



# The Gulf Breeze

The official newspaper of  
Padre Island National Seashore  
Fall 2008



Padre Island National Seashore protects the longest section of undeveloped barrier island in the world, preserving rare coastal prairie, a complex, dynamic dune system, and the Laguna Madre, one of the few hypersaline lagoon environments left in the world.

## Greetings from the Superintendent

WELCOME TO PADRE ISLAND NATIONAL SEASHORE, THE longest remaining undeveloped stretch of barrier island in the world. Our mission is to save and preserve this great park unimpaired for purposes of public recreation, benefit, and inspiration. While you are here, take some time to observe the surrounding areas. Whether you are enjoying the beach, launching your boat or windsurfing, there is always something to see.

Bird Island Basin is a popular area with boaters, campers and windsurfers enjoying the Laguna Madre. When enjoying this area, be aware of your surroundings and be courteous to your fellow visitors. To make this increasingly popular area available to as many visitors as possible, please heed the rules and signs in place for the boat ramp and campgrounds.

The past few months have been very eventful. We have once again achieved a record year for endangered Kemp's ridley turtle nests found in the park, as well as hatchlings released. We also had to deal with two hurricanes this past summer. While hurricane Dolly caused some minor wind damage to our facilities, the effects of Ike were more severe. Though most of our facilities were not damaged, the ocean surge brought a lot of debris to the Seashore. We are in the process of cleaning the beach, but progress will be slow. Please be patient and careful while enjoying the park. You may notice some additions to our facilities as well. We have a new boardwalk, that extends over the dunes to the beach in the Malaquite Campground and we reclaimed part of our parking lot at the Visitor Center for a more natural setting. We will also be adding a new gazebo which will provide us the opportunity to reach out to more students through out the school year.

We do our best to provide an experience in nature unaffected by progress while you are here, and we ask that you extend this courtesy to your fellow visitors. Please remember, the National Park Service, visitors and neighbors are all stewards of this special place, and we must work together to protect and care for Padre Island National Seashore so that it may be enjoyed unimpaired for generations to come. Whether you are touring the country or are from the local community, we hope that you enjoy your visit and plan to return.

Sincerely,

Joe Escoto, Superintendent

## 2008 Another Record Year for Kemp's Ridley Sea Turtle Nesting

Donna J. Shaver, Ph.D.

Chief, Division of Sea Turtle Science and Recovery

FOR THREE DECADES, PADRE ISLAND NATIONAL SEASHORE staff and volunteers have worked to help save the world's most endangered sea turtle species from extinction. We are thrilled to report that 2008 was the fifth consecutive year that a record number of Kemp's ridley nests were found in Texas since record keeping began in 1980. More Kemp's ridley nests are found at the National Seashore than at any other location in the U.S., and each year we grow closer to our long-term goal of a thriving population of this native species nesting here.

### Long-term recovery efforts making a difference

In 1978, it was feared that the Kemp's ridley sea turtle would go extinct unless immediate steps were taken. Since then, the National Park Service has worked with a variety of partners in the U.S. and Mexico to increase nesting by Kemp's ridley turtles at the National Seashore, as a safeguard against extinction. Thanks to the hard work and dedication of many people at the National Seashore, elsewhere in Texas, and elsewhere in the world, the Kemp's ridley population is increasing.

### Nest detection involves many people

Kemp's ridley turtles take only about 45 minutes to nest. During nesting, the turtle emerges from the sea, crawls up the beach, lays her eggs in the sand at a location anywhere from the high tide line into the dunes, covers the nest with sand, and returns to the sea.

We want to find the nesting turtles so that we can study and protect them, and more easily find their nests. Tracks left in the sand by the nesting turtles blow away very quickly, and nests occasionally go undetected at egg laying because the nesting turtles and their tracks are so difficult to find. We want to find the nests so that we can protect the eggs and produce as many hatchlings as possible to help build the population. When we do not find and protect the eggs, fewer hatchlings are born and successfully enter the water due to predation, high tides, and other factors.

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### Need-to-know info

**IN CASE OF EMERGENCY,**

**DIAL 911**

**Park rangers are available during normal working hours to provide assistance.**

**Lost-and-found items may be reported at the visitor center.**

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### The Gulf Breeze

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

## Interpretive Programs

| Program        | Time   |
|----------------|--|
| Beach Walk     | 11:00 a.m.<br><i>Daily</i>                             |
| Deck Talk      | 1:00 p.m.<br><i>Daily</i>                              |
| Family Program | 3:00 p.m.<br><i>Seasonal</i><br><i>(Fri, Sat, Sun)</i> |
| Junior Ranger  | Self-paced   |

*Programs are subject to change. For more information, please contact the Malaquite Visitor Center at (361) 949-8068, or visit the park's website, [www.nps.gov/pais](http://www.nps.gov/pais).*

### Hours

Padre Island National Seashore is open 24 hours a day, 365 days a year. The Malaquite Visitor Center is open daily from 9:00 a.m. to 5:00 p.m., all year-round.

The Malaquite Visitor Center and concessionaire are closed on Christmas day.

### Location

The park's physical address is 20301 Park Road 22. From Interstate Highway 37, turn onto Highway 358. The highway name changes from 358 to South Padre Island Drive, then crosses over the Laguna Madre on the JFK Causeway and becomes Park Road 22. At the end of Park Road 22 is the National Seashore's entrance station. Traveling through the park takes one to the Malaquite Visitor Center. Approximately one-half mile farther down the road the pavement ends and beach access begins. The total driving distance from I-37 to the beach is approximately 37 miles.

