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THE WHITE MOUNTAIN REGION.

AN ADDRESS

DELIVERED BEFORE THE

American Forestry Association,

AT

PLYMOUTH, N. H., AUGUST 24, 1894.

BY

JOSEPH B. WALKER.

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HAMPSHIRE FORESTRY COMMISSION, FOR 1894.

C
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1895.

White Mountain Region
OF THE
Concord and Montreal
RAILROAD

RAND AVERY SUPPLY CO., ENGR'S, BOSTON.

The most important and deepest of the passes just alluded to, pursue a northerly and southerly direction. The Franconia, the Crawford, the Pinkham, and the Carter notches, as they are termed, run very nearly north and south. The courses of the Saco, the Swift, the Baker, and most other river valleys are substantially easterly and westerly. The number of these passes is undetermined. Hardly any two persons would enumerate them alike.

The Indians knew many of them, and made trails through the most important ones. That up the Merrimack river bifurcated at Franklin into two. One went up the Winnepesaukee river and on by the lake through the Ossipee country to Fryeburg. Thence, following the Saco, up through the Crawford Notch, it led on to the Upper Coös and to Canada.

The other followed the Pemigewasset to Lincoln, and thence ran onward, through the Franconia Notch, to the Connecticut valley. A third, leaving the Pemigewasset at Plymouth, and following the Baker's and Oliverian streams, struck that valley at a point lower down. It was on this that John Stark was captured by the Indians, in 1752, and carried thence to Canada; to there run the gauntlet to the entire satisfaction of both himself and his captors, and to show, at that early age, a pluck which, twenty odd years later, made him famous at Bunker Hill and the hero of Bennington.

It is a fact worthy of note that the Indian was so good an engineer that the white man who succeeded him has made his main highways by simply broadening these trails, and that, in the improvement of transportation, railway officials have found no better lines for their tracks of steel.

The study of mountain locomotion shows that thus far each kind of highway has answered the requirements of those who used it; and that even the simple forest path conveyed the soft moccasined foot of the Indian maiden, lightly clad and unencumbered, while under our later civilization broader highways are necessary, and

“Miss Flora McFlimsey, of Washington Square,
With a hundred fine dresses and nothing to wear,”

with her poodles and Saratoga trunks, requires a track upon which steam locomotion is possible and palace cars can run.

MAP

Showing the Relative Distribution
of the Forest Cover of

NEW HAMPSHIRE.

[AFTER HITCHCOCK.]

Prepared to accompany the Report of the New
Hampshire Forestry Commission, 1894.

Republican Press Association, Concord, N. H.,
Engravers and Printers.

HISTORY OF THE WHITE MOUNTAIN REGION.

Very little was known of the White mountains previous to the settlement of Capt. John Mason's colonists at Portsmouth and Dover, in 1623. Before this, mariners sailing along the New England coast had observed the lofty inland elevations, eventually designated the White mountains, and made mention of them; but they had no more than this remote acquaintance with them.

The Indians learned more of them by hunting in their forests, and by threading their dark mazes, as they journeyed back and forth from Canada to the sea. There was also an Indian village in their vicinity, but a superstitious dread of malign spirits, supposed to reside upon their summits, kept them from mounting to these elevations.

Darby Field, however, a wide-mouthed Irishman "about Pasquatquack,"¹ had no such fears, and made the first ascent, so far as known, ever made to the summit of Mount Washington.

Governor Winthrop, in his history of New England, says that, "His relation at his return was, that it was about 100 miles from Saco, that after forty miles he did for the most part ascend, and within twelve miles of the top was neither tree, nor grass, but low savins, which they went upon the top of sometimes, but a continual ascent upon rocks, on a ridge between two valleys filled with snow, out of which came two branches of Saco river, which met at the foot of the hill, where was an Indian town of some 200 people. Some of these accompanied him within eight miles of the top, but durst go no further, telling him that no Indian ever dared to go higher, and that he would die if he went."²

For a century after this, the White Mountain region was rarely visited by white men. Population from the coast moved inward but slowly. Not until 1730 did it reach Concord and the adjoining towns, where it rested for a generation; until life had been made secure in the regions beyond by the treaty of Paris, in 1763, and all hope of French supremacy on this continent had been abandoned forever by the worthless king of France. From this time onward, central New Hampshire was settled with great rapidity.

