

Cape Lookout National Seashore



2008-2009 Edition

FREE

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Welcome to Cape Lookout

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2008–2009 Edition

Barrier Islands- Geology You Can See...

The Cape Lookout National Seashore Newspaper is published by the National Park Service. Partial funding provided by Eastern National.

Welcome to Cape Lookout National Seashore. The 56 miles of undeveloped islands that comprise the Seashore are a fantastic geologic laboratory, helping us learn about and understand the dynamic nature of a natural barrier island system. Although it's the stuff of scientific study, once you know what to look for, you can easily recognize all around you evidence of the geological forces that shape and reshape the beach.

The most gradual and global of the forces is sea level rise. Measured over decades and centuries, the accelerating rise of earth's average temperature is becoming abundantly clear. Ice, once captured in the world's glaciers and poles, is visibly melting and the vast ocean is rising. Where elevation in inches and feet matter, the barrier islands and the low inland coast of North Carolina are gradually drowning. While these changes require study to see, they are still discernible in our lifetimes.



A delicate "mushroom" of sand carved by the wind.

Gradual forces such as the wind, waves, currents and tides work constantly to shape the barrier island beach over the course of days, seasons, years and decades. Even on the scale of minutes and hours, the constant motion of sand in the surf and wind and the accumulation of fresh sand in the dunes are readily apparent. And in a seasonal tug-of-war, you can see sand pushed high on the beach by calmer summer waves, only to be cut away and flattened in the turbulent and roiling winter surf.

But it is from the immense raw power of nor'easters, tropical storms and hurricanes that we see, in a matter of hours, the dramatic result of these forces: new inlets cut in the land and an island tossed over itself, moved inland towards the mainland coast in an unstoppable effort to reach a new equilibrium. In witnessing such events, we truly begin to understand the temporary nature of everything that we build on the beach.

Come and experience a sense of wonder in the geology of the coast...



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Cover: NPS Photo



The storm surge from Hurricane Isabel deposited the white sand of the beach across the island and into the waters of the sound.

FERRY AND TRANSPORTATION INFORMATION

To	Leaves From	Operator(s)	Type	Pets	Phone
North Core Banks, Portsmouth Village	Ocracoke	Rudy Austin	Passenger	Maybe, call first	(252) 928-4361
North Core Banks, Long Point	Atlantic	Morris Marina Kabin Kamps & Ferry Service	Vehicles / Passenger	On leash or in vehicle	(252) 225-4261 (877) 956-6568
South Core Banks, Great Island	Davis	Davis Shore Ferry Service	Vehicles / Passenger	In vehicle or crate	(252) 729-3474 OR (252) 729-8411 (fax)
South Core Banks, Cape Lookout Lighthouse & Shackleford Banks	Harkers Island	Calico Jacks Ferry Harkers Island Fishing Center Island Ferry Adventures at Barbour's Marina Local Yokel Ferry and Tours	Passenger Passenger Passenger Passenger	On leash On leash Call first Maybe, call first	(252) 728-3575 (252) 728-3907 (252) 728-6181 (252) 728-2759
South Core Banks, Cape Lookout Lighthouse & Shackleford Banks	Beaufort	Mystery Tours Outer Banks Ferry Service	Passenger Passenger	On leash, call first On leash	(252) 728-7827 (252) 728-4129
Shackleford Banks Only	Morehead City	Waterfront Ferry Service	Passenger	Maybe, call first	(252) 726-7678
Shackleford Banks Only	Beaufort	Island Ferry Adventures Mystery Tours	Passenger Passenger	Call first On leash, call first	(252) 728-7555 (252) 728-7827

This publication was designed by Vision IPD
Beaufort, NC. / Bangor, ME
866.574.4889
www.VisionIPD.com



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Visiting an Undeveloped Seashore

Come explore the beaches of Cape Lookout National Seashore! Whether you spend an hour, a day or camp overnight you are in for a truly unique experience. A boat ride, either on your own boat or one of the toll ferries, is required to reach these undeveloped islands. (See ferry list on page 2.)

With a little advance planning, you can count on a good visit; answers to some of the most commonly asked questions are provided within these pages (see Good Questions on page 4). For more assistance, stop in at the visitor center on Harkers Island – here you will find information, exhibits and help in planning your visit. The visitor center on Harkers Island is fully accessible and can be reached by car.



Harkers Island Visitors Center





Good Questions

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To help make your trip to the seashore more enjoyable, here are answers to some of the most common questions.

What Is A "Trash Free Park"?

There are no trash cans or trash pickup service anywhere in the seashore. Please help us keep the beaches clean by taking your trash (and more) back to the mainland with you.

Are There Changing Rooms And Showers?

The restrooms at the Light Station Visitor Center have changing rooms inside and an outside cold water rinse-off area. The cabin camps at Long Point on North Core Banks and at Great Island (milepost 30) on South Core Banks provide public shower facilities and bathrooms (but not changing rooms) for day use.



Are There Toilet Facilities?

On North Core Banks- flush toilets are located at Portsmouth Village and Long Point Camp and composting toilets are located on the trail into Portsmouth. On South Core Banks- flush toilets are found at Great Island Camp and the Light Station Visitor Center and composting toilets are located near the point of the cape. On Shackleford Banks composting toilets are located on the sound at Wades Shore and the dock. If there is no toilet, find a remote area and bury human waste at least 6 inches in the sand.

Are There Stores Or Restaurants?

There are no restaurants or food stores on the islands. Bottled water is sold at the Light Station Visitor Center. Drinking water is available (seasonally) at Long Point Camp and Great Island Camp. A hand pump with iodine-treated water is located near the point of the cape on the back road.

Am I Allowed To Drive On The Beach?

Driving is permitted on North and South Core Banks. All driving is on the ocean beach or designated sand trails only. Drivers must be at least 16 years of age.. Ask about the regulations or see our website www.nps.gov/calof/, as driving rules are strictly enforced.

May We Hunt And Fish?

Yes to both. The new NC Coastal Recreational Fishing License is required at the seashore. Fishing regulations are set by the NC Division of Marine Fisheries (see their web site: www.ncdmf.net/recreational/recguide.htm.) Hunting regulations are governed by the National Seashore and the NC Wildlife Resources Commission (NC hunting rules are at www.ncwildlife.org/index.htm). Outside of open hunting seasons, weapons are prohibited. Please check with a Park Ranger for hunting rules and regulations.



Where May We Camp?

Camping is allowed almost anywhere except: within posted closed areas, in the concession camps, in Portsmouth Village, within

100 yards of the lighthouse or within 100 feet of other structures. Since there are no developed campsites, campers need to bring everything they need with them. Take a good tent and long stakes. Camping vehicles must stay on the ocean beach.

Is There An Option To Camping?

Overnight rustic cabin accommodations are available on North and South Core Banks. See page 14 for details on Cabin Camps.

May We Build A Campfire?

Yes, but ONLY on the open beach below the high tide line (i.e. not on the dunes, or in the trees). Only dead and down wood (driftwood) may be collected for firewood and is hard to find. Do not use shipwreck timbers or standing dead trees, as they are protected. Put out fires with water, not sand. Sand allows air to reach the fire, and the smoldering coals could burn someone's foot.

What About My Personal Watercraft (PWC)?