### Educational and Interpretive Programs

Deck Talks and Beach Walks are held every day. Deck Talks last 45-60 minutes and are an in-depth discussion of marine organisms and beach debris, including shells, sea beans, and human-made items that are found along the shoreline. Beach Walks last 45 minutes and are guided walks along the beach with a ranger. Discussions may include the natural and cultural history of the island as well as shells, birds, island ecology, flotsam, and plants while touching upon environmental issues of importance to the park. Family programs may be offered at the Malaquite Visitor Center during the summer months on Fridays, Saturdays, and Sundays. Topics may include nature journaling, birding, nature crafts, and beach activities for children and their families. The National Seashore also offers environmental education programs for school groups of all ages. These professionally-presented programs teach children about topics that may include habitats and migration while providing direct contact with nature. Contact the park's Environmental Education specialist, William "Buzz" Botts, at 361-949-8068 for more detailed information and to make a reservation for your group.

### Available Facilities

The Malaquite Visitor Center has an information desk, small museum, bookstore, concession stand, observation decks, restrooms, and cold showers (open 24 hours). The visitor center is fully wheelchair accessible with ramps to the main deck and an elevator to the main observation deck. Beach wheelchairs are available for day use. Please contact the visitor center for more detailed

information.

### Camping

There is a 14-consecutive-day limit for camping. Overnight camping is limited to a total of 56 days in a calendar year. Primitive camping requires a free backcountry permit, available at the visitor center and the camping and registration kiosks located at Bird Island Basin and the South Beach entrance. Permits must be displayed on vehicles

### Malaquite Campground (Open All Year)

Semi-primitive, providing only toilets, cold rinse showers, picnic tables, and 48 designated sites (6 sites are for tent camping only). An \$8 fee is required for a site ; \$4 with a Senior or Access passport. There are no hook-ups. There is a gray-water dump station and potable water filling station near the campground entrance. Quiet hours are from 10 p.m. until 6 a.m. The area is patrolled by rangers. Camping is accommodated on a first-come, first-served basis and reservations are not accepted. The campground is rarely full, except during February, March, and April. Also, a camping envelope is needed at the Malaquite Campground. Please deposit payment in the Iron Ranger.

### North Beach (Open All Year)

Primitive, no charge. A camping permit is required and is available from the Malaquite Visitor Center. Open to RV and tent camping. No reservations are needed. There are no facilities or designated sites. Camping is permitted from the dunes to the water's edge and is open to two-wheel drive-vehicles. However, beach conditions may vary with weather, and campers should always use caution to avoid becoming stuck in unexpectedly deep sand.

### South Beach (Open All Year)

Primitive, no charge. A camping permit is required and is available from the camping registration kiosk located at the entrance of South Beach. Open to RV and tent camping. No reservations are needed; space is usually available. Camping is permitted from the base of the dunes to the water's edge (up to 100-ft. distance). There are no designated sites. The camping area extends from the end of Park Road 22 south 60 miles to the boundary of the park at the Mansfield Channel. There are no roads, all driving is on the beach. The first five miles of South Beach are open to two-wheel-drive vehicles. The lower 55 miles are accessible to four-wheel drive vehicles.

The beginning of the four-wheel-drive

area is marked with the five-mile marker sign. Please note that in Texas, beaches are considered highways, and all vehicles must be street-legal and licensed. Licensed and unlicensed ATVs, UTVs, go carts, and dune buggies are not allowed to be driven in the park.

Be aware that driving conditions on the beach may vary with the weather and areas of soft sand may be sometimes found in the two-wheel-drive area, making driving difficult and possibly becoming stuck. Wrecker services can be costly and response time slow. Some areas within the four-wheel-drive area have very deep sand. A bulletin on how to prepare for driving down island is available by contacting the visitor center. Contact the visitor center before driving down island to check on beach conditions. Driving off the beach and into the dunes, grasslands, and mudflats is prohibited.

### Yarborough Pass (Open Intermittently)

Primitive, no facilities and no charge. A camping permit is required and is available from the South Beach camping and registration kiosk. Reservations are not needed. Located on the Laguna Madre 15.5 miles south of the visitor center. Access to the area is possible only through the four-wheel-drive area of South Beach. To find the campground (not a developed campground) drive to the 15-mile marker, then backtrack approximately 100 yards and look for a notch in the dunes. Drive through the pass and following the road approximately 2 miles to the campground. Be aware that the pass through the dunes is sometimes filled with exceptionally deep and soft sand in which even four-wheel-drive vehicles may become stuck. Do not drive on the mudflats surrounding the campground. Fines for damaging the mudflats are heavy.

### Bird Island Basin (Open All Year)

A camping permit is required and is available at the Malaquite Visitor Center or nearby kiosks. No reservations are accepted for camping, but space is usually available. There are pit toilets available. Bird Island Basin is suitable for both RV and tent camping. A fee of \$5.00 per day, or a \$10.00 annual fee for camping, day use, and boat ramp use is charged at the entrance station in addition to the park entrance fee. If you possess a Senior or Access pass, the fees are reduced by half. Bird Island Basin is located on the Laguna Madre approximately four miles from the visitor center. In addition to camping, Bird Island Basin has a windsurfing area ranked by Windsurfing Magazine as the best flat water sailing site in the continental U.S. There is also a boat launch ramp.

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Systematic patrols to locate nesting Kemp's ridley turtles and nests are conducted to some extent on all Gulf of Mexico beaches in Texas. The program run by the National Park Service on North Padre Island is the longest running (begun in 1986) and involves the most people. National Park Service staff and volunteers use Utility-Transport-Vehicles (UTVs) to repeatedly patrol the Gulf of Mexico beachfront of North Padre Island, between 6:30 a.m and 6:30 p.m each day, from April through mid-July. During 2008, volunteers and staff spent 11,978 hours patrolling a total of 93,973 miles on North Padre. One hundred thirty-two volunteers participated in patrols or other aspects of the sea turtle recovery efforts at the National Seashore in 2008.

Other people working or recreating on the beach also aid greatly with detection efforts by immediately reporting their observations of nesting turtles and hatchlings emerging from previously undetected nests and watching these sites until biologists arrive.

