

## OUR FOREST INTERESTS IN RELATION TO THE AMERICAN MIND.

*By J. B. Harrison.*

THE careless and wasteful methods of treatment of our forest interests and resources which have been common in this country have always had close and vital relations to the general contents of the American mind; that is, to the whole body of ideas, theories, opinions, beliefs, and assumptions which belong to the intellectual life of our people. They are features and products of our mental conditions and environment, and belong naturally to the stage of civilization which we have reached. We have treated our other great natural resources in about the same way. We have wantonly wasted and in many instances totally destroyed valuable sources of supply for fish and game; and the supply of water for the irrigation of vast tracts of arid land in the western part of our country is seriously threatened by the national indifference to injuries to the mountain sources of the rivers.

Here in New England our principal mountain streams are choked and polluted with sawdust and other saw-mill refuse, and have been transformed into sewers, although their waters, if they had been kept pure, would be worth millions of dollars to the inhabitants of the great towns between the mountains and the sea. The springs of the White Mountain forest region are the natural and only adequate sources of supply of pure water for the vast populations which are assembling, during recent years, in the shore towns of Massachusetts; but the rivers which flow from those mountain springs are already so defiled and contaminated that their waters carry disease and death to the unfortunate people who are compelled to drink them.

Our mountain landscapes are unequalled in variety of beauty and interest in so small a territory elsewhere on this continent; yet they are needlessly defaced

and vulgarized, and the attractiveness of our scenery is being steadily reduced, obliterated, and destroyed, although this scenery is the source of an actual annual revenue of many millions of dollars.

The general treatment, by individual proprietors, of springs and of small or local sources of water supply is nearly everywhere in New England such as destroys them entirely, even when they would have a definite and important money value, and thousands of such springs have been extirpated. There was formerly a spring at the head of nearly every ravine which leads down from the higher land to the intervalles or bottom lands along the rivers, often a spring every few rods, sending down a never-failing stream of the purest water to help maintain the equable flow of the mightier current through the valley below.

These springs were usually situated where the ground could not possibly be cultivated, as it was too steep for any kind of tillage. If a small area around each one had been kept in forest conditions and left for the growth of timber, the perpetual supply of this product would have been valuable, and the springs would have been permanent. But the usual course of treatment of such places is to cut off all the trees and bushes and, when the brush has become dry, to burn the ground over, so as to destroy all possibility of the reproduction of tree-growth in the areas thus desolated.

In consequence of the destruction of the mat of root fibres which held the steep banks in place, the slopes soon begin to break away, the surface soil slips down, and the sand or gravel of the hill-side spills out and smothers the spring, often filling up and burying the entire nook or glen in which it was situated. While the small fountain flowed, and the



trees and shrubbery grew around it, the little basin or valley was a very shrine of sylvan loveliness. Many kinds of birds built their nests there every year, in order to be near the spring; beautiful flowers bloomed in these recesses, and there were plants of great interest to the botanist which are now sought in vain. Instead of all this abounding life, beauty, and fruitfulness, there is now a broad slope of sliding sand, which every year covers up and destroys more and more of the fertile and valuable land of the interval below.

There are hundreds of these small deserts along the edges of our river intervals, where once all was verdure, freshness, and growth. Some scientific men hold that all the deserts of our planet have been created by human agency. I do not know whether this is a correct opinion, but my fellow-citizens in New England have long been engaged in the business of desert making, and they still widen the areas of desolation every year. There is a great deal of sheer, vulgar destructiveness in the common methods of treatment of our forest and scenery interests, and this is so strong an element in the character of many of our people as to lead them to an utter and stupid disregard of their own interests, not only the interests of their higher natures, whatever these may be, but disregard of opportunities and means for improving their material condition and filling their purses. *Enlightened* self-interest may be an adequate guide for human conduct, but *blind and uninstructed* self-interest often plays havoc with the most important means and conditions of human welfare, a truth which finds constant and impressive illustration in the treatment we are still applying to the forests, water sources, and scenery of the White Mountain region.

Our treatment of the soil itself, the greatest of all our natural resources, has been, in the United States, to a very great extent, wasteful, reckless, and unintelligent. Many farmers burn their fields over every spring, wherever there is a sufficient film of grass, weeds, or stubble to lead the fire over the ground. This burns out the fertility of a thin stratum of the surface soil, which is

ploughed under this year, and a new layer is turned up, which will be subjected to the action of fire next spring. Under this treatment the land grows more and more inert and unresponsive under tillage each year. Where there is a considerable proportion of sand in the soil, the effect of the annual burning produces a gradual whitening of the fields, and an apparent increase in the quantity of sand, so that people say, "Where does the sand come from?" This appearance is, of course, due to the diminution of the other elements in the soil, which makes the sand relatively more abundant. These farmers buy costly "commercial fertilizers," and complain of the diminishing fertility of their fields. Not long ago I saw almost the whole length of the valley of the Red River of the North ablaze with burning wheat-stubble and straw.

