

I. Park Services and Facilities



A. Staff

Kohler-Andrae State park has full time staff on duty at the park year round. All staff members are willing to answer any questions you may have to assist you in planning your trip to the park.

A Natural Resources Educator or naturalist may be able to meet and work with your group, but please call ahead to confirm their availability. If a naturalist is not available, a park volunteer nature center host will meet with your group. Again, please call ahead to confirm your visit.

The park is open 6:00 A.M. to 11:00 P.M. everyday. The park office is open most days from 9:00 A.M. to 4:00 P.M. In the summer, office hours are 8:00 A.M. to 11:00 P.M.

B. Sanderling Nature Center

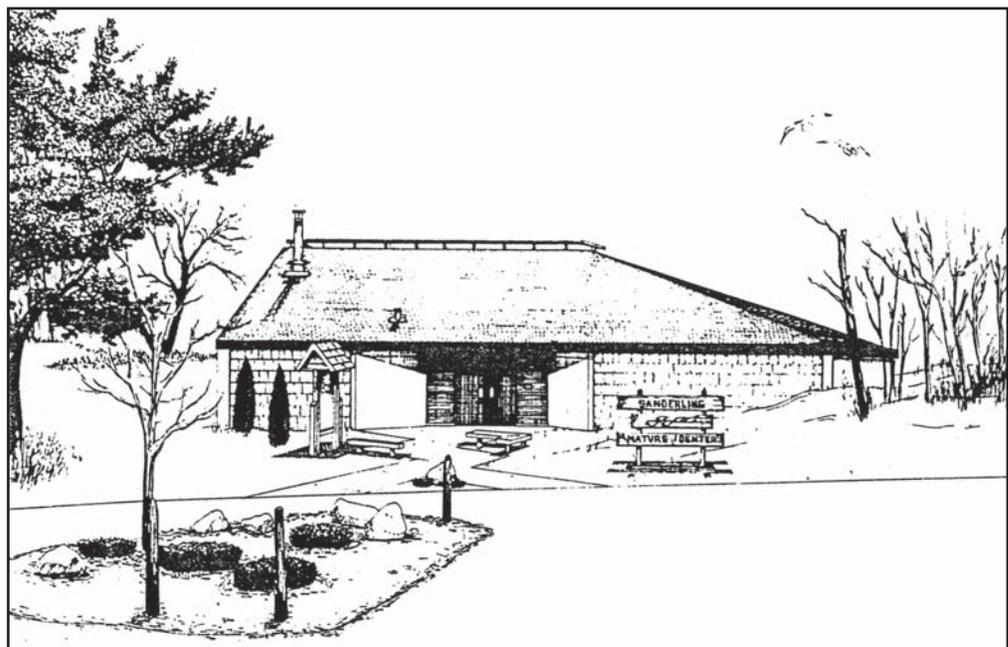
Located in the central area of the park, the Sanderling Nature Center overlooks beautiful Lake Michigan. This facility is one of the park's most treasured and popular attractions. It is named for a special shore bird, the sanderling, which visits the area.

The center has many interesting and informative displays, including a mural that depicts each of the plant communities that are present in the park. The displays

cover a wide variety of topics, ranging from the park's history to how the sand dunes formed. A hands-on display allows visitors to observe different natural objects through a microscope. A Lake Michigan fish display challenges visitor's knowledge of the fish species present in the lake. A match-up game displays common beach rocks found at Kohler-Andrae. A computer contains nature software programs covering topics such as insects, reptiles, amphibians, birds, and park trivia. Air monitoring equipment provides information about wind, temperature, and ozone. A binocular telescope, mounted on the center's roof, allows for up-close views of passing vessels, birds, and wildlife.

In case of inclement weather, the center offers computer games to test your knowledge of flora, fauna, and history of the park. A VCR hooked up to our video projector gives you a chance to view videotapes. An auditorium seating ninety-nine is available for presentation of slides, movies, and other programs. See Appendix C for a list of the park's video library.