#### Another record nesting year

A record 195 Kemp's ridley nests were found on the Texas coast in 2008, compared to 128 in 2007, 102 in 2006, 50 in 2005, and 42 in 2004. One hundred and four of the 195 were found on North Padre Island, including 93 at the National Seashore.

Eggs from 125 of the nests found at the National Seashore and northward on the Texas coast were brought to the National Seashore's incubation facility for protected care. Resulting hatchlings were released at various locations in the northern half of the National Seashore.

Eggs from 11 nests found at the southern end of the National Seashore were transported to a large screen enclosure--called a corral--located at the patrol base camp near mile marker 40. Hatchlings from these nests were released near the corral. This was the first year that we used this incubation technique at the National Seashore. We wanted to test it and establish procedures on a small scale before it is necessary to incubate many more nests in corrals in the future, as nesting continues to increase and we start to reach capacity within the incubation facility.

Eggs from 49 nests located on South Padre Island and Boca Chica Beach were transferred to a corral on South Padre Island, and the hatchlings were released on South Padre Island.

Ten nests were not found at egg laying and incubated on the beach before being documented. Two of the nests outside the park did not hatch. One was destroyed by inundation from high tides and the other totally predated. Hatchlings from the other eight nests were released at those nest sites, but none of these releases were fully observed by biologists, and thus the exact number of hatchlings that emerged from the nests and successfully entered the sea is unknown.



Hatchling release, Summer 2008

#### Over 11,000 hatchlings released on North Padre Island during 2008

From June through August 2008, 15,815 hatchlings were successfully released from eggs cared for in the incubation facility and corrals on the Texas coast, including 11,646 at the National Seashore. Additional hatchlings successfully entered the water from the eight nests that incubated on the beach that hatched, but the exact number cannot be accurately

estimated. Eighteen of the hatchling releases held at the northern end of the National Seashore were open to the public. Over 3,000 people attended these releases, with many traveling long distances just to be there.

#### Turtles killed by vehicles outside the National Seashore

Unfortunately, vehicles caused the deaths of two nesting turtles and several hatchlings emerging from nests that incubated on Texas beaches this year. Although these incidents occurred outside the National Seashore, they highlight the need for people operating vehicles on the beach during the nesting season to be extremely vigilant.

Nesting Kemp's ridley turtles are difficult to see because their olive-green color blends with the sand and vegetation, and they often become covered with sand during nesting. They sometimes nest in vehicle ruts and cannot move quickly to avoid an approaching vehicle. In fact, while they are depositing the eggs in the nest, they enter a trance-like state and will not move from the nest. Hatchlings are even more difficult to see from a moving vehicle because they are so small. They also cannot move quickly enough to be able to flee from the pathway of an approaching vehicle.

#### Hurricane impacts

We suffered some minor to moderate setbacks to the program due to Hurricane Dolly and Hurricane Ike. Although these hurricanes did not make landfall at the National Seashore, high tides, storm surge, winds, and rain that they produced impacted the turtle patrol cabin and corral located near mile marker 40. Fortunately, no eggs were in the corral and much of the damage can be repaired. Some dunes were damaged and lots of debris has accumulated at the base of the dunes. Floating debris fields deposited large amounts of debris on the beaches which may create challenges for nesting turtles and pose safety concerns for the patrol staff. Hopefully, much of this debris can be removed and the fore-dunes will start rebuilding soon, and there will not be impacts to nesting next year.



Debris from Hurricane Ike on the shores of Padre Island National Seashore

#### Looking forward to the future

Padre Island National Seashore is the most important nesting area in the U.S. for Kemp's ridley. After years of effort, nesting is increasing rapidly, but to ensure continued success, monitoring and protection efforts must continue. Plans are already under way for the 2009 patrol and nesting season. We will conduct a similar program next year and look forward to more exciting results. For more information on the Kemp's Ridley Recovery Program at Padre Island National Seashore, visit our website at [www.nps.gov/pais/](http://www.nps.gov/pais/).



Kemp's ridley hatchlings

# Common Saltwater Fish

## Atlantic Croaker

(*Micropogon undulatus*)



**Description:** The Atlantic croaker has a row of whiskers on each side of its lower jaw. The young are silver, while older fish are yellow with short irregular brown streaks.

**Habitat:** These fish frequent the bottoms of bays, surf, and spoil islands.

**Size:** These average less than 1 pound, but may reach 4 pounds.

**Fishing tips:** Try fishing with peeled shrimp, live shrimp, and cut bait.

## Black Drum

(*Pogonias cromis*)



**Description:** Whiskers on the black drum's chin help it to find marine worms, shrimp, crabs, and other shellfish. Two plates deep in their throats help the black drum crush and grind their food.

**Habitat:** Well adapted to a wide range of aquatic habitats, this fish can range from the shallow bay waters of the Laguna Madre to deep waters in the Gulf of Mexico.

**Size:** These fish average 2 pounds, but may reach 80 pounds or more.

**Fishing tips:** Try fishing with dead shrimp or pieces of crab fished close to the bottom.

## Red Drum

(*Sciaenops ocellatus*)



**Description:** This reddish bronze fish has a black spot on each side at the base of its tail and lacks the chin whiskers of black drum. These fish feed head down as they scour the bottom for crabs, shrimp, marine worms, and small fish.

**Habitat:** For the first few years of their lives, the red drum prefers sea grass beds, shallow waters, and mudflats in the bays. Adults migrate from the bays to the Gulf of Mexico, where they remain for the rest of their lives.

**Size:** This fish can weigh up to 50 pounds.

**Fishing tips:** Try fishing with live finger mullet, cut mullet, live croaker, live or dead shrimp, and lures fished close to the bottom with gold and silver spoons.

## Sheepshead

(*Archosargus probatocephalus*)



**Description:** These black and white striped fish crunch up barnacles, Fiddler crabs, and many other hard-shelled animals with their large front teeth.

