



Port Royal Water Trail, Pier Extension and Public Access



NA15NOS4190164

Task 50

September 30, 2016

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Port Royal Water Trail

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Rappahannock Wildlife Refuge Friends Group

The Rappahannock Wildlife Refuge Friends Group was honored to have been awarded this grant from Virginia Coastal Zone Management in conjunction with the Town of Port Royal. This collaboration has proven to be very successful especially with the help of Tim Ware from the George Washington Regional Commission as the grant administrator. The Friends Group portion of the grant consisted of the development of a water trail that started at the Port Royal canoe and kayak launch at the end of King Street. The trail is made up of three paths along the Rappahannock River. The trails overlap but are designed for the novice, intermediate, and advanced paddler. A significant part of the water trail includes a landing at the Port Royal Refuge Unit that is accessible only by water. Upon landing, canoers and kayakers can walk the 1.5 mile trail. The grant included water trail signs, landing signs, observation decks and resting benches. A group of friends members wrote a hardcopy water trail brochure as well as all of the documentation used to develop an IOS based water trail app that can be downloaded from the apple store. Below is the story of the work and the result of the grant including the dollars expended and the in-kind dollars and volunteer hours that made up the 100% match required by the grant.

The first phase of the project was to map out the exact trail. This was done via two boat trips along the Rappahannock River with GPS devices and cameras to map the trail and take pictures that would be used as Points of Interest along the trail. The pictures were also used for the articles that were written for the application.

A steering committee was formed to manage the project and make sure that the project goals were met. This committee along with historians, plant experts and bird experts picked the pictures that were used as the Points of Interest and in the articles. They also wrote the articles and the brochure and helped with the editing of the brochure. Friends members who were grammarians and Refuge staff also edited the information.

DECKS:

In conjunction with this work, the materials for the decks were purchased and volunteers built the two decks on the Port Royal Unit. The materials were purchased with non-grant dollars and were considerably less than the original estimate because the placement of the decks did not require the

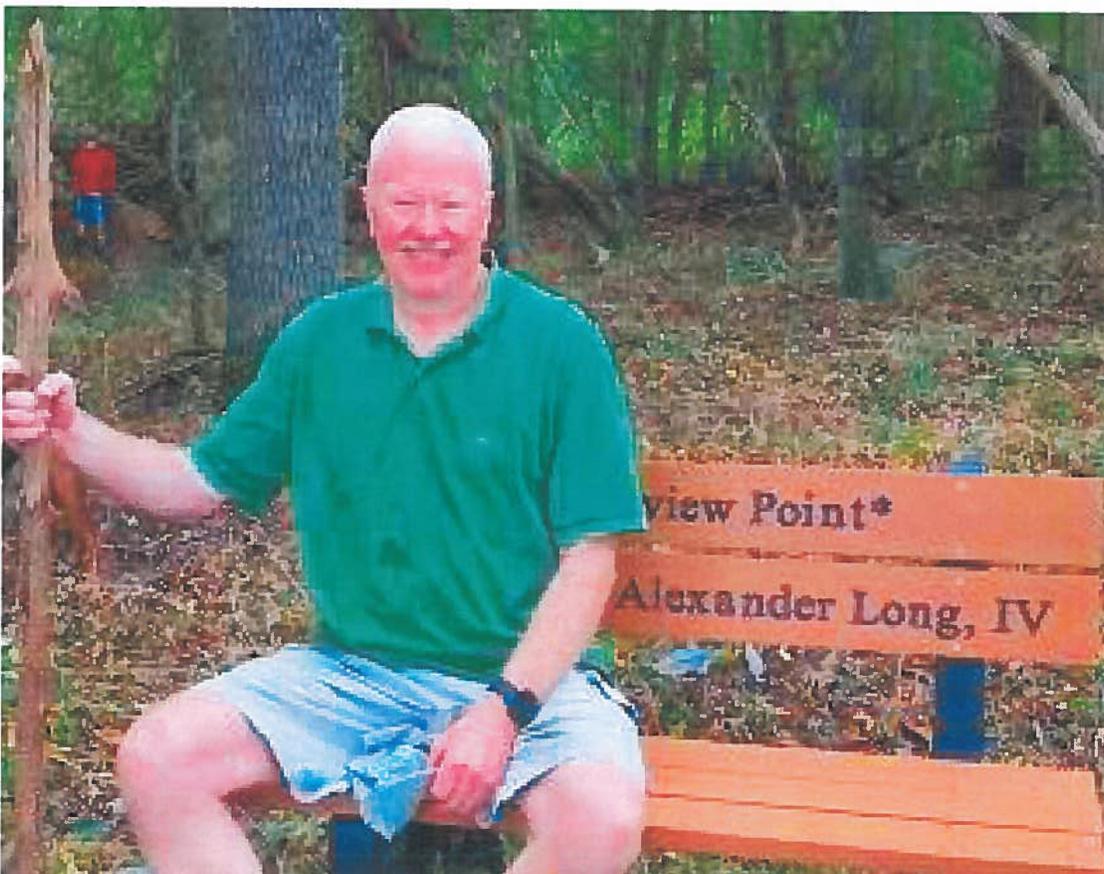
altitude that was originally priced in the grant application (4 foot high with matching ADA ramp). Below are pictures of the two decks:



Please note: all excess wood seen in this picture has been cleaned up

Resting Benches:

The grant included three resting benches. One bench was paid for by a volunteer which further reduced the amount spent on the grant. See below for picture of the benches:



Water Trail Signs:

The grant provided for four water trail signs placed at each of the landings to publicize the trail and to help paddlers follow the trail. After looking at the placement of the signs, it was determined that the sign at the Port Royal launch should have a set of signs facing the road as the paddlers come in to launch and another set on the other side facing the water for those paddlers coming in from the water. An additional set of signs were ordered. See below for a picture of the sign at the Port Royal Launch site:





The water trail signs were purchased locally and the 12' stakes were purchased with non-grant dollars.

Waterfront Signs:

The waterfront signs were paid for with non-grant dollars. As of this writing the signs have been ordered and received, but have not been installed.

Main Entrance Panel:

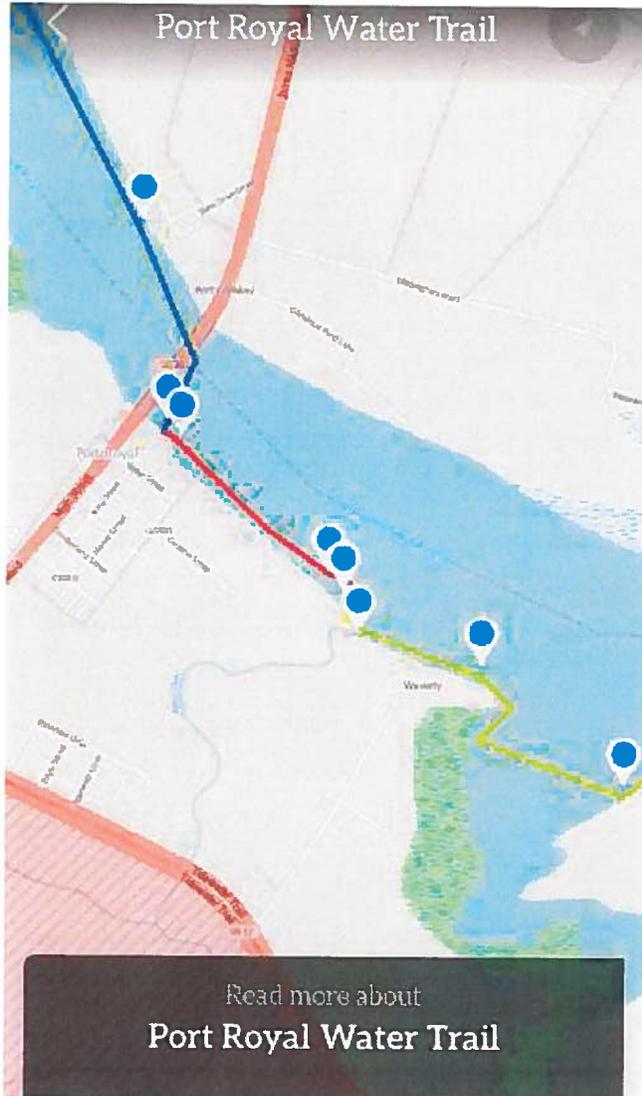
The grant also includes a new main entrance panel that will reference the water trail and show the location of the decks and the benches on the Refuge trail. This was originally part of the grant; however, funding was found to purchase this with non-grant dollars. The panel has been designed paid for and ordered, but has not been delivered

