

Sleeping Bear Dunes

National Lakeshore
Michigan

National Park Service
U.S. Department of the Interior



Cover photo by Tom Algire

On the northwestern shore of Michigan's lower peninsula lies Sleeping Bear Dunes National Lakeshore, a hilly region fringed with massive coastal sand dunes and dotted with clear lakes. It is a diverse landscape, embracing quiet, birch-lined streams, dense beech-maple forests, and rugged bluffs towering as high as 140 meters (460 feet) above Lake Michigan. Several kilometers offshore, surrounded by the unpredictable waters of Lake Michigan, sit the 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, sport 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 construction and fuel for wood-burning ships that sailed the Great Lakes in the mid- and late 1800s. 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 apple trees. 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 one wreck, the freighter *Francisco Morazon*, can be spotted off South Manitou's south shore. The lifesaving stations at Glen Haven and South Manitou are reminders of earlier times, when rescue crews launched small oar-powered wooden boats into giant waves to save shipwreck survivors. In this century the Sleeping Bear Dunes area has thrived as a popular summer resort area.

A Masterpiece of Ice, Wind, and Water

Long ago 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 reached the 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 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 this 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.



A glacier-sculpted landscape

One of many small inland lakes



A towering sand dune



A ghost forest atop a dune

Hardy pioneer dune grasses

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, 11,000 years ago, the last glacier retreated.

With the glacial landscape formed, Lake Michigan and many smaller lakes began taking 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.

The glaciers left behind an ideal setting for building sand dunes: a sandy coast on the leeward 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

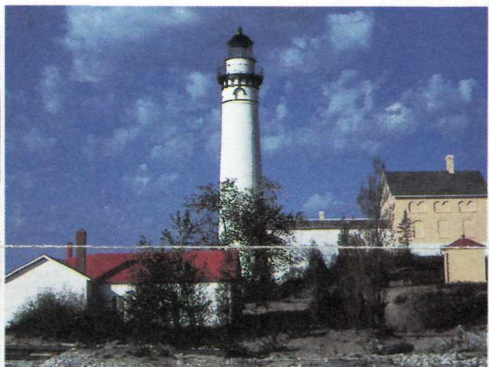
dead trees are exposed, stark reminders of the dunes' passing. Not even man has escaped the influence of windblown sand. U.S. Coast Guard buildings now located in Glen Haven had to be moved from Sleeping Bear Point in 1931 because migrating dunes threatened to cover them.

Beachgrass and sand cherry are among the first plants to invade 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



The dunes provide a playground of shifting sand for children of all ages.



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



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



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



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



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

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Visiting the Lakeshore

The visitor center is open from mid-May to mid-October and on weekends during most of the rest of the year. Nature and history exhibits, a slide program, and book sales are available. Exhibits also can be seen at Sleeping Bear Point Coast Guard Station, on South Manitou, and at way-side locations. For a summer schedule of guided walks and evening programs, ask at the visitor center or campgrounds.

The Pierce Stocking Scenic Drive This 12.2-kilometer (7.6-mile) route offers panoramic views of Sleeping Bear Dune, Glen Lake, and Lake Michigan. It is open from mid-May to early November, weather permitting. Pick up a self-guiding brochure at the drive entrance. Motor homes more than 7.3 meters (24 feet) long or 3.4 meters (11 feet) high, trailers, and bicycles are prohibited.

Exploring the Dunes Climbing to the top of the Dune Climb is strenuous but rewarding. From the crest you can view Glen Lake or walk the Dune Trail, a 6.4-kilometer (4-mile) round trip. Neither water nor shelter from the sun or wind is provided. Sleeping Bear Dune covers an area

of about 6 square kilometers (4 square miles). Children should be supervised; it's easy to get lost in this expanse of sand. Hikers should consult a map and plan a route. Wear shoes to protect your feet.

Hiking trails Several trails lead through forests and meadows. See map for trailhead locations. Pick up trail map at trailhead or the visitor center. Some land within park boundaries is still private property; please respect owners' rights.

Hunting Deer, rabbit, squirrel, ruffed grouse, and waterfowl hunting are most popular. Hunting is allowed in season under state regulations.