**Habitat:** Oyster reefs, barnacle-encrusted pier pilings, bulkheads, and jetty rocks.

**Size:** Averages 2 pounds, but may reach up to 15 pounds.

**Fishing tips:** Try fishing for these shellfish-loving fish with Hermit crabs, Fiddler crabs, or live or dead shrimp around piers, rocky outcroppings, jetties and oyster reefs.

## Southern Flounder

(*Paralichthys lethostigma*)



**Description:** This well-camouflaged, flat fish blends in easily against the muddy or sandy bottom it inhabits because it can change the color of its upper side to match its surroundings.

**Habitat:** This fish is most commonly found near the mouth of bayous leading into back bays and marshes, near marsh grasses, oyster reefs, or spoil islands. In fall, southern flounder migrate to the Gulf of Mexico to spawn.

**Size:** Average 1–3 pounds but may reach 13 pounds or more.

**Fishing tips:** Try fishing with live finger mullet, mud minnows, live shrimp, or artificial lures close to the bottom.

## Spotted Seatrout

(*Cynoscion nebulosus*)



**Description:** Silvery sides, a greenish back, and many dark spots on the upper sides of the body help identify this fish. The mouth is orange and has two distinctive canine teeth in the tip of the upper jaw.

**Habitat:** These fish frequent shallow waters near sea grass beds, reefs or marshes. Their green color helps them to easily blend with their environments.

**Size:** This fish averages 1–3 pounds, but may reach 13 pounds.

**Fishing tips:** Try fishing with live shrimp, live finger mullet, live croaker, or artificial baits that look like shrimp or shad.

# How's the Fishing?

William Botts, Park Ranger

“HOW'S THE FISHING?” IS A FREQUENTLY ASKED question at the National Seashore. A seasoned fisherman may answer that it depends on what you're fishing for. Each species has its own habits and feeding behaviors that affect what will be caught at any given time. Also, in the words of Henry David Thoreau, “Many men go fishing all of their lives without knowing that it is not fish they are really after.” Some fish for relaxation, others for a chance to think, and many to simply spend quality time with family and friends. For others it may be the excitement of landing a large shark or the quest for a delicious fish fillet. Regardless of the reason or the type of fish one is searching for, there is no better time to pursue a passion for fishing at the National Seashore than the fall and winter months.

If you plan on fishing on South Beach this year, be aware that the driving may be more challenging than usual due to storm debris deposited here after Hurricane Ike. If you do decide to drive south, be sure to allow for a longer journey than usual so that you can drive slowly and watch for dangerous objects. There are lots of sharp pieces of debris that can flatten a tire. Some travelers have reported multiple flat tires in one trip!

Be advised that park rangers strictly enforce the Texas state fishing regulations. Anyone 17 years old and above must have a valid Texas fishing license with a salt water stamp in order to fish at the National Seashore. Since the park provides critical habitat to thousands of shorebirds, the National Park Service has implemented additional regulations specific to the National Seashore to insure an ample food supply for both the birds and the fish. Three new regulations to be aware of are:

1) Ghost shrimp are an important food for migratory shorebirds. The use of ghost shrimp as bait is now prohibited in the park, except from July 1st to September 30th. Sand pumps may be used to make a hole for rod holder placement during the winter months but the plug of wet sand from the pump should be immediately dumped back into the sea so that no invertebrates are harmed.

2) Seines are not allowed for collecting live bait. A cast net is legal for bait collection as long as the net diameter is less than 14 feet.

3) The maximum number of poles that one person may have in the water at any time is six. It is legal to possess additional rods in the vehicle so that lures and rod types can be quickly exchanged as needed.

These regulations should help insure an ample food supply for the fish and birds by preventing the overharvest of bait species that they both depend upon.

Regardless of why people fish, it continues to be a popular activity at the National Seashore. The goal of park management is to insure that when someone asks “how's the fishing,” the answer will be a positive one. There is so much more to the fishing experience than just catching fish, so please do your part to help improve it for others. Picking up a bag or two of trash makes a difference, as does leaving a clean camp when heading home. Driving slowly when approaching campers and watching for pedestrians also are great ways to show your respect for other fishermen and women. With a little extra consideration and effort, every fishing person can have a great experience regardless of what they are really “fishing” for.

Images courtesy of:



# Marine Mammals in the Gulf

Chelsea Aldrich, Park Ranger

MANY OF US REMEMBER WHEN HURRICANE DOLLY SWEEPED THROUGH Padre Island. Though the north section of Padre Island did not receive such direct impacts as the southern region, its shores did experience the usual overflow of post-storm detritus. Marine debris, accumulated from countries around the world, swept in with the currents which had been strengthened by the hurricane's winds. The day after the hurricane passed, however, more than a beachcomber's typical find washed ashore at Padre Island National Seashore.

Amidst the debris, an ill Pygmy sperm whale had stranded on the shore, a common occurrence among sick or dying marine mammals. Though small, this toothed whale was estimated at 600 pounds and nine feet long. The whale revealed its identity by a unique defense mechanism it uses when startled. Like squid and octopi, Pygmy sperm whales expel a dark reddish-brown liquid to confuse their predators.



Pygmy sperm whale

Unfortunately, Pygmy sperm whales have a zero-percent survival rate once stranded, and this one shared the same fate. However, we can at least be comforted by knowing that park employees and the marine mammal stranding network provided the whale with company and reassurance in its last hours, as it relaxed and stopped thrashing upon the arrival of assistance.

It is difficult to imagine what lives offshore, but unique events, like hurricanes, that occasionally unveil the existence of these mysterious creatures, serve as reminders of the incredible diversity in life that thrives in the Gulf of Mexico. Not only are they rarely seen, but there is still much to learn about the characteristics of marine mammals, and their interactions with one another and other species.