Every year scores of people are burned to death in this country, and property of the value of many millions of dollars is destroyed by fires which might easily have been prevented. The causes of such fires belong to two classes, those of faulty construction of buildings, and those of inadequate care of stoves, furnaces, and fireplaces. It is *a little cheaper* to build houses so as to invite the resistless spread and dominance of any fire once started, and so we build them in that way. Very often a great fire would have been prevented by the employment of one or two night watchmen; but that would have cost three or four dollars a night, perhaps, so the owner or occupant hopes it will "be all right," and takes the chances, and the building burns. Multitudes of our people think there is no actual loss when property is destroyed by fire, *if it is fully insured*.

The ideas, notions, and practices of our countrymen related to our forest interests and resources are not exceptional or peculiar. They are of a piece with the general intellectual character and possessions of our people. "The spendthrift's childlike faith in the inexhaustibility of his patrimony" is a strong belief in the general American mind, and a potent influence in our national character and action. This common prepossession



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is what chiefly inclines people to believe the mendacious asseveration of the men who are engaged in destroying them that the forests of the White Mountain region, and those around the sources of the irrigation rivers in California, are inexhaustible and indestructible.

A large proportion of the intellectual possessions of the American people consists of notions, ideas, theories, assumptions, and beliefs which will not bear any thorough or searching analysis. This is true not only of the mass and average of the men and women who work with their hands for wages, who have little time or opportunity for what is called culture, but it is also true, to a great extent, of most of our "educated people" as well. Since our Civil War no exigency has arisen to compel us to "take account of stock," or to examine and revise the mass of incoherent and undeveloped "views" and fancies which, in various ways, have come to be "taken for granted," and are everywhere put forward and repeated as true and important, and which now occupy a great deal of room in the average American mind. Their vogue depends upon the fact that they have not been challenged or examined, and it is time to challenge them.

One of the chief of all these baseless assumptions, and one of the most influential in its bearing on our methods of managing our national resources in general, is the fantastic trust in the omnipotent power of *science* to free us from all need of care, toil, economy, and foresight, and to make good all the losses caused by our wanton waste and stupid destructiveness. We destroy our forests in most unintelligent fashion, instead of treating them in a rational manner with a view to their importance as a permanent source of supply for timber, because the mass and average of our people believe that science is likely to provide substitutes for wood and timber whenever we need them; and with similar confidence that supplies of all kinds will be forthcoming as they are required, we assume that whatever we choose to do is safe, and that we can, "with a light heart," and without danger of ill consequences,

disregard all lessons drawn from the experience of other nations.

The effect of this illusory faith is shown in our practice. We are the most wasteful of all the nations called civilized. Of some of our most valuable natural resources we have always wasted far more than we have used. The national prosperity of which we boast as evidence of our superior wisdom and energy is largely due to the fact that we have been recklessly expending our magnificent capital. The worst feature in our national character is our criminal willingness to appropriate to ourselves, and to waste and exhaust, what should be the fixed capital and unwasting basis of the nation's prosperity for all time to come.

We have wasted and are still wasting our resources in fish and game, in forests and water sources, in the fertility of the soil and in other storehouses of the nation's natural wealth, as if responsibility to the future for our action as trustees of this magnificent inheritance had for us no existence. We expect science to bless our disregard of economic and of moral laws with all the rewards of wise and orderly living. This means, in the last analysis, and when thought has produced its natural effect in character and action, the breaking down of moral distinctions, and the emancipation of men from that sense of obligation and responsibility which has hitherto always been necessary to the existence of society and civilization; and these consequences are already widely apparent.

The only adequate or real remedy for these undesirable conditions, and the evils which result from them, is an advance and improvement in popular thought and intelligence. There is no mystery, nor anything which should be surprising, in the actual condition or current treatment of the White Mountain forests, water sources, and scenery, though there is much misunderstanding in the public mind regarding the matter. There is no difficulty or uncertainty which hinders our knowing what course of action should be adopted and pursued in order to secure, protect, and preserve the interests of the people of the State



in these great natural resources and possessions, so far as it is possible to accomplish this object.

We have every reason for believing that if a knowledge of the facts, as they are, regarding the treatment of the White Mountain region, and of its destructive effect upon the interests of the people of the State, were adequately brought to the attention of our citizens, there would be a speedy and decided change in this treatment, a change which would be the beginning of a far-reaching and permanent improvement.

The work which is first and chiefly needed in New Hampshire is the honest and thorough reporting and description of what is done each year by the men who are despoiling and destroying the mountain forests, water sources, and scenery. There has been a great deal of sham discussion of forestry topics in New England during the last few years, especially in relation to the White Mountain forests. If the element of unreality were subtracted from the incoherent and turgid rhetoric of the pretentious essays on the White Mountains, and on the remarkable qualities of the people of New Hampshire, which have appeared in some newspapers and magazines as discussions of forestry subjects, little of anything real or substantial would remain. The men who wish to continue the work of destruction in the White Mountain country naturally wish to divert public attention from the actual condition of things there, and writers in their employ have invented various fictions for this purpose. The effective instrument to be employed against these fictions is the truth, the straight, uncolored reporting of existing conditions, with the methods employed by the men who are cutting off the forests, befouling the streams and defacing the scenery, and the progress made each year in every part of the region, in this stupid and needless destruction of invaluable resources. These reports should be illustrated by photographs showing the effects of each year's lumbering and of the destruction of the soil by repeated burnings on the areas on which forest conditions have been permanently destroyed.

