



Sea Breeze

Canaveral National Seashore



Welcome to Canaveral National Seashore!

"I am pleased with what we have accomplished in the past and excited about the possibilities for the future. My staff and volunteers look forward to serving your needs so you can have a rewarding environmental experience. If we can help you in any way, please feel free to ask."

Robert Newkirk, Superintendent

Explore The Seashore

Perhaps, like many visitors, your vacation time may be limited, but opportunities in the park are endless. The following suggestions may help you plan your visit.

Visitor Center

Located at Apollo Beach. Stop by to see the short video presentation about our history. Park rangers and volunteers are available to answer your questions daily.

Step back in time

Turtle Mound is a 35 ft. high Native American (Timucuan) archeological site. This mound is what remains of a civilization that lived here a thousand years ago.

Walking

Enjoy a walk along Castle Windy trail or the trail to Eldora. You will find yourself in a wondrous new world where the full canopy is created by temperate vegetation while the understory is subtropical.

Self guided Tour of the Vistas

From the Playalinda Beach entrance you can obtain a brochure that will help you understand the diversity of the seashore by making use of the vista overlooks along the main road.

Swimming

Discover the real treasure! 24 miles of surf and sand with nary a condo in sight. This is an area where you can really get away from it all. Lifeguards on duty during the summer at designated sites.

Fishing

The beach provides an opportunity for excellent surf fishing. Mosquito Lagoon is accessible by several boat ramps and provides some of the best year round fishing and clamming in the state. License may be required.

Birds and Wildlife

Canaveral is home to 14 threatened and endangered species. There are manatees, sea turtles, eagles, scrub jays, and woodstorks to mention a few.

Celebration 2000!

The year 2000 marks the 25th birthday of Canaveral National Seashore. Keep an eye out for some exciting happenings.

Public Programs

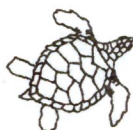
Summer During June and July the loggerhead sea turtle comes ashore to nest on our beaches. Advance reservations can be made to join the rangers on our deserted beaches to watch a process of nature that has been going on since the time of the dinosaurs.

Fall/Winter/Spring During the winter and into the early spring we introduce you to the very gentle and endangered Manatee. In April there is a Songbird Festival here, and in November is the Flyway Festival. Programs are scheduled throughout the rest of the year to introduce you to birding, identification and adaptations.

Year 'round Several times a week visitors can participate in programs designed to show how to surf fish, use a cast net, identify sea-shells and seabeds, use a canoe, find out what lives on our beaches, and how the barrier island (in its natural state) protects us.

Did you know...

"Canaveral" is Spanish for "Place of Canes"





Superintendent's Message



Our mission is to preserve and protect the outstanding natural, scenic, scientific, ecologic and historic values and resources of the seashore and provide for public outdoor recreation use and enjoyment. What resources we have! They include a barrier island community with beach, dunes and lagoon ecosystems. Fourteen threatened or endangered species call us their full or part time home (this is more than any other national park except the Everglades). Nineteenth century houses give us a glimpse of life as it was in the early days of Florida. The archeological treasures of the shell remains of Turtle Mound, Castle Windy and Seminole Rest reveal facts about people who lived here thousands of years ago.

In an era of austere funding, maintaining these resources has been quite a challenge. With the help of our legislative and business leaders, we have funds to restore the historic Eldora State House, and have received \$800,000.00 to begin the restoration of the Native American and early Florida site known as Seminole Rest. In addition, through funds generated by our use fees, we are in the process of upgrading the entrance stations, visitor center and boardwalks to enhance your enjoyment of the park.

In the area of science, we have an outstanding partnership with the Central Florida University, doing cutting edge research in all aspects of the Mosquito Lagoon estuary. In 1998, we had a record year of over 4000 turtle nests. We provided hands-on education programs to over 3000 students to ensure they understand the fragility and beauty of our environment.

My wish list for new volunteer programs in 1999 includes a dynamic marine mammals program to identify/track and count dolphins bi-annually. I would also like to see weekly flower, birding and insect walks in the park, and a horseback riding program at Bill's Hill. Obviously, these new programs cannot be conducted solely by our small full-time staff. In 1998, volunteers logged over 9000 hours of service to the park and to the public. This service involved everything from staffing the visitor center and environmental education programs to maintenance and clean-up activities. We need more dedicated volunteers to organize and conduct these programs so it truly becomes your National Park. If you would like to help, please contact one of our ranger staff during your visit.

Keep your eyes on the year 2000! The beginning of the new millenium also marks the 25th anniversary of Canaveral National Seashore. We are planning a gala celebration and YOU are invited.

Robert Newkirk, Superintendent

General Park Information

Emergency - 911

Don't Become A Victim!

Leave your valuables at home or out of sight and LOCK YOUR CAR!

Headquarters

308 Julia Street, Titusville, FL 32796

Hours: 8 am - 4:30 pm (407) 267-1110

Playalinda Beach Ranger Station

East of Titusville (407) 867-4077

Apollo Beach Ranger Station/Visitor Center

7611 South Atlantic Ave.

New Smyrna Beach, FL 32169 (904) 428-3384

Websites:

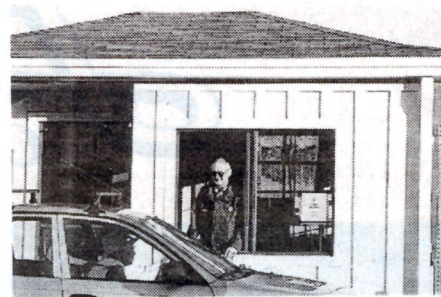
www.nps.gov/parks

www.nbbd.com/godo/cns

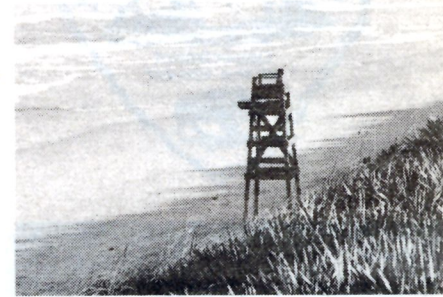
Fees Benefit Park

Canaveral National Seashore entered into the Fee Demonstration Program of the National Park Service in April of 1997. Canaveral now charges a "Use Fee."

