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Through the Eyes of a Ranger

It's not working if you love what you do!

Being a Research Ranger is one of the most rewarding job experiences imaginable. Several months often go by, filled with excitement, adventure, knowledge and definitely lots of challenges. Fostering a sincere love for nature doesn't necessarily have to be taught from a young age, it might be inspired by a couple words, a video or even a picture. When a love for the ocean exists, being a research ranger feels more like a hobby than an actual job. The true enjoyment though, comes from diving. Yes, you get to put in some one-on-one time with your fish buddies; but it's like a whole other world one could never imagine. One of my duties is data collection. This entails detailed observation of fish, coral, conch and lobster species and studying how



Image 2: This photograph shows, SEA ranger, Wilbert Castillo, conducting a research dive for the collection of commercial species data.



Image 1: This photograph shows, SEA ranger, Wilbert Castillo, untangling a magnificent frigate bird from a fishing line.

they react to the changes within their environment such temperature fluctuation, sedimentation levels and even human presence.

The overall picture of being a research ranger is also understanding the marine life from an ecological point of view. The coral reef environment is one big network: the coral provides a home for the zooxanthellae, which in turn provides food for the coral polyps. In numbers corals create reefs, which provides a home for fish and other marine invertebrates. The reef provides us

with much needed ecosystem goods and

services such as oxygen generation, coastline protection, provides recreational activities for tourism, food and lots more! It is ultimately our responsibility to love and protect the very core of our livelihoods. By removing or damaging one thing from this fragile and sensitive ecological cycle we risk losing more than what was originally intended have might have.

I don't believe that I'm ready to lose what has become such an essential part of my life. How about you?

**Wilbert Castillo
 Science Ranger**

Ready, Set, Protect!

Inhale! Now Exhale!

Did you know that approximately 70 % of the oxygen on the planet comes from ocean dwelling organisms like sea grass? Looking afar sea grass beds may seem like an ordinary grass patch with not much life to it. With a closer look though, one would come to realize that sea grass beds are an essential part of the marine ecosystem due to their high productivity level of oxygen and food. This ecosystem also provides a habitat for juvenile fish and tons of other vertebrate and invertebrate species. It is teeming with more life than you could possibly think of!



Image 3: Seagrass beds,- habitat for many vertebrate ad invertebrate marine animals.

Cont'd on page 4

“Educating the mind, without educating the heart is no education at all”
-Aristotle

Throwing bait on land

It's said that if you “give a man a fish, he eats for a day, but if you teach him how to fish, he eats for a lifetime”. Many Belizeans may never know the wisdom behind those words, whether interpreted literally or figuratively. Ultimately, it is our responsibility to ensure that our youth are bestowed with the knowledge to live in a sustainable manner no matter the occupation.

In keeping with this, SEA has adapted a *Fisherman Experience Sharing Program*, whereby the organization

has been working closely with local fishermen to teach students about the benefits and challenges about the trade of a fisherman. Majority of the students were familiar with the common fishing methods such as hand lining, long lining, and towing, They were also taught more about the unsustainable practice of gill netting and enlightened about the Belize Fisheries Regulations.

Approximately 300 students have been engaged as a part



Image 4: Fisherman, Daniel Edwards of Independence Village, sharing with knowledge with upper division students at Church of Christ Primary School.

of this program and SEA hopes to reach out to many more this year!



Image 5: Fisherman, John Thomas of Dangriga Town, sharing his knowledge with upper division students at Solid Rock Christian Academy.

SEA is grateful for the assistance rendered by local fishermen, John Thomas of Dangriga, Daniel Edwards of Independence Village and Kurt Godfrey of Placencia Village. A heartfelt thank you also goes out to all the schools which have opened their doors to us!