In the Gulf, there are seven baleen whale species, 21 toothed whale and dolphin species, the West Indian manatee, and the introduced California sea lion. Though they vary greatly in appearance, these species can all be referred to as marine mammals. As mammals, all of these diverse creatures breathe air with lungs, have hair at some or all of their growth stages, give birth to live young, nurse their young with milk, and are warm-blooded.

Today, many scientists agree that whales and dolphins are descendants from land mammals, based on the fossil record, and genetic analysis. In fact, hoofed mammals living today, like pigs and cows, remain the nearest land relatives of whales and dolphins. Many similarities can be observed between land mammals and whales and dolphins. For instance, whales and dolphins have a three-part stomach and reproductive structures similar to land mammals. Over time, ancestral land mammals developed adaptations for living in marine environments. Mouth bones elongated and nostrils moved to the top of the head, resulting in today's species of whales and dolphins. The nasal passages in these mammals form an opening through which they can breathe, known as the blowhole(s). While the dorsal fin and tail do not have bones, the flippers have bones that are similar to the forelimbs in other mammals. However, there are more digits which help to shape a broad, paddle-like fin, used in steering. Another unique similarity is movement. Marine mammals and land mammals propel themselves forward by moving their bodies in an up-down motion, fish and many other aquatic animals move their bodies from side-to-side.

Current threats facing marine mammals include marine debris, captures for exhibition, disease-and pollution-triggered die-offs, entanglement and death from interactions with commercial fisheries, habitat loss and degradation, boating, oil, and noise disturbance. While very few humans have the opportunity to experience seeing these animals, we can be certain that the ways in which we live on land and that our practices at sea can certainly have an impact on their fragile existence. Learning about the Gulf's marine mammals, and the slight chance of encountering them, is certainly cause for reverence and appreciation. Consequently, we can become conscientious of our individual impacts, which can lead to ultimate protection of these majestic creatures hidden in the deep.

# Winter Migration

Dimitra Guerrero, Public Affairs Specialist

AS SUMMER COMES TO END, ONE BEGINS TO NOTICE A VARIETY OF changes. The temperature cools, the colors change, and we begin to notice that we have some feathery visitors. High above our heads, we begin to see flocks of birds flying across the sky that we do not see other times of the year.

Centuries ago, people developed a variety of theories to explain where the birds went when autumn and winter arrived. For example, it was once believed hummingbirds migrated by hitching a ride on the backs of geese. Many thought it impossible that a bird so small and fragile could make such an incredible voyage alone. Some believed birds such as swifts and swallows hibernated in caves and trees, similar to some bats. People also believed some birds changed into different species, then back to their original form. One could imagine how a person could come to this conclusion. For example, the black-bellied plover has a very noticeable black neck, breast, and belly in the spring and summer, but looks quite different in winter when it becomes pale grey. Today we know hummingbirds, swallows, and swifts are capable of migrating thousands of miles.

During the winter season, food supplies and climate may not be adequate for survival in northern regions; therefore, many birds travel to the southern regions of the United States, Caribbean, and Mexico where food is available, and where many will continue to make the trip all the way down to Central and South America. By flying hundreds or thousands of miles, many birds take advantage of the warmer climate. In many cases, the long trip is dangerous and may include crossing bodies of water or facing inhospitable conditions.

Padre Island National Seashore, known as the longest stretch of undeveloped barrier island in the United States, encompasses and protects a variety of habitats utilized by birds, such as beaches, grasslands, dunes, and tidal flat. All of which provide rare and critical habitat for a variety of breeding, nesting, wintering and migrating birds. The National Seashore is located on the Central Gulf Coast, which not only provides prime habitat for many



Image Courtesy: Nutty Birdwatcher

wintering species of birds, but is also a stop-over location for those that are tired and hungry as they make their way along Central Flyway, one of several major migratory routes running north to south. Because of the island's location on the Central Flyway, about 380 species of birds have been documented within the National Seashore. This is approximately 45% of all bird species documented in North America. In fact, Padre Island National Seashore has been recognized as both a Globally Important Bird Area by the American Bird Conservancy and as a Site of International Importance for Birds by the Western Hemisphere Shorebird Reserve Network. Both designations are an important step towards ensuring that birds have suitable habitat, resting, and feeding sites along migration routes.

While many migrants will eventually end their journey in Central and South America, several species of note will choose to winter at the National Seashore. A drive along Park Road 22 and Bird Island Basin Road will bring many rewards. Fall brings Sandhill cranes and Snow geese, which can be observed slowly walking through the grasslands at the entrance of the Park or near the Malaquite Visitor Center. During winter, raptors may be seen perched in treetops, dunes, or on fence posts searching for prey. White-tailed hawks are commonly spotted along with Northern harriers, and American kestrels. A Peregrine falcon often resides near the Headquarters building and can often be found roosting on the radio tower. A stroll or drive along the beach will provide an opportunity to see a variety of shorebirds wintering on the National Seashore, such as endangered Piping plovers, Red knots, and Greater and Lesser yellowlegs.

Now is a wonderful time to experience birding at the National Seashore. The National Seashore provides a beautiful and relaxing landscape for even the casual observer to gain a deep appreciation of the voyage that many birds make to seek suitable habitat and climate.

# Oil and Gas at Padre Island National Seashore

Marti Occhipinti, Park Biologist

WHEN VISITORS COME TO EXPERIENCE PADRE ISLAND NATIONAL SEASHORE (PAIS), they expect to see grass-covered dunes, sandy beaches, and abundant wildlife. What they don't expect to see are the active oil and gas sites emerging from the native landscape. Like all lands in the National Park Service (NPS), PAIS was established in order to save and preserve a portion of our country's diminishing natural terrains. The five year political struggle to designate PAIS focused on several key issues, including cost, size, and mineral rights. When Congress finally established PAIS on Sept. 28th, 1962, provisions were included that allowed the original owners access to the underlying minerals in the park.

