

Sleeping Bear Dunes

National Park Service
U.S. Department of the Interior

National Lakeshore
Michigan



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On the northwestern shore of Michigan's Lower Peninsula lies Sleeping Bear Dunes National Lakeshore, a hilly region fringed with massive shoreline sand dunes and dotted with clear lakes. Its diverse landscape embraces quiet, birch-lined streams, dense beech-maple forests, sandy beaches, and rugged, glacially formed bluffs towering as high as 460 feet above Lake Michigan. Offshore sit North and South Manitou islands, tranquil and secluded.

Each year over a million visitors come to Sleeping Bear Dunes for its wealth of opportunities to relax and enjoy the outdoors. Many play at the Dune Climb or savor sweeping views of land and water from the park's roadways. Others hike the trails to find a rich variety of wildflowers, mammals, and birds. Beachcombers enjoy a walk along Lake Michigan's shore, stopping to examine pebbles or shells. Canoeists on slow-flowing streams experience an intimate look at the countryside. Fishing fervor peaks in the fall, when coho and king salmon, fish introduced from the Pacific Ocean, return to the Platte River to spawn. In winter cross-country skiers tour quiet woodlands.

Many people had ties to this land before it became a national park—American Indians, lumbermen, merchant sailors, and

farmers. Anishinaabek natives who settled here 3,000 years ago, hunted, fished, and set up sugar camps in the maple groves. In 1837, when Michigan became a state, the region's population, Great Lakes' shipping, and commerce boomed. Vast hardwood forests fueled the steamers on Lake Michigan's water highway. Lumber mills and docks sprang up along the shore. New settlers developed subsistence farms and orchards on the cleared forestlands. In the 1900s visitors found that the pleasant summer climate and bountiful lakes made for a sublime place to spend leisure time.

Manitou Passage—the stretch of water between the mainland and North and South Manitou Islands (see map on other side)—became a shortcut for shipping on Lake Michigan. But the shoal waters and rocks proved to be deadly for ships. Beginning in 1838 a system of lighthouses and lifesaving stations served mariners sailing through this treacherous passage. Later, lighthouses were added at North Manitou Island and in the water to mark its offshore shoal. Lifesaving service crews at North and South Manitou islands and Sleeping Bear Point stood ready to rescue survivors from ships that wrecked or foundered in the passage. Today the historic South Manitou Lighthouse and three lifesaving stations remind us of this dramatic maritime heritage.

A Masterpiece of Ice, Wind, and Water

Long ago, in the land that is now Wisconsin, a mother bear and her two cubs were driven into Lake Michigan by a raging forest fire. They swam and swam, but soon the cubs tired and lagged far behind. Mother bear finally reached the opposite shore and climbed to the top of a bluff to watch and wait for her offspring. But the cubs drowned. Today "Sleeping Bear," a solitary dune in Michigan overlooking Lake Michigan, marks the spot where mother bear waited. Her lost cubs are the two Manitou islands. —Anishinaabek Indian Legend

American Indians were the first to tell tales of how sand dunes and other features of the land were created. In recent years scientists have sought to explain the complex geologic history of the area. An abundance of clues has helped.

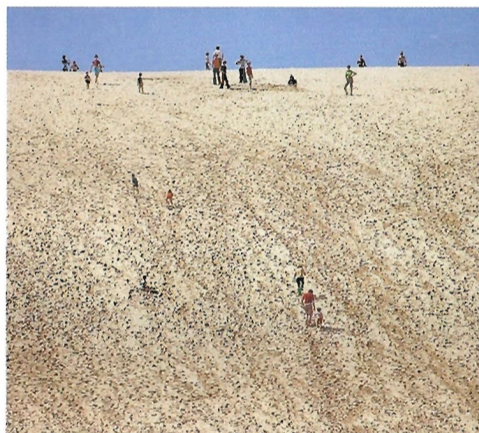
Fossils tell some of the earliest history, when shallow warm seas covered this area. More recent history is revealed in the landscape. The shoreline, hills and valleys, many small lakes, and sand dunes you see today are evidence

that the powerful earth-moving forces of ice, wind, and water have been at work here. Often geological changes occur slowly over millions of years, but here you can see dramatic changes within your lifetime. Twice in the 1900s landslides at Sleeping Bear Point sent large land masses plunging into Lake Michigan. In a matter of years, trees disappear as shifting dunes bury them under a blanket of sand. Such changes make Sleeping Bear Dunes an exciting place to visit again and again.



