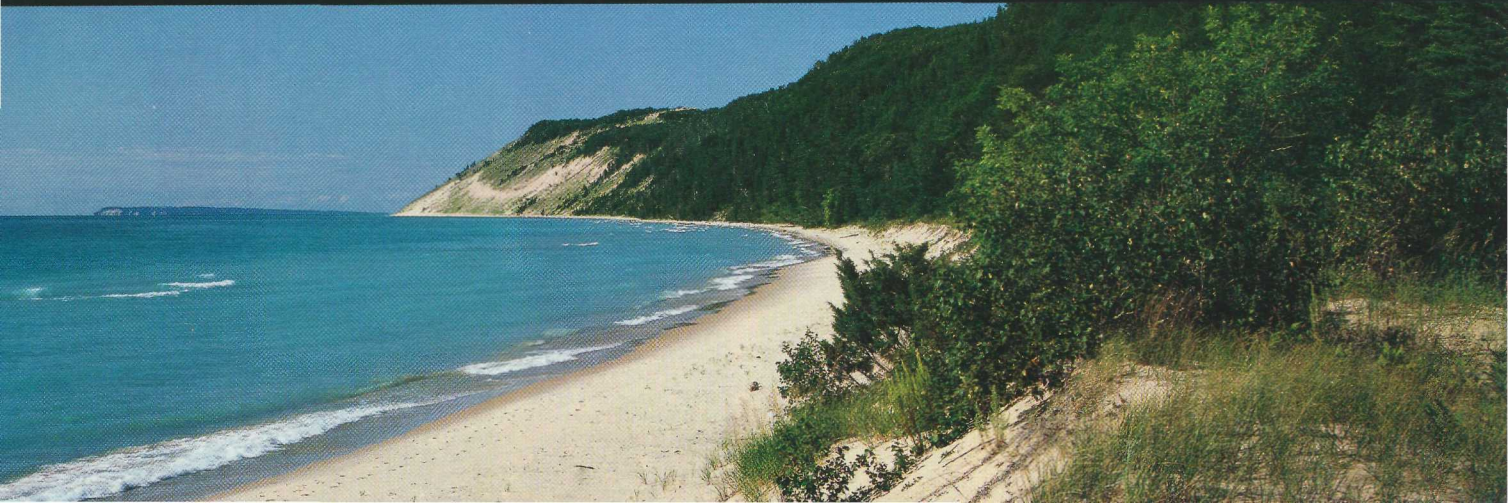


Sleeping Bear Dunes

National Park Service
U.S. Department of the Interior

National Lakeshore
Michigan





©Tom Algire

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. It is a diverse landscape, embracing quiet, birch-lined streams, dense beech-maple forests, sandy beaches, and rugged, glacially formed bluffs towering as high as 460 feet (140 meters) above Lake Michigan. Offshore, surrounded by the unpredictable waters of Lake Michigan, sit North and South Manitou islands, tranquil and secluded.

For thousands of visitors each year, Sleeping Bear Dunes offers a wealth of opportunities to enjoy the outdoors. Many come to play at the Dune Climb or to savor sweeping views of land and water from the park's roadways. Others come to hike the trails, where they find a rich variety of wildflowers, mammals, and birds. Beachcombers can enjoy a walk along Lake Michigan's shore, pausing occasionally to examine an interesting pebble or shell. Canoeing down a slow-flowing stream offers a quiet, intimate look at the countryside. Fishing fervor peaks in the fall, when coho and king salmon, fish introduced from the Pacific, return to the Platte River to spawn. In winter, cross-country skiers tour snowy woodlands. The possibilities for relaxation and challenge are almost unbounded.

There were many people whose lives were tied to this land long before it became a parkland—Indians, lumbermen, merchant sailors, farmers. Glen Haven and the Manitou islands were once busy communities supplying lumber for the construction of towns as far away as Chicago, Ill. They also supplied fuel to wood-burning ships that sailed the Great Lakes during the latter half of the 1800s and early 1900s. Ruins of sawmills and fueling docks can still be seen. Crop farming followed the cutting of the forests, but it, like lumbering, soon faded. Many farmers abandoned their fields, leaving them to return to their natural state. Orchard growers had more lasting success growing cherries and apples. Many fruit trees still grow in the park and nearby.

The South Manitou Island Lighthouse was built in 1871 to guide ships through the Manitou Passage and into the island's harbor when fierce lake storms broke. Despite such safeguards, many ships still ran aground. The ruins of the wrecked freighter *Francisco Morazan* can be spotted off South Manitou's south shore. The lifesaving stations at Glen Haven and South Manitou Island are reminders of earlier times, when rescue crews launched small oar-powered wooden boats into giant waves to save shipwreck survivors. Today the Sleeping Bear Dunes area thrives as a popular summer resort area.

