



In The Park

CAPE HATTERAS NATIONAL SEASHORE | WRIGHT BROTHERS NATIONAL MEMORIAL | FORT RALEIGH NATIONAL HISTORIC SITE

Fall, Winter and Spring

2008-2009

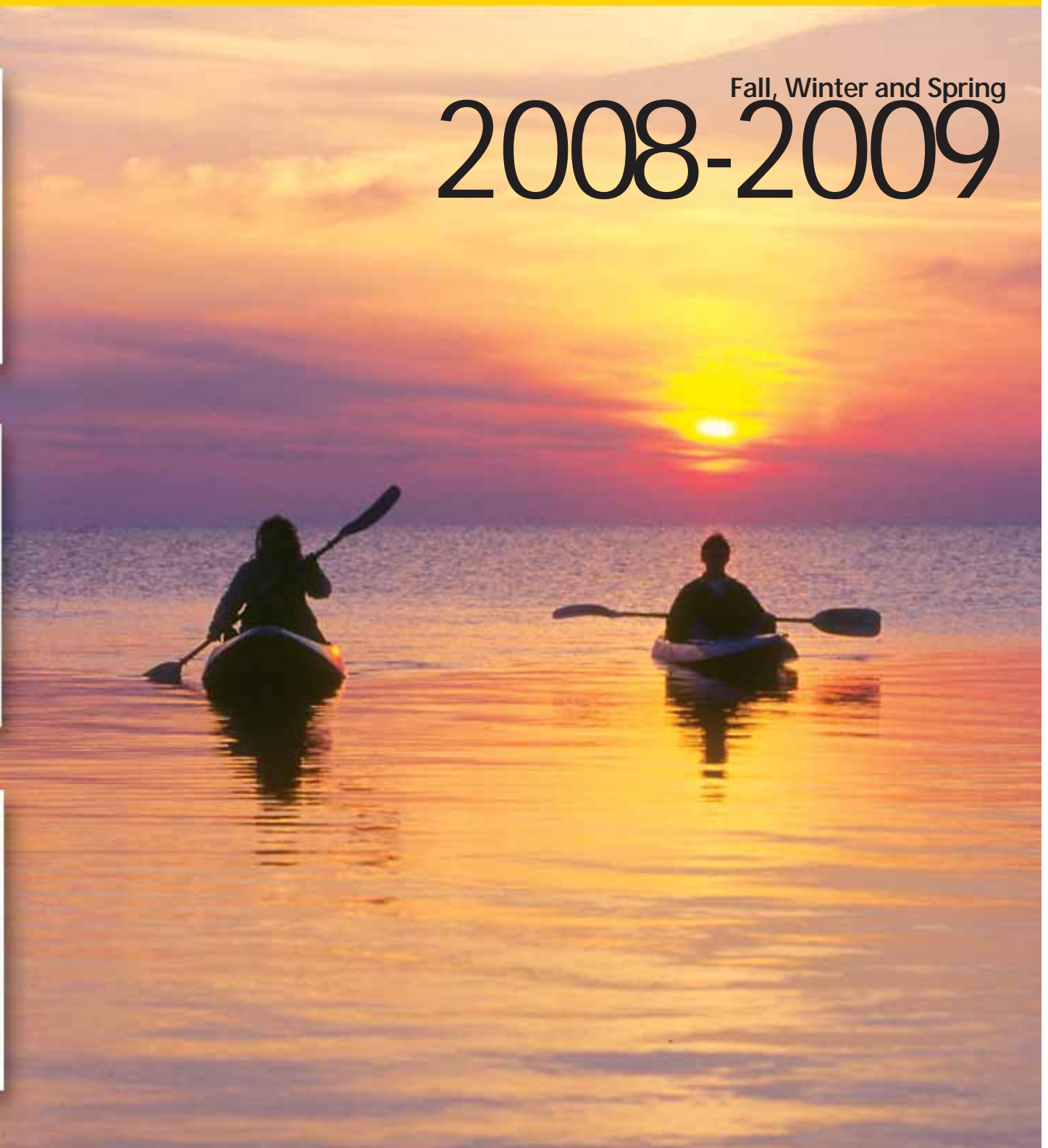
Cape
Hatteras
National
Seashore,
Pgs. 8 to 13



Wright
Brothers
National
Memorial,
Pg. 14



Fort Raleigh
National
Historic Site,
Pg. 15





Welcome To

In The Park is produced by the National Park Service and funded with the support of Eastern National.



Eastern National is a non-profit organization that provides quality educational products and services to the visitors to America's national parks and other public trusts. Eastern National operates educational outlets in over 170 national parks and public lands in 30 states. Since 1947, Eastern National has donated over \$89 million to the National Park Service. For more information, visit www.easternnational.org. Check out our sales items on the back page, visit our bookstores in the parks or visit us online at www.eparks.com.

Cover Photo

Kayaking the soundside water of Cape Hatteras National Seashore reveals a world of wetlands and wonder.

Photo by Michael Halminski

Published By
One Boat Guides
Michael McOwen
Beth P. Storie, Editor
Nealy B. Hansford, Design

Superintendent's Message



Superintendent Mike Murray

Welcome to the National Park Service Outer Banks Group!

Do you remember the fancies of childhood. . . wiggling your toes in the foam of an ocean wave. . . pretending you were an explorer in an uncharted territory. . . looking skyward and wishing you could fly? Chances are these childhood dreams and reminiscences were made as you explored the outdoors. Perhaps these experiences happened while playing in your own backyard. Or maybe it was during a family summer vacation to the Outer Banks – an experience that inspired you to bring your own children here, creating generational traditions and memories.

Today people are becoming separated from the natural landscape, and children seem to play indoors rather than go outside. There is growing concern that this disconnection between children and the outdoors will affect the future of the National Park Service.

If our youth do not play outside or visit the parks, will they want to continue to preserve these special places as adults? Continued stewardship of the natural and cultural wonders the National Park Service protects depends upon encouraging young people to connect with the world outside.

You play a crucial role in this effort to cultivate future generations of park stewards. During your visit to the Outer Banks, we encourage you to create new, or perhaps revive old, family traditions and lasting memories by taking your children exploring in the parks – either on your own or with a National Park Service ranger at the family- and kid-oriented programs offered at all three of our park sites.

We thank you for making our nation's heritage a part of your family tradition and look forward to seeing you out in the parks!

Park Fees

Wright Brothers National Memorial

The entrance fee is \$4 per person for anyone 16 years of age or older. The annual America the Beautiful Pass, lifetime Senior and Access passes, Golden Age and Golden Access passes are accepted for entry as indicated on the back of the pass.

Elizabethan Gardens

The Garden Club of North Carolina charges admission to enter The Elizabethan Gardens, located at Fort Raleigh National Historic Site. Call (252) 473-3234.

NPS Campgrounds

National Park Service campgrounds include Oregon Inlet, Cape Point, Frisco and Ocracoke. Fees for all campgrounds, except Ocracoke, are \$20 per night. The Ocracoke Campground fee is \$23 per night and is the only Cape Hatteras National Seashore campground that accepts advance reservations; call (877) 444-6777. America the Beautiful Senior and Access and Golden Age and Access Pass holders pay half-price at any campground. See page 4 for closing dates.

Cape Hatteras Lighthouse

The fee to climb the lighthouse is \$7 for adults. Children (must be at least 42" tall) younger than 12 and persons possessing Golden Age, Golden Access and America the Beautiful Senior and Access Passes pay \$3.50. The lighthouse closes on Oct. 13, 2008 and reopens April 17, 2009.

America the Beautiful Passes

America the Beautiful Passes have replaced the Golden Age, Golden Access, Golden Eagle and National Park Passes. America the Beautiful Annual, Senior and Access Passes are available at Wright Brothers National Memorial. Senior and Access Passes are also available at any campground and at the Cape Hatteras Lighthouse when open.



Olivia Fredlake of Gainesville, Virginia takes a flight with Orville on the First Flight Statue at the Wright Brothers National Memorial. She likes him because both their names begin with an "O".

Photo Credit: Yvonne Fredlake



In The **PARK** The Park



Fort Raleigh Junior Ranger Logan Daniels learns more about the native people of Roanoke Island during a clay pot-making activity with National Park Service Ranger Rob Bolling.

Be A Junior Ranger!



Becoming a Junior Ranger is a fun way to learn more about our parks and how you can help protect them – just like the park rangers that you meet do. The Junior Ranger programs at Cape Hatteras National Seashore, Fort Raleigh National Historic Site and Wright Brothers National Memorial are for ages 5 to 13.

Along the Outer Banks during the fall, winter and spring, you can actually become three different kinds of Junior Rangers -- a Seashore Ranger at Cape Hatteras National Seashore, a Flight Ranger at Wright Brothers National Memorial and a Roanoke Ranger at Fort Raleigh National Historic Site. Just go to the visitor centers located at these national park sites and a staff

person will give you a booklet to get you started.

At Cape Hatteras National Seashore, if you complete the workbook, you will earn a Junior Ranger badge. Get your booklet from any of the three Seashore visitor centers located at the Bodie Island Lighthouse, at the Cape Hatteras Lighthouse and near the ferry dock in Ocracoke Village.

You will earn a Flight Ranger patch at Wright Brothers National Memorial when you complete your booklet and attend one ranger program.

At Fort Raleigh National Historic Site, you can earn a Roanoke Ranger patch when you attend ranger programs and complete the booklet at any time of the year. You

can also become a Fort Raleigh Web Ranger and earn a Junior Ranger badge when you visit the park's website at <http://www.nps.gov/fora>. Just print out your worksheets, answer the questions and mail the worksheets to the park.

Remember to bring your completed booklets back to the national park site where you obtained them so you can get the right type of Junior Ranger award that you had been working toward. If you need someone to help you finish the booklet, ask one of your parents or one of our park rangers.

The North Carolina Beach Buggy Association, the First Flight Society and Eastern National help us in providing these Junior Ranger programs to you.

Photo Credit: Jennifer Brumfield



Be a Volunteer!

In America, we love our national parks. A recent survey has shown the National Park Service to be the second-highest rated of all federal agencies in positive public perception (the Postal Service being first). Last year, more than 273 million people visited the national parks, and 163,000 volunteers donated more than 5 million hours of service to help preserve and protect our nation's valuable natural and cultural resources.