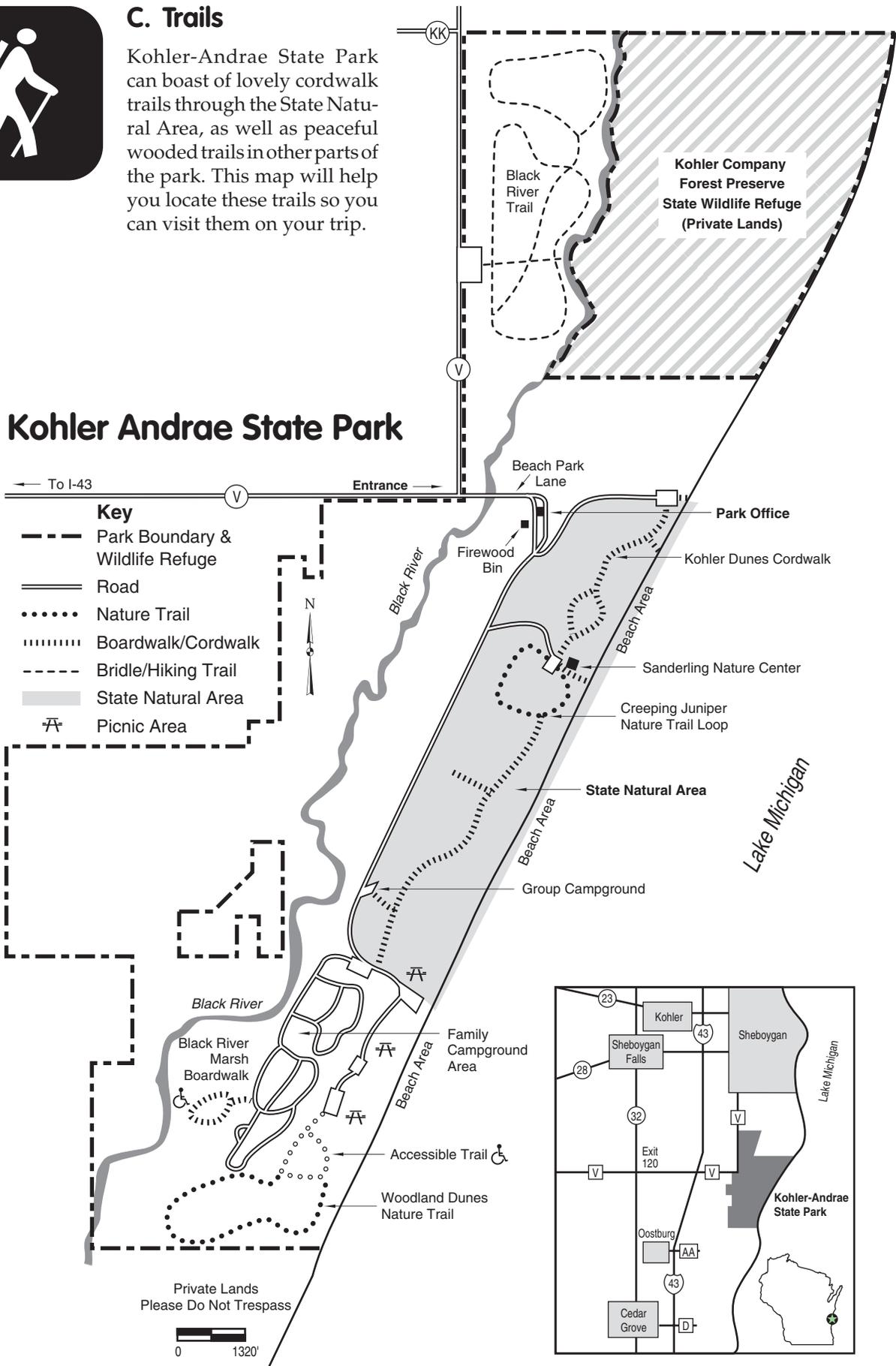
The center is open from May through October and is closed during the winter. Volunteers staff the center. The hours are 1-3pm on Mondays and Tuesday; and 12:30-4:30pm Thursday through Sunday. Other times may be available by appointment. School bus parking is available north of the center. Flush toilets are available.





