Simplified Surficial Geologic Map of Maine

DEPARTMENT OF CONSERVATION
Maine Geological Survey

Modified from Thompson, W. B., and Borru, J. W., Jr., Surficial Geologic Map of Maine, 1985, Maine Geological Survey

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What will you find if you dig a hole?
This cross section shows common relationships of glacial and postglacial surficial sediments in valleys above (left) and below (right) the marine limit.

1. Bedrock
2. Till
3. Esker
4. Glacial-marine deposits (silt and clay)
5. Glacial-marine deposits (sand and gravel)
6. Marine sand plain
7. Fine-grained glacial lake-bottom sediments
8. Glacial lake delta
9. Postglacial stream terrace
10. Modern flood plain

Glacial Recession in Southern Maine

16,000 years ago a continental glacier covered most of Maine, but was retreating from the coastal lowland. The sea was in contact with the ice margin.

15,000 years ago, the glacier was receding rapidly and southern Maine was ice-free. The land was still depressed from the weight of the ice, resulting in extensive submergence of lowland areas.

13,000 years ago, the glacier had disappeared from central and southern Maine. Uplift of the land had caused the sea to retreat.

The color map (at left) shows the principal types of sedimentary materials that cover the bedrock in Maine. Most of these materials were left by glacial ice during the Pleistocene "ice age". One of Maine's distinctive glacial legacies is the blanket of marine sediments across southern portions of the state. The last continental ice sheet was so thick and heavy that it depressed the Earth's bedrock crust several hundred feet. Even though global sea level was lower in glacial times, this depression enabled the sea to flood low areas of southern Maine as the glacier receded. The dark-blue line on the map shows the inland limit of marine submergence. Numerous islands existed in the flooded area but are not shown here. The recession of the ice sheet caused the land to rise above the ocean, and a wide variety of sedimentary deposits were released from the melting glacier. These include long eskers of sand and gravel formed in tunnels under the ice, shown by the red lines on the map. Maine's eskers and emerged marine features are world-class examples of glacial deposits.