

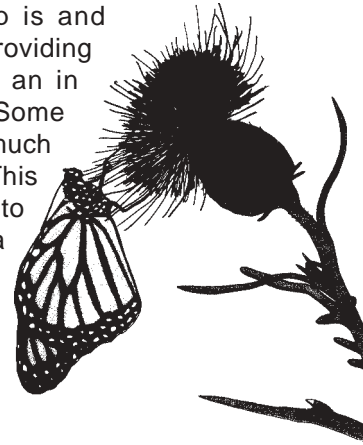
HIKING TRAIL GUIDE



Department of Natural Resources
Parks and Recreation

Trail Loop 4 - 5 (the southernmost loop)

The southern loop is an enjoyable stretch providing an opportunity for an invigorating hike. Some of it is wooded but much of it is open land. This is an ideal chance to catch a glimpse of a hawk hovering on a thermal, a rising column of air, or a butterfly getting nectar from a flowering plant.



It is difficult to consider the land in the park without mentioning the Great Lake it is located on. Lake Michigan, one of the most enjoyable attractions at Orchard Beach. Lake Michigan, like the rest of the Great Lakes, was not always lake. Before the Ice Age, the present lake basins of all the Great Lakes were actually stream valleys. During the Ice Age, the glaciers sculpted the region into much of its present shape. As they melted they filled the lake basins with water.

Other telltale signs left by the retreating glaciers include many of the huge boulders and field stones found in the area. The rolling hills which enhance the topography of the park have been formed from clay, sand, boulders and gravel deposited as the glacier retreated. Such deposits are called moraines.

Equal Rights for Natural Resource Users

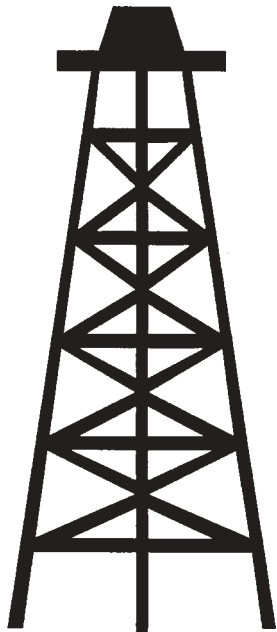
The Michigan Department of Natural Resources, (MDNR) provides equal opportunities for employment and access to Michigan's natural resources. Both State and Federal laws prohibit discrimination on the basis of race, color, national origin, religion, disability, age, sex, height, weight or marital status under the Civil Rights Acts of 1964 as amended (MI PA 453 and MI PA 220, Title V of the Rehabilitation Act of 1973 as amended, and Americans with Disabilities Act). If you believe that you have been discriminated against in any program, activity or facility, or if you desire additional information, please write the MDNR, HUMAN RESOURCES, PO BOX 30028, LANSING MI 48909-7528, or the MICHIGAN DEPARTMENT OF CIVIL RIGHTS, STATE OF MICHIGAN PLAZA BUILDING, 1200 6TH AVE, DETROIT MI 48226, or the OFFICE FOR DIVERSITY AND CIVIL RIGHTS, US FISH AND WILDLIFE SERVICE, 4040 NORTH FAIRFAX DRIVE, ARLINGTON VA 22203. For additional information or assistance on this publication contact: MDNR PARKS AND RECREATION, VISITOR SERVICES, PO BOX 30257, LANSING MI 48909. This publication is available in alternative formats upon request.