C. Trails

Kohler-Andrae State Park can boast of lovely cordwalk trails through the State Natural Area, as well as peaceful wooded trails in other parts of the park. This map will help you locate these trails so you can visit them on your trip.





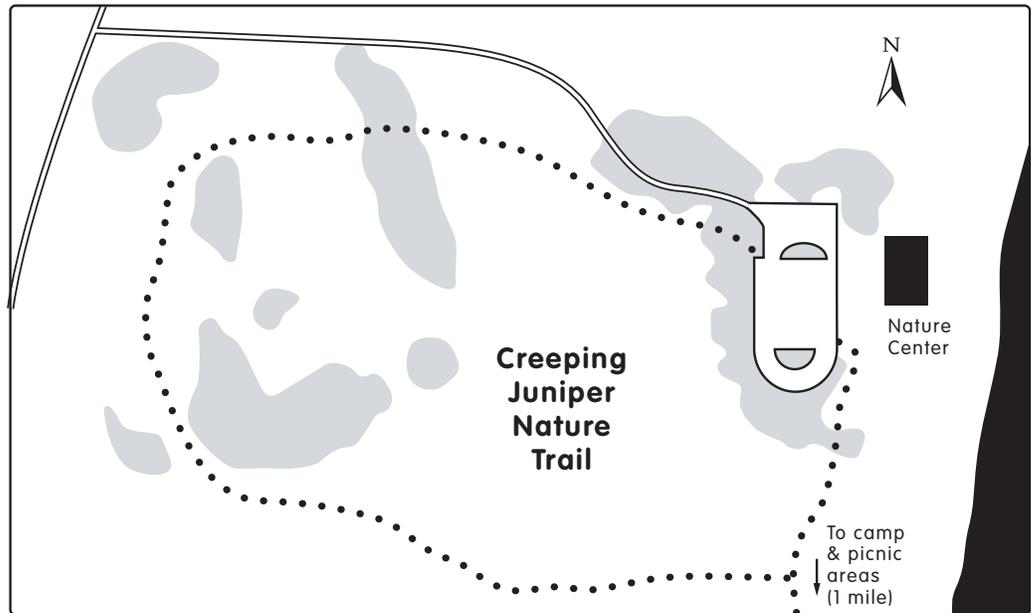
Nature Trails

Creeping Juniper Trail, part of the State Natural Area, is one-half mile long. Located south of the Sanderling Nature Center, this trail loops through the scenic sand dunes area along the shore of Lake Michigan. This trail is accompanied by signs describing plant life, geologic history, and animal life. It offers many educational opportunities. Help us protect and preserve this Natural Area by staying on the cordwalks. Rare plants and delicate soils are easily destroyed by human disturbance. Your group can discuss dune formation and ecology, plant adaptations, or park history. Look for small inverted cones in the sand. Ant lions build these structures to capture their insect prey. Copies of the trail narratives are included in Appendix D.

Creeping Juniper Trail

- Length: one-half mile
- Hike Time: 20-30 minutes
- Level of Difficulty: Easy to moderate
- Terrain: gently rolling dunes, some flat areas
- Surface: Wooden cordwalk
- Special Features: Nature trail signs, view of Lake Michigan, close to Nature Center

Our second nature trail is called the **Woodland Dunes Trail**. This trail is located just south of the campground and picnic





