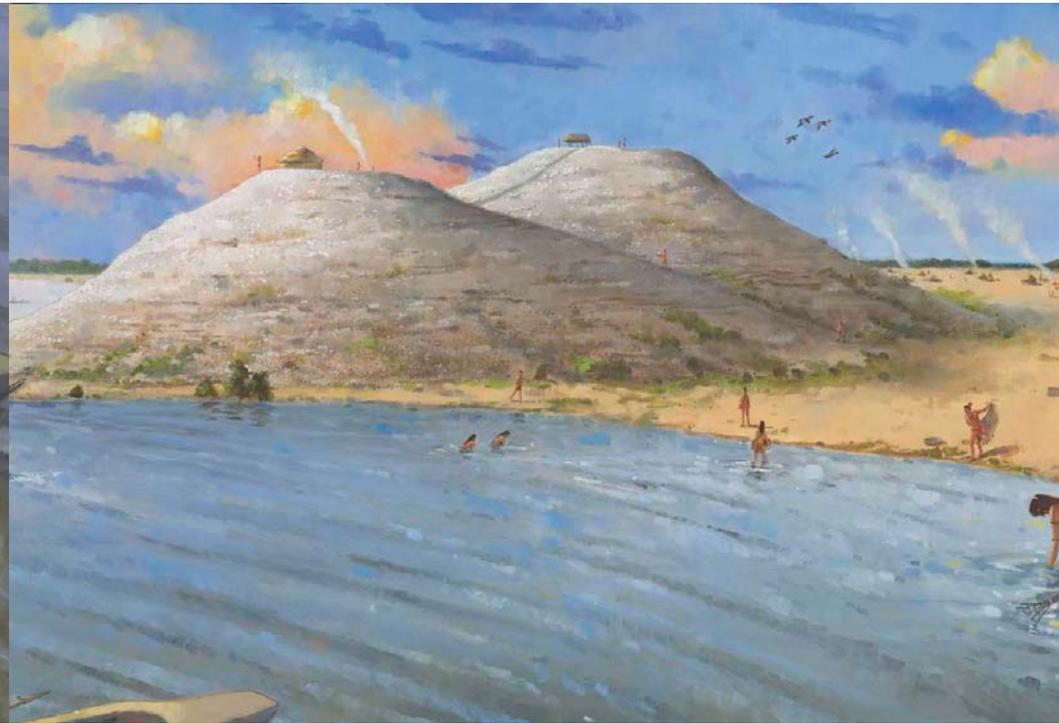
The background of the entire page is a detailed illustration. In the foreground, a Native American woman with a ponytail and intricate tattoos is shown from the waist up, sitting in a wooden canoe and holding a long wooden pole. The water is a deep blue with whitecaps. In the middle ground, a wide river flows towards the background. On the right bank, there are two large, conical mounds of earth or stone. The top of the larger mound features a small, circular structure with a thatched roof. A path leads up the side of the mound. Several small figures of people are scattered across the landscape, some on the riverbank and others in the water. The sky is a mix of blue, orange, and yellow, suggesting a sunset or sunrise. The overall style is that of a classic oil painting.