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 hapless cubs are the Manitou islands.

—Chippewa Indian legend

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

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

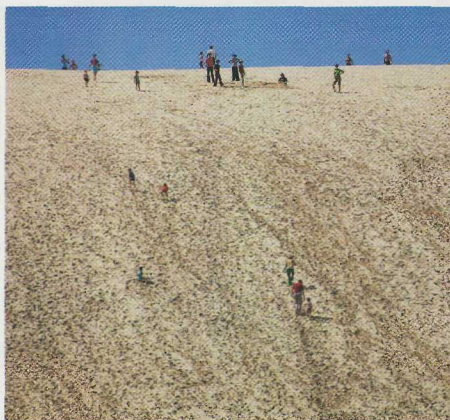
evidence that the powerful earth-moving forces of ice, wind, and water have been at work here. Often, geological changes occur slowly over millions of years, but here you can witness dramatic changes within your lifetime. Twice in the last century landslides at Sleeping Bear Point sent large land masses 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 and revisit.



Top: A glacier-sculpted landscape
NPS/WILLIAM A. BAKE



One of many small inland lakes
NPS/WILLIAM A. BAKE



A towering sand dune
NPS



Top: A ghost forest atop a dune
NPS



Hardy pioneer dune grasses
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 such as 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 Indian legend is a perched dune.

Some dunes migrate, pushed by the wind. Sometimes shifting sands bury trees. Then, 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 located 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. They help build dunes 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 if a strong wind succeeds in stripping plants from a dune, a bowl-shaped blowout can be excavated in the exposed area. Vehicles are prohibited on the dunes because they destroy dune vegetation. Tire-track scars last many years.

An Ever-Changing Scene



Top: Lake Michigan Overlook on Pierce Stocking Scenic Drive offers views of the lake and the dunes.

NPS

Cleared forest lands became small farms and orchards; many were later abandoned.

NPS



Top: South Manitou lighthouse, which once guided storm-tossed ships, now sits idle.

NPS

Lake Michigan may be calm one moment, then suddenly unleash its fury in a storm.

NPS



Top: The north woods wilderness of the Platte River unfolds as canoeists glide leisurely past.

NPS

Beech-maple forests celebrate autumn's arrival with a breathtaking show of color.

NPS

Visiting the Lakeshore

The Philip A. Hart Visitor Center offers exhibits, a slide program, and book sales. Park headquarters, in the same building, is open weekdays. Exhibits are also at the Maritime Museum, outdoor mainland locations, and on South Manitou Island.

The Pierce Stocking Scenic Drive

This 7.1-mile (11.4-kilometer) route offers panoramic views of Sleeping Bear Dunes, Glen Lake, and Lake Michigan. It is open late April to early November, weather permitting. Trailers are prohibited on this drive because the 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. From the crest you can view Glen Lake. You can also hike the Dunes Trail, a 3.5-mile (5.6-km) round trip, or walk a 2.8-mile (4.5-km) loop trail to Sleeping Bear Point. The dunes cover about four square miles (10.4 square km). No water or shelters are provided. Watch your children; it is easy to get lost in this expanse of sand. All hikers should use a map and plan a route beforehand. Wear shoes to protect your feet. Stay on designated trails to prevent erosion and damage to vegetation.

Hiking Trails

Many trails lead through forests and meadows. Trail maps are available at the visitor center and

are posted at trailheads. Some of the land within park boundaries is private property; please respect owners' rights.

Hunting

There are hunting seasons throughout the year; wear bright clothing whenever you are hiking or skiing. Deer, rabbit, squirrel, ruffed grouse, and waterfowl hunting is allowed in season under state regulations. Special park regulations prohibit hunting near the Pierce Stocking Scenic Drive when the drive is open.

Enjoying the Water

The park's lakes and rivers offer opportunities for swimming, boating, and fishing. Canoes can be rented on the Platte and Crystal rivers. Anglers with a Michigan license can fish for trout, pike, bass, and salmon. Certain fish may be contaminated and should be eaten in limited amounts or not at all. Check the *Michigan Fishing Guide* for details.

South Manitou Island

Points to visit include the huge white cedar trees, the lighthouse, and historic sites. Ferry service from Leland is available May to mid-October.

North Manitou Island

Hikers and backpackers can explore 15,000 acres (6,070 hectares) of wilderness. Ferries leaving Leland are available on a regular basis June through August; limited service is available in May and in September through mid-November.

