Salt River National Historical Park and Ecological Preserve

National Park Service
U.S. Department of the Interior

# Junior Ranger Activity Book

Name:

# How to become a Junior Ranger

So, you want to become a Salt River Junior Ranger? To earn your badge, you will need to finish 3 projects.

1) Become an Explorer, a Farmer or a Settler! See the next page for details.

2) Attend a Ranger-led activity – a tour, a walk, a demonstration

   a. Name of program: _____

   b. Ranger's name: _____

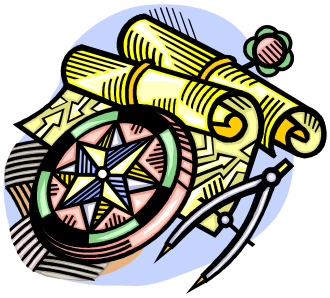
3) Complete a service project. When you finish your project, have your parents or another adult sign this form.
   a. Re-use something that you have already used in a different way, like reuse your plastic soda bottle as a water bottle
   b. Create your own brief ranger program to your family
   c. Pick up 5 pieces of trash (water bottles, paper)
   d. Create your own original Salt River service project!

      i. Name of project: _____

      ii. Adult's signature: _____

Remember – safety is the most important thing you do. Have respect for the people and places you visit during your Salt River adventure!

The Salt River Bay National Historical Park and Ecological Preserve Junior Ranger Program has three different groups. How many of these activities can you finish?



## Explorer

People have been coming to the Virgin Islands for thousands of years. They first arrived on St. Croix over 2,000 years ago. Ever since then, people have come to our island for its beautiful fertile land, its rich reefs, and many other amazing resources. Complete at least 4 of the activities in this book.

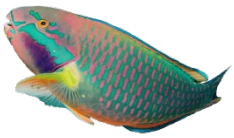
## Farmer

When people arrived on St. Croix they quickly realized just how good the land was for growing food. Ancient peoples grew lots of fruits and vegetables. Later, Europeans came and planted sugar, cotton, and other kinds of plants, for food and for money. Complete at least 6 of the activities in this book.

## Settler

People have built many kinds of homes on St. Croix, ranging from ancient large buildings that were home to many families, small farms, large villages, and even towns. Complete all of the activities in this book.

# Salt River Bay National Historical and Ecological Preserve



is a very special place. The beautiful and rich variety of plants and animals, and until about 50 years ago fresh water, brought many people to this bay and the surrounding hillsides for over 2,000 years. There were ancient villages on both sides of the bay, and up the hill to the south. As the number of people on the island grew, some places, like at Columbus' Landing, became important centers of culture and power. There was a ballcourt surrounded by stones carved with symbols that told of its importance. The fresh water from the Salt River was very important. It was so important that Christopher Columbus made a stop here on November 14, 1493, during his second voyage to the New World.

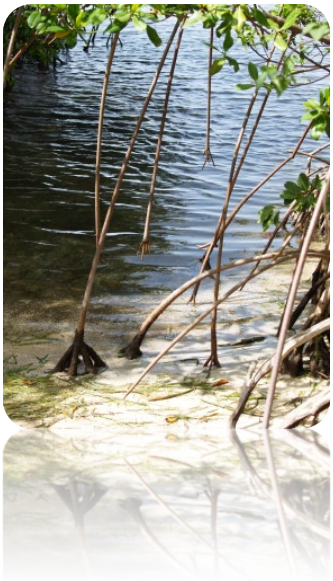
Today there are many **ecosystems** in the Salt River area. An ecosystem is a group of living things, like plants and animals, and non-living things, like soil, weather, rain, and wind, found in a certain place that depend on each other to survive. People are part of an ecosystem. Salt River Bay National Historical Park and Ecological Preserve was created by the United States Congress in 1992, to protect the history, the archeological artifacts, and all of the plants and animals both on the land and under the water.

Many archeologists have studied the two ancient villages that once stood on either side of the mouth of the bay. They use tools like radar to see under the ground before they dig.