The program allows Canaveral to retain 80 percent of this fee. This helps to provide additional services and reduce the backlog of maintenance projects that have mounted due to funding short-falls. The remaining 20 percent reverts to National Park Service funding to assist projects throughout the park service.



Visitor Contact Station



Lifeguard Station

Among the first things visitors notice are the improved visitor contact stations. The new contact stations have become a stopping place to not only collect fees but more importantly obtain information on how to enjoy their day at Canaveral. In addition, major improvements have been made to the visitors center to better serve the public's needs.

The initiation of the lifeguard program at Canaveral is an additional benefit resulting from the "Fee Demo" program. The lifeguard program is active during the summer months.



Road improvement



Sea oat replenishment on dunes

An ecological benefit to be derived from the fee program will be the removal of the septic tanks at the visitor complex. The complex will then be hooked up to a municipal sewer system eliminating the potential for accidental seepage into Mosquito Lagoon.

An additional restroom was constructed at crossover 10 at Playalinda Beach. Each parking lot now has restroom facilities for the park visitor. Road improvements, such as resurfacing and striping have improved safety and assured a more enjoyable ride for the motorists and cyclists.

Canaveral National Seashore continually strives to improve on ways to better serve the visitor. With your help we intend to make your visit safe and enjoyable.

Incidental Business Permit

Canaveral National Seashore is instituting a new system that will regulate all business operations on park land. If you are interested in conducting business at Canaveral National Seashore, please contact Park Headquarters.

Personal Water Craft

Effective December 1, 1998, Canaveral National Seashore closed the waters under its jurisdiction to the use or operation of personal watercraft (PWC).

PWC's may be launched from the paved boat ramp and proceed north of the park boundary to allow access to the ICW. For further information contact Apollo Beach ranger station.

Beach Wheelchair

A beach wheelchair is available upon request (and availability). For further information, ask at the visitor contact station when entering the park.

Did you know...

Some of the sand on our beach washed down from the Appalachian Mtns. millions of years ago.



Eldora Offers Up Its Charm

While at Canaveral National Seashore you can exercise your interest in Florida's recent history by visiting the former riverboat stopover of Eldora, located just 2-1/2 miles inside the north entrance of the park.

"The situation of the property is ideal," wrote former resident William A. Warnock of his Eldora acreage in 1913, describing in a five-page advertisement how a prospective buyer might profit from its acquisition as an investment in the future of Florida. *"Here is fertile ground wherein to sow the seeds of a profitable business. Whether planned as a Club or Winter Resort, a fruit and vegetable farm, or a health institute, Eldora possesses all the natural elements essential to success. The material is there to hand."*

The community of Eldora has always been viewed as both investment and retreat by those who owned or proposed development of its resources. In its prime, during the period from 1887 to 1915, Eldora hosted hundreds of visitors - some casual, many regular winter "sojourners" - and a handful of speculators who kept the spirit of the place alive and interesting. Never a town in the conventional sense, Eldora lacked any form of government but did enjoy a school and Post Office in its early years, and its settlers helped each other accomplish improvements to their property for the common good.

An element of Eldora's charm to this day is its resistance to being classified in a conventional category of human settlement. Shown on an 1882 Clyde Steamship Line map as Fairview (its original name), the community since then has been a small-scale evolutionary experiment, always tentative from any perspective due to its relative isolation.

Even citrus growing demonstrated the risks of large-scale agriculture as an economic base in the region after hard freezes late in the nineteenth century rendered the local groves unproductive. While some groves were replanted, producing oranges was not to be Eldora's destiny.

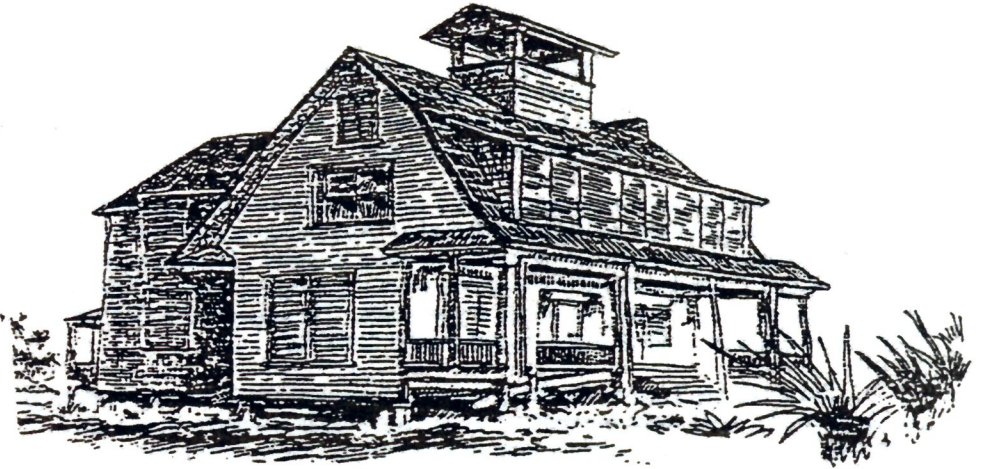
Instead, the community proved in its mid-life to best serve the needs of those looking for a romantic essence that combined the most beautiful of natural settings with true southern hospitality. Guests at the Warnock house reflected the success of Eldora in this regard through their handwritten entries in the house journal. Eliza L. Willets recorded an example of her sentiment in the guest register on February 1, 1914:

"After a four years absence, Mr. and Mrs. Charles A. Willets and Eliza, returned to Eldora today to find the same warm welcome awaiting us in the same old way that went right to our hearts, the ten years in succession spent here. More beautiful than ever we find this loved spot, under the able management of Mr. and Mrs. Warnock assisted by

Mother Nature who has been most kind, and seemingly a little partial to this special southern home."