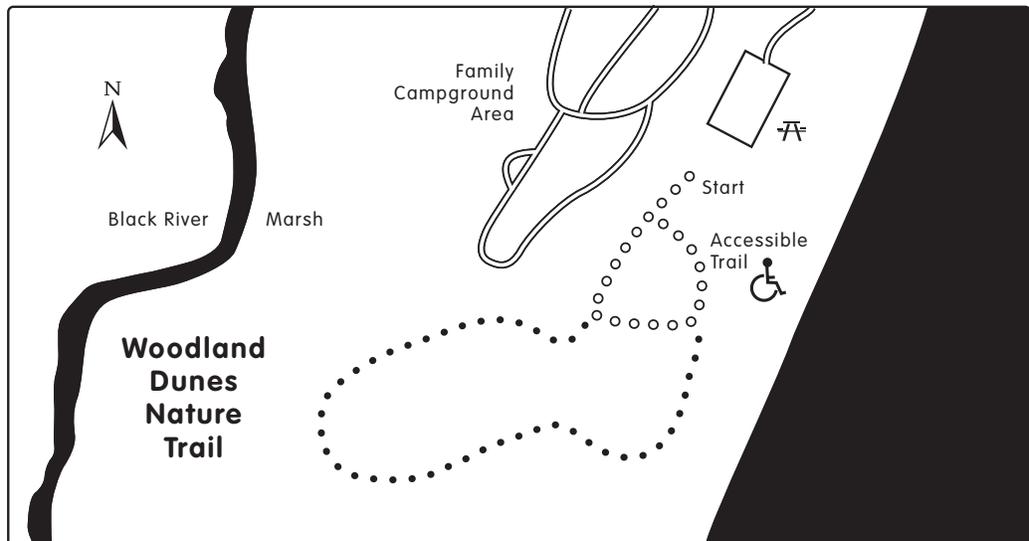
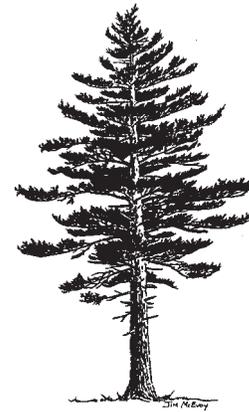
area and offers interpretive signs and tree I.D. emblems to assist you in identifying trees and other features. The trail is one mile long and travels through a heavily wooded area. These woods mark the transition zone between two major plant communities in Wisconsin: the southern prairie forest and the northern hardwoods forest. This area contains a blend of plant species typical of both communities.

Ask your students to listen to the various sounds from trees, birds, and the lake. Many birds live in this area of the park; a bird watching activity can enhance your hike. Vandalized trees which are carved with letters show how people hurt our resources. You can liken tree bark to our own skin to illustrate how damaging carving is to a tree. During spring and early summer, lovely wildflowers blanket the ground along the trail. Enjoy their beauty.

A complete list of tree species found in the park are listed in Appendix B.

Woodland Dunes Trail

- Length: one mile
- Hike Time: 30–50 minutes
- Level of Difficulty: Easy to moderate
- Terrain: Forested rolling dunes
- Surface: Bare ground and sand
- Special Features: forest habitat, close to picnic area





Hiking Trails

The **Dunes Cordwalk** is actually two different trails. Located just north of the nature center in the State Natural Area, the first trail segment offers you many chances to appreciate the scenery at Kohler-Andrae. This segment is one-half mile long. You can hike to a “blow out” in the sand dunes. Blow outs are depressions in the sand dune where plant cover has been destroyed by disturbance. The wind blows out the sand leaving a large depression. Two lookout points take you to platforms overlooking the beach and lake. This trail segment ends in the north beach parking lot where another cordwalk gives you access to the lakeshore.

If you hike along the beach, discuss how sand forms. Beachcomb for rocks and other treasures. Look for sand ripples formed by the waves. The point where waves reach their highest is called the *drift line*. The presence of plants indicates waves do not reach beyond that point. Ring billed gulls and other shorebirds live along the shore and feed on snails, fish, and insects washed in by the waves. Take a few moments to watch their behavior.



