

This is a land of legend, change, and survival. Ice, wind, and water shaped this place and continue to create a dynamic landscape—piercing blue lakes, immense stretches of dunes, and lush, deep forests. Nature's pulse is all around you. Listen to the rhythm of the waves against the shore; the rise and fall of water and currents move shoals and shape shorelines. Feel the wind. Each day it sculpts the dunes, building here, removing there.

Explore the shores, lakes, islands, and forests. Discover personal stories of hardship, heroism, and resilience; witness struggles for survival in plant, fish, bird, and mammal communities; experience accessible wilderness and the glow of the Milky Way arching across a clear night sky. Relax. Enjoy. Make memories and a connection to Sleeping Bear Dunes National Lakeshore.

## A Masterpiece of Ice, Wind, and Water



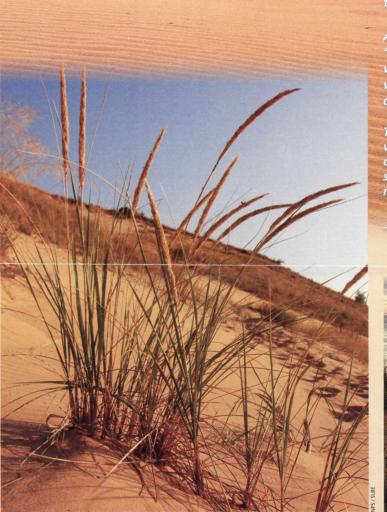
What encouraged you to come to Sleeping Bear Dunes National Lakeshore? The dunes? The lake? The forests? The wilderness? You may not have thought about it, but it was ice. Heavy, powerful, and up to a mile thick, glaciers advanced from the north over two million years ago. Creeping along like bulldozers, they moved rock and soil, gouging, carving, deepening, and widening existing drainages and rivers. Around 14,000 years ago temperatures warmed and the glaciers started to melt. The glaciers retreated, leaving behind ridges, glacial



*Ice* Each winter nature's ice sculptures remind us of the continental ice sheets, which formed the Great Lakes and other features of Sleeping Bear Dunes National Lakeshore.

kettles, moraines, and other glacial landforms. The meltwater filled in the holes, creating the Great Lakes, smaller lakes, and wetlands.

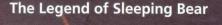
Since that time, westerly winds, water, and weather continue to impact the land. Sometimes the change is gradual, but occasionally, storms transform the landscape in a matter of hours. The dunes are the most prominent feature here and are most affected by winds blowing across Lake Michigan. They are part of a dune system



**Wind** Dune grass roots hold the sand in place, stabilizing and protecting the dune habitat for other species who live here. Help protect the fragile dunes by staying on designated trails.

that stretches along western Michigan, the largest freshwater dune system in the world. The tallest and most spectacular are perched dunes—piles of sand blown on top of glacial moraines (plateaus of rock and sand debris), left by retreating glaciers. Lower beach and falling or de-perched dunes are also found here.

Waves and currents refine the lakeshore you see today. The water level has changed many times since the glaciers retreated. Waves eroded the jutting headlands and bays.



Once, long ago, across the great lake in Wisconsin, there was terrible hunger and many people and animals died. A bear and her two little cubs, desperate for food, left that place to swim the long distance to the other side of the lake

After a while the cubs became very tired, and so the bear said: "Try hard, the land is not very far." But gradually the cubs weakened. Exhausted, one cub sank into the water when they were within sight of land and soon after the other also

The bear's heart was broken, but she could do nothing. She waded ashore and climbed the bluff to lay down looking out surfaced as two little islands. And so the bear still lies there now—looking after her children.

-The Anishinaabe Legend of the Manitou Islands and Sleeping Bear Dune



Water Wave action and currents continually shape Lake Michigan.

Currents carried sediment, building sandbars—some so wide they created inland lakes, like Glen and Platte lakes.

From day to day and year to year, nature is constantly sculpting, molding, and reshaping this masterpiece of ice, wind, and water. What will the next change be?

## **Diverse Natural Communities**



The view from Pierce Stocking Scenic Drive of North Bar Lake, Empire Bluff, and Platte River Point shows waters, beaches, dunes, and forests.

The dunes are, perhaps, the best known and most visited habitat within the lakeshore. However, other complex habitats—northern hardwood, pine, and boreal forests; interdunal wetlands, bogs and fens; 26 inland lakes; and several rivers and streams—are home to a wide variety of fragile plant and animal

communities that are continually shaped by natural processes.