PAIS is one of 13 NPS units whose enabling legislation allows oil and gas exploration and development to occur within its boundaries. Because it is the mission of the national park system to ensure the conservation of our nation's most remarkable natural and historic treasures, the NPS has created regulations that provide for their safety; 36 CFR Part 9, subpart B. These environmentally-conscious standards, referred to as "9B regulations," govern the activities of oil and gas operations during all phases of production. In accordance with 9B regulations, the NPS requires operators to submit an in-depth "Plan of Operations" that will serve as a blueprint for the operator's proposed activities.

Park managers evaluate the proposed plans and determine possible affects on resources, such as threatened and endangered species, vegetation, visitor use, cultural sites, and natural soundscapes—to name a few. The assessment process looks at alternative actions and seeks input from the public, state, and federal agencies. After the NPS has completed its review and environmental compliance, it may approve the operator's plan. If a proposed operation cannot be modified to prevent the impairment of park values, the NPS may seek to eliminate the associated mineral right by purchasing it. This action eliminates the possibility of oil and gas development, but is very costly, making this option impractical in most cases.

The park has developed 51 mandatory measures to eliminate, reduce, or mitigate the impacts associated with oil and gas development. These measures are designed to protect native vegetation and wildlife, enforce safe operational practices, prevent contamination, provide guidelines for reclamation, and to reduce the overall adverse affects to the natural environment. Park officials closely monitor the development and maintenance of oil and gas facilities within the park, conducting frequent site visits and meetings with oil and gas managers to discuss issues of concern.

Activities associated with oil and gas production have occurred at PAIS since the early 1950s. Ninety-one operations have been conducted to date, with at least 14 operations pre-dating the establishment of the park. Currently, 12 gas wells, one water well, and five pipelines are operational. BNP Petroleum Corporation, Kindee Oil and Gas Texas, and Cinco Natural Resources Corporation (Cinco) have acquired leases for subsurface mineral rights within PAIS. Cinco has submitted a proposed plan of operations to the NPS for three new wells.

PAIS and the NPS are setting the standard for proactive management of oil and gas operations. Park managers utilize cutting-edge technology, update established mitigation measures, evaluate past practices, apply new research findings, incorporate public comment, and coordinate with partners to ensure the preservation of park resources. Oil and gas companies have an increased awareness of their ecological impacts and are utilizing less invasive techniques, such as directional drilling and alternative mapping methods. These cooperative actions provide an enjoyable visitor experience and protect park resources, while still allowing congressionally mandated access to nonfederal oil and gas mineral rights.

## Oh Deer!

William Botts, Park Ranger

MOST VISITORS TO PADRE ISLAND NATIONAL SEASHORE ARE PLEASANTLY surprised if they see one of the many White-tailed deer that live here. Perhaps the surprise is due to the fact most people traditionally think of deer as forest-dwelling animals. However, deer are highly adaptable to a variety of environments including the coastal prairies that dominate the park's landscape.

The only species of deer documented on Padre Island are White-tailed deer. They are not especially large when compared to their relatives from colder climates. Deer living in northern climates need more fat and fur to survive than animals living in warm locales such as South Texas. One reason deer do well in so many different locations is their ability to digest a great variety of plant materials. Many native plants have a lot of wood fibers in the form of cellulose. This reduces the quality of the food, but deer make up for that by being selective about what parts of the plants they consume. They also belong to a group of animals called "ruminants" since they possess a special digestive organ known as a rumen. The rumen is a bacterium- and fungal-filled digestive compartment that softens the ruminant's food stuffs and breaks down the cellulose before separating the drier materials into a ball. This dry mass, informally called the "cud", is then regurgitated for additional chewing. After more saliva is thoroughly mixed in, the material is swallowed once again and digestion is completed.

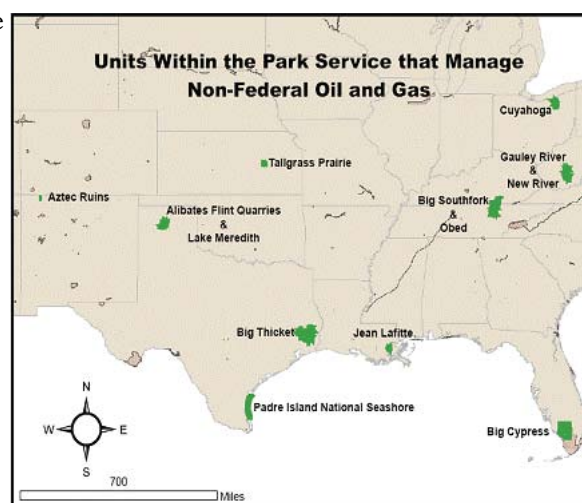
Despite the fact that deer are classified as herbivores (plant eaters) the use of remote cameras in predation studies has turned up some astounding information. Biologists monitoring bird nests with remote cameras have documented deer eating bird eggs and even baby songbirds! Other scientists as have recorded deer scavenging dead fish! These unusual foods are highly nutritious and likely make up only a very small fraction of their diet. However, like other animals, deer are opportunists and will take advantage of high quality food sources when they are available.

The greatest survival challenge for whitetail deer living on the National Seashore is the climate. This area of Texas has a history of dramatic swings in the weather cycles. During prolonged droughts that may last for several years, finding drinkable water can be a challenge for the deer. Fortunately, before the National Seashore was created, the park lands were part of a cattle ranching operation. The island is surrounded by saltwater, but cattle needed a source of fresh water, much as the deer and other native animals do today. The ranchers learned that potable water was available just a few feet below the land surface. When rain falls on the island, the water percolates down through the sand. Fresh water is lighter than salt water, so the result is that rain water forms a lens that floats atop the heavier sea water that infiltrates the sediments farther down, much as oil and vinegar separate in salad dressing. To provide easy access to an ample drinking water supply, the ranchers dug several shallow ponds. These ponds remain today and continue to be invaluable to the many deer, fresh water turtles, birds, and even the occasional alligator that all utilize the water sources. One of the ponds is easily viewed along the main park road and is located between the park headquarters complex and the Malaquite Visitor Center.