We Will Remember Turtle Mound

Uncovering the Past and Saving the Future
of Florida's First People

Suzie Caffery & Diahn Escue

Illustrated by Martin Pate



We Will Remember Turtle Mound

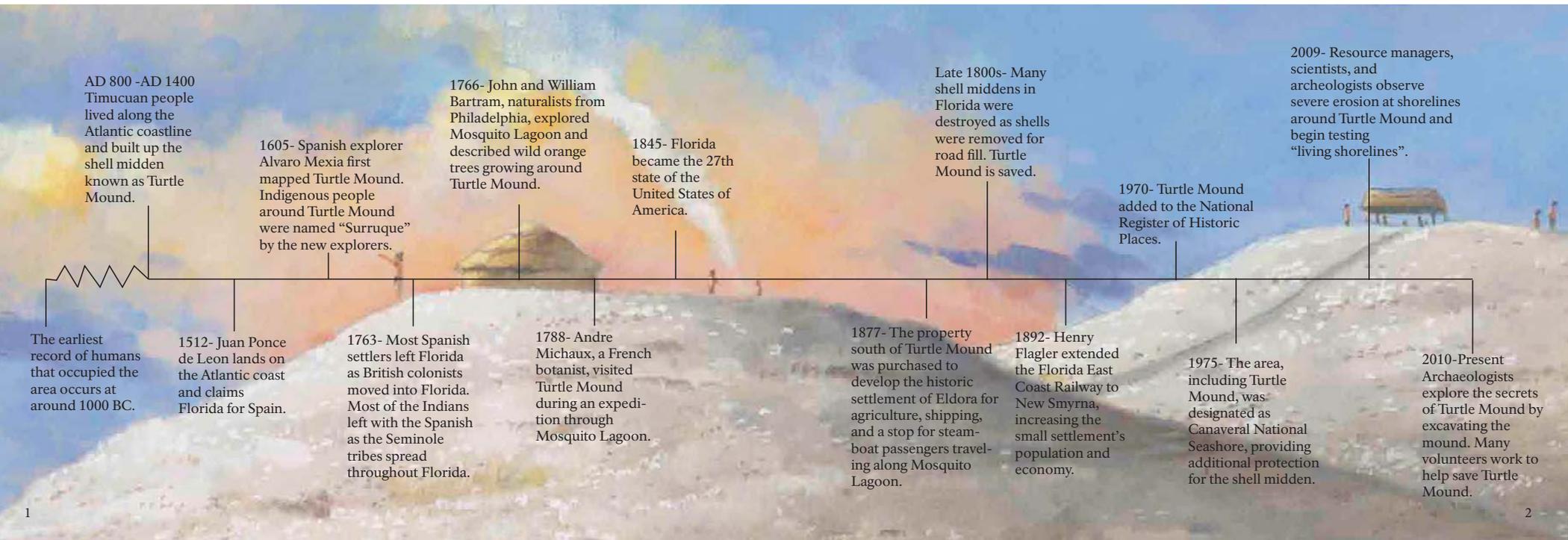
Uncovering the Past and Saving the Future of Florida's
First People

S. Caffery & D. Escue

Contributors: L. Walters, M. Schwadron, J. Stiner, M. Donnelly, J. Manis,
J. Sacks & P. Sacks

Illustrations: Martin Pate

Graphic Artist: Jayce Hill



AD 800 -AD 1400
Timucuan people
lived along the
Atlantic coastline
and built up the
shell midden
known as Turtle
Mound.

1605- Spanish explorer
Alvaro Mexia first
mapped Turtle Mound.
Indigenous people
around Turtle Mound
were named "Surruque"
by the new explorers.

1766- John and William
Bartram, naturalists from
Philadelphia, explored
Mosquito Lagoon and
described wild orange
trees growing around
Turtle Mound.

1845- Florida
became the 27th
state of the
United States of
America.

Late 1800s- Many
shell middens in
Florida were
destroyed as shells
were removed for
road fill. Turtle
Mound is saved.

1970- Turtle Mound
added to the National
Register of Historic
Places.

2009- Resource managers,
scientists, and
archeologists observe
severe erosion at shorelines
around Turtle Mound and
begin testing
"living shorelines".

The earliest
record of humans
that occupied the
area occurs at
around 1000 BC.

1512- Juan Ponce
de Leon lands on
the Atlantic coast
and claims
Florida for Spain.

1763- Most Spanish
settlers left Florida
as British colonists
moved into Florida.
Most of the Indians
left with the Spanish
as the Seminole
tribes spread
throughout Florida.

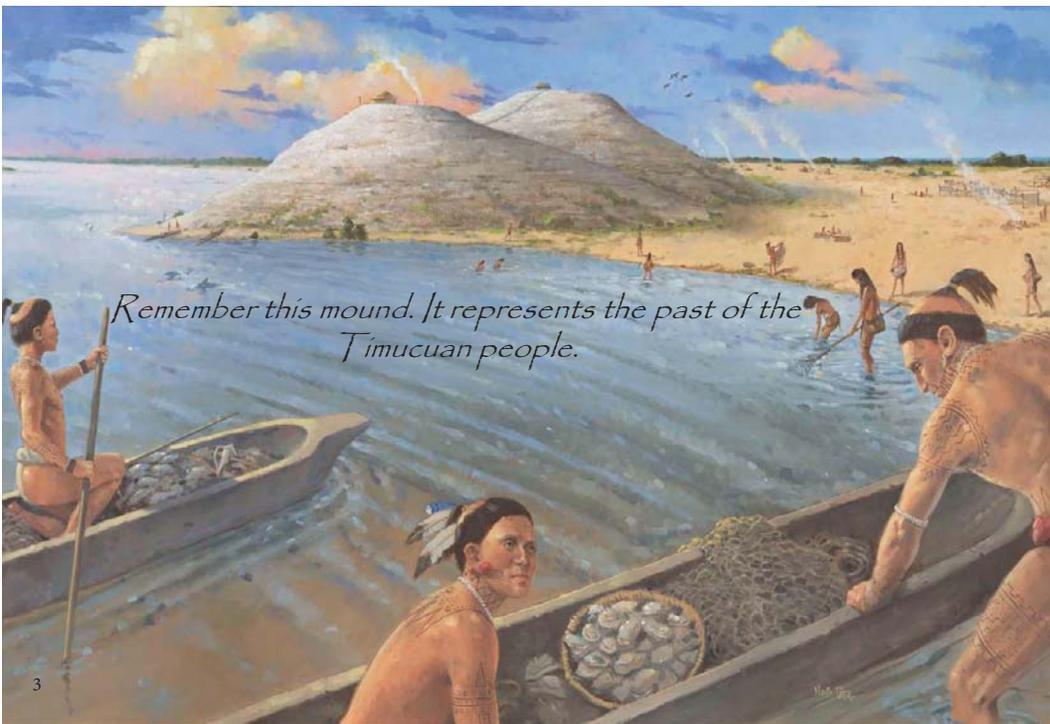
1788- Andre
Michaux, a French
botanist, visited
Turtle Mound
during an expedi-
tion through
Mosquito Lagoon.