Helen Gordon
Education & Science Assistant

Sun, Sand, SEA and Snowflake

In early September of 2017, on sandy beaches of the Laughing Bird Caye (LBC), Belize's very first Snowflake was spotted in the grueling sun. At first glance, SEA rangers thought that it might have been a piece of plastic moving in the wind, but upon closer inspection found out it was a loggerhead hatchling which had emerged from one of nests on LBC. This loggerhead however, was special, as it was an albino! Such occurrences in nature are very uncom-

mon. The little fellow was nicknamed "Snowflake" and was the first albino turtle recorded for the two protected areas which Southern Environmental Association (SEA) co-manages.

all the turtle hatchlings around the world. Since 2013, there has been a significant increase in the number of successful hatches seen within the areas which SEA monitors. Snowflake had emerged from a clutch of 56 eggs and in 2017 alone there were 5 loggerhead nests and 15 hawks bill nests laid on LBC. In total SEA was able to record information on 28 different sea turtle nests spread out between LBC, Silk Cayes, Little Water Caye and Placencia Peninsula.

Turtles are one of the earth's longest living reptiles, presumed to be roaming the oceans for the past 65 million years. These creatures are generally long-living and have played a vital role in maintaining healthy marine environments all around the world. In



Image 6: Photograph of Snowflake, the albino loggerhead turtle.

Belize, sea turtles were once traditionally fished for used in cultural rituals for food and musical instrument. Over the past years though, the fishing of sea turtles have decreased significantly due to its new protection status. In light of this, SEA has adapted a turtle education campaign which is done yearly during the sea turtle nesting season in the Placencia Peninsula. SEA applauds all fishermen who have phased out the use of harmful fishing gear such as nets and encourages everyone to continue protecting our natural resources.

Deidra Mahler
Education & Science Manager

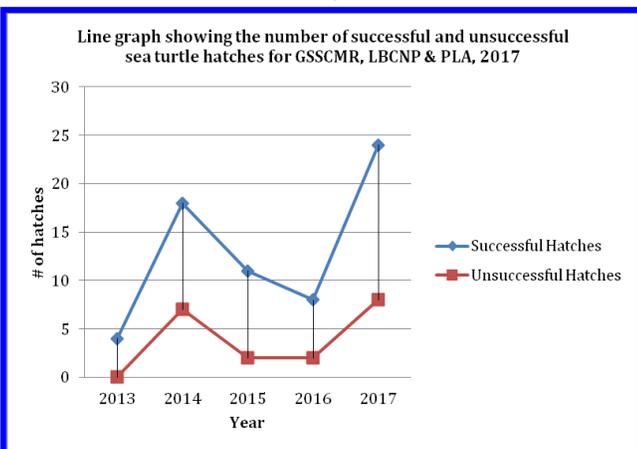


Image 7: Graph showing the turtle data over a 5 year period

Before the opening of every sea turtle breeding season in June, rangers of SEA gear up and put on a hawk's eye for their yearly turtle nesting lookout. SEA was fortunate to have had the chance to take care of Snowflake and we hope the best for

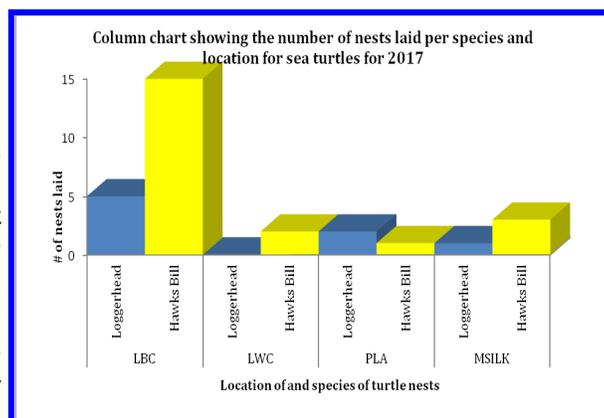


Image 8: Graph showing # of nests by site and species

Cont'd. Ready, Set, Protect!

In Belize, it is also home to one of the largest, yet most vulnerable mammal species- the West Indian Manatee. This manatee species is endangered with fewer than 2,500 remaining in Belize's waters. In recent years, the Placencia Lagoon has seen an increase in the number of boat related manatee deaths. This is because boat traffic has significantly spiked, especially with the recent start of cruise tourism.

These animals are just one of many on the verge of extinction as a result of anthropogenic activities. The extreme sensitivity of marine environments to pollution and unsustainable activities is already becoming obvious, as we are no longer able to find some species in large numbers as once before. Marine ecosystems such as seagrass beds will continue to provide necessary goods and services, so as long as we realize and demonstrate through actions that we care enough to protect and conserve.



