GLACIAL LANDMARKS TRAIL

Iowa’s Heritage of Ice

Some of the first landforms of glacial origin to be seen in Iowa are found in the “lake district,” here in the northwestern part of the state. The clays to these past origins are everywhere — in the clusters of natural lakes and wetlands, in the boggy swales scattered among irregularly shaped hills and, in the boulders and gravel deposits on ridges and hills. Though attention here is focused on Dubuque and Oceola counties as a showcase of glacial history, distinct terrain features associated with the presence of the massive ice sheet extend throughout north-central Iowa. This region is called the “Des Moines Lobe,” the area occupied by the last advance of glacial ice into the state (see Figure 1). Its name refers to the location of Iowa’s capital city at the southernmost limit of this former ice mass.

During the Wisconsinan glacial stage of the Pleistocene Epoch of geologic time, a glacial ice sheet expanded briefly into Iowa from a much larger, continental ice sheet which lay to the north. This “brief” interval of time lasted approximately 1,500 years and occurred between 14,000 and 12,500 years ago, as determined by radiocarbon dating of peat, logs, and stumps of trees within the deposits left behind. These deposits are younger by hundreds of thousands of years than the glacial deposits that mantle most other Iowa landscapes (see Figure 2). The geologically fresh deposits of the Des Moines Lobe still display the special landscape shapes that result from direct contact with melting and disintegrating glacial ice.

The places identified in Figure 3, and the terrain in their vicinities, clearly exhibit the topographic features that characterize a recently glaciated landscape. In particular, note the “knob-and-kettle” topography associated with the end moraines left by the stagnating flutes of the Allandale glacial advance, two major components of the Wisconsinan-age glacial activity in Iowa. Moreover, and the DuSable, Enclawed depressions, marshes, lakes, knolls, and ridges, glacial boulders (“erratics”), and the lack of an efficient drainage system all provide areas of unusual scenic beauty, valuable wildlife habitat, and outstanding examples of landscapes that reflect our state’s glacial heritage.

Figure 1. Glacial Map of the Des Moines Lobe.

Figure 2. Limits of Major Pleistocene Glacial Advances into the Midwest.

Figure 3. Points of Interest Along the Glacial Landmarks Trail in Northwest Iowa.

Stop

1. Spirit Lake (south shore)
2. Little Swan Lake — Christopherson Slough Wildlife Area
3. Spring Run Wildlife Management Area
4. Freda Haffner Kettlehole State Preserve
5. Galv Point State Park
6. Cailey Prairie State Preserve
7. Silver Lake Fen State Preserve
8. Ocheyedan Round State Preserve
9. Grover’s Lake Wildlife Area and Koppen Prairie
10. Ketelsen Hogback Wildlife Management Area

These 10 stops highlight the glacial landforms in the “lake district” of Iowa (see photos on reverse side). Many people know the area for its water-based recreation; fewer realize the special geological origins of the wealth of wetlands and related natural resources. Thanks to the great thrust of a continental ice sheet into this area between 14,000 and 12,500 years ago, the land was shaped to provide habitats for a rich bounty of plants and animals that live in these wetland-pocked prairies. More than just a good place for swimming, fishing, and boating, this region can be considerable a living museum of the imprints of the last glacial advance to affect Iowa — one of nature’s most remarkable phenomena.

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SPRING LAKE: This glacial lake is located between the coastal areas of Lake Michigan and Lake Huron. The lake is known for its unique geology, which includes a series of small islands and a distinctive shoreline. The lake is home to a variety of wildlife, including birds, fish, and other aquatic life. (Page 1)

LITTLE CREEK LAKE: — CHRISTOPHERSON
SLOUCH WILDLIFE AREA: These natural habitats are crucial to the survival of the local ecosystem, providing shelter and food for a variety of species. The area is home to a number of rare and endangered species. (Page 2)

OGREYEBAN MOUNT STATE PRESERVE: This preserve is home to a variety of unique plants and animals. The area is also known for its scenic beauty, with views of the surrounding mountains and forests. (Page 8)

SILVER LAKE: — PEN STATE PRESERVE: (a) A hillside bordering the southwest shore of Silver Lake is characterized by a series of small ridges and depressions, which are the result of glacial activity. The area is home to a variety of wildlife, including birds and small mammals. (Page 4)

SILVER LAKE: — PEN STATE PRESERVE: (b) A hillside bordering the southwest shore of Silver Lake is characterized by a series of small ridges and depressions, which are the result of glacial activity. The area is home to a variety of wildlife, including birds and small mammals. (Page 4)

SILVER LAKE: — PEN STATE PRESERVE: (c) A hillside bordering the southwest shore of Silver Lake is characterized by a series of small ridges and depressions, which are the result of glacial activity. The area is home to a variety of wildlife, including birds and small mammals. (Page 4)

KETTLEHORN HOGBACK WILDLIFE MANAGEMENT AREA: The hogback is a unique geological feature that is often found in areas that have been shaped by glacial activity. The hogback in Kettlehorns hosts a variety of wildlife, including birds and small mammals. (Page 10)

CAYLER PRAIRIE STATE PRESERVE: Cove is a wetland that is home to a variety of unique plants and animals. The area is also known for its scenic beauty, with views of the surrounding mountains and forests. (Page 8)

GULL POINT STATE PARK: This beautiful peninsula lies out into the waters of West Okoboji Lake, the deepest part of Iowa’s Great Lakes. Numerous ecosystems, from wetlands to prairies, and forests to lakes, are found here, providing a unique and diverse habitat for a wide variety of wildlife. (Page 8)

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