

## Whitewater Lake Glaciers

Yesterday I led a 4H group hike from Clover Valley to the Rice Lake Nature Trail and back, 2.3 miles in length. I had to do some research prior to the hike so that I could talk about some of the glacial features of our area. I am in no way an expert on this subject, but I thought I would share what I learned about our Whitewater-Rice Lake area's topography while it is still fresh in my mind, because like me, you might find it rather fascinating. My sources were two books, UW-Extension's "Geology of the Ice Age National Scenic Trail" by Mickelson, Maher Jr and Simpson and "Ground Water Resources and Geology of Walworth County, Wisconsin" by R. G. Borman, U.S. Geological Survey (which my neighbor Jim Mulcahy loaned me). Jim also pointed me in the direction of David Gundlach - NRCS, Janesville, WI who was also a great help.

One of the things I learned is that our area is the confluence of the Johnstown Terminal Moraine, Darien Terminal Moraine and the Kettle Interlobate Moraine. Terminal moraines are a type of end moraine, which in our case is where the Laurentide Ice Sheet (Wisconsin Late Glaciation) stopped in it's most extreme glacial advance 20-26,000 years ago and began to melt away, leaving deposits, otherwise known as glacial till, in its wake. The Kettle Interlobate Moraine is where two of the Laurentide Ice Sheet's glacial lobes came together, the Green Bay Lobe and Lake Michigan Lobe. So, not only was our area's topography shaped by Laurentide's terminal moraine, but also the Kettle Interlobate Moraine.

Two glacial features that are especially represented in our Whitewater Lake Recreation Area are kettles and eskers. Kettles are formed when an ice chunk falls off the glacier wall, in an action referred to as calving, and then the ice chunk is buried by glacial till as the glacier melts away. When the ice chunk melts, any glacial till that was on top of the ice chunk falls into the hole and a "kettle" or pot hole remains. The pioneers named these holes "kettles" because they looked like kettle pots. Several kettles dot our Whitewater-Rice Lake landscape, including three kettle lakes which were flooded when Whitewater Lake was dammed.

An esker is formed when meltwater seeps down and forms a stream tunnel within the glacier. Glacial till is then carried along with that meltwater and deposited along the

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bottom course of the tunnel. When the glacier melts away, a ridge is left in its place. There are four eskers in our Whitewater Lake Recreation Area. One is on the east side of the Rice Lake Nature Trail pond, one is the entire length of Ridge Road, another is State Park Rd and a fourth is located in the Scenic Ridge Campground.

Much of the Ice Age National Scenic Trail follows the Laurentide's terminal moraine and the Kettle Interlobate Moraine. A bonus of these landforms is that in many locations the landscape was not ideal for farming because it was too rocky and hilly, so native plant species survived in some of these areas, allowing for the preservation of some of our Wisconsin primary wildlife migrating travel corridors. The Southern Unit of the Kettle Moraine State Forest is one of these primary wildlife corridors because of its high quality wildlife habitat and is the only primary wildlife corridor in our County that is of global significance.

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