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THE

Natural Resources of New Hampshire.

AN ADDRESS

DELIVERED AT THE

ANNUAL FIELD MEETING

OF THE

NEW HAMPSHIRE BOARD OF AGRICULTURE

HELD AT

BOAR'S HEAD, HAMPTON, AUGUST 27, 1891.

BY

JOSEPH B. WALKER.

CONCORD, N. H.:

IRA C. EVANS, PRINTER, 13 AND 15 CAPITOL STREET.
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THE NATURAL RESOURCES OF NEW HAMPSHIRE.

BY HON. J. B. WALKER.

Some years ago, in the days of our genial Adams, this Board's first secretary, I was engaged by him to deliver at one of its institutes an address upon the subject of Forestry. When he reported this fact to his chief, the present chairman, the latter remarked with some surprise, "Forestry, forestry, nobody cares anything about forestry." To say that this remark put my sweet temper into a state of violent ebullition, is to state the fact in the mildest possible terms. At length, however, when the harmless boiling had subsided, I became convinced that Uncle Moses was right; that, for once in my entire life, I had got ahead of my time, and that while I was in one respect like John the Baptist, a voice crying in the wilderness, I was in another, entirely unlike the great forerunner, for he had followers and I hadn't.

But while Mr. Humphrey's remark was true twenty years ago, it is not so to-day; a fact which affords gratifying and important evidence of the growth of our agricultural intelligence.

If New Hampshire were to-day, for the first time, put into our possession, as was Eden into the control of Adam, "to dress and keep it," our first inquiry, doubtless, would be, "what shall we do with it?" To answer as best I may this great fundamental question, so important to all our interests, I am in your presence to-day.

A survey of our State shows that we have a territory nearly two hundred miles long, with a greatest breadth of

about one hundred; embracing an area of about six million (6,010,880) acres of diversified surface, lying at elevations which vary all the way from the sea level to an altitude of nearly a mile and a quarter above it, consisting of multitudinous water areas, amounting, according to one official authority, to a million acres, but which I venture to place at one half that number; of much good arable land, and of far more of a rougher kind, which has never yet tolerated culture, and never will.

This is our inheritance, not a great, but a very respectable one. Are we equal to its full development? What shall we do with it? Yes, what shall we do with it? This question is not a new one, first asked in our day. It was propounded by John Mason, the first proprietor of New Hampshire, more than two hundred and fifty years ago. It has been asked over and over again, by the nine or ten succeeding generations which have occupied it, and been variously answered by each in its time. It has come down to us and we cannot evade it. To what uses can we most profitably apply these six millions of acres of which we are now the guardians. This is the great question of to-day.

Some of the earliest settlers of the State said, "establish here the fur trade," and it was done; but the catching of beavers, and muskrats, and skunks, and woodchucks, proved a meagre business and was discontinued, for the want, possibly, of a Legislature to attract by suitable bounties game from outside our lines.

Others of the earliest inhabitants, of ardent thirst, perhaps, suggested the making of vineyards, and vines were planted on the sunny banks of the Newitchewannock. But this business proved unprofitable. Modern experience indicates that had they established breweries instead, their ventures might have proved more remunerative. But they probably would have been premature, for there were not then in all New England parched throats enough to swallow a thousand barrels a day.

Mining was proposed, and search was made for precious

and useful ores; but in vain. These have never yet been found in plentifulness sufficient to return a new dollar for an old one. The history of mining in this State from 1623 to this year of our Lord, 1891, has been one of uniform failure, and at times of sad personal disaster to those who have pursued it.

Others said, look at these broad forests which everywhere cover the ground; and saw mills were erected upon the Piscataqua and its tributaries. The manufacture of building timber and plank, pipe staves and masts, was commenced and prosecuted with vigor. Ships also were built and in time the lumber interest became the leading business in many localities. Resulting from this came a considerable export trade of forest products to West Indies, Southern Europe, and to our mother country.

But when in time, the importation of foreign corn for the support of the people proved too costly, and its transportation for grinding, to and from the wind-mill at Boston, too onerous, local agriculture was suggested. From that day, down almost to the present, New Hampshire has been regarded as an agricultural State.