Winter Recreation

About 50 miles (80 km) of trails are marked for cross-country skiing. Get a map at the visitor center, headquarters, or a trailhead. Snowmobiling is prohibited except on rights-of-way along some state and county roads.

Camping

Platte River Campground is open year round, with reservations available for one-third of the campsites from Memorial Day to Labor Day. The remaining campsites are available on a first-come, first-served basis. D. H. Day Campground is open from April through November, with all campsites available on a first-come, first-served basis. Contact the park for exact dates. D. H. Day has water and vault toilets. Platte River has showers, flush toilets, water, and a few sites with electrical hookups. Camping is limited to 14 days. A fee is charged. Groups can reserve campsites at a group campground near Glen Lake Picnic Area or at Platte River Campground. Backcountry camping, by permit only, is allowed at walk-in campgrounds on the mainland and on both Manitou Islands. Permits are available at the visitor center in Empire or at ranger stations.

Accommodations

Most motels and cottages are open only in summer; reservations are recommended. For lodging information, write: Glen Lake Chamber of Commerce, Box 217, Glen Arbor, MI 49636; Benzie County Chamber

of Commerce, Box 505, Beulah, MI 49617; or Leelanau County Chamber of Commerce, 5046 S. West Bay Shore Drive, Suttons Bay, MI 49682.

The Climate

Summers are cooler and winters milder along the lakeshore than in inland areas because of Lake Michigan's moderating influence. From June through August daily maximum temperatures range between 70 and 90°F (21 and 32°C). In winter temperatures below 0°F (-18°C) are recorded only a few days each year, but the wind makes it feel colder. Most precipitation falls as snow, which averages 100 inches (254 cm) along the shore; inland accumulation is higher.

For a Safe Visit

- Sand dunes, like snow drifts, can be unstable. Landslides sometimes occur.
- Do not dig holes deep enough to bury someone.
- Do not dig in sand at the base of a dune.
- Do not descend steep slopes where rocks or sand could dislodge and injure someone.
- Do not cross steep snow-covered dunes. Big snowdrifts can avalanche.
- Hunting is permitted within the Lakeshore. Hikers are reminded to wear brightly colored clothing during hunting season, especially during firearm deer hunting season (November 15-30).

Practice Safe Boating

- Boaters should monitor weather reports. Conditions on Lake Michigan can deteriorate rapidly and become hazardous

even to large boats.

- Carry safety gear and extra fuel in case a storm develops.
- For detailed navigational information on nearby waters of Lake Michigan, obtain National Ocean Survey charts 14907 and 14912.
- Lake and stream water may be contaminated. Boiling water for at least a minute will kill most germs but won't remove chemical pollutants.

Regulations

- Do not drive off established park roads.
- Always keep your pet on a leash.
- Pets are not allowed at North Bar Lake, on the Manitou islands, in backcountry campgrounds, on the Dune Climb, or on the swimming beaches.
- Pets on a leash (no more than six feet long) are permitted on all hiking trails between April 1 and November 30.
- Camp only in campgrounds.
- Fires are permitted in campground fire rings and in picnic area fireplaces.
- Beach fires are restricted to bare beach sand between the water and the first dune and are not permitted on the Manitou Islands.
- Do not collect ghost-forest wood or other wood on the dunes or disturb any plants or natural objects. Campers can collect dead and down wood elsewhere.
- You may pick mushrooms and fruit for personal use.
- Bicycles are not permitted off the roads.
- All glass containers and products are prohibited on any land or water area used for sunbathing, swimming, or wading.
- Horses are permitted only on

the Alligator Hill Hiking Trail.

Poison Ivy

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



Getting to the Park

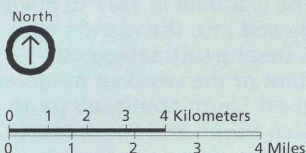
Many north-south highways approach the park, including U.S. 31 along Lake Michigan, U.S. 131 through Grand Rapids, and I-75, which runs the length of the state into the Upper Peninsula. U.S. 31 connects with Mich. 22, the main road through the park. Two east-west routes, Mich. 115 (to Frankfort) and Mich. 72 (through Traverse City to Empire), also lead to Mich. 22.

More Information

Sleeping Bear Dunes National Lakeshore
9922 Front St., Hwy. M-72
Empire, MI 49630-0277
231-326-5134
www.nps.gov/slbe
slbe_superintendent@nps.gov

Sleeping Bear Dunes is one of more than 380 parks in the National Park System. Visit www.nps.gov to learn more about parks and National Park Service programs in America's communities.

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LAKE MICHIGAN

Lake Elevation 580ft (177m)