1877- The property
south of Turtle Mound
was purchased to
develop the historic
settlement of Eldora for
agriculture, shipping,
and a stop for steam-
boat passengers travel-
ing along Mosquito
Lagoon.

1892- Henry
Flagler extended
the Florida East
Coast Railway to
New Smyrna,
increasing the
small settlement's
population and
economy.

1975- The area,
including Turtle
Mound, was
designated as
Canaveral National
Seashore, providing
additional protection
for the shell midden.

2010-Present
Archaeologists
explore the secrets
of Turtle Mound by
excavating the
mound. Many
volunteers work to
help save Turtle
Mound.



Remember this mound. It represents the past of the Timucuan people.

*Remember this mound, tall and steep
with discarded objects hidden beneath.*

Turtle Mound is a mound of shells, also called a shell *midden*. It was built by Timucuan people, layer by layer, year by year. The Timucuan were the *indigenous* people of Florida's east coast who lived in the area we now call Mosquito Lagoon, located just south of New Smyrna Beach. Over one thousand years ago, the Timucuan piled up discarded bones, oyster shells, broken pottery, and other *refuse*, creating this mound. As the years went by the mound grew, leaving its mark on this location.

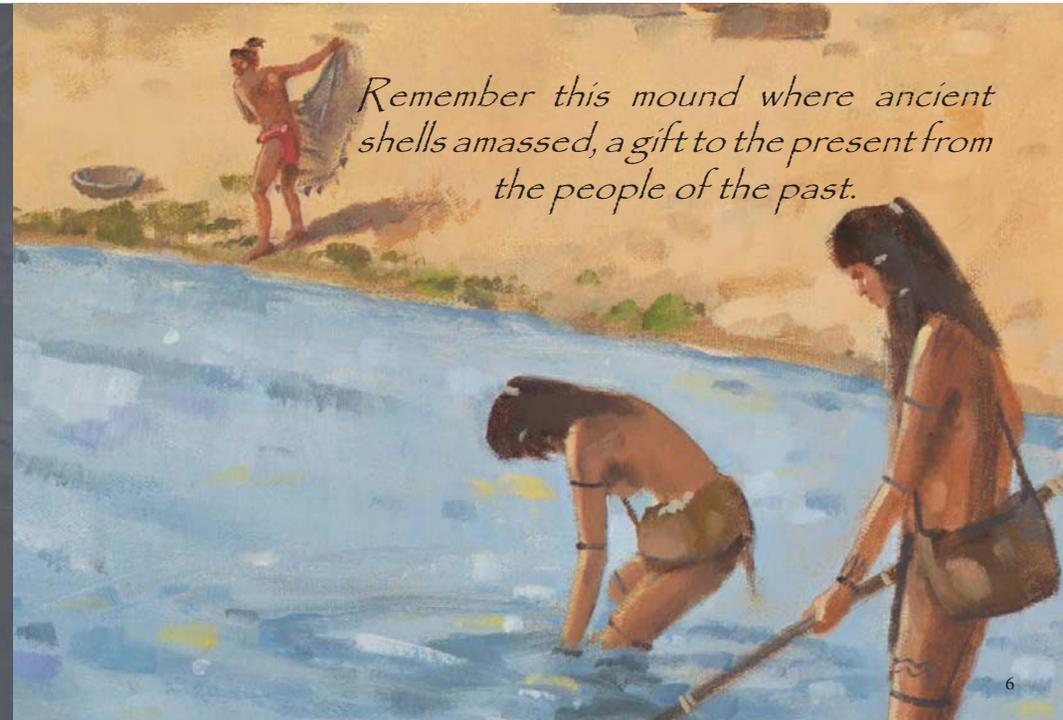
We will remember Turtle Mound

Remember this mound and its wonderful views, where the Timucuan made fishhooks and tree trunk canoes.