Volunteers come to our national parks because they, like you, care about these special places and want to make a contribution – sharing their passion and knowledge.

We enthusiastically salute the 150 dedicated volunteers who donated more than 22,000 hours to Cape Hatteras National Seashore, Wright Brothers National Memorial and Fort Raleigh National Historic Site last year! Their time and effort helped us meet our mission of protecting resources and providing for the enjoyment, education and inspiration of this and future generations.

If you want to do more to care for national parks, you can visit the federal volunteer website www.volunteer.gov/gov and check out the latest Outer Banks Group parks' volunteer opportunities. Or, if you have specific volunteer activities in mind, call (252) 473-2111.

And if you meet some of our volunteers during your visit, thank them for caring for the national parks too!



Volunteer Ted Kiss assisting visitors at the Cape Hatteras Lighthouse during Summer 2008.

How Would You Look in a Park Ranger Hat?



Are you a college student who would like a fun and interesting summer job, a local who would like to share your knowledge or a visitor who would like to further your experience in this unique area? Then perhaps you'd enjoy working as a Park Ranger.

If so, visit www.usajobs.opm.gov. This website is where all National Park Service job openings are posted, and you can apply directly on-line. Summer 2009 jobs for Cape Hatteras National Seashore, Wright Brothers National Memorial and Fort Raleigh National Historic Site will likely be advertised in October and November 2008. Or there may be other National Park sites where you might be interested in working . . . Yosemite . . . Grand Canyon . . . Gettysburg . . . Lincoln Memorial. Check the website and maybe we'll be seeing you here next summer as a National Park Service Outer Banks Group employee.

To learn more about other national park sites, visit www.nps.gov. Working for the National Park Service could be the experience of a lifetime!

We want your visit to the Seashore to be safe and enjoyable. By following these guidelines, we can all protect and maintain this spectacular area.

Am I Allowed To Drive On the Beach?

- A four-wheel-drive vehicle is a must, due to the soft sand.
- Vehicles are not allowed on park beaches 10 p.m. to 6 a.m. from May 1 to Sept. 15. Night permit required Sept. 16 to Nov. 15. Permits will be available at park visitor centers.
- Your vehicle, including ATVs and dirt bikes, must be street legal to operate within the park.
- The driver must possess a valid driver's license.
- All regulations that apply on the streets and highways of the state also apply on the beach.
- The maximum speed limit is 25 m.p.h., unless otherwise posted.
- Driving or parking on the dunes and/or vegetation is strictly prohibited. Access the beach only by designated ramps.

• Please observe all signs, and do not drive in areas where you see a "No Vehicles" sign posted. These areas are closed to protect natural resources such as turtle and bird nests, developing dunes and vegetation.

• If violations of protected species closures results in disturbance or harassment of wildlife or the vandalization of fencing, nests, or plants; the closure is mandated to be expanded 50 m for the first violation, 100 m for the second, and 500 m for the third. Violators are subject up to a \$5,000 fine and/or imprisonment up to 6 months.

• Beach areas in front of the villages of Rodanthe, Avon, Buxton, Frisco and Hatteras, are closed to vehicles from May through September to ensure the safety of the beach goers in these heavy use area.



Where Can We Camp?

Camping on the National Seashore is permitted only in designated campgrounds at Oregon Inlet, Cape Point, Frisco and Ocracoke. Availability is on a first-come, first-served basis except at Ocracoke, where you may make reservations by calling Reserve America at (877) 444-6777. Camping on the beach overnight, whether in a tent or in your vehicle, is not permitted. Oregon Inlet and Frisco Campgrounds close Oct. 13. Ocracoke Campground closes Oct. 27.

Is It Okay To Have a Beer On the Beach?

Some alcoholic beverages are permitted in the Seashore, but consider the following:

- The laws of North Carolina do not permit spirituous liquors — distilled liquors, whiskey, vodka, etc. — or fortified wines to be consumed in public. Ask where you buy your wine if you are unsure what's fortified and what's not.

- The legal drinking age is 21.
- Open containers of alcohol are not permitted within any motor vehicle, including vehicles on the beach.

Please be sure to put all your cans and bottles in the trash.

Can I Fish at the Seashore?

In a word, yes. But be aware that fishing within Cape Hatteras National Seashore is regulated by state law. It is a state requirement that all people fishing in the National Seashore must obtain a Coastal Recreational Fishing License. Regulations regarding size limits, numbers of fish per day, seasons and licensing requirements are set by the North Carolina Division of Marine Fisheries, which may be contacted at (800) 682-2632. Limit sheets are available through local tackle shops.

What About Launching My Personal Watercraft?

The trailering, launching or landing of personal watercraft of any kind (Jet Skis, Waverunners) is not allowed within the boundaries of Cape Hatteras National Seashore.

How About a Beach Campfire?

Fires are permitted on seashore beaches except 11 p.m. to 6 a.m. year-round. The fires must, however, be at least 100 feet from any grasses or dunes and below the high tide line. Fires are not allowed within 100 yards of a turtle closure. Please keep the fires small. Boards containing nails and other debris should not be used in the fire since they create a hazard to bare feet. When putting the fires out, please use water. Burying the embers with sand allows the fire to smolder, making the sand covering the fire very hot — an obvious safety problem.

What About Handicapped Beach Access?

Handicapped-limited beach access permits are available from Cape Hatteras National Seashore Headquarters by calling (252) 473-2111. Beach-capable wheelchairs are available on a first-come, first-served basis. Inquire at the park visitor centers.

May We Shoot Fireworks?

No. Fireworks are not allowed in any National Park Service area. This includes the beaches in front of the villages.

Where Can I Fly My Kite?

Kite flying and throwing Frisbees or balls is permitted anywhere in the Seashore except within or over any bird closure. These activities can scare birds and disturb them during migratory resting periods.

Remember:
Call 911 to report emergencies.

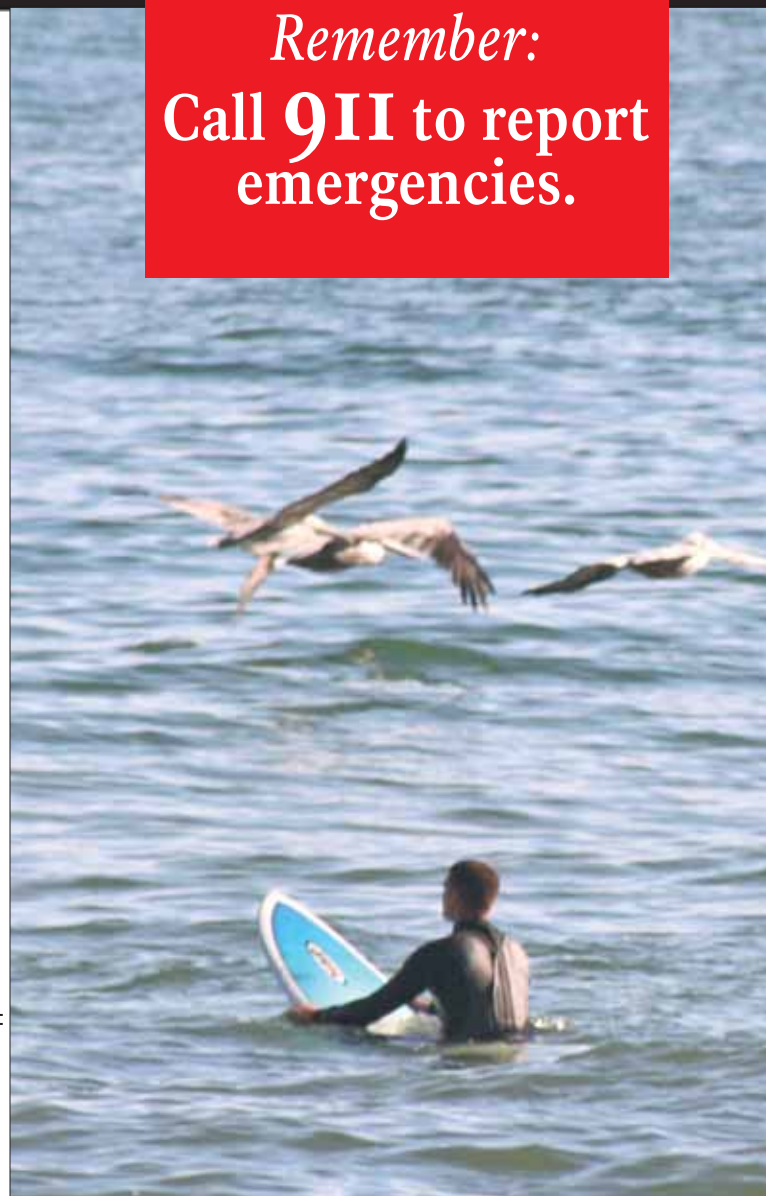


Photo Credit: Quinn Capps

What If My Pet Comes On Vacation Too?

Your pets are welcome at Cape Hatteras National Seashore. Pet must be on a 6' leash at all times and are prohibited within any resource closure. Pets are not allowed on designated swim beaches or in buildings. Please, for your pet's sake, do not leave them unattended. And, for other visitors' sake, clean up after your pet. And, if your pet is a horse ... that's ok too! You may ride them anywhere vehicles are permitted to drive except in campgrounds. Horseback riding is prohibited in NPS campgrounds. Riders are required to use ORV ramps when crossing dunes.



May I Hunt For Hidden Treasure With My Metal Detector?

No. Because of the vast wealth of historic artifacts within National Parks, metal detectors are prohibited by law in all areas, including beaches and campgrounds.

What If I Find Shipwrecks Or Other Treasures On the Beach?

All items found on the beach, with the exception of shells and driftwood, are protected by law and may not be removed from the beach. Please do not disturb any shipwrecks that may wash up or be uncovered by the ocean or wind.



Swimming Safety

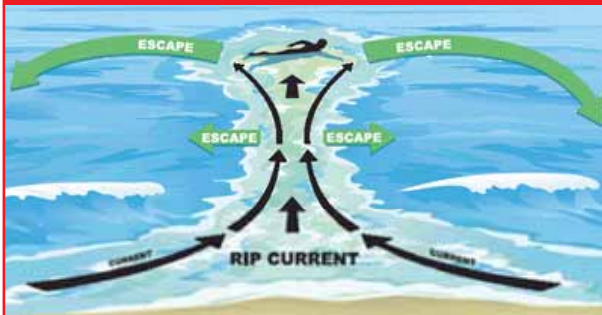
The ocean is a wonderful place to swim — if you are careful. Strong wave energy, rough surf and rip currents can turn a quick dip into a problem.