PWCs, sometimes known as jet skis, may land at 10 designated soundside locations within the Seashore. See page 3 or our web site www.nps.gov/calof/. The remainder of the Seashore is closed to PWC operation within 150 feet of the soundside shore.



May We Shoot Fireworks?

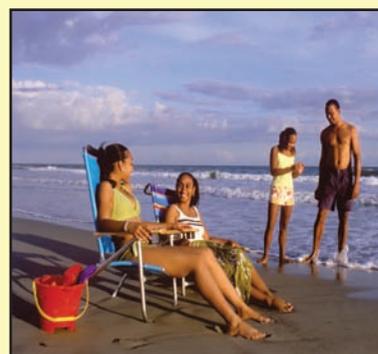
No. Fireworks are not allowed in any National Park Service area.

What If My Pet Comes On Vacation Too?

Pets are allowed but must remain on a six-foot leash **at all times**. Unleashed pets can impact wildlife, other visitors and the fine for having them off a leash (\$150 or more) will ruin your day. Please check ferries to confirm that they will carry pets to the Seashore and remember to plan for your pet's comfort and needs, especially with fresh drinking water and a bowl.

May I Hunt For Hidden Treasure With My Metal Detector?

No. The only items that you may collect from the seashore are limited amounts of seashells. In National Parks metal detectors are prohibited to protect historic artifacts. Please do not disturb any shipwrecks that may wash up or be uncovered by the ocean.



If you do not find it here, don't hesitate to ask a ranger, call the park at 252-728-2250, or check out our web site at www.nps.gov/calof/.



Staying Safe

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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 nightmare. There are no lifeguarded beaches within Cape Lookout National Seashore, so all swimming is at your own risk.

Safety TIPS

- Please watch your children in and near the water at all times. Be alert for strong currents or other natural conditions that may pose a problem for you or your family in the water. Before going in the water, spend a few moments watching the waves. Wave patterns are good indicators of the presence of currents, sand bars and deep-water troughs. Know what to expect before you go in.
- Don't swim near surfers. The fin under the surfboard can cut you.
- Don't swim in rough seas. The force of big waves crashing at the shore's edge can pick you up and throw you on to the sand. This may result in a dislocated shoulder or knee. Broken necks and paralysis have resulted from swimmers being thrown on to the ocean bottom headfirst.
- Please watch your footing when wading. Sudden changes in depth can occur even in the sound.
- Ocean conditions differ from day to day, sometimes changing hourly. Nonswimmers should use Coast Guard approved flotation vests, even while wading.
- Watch for the change of the tide; near shore currents can be stronger at different tide heights. Areas that were easy to reach at low tide may be unsafe at high tide.
- Watch for jellyfish floating in the water. If stung, contact a Ranger for first aid. Don't rub sand on the stings. Meat tenderizer often reduces the pain.
- Be alert for boats coming in to anchor or tie up at the dock on the sound side of the island. The boat operator may not see you in the water.

Emergencies - Where to Get Help

The following locations have park or concession staff available to provide emergency help (in season - generally April to November):

- Portsmouth Village, milepost 1—go to the Life Saving Station or to the Visitor Center
- Long Point cabin area, milepost 17
- Great Island cabin area, milepost 29
- Light Station Visitor Center, milepost 41

Park Watch – You can be an extra set of eyes and ears in the park to help the park rangers keep everyone safe and having a good time. To report a problem or a violation that you have seen, call 252-728-2250 and press “0” for the front desk between the hours of 9 AM and 5 PM.

For after hours emergencies dial 911.

Cell Phones

Cell phones work in most locations on the islands. When making a 911 call, be sure to tell the dispatcher:

- You are calling from a cell phone and your phone number (in case you get disconnected)
- You are calling from Cape Lookout National Seashore, and your exact location (use landmarks and, if known, the milepost number)
- The nature of your emergency

Hurricanes

Hurricane season runs from June 1 to November 30. Before coming to the Seashore for an extended stay:

- Listen to the latest weather forecasts.
- Carry a battery-operated radio with you and check the weather forecast regularly for updated information since storms can change quickly.
- Be prepared to cut your trip short. The Seashore will be evacuated upon the declaration of a Hurricane Watch. Due to the remoteness and relative inaccessibility of the Seashore, evacuation may begin before the actual declaration of a Hurricane Watch at the discretion of the Park's superintendent. It takes several hours for an organized evacuation, so follow instructions as soon as possible.
- If you arrived by ferry, be aware that the ferry captains have authority to load vehicles to maximize capacity when necessary.

Docks

For your safety do not jump or dive from the docks at any tide height. The water may be more shallow than you think, and barnacles attached to the dock pilings can cut your hands and feet.

Escape from Rip Currents

Rip currents, commonly called rip tides or undertows, are strong, narrow, river-like currents that are moving away from the shore. If you are caught in a rip current, **remain calm**. The current will not pull you under, but it will pull you out into deeper water. The best way to escape is to wade or swim parallel to the beach until you are out of the current. Then, when free, wade or swim back towards shore at an angle from the current. Do not attempt to swim directly against the current as you will only exhaust yourself.

As shown in this illustration, swimming parallel to the shore is the best way to escape from a rip current.

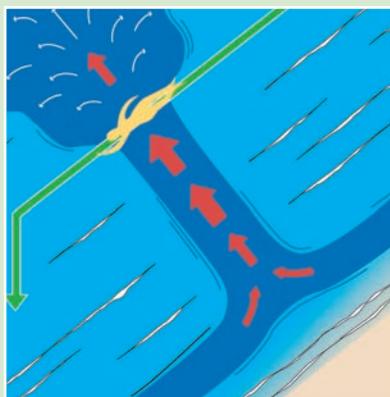


Image Credit: courtesy NC Sea Grant

Dangers of Heat & Humidity

A combination of high temperature and high humidity creates an even higher and possibly dangerous apparent temperature. With an air temperature of 90°F and a humidity of 80%, the apparent temperature is 113°F. Heat cramps, heat exhaustion and heatstroke are possible during elevated apparent temperatures. Enjoy the beach, but limit your physical activity and exposure during days of high heat and humidity.



Preserve & Protect

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Of Storms and Birds

The ecology of barrier islands is shaped by storms often in dramatic events. In 2003 Hurricane Isabel struck



New Drum Inlet to "Ophelia" Inlet

the Core Banks in mid-September. The storm caused considerable long-term damage to human communities along the coast. On the undeveloped Core Banks there was some short term damage to wildlife as many sea turtle nests were washed away by the flooding. Yet there was long term benefits created for the beach nesting birds. The storm tide scoured the banks removing vegetation, flattening the low dunes and creating large open sand flats. These overwash fans of bare sand are desirable for beach nesting birds since their nests are laid



Piping plover eggs and chicks

on the ground and are camouflaged like sand and shell. Without vegetation to hide potential predators such as raccoons the birds have a 360 degree view to watch for intruders that may harm the nests. This means no sneak



American oystercatcher

attacks by predators and gives the adult birds more time to lead predators away from the eggs. These cross island sand flats also have the benefit of providing good habitat away from the recreational beach. The vegetation and dunes eventually grow back after several years, forcing the birds to nest out on the open beach where there is more recreational disturbance. Often, another storm comes along to maintain the overwash fans and reshape the banks.