Water Trail Brochure:

A hardcopy water trail brochure was developed that is printed on waterproof paper and will be put at the launch site and at the Refuge entrance kiosk. In addition, the brochures will be given to local businesses and tourist stops. The Friends Group will also distribute the brochures at their public events. The original proposal called for printing 10,000 brochures; however, the steering committee felt very strongly that there should also be a technology element added to this project to attract the younger paddlers. Since there were significant savings on the various items purchased through getting more matching dollars than anticipated, the steering committee received permission from the grant administrator to proceed with an app development. Because of this, it was decided to only purchase 3,000 copies of the brochures since many people would be utilizing the app. This also helped to cut down on the amount of paper that would be used in this project. See attachment for electronic copy of the water trail brochure.

Water Trail App:

The water trail app is written in IOS and will be available for download from the Apple Store at no charge to the public. This app features all of the Points of Interest that are in the hardcopy brochure. In addition, there are in-depth articles about the birds, plants, historical houses, and Native American lore (with tie-in to the John Smith Trail). Below is a picture of some aspects of the app:



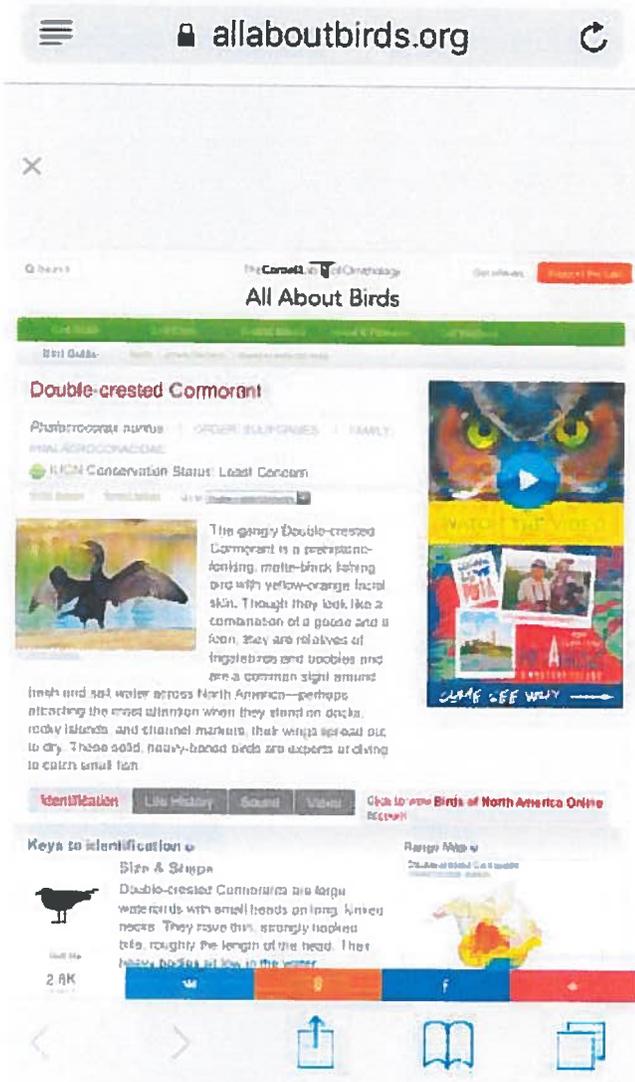
Xom Birds you may see along t...
they are relatives of frigatebirds and

boobies and are a common sight around fresh and salt water across North America—perhaps attracting the most attention when they stand on docks, rocky islands, and channel markers, their wings spread out to dry. These solid, heavy-boned birds are experts at diving to catch small fish.

For more information go to: https://www.allaboutbirds.org/guide/Double-crested_Cormorant/id.