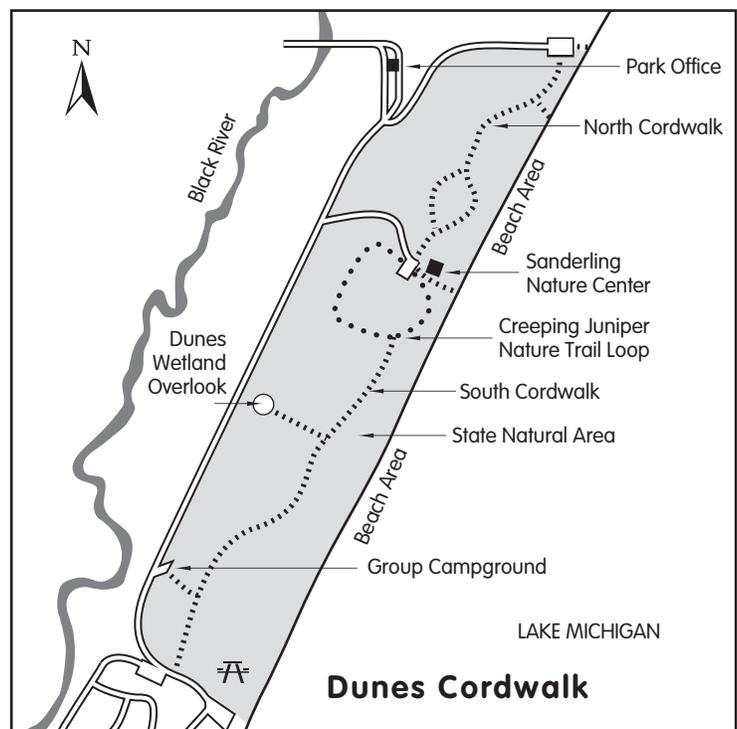
The second trail segment is south of the nature center. This trail connects to the Creeping Juniper Nature Trail and follows one and one-half miles of the dunes. A side trail takes you to a lookout platform, giving you a view of a rare and very special inter-dunal wetland. Discuss topics such as the lake’s air-conditioning effect, active dune formation, and dune plants. Dune plants such as marram grass help stabilize the sands by extending long, complicated root systems which hold the sand and reach groundwater and nutrients.

Dunes Cordwalk

- North Trail:
- Length: one-half mile
- Hike Time: 30–40 minutes (with hike along beach to Nature Center)
- Level of Difficulty: Moderate
- Terrain: Rolling dunes
- Surface: Wooden cordwalk
- Special Features: Two lookout points with view of lake, sand dune blow out view

Dunes Cordwalk

- South Trail:
- Length: one and one-half mile
- Hike Time: 30–50 minutes (with hike along beach to Nature Center)
- Level of Difficulty: Moderate to Difficult
- Terrain: Rolling dunes
- Surface: Wooden cordwalk
- Special Features: Lookout platform to inter-dunal wetland, view of lake





The **Black River Trail**, two and one-half miles long, is located in the northwestern section of the park just off County Highway V. This trail passes through flat, open fields, woodlands, and an evergreen forest, offering seclusion from the main part of the park.

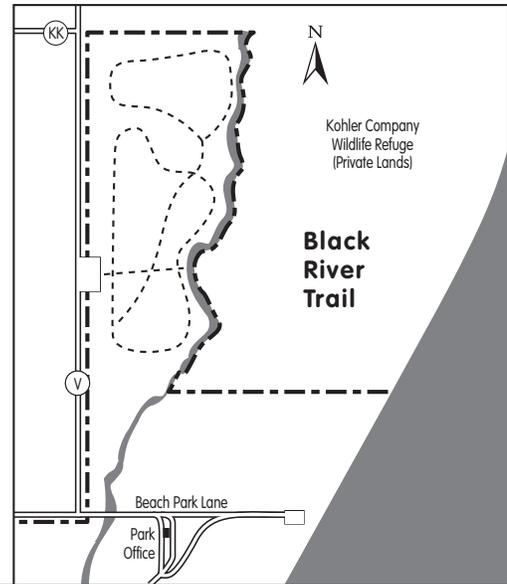
On this trail you can observe bluebird houses in the open field. These houses replace natural homes which are depleted by habitat loss and clean farming practices. Ask students why animals need homes and what people can do if animal homes are lost.

Many birds and other wildlife live on the edge between two different communities. Therefore, this open field and woodland community is home to a variety of wildlife. If your group is observant, they may see and hear Kohler-Andrae's wildlife.

The **Black River Marsh Boardwalk**, ¼ mile long, is located west of the campground area. This trail offers interpretive signs to assist you is discussing the importance of preserving wetlands for aesthetics, wildlife use, recreation, and the health and safety of the ecosystem and water supplies.