Clues for Spotting a Rip Current:

- a channel of churning, choppy water
- an area having a notable difference in water color
- a line of foam, seaweed, or debris moving steadily seaward
- a break in the incoming wave pattern



IF CAUGHT IN A RIP CURRENT...



- Don't fight the current.
- Swim out of the current, then to shore.
- If you can't escape, float or tread water.
- If you need help, call or wave for assistance.

Photo and graphic credit: NOAA and U.S. Lifesaving Association

More Safety TIPS

- . Due to dangerous currents, never swim in inlets.
- . Do not swim alone, at night or near fishing piers. Children should swim only with adult supervision.
- . Know the various types of ocean currents and how to get out of them.
- . Watch the weather. Storms and squalls come up quickly.

- . Don't swim during thunderstorms. Lightning is extremely dangerous and does strike the beach.
- . Non-swimmers should use Coast Guard-approved flotation vests, even while wading.
- . The force of big waves crashing at the shore's edge can pick you up and throw you into the sand. This

- may result in a dislocated shoulder or knee or broken necks.
- . Watch for jellyfish. If stung, seek first aid if needed. Don't rub sand on the stings. Meat tenderizer often reduces the pain.
- . Do not swim near surfers. Their surfboard fin can cut you.

Bugs!!!

✓ Mosquitoes and other insects serve a purpose in the scheme of things. b Nonetheless, they are nuisances and can make i your trip an ordeal. Be prepared with mosquito repellent and netting for camping and other island-related activities. p After hiking, be sure to check yourself for ticks. 🦋

Avoid the "Ouch"

Our seashore is beautiful, but often on the beach and in the sound you'll find dangerous debris. You may come across sharp objects such as broken seashells, crabs, cactus and spurs. People add to that with glass, metal, fishhooks and nails. HOT SAND can burn unprotected feet. Think safety before leaving your vehicle. Protect your feet from these hazards.

What to Do During a Hurricane Watch

- Listen regularly to a NOAA Weather Radio or local radio stations for updated information. Hurricanes can change direction, intensity and speed very suddenly. A storm that was a minor threat several hours ago can quickly escalate to a major threat.
- Fill your car's gas tank. If advised to evacuate, you may be caught in traffic, idling for long periods of time. Gas stations along the route may be closed.
- Listen to the advice of local officials and evacuate if they tell you to do so.
- Others will be concerned about your safety, so call a loved one or friend outside of the storm area. Tell them that you are aware of the storm and advise them of your plans.

Warning

- Keep posted to local radio stations for updated information and official instructions. Local officials will advise leaving only if they truly believe your location is in danger. It is important to follow their instructions as soon as possible. It takes many hours for an organized evacuation. Roads may become blocked as the storm conditions worsen, preventing a safe escape.
- Call your check-in contact so someone will know where you will go in case of an evacuation.
- Pack all of your belongings to save time if the evacuation is announced.
- Check before returning to the Outer Banks. The area may remain closed to visitors for several days after a storm passes.



Emergency Stabilization Completed At Bodie Island Lighthouse

The National Park Service, as steward of many of America's most important cultural resources, is charged to preserve them for the enjoyment of present and future generations. Coastal environs take a heavy toll on the historic structures located in the parks of the Outer Banks Group. Through years of enduring the harsh maritime elements and storms, the Bodie Island Lighthouse has become badly deteriorated, especially the metal components. National Park Service preservation planning is under way for a major restoration currently scheduled for 2009.

The restoration project will further correct structural and safety problems and restore the structure by:

- Strengthening the support of its 10 flights of spiral staircase and replacing 21 cracked stair treads;
- Repairing or replacing corroded metal features in and around the gallery and lantern decks;
- Repairing masonry and stone;
- Repairing or replacing where necessary the roof, windows, the marble and slate at the bottom floor, and the framing in the attached oil house;
- Removing lead paint and repainting interior;
- Replacing electrical lines, conduit, interior lights and lightning protection;
- Installing a fire detection and suppression system.

The 156-foot brick tower reflects a standard and design used by the U.S. Light-House Board for several coastal first-order lighthouses during the 19th century. The lighthouse, transferred from the U.S. Coast Guard to the National Park Service in 2005, still retains its original 1871 first-order Fresnel lens. The operation of the lens lamp continues, making the lighthouse still on duty as an active aid to navigation.

This beautiful structure, listed on the National Register of Historic Places, is a favorite of park visitors. Preservation of the Bodie Island Lighthouse is a top priority for the park.



Photo Credit: Joyce Edwards

New From the Vault

The National Park Service is the custodian of irreplaceable and priceless museum collections representing important natural and cultural resources in the United States. The Outer Banks group museum collections hold approximately 193,000 items, artifacts and archives related to our parks. Every year we receive new items in our collections that have either been donated to the parks or have been found on park grounds. New to our collections this year are 1800s pottery, pipes and glass from a recent archeology dig at Fort Raleigh National Historic Site in February 2008 and 1500s Spanish coins recovered from a shipwreck on Cape Hatteras National Seashore in January 2008.



Recent Fort Raleigh artifacts from the 1800s.



Spanish coins found at Cape Hatteras in January.

Wright Monument Receives a Facelift



Visitors to Wright Brothers National Memorial will notice a new and improved look to the Wright Monument. Visible for nearly 5 miles, the granite pylon towers 60 feet above the summit of the Big Kill Devil Hill sand dune in tribute to the two modest brothers.

Although time cannot erase the Wright brothers' accomplishments, time and the elements have taken a heavy toll on the monument erected in their honor.

After years of weathering Outer Banks salt and storms, the historic and structural integrity of the monument had deteriorated since its dedication in 1932. Major restoration occurred over a decade ago, but many of the previous problems had resurfaced. In early 2008, in an effort to preserve the monument, the First Flight Foundation in partnership with the National Park Service undertook a restoration project to prevent further deterioration.

Critical elements in re-establishing the monument's structural and historical integrity included cleaning the interior and exterior of the granite pylon, re-pointing the exterior mortar, replacing the HVAC and ducts system, painting the stairs, replacing the exte-

rior lights and renovating the electrical and mechanical systems. The stainless steel doors and all fixtures have been polished and a polymer coating applied to prevent future weathering. The beacon light atop the monument was removed to prevent damage to it during the restoration project and then it was cleaned and replaced.

Through the monument restoration, the National Park Service can continue to protect a fitting memorial to the brothers who presented the world with the gift of flight. Newly preserved, it will continue to serve as inspiration for those who climb the hill and read the inscription carved in the base of the monument that characterize the Wright brothers' driving spirit:

In commemoration of the conquest of the air by the brothers Wilbur and Orville Wright. Conceived by genius and achieved by dauntless resolution and unconquerable faith.



Off-Road Vehicle Management Planning and Regulation

The National Park Service is in the process of developing an off-road vehicle (ORV) management plan for Cape Hatteras National Seashore. Public input and comments are a key component in the successful development of the plan and associated regulation.

The ORV plan will address resource protection (including protected, threatened and endangered species), visitor safety and potential conflicts among various park users. The plan will also ensure that ORV use is managed within applicable law, including the park's enabling legislation, which provides Congress' intent for the management and use of the park.

This plan will also satisfy Executive Orders 11644 and 11989, which require the NPS to develop regulations for parks that allow ORV use. Rulemaking is the process used by federal agencies to formulate, amend or repeal a regulation.

In the traditional agency rulemaking process, the agency alone produces a proposed regulation. Negotiated rulemaking is an optional rulemaking process that establishes a negotiated rulemaking committee consisting of the agency and interest groups involved in the issue to collaborate on a proposed solution. At its best, negotiated rulemaking increases citizen participation, results in more creative solutions, eases

implementation, increases compliance by the citizens affected by the regulation and reduces the prospect of future conflict and litigation.

The NPS is using negotiated rulemaking to develop the required ORV regulation at the Seashore.

The Secretary of the Interior has established a negotiated rulemaking committee of 30 primary members to reach consensus on ORV management issues to be the basis for the proposed regulation. Committee meetings are open to the public. The negotiated rulemaking process is occurring concurrently with the required National Environmental Policy Act (NEPA) analysis.

Consent Decree - 2008

In October 2007, Defenders of Wildlife and the National Audubon Society (plaintiffs) filed a lawsuit against the National Park Service (NPS) alleging inadequacies in management of protected species and failure to comply with the requirements of ORV executive orders and NPS regulation at Cape Hatteras National Seashore. The species identified for increased protection included the piping plover (federally-listed threatened), several species of colonial waterbirds (state-listed threatened and species of concern); the American oystercatcher (state-listed significantly rare); and several species of protected sea turtles.

In April 2008, the U.S. District Court Judge signed a consent decree on a settlement agreement reached by the NPS, the plaintiffs and the intervenor-defendants: Dare and Hyde Counties and a coalition of local ORV and fishing groups (Cape Hatteras Access Preservation Alliance). This consent decree gives the settlement agreement the force of a court order which must be implemented.

To meet the legal requirements of the consent decree, the NPS must: increase the frequency and degree of monitoring and protection of certain shorebird and all sea turtle species; establish and enforce larger buffers around nesting areas; mark, monitor

and enforce pedestrian and ORV use corridors along the shoreline; and enforce a new prohibition of vehicles on park beaches between 10 p.m. and 6 a.m., May 1 to Nov. 15, with a permit system to be established for night driving Sept. 16 to Nov. 15. Protected species closure violations that disturb or harass wildlife, or vandalizes fencing, nests, or plants are mandated to expand 50 meters for the first violation, 100 meters for the second, and 500 meters or more for the third. Closure violations may have up to a \$5,000 fine and or imprisonment up to 6 months in jail.

Accessing Park Beaches With Your ORV

The National Park Service welcomes visitors to enjoy the beautiful, undeveloped ocean beaches of Cape Hatteras National Seashore.

Some sections of ocean beach, such as those in front of the Hatteras Island villages, receive significant pedestrian use during the summer. These beaches are open to pedestrian use year-round, but are temporarily closed to ORV use during the summer.