Photo by: Bill Portlock



96 Foot Extension of Port Royal Pier

Description: The Town of Port Royal

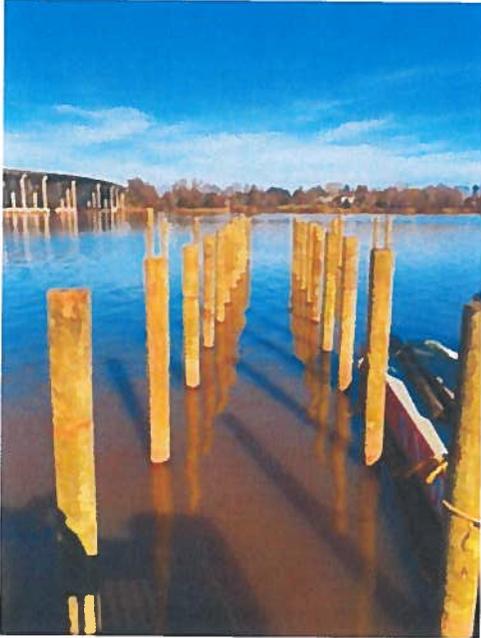
The Port Royal was in an unusable state. As a result the town applied for a US Park Service Grant. The town was able to secure funding for a 100 Foot pier. The funds from the Coastal Management Program allowed for the pier to be increase by 96 feet. The construction was completed in the spring of 2016.



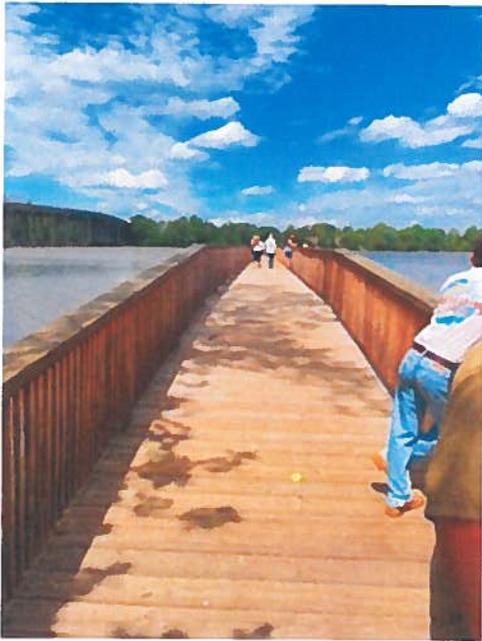
Pier Material



Pier Location and Soft Boat Launch



Pier Construction



Completed Pier

ATTACHMENT – PORT ROYAL WATER TRAIL GUIDE

Port Royal Water Trail Guide



The Port Royal Water Trail is made up of three paths along the Rappahannock River starting at the Port Royal Canoe/Kayak Launch. The trails overlap but are designed for the novice, intermediate, and advanced paddler. The advanced trail is eight miles long one way, so it is recommended that this be undertaken as a one-way trip. Sites 3 and 4 are located in the historic colonial town of Port Royal which was the farthest port upriver that could accommodate ocean-going ships of the Colonial Era. This port was important for trade. Inland planters brought their tobacco to warehouses here to be shipped to England.

Follow the Map and enjoy each Point of Interest listed:

Site 1 - Sayer/Bishop Tract: From the Port Royal Launch site, paddle across the river northward to reach the rest stop of the Sayer/Bishop Tract of the Rappahannock River Valley National Wildlife Refuge. Except for the canoes/kayak landing this tract is not open to the public, so enjoy this resting spot before returning to the pier or tackling the intermediate path.



Site 2 - Belle Grove: Located at Port Conway, across the river from Port Royal, Belle Grove was owned by the Conway family in the mid 1700s. It was the home of Eleanor Conway and the place where she gave birth in 1751 to James Madison, fourth president of the United States. The original Conway house is now gone, replaced by a sophisticated Richard and Yelverton Stern - designed house built in 1792 by John Hopkins. Cornelius Turner purchased the property in 1839 and modified the 1792 house by the addition of porticoes and terminal wings. Belle Grove continues as a working farm and is now home to a Bed and Breakfast.



Site 3 - Port Royal Pier: Launch site for the Port Royal Water Trail. The pier is open for fishing from sunrise to sunset. You will need a freshwater license to fish. Expect to catch catfish, bass, and perch. Check out the local antique stores and the historical buildings in the town of Port Royal.



Site 4 - Riverview: The large white house, called "Riverview," was built in 1846 by John Bernard and Harriet Lightfoot. During the Civil War, the house was shelled by Union gunboats and the family took refuge at Rose Hill, a plantation home farther from the river. Harriet's cousin Sally Tompkins, the well-known "Nurse of the Confederacy," often visited Riverview during and after the Civil War and resided at Riverview by the 1870s. She bought the house in 1896 and lived there until 1905, when she sold the property and moved to the Home for Needy Confederate Women in Richmond. Riverview is listed in the National Register of Historic Places.