Partial to Eldora today is the non-profit group Friends of Canaveral, a local grassroots team that has been striving for ten years to raise funds and generate interest in preserving one of the last original structures from Eldora's heyday. In the spring of 1999 their dream came to fruition with the completion of rehabilitation work and the installation of interpretive displays in the structure, known locally as the State House.

Bring your camera, fishing pole (and Florida fishing license for non-residents), and plan to stop in at the State House on your visit to Eldora.



Eldora State House, Circa early 1900's

There you can view exhibits comprising historic period photographs and a sampling of select artifacts of the Eldora story. A ten-minute slide program inside the house helps bring the site to life for all who want to learn more about this memorable place. Please call the park Visitor Center at 904-428-3384 to inquire about hours and days of operation for the State House.

Take time to experience all that Canaveral National Seashore has to offer the human heart. *"...I feel as though some magic spirit must be working here..."* penned Eldora guest Edna Blakeslee Burgess on January 25, 1913. Why not find out for yourself?

Houses of Refuge



The Mosquito Lagoon House of Refuge did not have an inviting name, but offered the only shelter available to shipwrecked sailors.

Florida's east coast is famous for its hurricanes and lightning storms. During Florida's early years its shores were virtually uninhabited and shipwrecked sailors were likely to die of starvation and thirst before they reached human habitation. As a solution, the Life-Saving Service decided to build houses of refuge on remote areas of the coastline. Altogether, there were 11 houses of refuge on Florida's east coast, which were built from architectural plans drawn in 1875 and completed in 1885.

Florida's houses of refuge were fifteen feet wide by thirty-seven feet long with three apartments on the first floor and an upper story loft. Each house could accommodate twenty-five survivors with provisions for ten days. All houses of refuge were alike, built from the same set of standardized plans. The houses contained cots, food, water, clothing and medicine for rescued mariners, and living quarters for the keeper and his family. These early families were true pioneers who brought search and rescue services, law and order and a much needed government presence to Florida.

The Mosquito Lagoon House of Refuge was originally located at what is now Apollo Beach parking lot #5 in Canaveral National Seashore. It was built in 1885 and its use was discontinued early in 1939 when Ponce de Leon Inlet Station was put into commission as an active station.

Amelia Earhart once made an airplane landing on the beach at low tide to get exact information on her location and to make a telephone call from the station.

Since its abandonment in early 1939, the building suffered greatly from both vandalism and the effects of the Florida weather. Therefore, it was not surprising that in 1955 the entire structure accidentally burned down, leaving only the foundation.

Today, even the foundation is gone and this vital piece of history is to be found only in old records.



Spotted Sea Trout

(*Cynoscion Nebulosus*)

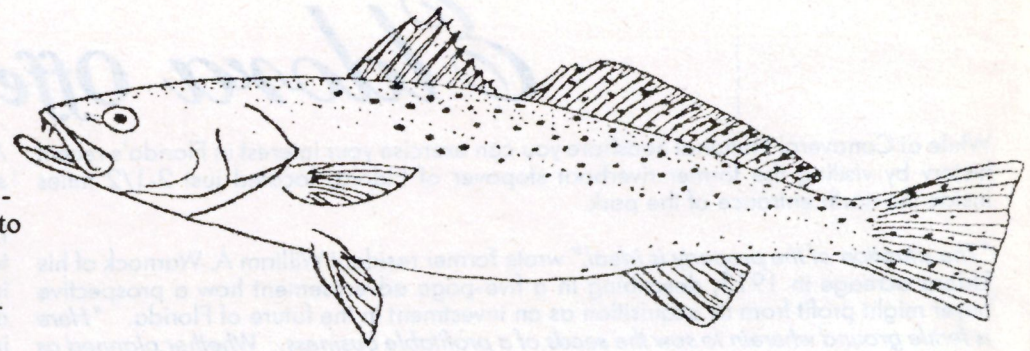
We live, work and play in one of the world's most productive estuaries - Mosquito Lagoon. Marine life in the Lagoon is abundant, from the sea grass, to the clams and oysters, the blue crabs and the variety of saltwater fish. A lot of people depend on the Lagoon to earn a living, but many more depend on the Lagoon for recreation. Keeping Mosquito Lagoon healthy is a challenge everyone must aspire to meet.

A majority of fishermen talk about, and chase after, the infamous redfish and who can blame them. After all, the redfish are a fun fish to catch! However, there is another intriguing and prevalent species in the lagoon that is not as well known, the spotted sea trout.

The sea trout is a member of the drum family... cousin to the redfish & black drum. The colors on a trout are beautiful, silvery with round blue-black dots on the top and sides of the fish. People tend to describe the colors as iridescent when the fish is first brought out of the water.

