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DEPARTMENT OF BIOLOGY

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Subject: The GLACIERS at ORDWAY.

The terrain at Ordway gives obvious signs of its glacial origin and it requires little imagination to make out the moraine on which the property lies. A graceful ridge runs south-eastward from the building and turns its spine southward to form a steep slope which contains River Lake along its west bank; other similar ridges compartmentalize the area leaving deep wooded glades lying between. Glacial till displays boulders and pebbles of both granite and basalt, evidence of their northern origins. In fact, the land which meets the eye at Ordway is of glacial origin for one will look in vain for ledge rockoor any of the underlying rock of this region - the Shakopee Limestone. These sedimentary rocks tilt upward toward the north and surface on adjacent property about 150 meters from our fenceline.

The four major glacial ages covered this part of Minnesota although it is quite near the southerly edge of such activity. The Illinoian Ice Stage (about 300,000 years ago) left a moraine around Hampton (15 km to the south), southeastward to the Cannon River with some hills 25-30 meters in height. It also left a thin layer (perhaps only 3 meters in places) of material over parts of Dakota County. This glacial layer weathered during the approximately 150,000 years of the so-called Sangamon Interglacial Interval and formed the soil which now covers most of the area. Then, about 50,000 years ago, the final ice age, the Wisconsin Ice Stage, covered the area with several sheets of ice. Most of the evident effects of glaciation in the area are the result of this most recent ice intrusion, which took place in at least four sub-stages. About 22,000 years ago the Iowan sub-stage pushed southward as far as Des Moines and it is on the so-called Des Moines Lobe that the Ordway is situated. The ice probably did not last long, became stagnant and melted away.

Finally, the Superior Lobe pushed ice southward to the Twin Cities region where its outer edge probably remained for quite some time, depositing great heaps of rocky material in huge moraines east, south and west, forming part of the St. Croix moraine complex. This complex is marked by a jumble of hills 30 or so meters high with hollows 20 meters in depth between. (This is quite evident in the series of "folded" compartmented valleys and ridges at Ordway.) In its drift are contained red material from the Superior Basin and blue pebbles from around Duluth. Both of these are locatable at Ordway. This ice probably receded about 10,000 years ago. What it left is beautiful....

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