

S. 30° E. ; S. end of Mount Webster, S. 37° E. ; top of Mount Webster, 4000', S. 30° E. ; top of Moosilauke, 4811', S. 22° E. Further, on Mount Abraham, in Maine, the direction found is S. 59° E.

From the White Mountains to the coast of Maine, along by Portland and the mouth of the Kennebec, the distance is but 70 miles ; and hence, supposing the pitch of the surface the same as to Nantucket, the foot of the glacier in that direction, as remarked long since by Agassiz, was over the shoals off the coast of Maine, south of Nova Scotia, then probably an emerged area, and the depth of ice over this part of Maine was at the least 4000'.

The direction of the scratches (see map) over western New England is testimony as to the Adirondack source of the ice. The following are observed facts : —

Over high western *Connecticut*, 1000' to 1200' above the sea, in Warren and Litchfield, S. 29° E. (D.) ; in Newtown, S. 32° E. (D.) ; in Sharon, S. 33°–36° E. (D.) ; in Cornwall, S. 33°–36° E. (D.) ; near Norfolk, S. 20°–25° E. (Mather) ; on Mount Tom, near Litchfield, S. 17°–22° E. (Hitchcock) ; in Goshen, S. 23° and S. 28° E. (H. Norton) ; on Kent Mountain, S. 19° E. ; and S. of Kent, S. 38° E. (D.) ; boulders, from Canaan, of limestone containing canaanite, found 5 m. W. of New Haven, S. 16° E. (D.).

In western *Massachusetts*, on Mount Washington, in its southwest corner, on the top of its summit peak Mount Everett, 2624' high, S. 18° E. (Hitchcock), S. 27° E. (D.) ; on top of the ridge Tom Ball, nearly N. of Mount Washington, S. 43° E. ; on the Taconic Range, W. of Richmond, S. 53°–S. 70° E. ; on top of Lenox Mountain, between Stockbridge and Richmond, S. 41°–45° E. (Benton) ; E. slope of Taconic Range, near Pittsfield, S. 50° E. (D.) ; on the mountain between Otis and Becket, about SE. (Hitchcock).

The boulder train (page 959) over Richmond and Lenox has the course S. 45° E. west of Richmond, and S. 35° E. from Richmond through Lenox.

Over the higher part of *Vermont* (from E. and C. H. Hitchcock's *Vermont Rep.*), mostly S. 30° E.–S. 55° E. the greatest to the northward ; in the southern portion of Vermont, in Windham, S. 28° E. ; in Wilmington, S. 29°–39° E. ; in central Vermont, West Hancock, S. 50° E., Ripton, S. 60° E. ; in northern Vermont, on Camel's Hump, 4077' above the sea, S. 55° E., on Mount Mansfield, 4389', S. 55° E. ; on Jay's Peak, north of the last, S. 50° E.

In higher parts of eastern *New York*, in Dutchess County, mostly S. 15°–30° E. (Mather) ; near Arthursville, S. 24° E. (D.) ; in Putnam County, near Patterson, S. 17°–22° E. (Mather) ; in Columbia County, north of Dutchess, S. 18°–30° E., and on mountain top east of Shaker village, S. 45° E. ; beginning of Richmond boulder train on the borders of Lebanon and Canaan, S. 55°–45° E. (Benton).

In northern Pennsylvania, J. C. Branner obtained for striæ on Pocono Mountain, west of Carbondale, a mean course of about S. 20° W.–S. 30° W. ; and on the summit of Bald Mountain west of Scranton, S. 10° W.–S. 33° W.

The facts prove that from all western New England the flow was from the north-westward, across the Taconic Range and the Green Mountains, and in a direction from the Adirondack region, or the more elevated Laurentide region beyond it.

The distance from the Adirondack part of the plateau to the southwest margin of the lobe in western New York is about 200 miles, or 150 if the Adirondack plateau extends 50 miles west of Mount Marcy. It is about 250 miles to the ice-limit south of New York, and nearly the same to southern Long Island in the line over New Haven ; and about 220 miles from the White Mountain center to the southeast side of Nantucket. It is to be noted, however, that the position of the margin in western New York was 1500' above the sea level.

A bluff facing the water of Lake Cayuga, about a mile north of Ithaca, according to H. S. Williams, in a region where scratches, flutings, and planings of the rocks are exhibited on a grand scale, has its whole vertical face marked with scratches that have a *descending*