Hurricane Ophelia in mid-September 2005 not only controlled the expanding vegetation but opened a new inlet. Inlets are favored by shorebirds partly because that's where their food is and for the open sandy habitat. Birds and fish find inlets productive foraging areas. Fall and winter storms can provide benefits to bird nesting habitats. Timing is important because spring or early summer storms may help the habitat, but actually hurt that year's reproductive success.

In 2007 Sub Tropical Storm Andrea in May and Tropical Storm Barry in June caused many nest losses due to flooding the ground nests of piping plovers and American oystercatchers. The first nests are often the most successful and while the birds renested it placed an additional hardship on them to start the process a second time. The terns and skimmers typically don't start nesting until mid-May and missed the stronger Andrea Storm. At the New Drum Inlet sand spit these birds did well on open sandy habitat. This site supported the largest colony of nesting gull-billed terns in the state. While we can't control the timing or force of coastal storms, we can protect bird nesting sites. The park posts these sites by April 1 to exclude all entry so the birds can have an undisturbed place to raise their families.

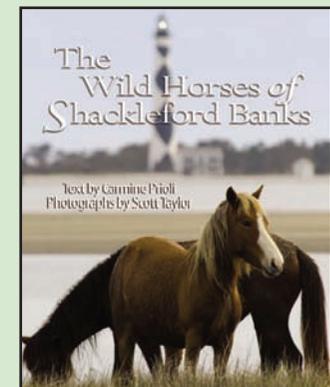


Wild Horse Watching Tips, Shackleford Banks

Shackleford's 110-130 horses live in about 30 groups called "harems" (stallions, mares and foals) and "bachelor bands" (only stallions). They may be seen in all parts of the island but you may need to hunt around a bit to find them.

Remember that the horses are wild – they must find their own food and water and protect themselves from danger. Wild horses see humans and dogs as something dangerous. If you get too close to the horses they may defend themselves by charging, kicking or biting. For you and your pet's safety:

- Watch the horses from a safe distance. If the horse stops what it's doing to stare directly at you, stop there. If it starts to move away, you are already too close.
- Bring binoculars and use a telephoto lens so you won't disturb the horses or endanger yourself.
- Keep your dog on a leash for its and the horses' safety (and it's the law!).
- Always carry fresh water for yourself and your pet. During the warm months, bug repellent is recommended.



The Wild Horses of Shackleford Banks by Carmine Prioli



Preserve & Protect

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Managing Wildlife for a Changing Ecosystem

Most wildlife – like loggerhead turtles and piping plovers – have to handle their own population to adapt to changing habitats. But the horses on Shackleford Banks have some help.

Because the population is on a limited space – 2990 acres – and can't roam like turtles or birds, it needs some help keeping the numbers at a sustainable level. The herd is kept between 110 and 130 animals. Selected mares (adult females) are contracepted (given a birth control injection by dart which falls out after injecting the contents) each year. Selected young horses are sedated, also by darting, and removed each year to go to adoptive homes on the mainland.

If the horses weren't managed, natural selection would determine which animals reproduced. Females who were fertile and who were good mothers would have offspring.



Management strategy allows mares of under-represented lines the chance to reproduce.

Strong offspring would survive. Males who were good strong fighters would become alpha stallions and hold large harems of mares.

Since the horses need to be managed for population size, the managers (the park and the Foundation for Shackleford Horses, Inc.) have to make choices. Which mares to contracept? Which youngsters to remove?

One model is the “random” system. Females whose numbers were chosen out of a hat would receive birth control that year and youngsters who were similarly chosen would be removed.

But herd managers have information about the herd that

suggests we should manage differently. We have up to four generations of records on these horses. The Shackleford herd members trace their ancestry back to 47 “founders.” A founder is an individual whose parents are not known, and he or she is treated as the originator of that line.

Our primary genetics advisor, Dr. Gus Cothran of Texas A&M University, has determined that the herd is comfortably diverse “as is.” There is no danger from herd members being too closely related at this time.

Of the founders, one mare “#36 Daphne” has 28 living representatives – daughters, sons, granddaughters, etc. – on the island. This is far and away the largest line. Seven lines have only one representative on the island, five have only two, and nine have three representatives.

Since we don't know the relationship of the lines any further back than 4 generations, we treat the lines as if they are unrelated. Though, of course, all the horses on the island are likely to be somehow related to each other. They are related enough to be given a breed name: Banker Horses.

If you were managing a barrier island population for the future, and wanted to be sure it had the best chance to adapt to changing conditions, what attributes would you choose? Perhaps the ability to make do with less water? Or the instinct to avoid hurricane force winds and rising water? Or the ability to survive in temperature extremes? All of these are assets. The problem is that we don't know what lines have these abilities to a greater or lesser degree.

The best way to manage a population like this is to preserve its diverse gene pool. That way, whatever adaptive abilities are needed in the population, some animals should have them.

Management decisions of contraception and removal are made on the basis of number of representatives, mean kinship, and some individual factors. For example, a mare with one “uncle” and no offspring would not be contracepted so she has the chance to produce offspring for her line. A stallion with no offspring and no known relatives would – if he could win and keep a mare – have the chance to increase his line by having any foals stay on the island – even if their



Strength and agility are required of a successful harem stallion.

mother was from a very well represented line.

Mean kinship is a number derived from a complex formula that shows the relative relatedness of all members of the herd. An offspring from two well represented parents would have a higher mean kinship number than one with two less well represented parents. Mean kinship is valuable when a decision needs to be made between two individuals and the relationship is more complicated than can be determined by just comparing the number of representatives.

Individual factors include situations like the reproductive capacity of the members. A line with three representatives where all three are breeding age females is not so “thin” as one with one aging mare and two young unproven stallions.

By making the best possible decisions, this wild but remotely managed population will have the genetic diversity to adapt to its changing barrier island ecosystem



Young horses need thick winter coats and enough grasses left over from the growing season to survive the cold months.



Park Activities

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Park Activities The 2008 – 2009 Edition

The programs listed below will be offered from May 24th through September 1st. Additional programs may be offered. Check at the Visitor Center for a complete schedule. Programs will run on schedule unless there is inclement weather. For more information on these and other program offerings call (252) 728-2250.

DAILY PROGRAMS

Cape Lookout Light Station

Lighting the Way (15 minutes)

Program times are: 10:15 am, 1:15 pm 3:15 pm. Meet on the porch of the Assistant Keepers' Quarters next to the lighthouse. Come learn the history of the Cape Lookout Lighthouse and the life of a lighthouse keeper.

Life of a Keeper (30 minutes)

Program time is: 11:15 AM. Program is offered on Saturday and Sunday from May 24th through June 1st, offered Daily after June 3rd. Meet at the Light Station Pavilion near the ferry dock..

Lighthouse Keepers were dedicated men and women who kept the light burning through fair weather and hurricanes. Come discover how they, and their families, managed to keep the light burning.

WEEKLY PROGRAMS

Cape Lookout Light Station

Storms, Wars & Shipwreck Stories (30 minutes)

Program time is: 2:15 pm on Tuesdays and Thursdays from June 3rd through August 28th. Meet at the Light Station Pavilion near the ferry dock.



Nor'easters and Hurricanes, pirates and wars have all left behind stories and marks on the island that live long beyond those who lived through them.

Discovery Cart (30 minutes)

Program time is 2:15 pm. Beginning May 24th program is presented on Saturday and Sunday. Beginning June 4th program is presented Monday, Wednesday, Friday, Saturday and Sunday. Meet at the Light Station Pavilion near the ferry dock.

