coastal forests

Not everything related to dunes is on the beach. Michigan's coastal systems feature many different types of forests, including backdune forests, forested dune ridges, and forested swales. These forests are an important stabilizing element to the dunes—they help slow the erosion process. In dune systems, forests naturally grow over time. In fact, our oldest forested dunes were once open and sandy.

Backdune Forests

Backdune forests usually grow behind and between the dunes where they are protected from the wind, and sand tends to accumulate more slowly.

Trees can also grow on the wind-exposed side of the dune, but must be able to survive on dry, nutrient poor sand. The mix of wind, sand, storms and other natural processes produce a distinctive forest type. Bigtooth aspen, sassafras, oak, and white pine often comprise a large portion of the backdune forests.

Coastal forests serve as resting spots species such as monarch butterflies as they migrate through the area in the spring and fall. These forests also act as a sanctuary to other migrating animals, such as songbirds and hawks. The birds can stop on their long journey to look for food like the red-backed salamander that crawls through the leafy forest floors.

Moisture, nutrients, fallen leaves and branches make the perfect organic matter to provide the foundation for a diversity of spring wildflowers ranging from common trillium and jack-in-the-pulpit to Dutchman's-breeches and bunchberry.

Location:

Backdune forests are found in parabolic dune systems and can be seen at places such as P.J. Hoffmaster State Park and Warren Dunes State Park. They are found all along the Lake Michigan coast on private land as well.

Migratory songbirds, like the black-and-white warbler seen here, depend on coastal forests for their habitat.

Paper birch is just one of the tree species found in forested swales, which provide habitat for osprey and red fox.

Forested dune ridges & Swales

Compared to other forests, forests on dune ridges develop fairly rapidly in dune and swale complexes. Much less sand accumulates in these complexes, allowing trees to increase moisture and nutrients found in the soil. These forests help to stabilize the dunes against the elements that Michigan's harsh weather can bring.

Like forested dune ridges, forested swales can be found in dune and swale complexes. The primary difference between the forested ridges and swales is that the forested swales grow much more slowly with trees growing closer to the shoreline. The soil further from the shoreline remains much drier and often better suits the needs of shrubs and swamp conifers.

Forested dune ridges are mostly made up of conifers such as red and white pines, balsam fir, and balsam poplar. Buttonbush, meadowsweet, willows, and Michigan holly can also be found in nearby forested swales next to trees like cedar, paper birch and trembling aspen. Eagles, ospreys, and hawks can often be seen nesting in the trees in the forested dune ridges and swales which also provide shelter to the red fox, snowshoe hare, and whitetail deer.

Location:

Both of these forest systems grow in linear dune (dune and swale) complexes. They can be found at Grand Beach, Sleeping Bear Dunes National Lakeshore, and Wilderness State Park.

A forested dune overlooks Lake Michigan at P.J. Hoffmaster State Park.

What can YOU do to help save our coastal forests?

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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