Although extremely narrow beaches stay open for pedestrian use, they may temporarily close to ORV traffic due to safety concerns.

Some portions of the beach may be temporarily closed to ORV use due to mandated protection of wildlife and plant species, such as protected birds and sea turtles. Closure boundaries may shrink or expand given the specific behavior or requirements of the protected wildlife. In the event of ORV closures, alternate routes or bypasses may be established to maintain access.

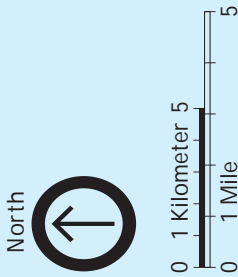
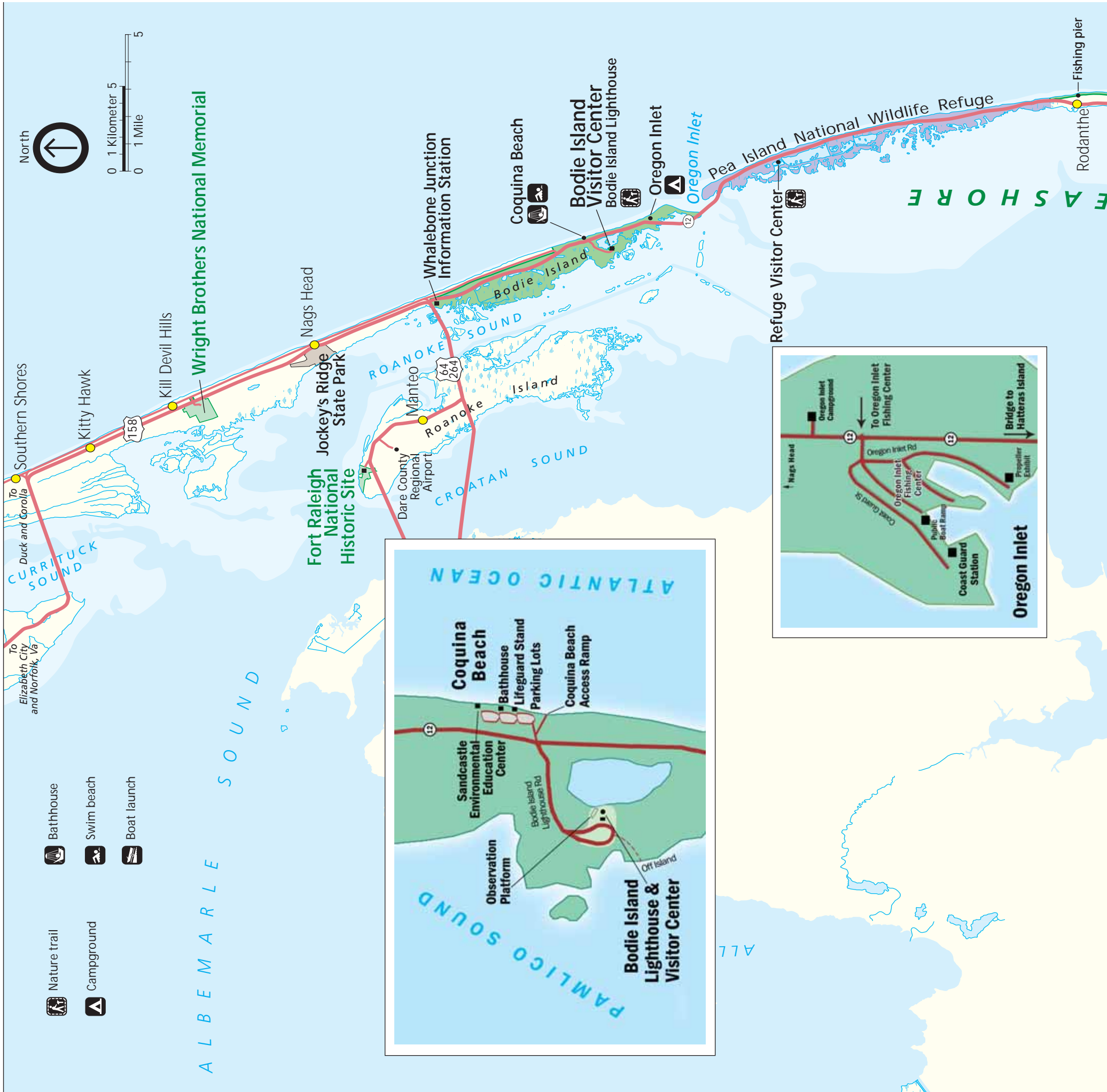
For current beach access information, visit one of the Seashore visitor centers.

When taking an ORV on park beaches remember:

- Protected species closure violations that disturb or harass wildlife, or vandalize fencing, nests, or plants are mandated to expand 50 m for the first violation, 100 m for the second, and 500 m or more for the third. Closure violations may have up to a \$5,000 fine and/or imprisonment up to 6 months in jail.
- Drive only four-wheel-drive vehicles on the beach.
- Vehicles are not allowed on park beaches 10 p.m. to 6 a.m. from May 1 to Sept. 15. Night permit required Sept. 16 to Nov. 15. Permits will be available at park visitor centers.
- Before entering the beach, lower tire air pressure to 20 psi or less. Lowering tire pressure and driving at a slow steady rate of speed are the best ways to provide enough traction for a vehicle to maneuver. If stuck, lower tire pressure more. If your wheels start to spin, slowly back up in your tire tracks for several car lengths and then slowly accelerate forward.
- Be aware of tide changes and don't get trapped -- some sections of beach can be cut off by high tides.
- Any law applicable to vehicle use on a paved road in the State of North Carolina also applies to ORV use.
- Avoid driving or parking on the wrack line. The wrack line is a line of stranded natural debris on the beach left by the previous high tide that can be an important food source for protected birds.

If you would like to keep updated on the planning process, please go to <http://parkplanning.nps.gov/caha>. To join the park's ORV planning update list-serve, send an email to caha_orv_mgt@nps.gov.

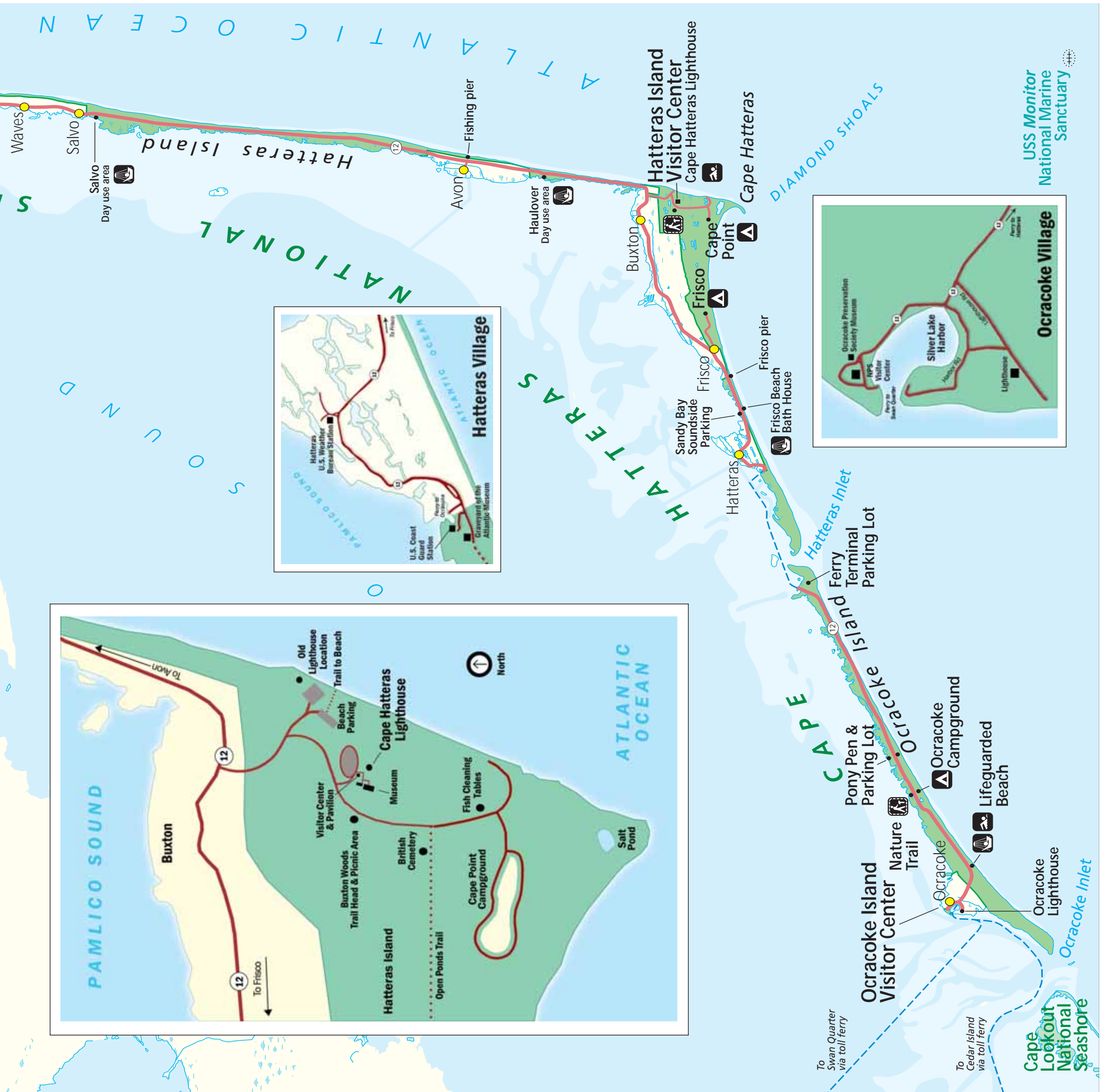
CAPE HATTERAS NATIONAL SEASHORE MAP



- Nature trail
- Campground
- Bathhouse
- Swim beach
- Boat launch



CAPE HATTERAS NATIONAL SEASHORE MAP



Whatever Happened to the Carroll A. Deering? Ghost Ship Found on Diamond Shoals, 1921



Visit the Cape Hatteras Lighthouse

The Cape Hatteras Lighthouse is the tallest brick lighthouse in the world. It stands 198 feet tall and was constructed in 1870. It was built to help ships navigate around Diamond Shoals off Cape Hatteras, one of the most dangerous sites on the Atlantic Coast. The shoals are a complex of underwater sand bars that constantly move and shift. Ships caught in heavy seas and wind would be washed upon the shoals. Waves breaking on the shoals would simply rip the ships apart. Hundreds and possibly thousands of shipwrecks in this area have given it the reputation as the "Graveyard of the Atlantic."