Sleeping Bear Dunes National Lakeshore preserves 71,000 acres of natural habitat. Management includes monitoring, research, and restoration efforts to help maintain the complex and delicate web of life.

Waters in the park, including Lake Michigan, inland lakes, and streams are designated as "Outstanding State Water Resources." They support diverse, highquality aquatic communities, including warm- and coldwater fisheries, many amphibian species, and a variety of aquatic life.



Piping plover with eggs

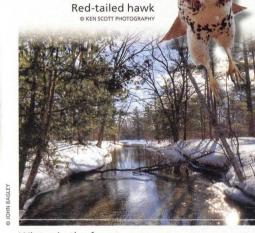
Beaches occur where water meets land, extending from the water's edge to the reach of the highest storm wave. They are an important foraging habitat for many shorebirds, as well as nesting habitat for piping plovers, endangered due to habitat loss, predation, and disturbance of nesting sites. Help us protect these vulnerable birds by keeping dogs on a leash and obeying all closure signs.



Pitcher's thistle

**Dunes** along Lake Michigan are ecologi cally unique and support a diversity of plants and wildlife. Within the Lakeshore, the process of dune formation, stabilization, and movement continues largely uninterrupted along 65 miles of shoreline.

Pitcher's thistle is a threatened dune plant that is globally rare, but commonly seen here due to large areas of preserved dune habitat.



Winter in the forest

Forests here are mostly secondary growth and are of a scale and quality rare on the Great Lakes shoreline. A small stand of old-growth cedars (400-500 years old) remains on South Manitou Island. The diverse forests support a variety of wildlife.

## Home, Hardships, and Heroes



Bufka Farm at Port Oneida

Following the retreat of the last glaciers, prehistoric people were active in the area. They lived in seasonal camps fishing, gathering, hunting, and trapping. The Anishinabek people were living here when Europeans arrived in the mid-1600s. In the early to mid-1800s, Europeans settled on the Manitou islands and later moved to the mainland.

Visit Port Oneida Rural Historic District and Glen Haven to step back in time. These once thriving communities are a testament to the hardworking immigrant families who chose this rugged land as their home. Imagine their struggles and hardships, and marvel at their resourcefulness. Life here was hard. Would you have been up to the challenge?



Steamship at dock

Glen Haven played a role in three of Northern Michigan's economic eras lumbering, agriculture, and tourism. A stop for ships to take on fuel wood, it provided food, lodging, and services to travelers along Lake Michigan. Its economic evolution can be traced to visionary businessman David Henry Day, who pioneered sustainable forestry, helped introduce fruit orchards, and brought tourism to the area. Today, you can tour the fruit cannery (now a boat museum), general store, and blacksmith shop.



Farm life program

Port Oneida, settled predominantly by German and Prussian immigrants, was a lumbering, farming, and port community. In the 1860s Thomas Kelderhouse built a dock and sawmill, harvesting forests to sell as fuel to the steamships traveling across Lake Michigan. By the 1890s the forests were cleared, and the dock and mill were closed. Poor soil conditions forced some residents to move to support their families. Today the Port Oneida Rural Historic District is the nation's largest publicly owned historic agricultural landscape.



South Manitou Lighthouse

Treacherous Passage The Manitou Passage, a 36-mile-long waterway between the mainland and Manitou islands, is a main shipping lane through Lake Michigan. It provides one of the few sheltered bays between the Straits of Mackinac and Chicago but hides dangerous shoals and sandbars. Before modern navigational aids, stranded and wrecked ships were common here, leading to the construction of the South Manitou Lighthouse (1839), North Manitou Lighthouse (1896), and North Manitou Shoal Light (1935).

You have to go out, but you don't have to come back.



Surfboat and crew

US Life-Saving Service In 1871 Congress created the US Life-Saving Service (USLSS). Stations were built on North and South Manitou islands and Sleeping Bear Point. From 1871 to 1915 courageous surfmen and keepers rescued over 178,000 people from shipwrecks. In 1915 the USLSS merged with the US Revenue Cutter Service, forming the US Coast Guard. Visit the Sleeping Bear Point US Life-Saving Service Station Maritime Museum, just west of Glen Haven, to find out more.