Such were the leading answers given by our progenitors to this important question. "What shall we do with our domain?" I again put it to you to-day. Let us summon into activity our broadest wisdom and answer it as best we can.

If our friend, Colonel Weare, is present to-day, as he usually is at these gatherings in his neighborhood, he will be likely to say, "agriculture has been our chief support for two centuries. Improve its methods, enlarge its operations and let it remain such." But nature has restricted our farming to less than one half of our territory, we have never plowed more than one sixth of it, we have never pastured more than one quarter of it and we never can, to any profit. Our agricultural operations cannot be much extended beyond their present limit of some two millions and a quarter of acres. To attempt it would be to contend with nature, in an effort sure to prove as vain as it would be foolish. What, therefore, shall we do with our remaining three millions of acres?

A partial answer to that question is sure to be, utilize our ubiquitous water power and establish manufacturing industries in all sections of the State, from Indian Stream to the mouth of the Piscataqua. And in this proposition there is truly much wisdom. While our manufacturing interests are already of great importance, we have but very partially utilized the natural powers offered by the streams to be found in every town in the State.

Some twenty years ago, following the example of her sister State of Maine, New Hampshire made a slight effort to ascertain the locations and amounts of her water powers. A commission was appointed by the governor and council, who made a cursory examination of the subject, and a preliminary report, in 1870, which embodied many important facts.

We learn from this that nearly fifteen hundred streams of varying volumes have been laid down upon our state and county maps, and that, in answer to a circular sent to the towns by the commissioners, asking for the number of water powers in each, returns were received from ninety-one of the two hundred and thirty-eight, or thereabout. These were as follows:

21	towns in Rockingham county returned .	. 48	powers.
6	“ Strafford “ “ .	30	“
5	“ Belknap “ “ .	36	“
4	“ Carroll “ “ .	20	“
9	“ Merrimack “ “ .	94	“
12	“ Hillsborough “ “ .	138	“
12	“ Grafton “ “ .	159	“
4	“ Sullivan “ “ .	36	“
12	“ Cheshire “ “ .	132	“
6	“ Coös “ “ .	58	“
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The officers of many of these towns accompanied their returns with the remark that they were imperfect, and that they had made but partial lists of the water powers in their

several towns. Yet, these averaged eight and a quarter powers to a town. Upon this basis, New Hampshire has nearly two thousand water powers (1,963), a number doubtless much below the actual one.

Those on many of our streams have never been utilized at all. Indeed, thus far, New Hampshire has availed herself in but a small degree of this vast natural force which has been so generously placed at her disposal. The full utilization of it would treble our population, more than treble our wealth, and increase proportionately our industrial and political importance. And yet, we had invested in manufactories in 1880, over fifty millions of dollars (\$51,112,263) which yielded an annual product of nearly seventy-five millions (\$73,978,028); four or five times that of our farming. Manifestly, we are destined hereafter to become more of a manufacturing than of an agricultural people, if, indeed, we are not already such.

But when we shall have utilized all the water power in the State, and surrounded their sides with prosperous villages, there will still remain some three millions of acres — a strong half of our area — waiting to be improved. What shall we do with these, or rather what can be done with them to render them the most productive? The Almighty has made them for something, but for what? This is one half of the whole great question which asks an answer just here and now, with the deep resounding sea on one side of us, the plains and mountains on the other, and the blue vault of heaven bending over us.

In my own humble opinion there is but one sensible answer to this inquiry. The rugged sides of many of our mountains and hills, scattered everywhere over the State, spurn the plough and will yield neither grass, roots, nor grain. Left to themselves however, they will grow wood and timber perpetually, the crop which nature assigned to them when the State emerged from the universal flood which had covered it for a period of whose duration we have no knowledge. That is the crop and the only one which they have borne since man has known them. It is the only one which they are willing to bear. Is it not as well to allow them to do as they will and govern them in the line of their aptitudes?