To improve your chance of seeing deer, the time to get out is about thirty minutes or so before sunset or else go out in the early morning at first light. Drive slowly along the park roads and you have a good chance of seeing deer and perhaps even a coyote. In the fall, the deer population can increase by a surprising amount as deer move from private lands across the bay to the park to escape heavy hunting pressure. Whitetail deer are excellent swimmers and readily move from one place to another in search of food, water, or cover.

When driving in deer country be extra careful. Visitors are amazed to learn that deer are the most dangerous animal in North America. On average, approximately 12 to 15 people per month are killed by deer in the United States! Of course, that statistic is a bit misleading. It's not that deer are aggressive and lash out at humans; the reality is that they often stray onto the roads in the early morning or late evening hours and cause automobile accidents. Many people are killed each year and hundreds more are badly injured in deer-related vehicle accidents. Please drive carefully during times of peak deer activity.

As is true of animals in other national parks, the deer at the National Seashore are somewhat habituated to people. Enjoy watching them, but please do not feed them or closely approach them. Human foods are not healthy for deer and if frightened, a deer can be dangerous. Keep your dogs leashed so that they cannot chase or harass the deer. With help from all of us, as well as their own remarkable adaptability, we should have plenty of deer to enjoy for generations to come.



# Kid's Korner

## Word Find and Scavenger Hunt

During your visit at the National Seashore, see how many of the items listed below you can actually observe or do. Some of the animals listed, like dolphins or whales, may be difficult to spot during your visit, so try your luck in the word find! The words can appear forwards, backwards, up, down, and even diagonal.

GULF OF MEXICO  
BARRIER ISLAND  
CURRENTS  
WAVES  
DUNES  
SARGASSUM  
MARINE DEBRIS  
BEACH CLEAN-UP  
PIPING PLOVER  
KEMP'S RIDLEY

DOLPHIN  
WHALE  
PELICAN  
GHOST CRAB  
JELLYFISH  
FISHING  
WINDSURFING  
SWIMMING  
SEABEAN  
SEASHELL

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

## Pause and Reflect

In the space below, draw your favorite memory, experience, animal, plant, or setting that you enjoyed during your visit to the Seashore.

WESTERN  
NATIONAL PARKS  
ASSOCIATION

## Recommended Reading



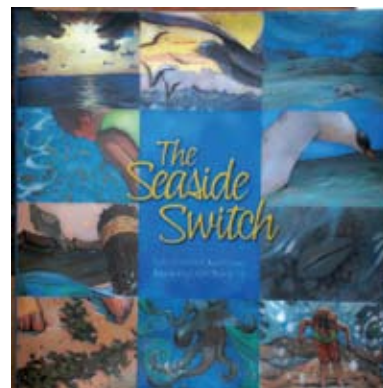
Retail \$21.95 Birds of Texas

Whether you are a beginner or an expert, this book is essential. With a quick reference of 401 species grouped and color coded for quick identification, this is one of the favorites over many in our store. As you look at the beautifully illustrated pictures with the bold and bright colors, it will soon be your favorite too! It includes a color coded-range map and a top birding-site list in Texas to assist you in your quest to see and identify the beautiful birds in our area.



Retail \$ 24.95 Texas Coral Reefs

Just 110 miles south of the Texas-Louisiana border lay two coral reefs in the Gulf of Mexico. This is the northern most reef system in the United States and is home to hundreds of kinds of fish and other tropical sea life, including whales, manta rays and turtles just to mention a few. This book is beautifully illustrated and beckons you to turn the page to explore the reef in vivid color page by page.



Retail \$16.95 The Seaside Switch

The Seaside Switch is a wonderful book about the ever-changing face of the seaside. With each change of the tide, the mysteries are revealed about what lives above and below the water and is dependant upon the tidal changes. From gulls to seaweed, from crabs to clams, it will bring you right to the waters edge.

## 20% Discount

For all teachers and homeschool educators. When you check out at the Malaquite Visitor Center Bookstore, mention that you are a teacher or a homeschool educator and get a 20% discount on all of your educational purchases!

## Forget something?

During your recent visit to Padre Island National Seashore, did you check out our bookstore, but forgot your wallet or credit card? Check out the Western National Parks Association website to order your favorite publications and help support your parks.

<http://www.wnpa.org>

# Health and Safety Tips

## Swimming

Use caution when swimming and never swim alone. Strong currents flowing parallel to the beach, tides flowing to and from the beach, and sudden drop-offs in the surf can be dangerous for swimmers and waders alike. If caught in a rip tide, do not panic. Swim parallel to the beach until you are free from the flow, then swim to shore. Do not attempt to swim to shore against the flow. You will not make it.

## Hazardous materials

These periodically wash ashore and range from 55-gallon barrels containing unknown substances to used medical products. If you come upon hazardous materials, note the location and alert a park ranger.

## Metal detectors

Possession or use of metal detectors is prohibited in the park. Items such as seashells and driftwood, washed in by the tide, may be collected as long as the items are not used for commercial purposes. All other collecting is prohibited. Collection of live sea creatures is prohibited.

## Pets

Pets must be on a leash and under physical restraint at all times. Pets are not permitted at the Malaquite Visitor Center area, including the designated swim beach in front of the visitor center. Pet waste is becoming a growing problem. Please clean up after your animals.

## Gray water and sewage

Gray water and sewage must be disposed of only at the dump station at the Malaquite Beach campground.