**Did you know that over 1,000 years ago fishermen used to make their own fish hooks out of sea shells and bone?**

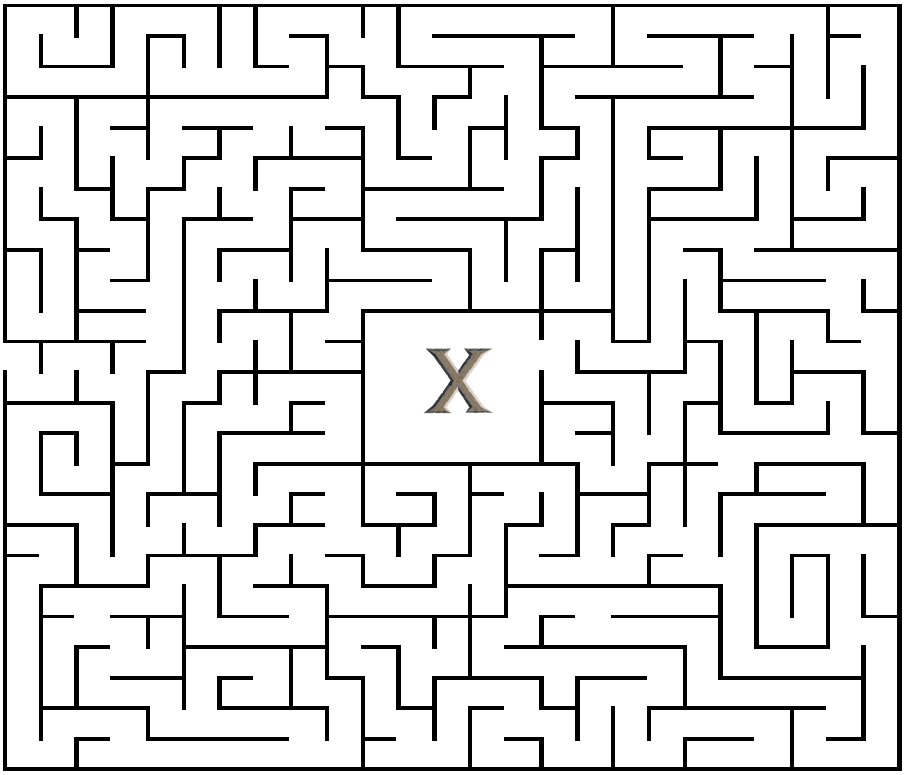
# Mangrove Maze

Mangroves grow where the land and sea meet, in intertidal zones and estuaries (the mouths of rivers). There are three kinds of mangroves at Salt River Bay: red, white, and black. Each kind lives in a particular zone. **Red mangroves** grow next to the sea in brackish water (a mix of saltwater and freshwater). **Black mangroves** grow a little more inland but still get wet from high tides. **White mangroves** (and **buttonwood**) are found inland on high ground and hardly ever get wet. Mangroves grow by dropping prop roots (**propagules**) into the mucky water.



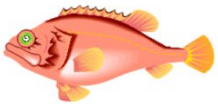
Mangroves serve an important role in the Salt River Bay ecosystem. They filter water that runs off the land into the bay, and they protect nearby corals from being choked by sediments that are also running off from the land. This helps to keep the water clear. They also protect the mainland from storm wind, floods, and waves. The leaves that fall into the water decompose and become food for many small animals, which are food for bigger animals. Mangroves are important **nurseries** for many species of fish, shrimp, crabs, and other creatures. The tangled maze of mangrove roots help to keep the soil from eroding, and actually help to slowly build land.

Starting at the **X** in the middle, find your way through the maze of mangrove roots to reach the ocean!

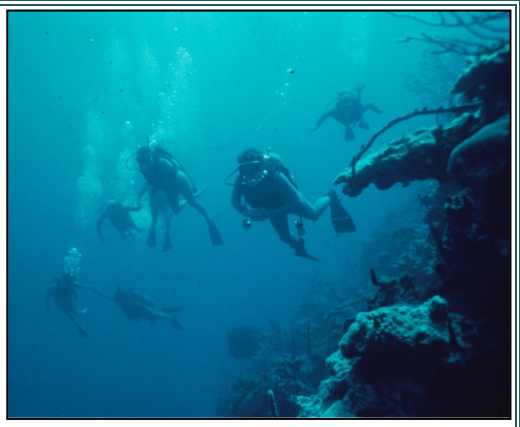


# Beach Bingo

Look for these things when you visit Salt River and the other beaches on St. Croix. When you find one, mark the square with an "X". Find 5 in a row, and you've got BINGO. But don't stop there – see how many you can find!

