Maine Geologic Facts and Localities
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Mount Ktaadn from W. Butterfield's (Oct. 8th 1836)
Near the Grand Schoodic Lake

Text by
Thomas K. Weddle
Introduction

In 1836, Charles T. Jackson began the first field season of what would eventually become the first report on the geology of the State of Maine. In the first year, Jackson had an illustrator in his field party, Franz Graeter, who produced line drawings of places visited by the party. The drawings were later water-colored as vibrant lithographs and the image that is of interest here is the one of Mount Katahdin shown below.

Figure 1. Plate VII from Atlas of Plates Illustrating the Geology of the State of Maine accompanying the First Report on the Geology of the State, by C. T. Jackson, 1837. Drawing by Franz Graeter, lithography by Thomas Moore.
Jackson writes of the place mentioned in the title of the image and where the party stayed en route:

"After examining the shores of the lakes without discovering any very interesting geological appearances, we continued on our journey to Mr. William Butterfield's, 54 miles from Calais, and from thence we explored the vicinity of the Grand Schoodic Lake. Limestone and bog iron ore are said to occur on the banks of the Mattawamkeag, west from Butterfield's, but we did not go thither to explore it, as it would have taken up more time than could be spared from the public lands. After passing Butterfield's there is no road. The trees are felled so that a light waggon may lumber slowly through, but we found it extremely laborious to effect a passage with a double waggon. After going on three or four miles, the road becomes more passable, and on reaching the ridge called the Horseback, it is very good all the way to Houlton. ... On our way from Butterfield to Houlton, we discovered an abundance of black oxide of manganese and iron ore, on the road side, and imbedded in rocks in place. After our arrival at Woodstock, I had the pleasure of discovering an enormous bed of this ore, which runs directly towards the spot, where we had picked up the specimens above mentioned"
Location Map

The view of Katahdin in the Jackson plate is noted as near Butterfield's; exactly where is not known. It seems likely that the party stopped on the higher ground that the present-day U.S. Route 1 passes over just to the north of Butterfield Landing in Weston. In 1835, William Butterfield, Esquire and Justice of the Peace, was one of the original incorporators of the town (Kinney, 1984).

Figure 2. Portion of Danforth 15' USGS topographic map.
Eskers
An esker can be seen on the western edge of the map in Figure 2. It seems unlikely that this was the "horseback" that Jackson notes made travel easier. Early maps of Maine by Moses Greenleaf show the road that now is U.S. Route 1 was then called the Calais - Houlton Road, and the trace of it beyond Two-Mile Curve can be seen on the topographic map. The town of Danforth wasn't incorporated until 1860. The main road may have been re-routed prior to that, but clearly the old road was still passable in 1943, the date of the topographic map. Something that hasn't changed, even after 174 years, is that most people in Maine still refer to the esker ridges as "horsebacks".
Jackson’s Second Trip

It is puzzling that Jackson had no comments in his first report about the dramatic view of Katahdin from Butterfield’s. For the next field season, there was no funding for Graeter, and Jackson states

"Although I do not make any pretentions to graphic skill, I have nevertheless been obliged to draw many outline sketches, a few of which we have been able to present in the form of wood cuts, the cheapest kind of illustrations, which, however, will aid essentially in giving an idea of the country."

Figure 3. View of Mt. Ktaadn, bearing N. 27o E. from west branch of Penobscot.
Jackson’s Second Trip

As noted in the Second Report on the Geology of the Public Lands (Jackson, 1838), he and his party ascended to the summit of Katahdin and encountered a snow storm on September 23, 1837, made barometric observations, noted that the mountain was comprised completely of granite, and that based on erratic boulders on the mountain, Jackson believed it was evidence that the Biblical Deluge covered the mountain (Griscom, 1966).

Figure 4. View of Mt. Ktaadn from the summit of Sugar-loaf Mt., bearing S. 60° W. Granite.
Jackson’s Second Trip

A later account of the ascent by one of the party, Rev. William Clark Larrabee, describes their experience on the summit (from Neff, 2006).

"At last, with many a weary step, and many a hair-breadth escape, we reached the cloud-capped summit...The cloud, which from below, appeared resting so quiet on its mountain perch, was all in a whirl. The wind blew so violently that one of the company, with comic gravity, inquired how many men it might take to hold one's hair on. Nor were wind and cloud all. The snow came thick and fast, and the cold was so intense that out of ten men, protected by overcoats and mittens, not one could unscrew the tube of the barometer, so benumbed were our fingers... An Indian of the Penobscots (Louis Neptune), who was one of the party, averred that Pimola, the mythological demon of the mountain, had sent this terrible storm upon us, in punishment for our impiety in visiting his dominions... After much difficulty, we succeeded in taking barometric measurements and obtaining such geological information as the circumstances allowed; and then finding that longer delay might be dangerous, on account of the intensity of the cold, and the violence of the storm, we started on our return."

Jackson's barometric calculations indicated to him that "we have ascertained that the true altitude of Mount Ktaadn above the level of the sea is 5300 feet." His measurement was the most accurate until 47 years later, when a survey made for Colby's Atlas of 1884 cited the elevation of Katahdin at 5248 feet. Today we know that the elevation is 19' higher, at 5267 feet, surveyed by spirit levels in 1927 by the U.S. Geological Survey and the State of Maine (Leavitt, 1942).
References and Additional Information


Jackson, C. T., 1838, Second report on the geology of the public lands, belonging to the two states of Maine and Massachusetts: Luther Severance, Printer, Augusta, Maine, 168 p., 8 plates.


The author wishes to express gratitude to the Maine State Library and Director Dean Corner for permission to access the Jackson Atlas, and to the librarians who assisted him with this Geologic Site of the Month.