



A
**BALD HEAD ISLAND
ECOLOGY PRIMER**

A Tale of Animal
and Human Habitats

by
Story Dawson

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The Bald Head Island Conservancy

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A TALE OF ANIMAL HABITATS

Where Will Wanda Want to Live?

An Ecosystem Adventure

Wanda the Warbler wanted to build a nest. She was looking all over Bald Head Island for just the right place. She needed some prime real estate. She began asking the locals where a good place would be to build her nest.



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At **THE CREEK** she talked to Manny the Minnow. He said, “hmmm...I know a place down the way that would be good for a home.” Wanda followed his directions, but when she got there she stood on the mud and started sinking. It was too soft and wet for a nest. It might be a good place for a minnow, but it was not a good place for Wanda’s family.



She flew to **THE BEACH** and saw a loggerhead turtle named Lucy. Lucy told Wanda that, “yes, the beach was just the right place to build a nest.” It had soft sand and she could dig a deep hole for her eggs. Wanda looked around and agreed that it was nice. But she saw there was no protection from bigger birds and other predators. It was also very windy, and the sand stung her legs. “Thank you

Lucy the Loggerhead, but I shall keep looking,” she said.



At **THE POND**, Wanda noticed some nice trees on the banks and lots of bugs near the water. Alfred the Alligator told her it was the best place to call home. He had lots of yellow-bellied slider

turtle friends, lots of fish to chase and sometimes he could catch a plump heron for dinner. Wanda quickly flew to a higher branch and told him she liked his pond but had to say goodbye.

She went deep into **THE MARITIME FOREST**.

It was dark and felt safe. There were a lot of leaves on the forest floor and she knew she would find some fat worms and grubs to feed her children. Sammy the Snake welcomed her to the forest. He told her all about his home. He had logs to hide in and trees to climb. There were lots of little creatures for him to eat. Wanda felt nervous and wondered if perhaps the forest was a little too enclosed. She would need more openings for escape if something chased her.





Finally, Wanda went into the shrub thicket in **THE DUNES**. The shrubs were good protection but had enough openings so she could fly in and out with speed. The shrubs had some leaf mulch underneath them and some bugs, and lots of little branches for building a nest. It was prime real estate for Wanda. She moved in right away and started to build her nest. Her neighbors were a darling dove couple raising their new chicks. She could not wait to have her own!

Animal Habitats and the Island

All of the living things (including people) and the land they live on, as well as how they live together and use each other to survive, is called **ECOLOGY**. Ecology is the relationships of living things and the land.

When people use the land, they change plant and animal habitats to make their own habitat. This disturbs the ecology of a place and affects survival of some species.

Questions

How can people protect plant and animal habitats when they build?

Why is it important to leave some places natural?

How does the Bald Head Island Conservancy protect animal and plant habitats on the island? Does your hometown protect animals and plants?

Think about Wanda's search for a home. What would happen if people destroyed a particular animal habitat (such as all freshwater ponds) on Bald Head Island?

Did you know North Carolina has 27 plants and 39 animals on its endangered or threatened species list? The Loggerhead sea turtle is one. How has this happened?

Some species thrive when people build new homes and towns. Can you think of which species do well, and why?

Habitat Activities

What is a **habitat**?

Habitat: the natural home in which a plant or animal lives

Identify the **habitat** of each animal:

Manny the Minnow _____

Lucy the Loggerhead _____

Sammy the Snake _____

Alfred the Alligator _____

Wanda the Warbler _____

You _____

- pond
- dune/shrub
- thicket
- house
- beach
- creek
- forest

Draw a picture of your favorite animal on Bald Head Island in its habitat.

Here are some ideas: raccoon, fox, snake, skink, frog, snapping turtle, alligator, heron, cardinal, crab, fish.

Scavenger Hunt

Find a:

- _____ yaupon leaf
- _____ auger shell
- _____ white bird feather
- _____ purple berry
- _____ twisted stick
- _____ eggshell or bone
- _____ grass seed
- _____ acorn
- _____ beetle
- _____ something unusual

Match Game

Have a friend find 5 natural objects. You then find 5 to match them as close as possible.