| B | I | N | G | O |
|---|---|---|---|---|
| seaside morning glory | egret | sea urchin | butterfly | rock |
| sea shell |  fish | frangipani | pelican | ant |
| footprints | mosquito | palm tree | ghost crab | sea fan |
| iguana | frigate bird | NATIONAL PARK SERVICE | sea grape | frog |
| red mangrove | coral | conch | bird tracks | blue heron |

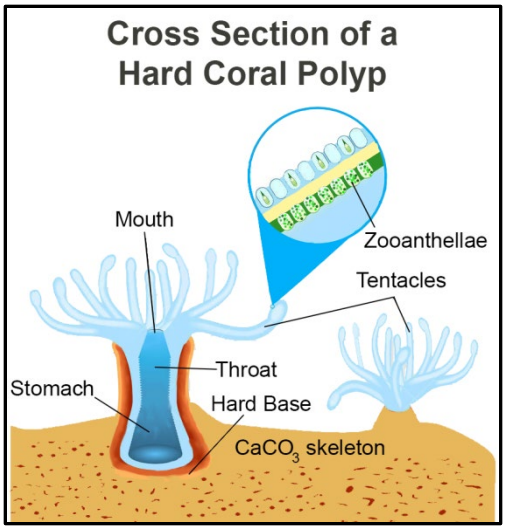
# Canyons of the Deep



Salt River Bay is protected from the power of the sea by a barrier reef that is made up mostly of finger and elkhorn corals. The flat sand and coral bottom then suddenly drops off into a deep canyon that is over 350 feet deep. The walls of this deep canyon are covered in lettuce corals, sponges, and other soft corals, like sea fans. Creatures that live in the corals include West Indian (spiny) lobsters, spiny sea urchins, spaghetti worms, and anemones. At the bottom of the canyon there are seagrasses and seaweeds.

Over 30,000 years ago, when sea levels were about 300 feet lower than they are now, this underwater canyon was actually above water. Like the Grand Canyon, the Salt River carved the canyon out of the rock.

The canyon runs into the Virgin Islands Trough, which is 18,000 feet deep! That's over 3 miles! Further to the north, the Trough runs into the Puerto Rico Trench, which is the deepest part of the entire Atlantic Ocean – it is over 28,000 feet deep!




Many corals have other creatures, like algae, that live inside them. These creatures are called **zooanthellae**, and they give coral their bright colors. Over 40 species of corals have been seen at the Salt River canyon.

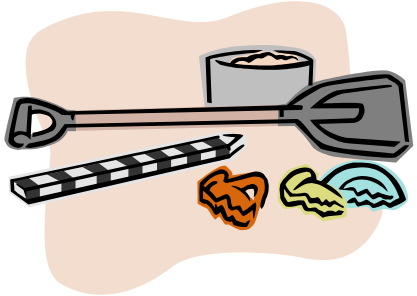
**A soft coral does not build a reef, and does not have a stony skeleton. They look like trees and plants, and can live outside the tropics.**

**Are the corals in this picture hard or soft corals?**

_____

# Digging the Past

**Archeologists** and historians study and research **people** who lived in the past – from thousands of years to just a few years ago. They study how people lived, what they did, how they traveled, and who they met. Both historians and archeologists use documents like maps, diaries, church and government records, letters, and business records to piece together untold stories of the past. But, many times there are no maps or letters. Many cultures did not even have a written language. But all people leave behind things, like ruins of buildings, piles of trash (**middens**), and burials of their dead.



Archeologists also dig in the ground to find the remains of those people who may not have left written records, whether they lived 100 years ago or 5,000 years ago. Archeologists find the ruins of homes, tools, the items they used to cook and eat food, and sometimes even the food itself. The objects that people leave behind are called **artifacts**. The artifacts and the ground where they are buried help the archeologist make **observations** about how people lived in the past; an observation is information gathered by using one of the five senses. The artifacts, however, only tell part of the story. Both historians and archeologists must use their observations and research to **infer** the whole story of how people lived in the past; to infer is to reach a conclusion about something based on observations or hypotheses.

Use the clues below to decipher the untold story about the people who owned them – who they were, how they lived, and the activities they did. On the next page, write a story about these people.

A map of Salt River Bay from 1647 that shows a fort with cannons and several houses nearby.

Fragments of pottery - bowls and plates with a green glaze that date to the 1700s.

