Natural Features of Bird Island

The Bird Island Reserve has pristine sandy white beaches, dunes, grasslands, salt marshes, and tidal creeks. The reserve is located in Brunswick County, south of Shallotte. From Hwy. 17 South, turn left onto N.C. 904; then turn right onto N.C. 179. It will become Sunset Beach Boulevard. Cross the Intracoastal Waterway onto Sunset Beach. At the “T” intersection with Main Street, turn right. Parking is permitted on the side of the road and near the 40th Street crossover. Walk west on the beach to get to the reserve boundary.

Visitors can expect to find beautiful salt marshes and tidal creeks. The Bird Island Reserve was previously owned by the Bird Island Preservation Society, a group dedicated to the protection of this coastal ecosystem. The reserve is now managed by the N.C. Division of Coastal Management to protect the island’s ecosystems and organisms for research, education, and compatible uses.

Bird Island is managed by the N.C. Division of Coastal Management to protect the island’s ecosystems and organisms for research, education, and compatible uses. Support and assistance of the Bird Island Preservation Society and its volunteer stewards is gratefully acknowledged. This site is also a Dedicated State Nature Preserve.

The North Carolina Coastal Reserve & National Estuarine Research Reserve is a part of the N.C. Division of Coastal Management, a division of the N.C. Department of Environmental Quality.

Bird Island is an important research site for scientists, students, and the public. It is available as an outdoor laboratory where visitors can learn about the processes, functions, and influences that shape and sustain the coastal area. The reserve is open to visitors year round.

Rules & Tips for Visitors

- Visit at your own risk. Sites are remote and conditions can include natural hazards such as bees, ticks, and poisonous plants.
- Off-leash pets are prohibited.
- Fires, fireworks, target shooting, nudity, and camping are prohibited.
- Hunting is allowed as per state and local hunting regulations.
- Producing noise that is disruptive to wildlife or other visitors is prohibited.
- Removable or disturbance of plans, animals, fungi, or vegetation is prohibited.
- Producing noise that is disruptive to wildlife or other visitors is prohibited.
- Visitors are provided with maps and guides.
- Littering is prohibited. Leaving any personal property unattended within the boundaries longer than 24 hours is prohibited.
- Recreational/off-road motorized vehicles are prohibited. Bicycles are allowed on the ocean beach.
- Access to the reserve is provided.
- The reserve is open to visitors year round.
- When you have finished with this publication, help save our earth by sharing it with a friend, returning it, or recycling it.

For the most up to date rules and guidance visit: [deq.nc.gov/reserve-rules]
Bird Island Reserve

Upper beach

The area between the surf zone and the dunes is subject to harsh conditions like shifting sands, glaring sun, strong winds, salt spray, and storm surge. Only a limited number of species are specifically adapted to survive here. Flowering plants include sea rocket, orach, dune spurge, and seaside elder. Grasses such as sea oats and beach panic grass grow here.

The upper beach is a critical nesting area for loggerhead sea turtles. Some ground nesting birds such as the American oystercatcher, terns, black skimmer, and Wilson's plover build nests directly on the sand. The ghost crab makes deep tunnels under the sand to avoid predators and high temperatures.

Sand dunes

Plants are found in greater numbers as distance and elevation above sea level increase. The dune system at Bird Island has prominent frontal and secondary dunes, some in excess of 20 feet high. Sea oats are the dominant vegetation. Their extensive underground stem and root networks stabilize the dunes by literally holding the sand together.

Other dune plants such as croton, pennywort, and evening primrose are adapted to the windy conditions. They have flexible leaves and stems and grow close to the sand.

Maritime grasslands

The depression behind the sand dunes is better protected from salty wind and waves. Here, grass and herb species include saltmeadow cordgrass, broomedge, carex, prickly pear cactus, peppergrass, blanket flower, goldenrod, marsh fimbry, pennywort, and beach morning glory.

The grasslands vary from seasonally or permanently wet in lower areas to well-drained in areas of higher elevation.

Maritime shrub thicket

Farther from the effects of the ocean, where salt spray and temperature variations are reduced, a mix of vine, shrub and tree species grows into a shrub thicket. White-tailed deer, non-native red fox, bobcat, opossum, raccoon, marsh rabbit, and cotton mouse use the shrub thicket for protection and shelter.

Salt marsh

Lunar tides flood the intertidal salt marshes twice each day. Supratidal marshes remain above water except during occasional spring tides and storm tides.

Saltmarsh cordgrass, which dominates the intertidal marsh, is adapted to dramatic changes in salinity and temperature. This abundant, tall plant regulates salt concentrations in its cells by releasing excesses through pores on its blades.

Tidal mud flats

Expansive and seemingly barren flats are easy to see at low tide. Decaying marsh grass, or detritus, is deposited with each tide. These nutrients support a food web of crabs, fish, snails, and mussels.

Wading birds and shorebirds come to the exposed mud flats to feed during low tide. The sediments sometimes have a “rotten egg” smell due to the hydrogen sulfide gas produced as decomposers break down organic matter in the marsh.

Sea beach amaranth

Found in the foredune, this rare plant does not tolerate disturbance such as development, beach nourishment, and erosion. Only 55 populations are known to exist. As a result, the plant was listed as federally threatened in 1993.

Diamondback terrapin

The diamondback terrapin is a state species of special concern. It is the only reptile specifically adapted to survive in fresh or salt waters. It prefers the brackish water of the salt marsh. The shell of this reclusive turtle has distinctive diamond-shaped scales.

Loggerhead sea turtle

Female turtles crawl out of the sea to nest during the summer. Hatchlings mature in the sea and the females may return many years later to nest in the same region. It is estimated that only one in 1,000 of these threatened sea turtles will survive to adulthood.

Mammalian predators

Predator populations fluctuate from year to year. Clever predators, such as red fox and coyotes, use a variety of food sources and adapt readily to living in close association with human development. The result can be noticeable impacts to threatened and rare wildlife, including damaged sea turtle and shorebird nests.

Birds

The barrier island bird community includes brown pelican, Wilson’s plover, black skimmer, ibis, gulls, herons, and egrets. Piping plover, willet, eastern painted bunting, wood stork, and several types of tern are present, but less common.