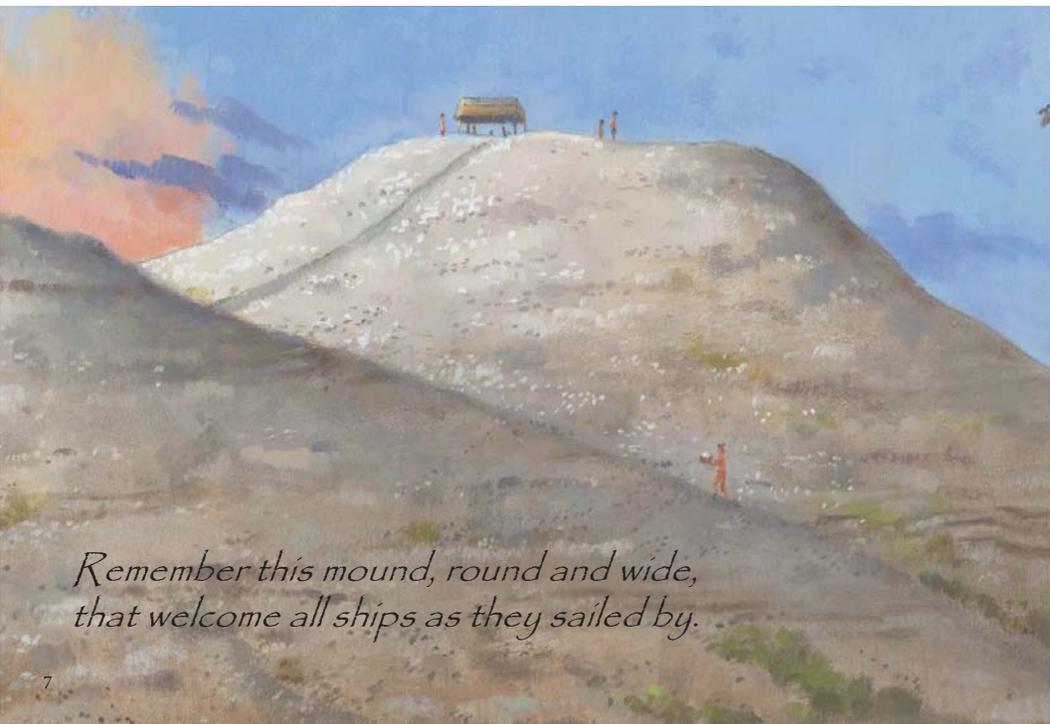
Timucuan tribes inhabited the area surrounding Turtle Mound. This was their home, and the place where they raised their families. Food was abundant and found all around the Lagoon. They carved fishing hooks, arrows, and knives from bones and shells. Fishing nets were woven from reed (a type of grass) and palm trunk fibers. They hollowed out trees of pine and cypress to make canoes to *navigate* the lagoon.



We will remember Turtle Mound



Remember this mound where ancient shells amassed, a gift to the present from the people of the past.



*Remember this mound, round and wide,
that welcome all ships as they sailed by.*

*Remember this mound, echoed with laughter, family fun, and
children's chatter.*

Timucuan children helped their families by carrying empty oyster shells to the top of the mound. They used hand-made baskets to carry their heavy loads. Children helped collect fresh water in pottery bowls. When work was done, the children enjoyed playing and splashing in the warm, shallow water of Mosquito Lagoon.