Cape Hatteras Lighthouse

9 a.m. to 5 p.m. daily Sept. 2nd-Oct. 13th, 2008
Reopens April 17, 2009

\$7 for adults and \$3.50 for seniors, age 62 and older,
the disabled and children under 12.



The five-masted schooner Carroll A. Deering was built in Bath, Maine and wrecked on January 31, 1921.

By: Bob Herendeen

Cape Hatteras is home to many maritime legends but perhaps none is as curious as the real-life story of the massive schooner, Carroll A. Deering. Lost on the Outer Shoals in 1921 and discovered completely abandoned by the Coast Guard, this historical event has all the makings of a Hollywood ghost story.

On January 29, 1921, the Carroll A. Deering was making a return trip to Hampton Roads, Virginia from Barbados when she passed the Cape Lookout Lightship. According to the lightship keeper, the crew were milling about and a crewman, who did not look or act like an officer, reported that the ship had lost its anchors. The following day, the ship passed the SS Lake Elon southwest of the Diamond Shoals Lightship at approximately 5:45 pm. The Deering seemed to be steering a peculiar course. This was the last report of the ill-fated Deering before she was found run aground and abandoned.

At 6:30 am on January 31st, C.P. Brady of Cape Hatteras Coast Guard Station spotted a five-masted schooner in the morning light, aground and helpless on the shoals. It was reported that the ship's decks were awash, sails were set, lifeboats were missing, and she appeared abandoned. Due to heavy seas, the surf boats failed to reach

the wreck. Finally, the wrecker Rescue arrived on the morning of February 4th and, with the cutter Manning, reached the battered ship around 9:30 am. Captain James Carlson of the Rescue boarded the ship and confirmed its identity as the Carroll A. Deering. Upon investigating the ship, it was discovered that all personal belongings, key navigational equipment, certain papers, and the ship's anchors were missing. Furthermore, food was laid out as if in preparation for a meal. But there was no sign of the crew.

The wrecked and battered hull of the Deering was all that was left to signify the vessel's strange passage. In

March of 1921, with the vessel breaking apart on the shoals, it was towed away then dynamited. In April, Christopher Columbus Gray, a Buxton, N.C. resident, reported finding a note in a bottle, which told of the capture of the Deering by pirates. Handwriting experts authenticated the note as being written by engineer Herbert Bates. Later examination, however, by federal government experts proved the letter was a hoax, written by Gray himself. In May, Mrs. Lula Wormel (wife of the ship's master), Captain Merritt (the former master), and Rev. Dr. Addison Lorimer visited Washington and convinced Secretary of Commerce Herbert Hoover to commence an investigation.

The ongoing lure of the Deering mystery may be due to the many historical threads uncovered in the investigation of this amazing story. Agent Thompson of the FBI visited Dare County in July of 1921. Among the leads he followed were stories of Bolshevik sympathizing pirates, rum-running gangsters, and mutiny. When he asked local Coast Guardsmen about the theory that the crew had mutinied and abandoned ship before striking the Shoals, "Impossible!" was the answer - the coast was too rough for lifeboat landings. "I believe they abandoned her after taking everything of value," said Captain Ballance of the Cape Hatteras station, "and ran her up on the Shoals intentionally...."

In the end, the investigation proved fruitless. No trace of the crew, the ship's log, or the navigation equipment was ever discovered. A true maritime mystery began...and continues to this day.



Wreckage of the Carrol A. Deering in 1955 on Ocracoke. No remains of the ship can be seen on the seashore beaches today.

Epic Migration of Shorebirds



photo credit: Sidney Maddock

The Red Knot population has fallen at an alarming rate. Biologists believe that the over-harvesting of horseshoe crab eggs in the Delaware Bay is a cause.

What You Can Do to Help!

- Keep your dog on a leash and do not let it chase shorebirds. By flushing birds, dogs rob shorebirds of critical resting and feeding time needed on their long migration.
- Reduce human disturbance. Walk or drive around – not through -- flocks of feeding and resting shorebirds.
- Respect bird closures by not entering posted areas.
- Do not feed wildlife in the park. Your treats can help increase populations of predators such as raccoons or gulls, which also prey on shorebirds.

Like clockwork, they begin to arrive. As predictable as the rhythm of the ocean waves and tides, the first wave of migrating shorebirds appears on the beaches in late July and continues through October or even November. It is a predictable wonderment of nature that repeats itself each spring and fall. Tens of thousands of shorebirds migrate through Cape Hatteras National Seashore. More than 20 species can be observed, ranging from the sparrow-sized Piping Plovers and Sandpipers to the crow-sized American Oystercatchers and Whimbrels. Though some linger here for several months, the stay for most is but a brief respite on a long, epic journey. These birds are globetrotters, flying twice each year between continents and hemispheres. Each migration can cover several thousand miles, much over open ocean water. Fall migration is the most impressive in both numbers and displays. Adults combined with newly fledged young leave nesting grounds in the high Arctic tundra flying south with weather fronts. On beaches used as stopovers such as Cape Hatteras, thousands of shorebirds literally appear overnight as fronts push through. Their final destinations are most often

Central and South America. Spring migration returning to the breeding grounds is less dramatic. Weather is less important in pushing migrants north. Also, numbers are diminished since not all birds survive the winter and some young birds may not go north to breed their first year.

Cape Hatteras National Seashore serves as a vital resting and feeding stopover for these long distant migrants. The greatest numbers and highest diversity of species utilize inlet sites. With falling tides, species such as Sanderling, Willet and Red Knot feast on coquina clams, mole crabs and other burrowing invertebrates. Most Sandpipers prefer wet sandflats where they gorge on marine worms. Rudy Turnstones flip through the wrack line searching for insects and sandfleas. Birds often double their body fat in a matter of days. Ample resting and preening time is equally essential to completing a successful migration. Once recharged and refueled, the shorebirds will continue along their migration route, often as a non-stop flight all the way to South America.

Park staff joins the ranks of many volunteers between the Americas by participating in International Shorebird

Surveys. Approximately every 10 days during the migration period, shorebirds are counted along specific stretches of beach. These surveys help identify important stopover areas as well as habitat types used by avian migrants. They also monitor population trends and the migration event itself. One important finding has come from re-sighting color-banded birds. Individually marked migrants have been found to use the same stretch of beach from one migration year to the next.

Many shorebird populations are in decline. Biologists believe the loss of undisturbed resting and feeding habitat along the migration routes is one of the causes. At Cape Hatteras National Seashore, seasonal closures of suitable interior habitat are established near the inlets and Cape Point to protect migrant piping plovers, a federally threatened shorebird species. These closures benefit many other shorebirds as well. It gives worn out birds the chance to successfully revitalize and refuel before taking to the wing once again to complete their remarkable journeys – a natural wonder that we are fortunate to witness along the Seashore. ♪



Nov. 4-9, 2008

North Carolina's
Outer Banks

Call (252) 441-8144

www.wingsoverwater.org

The Mighty Blue Stream

By: Jennifer Wurts

The color is blue. A deep, vivid ocean blue. Limitless. Schools of flying fish skip over the water surface and then disappear below. Pods of spotted dolphin torpedo through the rolling seas. Thick floating rafts of golden seaweed drift along, sheltering tiny fish, shrimp, crabs and baby sea turtles. The gushing torrent above hides unusual deep water corals in the abyss below. One has surely slipped into another universe when entering the Gulf Stream. Yet this complex, other-worldly ocean current system helps powers commercial shipping routes, weather patterns, and marine ecosystems that shape our modern world.

At up to 90 miles wide and half a mile deep, this vast oceanic river dwarfs the volume of all the earth's freshwater rivers combined. Coursing northward from Florida to Newfoundland and then across the Atlantic Ocean to Europe, the mighty Gulf Stream transports around 20 billion gallons of water per second as it passes just 50 miles off the coast of Cape Hatteras National Seashore.

This swift trans-Atlantic waterway has proven immensely beneficial to humans. Discovered by Spanish explorers in the 1500s, the Gulf Stream created a faster, cheaper, safer conduit for navigation and transport between the New World and Europe. Five hundred years later, world commerce still depends on this ocean highway.

The Gulf Stream helps distribute more than just manmade goods. Fed by warm equatorial currents, it carries enough heat energy to power 14 trillion 100-watt light bulbs, more than 100 times the planet's energy demand. Ecologically, the current's heat powers tropical storms and hurricanes. Although the immediate impacts of such storms can be devastatingly destructive, they also bring life-giving rains and warmth. The heat of the Gulf Stream creates temperate climates that support productive agriculture and ecosystems along two of the world's major population centers - eastern North America and western Europe. It keeps the summers warm and winters mild at Cape Hatteras National Seashore, allows palm-like trees to grow as far north as Scotland and permits Norway's coastlines to stay ice-free even during the Arctic winter. Not all weather created by the Gulf Stream is warm. In the winter, blasts of Arctic air sit over the stream's warm water off the coast of Hatteras, creating low-pressure systems known as "Hatteras Lows." These intensify as they move up the coast, turning into major New England blizzards.

A diversity of marine species also depends on the Gulf Stream for survival in many of the same ways that we do. Just as the current's heat energy creates productive inland environments for humans, it also supports thriving offshore food chains. At Cape Hatteras National Seashore the warm southern waters of the Gulf Stream collide with the cold northern waters of the Labrador Current at Cape Point creating a churning effect that pulls an abundant food supply up from the ocean depths. Marine mammals, open ocean birds, and fish we enjoy on our dinner plates, such as tuna, snapper, mahi, swordfish and sailfish, all dine en masse on this nutrient buffet. Because of the diversity of fish species where these northern and southern current systems meet, swarms of hundreds of humans can be found on the waters off Cape Point every year - it is an extremely popular location for sport fishing.