Enjoying the Water The park's lakes and rivers offer opportunities for swimming, boating, and fishing. A lifeguard is on duty at Glen Lake Beach in July and August. Canoes can be rented on Platte and Crystal Rivers. Anglers can fish for trout, pike, bass, and salmon. Fishing requires a Michigan license. Warning: Certain fish may be contaminated and should be eaten in limited amounts, or, in some cases, not at all. Check the Michigan Fishing Guide for details.

South Manitou Island Points to visit include the Valley of the Giants, with its huge white cedar trees, the lighthouse, and other historic sites. Boat trips to the island from Leland run from May through October. Reservations are recommended.

North Manitou Island The Park Service is taking steps to acquire North Manitou. Today it is still privately owned and not open to the public.

Winter Recreation About 40 kilometers (25 miles) of trails are marked in the winter for cross-country skiing. Obtain trail map at the visitor center, headquarters, or trailhead. Snowmobiling is prohibited except on some state and county roads.

Camping The D.H. Day and Platte River Campgrounds are open year-round on a first-come, first-served basis. Each has water (except in winter) and vault toilets, but no hookups. Camping is limited to 14 days. A fee is charged. Groups can reserve campsites at a group campground near Glen Lake Beach. Backcountry camping is allowed on the mainland and on South Manitou. Free backcountry permits are required. Mainland

backcountry permits are issued at the visitor center, campgrounds, and headquarters. Get South Manitou permits on the island.

Accommodations Most of the area's private cottages and motels are open only in summer. Reservations are recommended. For more information write: Glen Lake Chamber of Commerce, Box 217, Glen Arbor, MI 49636; or Benzie County Chamber of Commerce, Box 505, Beulah, MI 49617.

The Climate Summers are cooler and winters milder along the lakeshore than in nearby inland areas because of Lake Michigan's moderating influence. From June through August daily maximum temperatures range between 21 and 32°C (70 and 90°F). In winter months temperature readings below -17°C (0°F) are recorded only four days each year, on the average, but winds can make it feel colder.

Most precipitation falls as snow in the winter. Snowfall totals average almost 2.5 meters (100 inches) on the shore. Inland accumulations are higher. Summers are marked by infrequent thundershowers.

Getting to the Park Several north-south

highways approach Sleeping Bear Dunes. Among them are U.S. 31, which parallels Lake Michigan, U.S. 131 through Grand Rapids, and U.S. I-75, which runs the length of the state into the Upper Peninsula. U.S. 31 directly connects with Michigan 22, the main road through the park. Two main east-west routes that also lead to 22 are Michigan 115 (to Frankfort) and Michigan 72 (through Traverse City to Empire).

For a Safe Visit Sand dunes, like snow drifts, can be very unstable. Landslides sometimes occur. For your safety:

- Do not dig in sand at the base of a dune.
- Do not dig holes deep enough to bury someone.
- Do not descend steep slopes where rocks or large piles of sand could dislodge and injure you or someone below.
- Do not cross steep snow-covered dunes. Big snowdrifts can avalanche.

Boaters should monitor weather reports. Carry safety gear and extra fuel in case a storm develops. For detailed navigational information on the nearby waters of Lake Michigan, obtain National Ocean Survey charts 14912

and 14907. Drink water only from wells and drinking fountains. Stream and lake water may be contaminated. Boiling water for at least a minute will kill disease-carrying organisms but will not get rid of chemical pollutants. Autumn hikers should wear "hunter orange" for safety.

Regulations Do not drive off established roads in the park. Camp only in the campgrounds. Always keep your pet on a leash. Pets are not allowed on the Dune Climb, South Manitou Island, or Glen Lake Beach. Build fires only in campground and picnic area fireplaces, or on bare sand along Lake Michigan below the first vegetated dune. Do not collect dead wood of ghost forests or any other wood on the dunes or disturb plants or other natural objects. You may pick mushrooms and berries for personal use. Park campers can collect dead and down wood for campfires anywhere but the dunes.

Information For park information write: Superintendent, Sleeping Bear Dunes National Lakeshore, 400 Main St., Frankfort, MI 49635; or call (616) 352-9611.