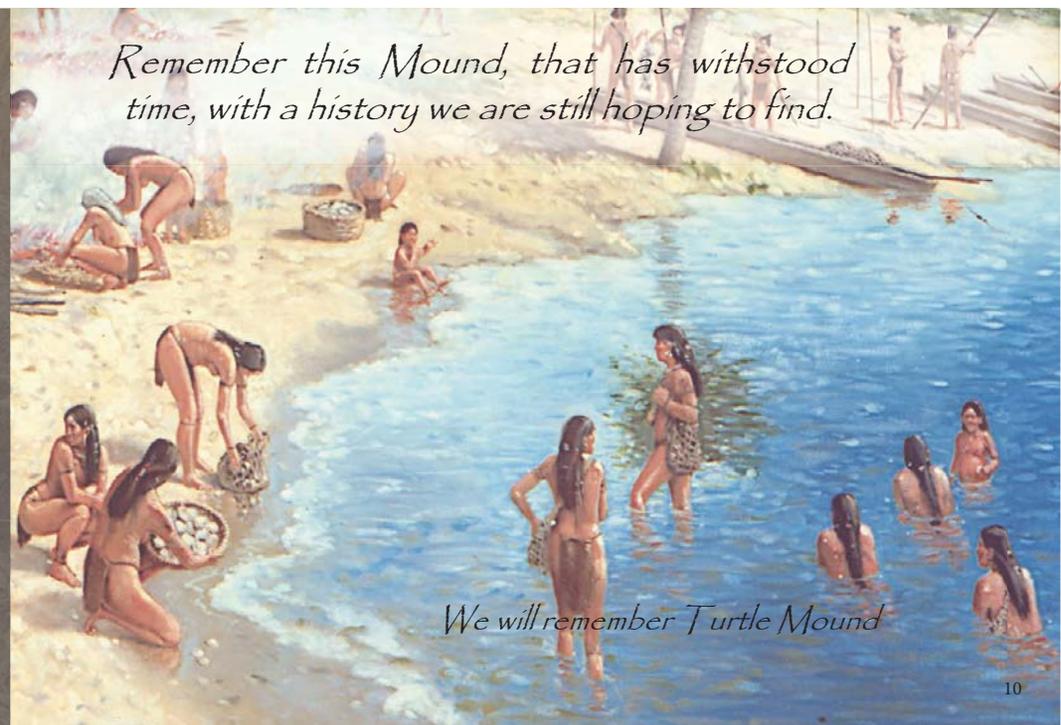
The mound grew larger over time as more and more shells were added. It reached almost 40 feet (12 meters) in height. On Florida's otherwise flat landscape, this tall mound could be seen for miles offshore. It was used as a navigational landmark for centuries. Legends suggest that some early *mariners* thought the mound was shaped like a turtle, earning it the name Turtle Mound.

We will remember Turtle Mound

*Remember this mound.
It represents the past of the Timucuan people.*

Turtle Mound is a place where we hope to rediscover a way of life that is now gone. As *archeologists* study Turtle Mound, we are learning more and more about the history of the Timucuan people, and why we must protect and preserve their history. *Archeologists* search for a history that is not written, but left for us to unearth and interpret. They dig down inch by inch, documenting everything they uncover.

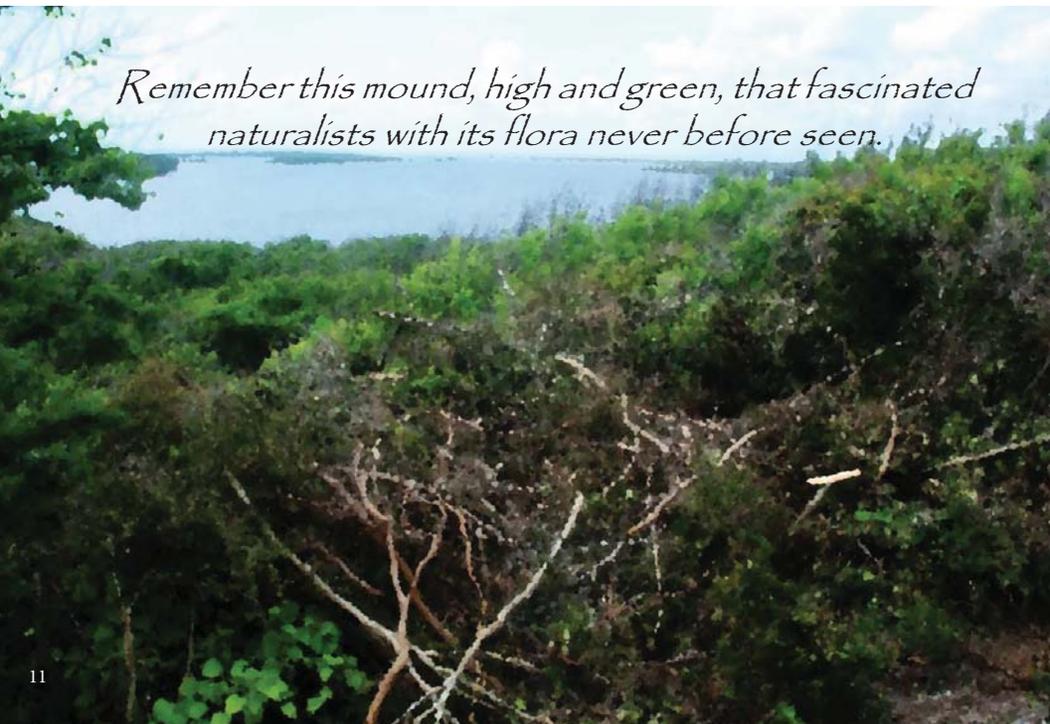
Today, Turtle Mound covers nearly 2 acres, holds 2.5 million *bushels* of oyster shells, and stands 35 feet tall (11 meters). The reduction in height is due, in part, to natural processes packing down the shells over time. To protect it, Turtle Mound was added to the National Register of Historic Places. It is located in Canaveral National Seashore and is protected by the National Park Service.