Image 9: Photograph of manatee mother and calf



Image 10: Photograph of two manatees

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HAPPY SEAGRASS & MANATEE APPRECIATION MONTH!

Deidra Mahler
Education & Science Manager



Image 11-13: Top photograph shows sea cucumber and undersize lobsters harvested. Middle photographs shows loggerhead turtle. Bottom photograph shows undersize conchs harvested.

PRESS RELEASE: ILLEGAL PRODUCT BUST NEAR GSSCMR

A joint patrol with SEA Rangers and the Belize Coast Guard, conducted near the north western area of the Gladden Spit and Silk Cayes Marine Reserve (GSSCMR), on the night of March 1, 2018 resulted in the discovery of the 4,594 conchs, 7 spiny lobsters, 5 sea cucumbers, and a loggerhead turtle.

The discovery was made based on SEA ranger intelligence around 5:13 PM, during a routine patrol. The illegal products were found 50 yards inland of a mangrove area on Jacks Caye inside two large old refrigerators. The product was then loaded onto the SEA boat, brought to Placencia and labeled as found property.

known to be one of Belize's most lucrative fishing areas. SEA is deeply troubled and disappointed by the increased illegal fishing activities within Managed Access Area 3 and would like to take this time to advise fishers and the general public that it is a fisheries offence to (1) harvest undersize conch & lobster, (2) harvest lobster during the closed season, (3) capture and kill protected turtle species and (4) harvest sea cucumber species while a moratorium has been issued.

SEA also takes this opportunity extend a thank you to the Belize Coast Guard for their continued support and assistance in conducting joint patrols.