Come and discover what lies beneath the waters of Cape Lookout National Seashore at our Discovery Cart. Learn about horseshoe crabs, loggerhead sea turtles, sea urchins, sharks, whales, shells, and the creatures that live within them, and much more!

Island Explorations (30 minutes)

Program time is 1:15 pm. Beginning May 24th program is given on Saturday and Sunday. Beginning June 4th, program is given on Monday, Wednesday, Friday, Saturday and Sunday. Meet at the Light Station Pavilion near the ferry dock.

Come join a Park Ranger for new adventures at Cape Lookout National Seashore. From the ocean to the sound and from the sea to the sky, these programs will take you on a different encounter with nature each day.

Portsmouth Village

Portsmouth Village Guided Tour (1 hour)

Tours begin at 9:30 AM on Friday and Saturday. Meet at the Haulover Channel Dock in Portsmouth Village.

Come and discover what life was like for those who once called Portsmouth and the Outer Banks home. Be sure to bring drinking water, bug repellent and sunscreen. There are no amenities in the village.

SELECT DATES

The following programs are presented on selected days.

Cape Lookout Light Station

Ranger Story Time (30 minutes)

Programs start at 1:30 PM on alternate Saturdays, beginning May 31st. Meet at the Light Station Pavilion near the ferry dock

Need a short break from the hot sun and sand? Why not join the Ranger in the shade shelter for a short program of fun stories for children and their favorite adult.

Shoreline Walk (45 minutes)

Programs start at 1:00 PM on alternate Saturdays, May 31st. Meet at the sound-side beach near the Lighthouse Keeper's Summer Kitchen.

Come explore the underwater world of Cape Lookout Bight. Discover live sand dollars, sea stars and hermit crabs using glass-bottom buckets for a look beneath the waters.

Fishing with a Ranger (1 hour)

Programs start at 11 AM on alternate Saturdays beginning May 24th. Meet at the ocean beach overlook at the end of the boardwalk.

Join a ranger and other fishing enthusiasts to learn the art of surf fishing. We provide poles, water and instruction. Catching fish is up to you. An adult must accompany participants 13 and younger during this program.

Barrier Island Ecology (1 hour)

Programs begin at 11:00 AM and 1:00 PM on Tuesday and Thursday from June 3rd through August 14th. Meet at the Light Station Pavilion near the ferry dock. Check the Program Calendar for dates.

Join the North Carolina Coastal Federation for an educational walk from the estuary to the ocean. Learn about animal and plant adaptations for life on a barrier island, the constant migration of these barrier islands, and environmental issues the Cape Lookout National Seashore faces today. All ages are welcome: Please wear comfortable walking shoes, clothing, and appropriate sun-gear.





Park Activities

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	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Cape Lookout Lighthouse							
Lighting the Way	10:15, 1:15, 3:15	10:15, 1:15, 3:15	10:15, 1:15, 3:15	10:15, 1:15, 3:15	10:15, 1:15, 3:15	10:15, 1:15, 3:15	10:15, 1:15, 3:15
Life of a Keeper	11:15	11:15	11:15	11:15	11:15	11:15	11:15
Barrier Island Ecology			11:30, 1:30 June 3 - Aug. 14		11:30, 1:30 June 3 - Aug. 14		
Shoreline Walk							1:00 Alternate weekends starting May 31
Island Explorations	1:15 (May 24 on)	1:15 (June 4 on)		1:15 (June 4 on)		1:15 (June 4 on)	1:15 (May 24 on)
Ranger Story Time							1:30 Alternate weekends starting May 31
Fishing with a Ranger							2:00 Alternate weekends starting May 24
Discovery Cart	2:15 (May 24 on)	2:15 (June 4 on)		2:15 (June 4 on)		2:15 (June 4 on)	2:15 (May 24 on)
Storms, Wars, and Shipwreck Stories			2:15		2:15		
Tidal Flat Explorations	Various dates and times - See below for more information						
Portsmouth Village							
Guided Tour						9:30	9:30
Shackleford							
Horse Sense & Survival	various dates -- by reservation only						

Tidal Flat Exploration (30 minutes)

Program start times vary as they are set to take advantage of low tide on the day they are given.

Dates and Times: June 13, 9 AM; June 16, 11 AM; June 30, 10 AM; July 2, Noon; July 14, 10 AM; July 16, Noon; July 28, 9 AM; July 30, 11 AM; August 11, 9 AM; August 13, 11 AM

Meet at the Light Station Pavilion near the ferry dock.

Join the North Carolina Coastal Federation to explore tidal flats and search for wanderers, burrowers, and hunters that call these sandy areas home. Discover the survival techniques of whelks, worms, wentle-traps and other marine creatures. Wear shoes to protect your feet and be prepared to get wet.



Shackleford Banks

Horse Sense & Survival (6 hours)

By Reservation Only. Program dates: June 20, July 15, September 6 & November 22

The wild horses of Shackleford Banks are fascinating to observe but may be difficult to find. Join a Ranger for a day-long walking trip to find horses and watch their behavior. The park will arrange transportation by local ferries; there will be a charge for this ride. If you have your own boat, call the park for reservations and meeting locations. There is no charge for the walking program. Come prepared for a day in the sun and for walking

through dunes in deep sand. Comfortable walking shoes that can get wet and muddy are a must. Bring water, lunch/snacks, bug repellent, sunscreen, a sun hat, binoculars, and camera with telephoto lens. Call (252) 728-2250 for reservations, more information on the program, ferry costs and other questions.

Harkers Island Visitor Center

Ribbon of Sand (Film) (26 minutes)

Daily

This film offers spectacular imagery, including aerial and underwater photography, to describe the Cape Lookout ecosystem from the soundside marshes and estuaries to the thin protective line of barrier islands of the Outer Banks and the ocean depths beyond. This film is shown in a large screen format in the Harkers Island Visitor Center theater.

A shorter (16 minute) version of this film is shown daily in the mini-theater in the Keepers' Quarters Museum near the lighthouse.



Shifting Sands

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Islands of Change

We rarely think of the land as moving or being able to change its location or shape. Along the coast, the sandy beaches are doing just that. Every day the ocean expends its energy against the land, waves break and rush across the sands and then retreat once again. Over and over this action is repeated and with each wave the land is altered slightly. Each wave moves sand, moving it higher on the beach here, in another spot carrying the sand back out to sea. Generally these are small changes that we barely notice, but over time these changes can make big differences to the beach and the island. Some of the causes of these changes are more easily observed during your visit than others.

Winter-Summer Beaches

One pattern of change is the difference between the summer beach and the winter beach. During the spring and summer months, the waves are generally carrying sand onto the beaches resulting in wide, gently sloping beaches. Winter brings stronger waves which cut into the summer beach producing “scarps” or cliff-like cuts as the sand is carried out to sea once again. On some beaches the seasonal difference can be dramatic.



Wave cut scarp on a winter beach.