Black River Marsh Boardwalk

- Length: ¼ mile
- Hike Time: 20 minutes
- Level of Difficulty: Easy
- Terrain: Level boardwalk
- Surface: Wooden Planks, Handicap Accessible
- Special Features: Wetland plants, waterfowl, marsh birdlife, pond and river overlooks, nature signs



D. Picnic Areas, Shelters, and Recreational Facilities



In order to keep the Nature Center and surrounding State Natural Area unspoiled, we ask that you please eat only in designated picnic areas. These areas are designed for large numbers of users. For safety considerations, glass containers are not allowed on the beach or in the picnic areas. The park has a Carry In—Carry Out policy for trash and recyclables. Please plan on taking this material with you as you exit the park. Please let your students know why recycling is important and necessary.



Picnic Areas

The park picnic area runs nearly one-half mile along the lakeshore. Please see the enclosed map for details. The southern area of the park has 250 tables near the park concession stand. Soda, ice cream, and other snack vending machines are available in the concession stand from Memorial Day to Labor Day.

Shelters



The park has one indoor shelter featuring a stone fireplace. Firewood is available for a nominal fee from the park office. The shelter is located across from the shower/toilet building in the north campground area. The shelter is available upon request and can be reserved.

An outdoor shelter is also available near the ball diamond in the picnic area.

The park concession stand and restroom facility contains a breezeway. This building may be used as shelter in bad weather.

Recreational Facilities



On the south end of the picnic area, our playground with slides, swings, and other equipment is a popular spot for school groups on lunch break. Close by is a baseball field and volleyball net. Take a short break after lunch to enjoy these facilities.





E. Restroom Facilities

Please see the enclosed map for the location of the restrooms at Kohler-Andrae. Flush toilets are available from mid-April to mid-October. Pit toilets are open year round.



F. Amphitheater

A 198-seat amphitheater with a large wooden stage and electrical outlets is located at the north end of the picnic area. Please see the park map for the exact location. The amphitheater is generally open during the week for use. On weekends the park naturalist conducts programs here and on Sunday mornings the amphitheater is used for non-denominational church services.

G. Classroom

Adjacent to the park shelter is a large 640 square foot classroom with tables which may be reserved at no charge to school groups.



H. Accessibility

Due to the rolling nature of the dune landscape and shifting sand, the Dunes Cordwalk Trail, the Creeping Juniper Trail, and the Black River Trail are somewhat difficult to traverse. The Woodland Dunes Trail features a ¼ mile loop with a crushed limestone surface. The ¼ mile Black River Marsh Boardwalk is also accessible with its wooden board surface. Sanderling Nature Center is accessible; however, the observation deck is located on a second level. A cordwalk from the Nature Center to the shoreline gives visitors with disabilities access to the lake. A beach wheelchair with large balloon tires can be checked out for beach use. All flush toilets in the park are designed to accommodate people who have disabilities. Picnic areas also contain wheelchair accessible picnic tables and drinking fountains. Designated parking is available.

I. Resources

From the marshes along the Black River to the shoreline of Lake Michigan, Kohler-Andrae supports hundreds of species of animal and plant life. A special feature of Kohler-Andrae is the diversity of wildlife.

At least 33 different species of mammals are known to live in the park. White-tailed

deer are without a doubt the most popular with visitors. Visitors can spot deer most anytime, but deer are frequently seen when they're most active in early mornings and late evenings. The curious thirteen-lined ground squirrel, incorrectly called gophers, are seen throughout the park as they surface from their underground network of tunnels.

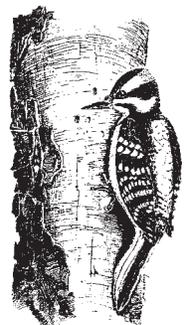
Fox, bats, chipmunks, several types of squirrels, muskrats, mink, raccoons, rabbits, opossums and many other common mammals also live here. Keep an eye out for the more elusive river otters, beaver, coyotes, and badgers. See Section IV, General Resources for a more complete listing of park mammals.

Over 150 bird species live or visit Kohler-Andrae. The shore of Lake Michigan acts as a migration corridor for birds during the spring and fall migrations. Many hawks, including marsh hawks, red-tailed hawks, sharp-shinned hawks, and the broad-winged hawks, migrate through the park as do several other endangered and threatened species of birds.

