



## Glossary of Geologic Terms

**CONTINENTAL GLACIATION**--The formation, movement, recession and related effects of colossal, nearly continent-sized ice sheets. Though common during the Pleistocene (or most recent) Ice Age, the only ice sheets that today approach the enormity of those existing during the Ice Age are in Antarctica and Greenland. Continental glaciation sculpted a quarter of the Earth's landmass and dramatically changed the Earth's climate, oceans, plants and animals.

**DRIFTLESS AREA**--The southwestern quarter of Wisconsin is unglaciated or shows no signs of past glacial activity. It is a landscape deeply cut by ancient streams into narrow, angular valleys and several hundred million years old ridges. The best place along the Trail to see the Driftless Area is Dane County between Mineral Point Rd. (Ice Age Complex at Cross Plains) and Table Bluff (Swamplovers), along the west of the end moraine.

**DRUMLIN**--An elongated, teardrop-shaped hill. These streamlined hills were sculpted in the direction of the glacial ice movement. They often occur in groups known as swarms. Because drumlins generally form miles behind, or up-ice, from an end moraine, they are rare along the Trail. Drumlins are located within the Lodi State Wildlife Area and City of Lodi.

**END MORAINE**--A type of moraine formed at the outer edge of a glacier or glacial lobe where it paused or stopped. Prominent end moraines along the Trail can be witnessed at Prairie Moraine County Park in Dane County, Devil's Lake State Park in Sauk County and the range of hills north and east of Antigo in Langlade County.

**ERRATICS**--Boulders carried long distances by the glaciers and deposited when the glacier melted. They tend to be smooth and rounded. Erratics can be found along the entire Trail, except where it traverses parts of the Driftless Area. Erratics mark the further extent of the glacier within the Ice Age Complex at Cross Plains. Large, famous erratics along the Trail are in Walworth, Waupaca and Langlade counties.

**EXTINCT GLACIAL LAKE**--A glacial lake that drained, often catastrophically, when a glacier or glacial lobe melted back. Extinct Glacial Lake Wisconsin's lakebed remains visible in Adams and Juneau counties, north of the Aldo Leopold Shack.

**ICE SHEET**--A large, continental glacier that is not confined by underlying topography. The northeastern quarter of North America was covered over a dozen times by the Laurentide Ice Sheet during the Ice Age, between 10,000 and 2.5 million years ago. Today, ice sheets are found only in

polar regions such as Greenland and Antarctica.

**KETTLE**—A surface depression formed by large, detached blocks of melting ice that were buried with sand and gravel. As the ice melted, the other material collapsed, leaving a crater-like depression. Some kettles are more than 100 feet deep. Kettles can be found in many places along the Trail.

**LOBE**—A tongue-like extension of an ice sheet. Six major lobes during the late Wisconsin Glaciation covered portions of Wisconsin. These lobes were the Superior, Chippewa, Wisconsin Valley, Langlade, Green Bay and Lake Michigan lobes. The Des Moines Lobe extended slightly into western Polk County.

**MORAINE**—A ridge formed by unsorted gravel, sand and boulders carried by the glacier and deposited at the outer edge, or front, of the glacier. Some are only 10 feet high, while others rise 250 to 300 feet. Moraines define the basic route of the Trail, and can be found in many places along it.

**OUTWASH PLAIN**—A sandy plain formed when glacial meltwater streams in front of glaciers spread over a very wide, flat area. The water swept the sand into both glaciated and unglaciated areas.

**POTHOLES**—A smooth bowl carved into bedrock by the grinding action of stones whirling around in a river eddy. Many potholes were formed by

torrents of glacial meltwater during the Ice Age. The small potholes at Devil's Lake State Park were formed before the Ice Age.

**TERMINAL MORAINE**—A type of end moraine where a glacier or glacial lobe reached its maximum extent and melted back.

**TUNNEL CHANNEL**—Subglacial rivers cut into the underlying glacial bed, forming tunnel channels. In Wisconsin, these channels occur only at the outmost edge of the late Wisconsin advance, where they cut through the moraines and end in large alluvial fans. After the glacier has melted, the channel may contain a series of lakes.

**WISCONSIN GLACIATION**—A period of the Earth's history at the end of the Pleistocene Ice Age, between 10,000 and 75,000 years ago. All glacial lobes and landforms were created during the last part of the Wisconsin Glaciation, unless otherwise noted.



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