Trout mature between the ages of 1 and 3 years with the greatest "spawning power" around the age of 2 for the females. Spawning occurs over several months with June, July and August being the peak months. Trout can live to be 10 years of age. Sea trout are slow growers only averaging about 3" per year. A legal sized trout (15") will be about 4 years old. This makes the idea of "Catch and Release" a little more important for these fish.

Sea trout are bottom-dwelling fish and have extremely sensitive eyesight. The trout prefer early light for feeding as the ultraviolet intensity is minimal. Trout can slow down their metabolism in reaction to colder water temperatures. A slower metabolism means less food required. Try fishing for trout on the day before a cold front passes through; you might be surprised at the high level of



feeding taking place by the trout in preparation for the front. Since these fish are carnivorous, they primarily feed on crustaceans (shrimp) and small fish such as fingerling-sized mullet. Trout tend to school in the first 5 or 6 years of their lives, but once they reach "gator" size (larger than 8 lbs.) they become loners.

Migration is kept to a minimum with the trout as they are known to be "lazy" fish. However, with their keen hearing, if an approaching fisherman makes a lot of noise they will certainly head off to anywhere the fisherman is not!

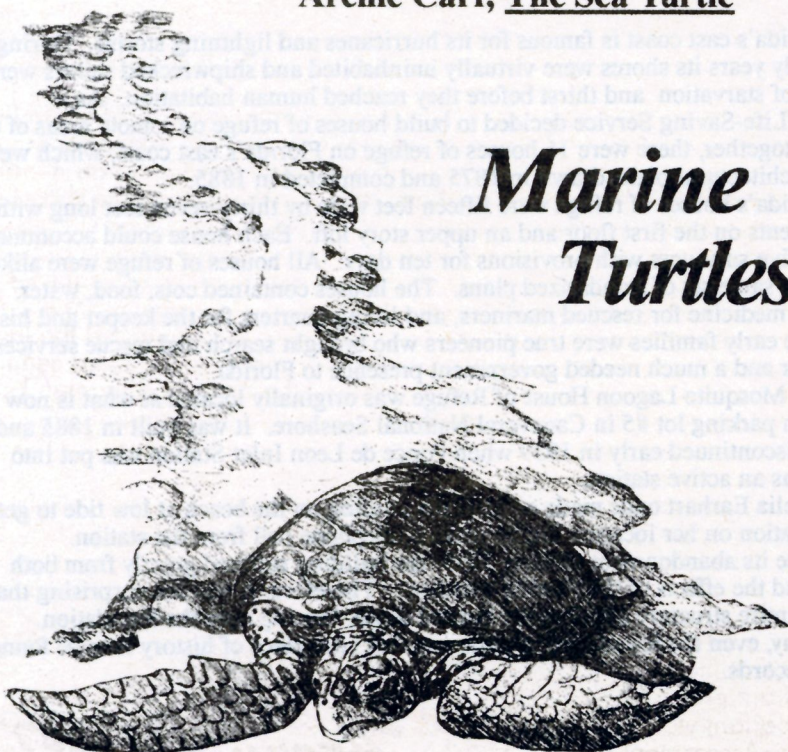
Delicate is the trout's middle name! If a fisherman sets the hook too hard in the mouth of the trout, all he'll get is a pair of lips on the retrieval. Too much horseplay during the retrieval will wear down the trout so much, revival may be impossible. Improper handling of any fish will cause the ever critical slime to be removed. To increase the survival rate, try and keep the fish in the water when removing the hook.

The next time you see a spotted sea trout, perhaps you'll have a little better understanding of their life and habits. Maybe their white meat will taste a little better at the dinner table or, perhaps you'll remember how slow they are at growing and will decide to throw the fish back into the water so it can spawn and produce lots more little sea trout.

"There are two times in the life of a sea turtle when a zoologist can count on making contact with it: when it hatches, and when the female goes ashore to nest. Everything else is done away off somewhere out of sight, and has to be reconstructed by deduction from fragments of observation."

Archie Carr, The Sea Turtle

Marine Turtles



The park, with 24 miles of essentially undeveloped beach is a significant nesting area for sea turtles. These are primarily loggerhead (a threatened species), with a lesser number of greens (endangered species) and a few leatherbacks (endangered species). The 1998 turtle season (approximately 4400 nests) was the largest since the park began keeping records in 1984.

Sea turtles spend their entire lives in the ocean with one exception. From May to September on southeastern beaches female turtles ponderously crawl ashore to lay their eggs in the sand. A 200-300 pound turtle, totally out of her element but driven by the most basic of instincts, spends approximately an hour nesting on the beach. Once the turtle starts to lay her eggs she rarely stops for any reason. It seems like her successful nesting is the only thing that matters - she is playing her part in the survival of her species.

New public awareness programs are allowing more of the public to view this unforgettable event. Canaveral National Seashore conducts ranger-led turtle walks (reservations required) in June and July each year. These walks are limited in size, and strictly regulated, to minimize any measure of disturbance to the nesting sea turtles.

In the early 1980's over 90 percent of the nests were being dug up and destroyed in the park by raccoons. To protect the nests from raccoon depredation, while allowing the raccoon to remain as an important part of the seashore ecosystem, the park implemented a nest screening program in 1984. Nest screening is the method most compatible with the National Park Service mandate to maintain and enhance natural ecosystems. It is the process of placing a 4 foot square screen over the nest and anchoring it at each corner. This keeps preda-

tors from digging up the turtle eggs.

After a 60-day incubation period, and usually during nighttime hours, the nests hatch and the hatchlings head for the ocean. What a sight to see! Eighty to a hundred and twenty hatchlings, spread out in a fan shape, hurrying to get to their natural element, the sea! They swim offshore to the Sargasso Sea where they hide in the grasses, feed and grow. When they become mature and ready to nest, females often return to the beach on which they were hatched.