¹ Bell's History of Exeter, p. 25.

² Winthrop's History of New England, Vol. 2, pp. 80 and 81, Savage's edition, 1853.

Between 1760 and 1770 more than half of all the towns of Grafton county received their acts of incorporation.¹

Except to the Indians, the Crawford Notch was unknown until 1771, when it was discovered by Timothy Nash, a hunter, who was subsequently rewarded for his discovery by a gift from the state of an important tract of land, afterwards known as Nash & Sawyer's location. This led in time to the opening of a highway for travel from the upper Coös to Conway.

In 1792 Eleazer Rosebrook moved his family into a log house in the primeval woods upon this highway. It stood near the site now occupied by Fabyan's. He subsequently cleared up a farm in the vicinity, and built a new house, barns, and mills. Here he dispensed a rude hospitality to such as claimed it, to the time of his death in 1817.

President Dwight, of Yale College, was his guest in 1797. He says, "For the usual inconveniences of a log house we were prepared; but we found comfortable beds, good food, excellent fare for our horses, all furnished with as much good-will as if we had been friends of the family."²

President Dwight was one of the earliest of White Mountain tourists. The attractions of the region became known by degrees, and others followed him.

As the last century approached its close, the people of the Coös country felt the necessity of a better road for the transportation of their products to the market towns on the coast, and in 1803 the Tenth New Hampshire Turnpike was chartered, to run through the Crawford Notch. It was twenty miles long, and built at a cost of forty thousand dollars, or two thousand dollars per mile, a very large expense for the construction of a common highway. The next year, to connect this with Lancaster, the Jefferson turnpike was chartered, and subsequently built at an expense of eighteen thousand and four hundred dollars.³

¹ Bath, Campton, and Canaan, 1761; Coventry and Dorchester, 1764; Enfield, 1761; Franconia, 1764; Hanover, 1761; Haverhill, 1763; Holderness, 1761; Landaff, 1764; Lebanon and Lyme, 1761; Lincoln, 1764; Lisbon, 1768; Lyman, 1761; Orford, 1761; Peeling, 1763; Piermont, 1764; Plymouth, 1763; Rumney, 1761; Warren, 1763; Wentworth, 1763.

² Dwight's Travels, Vol. 2, p. 131, London Ed., 1823.

³ The first half of the present century was quite prolific in turnpike roads. No less than sixty-one were chartered between 1800 and 1850. "The Tenth Turnpike Road in New Hampshire" extended from the upper line, in Bartlett, through the Notch in the White Hills, twenty miles. "The Jefferson Turnpike Incorporation" extended from the northern extremity of the Tenth Turnpike Road through Bretton Woods, Jefferson and Lancaster, to Lancaster Meeting-House.

These two turnpike roads made practicable the passage of teams of all kinds from the Upper Coös country to the east side of the mountains. New hotels of a primitive character appeared from time to time along the way, and the number of mountain visitors increased slowly from year to year. Professor Sanborn says, in his "History of New Hampshire," that "during the first quarter of this century the number of visitors averaged about twelve each year."¹

Your speaker first saw the White mountains in 1838. At that time the only hotels in the region were a single one in the Franconia Notch, still standing as an humble adjunct to the Profile House; that of Abel Crawford, in the Saco valley; that of Thomas J. Crawford, at the north entrance to Crawford Notch; and that of the celebrated Ethan Allan Crawford, the grandson and successor of Mr. Rosebrook.

A stay of several days at the latter impressed its appointments pretty strongly upon your speaker's memory. Possibly the impress may have been deepened somewhat by the society of the landlord's two daughters, and also a little more by the abundant supply of mountain brook trout served upon his table, which were then as plenty there, apparently, as were the salmon at Amoskeag Falls an hundred years before. At all events, a boy who could successfully digest three square meals each day, and a luncheon before and after dinner, was liable to be thus impressed.

This hotel, so pleasantly remembered, would then accommodate from thirty to forty guests, according to the number of beds set up in each room, and the number of sleepers put in each bed. Since then the number and capacities of the White Mountain hotels have increased astonishingly. Some fifteen years ago, Mr. John Lindsey, a hotel proprietor who had been long conversant with the mountain business, remarked that he well remembered when the aggregate receipts of all the mountain houses did not exceed \$12,000 a year, but that from this sum they had gradually risen to \$1,200,000. These facts are of value mainly as showing the increase in the number of visitors to our mountains during the last two generations.

