

# The Gulf Breeze

National Park Service  
U.S. Department of the Interior



Padre Island National Seashore  
News and Information, 2012



Padre Island National Seashore protects the longest stretch of undeveloped barrier island in the world, preserving rare coastal prairie, a complex and dynamic dune system, and the Laguna Madre, one of the few hypersaline lagoon environments left in the world. While you are here, take some time to observe your surroundings. Whether you are enjoying the beach, launching your boat or windsurfing at Bird Island Basin, driving, or simply walking, there is always something spectacular to see.

## Superintendent's Message

Welcome to Padre Island National Seashore! Our mission is to save and preserve this great park, unimpaired, for purposes of public recreation, benefit, and inspiration. Our team pledges to give a 100% effort in carrying out this mission, and we hope that you have an outstanding experience as you explore and enjoy this national treasure. While you are here, take some time to observe the surrounding areas.

During the spring and summer months, there is a flurry of activity on the beach. You will see turtle patrollers searching for nests, school children on field trips, families recreating, anglers surf fishing, and vehicles of all sizes driving up and down the shoreline. Please be vigilant and safe during this busy season.

The fall and winter months are ideal for bird watching due to the many birds that either migrate through or spend the winter here. Fall brings sandhill cranes, which can usually be seen slowly walking through the grasslands. During winter, hawks may be seen perched on telephone poles, fence posts, or in treetops watching for prey.

Please remember that the National Park Service, visitors, and neighbors are all stewards of this special place, and we must work together to protect and care for the National Seashore so that it may be enjoyed for generations to come.

Joe Escoto, Superintendent

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# Around the Park



**Malaquite Pavilion** is where visitors can find the visitor center, park bookstore, concession store, and bathhouse. Bring your snacks and enjoy the shade and cool breeze at the picnic tables. There is an accessible ramp to the beach, and beach wheelchairs are available at no charge at the visitor center.



**Malaquite Beach** has picnic tables and shade structures so that visitors can enjoy the beach in comfort. Visitors are welcome to bring a grill to cook on at the beach.



**Malaquite Picnic Shelter** is a great place for picnicking with your family and friends. Water is available. Lights and electricity are available upon request. Feel free to bring your own grill.



**Grasslands Nature Trail** is three-quarters of a mile long and is handicap-accessible. The trail may offer a glimpse of the birds and other wildlife that roam the grasslands. This is also a great place to watch the sun set over the island.



**Novillo Line Camp** will take you back in time to the days when there were more cattle than gulls on Padre Island. Take a light walk to the last standing remains of the Dunn family cattle ranching operation.

## Ranger-led Programs

ACTIVITY	Su	M	T	W	TH	F	Sa
Beach Walk - 11:00 a.m., Daily Weekends only in April and May	X	X	X	X	X	X	X
Deck Talk - 1:00 p.m.	X	X	X	X	X	X	X
Junior Ranger - 9:00 a.m. - 5:00 p.m. Self-guided	X	X	X	X	X	X	X
Birding Skills Class - 2:00 p.m.							X
Guided Birding Tour - 8:00 a.m. November - April			X	X	X	X	X
Evening Program - 7:00 p.m. January - March				X			
Star Party Times and dates vary. Please call ahead.							X

All programs are subject to change. Please call the Visitor Center at (361) 949-8068 before attending a park event.

# Camping



## North and South Beach

**Camping is free, but a permit is required.**

South Beach is the shoreline that runs along the Gulf of Mexico from the south end of Closed Beach to the Mansfield Channel. North Beach is the shoreline that runs along the northernmost section of the National Seashore, along the Gulf of Mexico. Mile markers are placed every five miles on the beach. All camping in these areas is primitive and open to RV and tent camping. Camping here is at your own risk. Vehicles occasionally get stuck in soft sand. At the entrance of South Beach, there is a chemical toilet and a large dumpster. Flush toilets and cold-water rinse showers are available at the Malaquite Visitor Center.



## Malaquite Campground

**\$8/night**

**50% off with an Interagency Senior or Access Pass**

Tucked in the dunes with a view of the Gulf of Mexico, Malaquite Campground offers 50 semi-primitive designated sites, six of which are tent sites. Tent campers may put their tents on the beach or at their campsite. This campground provides flush toilets, cold-water rinse showers, picnic tables, grills, and shade structures. There are no hook-ups available, but there is a free gray/black water dump station and potable water filling station off of the entry road to the campground.



## Bird Island Basin Camping, Windsurfing & Kayaking

**\$5.00/day or \$10.00/year**

**50% off with an Interagency Senior or Access Pass**

Located on the shores of the Laguna Madre, this site offers fantastic opportunities for windsurfing, kayaking, boating, birding and fishing. Both RV and tent camping sites are available. There are chemical toilets only, but flush toilets and cold-water rinse showers are available at the Malaquite Visitor Center.



## Bird Island Basin Boat Ramp

**\$5/day or \$10/year**

There are 106 vehicle/trailer, four vehicle only, and four handicap parking spaces available for visitors wishing to launch a boat to access the Laguna Madre.



## Yarborough Pass

**Camping is free, but a permit is required.**

Yarborough Pass is located 15 miles south of the visitor center. To find the camping area, drive to the 15-mile marker on South Beach and backtrack approximately 100 yards. Access to this area is possible only through the 4-wheel drive area of South Beach and by boating down the Laguna Madre. Be aware that the road through the dunes is sometimes filled with exceptionally deep and soft sand in which even 4-wheel drive vehicles may occasionally become stuck. The flooded areas may be deep. Please call the visitor center at (361) 949-8068 ahead of time for an update on weather and driving conditions. Permits are available at the entry to South Beach.

# Record Numbers of Nests and Stranded Sea Turtles Found During 2011

*Donna J. Shaver, Ph.D.*

*Chief, Division of Sea Turtle Science and Recovery*

*Facebook: Padre Island NS Division of Sea Turtle Science & Recovery*

It has been an eventful year for sea turtles. More Kemp's ridley and green sea turtle nests and more stranded sea turtles were found in Texas during 2011 than during any other year since consistent record-keeping began in the early 1980s. Satellite tracking of nesting Kemp's ridentles continued at the National Seashore and staff aided with similar tracking work in Mexico. Staff also applied a satellite transmitter on an adult green turtle that undertook long and interesting travels after release.

## Kemp's Ridley Nests

For more than three decades, the National Park Service has worked with several other agencies in the U.S. and Mexico to help save Kemp's ridley sea turtle from extinction. Kemp's ridley is the world's most endangered sea turtle species, but thanks to the hard work of many people, nesting is increasing and the population is recovering.