Turtles in Florida are now enjoying at least partial protection. There are lighting ordinances in many coastal areas to prevent the disorientation of turtles. Shrimp trawlers are now required to use TEDS to help prevent the drowning of sea turtles in their nets. However the turtles' greatest danger is the loss of habitat, both on the beaches and in the oceans. Nesting habitat is being damaged or destroyed by development. Sea walls, ripraps and revetments used to prevent erosion may force the turtles to nest below the high tide line where their eggs will not develop. Trash discarded by humans, such as plastic bags and other floating debris, which sometimes eaten by sea turtles can be fatal.

Beyond having a major impact upon the depredation rate, the park has little control over hatching success. Weather and tide-related factors, which are beyond man's control, have a major influence on hatching success and will cause it to fluctuate from year to year. The park's objective is to do what it can each year, within the constraints of its mission, to protect threatened and endangered sea turtles on its beaches. The rest must be left to nature.

Did you know...

The obstacles are so numerous for baby turtles that only about 1 in 1000 survives to adulthood.





Partnerships

MANAGING WILDLAND FIRE



The National Park Service manages fire in national parks to protect human lives, personal property and irreplaceable natural and cultural resources. The National Park Service balances the preservation of America's natural and cultural heritage with concerns for public health and safety.

Wildland fire has great potential to change park landscapes more often than volcanoes, earthquakes or even floods. Such forces of change are completely natural. Many plants and animals cannot survive without the cycles of fire and flooding to which they are adapted. If all fire is suppressed, fuel builds up and makes bigger fires inevitable. Under certain conditions, large, hot fires can threaten public safety, devastate property, damage natural and cultural resources, and be expensive and dangerous to fight.

The National Park Service policy stresses managing fire, not simply suppressing it. This means planning for the inevitable and promoting the use of fire as a land management tool. The goal is to restore fire's role as a dynamic and necessary natural process.

Here are some quotes taken from some local newspaper articles of the 1998 Fire Season:

"Timbermen, firefighters, even scientists agree wildfire is one force that will never be completely controlled."

"If nature wants it to burn, it's going to burn; nature is more powerful than we are."

"We (told) field units, out of 15,000 natural lightning strikes, you're going to get a large percentage that will actually cause a fire. And we were right."

"It was whistling like a tornado was coming. She said, 'all of a sudden police said, you don't have a chance, GET OUT!'"

"We have a situation that is tenuous at best and dangerous, and we need to stay on top of it."

"It's going to take a whole lot of rain over a couple of days to change things."

"Embers were flying a half mile or more and a number of new fires were started."

"We couldn't get out, we were trapped, fire was all around us. We've got fire all over the county now. We're stretched so thin between everything, we're pretty much just trying to protect houses."

"Mother Nature continues to throw us curves with this weather and the volatility of fuels."

"By the grace of God, and the courage and dedication of firefighters from all over, we made it through this thing."

1998 was an unforgettable fire season for all Floridians. Canaveral National Seashore battled its largest fire in recent years . . . 700+ acres at Bill's Hill. What looked like devastation is quickly returning to a panorama of new life. You will see areas that burned hot and intensely and other areas that burned cooler. The fire creates a puzzle, like a mosaic of diverse habitats for plants and animals. You can observe hawks and other birds of prey hunting along the edges of burned areas and finding cover in unburned areas. Deer are feeding on nutritious, succulent new shoots of grasses and shrubs that are appearing after the fire.

1999 IS HERE! All indications and predictions state unseasonably dry conditions resulting in high fire danger.

Did you know...

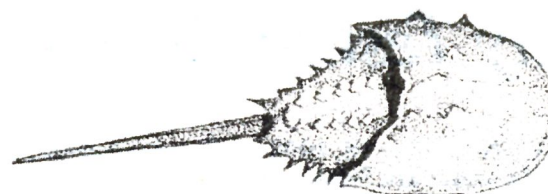
Today's Florida scrub depends on periodical controlled burns to provide healthy wildlife habitats and reduces unnatural build-up that can result in disastrous uncontrolled wildfires.

Where Have All The Horseshoe Crabs Gone?

The horseshoe crab, a bottom-dwelling arthropod, is an integral component of the Indian River Lagoon ecosystem, serving as a major food source for many animals including many species of fish, migrating shorebirds, and the threatened loggerhead sea turtle. Horseshoe crabs also help support the great biodiversity of the lagoon by creating additional habitat through their burrowing activity. While the horseshoe crab is not currently threatened, there is rising concern that the population is declining at a rate faster than it can reproduce. Loss of the horseshoe crab could have grave consequences for the species that rely on horseshoe crabs and their eggs as a food source.

Possible reasons for the suspected decline of the horseshoe crab population may be decreased water quality, loss of habitat, and increased human harvest. Increased development around the lagoon has decreased the water quality and increased the runoff into the lagoon, which has caused a build up of muck and non-oxygenated sediment along the shoreline. This has led to

creased, as horseshoe crabs have become important in the biomedical and pharmaceutical industry. Horseshoe crabs are also harvested for bait in eel and conch traps. The extent of human harvest in Florida is unknown; however, harvesters have been

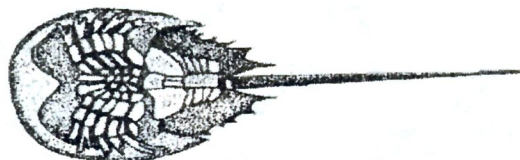


seen hauling away truckloads of adult horseshoe crabs from the Indian River. At the present time there are no regulations or limits on take in Florida.