Our ocean animal counterparts use the Gulf Stream for navigation, travel, and transportation much like we do. Humpback whales and endangered right whales can be seen off the coast of Cape Hatteras as they migrate along the edge of the Gulf Stream to reach their northern feeding grounds each spring. Loggerhead sea turtle hatchlings, some of which emerged from our park beaches, spend around 10 years passively traveling with this offshore ocean current. Many commercially-important species of fish, such as grouper, snapper and swordfish, depend upon this current to disperse their eggs, larvae and young across the wide expanse of the Atlantic.

As you are vacationing on Outer Banks beaches, the mighty Gulf Stream is still at work providing climate control, transportation, and food supply; affecting human population centers and biodiverse marine ecosystems; traversing from the Caribbean to Norway; and bestowing beautiful warm ocean waters off Cape Hatteras National Seashore for you and your family to enjoy.

Adopt an Ocracoke Pony

Stop and visit the Ocracoke ponies when you make your trip to Ocracoke Island.

No one knows the "Banker Ponies" beginnings for certain, but some of the answer may be from the thousands of shipwrecks that are part of the area's history. While small and powerful, they are full-grown horses whose ancestors roamed the islands for hundreds of years.

When the early colonists settled Ocracoke, they used the ponies to help make life easier on the island by pulling carts and hauling freight and fish. The U.S. Lifesaving Service personnel used them while they were patrolling the beach looking for shipwreck victims. As time progressed, the families that lived on the island claimed the ponies and had a pony penning each summer. Riders would start out early in the morning at the north end of the island and drive the ponies into the village where they had set up holding pens. Once in the pens the islanders would sort out the ponies and brand the new ones. Some would be trained for the islanders' use; some were sold. The rest were turned loose to roam free again.

After World War II, automobiles and ferry service came to the island. In order to protect the ponies from automobile traffic, they were eventually fenced in the pasture that remains today. The National Park Service assumed the care



of the ponies in the mid 1960s at the request of the Ocracoke natives.

Taking care of the Ocracoke herd takes both time and money -- an unexpected illness to just one of the ponies can cost hundreds of dollars in veterinarian fees. The fences in the pasture, hay, grain and customary care from the veterinarian and blacksmith are funded in large part by donations from the donation box at the viewing platform.

You can help by adopting a pony. To adopt and choose your pony, visit the Ocracoke Island Visitor Center,

located in Ocracoke Village alongside Silver Lake and next to the Cedar Island/Swan Quarter Ferry terminal. For a donation of \$25 you will receive a photograph and certificate in a presentation folder attesting that you are one of the adoptive parents of that pony. You may also adopt by mail by sending a \$27 check or money order made out to the National Park Service to: Ocracoke Ranger Station, P.O. Box 340, Ocracoke, NC 27960

Sea Turtle Facts



Threatened loggerhead and green sea turtles and the endangered leatherback sea turtles nest during the summer months at Cape Hatteras National Seashore. Most sea turtles are long-lived animals that usually do not lay eggs until reaching 20 to 25 years old.

Sea turtles usually nest at night and tend to avoid beaches with lights. Each turtle nest can contain more than 100 eggs. Eggs will hatch in approximately two months, although sand temperatures can lengthen or shorten the incubation time. Hatchlings usually emerge after dark and rely on natural light reflecting off the ocean to find their way. Light from human activities can fatally disorient hatchlings.

All species of sea turtles and their nests are protected by state and federal law.

Help protect sea turtles:

- Please stay out of posted turtle nest sites.
- Never approach a nesting female.
- Do not shine any lights at nesting turtles or emerging hatchlings.
- Build campfires well away from posted nest sites.
- Turn off all unnecessary house lights near the beach.
- Report any turtle activity in the park by calling (252) 216-6892.

Freshwater Wetlands –

An Oasis on the Coastal Edge

Inlets – A Natural Part of the Barrier Islands

Photo Credit: Sidney Macdook

Scores of inlets have opened and closed along Cape Hatteras National Seashore during its short geologic history. These water passages bisecting the islands connect the ocean waters to the shallow sounds. Inlets or “outlets” normally form when the narrow land on the soundside gives way from the pressure of storm-swollen waters.

Scientists have found that no two inlets behave exactly the same. Created in 1846, Oregon Inlet is the most dynamic of the Outer Banks inlets. It is situated on a higher wave energy shoreline and flushes a great volume of inland water due to its proximity to several major river mouths. By contrast, Ocracoke Inlet, the oldest existing inlet along the Outer Banks, is relatively shallow and stable as it flows through an ancient river bed.

The benefits of inlets are many. Inlets flush and dilute pollutants with each tide change. This is vital to water quality in North Carolina sounds, which has deteriorated from agricultural and urban contaminants transported from the mainland via rivers. Inlets also serve as a mechanism for creating new land. Sand sediments carried into the sounds by daily high tides are deposited on the backshore, adding to the width of the islands. The new marshlands and shoals created by these deposits serve as future storm buffers, absorbing flood waters like a sponge and defusing wave energy. Such vast supplies of sand are moved over time that inlets often become choked and close. Fisheries benefit from the influx of new sediments since these shallow marshes function as marine nursery grounds. Many fish and crustaceans depend directly upon the inlet currents to move eggs and larvae from the sounds to offshore waters and back again, thus completing their life cycle. Local communities lying near inlets take advantage of revitalized fisheries. Local anglers also take advantage of these water passages to reach offshore fishing grounds.

Inlets create unique challenges to manmade infrastructure on the Outer Banks. In 2003, Hurricane Isabel sliced the National Seashore in two, severing the highway link to Hatteras Village. To re-establish the roadway, the federal government artificially filled the new inlet with sand pumped from Hatteras Inlet, several miles away. Another challenge to roadways relates to the fact that inlets tend to migrate southward over time, pulled by currents flowing along the shoreline.

Oregon Inlet has migrated nearly 2 miles from its original location. The northern part of the Bonner Bridge spanning this waterway now stands over land that formed since the bridge was constructed in 1963. Segments of the bridge have been reinforced or re-engineered as the channel migrates beneath it. Presently various design plans for a new bridge are being considered. The constantly shifting waterway and the potential new inlet sites on the narrow Pea Island Wildlife National Refuge complicate the decision making.

Dr. Stanley Riggs of East Carolina University is among a cadre of coastal geologists who have studied these barrier islands intensively. He has created a model predicting where future inlets will most likely appear. According to Riggs, 60% of the barrier system from Oregon Inlet to Ocracoke has a high to intermediate potential of becoming new inlet sites with the passing of one major storm or a few successive smaller storms. Riggs and other geologists believe that this present potential has been exacerbated by human manipulation. Manmade dune lines built to protect development have eliminated much of the natural storm overwash that helps move sand across the land. In the past, large amounts of sand deposited on the island during flood tides provided essential elevation and width to the narrow islands.

The comings and goings of barrier island inlets are examples of geologic processes actively at work in modern time. Their presence is guaranteed due to the reshaping forces of storm waves, coastal flooding and sea level rise. The island system, its natural resources and its people can all benefit from their presence. Knowledge from scientists can help teach us how to best live with these inevitable, dynamic natural features of our coast.



Photo Credit: Joyce Edwards



Aerial Assault on the Marsh

The large Common Green Darner flies patrols back and forth over its territory. The slower Halloween Pennant is named for its orange tinted wings with black bands. The color of the Pond Hawk varies from a green body with black bands to a uniform powder blue. Are we talking about aircraft here??? No! We're talking about the masterful hunters and fliers of the freshwater ponds – the Dragonflies!!!!

Dragonflies begin life underwater and later transform into clear-winged adults. Colorful and swift on the wing, some can fly over 40 mph. Darting quickly in mid-air to grab flies, moths and even smaller dragonflies, they have been known to pick biting mosquitoes right off people's skin!

Fun facts about dragonflies

- Prehistoric dragonflies reached a wingspan of almost 30 inches.
- Dragonflies use motion camouflage. They fly so that they appear to be standing still to their prey when they are actually moving towards it.
- Dragonfly compound eyes may have as many as 30,000 facets.

Surrounded by the salty sea, the sandy barrier islands comprising Cape Hatteras National Seashore might seem at first glance to suffer from a shortage of freshwater. But look closer and you'll find that the narrow islands are infused with unexpected freshwater habitats supporting a stunning display of biodiversity. At these island oases, herons, egrets and ibis comb the shallows for minnows and frogs. Black ducks nibble on aquatic snails. Dragonflies dart over the water. Osprey perch on the snags of dead trees bordering the marsh. Even deer wander through to quench their thirst and nibble on emerging vegetation.

With the Outer Banks being up to 30 miles from mainland lakes and rivers, what is the secret source of the islands' freshwater wellsprings? How have would-be windswept sandscapes been transformed into wildlife wonderlands?

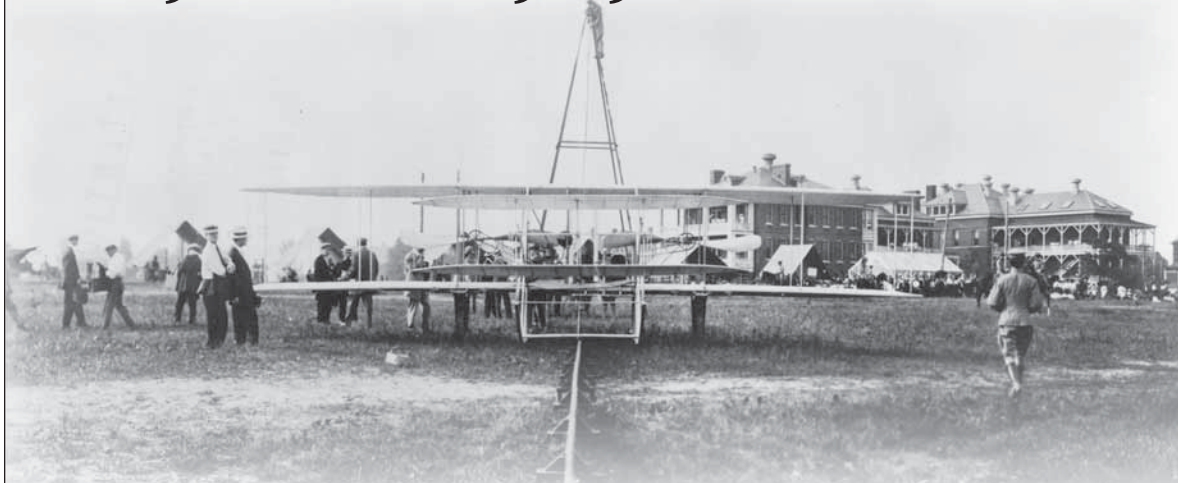
Beneath these barrier islands, an underground aquifer of freshwater that is fed by rainfall “floats” on saltwater-laden sands below. In low-lying areas, the land intersects this groundwater aquifer giving rise to freshwater habitats -- swales, ponds and marshes. The presence of these island wetlands, and the teeming ecosystems they support, depends on a complex set of factors including, not only fluctuations in rainfall and groundwater levels, but also trends in sea level rise and nearby ocean shoreline movement.