Top: A glacier-sculpted landscape. Above: One of many small lakes found here.

NPS/WILLIAM A. BAKE



Playing at the Dune Climb.

NPS



Top: A ghost forest atop a dune. Above: Dune grasses hold sand in place.

NPS

During the ice age continental glaciers spread southward from Canada, repeatedly burying this area under sheets of ice. These massive glaciers enlarged river valleys, carving out the wide, deep basins of the Great Lakes. They deposited huge piles of sand and rock debris when they melted, leaving behind the hilly terrain you see today. Finally, 11,800 years ago, the last glacier retreated.

With the glacial landscape formed, Lake Michigan and many smaller lakes began to take shape. The level of water filling Lake Michigan's ice-carved basin rose and fell many times before reaching its present level. The lake's shoreline—at first irregular with jutting headlands and recessed bays—was gradually smoothed out. Waves wore back the headlands. Shoreline currents carrying sediments built sandbars and spits across bay mouths. Sometimes sediments dammed bays,

creating small inland lakes like Glen Lake near the Lake Michigan shoreline. Receding Lake Michigan water levels have left a series of old beach lines that remain as alternating and contrasting low ridges and swales.

The glaciers left behind an ideal setting for building sand dunes: a sandy coast on the windward side of Lake Michigan. Prevailing westerly winds blowing across the lake build two kinds of dunes in Sleeping Bear Dunes. Beach dunes develop on low-lying shores of Lake Michigan. Their main ingredient is beach sand. The Aral Dunes, along Platte Bay's north shore, are good examples of beach dunes. Perched dunes, on the other hand, sit high above the shore on plateaus. Glacial sands atop these surfaces supplied material for these dunes. The Sleeping Bear dune of Anishinaabek Indian legend is a perched dune.

Some dunes migrate, pushed by the wind. Sometimes shifting sands bury trees. As the dunes move on, ghost forests of dead trees are exposed, stark reminders of the dunes' passing. Not even humans have escaped the influence of windblown sand. U.S. Coast Guard buildings now in Glen Haven had to be moved from Sleeping Bear Point in 1931 because migrating dunes threatened to cover them.

Beachgrass and sand cherry are among the first plants to grow on newly built dunes. They play an important role in dune development by acting as obstacles that slow sand-laden wind and force it to drop its load. Their roots hold sand in place and stabilize dunes. But strong winds can strip plants from a dune and carve out a bowl-shaped blowout.

An Ever-Changing Scene



Top: Lake Michigan Overlook on Pierce Stocking Scenic Drive offers views of the lake and the dunes. Above: Cleared forestlands became small farms and orchards; many were later abandoned.

NPS



Top: South Manitou Lighthouse, which once guided storm-tossed ships, now sits idle. Above: Lake Michigan may sit idle one moment, then suddenly unleash its fury in a storm.

NPS



Top: The north woods wild lands of the Platte River are canoeists' glide past. Above: Beech-maple forests celebrate autumn's arrival with a breathtaking show of color.

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Visiting the Lakeshore

Visitor Center The Philip A. Hart Visitor Center has information, exhibits, and book sales. It is open daily except Thanksgiving Day, December 25, and January 1. Seasonal hours vary. For details about activities and programs, get the free park newspaper at the visitor center or ranger stations or visit www.nps.gov/slbe.

Pierce Stocking Scenic Drive This 7.1-mile route has views of Sleeping Bear Dunes, Glen Lake, and Lake Michigan. It is open late April to early November, weather permitting. Trailers are not recommended because parking areas do not have pull-through parking spaces. Bicycles are permitted.

Exploring the Dunes Climbing to the top of Sleeping Bear Dunes at the Dune Climb is strenuous but rewarding. Watch your children; it is easy to get lost in this expanse of sand. There are no shelters or water. You can also hike the 3.5-mile round-trip Dunes Trail or walk the 2.8-mile Sleeping Bear Point loop trail. Hikers should use a map and plan their route beforehand. Stay on designated trails to prevent erosion and damage to vegetation.