The Ph.D. study, being conducted by Gretchen Ehlinger of the Florida Institute of Technology, represents the first systematic study of the horseshoe crab population on the east coast of Florida and will provide important baseline data on present population patterns in the Indian River Lagoon system. The goals of the study are to assess the horseshoe crab population, determine the recruitment success of the horseshoe crabs, determine suitable spawning habitats in the lagoon, and try to determine the cause of the possible decline of the population. The study is being carried out with the help of Canaveral National Seashore, Merritt Island National Wildlife Refuge, and NASA. With an additional grant provided by the National Park Service this important work will continue well into the new century. Assessment of

the adult population is being carried out through a mark/recapture survey in which all adults are tagged with a numbered yellow tag. Recruitment success is being determined by looking at survival at all life cycle stages. Habitat suitability is being determined by the hydrogen sulfide content representing a non-oxygenated environment, sediment grain-size, and amount of muck covering the sand and water quality parameters such as salinity and dissolved oxygen.

Due to the immense size of the Indian River Lagoon system, Gretchen is asking for the help of the public in notifying her when large numbers of horseshoe crabs are seen along the shoreline or if a horseshoe crab with a yellow tag affixed to it is seen dead or alive. If large numbers of horseshoe crabs are seen, please notify her as quickly as possible of when and where they were seen. If a tagged animal is seen please record the tag number and the location where it was seen. Any information about the amount of human harvest of horseshoe crabs in Florida would also be helpful. Your help is greatly appreciated and will help preserve the horseshoe crab population. If you have any information about horseshoe crabs please contact Gretchen Ehlinger at (407) 984-9426 or at ehlinger@fit.edu.



a reduction in favorable spawning habitat. Also, impoundments created in the 1960s around the lagoon have decreased the amount of shoreline available for nesting. Human harvest has in-

*Who is
Harry Yount?*





THANKS!

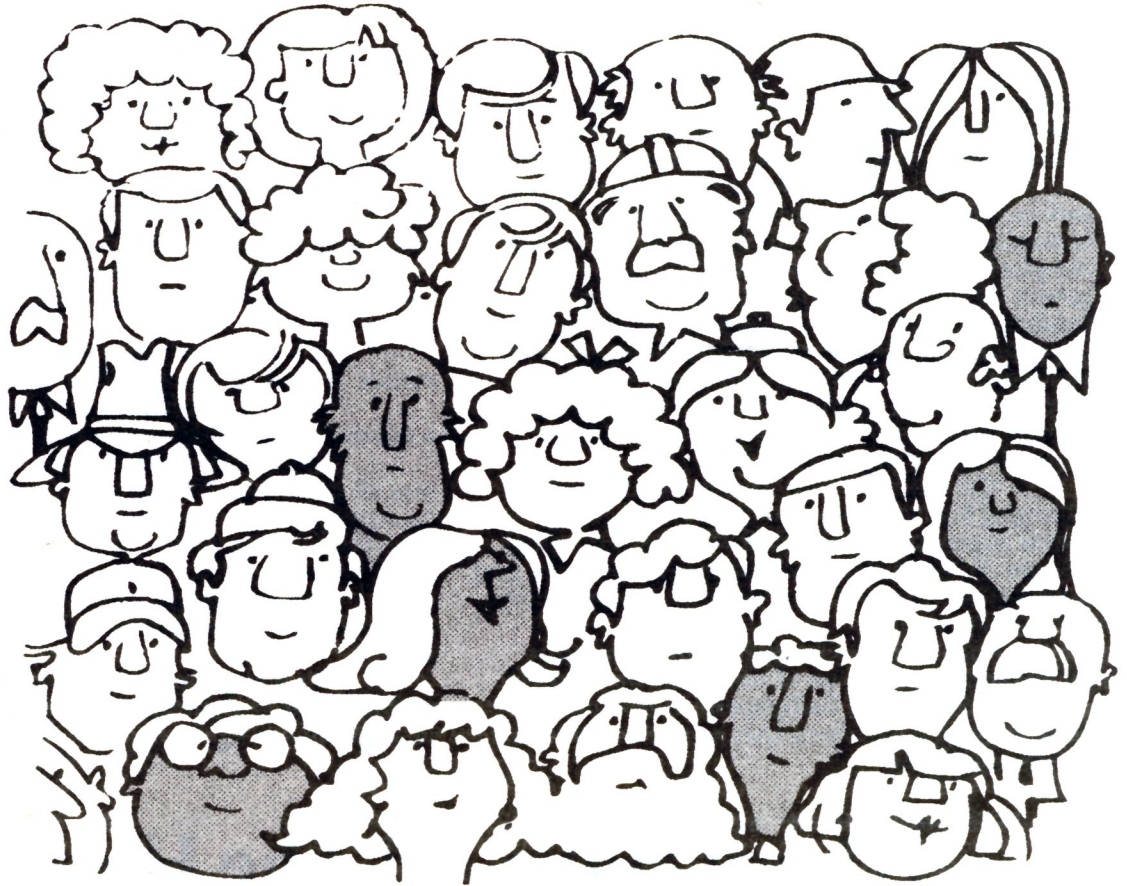
*How many volunteers does it take to help...
lead a school program...
screen turtle nests...
conduct public programs...
test the water quality...
make the park clean, safe,
and attractive?*

Throughout the history of the national parks, volunteers have carried on a proud tradition. Many parks owe their very existence to the efforts of volunteer conservationists, including the well publicized efforts of Nathaniel P. Langford to establish Yellowstone National Park in Wyoming (1872) and John Muir to establish Yosemite National Park in California (1890). Countless others worked successfully to establish such parks as Great Smoky Mountains National Park in Tennessee, Crater Lake Park in Oregon, and our own Canaveral National Seashore here on Florida's fragile east coast. Much of the work was done in public meetings and by writing books and articles to attract public interest and support for the parks.