Young wetlands emerge on the backside of the beaches as a result of change created by coastal dynamics. As powerful ocean overwash drives inland during storms, massive amounts of sand are rearranged, raising elevation in some sites, lowering it in others. Pockets of freshwater marsh often form in these open, changing landscapes as new dips in the landscape are created. Looking out from the top of the Cape Hatteras Lighthouse, you can see a young wetland forming behind the beach.

Where the islands are widest, highest and therefore most stable, the oldest and most established wetlands are found tucked away between relic dune ridges. A great example is Jeannette's Sedge in Buxton Woods. You can find other long-lived wetlands along the Hammocks Hill and Bodie Island Nature Trails as well.

So after exploring the shore, seek out a freshwater island oasis. Enjoy the wetland life that thrives around you – wings beating, fish splashing, leaves swaying and paws pitter-patter to an island heartbeat made possible by freshwater life-blood.

The Wrights Fly for the World in 1908 and 1909



The Wrights prove themselves at Fort Meyer, VA to secure a United States Military contract in 1909.

In October of 1906, frustrated by failed attempts to secure a patent and contracts from the various governments for construction of aircraft, Wilbur Wright wrote "We are convinced that no one will be able to develop a practical flyer within five years." Time would prove that not to be the case, as

the Wrights took the world by storm in 1908 and 1909. Their first success was in France.

In late afternoon of August 8, 1908, a quite critical and technical audience gathered near Le Mans, France to witness yet another attempt to fly . . . or so they thought! Wilbur Wright shocked

the crowd, and the world, with graceful flight maneuvers; exhibiting a mastery of flight never before believed possible. The Wrights achieved their first contract for aircraft production and formed the French Wright Company.

Following the success in France, the Wright brothers concentrated efforts on

obtaining a U. S. government contract. To do so, they had to demonstrate the ability to fly two people 125 miles at up to 40 mph. On September 17, 1908, while demonstrating the airplane at Fort Meyer Army Base in Virginia, Orville crashed the machine. He survived the crash, but, tragically, his military passenger, Thomas Selridge, was killed. Upon recovering from his own injuries, Orville successfully completed a demonstration on August 2, 1909. The Wright's sold the first military aircraft to the U. S. government - one airplane for \$30,000 shortly thereafter. Once again, the Wrights achieved another milestone - the first flying machine purchased and put into use by any government.

That same month, Orville traveled to Germany and, after a series of successful exhibition flights on October 15th, fulfilled a contract, thus creating the German Wright Company.

At the Hudson-Fulton Celebration in New York City, in September of 1909,

Wilbur electrified more than one million New Yorkers as they got their first glimpse of an airplane in flight. Setting the bar once again, Wilbur flew from Governors Island and around the Statue of Liberty; winning a \$15,000 prize.

Finally, on November 22, 1909, the brothers incorporated a Wright Company in the United States with

a capital stock issue of one million dollars. Wilbur served as president. Orville Wright and Andrew Freedman, a New York financier, were elected as vice-presidents.

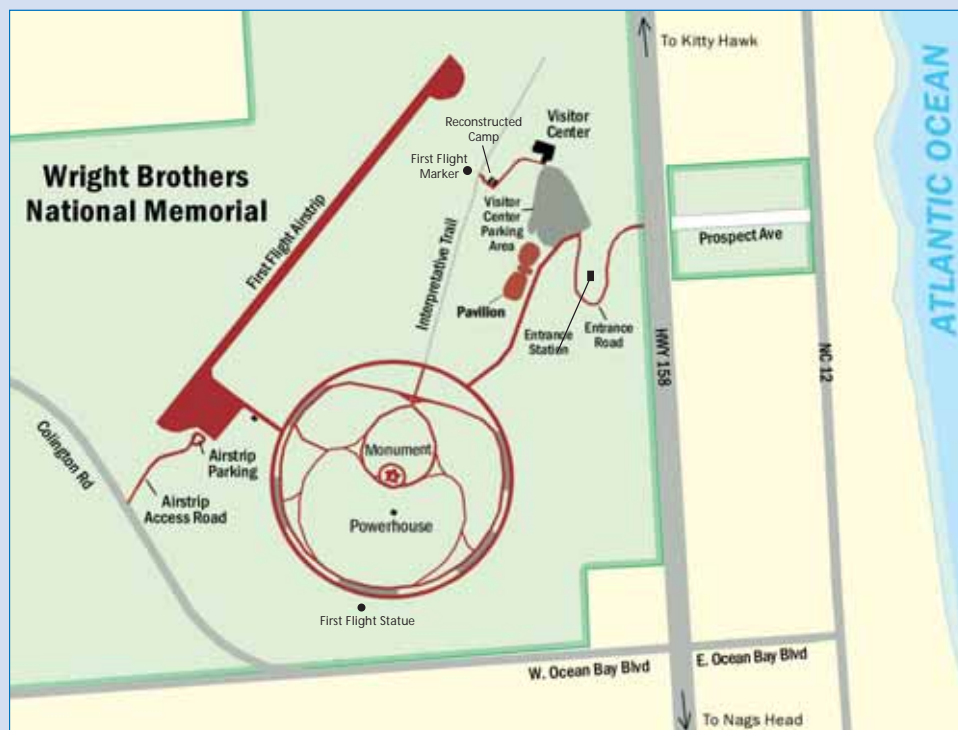
Thus, within three years of Wilbur's October 1906 dismal prediction, the Wrights had established themselves as the masters of the sky, teaching the world to fly as they ushered in a new era.

Above photo: While in France in 1909, Wilbur (left) and Orville (center) meet King Alphonso of Spain.



WRIGHT BROTHERS NATIONAL MEMORIAL

Visitor Center Open 9 a.m. to 5 p.m. daily. Programs may be offered. Check at the Visitor Center for a complete schedule or call (252) 441-7430.



Passenger Flight -

Another First for the Wrights

Tom D. Crouch
National Air and Space Museum
Smithsonian Institution

Passenger air travel, today, is commonplace with over two million people boarding airliners in the United States daily – some flying to a nearby city, others to the far side of the world. It all began 100 years ago, on May 14, 1908.

After their success with the world's first flights in 1903, Wilbur and Orville Wright spent the following two years near their home in Dayton, Ohio, improving their design and increasing their time in the air.

In 1908, they were ready to market their revolutionary flying machine. But, they had not flown since the fall of 1905 and they needed practice. In the spring of 1908, the Wrights returned to the Outer Banks to fine-tune their flying skills, accustom themselves to a new upright seating arrangement and new controls and try flying with a passenger for the first time, something both their American and French contracts required.

At 8 a.m. on May 14, near their original campsite in Kitty Hawk, Wilbur put Charlie Furnas, their mechanic, along side him on the machine. Their flight was a hop that covered only 656 feet. Not good enough. Orville kept Charlie aloft longer on a successful second try - the world's first passenger flight - just over four minutes. Not an impressive performance by modern standards, but it was enough. The age of air passenger transport was under way.

Technology & Archaeology Provide Results!



Recently excavated artifacts, like these copper plates, may uncover clues about the Lost Colony.

A recent archaeological excavation conducted at Fort Raleigh National Historic Site provided discoveries that may help answer some of the many questions regarding the Lost Colony – one of American history’s biggest unsolved mysteries.

In 2006, the national Park Service Southeast Archaeological Center conducted a ground-penetrating radar survey of three areas at the park. Although the survey identified many anomalies, it was determined that only two warranted additional field exploration. The two anomalies of interest appeared to be rectangular-shaped. Since rectangular-shaped objects do not normally occur in nature, it was presumed that these were manmade and might be structures or features associated with the early colony.

In May of 2008, ground-penetrating radar and radar tomography surveys were conducted to provide an accurate picture of what was buried beneath the surface. A team of archeologists and geophysicists, led by the First Colony Foundation, then began excavation work at the park. This work included both a series of test trenches and two large open area block-style excavation sites.

Many artifacts were recovered of which over 200 were from the Colington series. The Colington series is an archaeological grouping of artifacts from this region that includes the late 16th century – the timeframe of Raleigh explorers and colonists. The Colington series artifacts found at the park consisted of sherds (both Indian and European), fourteen copper alloy squares, seventeen milky-white glass beads, one copper rolled tubular bead (or aiglet), and a red clay Indian tobacco pipe.

The Colington series sherd finds included one crucible sherd from a melting pot used for metallurgy and one from a red Martincamp-type stoneware flask. Red Martincamp stoneware sherds/flasks have been found at Jamestown in the early 1607-1610 context. Additional research is being done on the Fort Raleigh sherd.