Nesting Kemp's ridley

During 2011, staff and volunteers patrolled the North Padre Island beachfront to find and protect nests. The public also aided by reporting nesting turtles that they observed. A record 199 Kemp's ridley nests were found in Texas during 2011. Of these, a record 124 were located on North Padre Island, including 117 at Padre Island National Seashore. More Kemp's ridley nests are consistently found at the National Seashore than at any other location in the U.S., making it the most important Kemp's ridley nesting beach in the U.S.

Eggs from nearly all nests found on the Texas coast are retrieved from the beach to protect them and the resulting hatchlings from natural and human-related threats. Eggs from 117 of the nests found at the National Seashore and northward in Texas were brought to the National Seashore's incubation facility for protected care. Eggs from 38 nests found at the southern end of the National Seashore were transferred to two large screen enclosures called corrals located near the 30 and 40 mile markers. Hatchlings from the National Seashore's incubation facility and corrals were released here. Eggs from 39 nests discovered on South Padre Island and Boca Chica Beach were protected in a corral on South Padre Island and the hatchlings were released on South Padre Island. Hatchlings from the incubation facility and corrals were guarded during release to help ensure that every hatchling safely entered the surf and swam away from shore.

Five nests were incubated where the eggs were laid. This in situ incubation generally results in lower hatching success and fewer hatchlings successfully entering the sea because these eggs and hatchlings do not receive the same level of protection as do the nests incubated in the facility and corrals.

Overall, more than 16,000 Kemp's ridley hatchlings were released on the Texas coast during 2011, most at the National Seashore. Thirty of the hatchling releases held at the National Seashore were open to the public. More than 7,000 people attended, with many traveling long distances and planning their vacation around the opportunity to watch a release. Viewing nesters and hatchlings is becoming an increasing source of ecotourism.

## Satellite Tracking of Nesting Kemp's Ridley Turtles

During 2011, satellite transmitters were deployed on 10 Kemp's ridley turtles that nested at Padre Island National Seashore, to learn more about where nesters go between laying successive clutches of eggs during the nesting season, and after they were done nesting for the year. We also continued to participate in a collaborative program to track movements of Kemp's ridentles that nested at the primary Kemp's ridley nesting beach at Rancho Nuevo, Mexico. After the nesting season was completed, most of the females moved away from both nesting beaches and took up residence in the northern Gulf of Mexico. Movements of these turtles can be viewed on [www.seaturtle.org](http://www.seaturtle.org) under the "Padre Island National Seashore Kemp's Ridley Tracking 2011" and "Rancho Nuevo, Mexico Kemp's Ridley Tracking 2010-2011" tracking programs.

## Updates on Green Sea Turtles

This has also been a noteworthy year for green turtles. The green turtle is listed as a threatened species in Texas. Six green sea turtle nests were documented in Texas during 2011, all at Padre Island National Seashore. These are the most green turtle nests recorded in Texas during a single year since consistent record keeping began in the 1980s. However, some green turtle nests have probably been missed over the years, since patrols usually wind down before the green turtle nesting season ends in mid-September.



Stranded Green Sea Turtles

Nearly 1,900 green turtles were documented stranded in Texas from January through mid-October 2011, including about 1,600 found "cold stunned" during early-February. Cold stunning occurs when severe cold fronts pass through the area and drastically drop water temperatures.

# Record Number Con't.

These reptiles cannot regulate their body temperature and at water temperatures below about 50 degrees they become immobilized. They float to the surface or wash ashore and if they are not located and protected quickly they will succumb. Thanks to the hard work of many people, more than 1,000 of cold stunned green turtles were located alive, stabilized, tagged, and released in south Texas waters. The 1,600 was the largest number documented during a cold stunning event since the Sea Turtle Stranding and Salvage Network (STSSN) was established in 1980, and resulted in setting a new STSSN yearly record of green turtles and sea turtles (all species combined) found stranded in Texas.

In 2011, we outfitted the first adult green turtle to be tracked via satellite telemetry in Texas. "Smokey" was found entangled on June 2 and taken to the ARK to receive care. On June 19, she was outfitted with transmitter and released. She quickly traveled southward to near the U.S./Mexico border and then swam across the Gulf of Mexico and around the tip of Florida to the Atlantic Ocean. She spent a lot of time in the Bahamas, but also made a large loop in the Atlantic Ocean. Her extensive travels can be viewed on [www.seaturtle.org](http://www.seaturtle.org) under the "Padre Island National Seashore Green Sea Turtle Tracking Program".

## Novillo *By Abri Morrison, Division of Interpretation and Education*

It is quite impressive to think that you are standing on the longest stretch of protected barrier island in the world. You have the chance to take in the beauty that nature has to offer, and enjoy the warm water and extra fine, soft sand under your feet. However, there is much more to this area than you may realize. This island has a rich cultural history in cattle ranching, which began in the 1800s and ended in the 1970s.

As you enter the park and drive past Bird Island Basin Road, you may not have noticed a little structure to your left. At the end of the dirt road, is a small building that looks like a rundown shack. You also might not have noticed a corral that once held cattle until they were ready to be driven across the Laguna Madre to the Flour Bluff area to market.



Novillo Campline Padre Island National Seashore

In 1766, Don Diego Ortiz Parrilla sailed to the mouth of the Nueces River and then scouted the area across the Laguna Madre to Padre Island. He stated that the island was unsuitable for raising cattle due to lack of fresh water and grass. In 1804, Padre Nicholas Balli, a Portuguese priest, and his nephew, established a mission to convert Native Americans to Christianity. They also found that the island was in fact suitable for cattle ranching, which they did for over 40 years.

Ten years after Texas became a Republic in 1836; John Singer and his family were blown off course while heading for Port Isabel and were forced onto Padre Island. There, at Rancho Santa Cruz, Padre Balli's old headquarters, the Singers began a profitable cattle ranching business. By 1855, they had expanded their holdings to include most of Padre Island and as many as 1500 head of cattle. John Singer's ranch on Padre Island lasted for 14 years until he joined the Union army during the Civil War. During the war, Confederate soldiers destroyed Rancho Santa Cruz and most of the livestock were confiscated and eaten.