¹ Sanborn's History of New Hampshire, p. 310.

IMPORTANCE OF WHITE MOUNTAINS REGION.

This mountain region, formerly remote and little known as already stated, has latterly become of much importance, not only to the people of New Hampshire, but to the unnumbered thousands without her limits, who visit it from time to time.

RIVERS.

Within its limits are the sources of two of New Hampshire's largest rivers, the Merrimack and the Saco. Those of the former may be found on the sides of Franconia Notch, and of the Willey mountain; those of the latter upon the slopes about the Crawford House. To these two should also be added the Ammonoosuc, a large affluent of the Connecticut, which starts upon its wild career from the Lakes of the Clouds, near the base of the cone of Mount Washington, five thousand feet above the level of the sea, and falls two thousand feet in the first three miles of its course.

FORESTS.

A large proportion of the primeval forests still standing in New Hampshire are to be found within the limits of the White Mountain region. Here emphatically is the home of the black spruce (*Abies Nigra*), which climbs the mountains to a higher altitude than all other trees, except the balsam fir, diminishing in size, as it ascends, until it dwindles to a tangled shrub and disappears altogether at the edge of the Alpine area, some four thousand feet above the ocean level.

FOREST DESTRUCTION.

Some twenty years ago, more or less, the lumberman, invading that part of the Ammonoosuc valley between the Twin Mountain House and Fabyan's, swept away the forests which had made it one of the most pleasing localities in the mountains. He brought with him the sawmill, and defiled the clear waters of the streams with sawdust and worthless edgings. The work of destruction then commenced passed into the grand old woods then lining the road from Fabyan's to the Crawford House, and extending westward therefrom to the base of Mount Washington.

MAP

Showing the Relative Area and
Character of the Forest Cover of
GRAFTON COUNTY, N. H.

Prepared to accompany the Report of the New
Hampshire Forestry Commission, 1894.

Republican Press Association, Concord, N. H.,
Engravers and Printers.

The **GREEN** tint represents virgin forest.
The **RED** tint represents secondary forest.
The **YELLOW** tint represents arable land.

Ere long fire followed in the footsteps of the lumberman, and swept away in its fury whatever he had spared. An abomination of desolation, as lugubrious as that spoken of by Daniel the prophet, succeeded the fire.

This great tract of charred soil, dotted all over with blackened stumps, lying as it did along the main highway from Bethlehem to the Crawford House, arrested the attention of every visitor. Universal regret, with much indignation, was freely expressed on account of the great injury thus done to one of the finest portions of the whole mountain region. Public opinion was aroused to activity.

FORESTRY COMMISSION.

In 1883 the New Hampshire legislature, upon its attention being called to this and similar injuries to the forests, made provision for the appointment of a state commission to investigate their existing condition and report such suggestions for their protection and improvement as to its members might seem wise. This commission made their report in 1885, embracing the following subjects, viz. :

1. The area of the forests. 2. Their relation to the rainfall and climate. 3. The trees and shrubs found therein. 4. Forest management and reforestation. 5. Forest fires.

This report was printed by the state in a pamphlet of about one hundred pages. A part of the edition was distributed among the members of the legislature, a part was sent abroad, as exchanges, to other states, and the remainder was carefully packed away in the document room of the state house.

It awakened more interest abroad than at home, and yet there were some persons in New Hampshire who read it; and ere long an increased interest in the subject was manifested and a desire expressed, strongly and repeatedly, that something be done to protect our remaining forests, and at once.

This led, four years afterwards (1889), to the appointment by the governor and council of a second commission, which made a report to the legislature in 1891, suggesting legislation in the interests of our wooded domain. Two bills, embodying suggestions of the commission, were introduced to the house of representatives and referred to the committee of the judiciary, who, after considering their pro-

visions, returned them to the house with a recommendation that "the further consideration of the same be referred to the next session of the legislature," a phraseology not altogether uncommon in our legislature, and which generally means to the friends of a bill, fight or fail. Inasmuch as this recommendation of the committee was coupled with another, that the then existing commission be continued, its members concluded that their effort was in part successful. They accordingly tightened their belts, went to work, and waited.