Littoral Drift

“Stay right in front of us!” we tell our kids as they head into the water carrying boogie boards and surf mats. But when we look for them a few minutes later they are way down the beach. Frustrated, we walk down and call them out of the water, scolding them for having “wandered away.” “But we didn’t!” they protest. This scenario is repeated all summer long on beaches everywhere. What’s going on? The culprit in this case is littoral drift or the long-shore current, an ocean current that runs parallel to the beach within the surf zone. Waves rarely come straight onto the beach; rather they strike the beach at an angle. As waves strike the land they move water along the face of the beach in one direction creat-



Summer beach

ing a current. This current moves sand and anything else in the water, such as swimmers or boogie boarders, down the beach. The direction of this current depends on the direction of the waves; along much of the coast this current generally moves north to south or “down beach” on an east facing beach. This movement can be reversed when waves come from a different direction in reaction to off-shore storms. Other beaches which lie facing south, or are oriented in a different direction, may have this current moving east or west depending on the prevailing winds and waves.

High winds and high tides

Strong winds blowing across the water push the water ahead of it until it piles up against the land making the water level higher than normal. This is called a “wind tide.” With the water level already high, flooding of low-lying areas is a common result during the regular time of high tide.



Flood tide at Portsmouth Church

Storms

Along the coast, storms are just a part of the lifestyle not only for the island but also for the people who live there. Storms with winds blowing from the northeast, known as nor’easters, as well as hurricanes can make some big changes to the island in a short period of time. Uniquely adapted to



Hurricane Isabel, Harkers Island Shell Point
Photo: Barbara Yeomans

survive the effects of Mother Nature’s redecorating, barrier islands put these changes to good use.

Overwash – Storm waves wash across the beach, past the dunes and into the interior of the island. Sand carried by these waves is deposited in the interior or even clear across the island into the marsh or sound. These



Before the storm



After the storm



Shifting Sands

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deposits build up the island, filling in low spots and increasing the width of narrow areas. Overwash can be a problem for humans, as roads are buried and houses are flooded, but for many animal and plant species it is a good thing. Overwash also clears away vegetation mak-



Ophelia overwash on flooded road

ing new and safer areas for terns and other shorebirds to nest the following season. Seabeach amaranth, an endangered native plant, grows best in open sandy areas. Eventually, the beach and marsh grasses reclaim these bare sand areas until they look like they did before the storm once again.

Inlet formation – during some severe storms, conditions are right for new inlets to open in the barrier island. Inlets form in low, narrow sections of the island where it was easiest for the water to wash over. Some inlets remain open only a short while, closing naturally in a matter of days or weeks. Others become a more permanent fixture of the island. These openings allow for the free exchange of water between the ocean and the sound. This water exchange helps to improve fish habitats in the sound and near shore ocean waters. Fishing in and near the new inlet generally improves to the delight of all fishermen. If the inlet becomes deep enough, boats may use it as well. Inlet formation can be a problem for humans if it cuts through a road or isolates a community. In these instances, man endeavors to fill in the opening.



When taking an ORV on park beaches remember:

-  A ferry is required to bring your vehicle to the seashore; see page 13.
-  Drive only four-wheel-drive vehicles on the beach. Two-wheel-drive and all-wheel-drive vehicles do not have adequate traction and are likely to get stuck. Towing is limited and very costly.
-  Before entering the beach, lower tire pressure to 20 psi or less. Lowering the tire pressure and driving at a slow steady rate of speed are the best ways to get around.
-  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. Use the last ramp and the back road when it is available.
-  Any law applicable to vehicle use on a paved road in the State of North Carolina also applies to ORV use. All operators must have a valid driver's license and be at least 16 years of age.
-  Avoid driving in 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
-  For a comprehensive listing of ORV tips and regulations, ask for an ORV site bulletin at any park visitor center.

Off-Road Vehicle Plan Update

The seashore is currently in the second year of developing an off-road vehicle (ORV) management plan for Cape Lookout National Seashore, with the entire process expected to take 3-5 years.

Public input is very important to this process- initial public meetings were held September 11-13, 2007, and meetings to discuss alternatives are planned for April 7-9, 2008. You can stay abreast of what is happening by checking the park web site at www.nps.gov/calor or the planning web site at <http://parkplanning.nps.gov/calor>

The ORV plan will address resource protection (including protected, threatened and endangered species), visitor safety and potential conflicts among various park users, and will ensure that ORV use is managed within applicable laws. This plan satisfies Executive Orders 11644 and 11989, passed by Presidents Nixon and Carter, which require all Federal agencies to develop regulations for sites that allow ORV use.

Accessing Park Beaches With Your ORV

The National Park Service welcomes visitors to enjoy the beautiful and undeveloped ocean beaches of Cape Lookout National Seashore. Much of the ocean beach on North and South Core Banks is open to off-road vehicle (ORV) use during the spring, summer and fall months.

Some sections of ocean beach are open to pedestrians and swimmers only for safety reasons and to reduce user conflicts.

Other beach areas may be temporarily closed to ORVs or all recreation (ORVs and pedestrians) when they are being used by nesting shorebirds and sea turtles.

To provide for both recreational access and species protection, the park will use adaptive management, shrinking or expanding the closure area given the specific behavior or requirements of protected wildlife. If species behavior indicates that the shoreline needs to be temporarily closed, alternative ORV routes or bypasses may be established to maintain access whenever possible.

For current beach access information, visit the seashore visitor center or check the park web site at www.nps.gov/calor.



Cape Lookout Lighthouse & Village

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Cape Lookout National Seashore

2008–2009 Edition

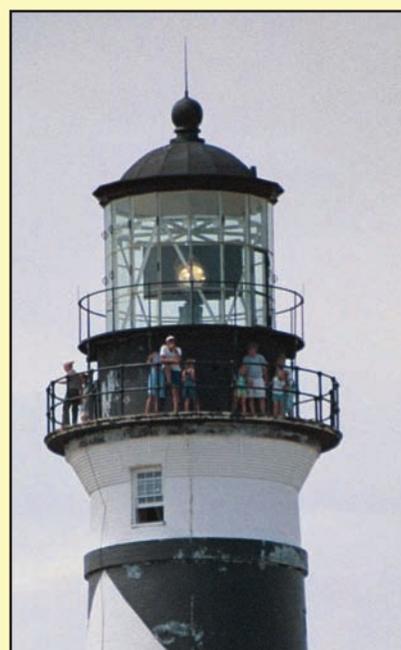
1859 Lighthouse Fast Facts:

Year current lighthouse completed	1859
Year painted with daymark pattern	1873
Year automated	1950
Height above sea level	169 ft.
Height above ground level	163 ft.
Focal plane of the lantern	
above mean high water	150 ft.
Wall thickness at the base	9 ft.
Wall thickness at the top	1 ft. 7 in.
Base diameter	28 ft. 7 in.
Top diameter	13 ft. 3 in.
Number of steps to gallery	207
Number of stair landings	5
Number of windows	10
Number of doors	2

A ship's hatch provides access to the gallery around the top of the lighthouse.

Light produced by two rotating beacons. Each 1000 watt bulb produces 800,000 candlepower.

Light color: white
Distance light seen out to sea: 25 nautical miles
Light pattern: 1 flash every 15 sec.



The view from the top is great!

Work Underway to Re-Open the Lighthouse for Regular Climbing Tours



Getting out of the Watch Room to the Gallery is definitely challenging.



The way up includes some narrow passageways and potential head bumps..

In the spring of 2008 the National Park Service suspended the popular “Open House” tours of the Cape Lookout Lighthouse for public safety reasons after an engineer’s inspection revealed significant deterioration to the integrity of the tower’s circular stairway. Before that report, the seashore had hoped to continue a limited schedule of tours, but it was clear from the engineer’s report that to ensure public safety, the tours would need to be suspended until structural and safety upgrades to the lighthouse were completed. Examples of safety concerns include: sagging steps, the lack good lighting and inside handrails on the stairs, a difficult opening to the gallery, and an inadequate railing around the gallery.