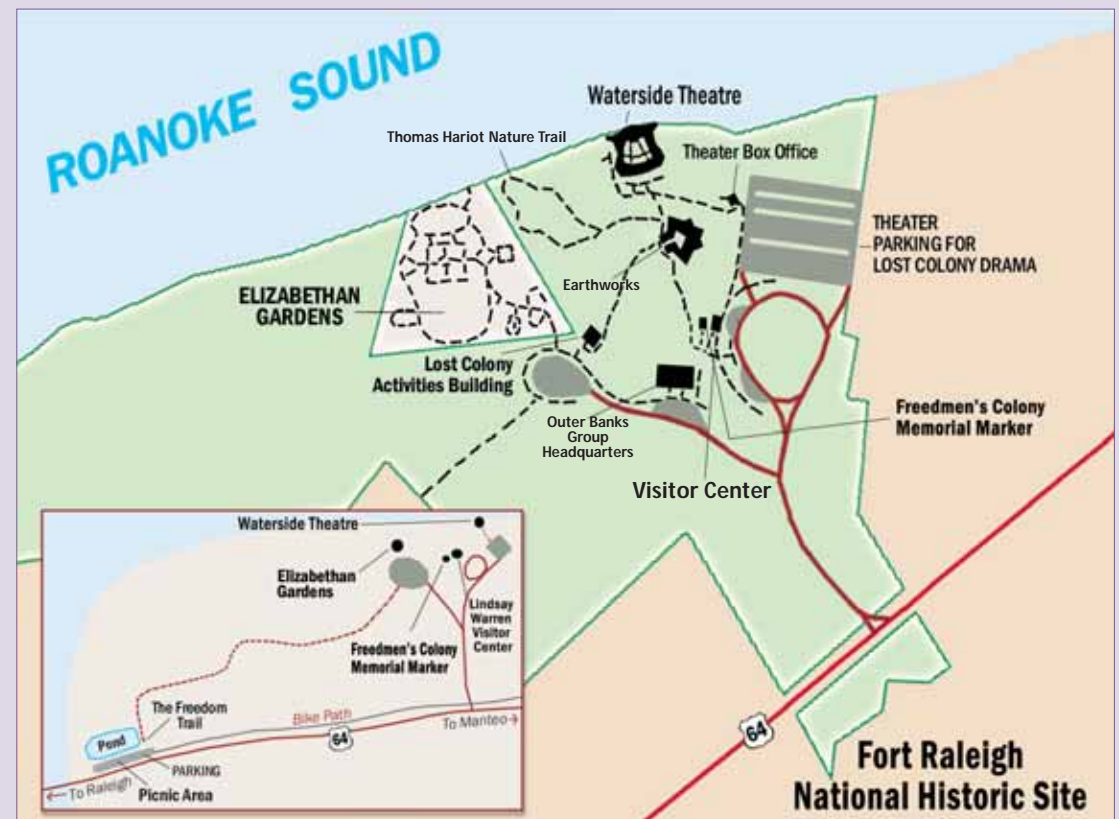
The fourteen copper alloy square plates were found buried near several oyster shells. Each plate is pierced at opposite corners and were laying corner to corner as if they were strung together to hang like a necklace. More analysis is still being conducted on these items to determine the timeframe of origin. Interestingly, some dark organic material, either leather or wood, covered the copper plates and was apparently preserved by the copper salts of the plates.

The other artifacts found date to time periods later than the Lost Colony. These include: pieces of an English tobacco pipe bowl, two pipe stem fragments, a gray flint (possible gunspall), a lead ball, one blue glass bead, Spanish olive jar sherds, three delftware glazed ceramic chips, nails, and window glass.

Additional archaeological surveys using ground-penetrating radar and radar tomography are planned for late 2008 or early 2009.

FORT RALEIGH NATIONAL HISTORIC SITE

Visitor Center Open 9 a.m. to 5 p.m. daily. Programs may be offered. Check at the Visitor Center for a complete schedule or call (252) 473-5772.



An Emblem of Optimism

At Fort Raleigh National Historic Site you may see a shield-like emblem representing a significant moment in our nation’s history. Circa 1587, this coat of arms represented the first colony of English families to live in the New World. As sponsor of this visionary

effort, Sir Walter Raleigh commissioned the “Cittie of Raleigh” arms to lend an air of integrity to the new colony.

The main element in the coat of arms was England’s national flag of the time -- the white background and the red Cross of Saint George, symbolizing the dominion and strength of Queen Elizabeth I. The roebuck, a small

European deer, represented Sir Walter Raleigh. He added this design element from his own personal coat of arms.

The Latin motto, *Concordia: Parva Crescunt*, roughly translated means “Peace and harmony produce abundance from small beginnings”-- an appropriate vision of the optimism of this bold endeavor. ☺

Discover History!



At Fort Raleigh National Historic Site interpreters, exhibits, an earthen fort, a nature trail and live drama all blend together to bring the visiting public a richer understanding of the Algonquians and English who lived and died on this site.

The Lindsay Warren Visitor Center features an Elizabethan Room of original oak paneling and stone fireplace from a 16th-century manor house. Displayed in the Museum Exhibit Room are site artifacts, information on the colonists and Elizabethan life and copies of some of John White’s watercolors depicting Algonquian Indian life. A 17-minute orientation video shown in the auditorium relates England’s first settlements and attempts to establish colonies here on Roanoke Island from 1584-1587.

Eastern National

SERVING AMERICA'S NATIONAL PARKS & OTHER PUBLIC TRUSTS

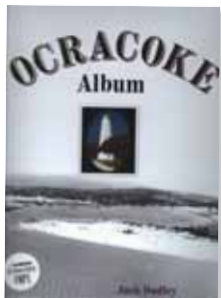
Nature Guide to the Carolina Coast by Peter Meyer

An entertaining, practical, reader-friendly guide to common plants, animals and the physical environment of the NC/SC coast. Fully illustrated - more than 100 color photographs, plus additional diagrams and drawings with in-depth information on each subject. A beachcomber's handbook, a valuable companion for seaside explorers of all ages. Scientifically accurate, yet written in language beginners can understand. \$13.95



Ocracoke Album by Jack Dudley

A photographic history of Ocracoke Island, from the 1890s through the 1960s. Detailing the spectrum of Ocracoke society, including the first post office and mail boats, the six-room school that served as the village's only public education building until 1971, meeting houses, the fishing industry of the island and, of course, the famous Ocracoke lighthouse. Beautifully designed and easily readable, Ocracoke Album is a delight not only for fans of the village but also for fans of photography and the old ways of life. \$40.00



Wind and Sand

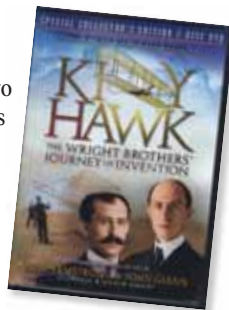
by Lynanne Wescott & Paula Degen
The story of the Wright Brothers at Kitty Hawk as told through their own words and photographs.



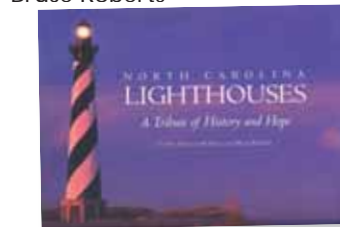
Contains key historic photographs and excerpts from the brothers' journals. Get a feel for how the brothers thought and their experiences with life at Kitty Hawk at the turn of the century as well as process of experimentation and invention. \$10.95

DVD Kitty Hawk

Special Collector's Edition, 115 minutes on two disks. Features hundreds of rare and unpublished photographs plus commentary from leading Wright experts. Costumed actors recreate life at Kitty Hawk and the brothers' experiments. Footage includes replicas of various Wright Flyers as well as original footage in Europe and America. \$24.95



North Carolina Lighthouses: A Tribute of History and Hope by Cheryl Shelton-Roberts and Bruce Roberts



For more than 200 years, North Carolina's lighthouses warned seamen of the dangers of our treacherous and ever-changing coastline. The seven surviving sentinels are revered as an integral part of North Carolina's maritime history and a symbol of pride for its residents. This book details with beautiful color photographs and insightful text each lighthouse, its history, specifications and keepers. It also details the move of the Cape Hatteras Lighthouse in 1999, the U.S. Life-Saving Service, "Torpedo Junction" and the Graveyard of the Atlantic. \$29.95



First Flight By Tom Crouch
Part of the National Park Handbook series: #159. Full of colorful illustrations and packed with lots of information about the quest for flight, the Wright brothers and the legacy they left. A great resource for school projects; includes information about both the Wright Brothers National Memorial and Dayton Aviation Heritage National Historical Park. \$6.00

War Zone: WWII Off North Carolina's Outer Banks

Directed by Kevin Duffus
In 1942, the United States suffered one of its worst defeats of WWII, not in Europe or the Pacific but along the nation's eastern seaboard. For six months, more than 65 German U-boats hunted Allied ships practically unopposed within view of Outer Banks communities. In all, 397 ships were sunk or damaged, and nearly 5,000 sailors and civilians were killed. Take a historic journey through time and explore the battles on the home front with award-winning director Kevin Duffus. \$19.98

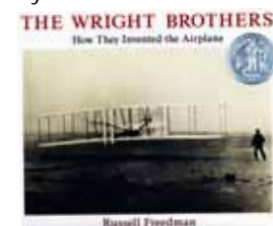


Roanoke: Solving the Mystery of the Lost Colony by Lee G. Miller
What really happened to the colonists of Roanoke Island? There are many theories of the fate of the colonists, due to lack of physical evidence. Ms. Miller, an

ethnohistorian and anthropologist, draws her own conclusions on the fate of the famous "lost colonists." She paints a remarkable picture of betrayal, treachery and murder. \$16.00



The Wright Brothers: How They Invented the Airplane By Russell Freedman



A Newbery Honor Book loaded with key photographs and informative text for all ages of readers. Learn the story of how the Wrights discovered flight and brought their dreams to life through both their struggles and the victories that chronicled their remarkable tale of discovery, experimentation and invention of powered, controlled flight. \$14.95

Wright Brothers National Seashore Pin and Patch

(America's National Parks Collector Series)
A century ago, wind, sand, and a dream of flight brought Wilbur and Orville to the Outer Banks of North Carolina. Here the first successful airplane flight took place on December 17th, 1903. Magnets and decals also available. \$5.95



Cape Hatteras National Seashore Patch & Pin (America's National Parks Collector Series)

Cape Hatteras National Seashore was established by Congress as America's first national seashore. Magnets and decals also available. \$5.95

Mail This Order Form to:

Eastern National • P.O. Box 427, Kill Devil Hills, NC 27948
Phone: (252) 441-6181 • Fax: (252) 441-9852



Name _____
Address _____
City _____ State _____ Zip _____
Phone (day) _____

Postage & Handling:
Up to \$20: \$4.50 — \$20-\$40: \$7.00 — Over \$40: \$9.00
• All prices subject to change.
• Posters shipped separately and require additional shipping charge.

Ordering Information

Qty	Description	Price Ea.	Total

Method of payment: Check - Money Order
- Credit Card (Make check or money order payable to Eastern National)

Subtotal _____
North Carolina residents please add 7% sales tax _____
Total _____

Credit Card # _____ Expiration Date _____

VISA • Mastercard • American Express • Discover
Please allow 4 to 6 weeks for delivery