Insect Magnet

Place a large sheet of white paper or fabric under a tree.

Wait a few hours and investigate the different insects which are attracted to the paper.

Hidden Treasure

Describe and count the species you find under a log.

Wildlife Habitat Journal (copy if you need more pages):

Date _____ Time _____

Habitat Find:

Species Involved:

Where located on the Island:

Notes:

Sketch:

A TALE OF HUMAN HABITATS

A History of People on Bald Head Island

Bald Head Island is a place that feels different from the mainland. The biggest difference is that there are no cars on the island. Years ago, it was decided that there would be no bridges built and no cars allowed. This would keep the island less crowded and more natural.

When you visit Bald Head Island, you will notice that the roads are small and have been built to save trees. As much of nature as possible has been saved, even though a lot of homes have been built in the forest and the dunes. People have tried to preserve the natural parts of the island which make it a beautiful and a special place.

People are part of nature too. We are an animal species which needs air, water and food just like the other animals, birds and plants on this earth. Unlike most other animals, we can change the land for our use, sometimes in good ways and sometimes in bad ways. On Bald Head Island, people have learned to care about habitats and ecology. From helping the loggerhead sea turtle to stopping the spread of damaging types of plants, Islanders help the natural health of Bald Head Island.



*Old Baldy
Light House and
Keeper's Cottage
1893*

A Coastal Island

Bald Head Island's unique ecology is a type of ECOSYSTEM. An ecosystem is all the natural parts of one place—in this case, Bald Head's ocean beaches, riverfront, marshes, dunes, forest, climate, animals, insects, turtles, grasses, fish, and everything that lives on and around the Island.

The island itself is similar to a lot of other islands found along the southern coast of the United States. Bald Head Island's special ecosystem is made by its location on the coast; warm ocean currents; the strong winds and sea spray; hot, humid temperatures most of the year; storms and lots of sunshine.

People on Bald Head Island

People visit and live on the Bald Head Island because of its warm weather, beaches and wild nature. But it is only in the last one hundred years that people have used the island mostly for play. In the past, it was used by people as a food source and a good place near the river mouth to serve and protect the towns upriver. Here is how people have used and changed Bald Head Island over the years as a source of supplies, work, or as a habitat.

Native people first used the island thousands of years ago to hunt and gather shellfish in the warmer months. We know this only because mounds of shells, called **MIDDENS**, have been found along the creek edge where the natives made camp.



Smith Island Map



Bald Head Lighthouse 1795

Local Homes

Explorers sailed up the Atlantic coast in the 1500's, but it was not until the late 1600's when people started to live on the lands of the Cape Fear River. The settlers only used the island to hunt and fish, as had the natives, but it became useful mostly as a place for ships to anchor near the river mouth. There are even stories about pirates using the island as a base to raid passing ships.

Bald Head Island was also used to get timber for boat building—the live oak trees that grew there were the right shape for ship's keels. Livestock (cattle and pigs) was also kept there to graze because no fences were needed.

In the 1700's, many settlers built homes and farms further up the Cape Fear River. Ship traffic grew, using the river to carry people and supplies. Some ships used the creeks around Bald Head Island to anchor and wait for good weather.

Island Building

As towns upriver grew, more people used Bald Head Island. The first building was a lighthouse built in 1794, and the lightkeeper was most likely the island's first resident. He lived in a keeper's cottage and kept chickens, a cow for food, and a garden, but had to row his boat to Smithville (now Southport) for supplies.

By 1813, the first lighthouse was torn down because the river got too close. A new one was built in 1817 and that is the one you see today. It is called **OLD BALDY**, and is now the oldest lighthouse in North Carolina.