Hiking Trails The park has over 100 miles of trails for you to explore. Maps are available at the visitor center and are posted at trailheads. Some land within park boundaries is private property; please respect owners' rights.

Hunting/Fishing Hunting and fishing are allowed in season under state regulations. Park regulations prohibit hunting near Pierce Stocking Scenic Drive when it is open. For firearms regulations check the park website. Check the *Michigan Fishing Guide* for more information about fishing regulations.

Manitou Islands You may backpack or camp on the islands. No commercial services are available. Passenger ferry service operates from May to September. Contact the concessioner, Manitou Island Transit, for details: 231-256-9061; www.leelanau.com/manitou.

Winter Recreation About 50 miles of un-groomed trails are marked for cross-country skiing. You may snowshoe throughout the

park. Ranger-led snowshoe hikes are offered when conditions permit. Snowmobiling is prohibited except on rights-of-way along some state and county roads.

Camping • Platte River Campground is open year-round; reservations are accepted from Memorial Day to October 1. • D.H. Day Campground is open from April through November; first-come, first-served; no reservations. Camping is limited to 14 days between Memorial Day and Labor Day. • Group camping is available; check the park website for information. • Backcountry camping, permit only, is allowed at walk-in campgrounds on the mainland and on the Manitou islands. Get permits at the visitor center in Empire or at ranger stations.

Accommodations For information find these chambers of commerce on the Internet: Glen Lake, Benzie County, and Leelanau.

Climate Summers are cooler and winters milder along the lakeshore than inland because of Lake Michigan's moderating influence. Daytime temperatures June through August: 70–90°F. Winter temperatures below 0°F are recorded only a few days each year, but the wind makes any temperature feel colder. Most precipitation falls as snow, averaging 100 inches along the shore; inland accumulation is higher.

Dune Safety Please follow these precautions. *Remember, your safety is your responsibility.* • Sand dunes, like snow drifts, can be unstable; landslides can occur. • Don't dig holes deep enough to bury someone. • Don't dig into sand at the base of a dune. • Don't go down steep slopes where rocks or sand could dislodge and injure someone below you. • Protect your feet; wear shoes. • Stay off steep snow-covered dunes; avalanches may occur. • Climbing is recommended only at the Dune Climb.

Poison Ivy Avoid its three leaflets, stems, berries, and roots; all can cause allergic reaction.

Ticks Several varieties of ticks, including the black-legged tick that can carry Lyme disease,

live here. Use repellent. Check for ticks and remove promptly.

Water Safety • Boaters should monitor weather reports. Conditions on Lake Michigan can change rapidly and become hazardous even to large boats. • Carry safety gear, navigation charts, and extra fuel. Swimmers should be aware of rip current conditions.

Regulations • Drive only on established park roads. Vehicles are not allowed on the dunes. • Pets must be on a leash and attended. They are permitted on hiking trails between April 1 and November 30. Pets are not allowed at North Bar Lake, on the Manitou islands, in backcountry campgrounds, on the Dune Climb, or on some swimming beaches.

• Camp only in campgrounds. • Fires are permitted only in fire rings and picnic fireplaces. • Beach fires are restricted to bare sand between the water and the first dune; no fires on Manitou islands. • Do not collect ghost forest wood or other wood on the dunes or disturb plants or natural objects. Campers may collect dead and down wood elsewhere.

• You may pick mushrooms and fruit for personal use; ask a ranger about limits. • Bicycles must stay on roads and the Sleeping Bear Heritage Trail. • Glass containers are prohibited in areas used for sunbathing, swimming, or wading. • Horses are permitted only on the Alligator Hill Trail.

Accessibility We strive to make our facilities, services, and programs accessible to all. For information go to a visitor center, ask a ranger, call, or check our website.

More Information
Sleeping Bear Dunes National Lakeshore
9922 Front Street
Empire, MI 49630
231-326-5134
www.nps.gov/slbe

Sleeping Bear Dunes is one of over 390 parks in the National Park System. To learn more about national parks visit www.nps.gov.

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LAKE MICHIGAN
Lake Elevation: 580 feet (177 meters)

