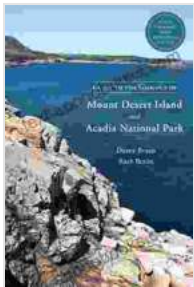


Guide To The Geology Of Mount Desert Island And Acadia National Park

Mount Desert Island, the centerpiece of Acadia National Park, is a geological wonderland. Its rugged coastline, towering mountains, and pristine lakes bear witness to the powerful forces that have shaped this landscape over millions of years. This comprehensive guidebook provides an in-depth exploration of the fascinating geological history of Mount Desert Island and Acadia National Park.



Guide to the Geology of Mount Desert Island and Acadia National Park by Tom Seymour

★★★★☆ 4.7 out of 5

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File size : 54892 KB
Text-to-Speech : Enabled
Enhanced typesetting : Enabled
Word Wise : Enabled
Screen Reader : Supported
Print length : 231 pages



With detailed descriptions, stunning photographs, and informative illustrations, this book is an essential resource for geologists, nature enthusiasts, and anyone seeking to delve deeper into the captivating natural wonders of this iconic landscape.

Chapter 1: A Geological Timeline

The geological history of Mount Desert Island and Acadia National Park spans hundreds of millions of years. This chapter provides a timeline of the major geological events that have shaped this landscape, from the formation of the bedrock to the retreat of the glaciers.

- **Precambrian Era (4.6 billion years ago - 541 million years ago):**
The bedrock of Mount Desert Island formed during this era. The rocks are mostly granite and gneiss, which were formed by the cooling and solidification of molten rock.
- **Cambrian Period (541 million years ago - 485 million years ago):**
During this period, the area that is now Mount Desert Island was covered by a shallow sea. Sediments deposited in this sea eventually formed the sedimentary rocks that are found on the island today.
- **Ordovician Period (485 million years ago - 444 million years ago):**
The sea continued to cover the area during this period. Volcanic activity occurred in the area, and lava flows formed some of the mountains on the island.
- **Silurian Period (444 million years ago - 419 million years ago):**
The sea level dropped during this period, and the area that is now Mount Desert Island became land. Rivers and streams eroded the land, and the sediment that was deposited in these waterways formed the sandstone and shale that are found on the island today.
- **Devonian Period (419 million years ago - 359 million years ago):**
The climate was warm and dry during this period, and the area that is now Mount Desert Island was covered by a desert. The wind-blown sand that was deposited in the desert eventually formed the quartzite that is found on the island today.

- **Carboniferous Period (359 million years ago - 299 million years ago):** The climate became cooler and wetter during this period, and the area that is now Mount Desert Island was covered by a forest. The plants that grew in this forest eventually formed the coal that is found on the island today.
- **Permian Period (299 million years ago - 252 million years ago):** The climate became warmer and drier during this period, and the area that is now Mount Desert Island was covered by a desert. The wind-blown sand that was deposited in the desert eventually formed the sandstone that is found on the island today.
- **Triassic Period (252 million years ago - 201 million years ago):** The climate became cooler and wetter during this period, and the area that is now Mount Desert Island was covered by a forest. The plants that grew in this forest eventually formed the shale that is found on the island today.
- **Jurassic Period (201 million years ago - 145 million years ago):** The climate became warmer and drier during this period, and the area that is now Mount Desert Island was covered by a desert. The wind-blown sand that was deposited in the desert eventually formed the sandstone that is found on the island today.
- **Cretaceous Period (145 million years ago - 66 million years ago):** The climate became cooler and wetter during this period, and the area that is now Mount Desert Island was covered by a forest. The plants that grew in this forest eventually formed the coal that is found on the island today.
- **Cenozoic Era (66 million years ago - present):** The Cenozoic Era is the current era, and it began with the extinction of the dinosaurs. The

climate during this era has been relatively stable, and the area that is now Mount Desert Island has been covered by a forest for most of this time.

Chapter 2: The Rocks Of Mount Desert Island

The rocks of Mount Desert Island are a diverse group that includes granite, gneiss, schist, quartzite, sandstone, shale, and coal. This chapter provides a detailed description of each of these rock types, including their composition, texture, and origin.

- **Granite:** Granite is the most common rock on Mount Desert Island. It is a light-colored, coarse-grained rock that is composed of quartz, feldspar, and mica.
- **Gneiss:** Gneiss is a banded rock that is formed from the metamorphism of granite. It is composed of the same minerals as granite, but the minerals are arranged in bands or layers.
- **Schist:** Schist is a foliated rock that is formed from the metamorphism of shale or mudstone. It is composed of fine-grained minerals that are arranged in parallel layers.
- **Quartzite:** Quartzite is a hard, non-foliated rock that is formed from the metamorphism of sandstone. It is composed of quartz grains that are tightly cemented together.
- **Sandstone:** Sandstone is a sedimentary rock that is formed from the consolidation of sand grains. It is a common rock on Mount Desert Island, and it is found in a variety of colors, including red, brown, and gray.

- **Shale:** Shale is a sedimentary rock that is formed from the consolidation of mud or clay. It is a fine-grained rock that is easily split into thin layers.
- **Coal:** Coal is a sedimentary rock that is formed from the accumulation of plant material. It is a black or brown rock that is found in a few locations on Mount Desert Island.

Chapter 3: The Landforms Of Mount Desert Island

The landforms of Mount Desert Island are a direct result of the geological processes that have shaped this landscape over millions of years. This chapter provides a detailed description of the island's major landforms, including its mountains, hills, valleys, lakes, and coastline.

- **Mountains:** Mount Desert Island is home to several mountains, including Cadillac Mountain, the highest point on the U.S. Atlantic coast. These mountains were formed by the uplift of the bedrock and by the erosion of the surrounding land.
- **Hills:** The hills of Mount Desert Island are smaller than the mountains, but they are still significant landforms. They were formed by the erosion of the bedrock and by the deposition of glacial till.
- **Valleys:** The valleys of Mount Desert Island were formed by the erosion of glaciers and rivers. These valleys are typically U-shaped, with steep sides and a flat bottom.
- **Lakes:** The lakes of Mount Desert Island were formed by the damming of streams by glaciers. These lakes are typically deep and clear, and they are surrounded by forests and mountains.

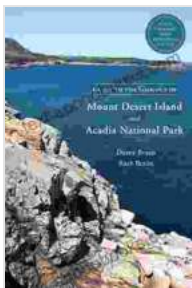
- **Coastline:** The coastline of Mount Desert Island is rugged and varied. It is characterized by headlands, bays, and islands. The coastline was formed by the erosion of the bedrock by glaciers and waves.

Chapter 4: The Glaciers Of Mount Desert Island

Glaciers played a major role in shaping the landscape of Mount Desert Island. During the last ice age, which ended about 10,000 years ago, glaciers covered the entire island. These glaciers carved out the island's mountains, valleys, and lakes. They also deposited a layer of glacial till over the island.

Today, there are no glaciers on Mount Desert Island. However, there are several reminders of the glaciers that once covered the island, including glacial erratics, striations, and moraines.

- **Glacial erratics:**



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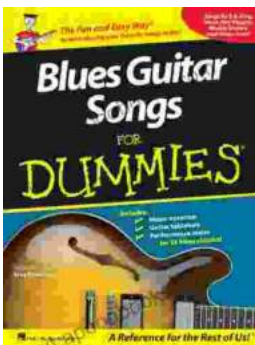
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