Early one morning, some years ago, as the late Mr. Thomas B. Leighton sat upon the piazza of his Appledore House, just across this bay at the Shoals, and had taken from his mouth the long horn, with which by gentle tootings, oft repeated, he was wont to arouse his guests, your speaker said to him, "what do you do when they won't wake up?" "I accept the inevitable and let them do as they will." We may wisely, I think, adopt this policy in our treatment of this large half of our domain. For we cannot raise grapes on thorn trees, or figs on thistles, or maize on the shaggy sides of Mount Washington, which will produce trees in abundance and forever.

Now, in case we shall follow the leadings of nature, what may we reasonably expect as the annual return of these rough acres? Each of these three millions ought to produce five thousand feet of timber every forty-five years, amounting to fifteen thousand millions of square feet, worth in the woods, at five dollars per thousand, seventy-five millions of dollars, or one and two thirds millions (\$1,666,666) per year, aside from the wood of which no mention has been made. We regard this estimate a reasonable one, and its realization easily possible.

But look a little farther. When this lumber has reached its ultimate condition by manufacture, its value will have been increased all the way from two or three to a dozen times its original amount, from four or five to ten or fifteen millions of dollars, according to the uses to which it may have been put.

This increase we are now giving very largely to manufacturers outside our lines, by exporting most of our lumber in the log or in partially manufactured forms, and thereby reserving to ourselves but a small fraction of its final value. In other words, we are selling raw material, to which foreigners apply their labor and make fortunes, which we may and ought to secure to ourselves. Communities grow rich but slowly, if at all, by the exportation of their raw products. Our Southern States are learning this lesson very fast, and it will enure to our profit, if we also hasten to do likewise.

Thus far, our woods have yielded us but a small portion of

the wealth which they would have done had their capacities been developed as they might have been. Properly managed, where they are now affording occupation to dozens of people and supporting inconsiderable hamlets, they would give employment to hundreds, often to thousands, and convert these hamlets into populous villages and thriving towns.

No great interest in New Hampshire has been so recklessly administered as has that of very many of our forests. The private interests of proprietors only, or rather what they deemed to be such, have been consulted. Formerly, and to some extent now, in the northern part of the State, no trees below certain minimum sizes were or are cut. Under this system, no immature timber is removed, the ground is shaded and its moisture preserved. As a consequence, the young growth is for the most part saved. Fires are comparatively few and their ravages not frequently extensive.

But when, at dry seasons, fires have started upon lands from which the entire growth has been removed, their arrest has been well nigh impossible, and every thing upon them, living and dead, has been destroyed. In some cases, the soil itself even has been consumed, and only one sad scene of awful desolation has been left to tell the story of mismanagement and neglect.

Last season, the speaker followed up a valley of the White Mountains, some seven or eight miles, which had been thus made frightful. The fire-bleached ledges which flanked its entrance instantly suggested the horrible inscription which Dante, in his "Inferno," has placed above the entrance arch of hell,—

"All hope abandon, ye who enter here."

In this devoted valley, some five years ago, from crest line to crest line of the mountain ranges which wall it in, raged for days devouring flames which consumed every living object upon its surface, save here and there a few trees which the wet ground protected, and the limpid stream which defied their power,—the whole scene there unfolded to view afford-

ing a marked example of the effects of drought, denudation, and careless firing combined.

As one wanders through that valley, gazing up and down its desolated sides, and pauses here and there to look upon the pure waters of the stream which divides it, he may realize as he has never done before, the sharp contrast of the blackened horrors of the eternal pit with the "river of water of life, clear as crystal, proceeding out of the throne of God and the Lamb."

But forest fires and denudation do not affect injuriously the forest alone. Their disastrous effects are felt by all our other great industrial interests as well, for these are all more or less inter-dependent upon one another. This remark applies particularly to the agricultural and manufacturing industries of the State. Whatever tends to diminish the water supply or to render it variable and uncertain, is detrimental to these, to a marked degree.

It is a mistake to regard the lakes and ponds of New Hampshire as her great reservoirs. These are her forests. The former are simply catch-basins which hold the stores which the latter have received from the clouds and yield as wanted under the gentle but constant pressure of gravity. Fires consume the covering of leaves and mosses which give them their retaining power, and convert their surfaces to blank areas of rock and sand, down which the rains flow as readily as showers down a roof.