The 1870s appeared to be promising for Richard King and Mifflin Kennedy, who had already acquired ranches between Corpus Christi and Brownsville. They tried ranching on Padre Island, but left the after a hurricane. King and Kennedy were able to fence their land with barbed wire to prevent its use by other ranchers and the loss of their livestock. This forced smaller ranchers to head west to find grazing land for their cattle. Patrick Dunn, born and raised in Corpus Christi, was one of these individuals. He and his brother decided to take 400 cattle and head east across the Laguna Madre to try ranching on Padre Island. There was no need for barbed wire since the water surrounding the island provided a natural fence. There was one exception to Dunn's open range ranching. A fence was needed across the island near the present location of the Mansfield Channel. Dunn did not own the entire island and this kept his cattle from straying from his property.



Modern Vaqueros (Cowboys)

Generally, the ranch was quiet and uneventful most of the year. However, when May and October came around it was time to hustle. The round up started at the southern end of Dunn's ranch and the cowboys, known as vaqueros, drove the cattle northward. Dunn had established three line camps: Green Hill, Black Hill and Novillo. A line camp contained a corral for the cattle, a cookhouse where the vaqueros could get a hot meal and a bunkhouse.

## Novillo Con't

The vaqueros drove the cattle from line camp to line camp where they would brand, vaccinate, and select yearlings for market, until they reached Dunn's headquarters on the northern end of the island. This could take up to a month to complete. They drove the cattle to market across the Laguna Madre near the present JFK Causeway. Native-born cattle thrived on Padre Island. Dunn noted that either cattle brought from the mainland took a long time to acclimate to the island's harsh conditions, or they would die. The Dunn Ranch also had to deal with hurricanes. Burton, Patrick's son, weathered a category 4 hurricane at the Green Hill Line Camp. The storm caused considerable damage to the line camps and it was necessary to repair them with the driftwood that had washed up on the beach.



Historic Photo of Cattle at Padre Island

Forty-six years later in 1926, Dunn, the self-proclaimed "Duke of Padre", sold his land to Colonel Sam Robertson. Because Dunn kept the grazing and mineral rights, very little of his life on Padre Island was affected by this decision and when he died in 1938, his ranching operations went to his son. Burton continued ranching, but due to advancements made by vehicles, he was able to herd the cattle a line camp and load them up onto a truck then take them to Laguna Madre to drive them across. When the 1,116 mile long Intra-Coastal Waterway was finished in 1949, it forced Burton to drive his cattle to Mustang Island and take them across by ferry. It was not until 1951, after the completion of the Padre Island Causeway, that Burton could take his cattle over the Laguna Madre without needing the ferry system.

During the 1940s, the federal government worked with the Dunn family to open a bombing range for the Navy and to permit Coast Guard patrols along the coast. The cattle continued to roam freely and only moved away from the target area whenever they heard sounds of an approaching aircraft.

In 1958, the Federal government initiated legislation that would lead to the establishment of the Padre Island National Seashore. Finally, after five years of litigation, Padre Island was designated a National Seashore in 1963. Ranching operations continued until Burton's death in 1970, which brought an end to a total of 91 years of the Dunn Ranch on Padre Island.

The Novillo Line Camp, listed on the National Register of Historic Places, is the last surviving of the three original line camps on the Dunn Ranch. It is a reminder of an era of ranchers who once lived, survived and thrived off little more than native grasses, driftwood and other items that washed up on the beach. So now, I ask you, did you notice the little structure at the end of the dirt road? Did you notice the historic Novillo Line Camp on your visit to Padre Island National Seashore?

## International Parks: Exporting America's Best Idea

*By Suzy Murray, Division of Interpretation and Education*

Back in the days before there was a trade deficit, we exported America's best idea to the rest of the world, national parks. The idea of national parks had originated with a small group of Americans who not only wanted to admire nature, but also to preserve it for the use of all Americans. This was a uniquely American idea. Historically in Europe, land was set aside, but it was only for the use of the wealthy and privileged.

Following the idea of Yellowstone National Park established in 1872, the first national park in the world, there soon followed the establishment of other national parks in other countries. Australia designated the Royal National Park, just south of Sydney in 1879. Rocky Mountain National Park was established as Canada's first national park in 1885, followed by New Zealand's Tongariro National Park in 1887. Europe's first national parks were in Sweden where nine national parks were established in 1909.

Africa's first national park was established by Albert I of Belgium who designated an area of what is now the Democratic Republic of the Congo centered around the Virunga Mountains as the Albert National Park. The park has since been renamed the Virunga National Park. In 1926, South Africa established Kruger National Park.

In the years following World War II, national parks were founded all over the world.

The International Union for Conservation of Nature (IUCN), has established criteria for national park designation worldwide. In 1969, a national park was defined as a large area with one or several ecosystems not materially altered by human exploitation and occupation, where plant and animal species, geomorphological sites and habitats are of specific scientific, educative and recreative interest or which contain a natural landscape of great beauty.



Valley of Flowers, India

# International Parks Con't

The highest competent authority of the country has taken steps to prevent or eliminate exploitation or occupation as soon as possible in the whole area and to effectively enforce the respect of ecological, geomorphological, or aesthetic features which have led to its establishment; and visitors are allowed to enter, under special conditions, for inspirational, educative, cultural, and recreative purposes.

In 1971, the criteria was further defined to include a minimum size of 1,000 hectares within zones in which protection of nature takes precedence; statutory legal protection; a budget and staff sufficient to provide effective protection; and prohibition of exploitation of natural resources, qualified by such activities as sport, fishing, the need for management, and facilities.

Nearly 100 nations have land designated as national parks worldwide. They are found on every continent except Antarctica. Each one is as unique as the country that has set each area aside for protection. In the United States and Canada, the focus is on protecting both the land and animals. In Great Britain and Europe, the focus is on preserving the land, while in Africa, large game parks have been established to protect animals. The largest national park in the world, and also the most northerly is the Northeast Greenland National Park which encompasses 375,000 square miles. The smallest national park is the Penang National Park in Malaysia which covers about 8.5 square miles.

There are several websites that list the best national parks outside of the United States. The following is a list of the parks mentioned most often and why they are considered noteworthy:

- Kruger National Park, South Africa for its vast land and wide variety of wildlife.
- Manchu Picchu Historic Sanctuary, Chile for its ancient Inca sites in the South American Andes.
- Sagarmatha National Park, Nepal which contains three of the highest peaks, including Mount Everest, in the Himalayas well as two glaciers and a variety of mountain wildlife.
- Fiordland National Park, New Zealand for its magnificent scenery in Milford Sound and fourteen other fjords.
- Galapagos National Park, Ecuador for its exotic wildlife found nowhere else in the world.
- Tikal National Park, Guatemala for its spectacular Mayan ruins and vibrant wildlife.
- Yellow Dragon Scenic Area, China for its snow covered peaks, waterfalls, gorges, forests, hot springs, and endangered species such as the Giant Panda and Sichuan golden snub-nosed monkey.
- Iguazu National Park, Argentina which contains waterfalls over seventy meters high and surrounding subtropical forest.
- Kakadu National Park, Australia which is remarkable for both its cultural importance to several Aboriginal groups as well as stone plateaus, rainforests, billabongs, tidal flats and coastal beaches.
- Swiss National Park, Switzerland includes not only the Alps snow-covered peaks, but also elks, chamois, golden eagles and bearded vulture.