*Remember this Mound, that has withstood
time, with a history we are still hoping to find.*

We will remember Turtle Mound

Remember this mound, high and green, that fascinated naturalists with its flora never before seen.



Remember this mound, shrouded in mystery, bearing silent witness to the arrival of new people creating their own history.

The tropical wilderness of Florida attracted explorers from around the world and Turtle Mound was noted on Spanish maps dating back to the 1600s.

By the 1800s, pioneer settlements sprang up all along Florida's east coast. Steamboat passengers and ships loaded with goods passed by Turtle Mound every day. Turtle Mound remained a look-out post and historical marker of the past as new *inhabitants* prepared for their futures.



*We will remember
Turtle Mound*

*Remember this Mound that could disappear along
with the memories the Timucuan held dear.*

In recent years, Turtle Mound and its clues to the Timucuan have faced destruction caused by erosion. Boat wakes and storms have crashed and torn at its shore. Erosion is carrying secrets away, washing its foundation into the sea. The sea level is also rising because of *climate change*, submerging more and more of the mound. Turtle Mound needs saving.

Archeologists, scientists and park rangers now work to preserve Turtle Mound. The scientists have studied the problem, and brought together thousands of volunteers to help create a “living shoreline”. By planting oysters, marshgrass, and mangrove trees around the base of Turtle Mound, there should be no more erosion. This mound is a tribute to the Timucuan people and the land they loved.

*Remember this mound with it's rich past.
We will preserve it's future at last.*



We will remember Turtle Mound

We will remember Turtle Mound



*Remember this mound from all that you've heard.
Now it's up to you to protect and preserve.*

Now, you are the steward, you hold the future of the past in your hands. It is up to you to protect and preserve Turtle Mound, and what the Timucuan held dear. As you enjoy the natural beauty of this area, remember to respect all *conservation* efforts, and look for opportunities to volunteer. The Timucuan left their mark upon this lagoon... now it's time for you to step forward and help preserve it.

Vocabulary Terms

Archeologist (ar-kee-ol-uh-jist): person who studies the past by digging up objects and buildings and carefully studying them.

Artifacts (art-uh-fakts): objects made or changed by humans, especially tools and weapons.

Bushel (bush-uhl): a unit of dry measure. 1 bushel = 32 quarts.

Climate Change (cli-mate change): a long-term change in the earth's climate, especially a change due to an increase in the average atmospheric temperature.

Conservation (kon-sur-vay-shuhn): the protection of valuable things, especially our natural resources.

Excavation (ek-skuh-va-shun): to dig into the ground in search of old objects.

Flora (flo-ra): all the plant life in a specific area.



Indigenous (in-dij-i-nis): native, originating in the region or county where found.

Inhabitant (in-hab-i-tant): people who live in a specific location.

Mariner (mar-i-nir): sailor, seaman.

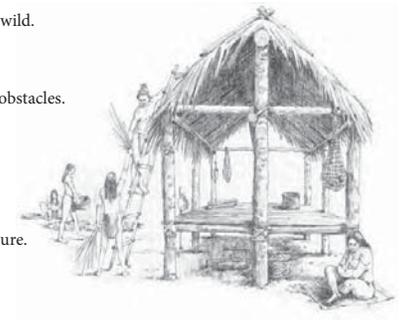
Midden (mid-den): very large pile of shells and other refuse materials (animal bones, broken pottery, etc.).

Naturalist (nach-ur-el-ist): person who studies plants and animals in the wild.

Navigate (nav-ih-gate): steer ship or car or plane or other vehicle around obstacles.

Refuse (ref-use): items that are no longer needed, rubbish.

Stabilize (stay-buhl-ize): to make something firm and steady, safe and secure.



The Story Behind the Story

The fight to save Turtle Mound

This book came about through a partnership between the National Park Service, the University of Central Florida, the Indian River Lagoon National Estuary Program, Brevard Zoo, local educators, and many members of the community. Canaveral National Seashore and Park Service staff knew there was erosion at Turtle Mound, and so they partnered with university scientists to test methods for stabilization of eroded shorelines. Local educators and volunteers were eager to help protect the mound. Hundreds of volunteers have helped to plant a “living shoreline” and now lots of new mangroves, marsh grass and oysters growing at Turtle Mound have helped to stabilize the mound and slow erosion. Here are the stories of some of the key people involved in this project. We all love our work and are proud to be involved in protecting and preserving Turtle Mound. Maybe you too are interested in archeology and science? Maybe you see yourself having a similar career some day in one of our National Parks?