Though volunteers have been part of the Park Service family since the beginning, the association turned into a full partnership in 1970 when Congress authorized the Volunteers in the Parks (V.I.P.'s) program. The authorization officially sanctioned comprehensive volunteer assistance in managing and operating the parks and, for the first time, included provisions for liability protection.

Men and women, eager to assist the parks without pay, were encouraged to do so. They could provide interpretive services, perform back country patrols, help with wildlife and resource management, and maintenance activities that help keep the parks clean, safe, and attractive for the visitors. Today's volunteers are involved in every aspect of park operations except law enforcement.

In 1998 volunteers at Canaveral National Seashore logged upwards of 9,000 hours of service. They range in age from 12 years to 84 years and each brings their own special talents and personality. Thanks is such a small word to mean so much. We are very proud of our V.I.P.'s.



*Here at Canaveral it takes more than 100!
And YOU can be a V.I.P. Too!*

Water Quality Testing In Mosquito Lagoon

The Indian River Lagoon region is one of the fastest growing areas in Florida in terms of human development. It is home to more than 4,000 plant and animal species, including one-third of the manatee population in the United States.

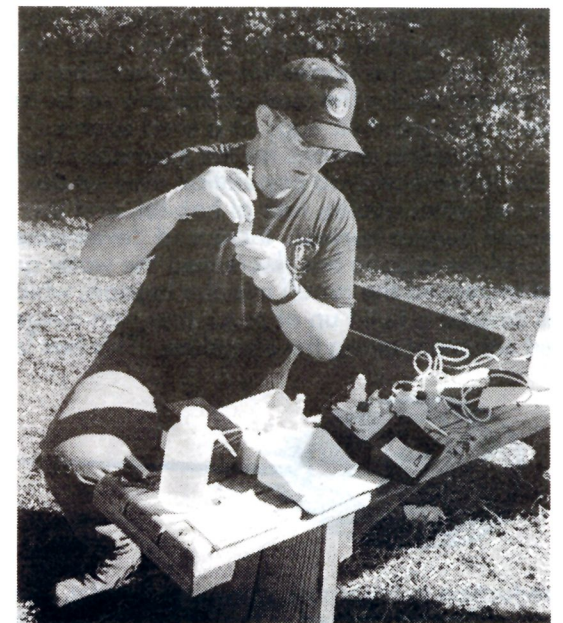
The rapid growth has resulted in increased urban and agricultural runoff causing degradation of water quality within the lagoon. This decline in water quality has led to a corresponding decline in habitat for species living in the lagoon.

The Citizen Volunteer Water Quality Monitoring Network (CVWQMN) is part of an overall approach to assess trends and changes in the water quality of the Indian River Lagoon. The program was established in 1989 by the Marine Resources Council (MRC) in cooperation with the Florida Department of Environmental Protection (DEP). Canaveral National Seashore is excited to be taking part in this important endeavor.

On November 18, 1998, staff and volunteers from the National Park Service and U.S. Fish and Wildlife met with Mr. Bob Morse from the Marine Resource Council at Eddy Creek. The group was instructed in the use of various testing equipment to monitor the condition of Mosquito Lagoon, which is part of the Indian River Lagoon System.

Volunteers who give their time to this project provide the MRC with more frequent sampling of a larger number of stations. In addition, a program utilizing citizen volunteers can increase public awareness of the water quality problems and aid the general public in gaining knowledge of how such problems are identified and addressed.

The Indian River Lagoon System stretches 155 miles along the central east coast of Florida, and if we take care of it properly it will continue to provide a healthy habitat for the wildlife, food, entertainment, and serenity for all of us!



John "Gabe" Wagner making sure the lagoon water is healthy.



Horse use at the seashore

During the months of November thru April, horse use is allowed on designated sections of Canaveral National Seashore. Permits are required as well as a valid Coggins test. Reservations may be obtained by calling 407-867-4077 or 904-428-3384.

In the near future horseback riding will be available year round in the Bill's Hill section of Canaveral National Seashore.



Can You Canoe?

The seashore routinely conducts ranger-guided canoe trips to various points of interest in the Mosquito Lagoon such as Shipyard Island, Eldora, Orange Island and Eddy Creek.

These quiet excursions offer opportunities to view the abundant marine life that is so dependent on the estuary, as well as learning some of the history surrounding the Lagoon and the Park. You have the option of following a self guided canoe trail or adventuring on your own. You are limited only by your imagination and your endurance!

Always check the weather before leaving the dock.

For your protection be aware of safety concerns when visiting the ocean. Rip currents, lightning, and Portuguese man-of-war can be hazardous.

RIP CURRENTS

Rip currents that flow seaward from the beach can be deadly. Sandbars often develop a short distance from shore (10-100 yards). Ocean water washes across the bar, gathers in the trough, and rushes back out through the breaks in the sand bar, thus creating a rip current. Rip currents can be very strong. Unwary bathers are sometimes caught in rip currents and carried deeper into the ocean. Learn how to identify rips. Know the conditions that produce them. To escape a rip, swim across the current not directly back into it. Once free of the rip, swim back to shore. Most important of all, remain calm. Panic in rip currents causes death.

OCEAN SAFETY TIPS!