Denudation causes them to freeze early in autumn. As a consequence, the entire precipitation of winter rests upon an impervious bed, exposed to evaporation and removal by sun and wind, whereby much of it is lost. Whatever of it remains until spring, melts before the frost leaves the ground, and is converted into torrents which plow the plains with destructive violence, cover fertile fields with barren débris and in headlong haste cause devastation wherever they go.

There is another great interest, not yet mentioned and of a comparatively recent date, which is particularly sensitive to a maladministration of our forests. I refer to the summer

visiting interest. This is omnipresent throughout the State. We all of us know more or less about it, but, in the absence of exact statistics, have a vague and inexact idea of its magnitude; yet, our personal observations are sufficient to indicate its great importance and that its future development bids fair to materially increase the value of our real estate, to awaken from their lethargy scores of our now too quiet villages, to improve our social condition, to render more attractive our homes, and afford us local markets where ultimate prices may be realized for the surplus products of our farms and gardens.

Mr. John Lindsey, of Lancaster, remarked some years ago that he remembered when the combined annual receipts of all the White Mountain houses were but twelve thousand dollars (\$12,000).

Mr. Edward Hungarford, in the present August number of the "Century," tells us that the White Mountain hotels and boarding-houses now have accommodations for eight thousand persons, and that Bethlehem alone can take care of three thousand. According to his estimate, no less than three hundred and twenty thousand (320,040) persons visit this part of the State every year. But reduce his estimate one third, cut the number down to two hundred thousand (200,000), and assign to each an expenditure of five dollars while there (and who can run the gauntlet between "Boots" and the bell boy on one side, and the gentlemanly clerk and the invisible proprietor on the other, for a less sum?), and this number will be found to have left behind no less a sum than one million dollars, besides the amounts paid to railroads and stages for transportation.

The industrious secretary of this Board of Agriculture tells us that, in response to his circulars sent out in 1889, to the hotel and boarding-house keepers in New Hampshire, asking the several amounts of their gross receipts for that year, he received returns aggregating five millions of dollars, five times as much as the value of one of the ordinary annual corn crops of the State.

These figures abundantly show that New Hampshire pos-

sesses strong attractions of some kind, which bring within its borders every summer the throngs of men, women, and children that appear among us. What are the attractions? They are not those of Mecca or Lourdes to which multitudes go as pilgrims impelled by religious motives. They are not those of New York or Leadville, nor those of the prairies and the plains, whither men and women go to make money, for visitors do not come here to worship, but to have a good time. They do not come to make money, but rather, to spend it. They are an amiable, well-behaving crowd, with shekels in their pockets which they are willing to part with for a fair consideration. Their numbers increase rather than diminish, and they penetrate every town and almost every school district in the State. What attracts them?

Among the attractions influencing this great throng are :

1. *Pure Air.* When, in July and August, a few weeks of rest and recreation are offered to men and women who spend eleven months of the year in close streets and furnace-heated apartments, they naturally seek God's open country and the fresh air of the hills and mountains, upon whose sides many of them first saw the light. However perfect the ventilation which art, guided by science, has introduced to the crowded stores and offices and work shops of our large towns, their atmosphere can never equal that of the highlands of the open country, or of the surf beaten shore where the pulse-beat of the wide ocean invigorates the weakened pulse-beat of man. In these sultry months, New Hampshire offers to all who pine for freshness and space, invigorating breezes brought upon our coast across the arctic current, or strengthening ozone wafted over all our inland country from the great storehouses of the frost king in the far north-west.

2. *Pure Water.* Next to pure air, pure water is essential to the physical welfare of man. When large numbers of people settle upon limited areas, the obtaining of this is a matter of no small difficulty. They are obliged, consequently, as the best to be had, to use waters of inferior quality. But this necessity does not destroy their relish for those, clear

as crystal, which our mountains distill from the clouds and transmit everywhere through rock-bedded channels for the free use of all who care for them. It rather increases it.