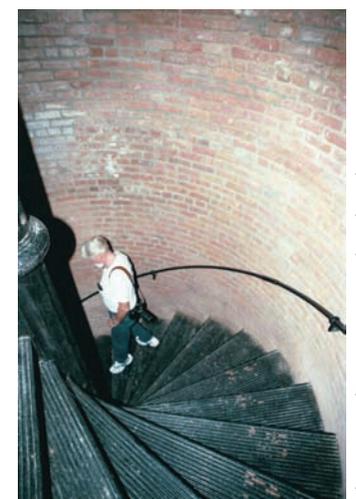
Superintendent Russel J. Wilson reports that this summer the seashore will take several significant steps towards opening the lighthouse to regular public access, including a comprehensive engineering evaluation and preparation of designs for the modifications that are necessary to the lighthouse to ensure public safety. These projects will also generate cost estimates for the project and will be the first steps towards generating funding for the renovations.



The iron bracing added to the tower in the 1980s make narrow stairs and entryways even more narrow.



The gallery guard rail needs to be updated to meet current standards, especially for children.



Sagging spiral stairs inside the lighthouse could result in a precipitous fall. For two way traffic, another handrail will need to be installed.

Photo credit: Frances Eubanks photo

Photo credit: Frances Eubanks photo

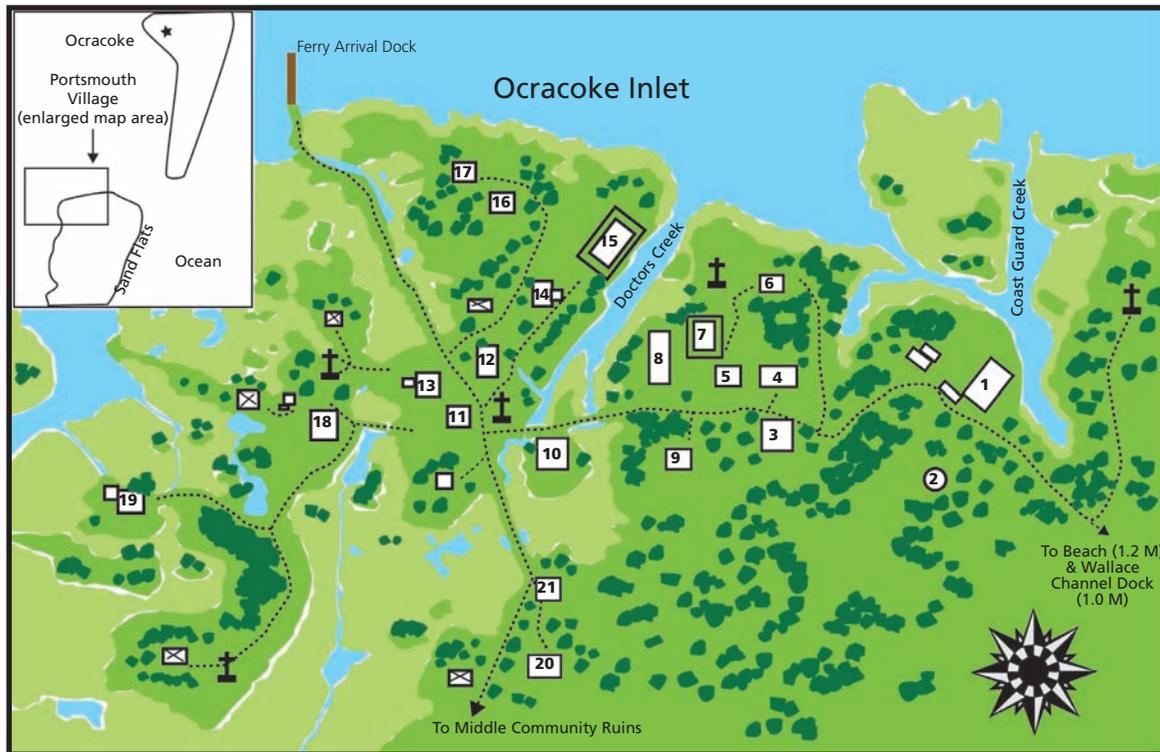


Portsmouth Village

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2008-2009 Edition



Portsmouth Homecoming: A Celebration of Place — April 19, 2008



Homecoming: a day of fellowship, adventure, history, and memories.

Homecomings are Southern celebrations of places and people with ties to those places. They are most often associated with a church or single family, but Portsmouth Homecomings welcome everybody.

Portsmouth Homecomings are sponsored jointly by Cape Lookout National Seashore and the Friends of Portsmouth Island and are held every other year in the even-numbered years. In 2008, Homecoming will be on April 19th.

During Homecoming, several special events occur in the village ranging from a special postmark available in the Post Office to special music and open houses around the village. The highlight of the day is the program following the ringing of the church bell. After the program everyone enjoys another Southern tradition, an old fashioned "dinner on the grounds." This is a picnic-style potluck dinner (lunch) where those who can, bring food to share with everyone else.

Map Legend

1. Life Saving Service Complex
2. Cistern - U.S. Marine Hospital Site
3. Lionel and Emma Gilgo House
4. Harry and Lida Dixon House
5. Jesse and Lillian Babb House
6. Ed and Kate Styron House
7. Ed, Nora, and Elma Dixon House
8. Methodist Church
9. Washington Roberts House
10. George and Patsy Dixon House
11. U.S. Post Office/General Store
12. Walker and Sarah Styron House
13. Theodore and Annie Salter House
14. Tom and Lucy Gilgo House
15. Henry Pigott House
16. Carl Dixon House
17. Frank Gaskill House
18. Jody Styron and Tom Bragg House
19. T. T. Potter House
20. Portsmouth School
21. Cecil and Leona Gilgo House

- Water
- Marsh
- Shrub Thicket/Grassland
- Ruin
- Cemetery



13 Theodore and Annie Salter House: serves as a visitor center; inside are exhibits and public restrooms.



11 The U.S. Post Office: occupying a corner in the general store, the Post Office was the town's information and social hub.



20 Portsmouth School: All elementary grades and sometimes high school were taught together in the single room from 1927 until 1943.



1 The U.S. Life Saving Station: from 1894 until 1937, the seven-man crew at this station was responsible for rescuing sailors from shipwrecks in the nearby ocean and sound waters.

Marian's Centerpiece

In the small village of Portsmouth there stands the house that once belonged to Jesse and Lillian Babb. It was built off the ground on short piers, like all the houses of Portsmouth, to keep it out of the range of the flood waters which came with storms or strong nor'east winds. Occasional flooding was and still is a part of daily life in Portsmouth. Marian Babb grew up in the house, along with her elder sister Edna and her younger sister Lee. She well knew the likelihood of flooding in the village and how high the waters might come. Her sister Lee told the story of the three girls frantically rolling rugs and trying to get everything put up on top of tables and chairs while their Dad stood at the door calling "Hurry up girls! Hurry up! The water's coming! I gotta open the door and let it in!" during the 1944 hurricane.