Site 5 - Dogwood Tree: This is a small deciduous tree found all over Virginia growing about 20 feet tall. The blossoms of the Dogwood Tree are the official state flower of the Commonwealth of Virginia. It is illegal to remove either the blossoms or the tree from their natural locations. Violations can result in a heavy fine. Dogwood grows as an understory tree like the Redbud. Since the two species require the same habitat, they are often found growing in the same area. The Dogwood blooms from early April to late April and in some years, both the Redbud and Dogwood bloom at



RESPECT PRIVATE PROPERTY

With the exception of the landing points marked on the map, all lands along the trail are privately owned. Please respect these lands and remain in your boat at all times.

FOLLOW THE LEAVE NO TRACE SEVEN PRINCIPLES:

- 1 Plan Ahead and Prepare
- 2 Travel and Camp on Durable Surfaces (where camping is permitted)
- 3 Dispose of Waste Properly
- 4 Leave What you Find
- 5 Minimize Campfire Impacts (Note: No campfires on any trail property)
- 6 Respect Wildlife
- 7 Be Considerate of Other Visitors

PROTECT NATURAL AND CULTURAL RESOURCES

- View wildlife from an appropriate distance.
- Do not disturb nests or dens.
- Do not use calls or whistles to attract or rouse wildlife.
- Do not touch or feed wildlife.
- Do not collect any plant, animal, or artifacts.
- You can help clean up the landings by picking up debris left by the river and depositing it in the trash at the end of your trip.

BE PREPARED

- The Rappahannock River is a tidal river. Be aware of tidal currents and plan your trip accordingly.
- Always wear a Coast Guard approved personal flotation device.
- Take advantage of the restroom near the Port Royal launch; there are none along the trail.
- If paddling alone, let someone know where you are and when you plan to return.
- Consider bringing: Binoculars, water, sunscreen, a snack, field guides, first aid kit, insect repellent, camera.
- If fishing, remember a Virginia Freshwater License is required, and please use non-lead sinkers.
- Watch the weather and dress accordingly.

the same time. The big white bracts are the showy part of the blossom while the greenish tiny flowers cluster in the center. The somewhat shiny ovate leaves emerge after flowering. Following the flowers are the red fruits which are relished by birds and deer. It has long been a popular landscaping ornamental. Medicinally, the red fruit when soaked in brandy has historically been used for acid stomach while root bark tea has been used for symptoms of malaria and as a poultice for skin ulcers. Twigs were once used to clean teeth for the twig ends become brushy when rubbed.

Site 6 - Refuge Landing: This is the water landing to the Port Royal Unit of the Rappahannock River Valley National Wildlife Refuge.

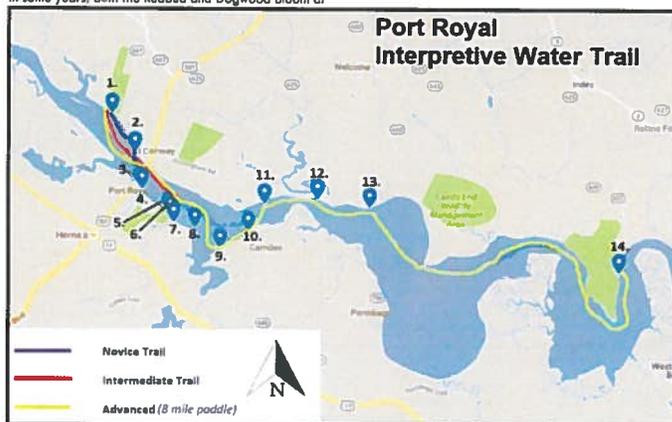
Paddlers can anchor their crafts on the banks of the entrance and walk the 1.5 mile trail. There are two observation decks and resting benches along the trail.



Site 7 - Marsh Grass Entrance to Roy's Run: Marsh Grass is very important to fish and amphibian populations since it serves as a nursery during their immature stages and protects juveniles from predators until they mature.

Site 8 - Osprey Nest on Green Channel Marker: Ospreys are very large, distinctively-shaped hawks. Despite their size, their bodies are slender, with long, narrow wings and long legs.

