A hidden glacial feature

The dividing line between today's hay fields
and the ancient terminal moraine

The Ruby Mountains are the most heavily glaciated mountain range in the Great Basin. We enjoy the beautiful mountain scenery created by the glacier that once filled Lamoille Canyon. We travel up the glacially carved canyon to visit lakes in glacial cirques where glaciers were born.

Yet there is a huge feature created by Lamoille Canyon's glacier, a feature with an interesting story that most of us travel across but do not recognize.

As the climate cooled 150,000 years ago, more and more snow fell on the upper slopes of the Ruby Mountains. Permanent snowfields piled up over the years until deep enough to compress the bottom snow into ice. This mass of ice near today's Lamoille Lake began moving slowly downhill, forming a glacier. As a massive amount of ice began bulldozing its way down canyon, it gouged and scraped at the canyon walls, widening them into their distinctive U-shape. More ice joined the

moving glacier from side canyons like Island Lake, Thomas Canyon and Right Fork Canyon. Eventually, the ice in Lamoille Canyon may have been 900 feet deep, filling half of its depth.

As snow continued to fall and ice to build up, the weight created a massive force pushing the glacier down slope. The glacier picked up tons of rock, gouged from canyon sides and bottoms.

Ice eventually extended throughout the canyon and emerged from its mouth. As the ice dropped lower in elevation, it melted faster, especially once it was clear of the confines of the canyon. As ice melted faster from its sides, top and front, the advance of ice slowed and finally stalled. Ice continued to move forward, but it melted so rapidly that the ice front stayed in one place.

For thousands of years, ice carried rock down the canyon, rock that eventually melted free of the ice and tumbled to the ground. When the advance of ice stalled, the entire glacier acted like a huge conveyor belt, moving rock from high in the canyon. Outside the canyon, it finally melted free to litter the ground.

A pile of rock built up in front of the glacial face, becoming what is known as a terminal moraine. This rock pile marked the farthest spot the glacier reached in its advance. As the climate warmed and dried, ice melting overcame ice advancement and the glacier face retreated back into the canyon. Eventually, all the ice finally melted away.

Today, we drive Hwy. 227 toward the town of Lamoille and turn off toward Lamoille Canyon. As we near the mountains, hay fields occupy the level ground on our left. About a mile from the canyon mouth, these hay fields suddenly end and rising ground is covered with rocks, boulders and brush. Once you recognize it, you can see this rough ground extends from the canyon mouth in a fan-shape on both sides of the road. The road climbs over this boulder-strewn ground before dropping into the canyon.

This rocky ground is Lamoille Canyon’s terminal moraine. That dividing line between hay fields and boulder-strewn ground marks the farthest point this glacier reached, over 14 miles below its source around Lamoille Lake.

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