Dr. Margo Schwadron, National Park Service Archeologist

Margo has an M.A. from Florida State University and a Ph.D. in Archeology from the University of Leicester. She always been fascinated in finding and understanding pieces of the past that, once understood and combined, turn into stories of our history. Her work takes her to many amazing historic areas, including Turtle Mound. For this project, Margo is responsible for leading a team of archeologists for the the archeological excavation and classifying and interpreting the importance of the artifacts.

John Stiner, Natural Resource Management Specialist in Canaveral National Seashore (CANA)

John holds a Master's Degree in Ornithology (study of birds) from Western Michigan University. He is now responsible for managing all the diverse resources of CANA. These resources include sea turtles nesting on the beach, fisheries in the Lagoon, and, of course, archeological sites. John was very concerned that the fossil shells and other artifacts were washing into the lagoon at Turtle Mound and coordinated with Dr. Schwadron and Dr. Walters to initiate this project. One important part of this project led by John was to create a walking path around the base of Turtle Mound to allow visitors to view the midden from many angles, while simultaneously allowing shoreline stabilization to occur.



Laura Henning, Chief of Interpretation and Visitor Service at Canaveral National Seashore

Laura began as a seasonal ranger with the sea turtle program, then after receiving her degree in Scientific Communication from Florida Institute of Technology, she moved to resource interpretation and education. Laura has the fun job of teaching visitors about the past, present and future of CANA. Hundreds of school children every year come on field trips to learn about Turtle Mound and the people that left behind this amazing legacy. Part of her job is also to work with the many partners of CANA like UCF and the non-profit fund raising group the Friends of Canaveral. These groups and so many more volunteers have been involved in preserving Turtle Mound for now and for future generations.

Dr. Linda Walters, Professor of Biology, University of Central Florida (UCF)

Linda leads the scientific and community volunteer aspects of the Turtle Mound stabilization efforts. She has a Ph.D. in Biology from the University of South Carolina and is now a Professor in the Biology Department at UCF. She began working in Mosquito Lagoon 16 years ago when John Stiner asked her to study the decline of oysters in CANA. Linda has always been concerned with protecting the marine environment and realized how important it is, first as a student and now as a college professor, to use the best possible science to protect areas such as Turtle Mound.



Melinda Donnelly and Jennifer Manis, Graduate Student Researchers with Dr. Walters at the University of Central Florida

Melinda is a graduate student in the Conservation Biology Ph.D. program at UCF and has been involved with the science of restoring shorelines in Mosquito Lagoon since the start of this project. Her doctoral research is focused on mangrove ecology, one of the focal species for shoreline stabilization at Turtle Mound. Jenny is a M.S. candidate in Biology at UCF. Her thesis research includes using a large wave tank at Florida Institute of Technology to determine how much wave energy is reduced by our shoreline stabilization efforts, immediately after stabilization and then over longer time periods. Both Melinda and Jenny have led dozens of community events in central Florida to prepare materials for stabilization as well as leading post-stabilization monitoring to track oyster recruitment and plant growth.



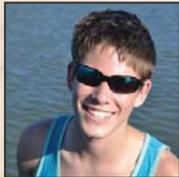
Suzie Caffery and Diahn Escue, Educators in Central Florida Schools

Between them, Suzie and Diahn have over 40 years of teaching experience with preK – 4th grade children. Both know the importance of hands-on learning and have their classes involved in all sorts of environmental projects. Both are also gifted authors, having previously written three stories for young children. Their first book, *“An Afternoon in Mosquito Lagoon”* is focused on the biological diversity and protecting oyster reefs; the second is titled, *“A New Home for an Old Friend”* that describes what to do with your aquarium plants and animals when you can no longer care for them; and *“The Mangrove Tree: Top to Bottom, Bottom to Top”* describes the importance of mangroves in estuaries. For the Turtle Mound project, Suzie and Diahn have been the primary authors on this book and have enlisted the help of dozens of their colleagues to grow mangroves from seeds with their classes and care for them until they are ready for planting.



Josh Sacks, High School Student and Community Volunteer

Josh is a public high school student in central Florida who is interested in ceramics, scuba diving, world politics, and plays on his high school lacrosse team. He is passionate about the environment and its protection, and accumulates over 500 hours of community service each year on this and many other projects. His goal is to obtain a degree in Environmental Politics that he can use to protect environmentally sensitive habitats around the globe.



