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Gerace Research Centre San Salvador Bahamas 2016 Cover photograph - "Pederson Cleaning Shrimp" courtesy of Bob McNulty

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THE MISADVENTURES OF MARIA THE HUTIA: EMPLOYING FICTION TO INSTILL A CONSERVATION ETHIC IN CHILDREN

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ABSTRACT

Folk tales and fables have long been used as mechanisms for changing children's perspectives in many areas. The personification of plants, animals, birds, and environments, creates a story with a personalized message. A child may not know what a hutia is and may not know why a hutia is an endangered species. But a child can relate to a hutia named Maria and empathize with her character as she tries to find her way home.

First and foremost, The Misadventures of Maria the Hutia is a story created for the children of the Bahamas. It promotes an awareness of the environmental impacts of development and overfishing, and explains how these factors affect wildlife habitats and the creatures that rely on them for life. It is intended to entertain and educate without being a lecture. The story centers on Maria, a lost hutia, who was washed away from her home during a storm. Hutias were once widely distributed throughout the Bahamas but the loss of habitat and predation by imported species reduced their existence to two known locations within the archipelago. As the story evolves, Maria enlists the aid of other animals in her efforts to return home. Her companions have all experienced some degree of displacement resulting from mankind's

impact on island habitats. This disparate group of characters embarks on a journey to help Maria find her home island. Ostensibly, it is also a search for an idyllic locale where they can be free of mankind's disruptive influence. While *The Misadventures of Maria the Hutia* is set in the Bahamas and is focused on Bahamian environmental concerns, the story is applicable to any audience facing contemporary environmental issues as a consequence of the development or destruction of natural resources.

INTRODUCTION

The use of fables, folklore and fiction as a teaching tool for instilling values and behavioral boundaries dates to the earliest use of language for communication. Maturing youth are instructed in about pitfalls that await them as they begin their journey into adulthood. *The Misadventures of Maria the Hutia* represents the use of one such tale as a mechanism for informing children about the dangers that arise from misuse of the environment and its consequences for animal species who may not be able to adapt to environmental change. It also speaks to the consequences of unregulated use of the environment and the unrestricted harvesting of animals for food.

Maria is a young hutia. Like the young of any species, there comes a point when maturing individuals test the boundaries set by adults as

they prepare for the time they will leave the protective environment of their parents and start a life of their own. The Misadventures of Maria the Hutia reflects one such point when Maria tests the restrictions placed on her by her parents. Her rebelliousness leads to trouble as she is swept away from her home by storm waves. Thus begins Maria's journey. It is a journey of loss and despair. It is a journey of growth and discovery. It is a journey of developing friendships and alliances. As her journey progresses, she meets others who have seen their habitats reduced by the activities of mankind. She meets those who have seen their number dwindle as mankind hunts and fishes to excess. Her growing group of acquaintances and accomplices all seek a quiet place where they can exist in peace with others of their kind.

The story clearly tests and/or exceeds the boundaries of reality. Animals that might act as enemies in a real life setting act as friends and compatriots within this unlikely band of travelers. They easily communicate with each other as if there is a common animal language that is unknown to man. But there are times that reality can't be allowed to interfere with the development of a good story line. Not only do our characters communicate, but they cooperate. They exhibit shared leadership and a shared cause. This common cause leads them to the successful completion of a shared task and shared objective.

HISTORY OF THE PROJECT

To roughly paraphrase J.R.R. Tolkien (1977):

In a hole in the ground there lived a hutia

In the late 1990s students from Mississippi State University reported sighting an animal with an unusual appearance while traversing the trail linking the perimeter road to a feature they had named Six-Pack Pond in the central part of the island of San Salvador. The animal was reported to be the size of a rabbit but it was described as having a kangaroo-like appearance. After much discussion, it was speculated that based on the combination of the animal's description and the isolated nature of the area that this critter might possibly be one of the hutia that were once plentiful throughout the Bahamas Archipelago (Shatuuck, 1905). Bahamian hutia are now thought to be extinct except for a natural population found on East Plana Cay and an introduced population on Little Wax Cay (Campbell, Lowell, and Lightbourn, 1991).

For the next three field seasons, I enlisted the aid of students and faculty from Youngstown State University in the quest to confirm the existence of Bahamian hutia on San Salvador Island. This quest was based on the information provided by students from Mississippi State University and on the discovery of a massive concentration of an unusual looking scat at the base of Almgren Cay on the eastern shore of San Salvador. Using live traps, we attempted to secure a living specimen for proof of existence. Our quest was unsuccessful, although we were able to trap a Norwegian rat (Figure 1) and a number of land crabs and hermit crabs (Dworak, 2001).

