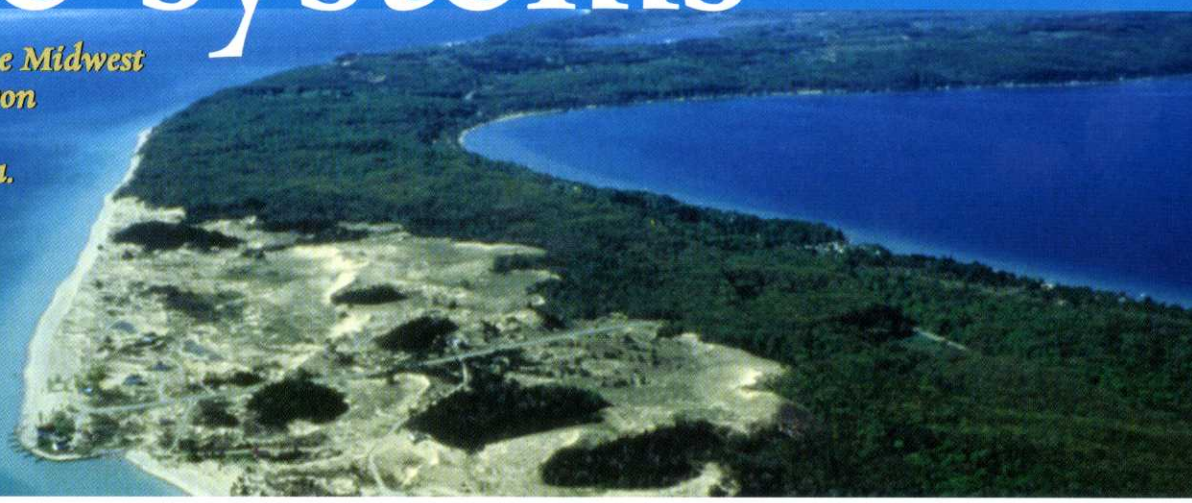
dune systems



"Those dunes are to the Midwest what the Grand Canyon is to Arizona and the Yosemite to California. They constitute a signature of time and eternity. Once lost, the loss would be irrevocable."

- Carl Sandburg

Michigan's dunes are a part of the largest freshwater dune system in the world, so large they are visible from space. Built by the glaciers thousands of years ago, 275,000 acres of dunes line our shores today, yet only 70,000 acres are in public hands and protected from a wide range of threats. Once gone, they can never be replaced. Yet we cannot protect them without first understanding their importance to our environment, economy and quality of life. This fact sheet provides a basic overview to two of Michigan's major dune types—parabolic and perched.

Parabolic Dunes

Parabolic dunes are distinctive U-shaped dunes consisting of at least four dune areas commonly referred to as: beach, foredunes (open, sandy, lower dunes), interdunal wetlands, and backdunes (forested, higher dunes).

Location:

Most of the dunes along the Lower Peninsula's Lake Michigan shoreline are parabolic dunes, which occur along the coasts' edges and are shaped here by Great Lakes' wind, water, and native vegetation. Saugatuck State Park, P.J. Hoffmaster State Park, Petoskey State Park, and Warren Dunes State Park all have excellent examples of parabolic dunes.

Parabolic dunes, as commonly seen along Michigan's west coast.

Perched Dunes

Perched dunes are found "perched" atop bluffs varying in heights from 90 to 360 feet above current lake level. They look much higher because they are "perched" on top, even though they are not all sand. Perched dunes typically contain foredunes, blowouts, backdune forests, and interdunal wetlands.

Location:

Perched dunes can be found in some areas along the northwest shore of the Lower Peninsula. Sleeping Bear Dunes and the U.P.'s Grand Sable Dunes are two of the more famous viewing areas for experiencing perched dunes.

Perched dunes sit atop coastal bluffs in the northern Lower Peinsula.

Saving Dunes, Saving Species

As fall approaches, the monarch butterfly can be seen in large numbers migrating along the Great Lakes shorelines en route to Mexico and Central America.

From the emerald forests of the north to the fields and prairies of the south, Michigan hosts a variety of natural communities that serve as habitat for millions of plants, animals, and people. Rare and endangered species like the piping plover and the Pitcher's thistle rely on our coastal system as do more common creatures like the monarch butterfly and the eastern box turtle.

The difference for many of these species, however, is that some cannot survive any where else while others can adapt to different habitat types. Conservation organizations like your local land trust are working to protect the dunes to save these precious places for all creatures, but especially those that face critical challenges from threatened habitat

Coasts Come With Challenges

Our 3,288 miles of shoreline make Michigan's coasts second only to Alaska. What sometimes attracts birds and other animals to our shores are often the same things that attract people: towering lookouts above the water, diverse climate, and seemingly endless natural resources. These places are not infinite, however, and face significant challenges that threaten to change their very foundation forever.

A study done on the dunes shows that over a 50-year period, the height of the Great Sleeping Bear Dune has been cut in half due to extensive vehicle use (including off-road vehicles). Other threats to our dunes include:

- ▲ Invasive (non-native) species
- ▲ Incompatible development
- ▲ Sand mining
- ▲ Recreational damage

One of Michigan's most photographed locations, Point Betsie contains virgin sand dunes, interndunal wetlands and boreal forests less than an hour's drive away from Traverse City.

Protection efforts like those undertaken by conservation organizations seek solutions compatible with the environment and the economy.

What can YOU do to help save our sand dunes?

Michigan's dune system has been here for thousands of years, but that does not necessarily mean they will last through the next millennium, or even this century, without our help. You can make a difference by following any or all of these suggestions.

- ▲ When visiting a park or nature preserve, stay on the path.
- ▲ Take only pictures, leave only footprints.
- ▲ Wash your shoes after a hike to avoid spreading invasive species.
- ▲ Volunteer for beach clean-up, piping plover patrol and/or stewardship work days.
- ▲ If you own property on or near the shore, consider placing a conservation easement on your land to restrict future development in perpetuity.
- ▲ Donate land or money to your favorite conservation organization!
- ▲ Participate in Sand Dune Day every May!
- ▲ Learn more and tell others about the importance of Michigan's dunes and shoreline.

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