Ospreys fly with a marked kink in their wings, making an M-shape when seen from below. They search for fish by flying on steady wingbeats and bowed wings or circling high in the sky over relatively shallow water. They often hover briefly before diving, feet first, to grab a fish. You can often clearly see an Osprey's catch in its talons as the bird carries it back to a nest or perch. Look for Ospreys around nearly any body of water: saltmarshes, rivers, ponds, reservoirs, estuaries, and even coral reefs. Their conspicuous stick nests are placed in the open on poles, channel markers, and dead trees, often over water.



Site 9 - Tidal Pool Built by Beavers: Beavers are known for building dams on rivers and streams, and building their homes (known as "lodges") in the resulting pond as you see here. They also build canals to float building materials that are difficult to haul over land. They use powerful front teeth to cut trees and other plants that they use both for building and for food. In the absence of existing ponds, beavers must construct dams before building their lodges. First they place vertical poles, then fill between the poles with a criss-cross of horizontally placed branches. They fill in the gaps between the branches with a combination of weeds and mud until the dam impounds sufficient water to surround the lodge.



They are known for their alarm signal. When startled or frightened, a swimming beaver will rapidly dive while forcefully slapping the water with its broad tail. This serves as a warning to beavers in the area. Once a beaver has sounded the alarm, nearby beavers will dive and may not re-emerge for some time. Beavers are slow on land, but are good swimmers and despite being air-breathing mammals, they can stay under water for as long as 15 minutes.

Site 10 - Camden: Located on a high bank above the south side of the Rappahannock. Built on the site of an earlier house, the current house is a striking example of pure Italian Villa style, designed by N. Starkweather for W. C. Pratt and completed in 1859. The rich interior has changed little from its original days and many of the original period furnishings remain. The large working plantation remains in the Pratt family. Camden is a National Historic Landmark in addition to being listed on the NRHP (National Register of Historical Places) and the VLR (Virginia Landmarks Register).



Site 11 - Phragmites (Phragmites australis)/Marsh/Duck Blind: This grass is found all over the world in temperate and tropical zones growing along waterways. A subspecies is native to the U.S., but the Eurasian subspecies is believed to have overtaken the native species and has become invasive. It blooms in summer with silky plume-like flowers. While purple-brown when young, the seed plumes turn white or tan with age. The jointed stems have strappy gray-green leaves, and the plant can reach 8 feet tall. Eradication has been very difficult as any bit of root left in the soil will become a plant. This plant has been found mainly in coastal Virginia. In Europe and Asia it has many uses. The stems and leaves are used for roof thatch, brooms, ropes, and paper. Medicinally, leaf tea has historically been used to treat bronchitis and cholera. Steeped flowers were used for food poisoning, and roots taken internally were used to treat diarrhea, fevers, vomiting, coughs, and urinary tract infections.



An edible plant, its young stems can be ground into flour, moistened and roasted like marshmallows. The tiny red seeds can be ground into flour as can the roots which are collected in winter.

Site 12 - Cypress Trees (Taxodium distichum):

The bald cypress is a large deciduous tree reaching 100 feet tall and found naturally growing in shallow waters of swamps, lakes, and rivers. It grows in eastern Virginia and when its lower trunk is submerged will produce root knobs known as "knees" above the water and which are thought to provide oxygen to the tree. The tree will also grow well in average soil; however, it will not produce knees but the lower part of the straight trunk will become fluted. Its leaves are feathery needles which with the stems turn a reddish-brown color in the fall before dropping to the ground. Instead of flowers, it produces a woody, gray female cone and an herbaceous tiny male cone. The seeds are enjoyed by wild turkey, wood ducks and other water birds, squirrels and Evening Grosbeaks. Bald cypress swamps offer nurseries for amphibians and nesting sites for the Bald Eagle. On large properties, bald cypress can be an ornamental providing year-round interest.



Site 13 - Redbud:

A member of the pea family, Redbud is a small deciduous tree reaching up to 20 feet in height and blooms in mid-March to mid-April. It is found naturally all over Virginia. It bears light green heart-shaped leaves and pink clusters of pea-shaped flowers. The blossoms occur before leafing followed by green pods of seeds (beans) and which turn brown when the seeds are mature. The tree has long been a popular ornamental for landscapes. Birds especially wild turkeys eat the seeds and bumblebees benefit from the pollen and nectar. The flowers can be added to salads, and the flower buds can be pickled. The young green pods can be sautéed in butter for a few minutes. Historically, the inner bark tea was once used to treat the symptoms of dysentery and leukemia.