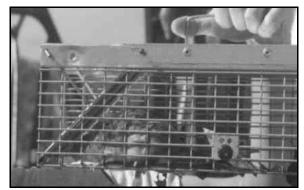


Figure 1. Norwegian rat captured in a live trap near a freshwater pond adjacent to the trail to Six-Pack Pond on San Salvador.

BIRTH OF A CONSERVATION CAMPAIGN

Sandy Voegeli was aware I fancied myself as a songwriter. She had initiated a campaign to establish a marine park on San Salvador and planned to use threatened species as a theme for the campaign. The San Salvador Living Jewels Foundation had been established and an informational brochure was produced highlighting the threatened wildlife species on San Salvador. During a field visit in March 2006, Sandy asked if I could compose a song for children that would focus on the threatened species of San Salvador. Within a month, the song, *Living Jewels of the Land, Sky, and Sea,* was written. I recorded a version of the song and submitted it to Sandy for her evaluation (Shaklee, 2006).



Figure 2. June 2007 CD release ceremony held at the Bahamas National Trust.

With a substantial investment of personal time and energy on the part of Sandy Voegeli, the project developed a life of its own. Sandy submitted a copy of the recording to Eric Carey, Executive Director of the Bahamas National Trust. Mr. Carey's enthusiastic support led to an arrangement to have the project recorded with a Bahamian 'Rake and Scrap' sound. Bahamian recording artist, Ira Storr (originally from San Salvador) and the Spank Band agreed to record the song. Ira utilized primary school students from San Salvador to sing the refrain. The recording was released nationwide in 2007 (Figure 2). It has been used as a theme for conservation awareness since that date. In December 2006, students at the San Salvador Primary School used the San Salvador Living Jewels as a theme for costumes they designed for the annual Junior Junkanoo celebration (Figure 3).

THE TRANSITION FROM SONG TO STORY

At that point the story might easily have come to an end, but thoughts about the characters incorporated into the song wouldn't leave me. I considered the plight of those characters and wondered how they might be brought to life in another way.

Maria the hutia is a primary character in the song. She speaks about the loss of habitat and how her species is restricted to two locales in the Bahamas. I created a scenario where Maria was swept away from her home island in a storm and was subsequently rescued and deposited on the shores of New Providence Island. There, she would encounter members of other species whose home territories were threatened.

The story was completed within six months, but it was a story that needed additional work. The story had a number of issues. It was too long for a children's book. The Bahamian characters spoke without distinctive Bahamian accents. There were scientific issues with habitats and diets. Other questions included how a diverse set of animal species might get along and how they might be able to travel together as a group given their differing marine, terrestrial, and aerial capabilities.

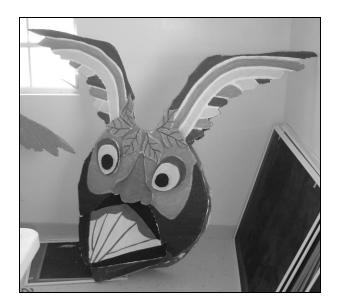


Figure 3. December 2006 Junior Junkanoo Costume.

Sandy Voegeli once again stepped forward to fill the void. Using her acquaintance network of scientists and friends that utilize the Gerace Research Centre, Sandy set in motion a collaborative effort by introducing a diverse group of contributors and motivating them to coalesce into a functional group of creative spirits.

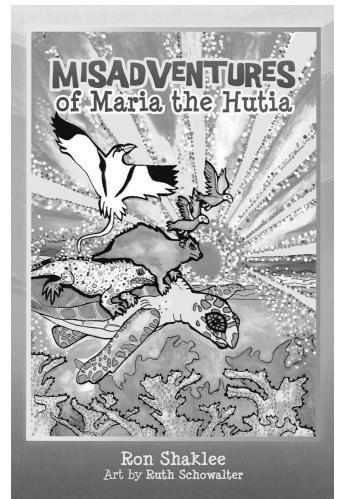


Figure 4. Misadventures of Maria The Hutia Cover art.