Diary of a soldier, with letters to his family back home in Denmark.

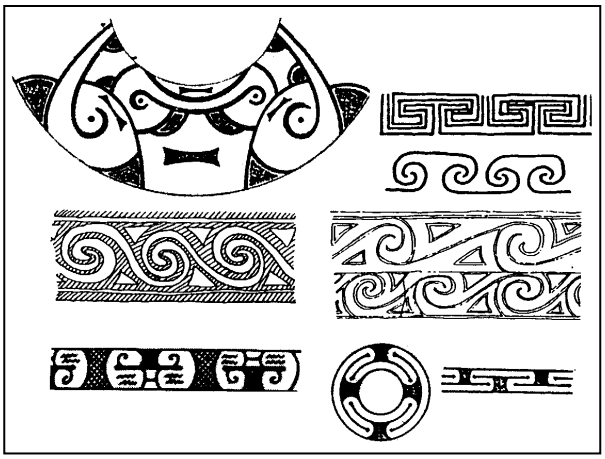
A glass beer bottle that dates to the 1700s.

A pile of fish bones and conch shells (called a midden)

A stack of cannon balls.

# Untold Stories

Archeologists have found evidence for the first people who came to St. Croix – they were Amerindians from South America, near the Orinoco River. They came to St. Croix over 1,000 years before Christopher Columbus arrived on November 14, 1493. These people made very good pottery with designs painted in red and white and other colors. These designs were symbols that may have told what family the owner was a part of, and their social status or rank (if they were a farmer, a fisherman, a priest, or a leader). Some of the symbols represented animals, like crabs, turtles, birds, and even ocean waves. And some pottery even had heads of animals molded out of clay, called **adornos**. These adornos represented local animals, like ducks, pelicans, turtles, frogs, and dogs, and even the leaders or chiefs of their village (**caciques,** *ka-see-kay*) and their spiritual leaders or shamans (**behique**, *be-hee-kay***)**.

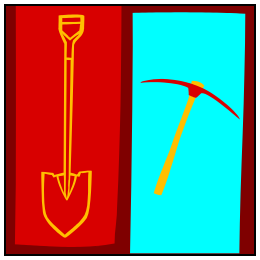


Symbols were also carved onto large rocks – these are called **petroglyphs**. Some petroglyphs were created near streams or rivers, and marked a tribe's territory, like a fence marks a yard. Others were carved into smaller stones that were used to mark the boundaries of ballcourts – open plazas in the villages where people would play games, dance, and have important meetings.

Design your own pottery vessel, petroglyph, or adorno. Remember that your design or symbol tells something about you, your family, and represents your life.

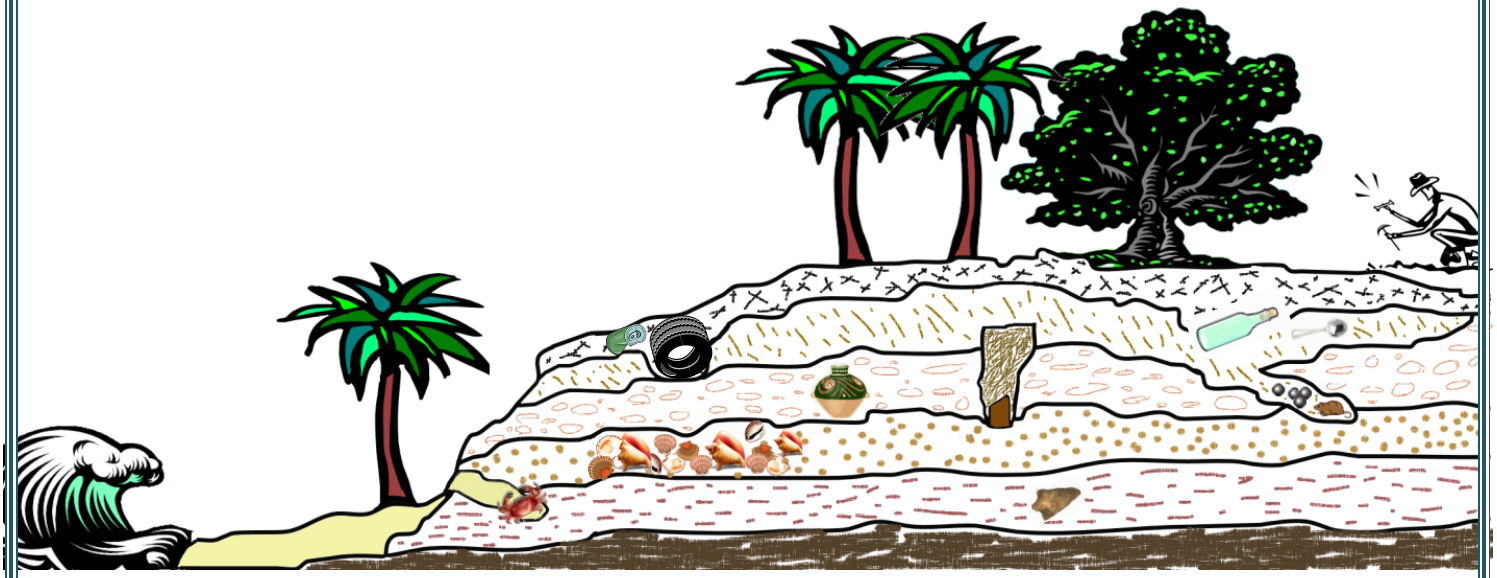
**Where is the Orinoco River? How do you think people travel from there to St. Croix?**