When, two years later, the legislature of 1893 assembled, a second report of this commission was presented, and ere long a bill embodying its leading suggestions was introduced. Much discussion and long delays ensued, after which the present forestry law passed the house and senate, and was approved by the governor on the 29th day of March, 1893. Among its other provisions is one providing for the establishment and maintenance of a permanent forestry commission. Under it the members of our present commission hold their offices.

To accomplish this much has required about ten years; a long period apparently, considering the progress made. But during this time far more has been attained than is apparent to a superficial observer. Many persons now realize the value of forest property, and the importance of its proper management. Many have learned that it is God's decree that about one half of this state shall produce wood and timber and nothing else; and that that decree can never be reversed or barred by any statute of limitations, or by any changes likely to occur in this geologic period.

TWO SYSTEMS OF FOREST MANAGEMENT.

Two systems of forest management now prevail in this White Mountain region; one conservative, and the other destructive; one regardful of the present and the future both, the other of the present only.

The first restricts the cutting, at intervals more or less regular, to mature trees only, and generally to those above a minimum size. That was the old practice before the present facilities of transportation had been realized, when logs were floated to market upon the nearest streams. Of some lumbermen, it is the practice to-day.

Certain advantages attach to this usage. It is systematic. By

its adoption, a crop may be taken from a given tract once in some twenty years perpetually. If his forest is large enough to allow the owner to be satisfied with the removal of the mature trees from a twentieth or twenty-fifth part of it each year, he and his successors may log thereon forever. Thus treated, a forest well situated affords a safe and most desirable investment of capital.

The second system is that of cutting clean, and the removal at once of the whole growth of the area logged upon. The improved means of transportation, whereby the cutting of hard-wood lumber, small spruces, poplars, and cord wood, and the manufacture of charcoal, has been made profitable, accounts for this practice. The argument urged by the lumberman in its favor is, that he has put his money into his enterprise and must get it out again, with the most profit he can secure; and that this is the best system for him. He will also say, that even if it be not the best in the long run and for the other industrial interests, more or less injuriously affected by it, he is working for himself and for present profit, and not for his neighbors or posterity.

But this is a system of denudation, fraught with all the evils consequent thereto. Woodlands thus treated are left covered with scattered masses of inflammable debris. If, by any means, this takes fire, as it is very liable to do, the sphagnous coating of the forest floor, the "duff," as the lumbermen call it, is destroyed, with more or less of the vegetable matter of the soil itself.

This system involves also the loss of a very large portion of the winter precipitation of snow and rain. In this White Mountain region, unprotected ground freezes by the first or middle of November, and becomes impervious to water. From this time on, during the ensuing winter and early spring, its covering of snow and ice is largely dissipated by the sun and winds. Whatever of it remains melts rapidly at the advent of warm weather, and converts to short-lived torrents the peaceful streams which were wont to convey their waters harmlessly to the sea. The flood having passed, dry channels, strewn with confused masses of rocks and vegetable debris, remain. Thus, upon denuded areas, very little of the late autumn, winter, and spring rain and snow-fall enters the ground, there to be retained until gravity presses it out to make equable and permanent the volumes of the stream it was intended to feed. We have not at the base of these mountains, as has Italy at the foot of

the Alps, a series of deep lakes to act as reservoirs for the temporary retention of its spring floods, to be afterwards sent thence, as wanted, on their beneficent journey.¹

If it be said that this evil is but temporary, and that nature will again reforest her wooded domain, the reply will be encountered that nature will require from fifty to seventy-five years in which to produce a new forest of merchantable trees on a denuded area, and that any considerable, even temporary, injury to the numerous water powers for which this region serves as a reservoir, means disaster to some of the most important manufacturing interests of the state. When it is remembered that upon the Merrimack and its tributaries, more cotton is manufactured than upon any other river of the world, the serious consequences of denudation in the White Mountain region become apparent.

NEITHER SYSTEM SATISFACTORY.

But neither of these systems, if such they may be called, is satisfactory. The objections to the latter, already stated, suffice to condemn it. To them may be also added the temporary marring of the scenery and the danger of destroying altogether the spruce, the most valuable of all our White Mountain trees.