Trail Loop 3 - 4 - 5 - 6

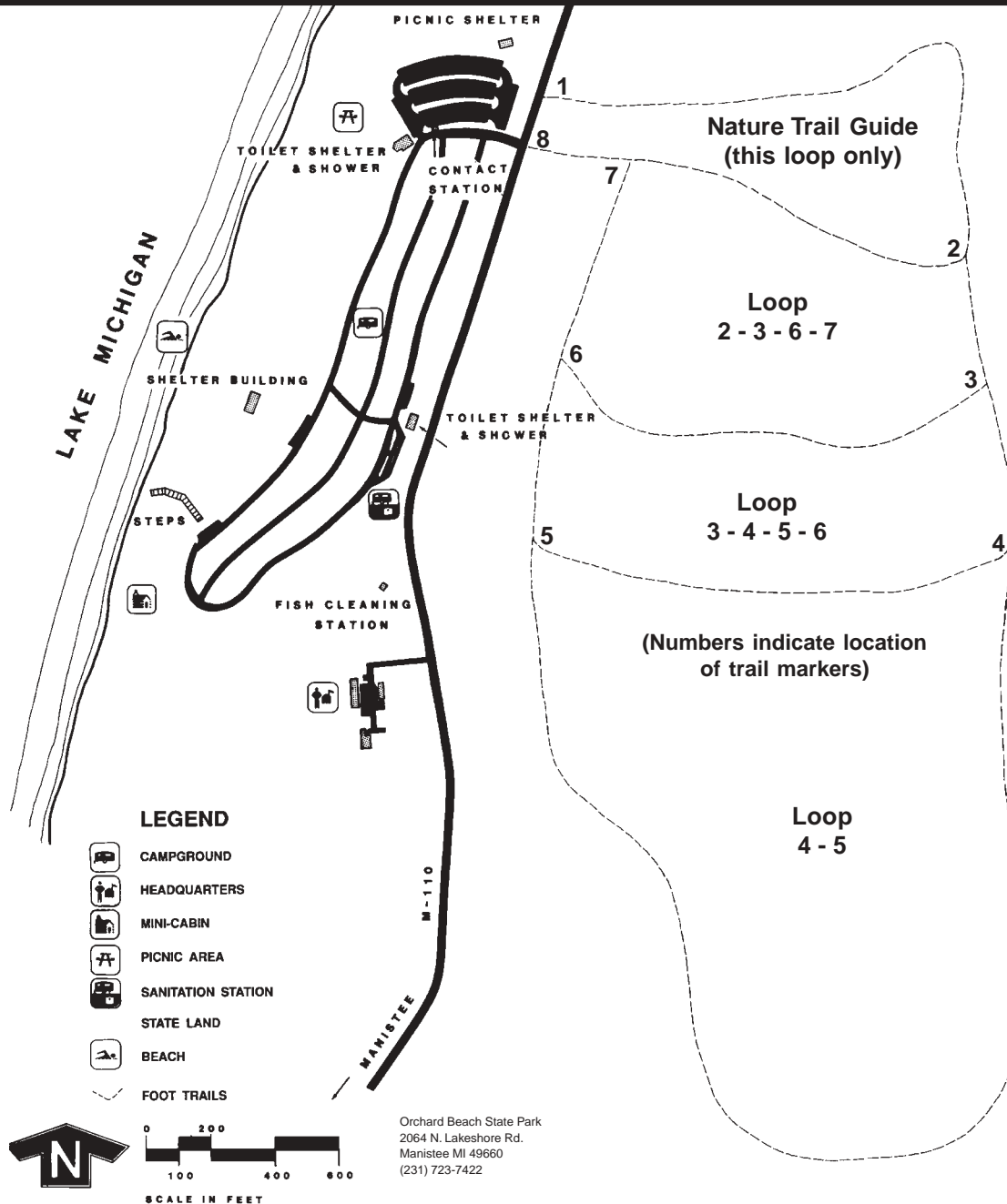
Beneath the very ground drilling in Manistee County is searching out oil deposited in what has been called the Niagra Reef Reservoir. The originated during what is called the Ordovician Michigan basin was which persisted on into Silurian Period. The reefs were built by lime Deposits created by the marine environment made possible the microorganisms, one animals, that would have hydrocarbons needed to the reservoir. Dependent Manistee is providing her

we stand on oil well Niagra Reef's formation called the Ordovician Michigan basin was which persisted on into Silurian Period. The reefs secreting coral and algae. marine environment development of tiny celled plants and provided the necessary produce the oil found in as we are on fossil fuels, share.



PRINTED BY AUTHORITY OF: Act 451, P.A. of 1994 as amended
TOTAL NUMBER OF COPIES PRINTED: 1,200
TOTAL COST: \$ 126.25 COST PER COPY: \$ 0.105

Orchard Beach State Park Hiking Trails



Trail Loop 2 - 3 - 6 - 7



At the beginning of this loop you will notice a cluster of Sassafras trees. A small tree of the laurel family, the Sassafras has the distinction of having an aromatic bark, leaves with usually two or three fingerlike lobes and small bluish fruits. Lumber from Sassafras was once used for barrels and buckets, dugout canoes and posts. The outer bark of its root makes a pleasant tea. Its fruits are enjoyed by songbirds, while rabbits and deer like to nibble at its twigs.

Along this loop you'll also notice several small mounds of earth. Closer examination will reveal that these are ant colonies with thousands of ants. Ant colonies typically contain one or a few sexual females or queens, neuter females which function as workers or soldiers and some males which are produced only a few times a year for mating purposes.

Sandy soils are common in this area of Michigan and since the area was disturbed through logging and farming, it's likely that the nutrient rich topsoil was depleted. But evidence of nature's determination and resilience is readily available to the keen observer. The abundant colonies of mosses and lichens help to break down rocks and stones to release their minerals to the soil. Some of the lichens are called "British Soldiers" because of their bright red caps. Others are called "Fairy Cups", an appropriate name considering their shape. The forces of wind and water along with the decomposition of organic matter help to create new topsoil.