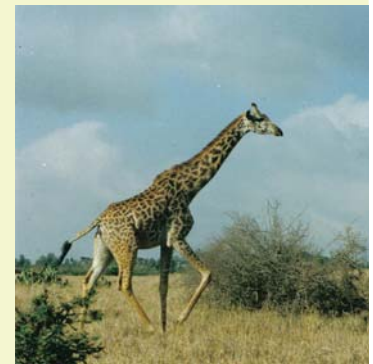
So, if you are patting yourself on the back about the number of national park stamps that you have in your National Parks Passport Book, think again. The national parks of the world are out there waiting to be enjoyed. According to the International Union for Conservation of Nature, there are over 7000 national parks worldwide.



Iguazu National Park, Argentina



Teide National Park, Canary Islands, Spain

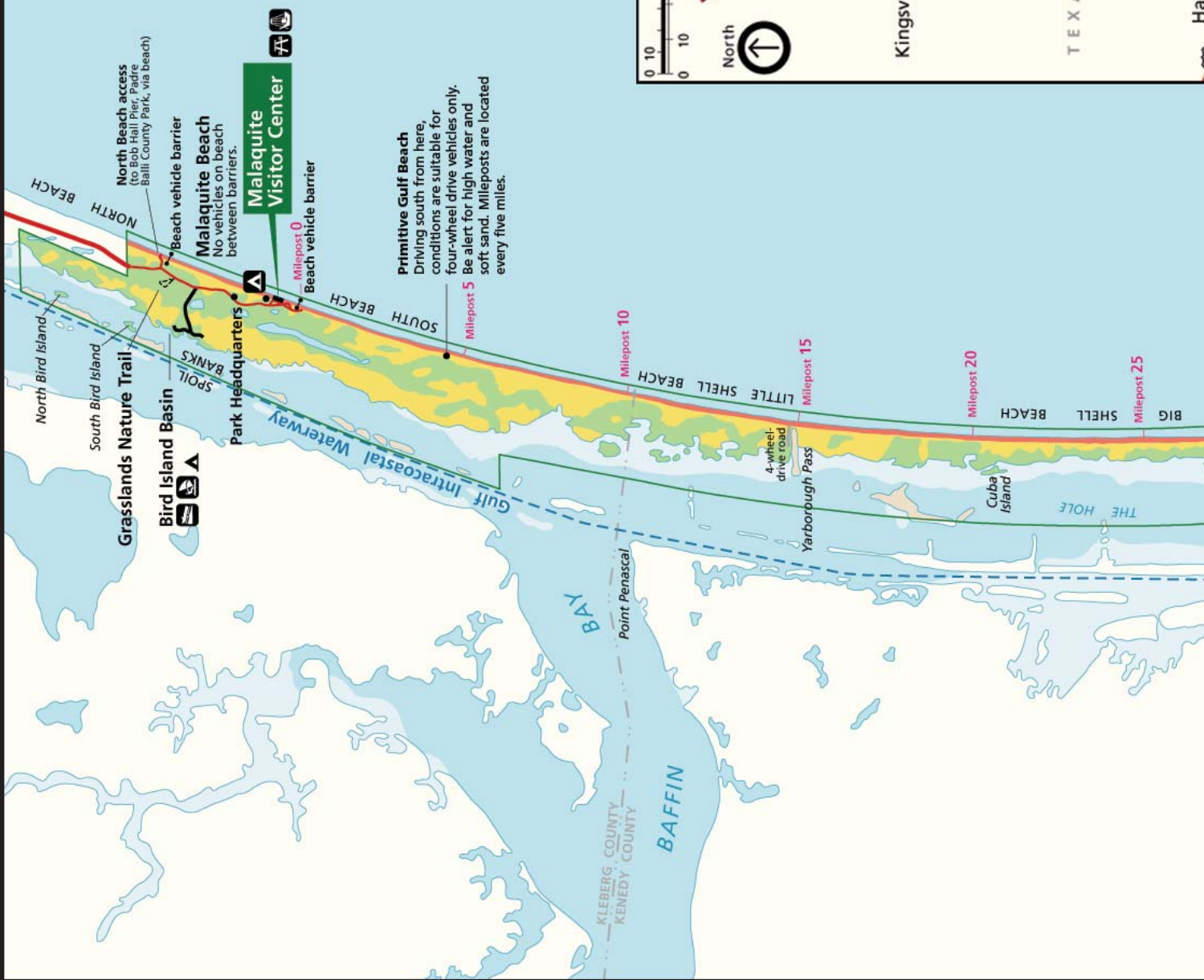


Nairobi National Park, Kenya

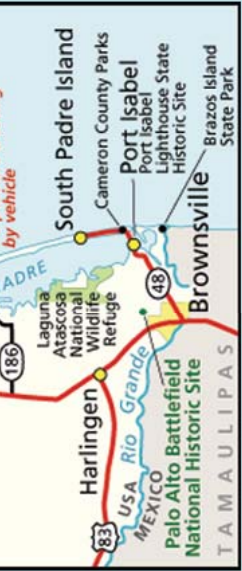


Twelve Apostles, Australia

# GULF OF MEXICO

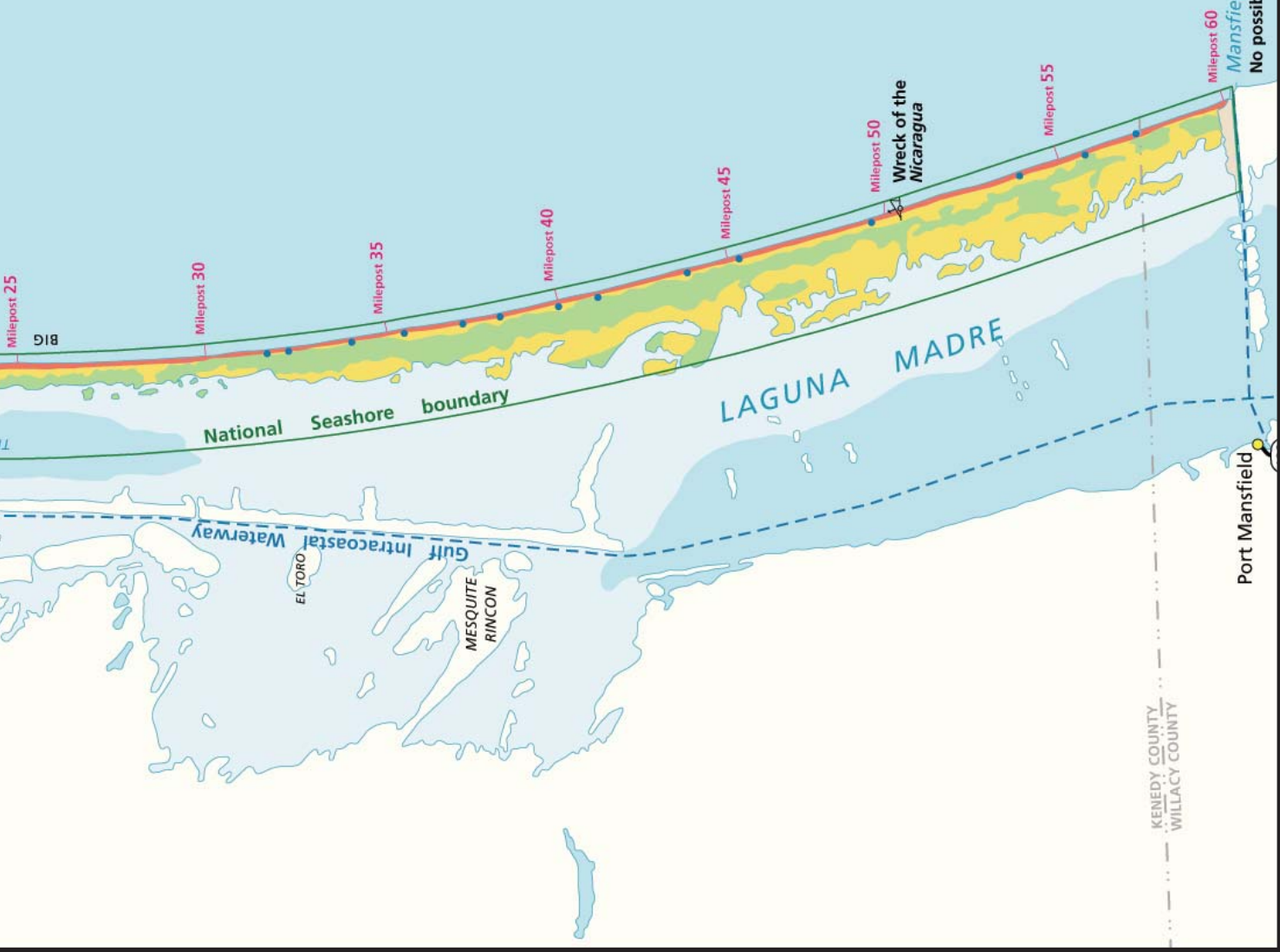






**Natural areas within Padre Island National Seashore**

- Beach
- Dunes
- Grasslands and flats
- Other area
- Tidal flat
- Spoil area
- Washover channel
- Picnic area
- Boat ramp
- Showers
- Wind surfing
- Campground
- Primitive campsite



**No possible crossing by vehicle**

# ISLAND OF TREASURE *By Ron Kratzer*

“Avast ye hearties! Lively with thar booty chest or ye dance the hempen jig! Heave ho ye shovels now boys! Arraag!!”

Padre Island National Seashore is indeed located on an island of natural treasure. With over 600 species of plants and wildflowers, thousands of acres of pristine wetlands, tidal flats, and fresh water ponds, the park attracts thousands of visitors each year to appreciate these natural treasures. However, in an earlier period, many island visitors were drawn to the island for a completely different type of treasure.

Not long after the Spanish discovery of Padre Island, originally called Isla Blanca, in 1519 the island became a depository of man made treasure. As Spain began settling its hold in the area many Spanish cargo and passenger sailing ships began plying the waters of the Gulf of Mexico frequently laden with mineral treasures of the New World. The Gulf coast waters off of Padre Island can be treacherous; riddled with sand bars, and at the mercy of fierce storms. In those early days of wooden sailing ships this combination presented a very dangerous sailing environment.