Many birds live and nest in the park. Ducks, gulls and shorebirds, woodland warblers, vireos, sparrows, marshland rails, and herons are part of the colorful array of birds. Bird watching in the park is certain to reveal a never ending and colorful show. A list of Kohler-Andrae birds is included in Appendix F.

Hundreds of insect species live in Kohler-Andrae, including several rare butterflies and moths. Several species of reptiles live here including brown snakes, red bellied snakes, garter snakes (none are poisonous), snapping turtles, Blanding's turtles, and painted turtles. Amphibians which inhabit the park include eastern gray tree frogs, northern leopard frogs, western chorus frogs, American toads, and green frogs. With a keen eye, you may be able to observe some of these animals. Watch closely!

The trees at Kohler-Andrae are less elusive. Over fifty tree species are found in the park. Try your hand at identifying some of these inhabitants of Kohler-Andrae. Look for white birch, yellow birch, beechwood, ashes, maples, eastern white pine, and white cedar, just to name a few. See Section IV, General Resources for a complete listing of park trees.





Lake Michigan

6th largest fresh water lake in the world

Length	307 mi. long
Width	118 mi. wide
Depth	279 ft. deep (Max. 923 ft.)
Water Volume	1,180 cubic mi.
Water Surface	22,300 sq. mi.
Shoreline population	14 million people

J. A Cross Section of Kohler-Andrae

The Lake and Beach Area: Let's take an imaginary hike east to west through the park. The eastern-most boundary is Lake Michigan. Due to its size, Lake Michigan significantly modifies the climate of the park. During summer months, large differences in daytime land and water temperatures increase wind velocity causing an air conditioning effect. Winter weather is modified so that temperatures are generally less severe.

The beach along the lake offers beachcombers a chance to discover driftwood, cobbles and pebbles carried by Lake Michigan. The beach and the lake are an irresistible combination of beauty and adventure. Check out the Lake Michigan fish display and beach rock match up display in the nature center.

The Dunes and Active Dune Formation

Just west of the sandy beach are forested and unforested dune communities. Much of this area is designated as a State Natural Area. The dunes contain many unique examples of dune vegetation and protect some threatened species of plants. Help us preserve and protect this unique area; please stay on the cordwalk trails.

Prevailing winds blow in an westerly direction, opposing the deposition of dune-forming sands. On particularly blustery days, the wind sends dune sands back to the beach or lake. Winter storms and high lake levels may erode the youngest most lakeward dunes. As a result, dunes grow only during infrequent northeasterly storms.

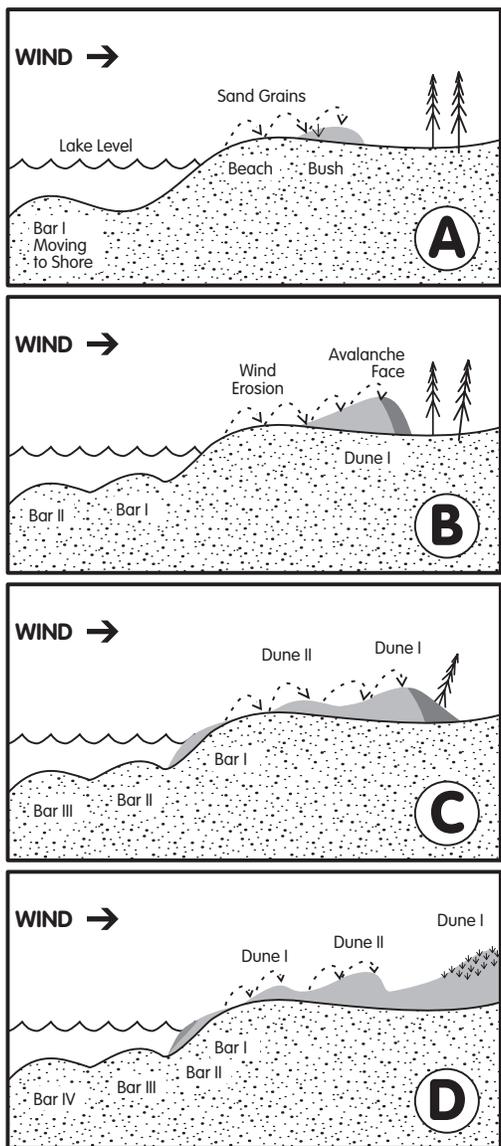
Dunes at Kohler-Andrae form when sand from the dry part of the beach blows inland and settles behind an obstacle such as vegetation, driftwood, rock or a fence. This action is similar to snow gathering behind a snow fence. The accumulation of sand provides a wind shadow that causes sand to be deposited on the side opposite the wind.