Martin Pate, Artist

Martin grew up in Hartsville, South Carolina. After high school he attended Ringling School of Art in Sarasota, Florida. He graduated with honors in 1981. His career as an illustrator began with Brown Dog Studios in Atlanta and now paints for the National Park Service. He has two paintings done in Canaveral. One is an interpretation of past life in Seminole Rest (page 10), the other is an interpretation of past life at Turtle Mound (front cover and throughout the book). His interpretative paintings and drawings are used for brochures, posters, book covers, and educational books. His paintings are important tools for educating the public and creating an interest in American history and archaeology.

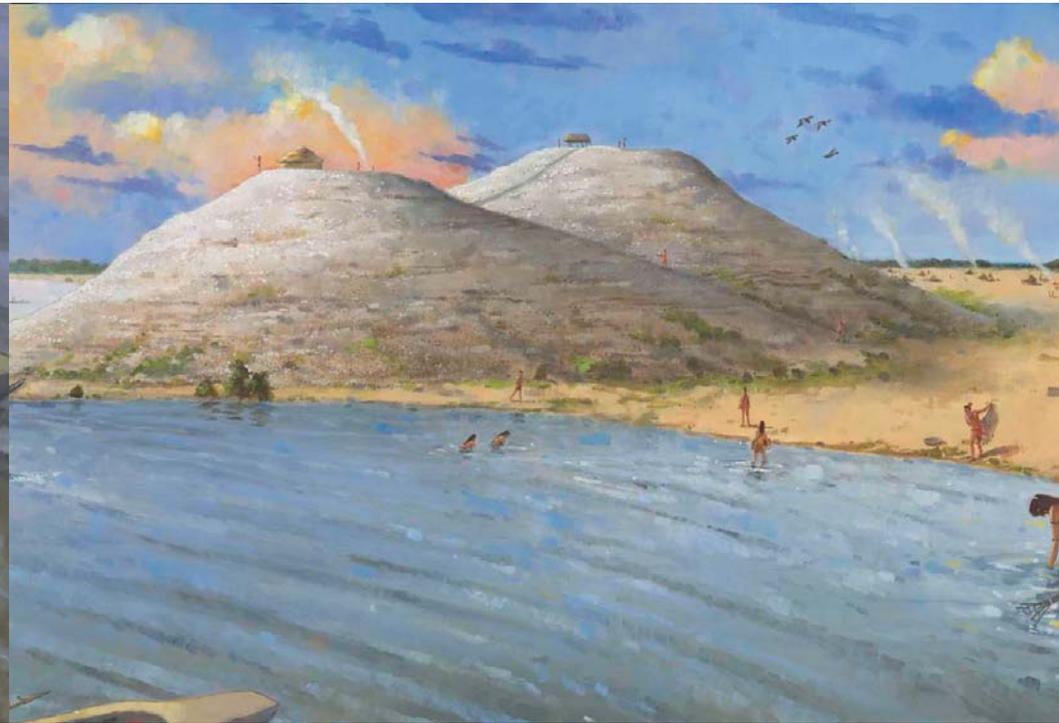
Jayce Hill, National Park Service Graphic Designer/Archeological Technician

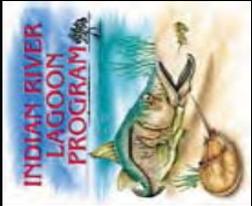
Jayce received his B.A. in Digital Media Production and his B.S. in Anthropology at Florida State University. Jayce grew up in Oregon and moved to Port Orange, FL when he was 16 years old. He graduated from Spruce Creek High School in 2008, only a few miles from Turtle Mound. Jayce started his career by directing various short films and volunteering on numerous excavations and archaeological research projects in college. In 2012 he graduated from Florida State University and secured a position at the Southeast Archeological Center (SEAC) at the National Park Service. Today Jayce continues his passions by designing various brochures, the SEAC website, working on archaeological field projects at SEAC and acting in/directing films in his personal time.



This book was made possible through a partnership between the National Park Service and the University of Central Florida.







Tons of fish bones, oyster shells, pieces of broken pottery, and other discarded materials were piled into large mounds, frequently called shell middens, many hundreds of years ago. On the east coast of Central Florida, along the shorelines of Mosquito Lagoon, many mounds were created by the Timucuan people. The largest of these mounds is known as Turtle Mound. In the pages of this book you will read about the past, present and future of this historic site and some of the many individuals dedicated to its protection.