Consequentially, Padre Island became one of the most legendary islands in the world for tales of shipwrecks, Spanish treasure, and hidden wealth. Strong currents in the Gulf, constant on shore winds, and frequent storms rightly gave early sea captains sailing the coast nightmares. Near what is now referred to as Big Shell and Little Shell beaches a slight bend in the shore became notorious for shipwrecks and was then known as “Devil’s Elbow”. It has been estimated that perhaps ten million dollars in silver was lost off the Texas coast. This lucrative sea activity naturally attracted “buccaneers”. Many were privateers; individuals who contracted mostly with the Spanish government to salvage shipwrecks. However, there were those who crossed the fine line of being a privateer and being an outright pirate. The inlets between islands and high sand dunes offered ideal hiding places for lurking “gentlemen ‘o fortune”. Some of the most infamous rogues of the times, such as Jean Lafitte, John Hawkins, and Mary Reed, along with dozens, if not hundreds of others utilized the waters along Padre Island to ply their trade.



Pirates Burying Treasure

This action was not confined to the waters of the Gulf, but also practiced on the island itself, as the vast number of foundered ships provided a source of activity and income for “wreckers”. Wreckers were men who roamed the island to salvage beached ships. These men were often referred to as “Sand Pirates”, as some didn’t wait for a distressed ship to be abandoned, but simply boarded it with guns drawn and helped themselves. There are tales of sand pirates attempting to increase their business by attaching lanterns to their burros and leading them along the beach on stormy nights to give the illusion to a ship at sea that perhaps there was a safe channel and of course, if followed, led to an unfortunate meeting with the feared sand bars of Padre Island.