Even after she was grown and living on the mainland, Marian would return to the little house for the summer. When she got ready to return to the mainland, the last thing she would do before she went to catch the ferry was place on her kitchen table for safekeeping what became known as "Marian's centerpiece." Perhaps because Marian never let anyone photograph her "centerpiece," the story became an island legend. Marian was careful to make sure she was the only one in the house before it would be placed on the kitchen table and the door would be locked behind her. Then everyone would head off for the ferry and the mainland.

Just what was Marian's kitchen table centerpiece during her absence? Her gas-powered push lawnmower!



Park Lodging

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Cape Lookout National Seashore

2008–2009 Edition

Park Lodging

Gentle breezes, miles of unspoiled beaches, and dark night skies perfect for stargazing are all summer attractions along the coast. The undeveloped beaches within Cape Lookout National Seashore are a perfect place to get away from everything and slow down to the rhythms of nature. One way to enjoy the lure of a deserted beach is to stay overnight in one of the park's cabin camps.

Cabin lodging areas within the seashore are located at Long Point on North Core Banks opposite the town of Atlantic and at Great Island on South Core Banks opposite the town of Davis. These rustic cabins provide an alternative to camping and are reachable by a concession oper-



Long Point Cabin



Great Island Cabin

What do we mean by a "rustic" cabin?

Each is equipped with such basic amenities as beds, hot and cold running water, indoor plumbing and gas stoves. There are no refrigerators. In select cabins, air conditioners are available for an additional fee.

At Long Point, electricity is provided by generator or solar panels. At Great Island, customers may bring their own generator or other light source.

Customers must furnish their own pots & pans, cooking utensils, bed linens, dishes and ice chests.

Before checking out, customers are expected to clean the sink and table, remove trash and sweep the cabin.

Pets are not permitted in the cabins.

For up-to-date ferry/lodging rates, schedules and reservations, call:

From Atlantic to Long Point, North Core Banks, Morris Marina Kabin Kamps & Ferry Service, Inc. ferry and cabins 252-225-4261 or 877-956-6568 (toll free)

Or on the web at: <http://www.capelookoutconcessions.com/>

From Davis to Great Island, South Core Banks, Davis Shore Ferry Service, 252-729-3474 OR 252-729-8411 (fax); cabins 252-241-6783

Ferry Schedule

Morris Marina Kabin Kamps & Ferry Service

Departures from Atlantic:

7:00 am
11:00 am
3:00 pm

Returns from Long Point:

7:45 am
11:45 am
3:45 pm

Davis Shore Ferry Service

Departures from Davis:

7:00 am 9:00 am
11:00 am 1:00 pm
4:00 pm

Returns from Great Island:

8:00 am 10:00 am
12:00 noon 2:00 pm
5:00 pm



Ferry from Atlantic



Ferry from Davis

ated ferry. Ferry service to these areas generally begins in mid-March and continues through the end of November. The cabins normally open for rental soon after the ferry starts operation. Long Point and Great Island also provide shade shelters, public restrooms and public showers with hot water for the convenience of day users and beach campers.

A caretaker is available at each camp to assist with information, emergency medical assistance and mainland contact. Arrangements may be made through this person for ordering bait, ice, limited groceries and other supplies. Gasoline is also available at the camps.

Lodging and Ferry Locations





Park Friends & Partners

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Cape Lookout National Seashore

2008-2009 Edition

Core Sound Waterfowl Museum & Heritage Center

Located on Harkers Island within Cape Lookout National Seashore, the museum features community exhibits and demonstration programs on carving, model boat building, story telling and music. Hours are Monday - Saturday 10-5 and Sunday 2-5. For more information please call (252) 728-1500 or check their web sites at www.coresound.com and www.downeasttour.com.



Cape Lookout Studies Program

The North Carolina Maritime Museum collaborates with Seashore staff to offer field trips to the area. The trips include lectures and activities that focus on dolphin biology and behavior, sea turtle conservation, kayaking, photography, renewable energy and cultural history. For more information check their website at: <http://capelookoutstudies.org/>.



Friends of Portsmouth Island



This non-profit organization was founded to foster and promote public knowledge of and interest in Portsmouth Island's past, present and future. A co-sponsor of the bi-annual Homecoming celebration, the Friends of Portsmouth Island also collaborate with Cape Lookout National Seashore on projects that preserve the village. See www.friendsofportsmouthisland.org.

North Carolina Coastal Federation

The North Carolina Coastal Federation is a non-profit, tax-exempt organization dedicated to involving citizens in decisions about managing coastal resources. The Federation works with Seashore staff to present additional public programs about Cape Lookout during the summer months. For more information: www.nccoast.org



Volunteers in Park (VIP)

Volunteers are important in all National Parks. For 2007, Cape Lookout National Seashore VIPs ("Volunteers-in-Parks") contributed 21, 738 hours valued at more than \$341,000.

There are caretaker positions at the Light Station Visitor Center and Keepers' Quarters Museum, Portsmouth Village and Cape Lookout Village. Volunteers also work at the Harkers Island Visitor Center. Interested persons with special interests, talents and skills are invited to inquire; a place can be found for you:

VIP Coordinator
Cape Lookout National Seashore
131 Charles Street
Harkers Island, North Carolina 28531
(252) 728-2250 ext. 3008
Richard_Meissner@partner.nps.gov



Friends of Cape Lookout National Seashore

The Friends of Cape Lookout National Seashore is a non-profit organization that supports the National Park Service's mission of preserving Cape Lookout National Seashore. From Portsmouth Village to Shackelford Banks, the Friends of Cape Lookout National Seashore need your help to accomplish the mission of preserving, restoring and enhancing the Park's resources. You can show you care about Cape Lookout by joining the Friends using the form below.

Join Friends of Cape Lookout

www.friendsofcapelookout.com

- o \$25 Mariner (Individual)
- o \$50 Life Saver (Family)
- o \$100 Captain
- o \$250 Commander
- o \$500 Assistant Light House Keeper
- o \$1,000 Light House Keeper

All contributions are tax deductible.

Name _____

Address _____

City/State/Zip _____

Email _____

Please include your check with this form.

Mail to:
Friends of Cape Lookout National Seashore
P.O. Box 1313
Morehead City, NC 28557

To Learn More...

about North Carolina Sea Life

Visit the North Carolina Aquarium at Pine Knoll Shores. Located on Bogue Banks near mile marker 7. Information: (252) 247-4003
Web site:

www.ncaquariums.com
Admission: \$8 adults;
\$7 ages 62 and over; \$6 children ages 6-17.