# Pieces of the Puzzle

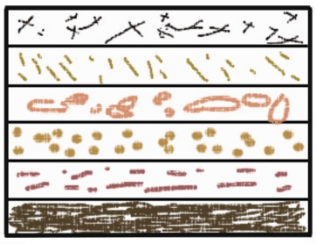


When archeologists excavate or dig into a site, the artifacts are normally found in layers of dirt, called **strata**. Generally, the layers on the bottom are older than those on top; they were deposited first. So, artifacts that are in the bottom layers are normally older than those in the upper layers. Sometimes animals or people will dig into the strata, like when a crab burrows a hole, or a person puts a post in the ground to build a fence. This digging can move artifacts to lower, older levels. The **stratigraphy** of an archeological site is the combination of all the different strata.

Using the picture and the legend below, match the artifacts to their time period (hint: look at the time period of the soil where they are located).



**Stratigraphy Legend**



0-100 years
100-400 years
400-1,000 years
1,000-2,500 years
2,500-4,000 years
4,000+ years

| Artifact | Time Period |
|---|---|
| Tire | _____ years ago |
| Glass bottle | _____ years ago |
| Pot | _____ years ago |
| Arrowhead | _____ years ago |
| Shell midden | _____ years ago |
| Spoon | _____ years ago |
| Small cannonballs | _____ years ago |
| Tin can | _____ years ago |

# Amerindian Words We Use Today

Many of the words we use today were adopted from the Native Americans, or Amerindians from the Caribbean, words like *canóa* (canoe), *huracán* (hurricane), *cáyo* (kay, island), and *barbacóa* (barbeque) are now very familiar to us.

Many of the foods we eat today are also originally from the Americas, like cacao (chocolate), vanilla, chili peppers, sweet potatoes, *mahíz* or maize (corn), tomatoes, peanuts, avocados, and even pineapple. When Europeans arrived and began to establish towns, they brought their own foods and animals, like cows, goats, chickens, rice, sugar, coffee, oranges, and wheat.

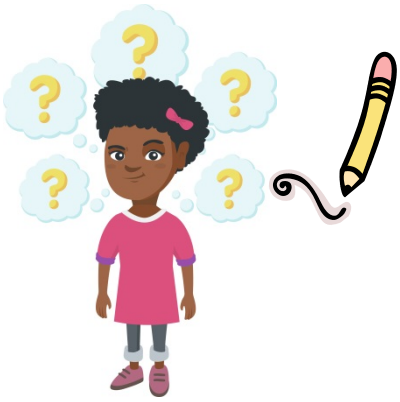
| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | Q | A | Y | A | P | A | P | I | H | A | A | U | T | P |
| K | A | T | F | P | V | P | G | V | A | G | V | G | W | A |
| D | A | Y | W | A | C | U | Y | V | N | O | A | Z | N | R |
| U | T | J | S | D | A | T | P | I | N | U | U | O | P | N |
| E | L | S | W | N | E | F | O | Q | A | T | G | V | V | K |
| G | A | N | A | Z | H | M | U | B | V | I | V | S | F | S |
| C | A | S | I | Y | W | E | Y | W | A | E | T | Q | D | B |
| E | N | A | C | I | R | R | U | H | S | C | O | G | D | W |
| R | M | I | Q | S | J | A | N | C | E | V | C | N | G | E |
| R | D | Z | G | V | X | J | F | R | E | C | Q | O | A | E |
| S | U | O | M | A | U | B | I | S | N | B | K | W | I | C |
| D | D | F | Z | M | L | F | P | E | B | S | R | J | F | B |
| M | W | L | J | Y | Q | W | F | I | X | J | G | A | W | O |
| H | A | M | M | O | C | K | S | M | O | N | T | U | B | X |
| G | T | M | W | J | H | G | M | W | B | J | E | G | D | W |