Of the two systems, the former is by far the preferable one. Yet it but partially secures the object sought—maximum returns at reliable and regular intervals. Nature is capricious in her seedings, and does not sow the ground evenly. As a result, much space is left vacant and succeeding crops are but partial ones. While on some acres, twenty thousand feet or more of spruce are often cut, others bear nothing, and the average yield is but about five. If the removal of selected trees were followed by the judicious planting of vacant areas, and by judicious thinnings where needed on the whole tract, this system would be greatly improved and the income from the forest greatly enhanced.

¹The loss consequent upon extensive denudation of the White Mountain region, is made apparent by a glance at the mean annual rainfall recorded at Laconia, the nearest point to this locality at which accurate records have been long kept. Here, the average annual precipitation—snow being reduced to water—during the period of twenty-seven years, extending from 1857 to 1884, was 43.12 inches, while the average annual amount from the last half of October to the close of the first half of the following April was 21.57 inches.

From this record, it is apparent that the entire denudation of the water-sheds of the Merrimack and Saco rivers would involve a loss of at least one half of the water power on those streams, and render them substantially valueless for manufacturing purposes.

MAP

Showing the Relative Area and
Character of the Forest Cover of
CARROLL COUNTY, N. H.

Prepared to accompany the Report of the New
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A person acquainted with the woodland practices of Europe is liable to tell us that we have no forestry in this country, and I regret to say that such is substantially the fact. But, that in time we shall have, there is no reason to doubt. When, how, or by whom, is not so clear.

Too much must not be expected of the state, for it does not own a single forest acre. In 1867 it sold the last of its timber lands for the paltry sum of \$25,000. If standing to-day, they would command \$1,000,000. But it has already done something, and can, and doubtless will, do more to encourage forest improvement, and diffuse correct ideas as to the management of woodland property.

Our main reliance, however, for the introduction of a true system of forestry, must be upon the proprietors of such property. Under our laws, these have the right to manage their forests as they please. This right they will be slow to relinquish, and they will not change their present practices for better ones until convinced that those proposed are superior to those in use. To find a better system than any we now have, and to commend it to the capitalist, the lumberman, and the owner of forest lands, is to be one great effort of our able and efficient Forestry Commission.

INJURY TO THE SCENERY.

There has been painful apprehension that the inroads upon its woods will destroy the beauty of the scenery of this region. That is in part, at least, unwarranted. Lands entirely denuded are soon covered with new growths which conceal their nakedness. A portion of the Russell mountain, which you will see to-morrow, was cut over some fifteen years ago. It now looks as attractive from the front piazza of the Deer Park hotel, as when covered with its primeval growth; unless, indeed, you insist that the absence of the dark masses of spruce, which formerly broke the monotony of its deciduous foliage, detracts from its former beauty.

INJURY TO THE WATER POWERS AND RAILROADS.

The greatest injury to be feared from a hasty and unwise removal of these forests is the impairment of the water powers upon which many of our most important manufacturing interests are dependent,

and to the railroads to which a lasting supply of freight is of consequence. But, strange to say, neither the manufacturers nor the railroads have, as yet, expressed any concern as to this matter.

LUMBER RETURNS.

Of the great lumber industries of New Hampshire, which center largely in the White Mountain region, I will say that I have here the preliminary totals, as given in the last census of the United States.

From these it appears that 831 establishments report an aggregate capital of \$12,311,513; that the officers, firm members, clerks, and operatives number 8,572; whose aggregate wages were \$2,414,461, and that the whole value of their products was \$10,907,438. These figures afford some idea of the magnitude of our lumber industry. To my great surprise, and perhaps to yours, they are about double those representing the same industry in our neighboring state of Maine.¹

A SANITARIUM.

Owing to its nearness to the immense population which surrounds it, this White Mountain region has also become important as a summer sanitarium. Its air is of the purest, its waters of the clearest, its scenery of endless variety, its boarding-houses and hotels are comfortable, some of the latter being sumptuous. Ten millions of people, more rather than less, living within a radius of three hundred miles from Mount Washington, can leave home in the morning and reach its summit by a daylight ride of twelve hours or less. It attracts the man of science, the seeker after health, and the general tourists.