Children 5 and under, members of the North Carolina Aquariums and registered North Carolina school groups are admitted free. From the mountains to beneath the sea: the North Carolina Aquarium at Pine Knoll Shores showcases the incredible diversity of aquatic habitats. Special educational programs and field trips are offered throughout the year.



about Decoy Carving & History

Visit the Core Sound Decoy Carvers Guild

Located near Harkers Island on Harkers Island Road
Information: (252) 838-8818
Web: www.decoyguild.com
Admission: Free
Hours: Tue-Sat: 10 AM-2 PM
Museum, decoy carvers, shop, annual events.



about N.C. Maritime History

Visit the N.C. Maritime Museum
Located in Beaufort at 315 Front Street
Information: (252) 728-7317

Web Site: www.ncmaritimemuseum.org
Admission: Free
Hours: Mon-Fri: 9 AM-5 PM,
Sat: 10 AM-5 PM,
Sun 1 PM-5 PM

Museum, boat building, special educational programs and trips (fee)





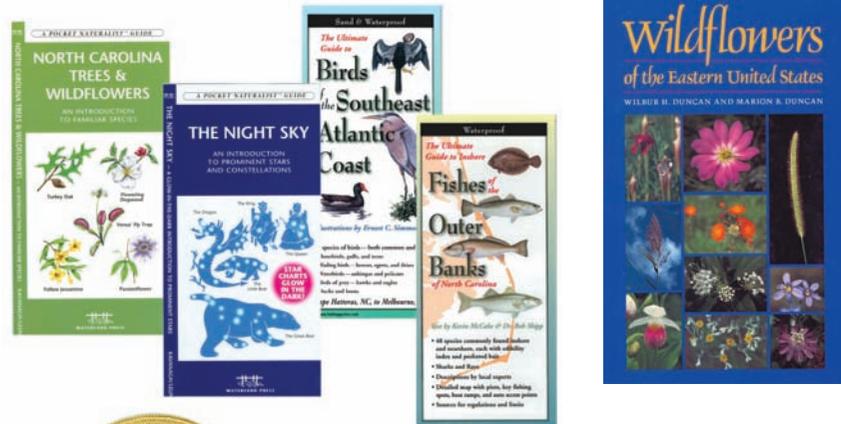
From the Bookstore

FREE

Cape Lookout National Seashore

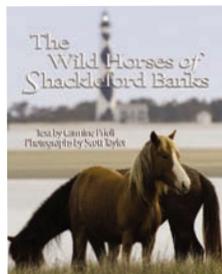
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The bookstores located at the Harkers Island and Light Station Visitor Centers are operated by Eastern National, a non-profit partner to the National Park Service providing educational materials for sale at many park sites. Profits from book sales are returned to parks for use in educational programs. The bookstores carry adult and children's books and guides, videos, high quality prints, lighthouse models, and small souvenirs spanning a variety of subjects, including: nature, beaches, environmental topics, outdoor guides and travel, lighthouses and lifesaving, coastal history and life, WWII, and more. Call 252-728-2250, extension "o" for more information.

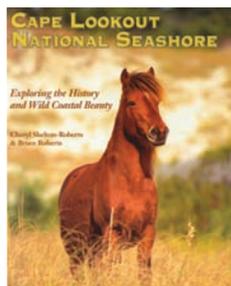


Wildflowers of the Eastern United States
By Wilbur H. Duncan and Marion B. Duncan
\$19.95
Nature guide series are available for novice and experienced naturalists.

The Wild Horses of Shackleford Banks
By Carmine Prioli, photos by Scott Taylor
\$16.95



Cape Lookout National Seashore: Exploring the History and Wild Coastal Beauty
By Cheryl Shelton-Roberts & Bruce Roberts
\$5.95
A beautiful guide to the Seashore



US Life-Saving Service Surfman's Uniform Insignia Patch \$3.00



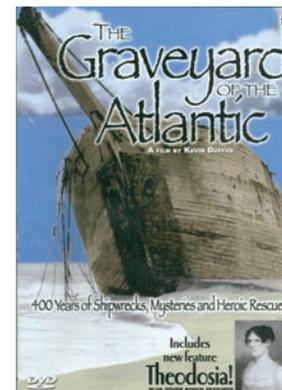
US Lighthouse Keepers Service Dress Uniform Hat Patch \$2.00

Cape Lookout National Seashore Patch \$3.50



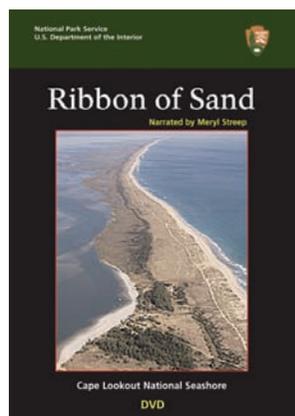
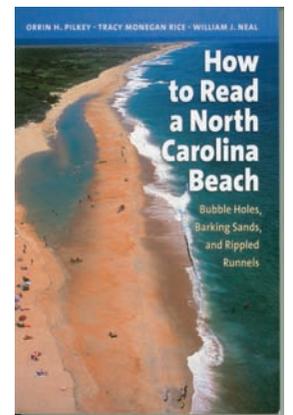
Americas National Parks Collectors Series Patches, Stickers and Pins
Sticker: \$2.95; Patch: \$5.95; Pin: \$5.95

Nature guide series are available for novice and experienced naturalists.

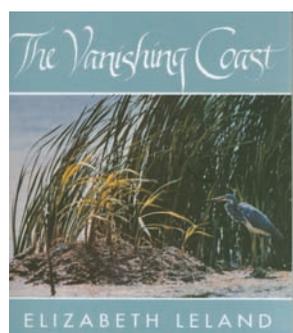


The Graveyard of the Atlantic: 400 Years of Shipwrecks, Mysteries and Heroic Rescues
A film by Keven Duffus
DVD, \$19.95

How to Read a North Carolina Beach: Bubble holes, barking sands and rippled runnels
by Orrin H. Pilkey, Tracy Monegan Rice, William J. Neal, \$13.95
Take a walk on the beach with three coastal experts who reveal the secrets and the science of the North Carolina shoreline.

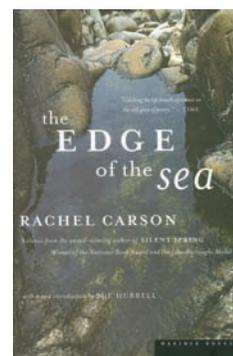


Ribbon of Sand
DVD, 26 Minutes
\$9.95
Striking imagery of the seashore as you journey from the mainland to the ocean depths.

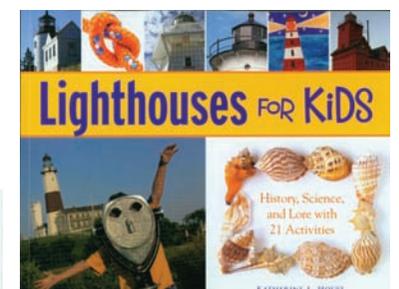
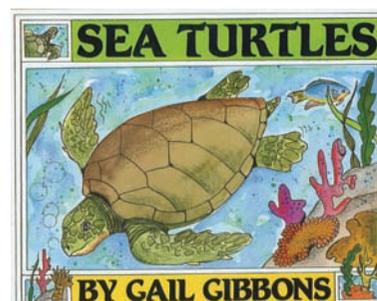
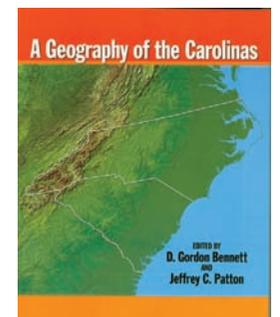


The Vanishing Coast
by Elizabeth Leland
\$10.95
A collection of stories, people and places describing the changing coast from Hilton Head Island, South Carolina to the Outer Banks of North Carolina.

The Edge of the Sea
By Rachel Carson
\$14.00
Explore the writing of this environmental pioneer who loved the sea, best known for *Silent Spring*.



A Geography of the Carolinas
Edited by D. Gordon Bennett & Jeffrey C. Patton
\$24.95
An exploration of the region's historical, cultural and physical landscapes.



Delightful children's books, nature guides for the budding naturalist, and coloring books, sticker books and activity guides are available.