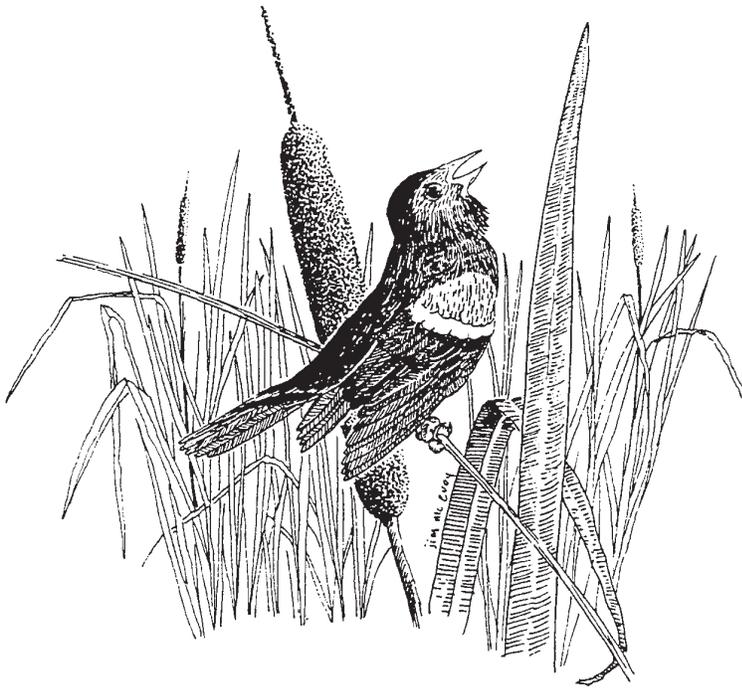
As this process continues, sand erodes from the windward side of the dune, and moves up over its edge to accumulate just over it. Sand avalanches down this steep side. This process continues, with sand from the windward side carried up and over the edge and deposited on the other side. In this way the dune migrates inland.

Younger dunes reduce the sand supply from the beach and block the wind so that vegetation establishes on the dune. Within this dune community you will see low lying shrubs called creeping juniper and stands of white pine. Grasses such as sand reed grass and marram grass stabilize the sand dunes and keep the sand from blowing away.

Blow outs are caused by disturbance such as foot traffic from humans and animals. Plant cover can be destroyed by disturbances, exposing bare sand. Wind enlarges the disturbed area and wind-blown sand covers and kills other plants. These sandblows or blow outs are common in the dunes of Kohler-Andrae.

Another feature unique to the dunes are rare *interdunal wetlands*. These wetlands are annually intermittent; they last temporarily. Rare plants, such as some species of sedges and rushes, live in interdunal wetlands.





The River Marsh and the Black River

The river marsh lies west of the dunes. This marsh serves as a buffer between the Black River and Lake Michigan. All marshes filter out various solids, other impurities, and chemicals from water before it reaches lakes or rivers. Marshes also retain flood water, store excess water, serve as groundwater recharge areas, and moderate stream flow.

Marshes and wetlands are homes of countless forms of plants and animals. Insects such as mosquitos, water fleas, dragonflies, damselflies and backswimmers live in the marsh. Snails, frogs, turtles, crayfish, and fish make their homes here. Raccoons are active at night along marshland shores, feeding on frogs and crayfish. Red-winged blackbirds build their nests in cattails. Cattails provide food and cover for many animals in the marsh including ducks and muskrats. Listen for the clangor of sandhill cranes nesting on the marsh during spring's early morning hours.