He who has been obliged to drink the indifferent waters of the great cities will appreciate the worth of our mountain streams. He who has journeyed from Jersey to Florida, over the great sand belt which lines the Atlantic coast, and noticed the turbid character of the streams which cut through it to the sea, will understand the surpassing excellence of the white waters of granitic regions. He who has attempted in vain to allay his thirst with the flat, tasteless waters of the prairies, knows how to value those of our New Hampshire springs. Next to the living waters of eternal life, springing in the regenerated heart of man, are the crystal streams of our hills and mountains.

3. *The Accessibility of our Position is a Third Attraction.* The great Creator of all things has seen fit to place the White Mountains and their ten thousand surrounding hills within the bounds of New Hampshire. That of Mount Washington is the highest mountain summit on the east side of this continent, north of North Carolina. In July and August, ten millions of people may reach it between the sunrise and the sunset of a single day. Luxurious railway trains from all directions converge to it, as did the great highways of the Cæsars to imperial Rome.

4. *Love of the Fatherland.* Thousands of choice men and women during the last seventy-five years have gone from the home of their nativity to seek fortunes abroad. Large numbers of them of the first or second generation, attracted to their fatherland by an interest which can be better felt than expressed, come back from time to time to visit kindred and scenes hallowed by the associations of other days. Not a few, with the means which enterprise has gained for them, are building summer homes here and there, all over the State. The love of country life is a characteristic of our race, which, if circumstances allow, is sure to manifest itself in the acquisition and improvement of landed estates. There is no property

so precious to a man who has English blood in his veins as a piece of God's fair earth, extending from the point where gravity centers to the realms of illimitable space.

5. *Our Scenery.* But the strongest attraction of any, probably, is that afforded by our scenery. I spent a winter some years ago upon the flat lands about the Gulf of Mexico, and became familiar with the floating bogs of its northern shore, with their gradual elevation to marshes, and still higher sand plains farther inland. They proved exceedingly monotonous and uninteresting. And when, at length, I started homeward upon the great Mississippi and watched, league after league, from the steamer's deck the rich bottoms through which it flows, that depression of spirit which monotony and ennui engender became painful. But when, at length, the little bluff upon which Natches stands came into view, exhilaration succeeded, for it seemed a gate post of Paradise. Indeed, there is very little to interest in the vast sedimentary plains which stretch, in some sections of our country, in all directions to the horizon, reminding one only of former submergence and of pre-historic monsters which the geologist only cares for.

But when the traveler rises to higher regions, where omnipotent Power has bent the pliable strata of the earth's crest into mountain and valleys, and clothed their sides with forests of perpetual green, an interest is awakened which never flags.

What the Alps and their outlying foot hills are to Switzerland, the White Mountains and their notches are to New Hampshire. Its mountains and valleys have made that little country of central Europe the sanitarium of the continent. If we improve, as we may, our grand opportunities, similar attractions will make our gallant State an important health resort forever.

The sum of what I have thus imperfectly said is this:

We have in our little State of New Hampshire a respectable heritage, affording some half a dozen leading resources, which are valuable, just in proportion to the wisdom and energy with which they are developed.

1. We have an agriculture whose products may be doubled or trebled, if the farmer will but rise to the level of his opportunities.

2. We have water power, of which only a tithe or less has been utilized, sufficient to give us high rank as a manufacturing State, if it be utilized as it may be.

3. We have forests covering half our area, which will yield us annually and perpetually for the simple taking, crops of wood and timber, whose manufacture may give profitable employment to large numbers and increase greatly the population of the State.

4. We have scenery unsurpassed in many respects by that of any other State, which in consequence of its attractive power has just as much a cash value as the soil of our fields or the granite in our quarries. If any one doubt this let him try to buy the summit of Mt. Washington or the old man of the mountain in Franconia Notch.

These and other resources to which I cannot now allude, thus far but partially developed, have hitherto given us a frugal living. Utilized as they may be, they will make us rich.

In a word, I can best illustrate my idea of our present situation as owners of this heritage by quoting the remark of a canny old Scotchman who once called upon me to see my farm. As we rode over it he complimented the different sections and I became so inflated with sweet satisfaction as to endanger the button-holes of my jacket. But his parting words produced a sudden collapse and removed the strain. These I have never forgotten. Said he: "You have a very good farm, Mr. Walker, but you don't half carry it on."

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