## Driving

Beaches are Texas public highways. Only street legal and licensed vehicles may be driven in the park. All-terrain vehicles (ATVs), UTVs, go-carts, golf carts, and dune buggies are prohibited. Driving in dunes, grasslands, or mudflats is prohibited. Drive with caution and strictly observe posted speed limits. Pedestrians have the right-of-way at all times and do not always watch for approaching vehicles.

## Portuguese Man-of-War

These amazing creatures are found at the park throughout the year. These attractive, blue jellyfish like creatures cause a painful sting, which is usually accompanied by redness and some swelling of the affected skin area. If stung, seek first aid. A very small percentage of those stung will experience an allergic reaction, which can cause difficulty breathing, numbness in the arms, legs or elsewhere, severe pain, and/or disorientation or unconsciousness. Visitors experiencing these or other symptoms should notify a park ranger immediately and seek medical attention.

## Stingrays

These relatives of the shark can inflict a puncture wound in the lower leg that can be extremely painful. If you are in the water, we recommend doing the "stingray shuffle"; instead of walking, shuffle along, so instead of stepping on a stingray you actually nudge it, thereby causing it to swim away.

## Rattlesnakes

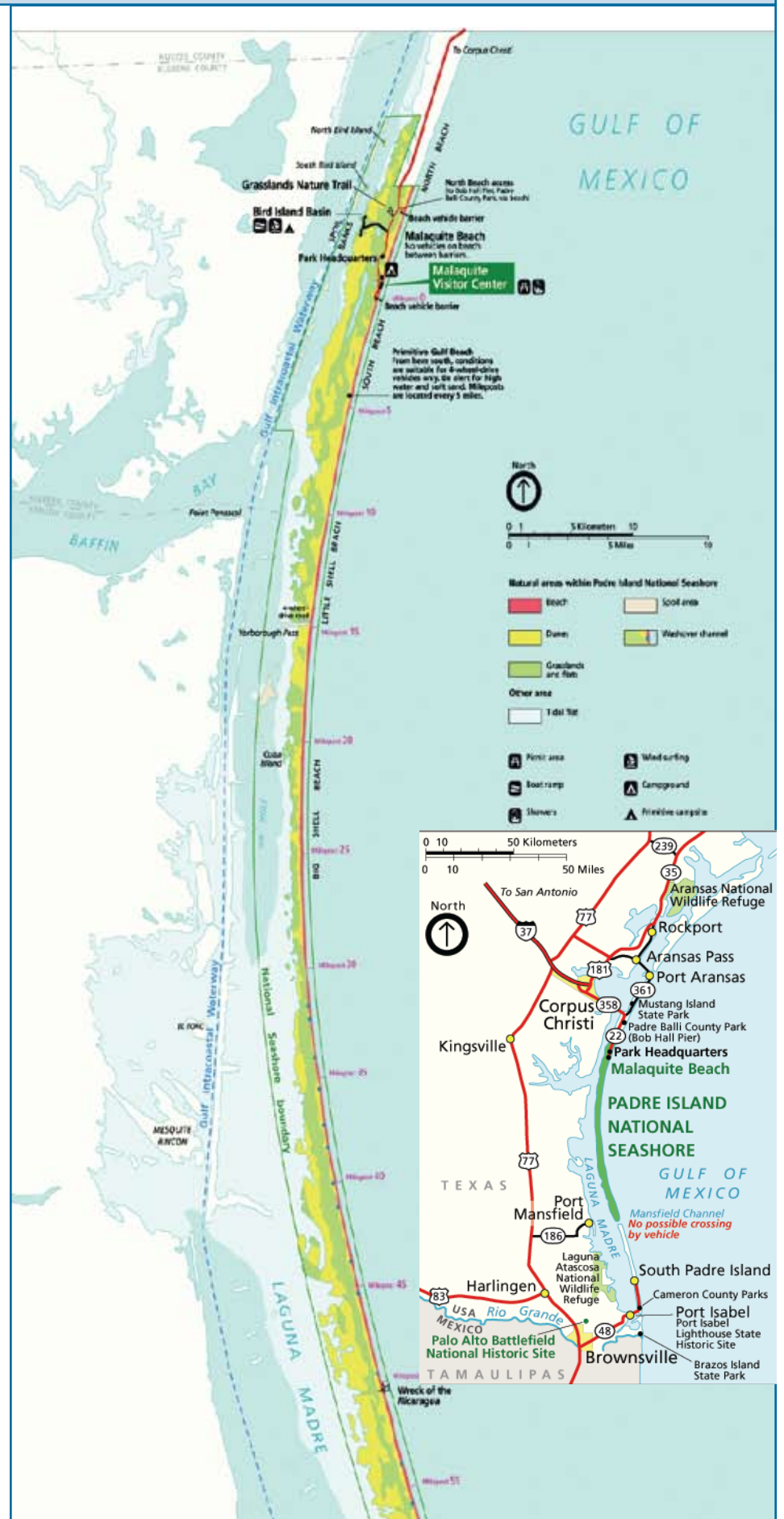
Rattlesnakes live in the dunes, grasslands, and mudflats. Visitors should use extreme caution when walking in these areas.

## Hunting

Hunting is not permitted in the park, except for the taking of waterfowl in the Laguna Madre in accordance with applicable state and federal regulations. Transporting lawfully taken wildlife, including exotic species, through the park is prohibited, except for waterfowl and fish.

**Loaded firearms are strictly prohibited. A Concealed Handgun License issued under the authority of the State of Texas, or another state is not valid at Padre Island National Seashore.**

**Jet skis, air boats, and kite surfing are prohibited.**



## IN CASE OF MEDICAL EMERGENCY

If you have a medical emergency during your visit, contact a park ranger immediately or go to the First Aid station at the Malaquite Visitor Center. If an employee is not immediately available, you may summon assistance for any emergency by dialing 911.

The closest hospital is Bay Area Medical Center, located at the corner of South Padre Island Drive and Rodd Field Road in Corpus Christi. This facility is 24 miles from the visitor center.