hicatee recovery plan, which would include voluntary designation of certain areas as off-limits to hicatee hunting.
- Following the discovery of a hicatee nest in an eroding riverbank on the Rio Grande, TIDE incubated six hicatee eggs that would have otherwise been lost. Of these, three hatched (see cover photo) and one of them died later on. One juvenile turtle was released into the Rio Grande on national TV by the presenter of Belize Watch, and another one with students from Forest Home Methodist School.



Figure 7: Discovery of a hicatee nest in danger of being lost

Acknowledgement

We are extremely grateful to the Conservation Leadership Program, the Turtle Conservation Fund, the Turtle Survival Alliance, Belize Audubon Society, the Fisheries Department, University of Belize students, TIDE staff and all other participants from making this project possible and successful.

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