Sandy took on the role of science advisor. She brought in Marcia Musgrove to add commentary and critique on the appropriate use of Bahamian accent and colloquialisms. Most importantly, Sandy introduced Ruth Schowalter, a selftrained folk artist, into the mix of personalities involved in the project. Ruth's vibrant imagination brought the characters to life. We determined it would be best to use artistic representations of the characters rather than photographs. A photograph may be a significant way to portray an animal, but it lacks the personification that an artistic image can portray. Ruth took the characters from a verbal concept to a visual reality. Her illustrations gave the characters substance and personality. In August 2012, a project that had been so long in the making celebrated the long-awaited publication with a book launch at the Decatur Book Festival (Figure 4).

THE MISADVENTURES OF MARIA THE HU-TIA: A SYNOPSIS

Maria is a hutia (Figure 5). Hutias are furry brown rodents. They are native to the Bahamas but have almost disappeared from the archipelago due to the loss of habitat from coastal development. They have also fallen victim to predation by animals that were introduced to the Bahamas from other locales.



Figure 5. Maria the hutia snacking on sea grape leaves.

Maria is swept away from her remote island home during a storm. She is rescued by a kindly Nassau grouper, named Rupert. Not knowing where Maria's home island might lie, Rupert takes her to Nassau where he speculates she might find others of her kind that could help her with her journey home (Figure 6).

As the story evolves, Maria is introduced to other characters who, after learning of her misfortune, offer suggestions and assistance in her quest to return to her home island. Many of these animals have their own tales of woe based on mankind's impact on their environment. They too seek that idyllic setting where they can pursue their lives free of man's disruption of their natural habitat. Appended to the end of the book is an encapsulated description of each animal that appears as a major character in the book.

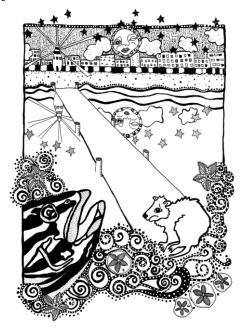


Figure 6. Rupert the Grouper delivers Maria safely to the pier at Nassau.

In Nassau, Maria is befriended by Matt, a Norwegian rat. Matt leads Maria to a local zoo. There, she befriends other animals who have been put into the zoo because of the threat to their species or as a consequence of mishaps that left them injured and vulnerable. Maria persuades these other animals to escape from the zoo and assist her with the search for her home (Figure 7). These creatures, too, seek a quiet refuge where they may lead their lives in solitude, away from the hustle and bustle of the tourist centers in the islands. The underlying message of the book speaks to the conflict between the needs of animals in the natural environment and people's desires for recreational development in exotic locales.

In addition to Maria, Rupert, and Matt, key characters in the story include an iguana (Lana), sea turtles (Myrtle and Bert), Bahamian parrots (Maret and Garet), a dolphin (Alton), Bahamian crawfish (Trish and Mitch), a Queen conch (Dawn) a white-tailed tropic bird (Amber), a coral reef (Darryl), a barracuda (Scooter), and a shark (Mark). Cameos for each of these characters are displayed in Appendix I.

After an arduous, and sometimes perilous, journey, Maria and her hardy band of compatriots finally find Maria's home island (Figure 8). The celebration of Maria's homecoming is bittersweet. Some of her traveling companions can stay but others will need to leave in search of more suitable locales.

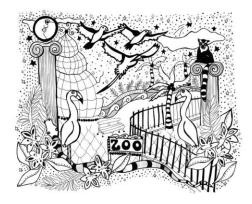


Figure 7. Escape from the Zoo.

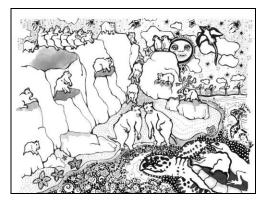


Figure 8. Maria's Homecoming.

MARIA THE HUTIA AS A CONSERVATION CAMPAIGN

Intended, or not, the *Misadventures of Maria the Hutia* has all of the necessary components for a wildlife conservation awareness campaign. On a grand scale, the *Misadventures of Maria the Hutia* could be viewed as a mechanism for:

- Creating a conservation awareness ethos in the Bahamas
- Pointing out the conflicts between economic development and the preservation of natural habitats
- Recognizing the value of natural habitats and species diversity

Elements of the story also address specific Bahamian conservation and development issues that impact the environment of the archipelago. These issues include:

- Beachfront Development
- Loss of Habitats
- Disruption of Breeding Areas
- Overfishing
- Outside Economic Control of Development Projects

EDUCATIONAL COMPONENTS

A pronounced educational component is incorporated into the story. The target audience is at a fourth grade reading ability although vocabulary occasionally exceeds that level with the introduction of scientific concepts. Some of the key educational elements include:

