The Story of Glaciers

You are about to embark on an exciting journey through time to discover how glaciers have shaped Acadia National Park. Glaciers have the amazing ability to form unique features, demonstrating the immense power of massive sheets of flowing ice. Rocks, mountains, valleys, and cliffs tell a story, a story of nature and its ability to create and change the natural features we see today.

Consisting of more than 47,000 acres, Acadia National Park preserves more than two dozen glacially sculpted mountains and valleys, glacial lakes and ponds, and one fjard known as Somes Sound.

Acadia National Park was formed by a series of geological events that began 500 million years ago. As you look around the park you will notice a lot of exposed rocks. All three different types of rocks—metamorphic, sedimentary, and igneous—are found in the park. Rocks have laid the foundation of Acadia National Park and our story here. Their location, formation, and appearance demonstrate the power of glaciers.

Starting one million years ago, several great ice sheets called continental glaciers covered much of North America, including Maine, for various periods of time. The last glacial period ended 18,000 years ago. Glaciers are formed when more snow falls than melts. As snow accumulates over thousands of years, the weight of the snow compacts and causes lower layers to turn to ice. Frozen ice pack moves in the same fashion as water following the forces of gravity to the lowest point. The rate of travel, however, is much slower. The massive mile-thick glacier that covered this area moved only a few yards each year. This slow glacial movement crafted some of the most impressive natural features you see on Mount Desert Island today.

Before there was Mount Desert Island, there was the Mount Desert Range. When the last continental glacier reached the Mount Desert Range, the high mountains temporarily obstructed the forward movement of the massive glacier. The high peaks in the northern section acted as a dam, holding back the forward momentum of the glacier until additional ice accumulated and eventually spilled over the mountain peaks. The last glacial event carved the trough known today as Somes Sound, dividing the mountain range in half and giving Mount Desert Island its characteristic horseshoe shape. As the glacier continued to flow 400 miles into the ocean, it carved deep saddles in the mountains, and the erosive power of the glaciers eventually deepened these saddles into valleys. The result of the last glacial event was a reorientation of the mountain range from east-west to north-south.

Eventually the glacier thickened, and it buried the newly formed Mount Desert Island. The glacier left its mark as it continued to move along. Your journey through Acadia National Park's EarthCache Program will unravel the story of glacial activity. Each site will demonstrate some aspect of the glacier's sheer power to transform the landscape.

Use the clues and information provided to get from one place to another, but remember that although the glaciers have subsided and melted, the story of nature is not over. In fact, it is an everlasting story, and if we aren't careful, our use of the land can impact nature just as drastically as the glaciers. The plants and their ecosystems that have flourished as result of nature's story are fragile. Where we step will change the plants and ecosystem of the area, so remember that all sites are on the trail—there is no need to go off trail. Please travel only on trails or on other hardened rock surfaces.

First Clue: To arrive at your first stop, take the road that shares a name with the park's second highest peak.

N 44° 19.110′
W 68° 18.364′