WATCH THE WEATHER

Central Florida is the lightning capital of the world. If you observe lightning while on the beach seek shelter in your car until the storm passes by.

PORTUGUESE MAN-OF-WAR

The Portuguese man-of-war is a floating drifting jellyfish that trails long "feeding" tentacles designed to sting and stun prey. The living cells in these tentacles can severely sting beach users. The Portuguese man-of-war looks like a purple balloon to children. Sometimes they will try to touch it or pick it up. If you see a man-of-war floating in the water, remember the tentacles can stretch up to 50 feet. Keep your distance. Even when washed up on the beach, and apparently dead, contact with the man-of-war can cause severe reactions. If stung, quickly and carefully remove any tentacle parts that may remain on the skin. Contact a park ranger for assistance.

Canaveral is...

One of the last remaining 24 continuous mile stretches of undeveloped beach on the East Coast of Florida.

Critical habitat for 14 federally threatened and endangered species of wildlife, including beach nesting area for approximately 4,000 sea turtles each summer.

A protector of one of the most diverse and productive estuaries in North America.

An outstanding cultural and archaeological resource.

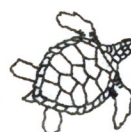
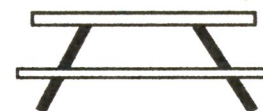
BACKCOUNTRY CAMPING

Canaveral National Seashore offers primitive backcountry camping. Choose from one of nine islands in Mosquito Lagoon.

We follow the "Leave No Trace" rules of camping - when you pack it in, you pack it out!

A special use permit and camping reservations are required and accepted up to seven days in advance.

Contact the Visitor Center at (904) 428-3384, ext. 0 for more details.



Did you know...

Canaveral recycles 75% of aluminum in the park.



Junior Ranger Programs

The Rangers and volunteers at Canaveral National Seashore invite children, ages 6 to 12, and their parents join us for a Junior Ranger program. The programs are designed to show children why Canaveral National Seashore is a special place.

Programs take place throughout the park. Call (904) 428-3384 near New Smyrna Beach or (407) 867-4077 near Titusville. Programs may be cancelled when shuttle launch activities close Playalinda Beach.

Children attending park programs must be accompanied by a parent or guardian. To be Junior Rangers children must attend at least three different programs, pick up a bag of trash, and also do a project of their own choosing. Children will receive a booklet in which to log their activities, and upon completion, a Junior Ranger certificate and a colorful patch.

ENVIRONMENTAL EDUCATION

Teachers, volunteers and staff lead the programs that take place three or four times a week from September through November, and again from March through June. Two classes are invited to participate in the activities and each program lasts approximately two hours. Teachers are invited to bring a picnic lunch. Activities include:

Kindergarten - 3rd Grade Program

Beach Discovery Hunt

Walk the beach and look for different items the ocean has washed up.

Mosquito Lagoon Discovery

This program allows the children to explore the beach and shoreline of Mosquito Lagoon. A Teacher's Guide and a video are a part of the pre-tour package.

4th and 5th Grade Program

Dynamic Dunes

Explore the sand dunes and find out why they are so important. Hands on activities help us understand how important the sand dune is to Florida's coastal communities.

Lagoon Search

Venture into Mosquito Lagoon with a ranger to discover the unique marine life.

Seaside Discovery

Explore the beach and learn about sea turtles, how trash effects marine life, and what creatures make this their home.

Turtle Mound Discovery

(Volusia County) Learn about the Timucuan Indians and see the mound of shells they left behind.

Prior to bringing students to a program, teachers are required to attend a workshop held in the Fall and Spring of each year. This prepares them to lead one of the programs. For more information call Sandra Hines at (407)-867-4077.

"CAPTAIN CANAVERAL'S" NATURE'S TREASURE CHEST BINGO

B I N G O

As you play Bingo remember there are thousands of different plants and animals waiting for you at Canaveral National Seashore and each one is fragile. Look at them but never take them away from their home or harm them in any way. The treasure chest would soon be empty otherwise.

This is only the beginning...Ask how to become a Junior Ranger and have even more fun!

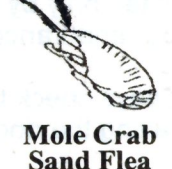
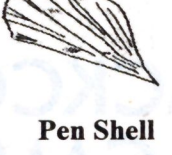
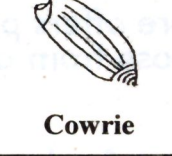
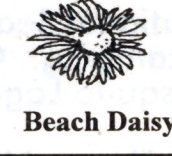
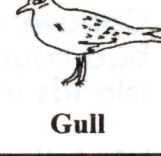
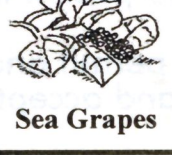
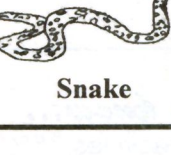
Instructions for playing:

When you see something on the list, check it off. When you get five treasures in a row (down, across, diagonally) you have...

BINGO!

Answer to question on page 5

Harry Yount is considered to be the first park ranger. Hired in the 1870's by Yellowstone Superintendent Norris as a gamekeeper, he worked until 1881 when he resigned.

 Prickly Pear Cactus	 Star Fish	 Snail	 Fish	 Mole Crab Sand Flea
 Shrimp	 Pen Shell	 Mosquito	 Sand Dollar	 Sunflower
 Cowrie	 Beach Daisy	 Gull	 Sting Ray	 Sea Oats
 Blue Crab	 Sea Grapes	 Hamburger Sea Beans	 Scallop Shell	 Sea Urchin
 Sea Heart	 Butterfly	 Lizard	 Snake	 Long legged Shore bird