Site 14 - Toby's Tract:

Here is a public landing with a canoe/kayak launch managed by King George County. The Refuge is on either side of the landing and is not currently open to the public.



REPRESENTATIVE PLANTS AND ANIMALS OF THE PORT ROYAL WATER TRAIL

PLANTS

Bald Cypress
Dogwood
Marsh Marigold
Phragmites
Redbud
Sneezeweed
Sweet Autumn
Virgin's Bower



BIRDS

Bald Eagle
Double-crested Cormorant
Forster's Tern
Great Blue Heron
Great Egret
Herring Gull
Laughing Gull
Osprey
Turkey Vulture



FISH

American eel
American shad
Blue gill
Catfish
Largemouth Bass
Yellow perch



MAMMALS

Beaver
Gray squirrel
Flying squirrel
Fox, red and gray
Opossum
Raccoon
River otter
Muskrat
White-tailed deer



John Smith Map Along the Rappahannock River by Gail W. Wertz

Four hundred years ago, the Rappahannock River, its creeks and adjacent marshlands provided sustenance and travel for the Native Americans living along its banks. We know this from evidence provided by archaeological explorations, from the reports and maps made by early explorers such as Capt. John Smith who navigated the main rivers emptying into the Chesapeake Bay around 1607-1609, and from information passed down by Native Americans. John Smith encountered numerous Native American groups in his explorations and made a remarkable map of the rivers showing the locations of Native American villages. His map shows numerous villages along the banks of the Rappahannock River. A portion of the Smith map showing the area that includes the Refuge River Trail is shown.

The Woodlawn Historic and Archaeological District, on the north bank of the Rappahannock downstream of Port Conway, has seven archaeological sites of which five are a series of important Native American sites. The most prominent of these was identified by David Bushnell in his study of important Native American sites along the tidal Rappahannock and includes what may be a palisaded enclosure within a more broadly distributed village. The artifact assemblage recovered from this area contained Potomac Creek Ware, a localized expression of the terminal prehistoric and early historic Native American occupation. It is possible that such occupation may correspond with either the settlement of "Papsicone" or "Assuweska" as depicted on John Smith's map of 1612. On the north bank of the Rappahannock at Nanzatico Bay is the site of a village occupied by the Nanzaticos. The name is a corruption of Nantaughtacund, a tribal name recorded by Capt. John Smith. The small populations of Native Americans had a relatively gentle impact on the lands adjoining the river throughout thousands of years of habitation before the arrival of Europeans. However, the arrival of the Europeans in Virginia approximately 400 years ago, accompanied by increasing deforestation and intensive farming practices, changed that. The Native American population was rapidly displaced and depleted as the population of immigrants increased. Population increases and the industrial age placed severe stress on the healthy ecology of waterways. Population growth resulted in construction and development along many of our most valuable and scenic waterways. It is well-known that archaeological sites are non-renewable resources. Once destroyed by development, they are gone forever and with them the information about the natural and cultural history of the area. The Refuge system strives to protect land for future generations.



The Rappahannock River and environs stand out as a bastion of unspoiled natural areas. Any help in maintaining the wild and unspoiled nature of these areas will benefit the overall ecology of the area. Anyone finding a Native American artifact is encouraged to photograph it, but leave it in context.

A REFUGE ALONG THE RAPPAHANNOCK

The Rappahannock River Valley National Wildlife Refuge was established by the U.S. Fish & Wildlife Service in 1996 to "protect and enhance important habitat for migratory birds along the Rappahannock River and its major tributaries." Refuge lands provide important nesting and roosting habitat for hundreds of migratory bird species, including our National Symbol, the bald eagle. These lands also help to protect water quality, acting as a "protective skin" that intercepts polluted runoff and allows it to be cleaned as it percolates through the ground. For more information about visiting the Port Royal Unit along the Rappahannock River or other units in the Rappahannock Refuge system visit: http://www.fws.gov/refuge/rappahannock_river_valley/ or call (804) 333-1470.



Directions: To access the water trail, go to Port Royal, Virginia. The canoe/kayak launch is located at the end of King Street. The Water Trail Project is funded by NOAA's National Coastal Zone Management Program Award No. NA15N054190164