A lot of other building happened in the 1800's on Bald Head Island. People used the island to help protect ships, such as with lighthouses; a lifesaving station to help shipwrecks; and a fort during the Civil War, which kept the Union ships from using the river. This small fort was named **FORT HOLMES** and was the largest building project on the island until then. Many trees were cut down and land was moved to create earth walls and high mounts for guns. Slaves from area plantations helped build the fort from sand, palm tree logs, and grass sod from the marshes. The fort was only needed for two years (1863-1865) but it was important for protecting the river. You can still see the earth walls of the fort in some places. Bald Head Island even got its name from a high dune which was well-worn by people using it to look for approaching ships.



*Captain Charlie
and Tram
early 1900's*

In the 1900's, another lighthouse was built near the southeastern cape called the **CAPE FEAR LIGHT**. It guarded the cape from 1903 to 1958. Three families used the keeper's cottages. During World War II, more buildings were built to protect the coast, such as a tower for spotting enemy ships, and a stable and bunkhouse for the men who patrolled the beaches on horseback. At this time, the island had a many residents, including some children (the families of the lightkeepers). A small school was even held. Overall, about 40 people lived on the island full time in the early 1900's.

Island Changes

As more people came to the area, new plants and animals were brought to the island for food and work. Fruit trees were planted and areas cleared for gardens. Along with the timber cutting and roads made through the forest and dunes, this gradually altered the island ecology. Although people liked to visit because of its natural features, Bald Head Island changed as humans used it more and more.

Land for homes first went on sale in the 1930's. A man named Thomas Boyd built a hotel and dock on the river to bring people to the island. He called it "**PALMETTO ISLAND.**" He did not sell many lots before the Great Depression started. Boyd then had to rent the island to farmers who cleared large areas of land to grow crops and plant orchards.

The State of North Carolina claimed Bald Head Island in the 1940's because taxes were late. Some people wanted it to become a state park. But the island was bought by a company which started building roads, the marina, and the golf course with ponds.

Of all the changes in the island's ecology, the golf course has been the biggest. Many trees were cut down and the land shaped to make the greens. This opened some of the maritime forest to salt spray and wind, which injured many trees. However, now the course has ponds, which are good habitats for alligators, ducks, herons, and freshwater turtles.

Protecting the Ecosystem

Land has been cleared a lot in the past fifty years for the many homes and other buildings. In order to save trees, there are many rules for builders about how to build. There are also rules for people such as keeping beach homes dark at night to keep the sea turtles safe, not walking on the dunes to keep the sand in place, and how to enjoy the creek without harming wildlife. Keeping the non-native plants and animals under control is also important to the ecosystem of Bald Head Island. Some **INVASIVE** plants can take over and damage the native ones.

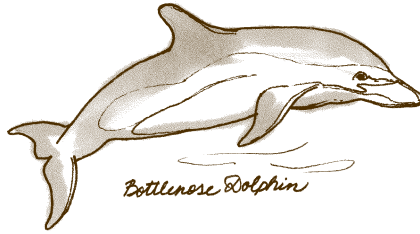


People now know that the wild beauty of Bald Head Island must be protected. They also know when the natural features of the island are changed or destroyed, it affects the ecosystem and may create problems. The more we learn and teach about the ecology of Bald Head Island, the more we can protect and save this special ecosystem for future generations.

Animals to Identify on Bald Head Island

Mammals:

- White-tailed deer
- Grey Squirrel
- Grey Fox
- Red Fox
- Opossum
- Bottlenose Dolphin
- River Otter
- Raccoon



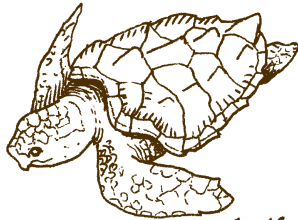
Bottlenose Dolphin



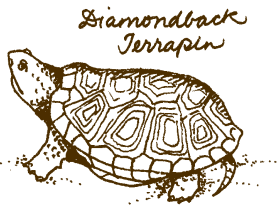
Red Fox



Raccoon



Loggerhead Sea Turtle



Diamondback Terrapin



Slider



American Alligator

Reptiles and Amphibians:

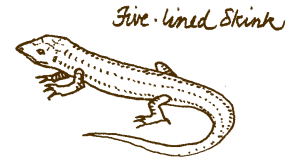
- Loggerhead Sea Turtle
- Diamondback Terrapin
- Yellow-bellied Slider turtle
- Carolina (Green) Anole
- Rough Green Snake
- Black Racer
- Yellow Rat Snake
- Green Tree Frog
- American Alligator

more Reptiles and Amphibians:

- Corn Snake
- Squirrel Tree Frog
- Eastern Glass Lizard
- Five-Lined Skink



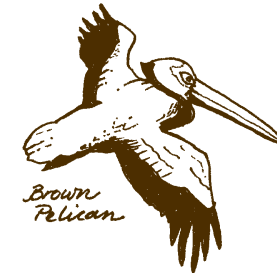
Corn Snake



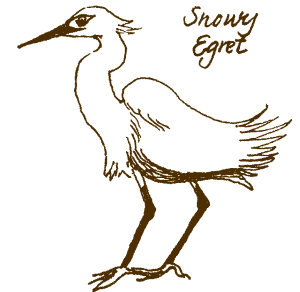
Five-lined Skink

Birds:

- Brown Pelican
- White Ibis
- Great Blue Heron
- Tri-colored Heron
- Great Egret
- Snowy Egret
- Sandpiper
- Laughing Gull
- Cormorant
- Boat-tailed Grackle
- Mourning Dove
- Swallow
- Purple Martin
- Cardinal
- Royal Tern



Brown Pelican



Snowy Egret



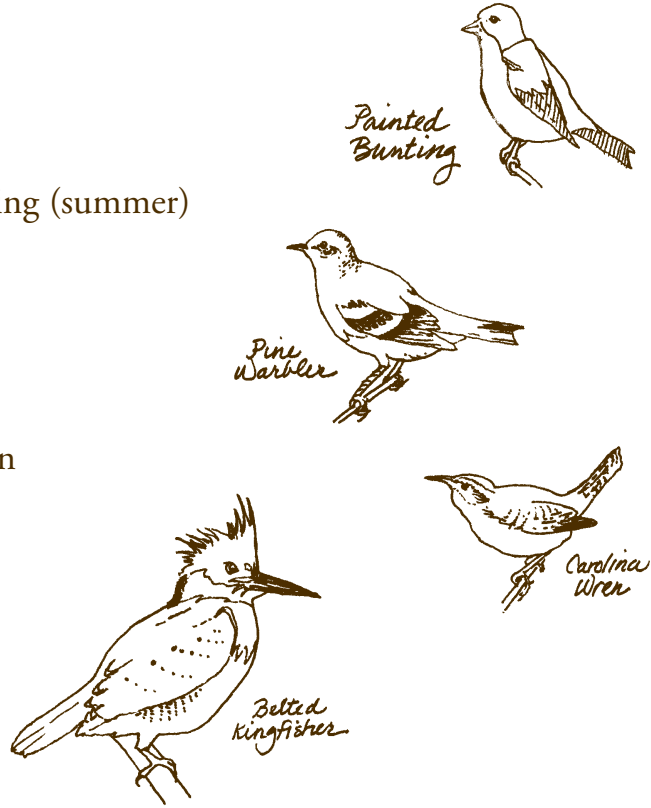
Laughing Gull



Purple Martin

more Birds:

- Least Tern
- Osprey
- Painted Bunting (summer)
- Pine Warbler
- Sanderling
- Willet
- Carolina Wren
- Kingfisher



Plants to Identify on Bald Head Island

Maritime Forest:

- Live Oak
- Sabal Palmetto
- Red Bay
- Carolina Laurel Cherry
- American Holly
- Resurrection Fern
- Yaupon Holly
- Loblolly Pine
- Wax Myrtle
- Dogwood
- Red Cedar



Dune, Shrub Thicket and Beach Strand:

- Sea Oats
- Panic Grass
- American Beachgrass
- Silverleaf Croton
- Indian Blanket
- Greenbrier/Catbrier
- Seabeach Amaranth