**Find these Amerindian words in the puzzle above**

AGOUTI
BARBECUE
CANOE
CASSAVA
CAY
GUAVA
HAMMOCK
SAVANNAH
TOBACCO
MAUBI
PAPAYA
MAIZE
IGUANA
HURRICANE

**What are some other foods that are originally from the Americas? What are foods that were brought from Europe? Africa? Asia?**

# Write a Story



Now that you have read about Salt River, and either visited the park or our website, think about something that you find interesting and you want to learn more about. Maybe mangroves? Birds? Trees? History? Ask your parents to help you research your topic, and write a short story that includes your item. On the next page, draw a picture that helps to tell your story.

# It's Not Easy Being Green

A lot of people visit Salt River every year: to play and picnic at the beach, fish, and camp. Many people who visit Salt River are responsible and careful, and throw their trash away properly. Some people, though, are careless and leave their trash on the ground, the beach, or even throw it off their boat! This trash can take a long time to decompose, or break down and rot. Some trash, like broken glass and metal, can be dangerous.

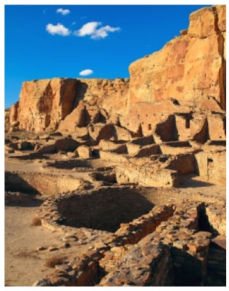
This chart shows how long it takes for things you use every day to decompose.

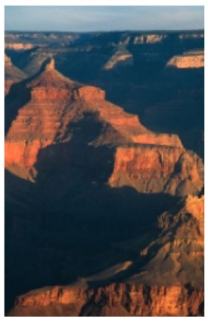
| | |
|---|---|
| **Batteries – 100 years** | **Paper – 2 to 5 months** |
| **Aluminum can – up to 500 years** | **Orange peel – 2 to 5 weeks** |
| **Plastic soda bottle – 500 years** | **Glass bottle – over 1000 years** |
| **Coated milk carton – 5 years** | **Painted wood – 13 years** |
| **Styrofoam – over 50 years** | **Fishing line – over 500 years** |

What can you do to help protect Salt River Bay and St. Croix, by following the 3 Rs – reduce, reuse, and recycle?

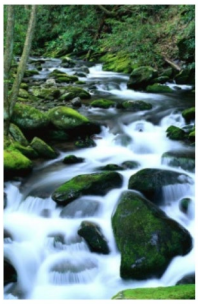
# Just one more step...

**Congratulations!** You are almost done! Now it's time to double check and make sure you've completed all the steps to become a Salt River Junior Ranger (see page 2). When you are finished, take this booklet to the Visitor Center so a Park Ranger can award you with your official Junior Ranger badge.





**Did you know that there are over 400 other National Parks in the United States, each with their own Junior Ranger program? There's even a national program. See how many badges you can collect!**



EXPERIENCE YOUR AMERICA

The National Park Service cares for special places saved by the American people so that all may experience our shared heritage.

# The Junior Ranger Pledge

I promise, as a Junior Ranger for Salt River National Historical Park and Ecological Preserve, to:

- learn all I can about this and other national parks
- protect the plants, animals, and history of the parks
- protect park artifacts, like arrowheads and pottery, by leaving them where I found them
- share what I learn with my family and my friends

Junior Ranger Signature Date

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- www.slaveryimages.org, sponsored by the Virginia Foundation for the Humanities and the University of Virginia Library
- St. Croix Landmarks Society

NATIONAL PARK SERVICE

FIND YOUR PARK

SALT RIVER BAY CHRISTIANSTED BUCK ISLAND REEF