Just one of the island stories of shipwreck and treasure is that of John Singer. Singer was an adventurer, shipping investor and somewhat of a scoundrel. Singer, who along with his second wife, and at least one son, (he had left his first wife back home in Illinois with other children) was exploring setting up a shipping operation in the Gulf of Mexico. Shortly after leaving Port Isabel in their three-masted schooner in 1847, they encountered some very bad weather. The increasing squall and huge waves promptly lifted the Singer boat and smashed it onto Padre Island. Everyone made it safely to shore and they fashioned a tent from the ship’s sails. After some days considering the situation they decided that this virtually uninhabited island wasn’t such a bad place and they fell in love with it. Even later when a rescue ship offered a chance to escape, they refused to leave. The Singers built a house from their ship’s wreckage, furnished it with articles of other wrecks, and settled in to island life. John started a vegetable farm and sold produce to Brownsville residents, began ranching, and also engaged in wrecking. The story has it that John Singer also had a knack for discovering buried treasure. He had a treasure trove himself; a place he called “Money Hill”. Apparently this was a secret sand dune somewhere concealing his fortune. Whenever John needed money he simply visited money hill and withdrew some of his account.



Galleon in Storm

John had a brother back East. John’s brother, Isaac Singer, was an inventor and an entrepreneur and was searching for needed money to launch a new manufacturing business. Regardless of how John Singer acquired his wealth, legend has it that he was able to make a sizeable loan to his brother to get his brother’s sewing machine business started. Now apparently Isaac Singer was as big a scoundrel as John because it is said that he never repaid the loan. However, after his new company began, operating he did send John a new Singer Sewing Machine and John’s wife, presumably using the machine on Padre Island, would have been the first person to ever use a Singer sewing machine in Texas.

# Island of Treasure Con't

John Singer was a “Northerner” and as the clouds of war began to gather he made no secret of his pro- Union sympathy which was understandably not well received as Texas was a Confederate state and eventually resulted in his eviction from Padre Island by Confederate troops at the start of the Civil War. Before he left, however, it is said that John placed \$80,000 in silver coins in a large screw top glass jar and buried it somewhere on the island. In this time period he was not alone in digging a depository in the dunes of the island. Affluent residents of Corpus Christi, fearing the consequences of the impending military conflict, were also making trips to Padre Island to hide money and personal items in the island’s secretive sands.

Singer spent the entire war years on the mainland in Corpus Christi. After the conflict he returned only to find that Union soldiers had torn down his house and used it for firewood. Also a hurricane during the war years had greatly changed many of the island features. Although he subsequently returned to Padre Island several times, he never relocated the large glass jar he had previously buried. Years later John Singer died a pauper and the silver burdened jar presumably still remains hidden somewhere on the island. In those days fortunes were made and fortunes were lost on Padre Island.

Singer’s story is just one of many tales of adventure and treasure during those early days on Padre Island. And now as you are stretched out on the beach in the afternoon sun, eyes almost closed – WHAT was that flash of something that you think you saw slightly above the dunes? Just a couple of soaring pelicans – or was it the tip a mast with a fluttering Jolly Roger? And now look over there – those glints of light farther up the beach – just wave reflections - or could it possibly be the top of a glass jar jutting from the sand? “Arraag!!”

## For Wetlands’ Sake By Kristina Jenkin, Biotech, Division of Science and Resources

Padre Island National Seashore visitors who venture south of big shell beach are sure to notice bollards that were installed along several washover passes during summer 2011. More can be found along the road to Yarborough Pass, with a total of 220 of the big posts being sunk. These bollards are part of a project funded by the Safe Borderlands Initiative aimed at deterring criminal activity within the Park while protecting and reclaiming natural resources affected by such activity. The Science and Resources Management division of the National Seashore recognized the damage to the island’s fore dune vegetation and wind-tidal flats caused by illegal off-road driving and began implementing measures to stop any further vehicle disturbances from occurring.



Bollards in Background

Wind-tidal flats are the primary wetlands of the National Seashore, comprising one fifth of the park’s territory. These flat, seemingly barren areas are characterized by long periods of being dry, with periods of flooding from Laguna Madre waters driven by strong Northerly winds. What looks like bare soil is actually covered a thin delicate layer of algae that springs to life when submerged. Flooding of the area is relatively brief, with water loss due to either a shift in wind direction or evaporation. While these wetland areas may appear as wasteland to some, they are actually highly productive biologically and critical to the overall health of the island’s wildlife. Tire tracks resulting from illegal off-roading are particularly destructive to this delicate ecosystem. As the elevation gradient along the flats amounts to only a few inches, alterations to the topography result in some portions being cut off from water flow, while others retain water long after it would normally return to the Laguna. Because of the sediment composition and the low wave energy of the shallow flats, the tire tracks become a nearly permanent feature and alter surface hydrology or flow characteristics to the point the algal mats that support the productive benthic community are no longer able to thrive.

This is particularly significant, as tidal flats such as these serve as an important winter and migration foraging habitat for shorebirds, including the federally threatened Piping plover. Habitat protection and restoration is of great importance to the Park, as Padre Island has been designated a Globally Important Bird Area by the American Bird Conservancy and a Site of International Importance by the Western Hemisphere Shorebird Reserve Network. A large portion of the wind-tidal flats are able to support extensive blue-green algal mats, creating an ideal environment for a thriving benthic community. Shorebirds feed on the snails, crustaceans, and insect larvae that would not be available if not for the presence of the algal mats. Alterations to the hydrology threaten the viability of the algal mats, as the algae require a degree of light attenuation lost in deeper waters. Failure to protect this unique wetland may further the habitat loss that has contributed to species such as the Piping plover to become federally threatened.

A fundamental policy of the National Park Service is to preserve park resources to the extent that the resources will be left unimpaired for future generations. Tire tracks left behind by vehicles alter the physical, biological, and aesthetic components of these valuable wetlands, and may take years to decades to recover naturally. Any driving in the dunes, grasslands, or mudflats of the Park is a violation, as it damages our natural resources. Protecting this valuable ecosystem will help to ensure that future generations will be able to experience viewing the incredible birds and wildlife of Padre Island National Seashore generations to come.

# “A Grain of Sand”

By William “Buzz” Botts

For look! Within my hollow hand,  
While round the earth careens,  
I hold a single grain of sand  
And wonder what it means.  
Ah! If I had the eyes to see,  
And brain to understand,  
I think Life’s mystery might be  
Solved in this grain of sand.

From: “A Grain of Sand” by Robert Service

Nothing compares to the feel of sand between the toes, the sounds of children laughing as they play on the beach, the warmth imparted on a summer day when stretched out upon it, or the romance and the beauty it invokes when strolling a remote beach with someone you love. Beaches remind us of good times spent with family and friends; of time relaxed and carefree. At a glance, the sand that formed that beach seems so simple...