PRESENT STATUS.

The present status of the forestry interest in New Hampshire is about this :

1. More than half of the state is to-day in forest, and being insusceptible of arable culture, must ever remain so.

2. During the last decade an increased interest in the welfare of forest property has been awakened, a forest law has been enacted, and a permanent forestry commission has been established.

¹ See Appendix, Paper I.

3. It is now the opinion of all intelligent owners of forest property,—

(1) That the present methods of lumbering are faulty, and may be improved to the profit of all parties interested therein.

(2) That, so far as possible, every acre should be kept adequately covered with growing trees.

(3) That all forest products should be harvested, from time to time, as they mature.

(4) That, when properly managed, forest property will yield sure and fair returns, and form a desirable investment of capital.

(5) That the true objective point in New Hampshire forestry is the attainment of such a systematic management as shall secure to the owners of wooded property, at regular croppings, maximum returns therefrom.

CONCLUSION.

I have sometimes wished that some person in supremest sympathy with the spirit of these mountains and forests might appear, to record in prose or verse their history and their traditions; to do, in short, for this region, what Sir Walter Scott has done for Scotland. But with the wish has come the thought that this work has been done in part, at least, already.

The geologist has been here and told us how, out of this immense elevation of rock and earth, Omnipotence has sculptured with chisels of frost and stream and air these towering mountains and intervening valleys. So, too, has the historian, and made record in graceful prose of the destruction of the Willeys by an avalanche in 1826; of dangerous wanderings upon the mountains by strangers dazed by mist and cold;¹ of old Chocorua, the last of his people, retreating up the mountain which bears his name, before his ene-

¹ *Mountain Tragedies*.—The destruction of the Willey family, by a landslide in the White Mountain Notch, occurred August 28, 1826.

Frederick Strictland, an Englishman, perished in the Ammonoosuc Ravine, in October, 1851.

Miss Lizzie Bourne, of Kennebunk, Me., perished on the Glen Bridle path, near the summit, on the night of September 14, 1855.

Dr. B. L. Ball, of Boston, was lost on Mount Washington in October, 1855, in a snowstorm, but was rescued after a two days and nights exposure, without food or sleep.

Benjamin Chandler, of Delaware, perished near Chandler's Peak, half a mile from the top of Mount Washington, August 7, 1856, and his remains were not discovered for nearly a year.

Harry W. Hunter, of Pittsburg, Pa., perished on the Crawford Bridle path, September 3, 1874, a mile from the summit. His remains were found nearly six years later, July 14, 1880.—Crawford's History of White Mountains, pp. 201, 202.

mies, to its summit, thence to curse the surrounding country and throw himself to the depths below, a victor vanquished.

And the poet, also, has been here, to tell us of the wonderful apotheosis of the great Passaconaway:

“A wondrous wight! Far o’er Siogee’s ice,
 With brindled wolves, all harnessed three and three,
 High-seated in a sledge, made in a trice,
 On Mount Agiochook, of hickory,
 He lashed and reeled and sung right jollily.
 And once upon a car of flaming fire,
 The dreadful Indian shook with fear to see
 The king of Penacook, his chief, his sire,
 Ride flaming up to heaven, than any mountain higher.”

And hither, from time to time, have come, and made records of their visits, the first President Dwight, Professor Thomas C. Upham, William Oakes, Thomas Starr King, Whittier, Emerson, Henry Ward Beecher, William C. Prime, Julius H. Ward, Appalachians many and still others more—a goodly company all.

Hither, also, you, ladies and gentlemen, have to-day found your way, to read upon these broad, unfolded pages of earth and stone God’s great record of the Past. Permit me, in closing, to express to you the heartiest wish of our New Hampshire people, that your stay with us may be as pleasant as the welcome we tender you is cordial and sincere.

MAP

Showing the Relative Area and
Character of the Forest Cover of
COOS COUNTY, N. H.

Prepared to accompany the Report of the New
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Engravers and Printers.

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The **YELLOW** tint represents arable land.

BIBLIOGRAPHY OF THE WHITE MOUNTAINS.

The White Mountain bibliography is quite voluminous, and extends over a period of more than a hundred years. Persons interested in this section of New Hampshire will do well to consult the following works, most of which are in the State Library at Concord :

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