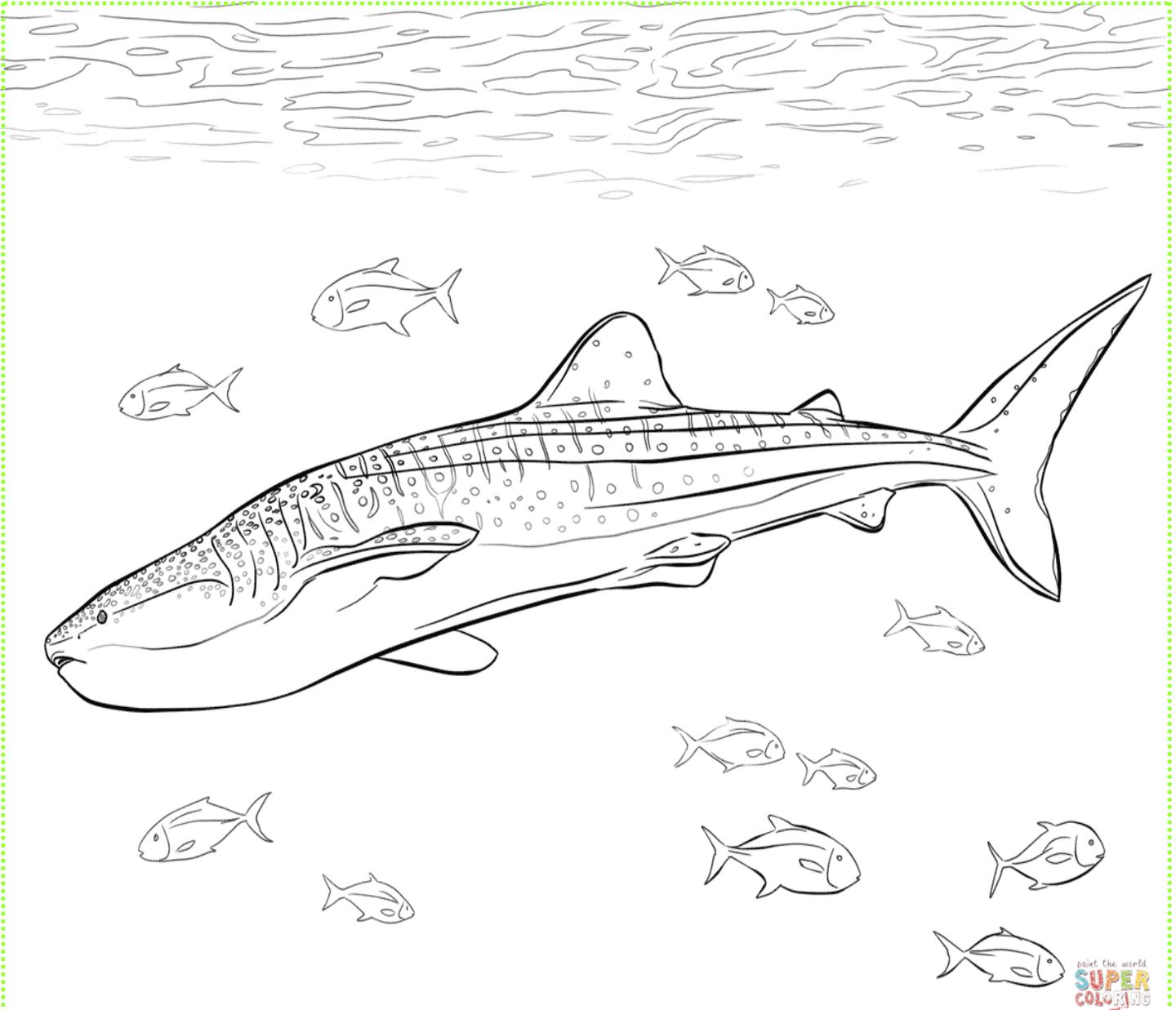
-END OF RELEASE-

Arreini Palacio-Morgan
Executive Director

Managed Access Area 3, Southern Belize, which includes, GSSCMR, Laughing Bird Caye National Park (LBCNP) and South Water Caye Marine Reserve (SWCMR), is

KID'S CORNER

Color Me!



paint the world
SUPER
COLORING

Did you know...?

- **Whale sharks are the largest fish on the planet**
- **Whale sharks are in no way related to whales**
- **Whale sharks are filter feeders and sieve on plankton through their gills for much of their nourishment. They also sieve squid, krill and small fish**
- **Whale sharks have about 3,000 tiny teeth (less than 6 mm long) but they don't use those teeth to eat.**



SOUTHERN ENVIRONMENTAL ASSOCIATION

**Placencia Village
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Phone: 501-523-3377
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For more information about SEA or the activities described here please contact Ms. Roneisha Williams at info@seabelize.org or Ms. Helen Gordon at volunteer@seabelize.org

SEA'S MISSION

The Southern Environmental Association is a non-governmental organization that continuously works towards improving stewardship and the environmental integrity of key marine areas in Southern Belize through effective, collaborative protected areas management, community involvement, and strategic partnerships for the benefit of all stakeholders.

BOARD OF DIRECTORS

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Kurt Godfrey: Councilor

About SEA: WHO WE ARE



The Southern Environmental Association is a non-governmental organization which formed in November 2008. SEA emerged from a merger of Friends of Nature (FoN) and the Toledo Association for Sustainable Tourism and Empowerment (TASTE) designed to ensure improved community involvement in the conservation and co-management of the natural resources in Southern Belize. SEA takes a practical, hands-on approach to conservation and management of

much of the Southern Barrier Reef Complex. SEA has co-management agreements for day-to-day management of Laughing Bird Caye National Park (LBCNP) with the Forest Department, and Gladden Spit and Silk Cayes Marine Reserve (GSSCMR).

The Southern Environmental Association undertakes a wide range of tasks from community outreach to scientific research to law enforcement.

SEA works closely with the nine stakeholder communities of Hopkins, Sittee River, Seine Bight, Placencia, Independence, Monkey River, Punta Negra, Riversdale and Punta Gorda. Under the co-management agreements with the Government of Belize, SEA as-

sumes control of zoning enforcement, the behavior of users and is authorized to police within and between parks. SEA also works closely with the local stakeholder committees who formulate policy for the management of the parks. The organization currently has a staff of sixteen including administrative, outreach, science and enforcement. SEA's board of directors consists of eight members which include community leaders and key stakeholder representatives. For the past 18 years, SEA has been working with community members to improve management of their marine resources. SEA takes pride in its growing successes in both management and community involvement.