Padre Island National Seashore’s beaches are primarily composed of sand. The name “sand” is short and simple just like the grains themselves. Yet as Robert Service implied there is so much more to the story! Bend down and lift a few grains of it from the Padre Island Beach. With a little effort, see if it’s possible to isolate a single small sand grain on your finger tip. Now, look up and down the coast at the vastness that is Padre Island and consider how something so tiny could build something so immense! Those tiny “stones” are the building block that created this expanse of wilderness coastline; that created Padre Island. How can something so diminutive build an island?

Perhaps the best way to answer that question is to start with the basics. What is sand? Many would say it is just ground up rock. Sand is actually a very broad term and is somewhat analogous to using the term *people*. When used as a descriptor, *people* encompasses diverse groups with different customs, skin tones, political views, languages, heights and weights, etc. Sociologists and anthropologists study the nuances of humanity so we can learn about ourselves much as geologists study sand to determine where the parent rocks originated and how the grains got to their current location. Geologists can take sand grains from a beach and carefully analyze the suite of components that the grains are composed of to determine where the grains originated. To geologists “sand” is not a single entity but is instead a mix of minerals with scientific sounding names such as quartz, feldspar, hornblende, zircon, and garnet.



Sand Grains Under a Microscope

In 1942, a geologist named R.M. Bullard did an analysis of the sand grains on Padre Island and determined the sand originated in two different locations. The sands on the northern end of Padre Island, including much of the National Seashore, come from Central Texas rock outcrops found along the Rio Colorado and Rio Brazos rivers. Some grains may be ground down from rocks formed over 200 million years ago. Those grains have a lot of history! The origin of the sand that comprises the southern end of Padre Island owes its descent to entirely different rocks found inland along the Rio Grande River. Not only was Mr. Bullard’s study useful in helping determine how the sand got to Padre Island, it also added validity to the idea that one of the reasons Padre Island is the longest of its type in the world, is due to Gulf of Mexico currents coming from opposing directions that collide offshore generating some of the energy needed to push sand onto the beach. The area of the island where the deposits end up is known as “Big Shell Beach”. It is about midway down the National Seashore beach and derives its name from the numerous shells and shell pieces that also accumulate there as a result of the converging currents. The shell pieces are big enough and heavy enough so that they tend to stay put while the smaller sand grains are moved by wind and water up onto the beach or along the coast by the near-shore currents and wave action. Most of the shells on Big Shell Beach are not from recently dead clams and mollusks (marine snails) but are actually in many cases almost fossils themselves. The large shells from Big Shell that have been carbon dated typically range from 1000 to 7000 years old! They are constantly being reworked and pushed around by the waves, storms, and currents as they have been for thousands of years.

Another way to think of how geologists determine how sand originated is to imagine walking into a kitchen and finding a pile of food spilled onto the floor. As you cleaned up the spill, if you were a good cook, you would likely recognize many of the ingredients and notice the way they had been cooked to determine what the dishes had been before ending up in a jumbled mess. Geologists are like chefs in a way in that they learn which mineral ingredients when “prepared” in a certain way, produce what types of rock. A geologist can work backwards to determine the rocks that sand was derived from by examining the minerals that it’s composed of.

Sand is like a food in another way as well. In a sense sand is the island’s food. The more sand (i.e. food) that the island receives, the bigger it grows. However, if the island is starved of food by construction of jetties and dredging then the island can lose weight and grow smaller. Changing currents and sea levels can also affect the amount of sand a beach receives. Hour after hour, day after day, waves pound against the sand. Why doesn’t it wash away against such unending pressure? In a sense it does. Sand never stays in one place for long on a beach. As a wave strikes the beach the energy lifts the grains and the wave forces may push it higher or wash it back down lower. Just as quickly as some grains are moving out, others are moving in to take their place. Geologists such as Dr. Richard Watson, in Port Aransas, Texas say many estimates are that from 500,000 to 700,000 cubic yards of sand per year may pass in and out of any given spot along this coast. That is a lot of sand movement! The constant shifting followed by rapid replacement is how sand fights the battle against the ocean currents.

# A Grain of Sand Cont't

Sand is nature's "Etch-A-Sketch", forever being shaken and recast to create some new form along the coast, along creek banks, and upon the land. Wind and water constantly shape and redistribute the grains into beaches, dunes, sand bars and countless other forms that make an island what it is.

Sand not only feeds the island, it provides a home to an unknown world right beneath our feet. Rachel Carson, author of the well known book *Silent Spring*, was not only a bestselling author: she was a marine biologist. In one of her books, Carson's *Edge of the Sea*, she describes something truly miraculous. Upon most tiny sand grains scattered along the beach there are entire "worlds" of life. A variety of organisms such as bacteria and bryozoans are able to live on a single grain of moist sand! A scanning electron microscope brings to life curious creatures thriving in the minuscule drop of water that may surround each uniquely shaped sand grain. Judith Winston, a marine biologist with the American Museum of Natural History, discovered 33 different species of animals called bryozoans living on sand grains. Nine of the species had never been seen before. Bryozoans are not plants. They are aquatic invertebrates that possess tentacles for gathering food into tiny stomachs. The animals are known collectively as microfauna meaning these tiny animals are so small you need a microscope to see them. Some microfauna spend their entire life on one sand grain that they call home, which effectively makes that sand grain into their own tiny planet!

For most National Seashore visitors sand will always be seen primarily as nothing more than a plaything. To contemplate each tiny grain as Robert Service did is difficult to make time for. However, despite the seeming insignificance of the individual grains, Mr. Service was onto something far greater than perhaps even he realized. For without those sand grains there would be no beach to make our memories on, no sand with unimaginably tiny creatures to contemplate, and most importantly – no habitat for the many species such as hungry shorebirds, nesting sea turtles, and countless other species that like us, all take sand for granted.

## Kid's Corner Where the Cattle Roam

Illustration courtesy of Amy Nordfelt  
Coloration courtesy of Jorge Martinez

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

Directions: Try to find as many words as your age or find all of them for a challenge!

BEACH           NOVILLO  
CATTLE         PADRE  
DRIVE           PARK  
DUNN           RANCH  
HISTORY        SANDDUNES  
KING            STORMS  
LINECAMP

# Frequently Asked Questions

## I would like to go camping. What sort of information do I need to know?

All campgrounds are open year-round. No reservations are accepted, and all camping is first-come, first-served. Campers must have a camping permit, which is available from the kiosks at the entrance to each campground or from a campground host at Malaquite Campground and Bird Island Basin.



Please note that a 14-day camping limit is in effect at all camping areas. At the end of 14 days, campers must vacate their site and leave the park for a minimum of 48 hours before returning to camp. The total number of days spent camping in the park should not exceed 56 calendar days per year in any combination of visits or consecutive nights. Camping is permitted only in the five camping areas available for public use.