Teaching environmental stewardship

- Entertains and engages
 - Animal names rhyme
 - o Bahamian accents
 - Illustrations capture attention

Teaching Bahamian natural environments

- Marine environments
- Terrestrial environments

Teaching the 'Whole' child

- Integrates mind and heart
- Incorporates individuality and connectedness into personal identity

Teaching about personal journeys

- Journeys of growth and discovery
- Journeys of persistence and perseverance

• Journeys of departure and return

Teaching about teamwork

- Working together can achieve mutual objectives one can't achieve on one's own
- Utilize the strengths of individuals to achieve a collective goal

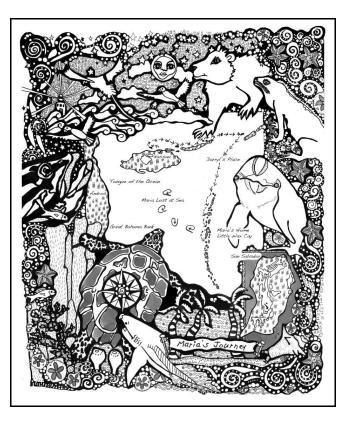


Figure 9. Map of Maria's journeys through the Bahamas.

CONCLUSION

Animation and fictionalized accounts of reality are common mechanisms for teaching children moral and ethical values. The underlying message of the *Misadventures of Maria the Hutia* is that unless mankind begins to recognize the extent of his impacts on the resources of the land, the sky, and the sea, and places global limits on his own use of the earth's resources, there will come a time when mankind will destroy himself in the battle over control of the few resources that remain. Children are the next generation of adults. Instilling environmental values in them at an early age influences future adult behaviors and values. In the story, Maria and her companions find their way back to Maria's isolated home island (Figure 9). If *The Misadventures Of Maria The Hutia* can influence the actions of a future generation of adults, then perhaps stories about the plight of threatened species in the Bahamas and elsewhere in the Caribbean region can be relegated to the genre of historical fiction rather than to the head-lines of contemporary tragedy.

ACKNOWLEDGMENTS

We would like to thank Dr. Donald T. Gerace, Chief Executive Officer, and Tom Rothfus, Executive Director, and Erin Rothfus, Research Coordinator of the Gerace Research Center, San Salvador, Bahamas, for the support provided for teaching and research efforts on San Salvador.

We would also like to express our appreciation to people of San Salvador. They have served as our hosts through the many years we have collectively traveled to San Salvador for teaching and research. Their continuing commitment to our work and to the welfare of our students is reflected in our continuing commitment to them to share and protect the wonderful bounty of San Salvador's Living Jewels.

Finally, we would like to dedicate this article to the late Lloyd Jones a long-time friend and employee of the Gerace Research Centre. Mr. Jones was an integral part of the operation of the Gerace Research Centre. His untimely passing in 2013 leaves a void in all of our lives.

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APPENDIX I THE CAST OF CHARACTERS



Figure A-1. Maria the hutia.



Figure A-2. Rupert the Nassau grouper.



Figure A-3. Matt the Norwegian rat.



Figure A-4. Lana the iguana.



Figure A-5. Maret and Garet- Bahamian parrots.

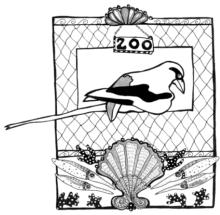


Figure A-6. Amber the white-tailed tropic bird.

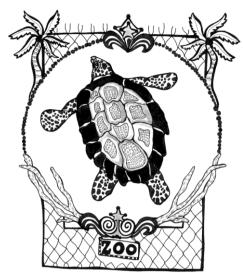


Figure A-7. Myrtle the sea turtle.



Figure A-8. Reef Creatures.

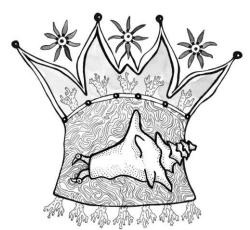


Figure A-9. Dawn the Queen conch.



Figure A-10. Alton the dolphin.

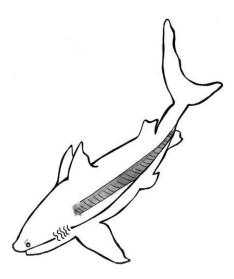


Figure A-11. Mark the shark.

The 15th Symposium on the Natural History of the Bahamas