## Can I build a campfire on the beach?

Usually, visitors can build a campfire on the beach unless a fire ban has been initiated by local authorities. At the campgrounds, visitors may only use the grills provided at the campsites and are not allowed to dig their own fire pit. However, on the beach in front of Malaquite Campground and on North Beach and South Beach, people are allowed to dig a small fire pit in the beach sand. No bonfires are allowed in the park. Ground fires are also not allowed at Malaquite Beach, but visitors are welcome to bring their grills from home for use on the ground, not picnic tables. Grills are also not allowed at Malaquite Pavilion. Instead, visitors may set up their grills at the Malaquite Picnic Shelter on the ground, not picnic tables.



## Where can I dump my gray water and sewage?

There are no public RV hook-ups anywhere in the park, but an RV dump station and a water filling station are available for all campers staying in the park. Gray water and sewage must be disposed of only at the dump station at Malaquite Campground. This facility is available to all visitors at Padre Island National Seashore. Here, there is also a water fill-up station for visitor use.

## There aren't any garbage receptacles on the beach, so where can I put my trash?

Please practice leaving no trace by packing your trash out with you when you leave. There are large dumpsters and recycling receptacles in the parking lot of the Malaquite Visitor Center. There are also smaller trash and recycling receptacles on the deck at Malaquite Pavilion. The visitor center also gives out free trash bags for your convenience. Please help the park by picking up trash you see on the beach.



## I love hermit crabs and sand dollars! Can I take them home with me?

The National Seashore protects all living things because each creature plays an important part in its natural habitat. Also, the number of many shellfish species is declining due to a number of human impacts. Taking a wild creature from its home is unethical, and it is against the law at the National Seashore.

While you are not allowed to take living creatures, you are allowed to collect up to five gallons of empty shells, sea beans, and other beach treasures each day. Please keep living creatures in their homes so that, in the future, people will be able to visit Padre Island National Seashore and see the same, or improved, park that you do today.



## Where can I bring my pet and are there any other pet-related rules I should know before visiting the National Seashore?

You can bring your pet to most parts of the park. Because many visitors often spend their day at the visitor center and on Malaquite Beach, dogs are not permitted only in these places for safety purposes. Pets are allowed on North and South Beach, where driving is also allowed, along with Malaquite Campground and Bird Island Basin. Ask a ranger about how you and your pet can access the section of the beach that is closed to vehicles. Pets must be on a leash at all times in the park to keep wildlife and your pet safe. To keep the National Seashore looking clean and to show courtesy to other visitors, please clean up after your animals.

### Is there a rip tide in the Gulf of Mexico?

Yes. Occasionally strong currents and sudden drop-offs in the surf can be dangerous for swimmers and waders alike. If caught in a rip tide that pulls you away from the beach, 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. Use caution when swimming and never swim alone.



### Are there any dangerous animals at Padre Island National Seashore?

Watch out for animals like Portuguese man-of-war, stingrays, and rattlesnakes. The Portuguese man-of-war can cause a painful sting, which is usually accompanied by redness and some swelling of the affected skin area. Stingrays (bottom-dwellers), if stepped on or agitated, can inflict a puncture wound that can be extremely painful. Rattlesnakes live in the dunes, grasslands, and mudflats. Treatment at the visitors can seek help and treatment at the visitor center or by a park ranger.



### I was walking on the beach and found a strange container with some liquid in it. Should I pick it up and throw it away?

No. Hazardous materials 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 without touching the object(s).



### When I go to the beach, I love feeding the gulls. Is that allowed in the park?

While feeding the wildlife can be fun and allows us to be closer to animals, it is not allowed at the National Seashore. Feeding wildlife is prohibited by NPS policy, and it causes wildlife to feel safe and okay approaching people. When this happens, wildlife begins to depend on people for food, and close encounters can cause animals to harm people, be harmed by people, or to harm other wildlife. Please keep yourself, other visitors, and animals safe and wild by not feeding wild creatures in their natural habitat.



### Can I use a metal detector at the National Seashore?

No. 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 in order to preserve and protect cultural resources.



### Is hunting allowed within the boundaries at Padre Island National Seashore?

Hunting is not permitted in the park, except for the taking of waterfowl by boat 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.



### Can I bring my firearm to the National Seashore?

Yes. As of February 22, 2010, a new federal law allows people who can legally possess firearms under federal, Texas, and local laws.

It is the visitor's responsibility to understand and comply with all applicable state, local, and federal firearms laws. Federal law prohibits firearms in certain facilities in this park; those places are posted with signs at public entrances. If you have questions, please visit the park website at [www.nps.gov/pais](http://www.nps.gov/pais).

### Can I ride my dune buggy in the National Seashore?

Beaches in Texas are 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. Pedestrians have the right-of-way at all times and do not always watch for approaching vehicles. Drive with caution and strictly observe posted speed limits. On the beach, northbound traffic has the right of way.



Western National Parks Association (WNPA) is a nonprofit cooperating association of the National Park Service, founded to support the interpretive activities of the National Park Service. One of WNPA's founding goals was to create and publish park-related information unavailable elsewhere. Currently WNPA has more than 175 books in print with many new publications introduced yearly. Western National Parks Association supports parks by producing more than a half million pieces of free literature annually, including park magazines such as this, trail guides, newspapers, schedules, and brochures. Since its inception over 70 years ago, it has contributed more than \$55 million to national parks, generated through store sales to park visitors and the support of our members. For more information or to shop online, please visit our website at [www.wnpa.org](http://www.wnpa.org).



### Island Seashore Gift Shop

Located at the Malaquite Pavilion, the Island Seashore Gift Shop is a general concessions store with supplies that you may have forgotten or need along with gifts and souvenirs.

#### Store's Hours

##### Winter Hours

Monday-Sunday  
9:00 a.m. - 4:00 p.m.

##### Summer Hours

Monday-Sunday  
9:00 a.m.-5:00 p.m



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National Park Service  
U.S. Department of the Interior  
Padre Island National Seashore



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**Physical Address:**  
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**Park Information:**  
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**Official Park Website:**  
[www.nps.gov/pais](http://www.nps.gov/pais)

**The Gulf Breeze Editor:**  
Juan Rodriguez

**For emergencies, dial 9-1-1.**

Increasingly, partnerships are an essential and effective means for the National Park Service to fulfill parts of our mission and foster a shared sense of stewardship that is so crucial for our future. Padre Island National Seashore would like to thank its partners for the continued services they have offered to the park's visitors throughout the years.