This work for the diffusion of knowledge of the facts regarding the gradual or rapid effacement of the forests and scenery should be accompanied by the propagation of rational and true economic ideas respecting the functions of mountain forests and their relation to the public welfare. This is the work needed in New Hampshire, the diffusion of knowledge and the propagation of ideas. If we consider the question of the means by which it can be accomplished we shall find that the methods upon which we still chiefly depend for the propagation of ideas are as much behind the requirements of our time as the use of ploughs with wooden mould-boards would be in agriculture.

Our people in general, even the cultivated and intelligent, vastly over-estimate the effectiveness of the publication of articles in a newspaper as a means for propagating ideas and influencing the public mind. Writers for the press are often under the spell of the same illusion. If we analyze the real conditions and phenomena attending an effort to direct or modify public thought by writing for a newspaper, we shall observe the fact that while an important article is usually read by a considerable proportion of the persons who see the paper, one reading makes but a very slight impression on most minds. If readers could have a little time to think about a particular article, to return to it again, to verify their first impression and to deepen it, they would be likely to retain this impression in some degree, and they might perhaps be influenced by it. But there are many other articles in the paper, each with a distinct claim upon the reader's attention, and to-morrow morning another number of the same journal appears, with every headline planned to draw the mind away from everything else to this issue of the paper and the articles it contains. Some of them are interesting, and the impression made by our particular utterance of the day before is blurred a little; and the next morning there is another paper, and the impression of which we are trying to keep trace fades a little more, and a little more, in every reader's mind.

It is naturally suggested that the writer should send in another article, and he



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does this. Some who saw the first will not see this one, and some will read this who did not see the other, and will say, "What is all this about?" The point of interest here for us is the fact that among so many impressions succeeding each other so rapidly, the chance for any definite, abiding result sufficient to modify any person's thought or action is necessarily very small. Besides, only a limited number of persons ever see the articles, even if a long series of them appears in the same journal. An enormous waste of energy and of effort is constantly going on in this way, all over the modern world. It is inseparable from the usual methods of procedure in efforts for the propagation of ideas, but people submit to it with martyr-like patience, as if it were a necessity ordained by fate or the nature of things. It is a waste of life itself, and it renders a large proportion of human endeavor for improvement abortive and ineffective.

We have made splendid progress in the invention and improvement of machinery to save muscular labor and to multiply its results, but we have made no corresponding advance in our methods for the propagation of ideas, or the multiplication of the results of intellectual exertion and production. In its essential nature the propagation of ideas is, of necessity, chiefly a mechanical process, and it is accomplished, almost wholly, by the repetition, iteration, and reverberation of the same idea, continued and multiplied until it compels attention. The first impression is repeated and deepened until it becomes permanent and dynamic. Eloquence is not an available instrument for work of this kind. It distracts attention, and stimulates a circle of faculties the functions of which are distinctly unfavorable to the effective propagation of ideas. Eloquence is too sensational and dramatic, and is interesting in too many ways, to be a suitable means for the rapid and fruitful propagation of ideas among great multitudes and masses of people who are living under the conditions of our modern civilization. What is required is mostly simple mechanical activity, repetition, rapidity, and measureless multiplication of attack and appeal,

in the presentation of one essential idea. This idea may be illustrated and enforced in numberless ways, but nothing should be presented to the public attention which is not completely subordinated to the central, essential object of the agitation.

The work required may be regarded as drudgery, and one reason for the failure of many promising undertakings which depend for success upon the propagation of ideas is that those concerned in them have no stomach for drudgery. It is a common but very superficial notion, that the effective propagation of ideas is a very fine and high kind of intellectual work. But the real process offers a man no opportunity for self-display. He must, in order to be successful, have a substantial idea — a reality and not a sham — to begin with, and it must admit of brief, clear statement. Such a statement he must have, at whatever cost. It must fit, embody, and express the idea, as a perfect body fits and expresses the soul which inhabits and vivifies it. When the agent of a movement for the propagation of an idea has achieved a brief, clear, adequate statement of it, what does he do with it? He hammers it into the minds of the people. He does not ask their leave, nor persuade them. He effaces and forgets himself. He cannot afford to be interesting or entertaining, or to be anything but the absorbed, devoted slave of the idea he is propagating.

As to methods, the main thing required is a little money for printing and postage. The agent may print the brief, clear statement of the idea as an editorial paragraph in an influential newspaper, if that may be done conveniently. This, as we have seen, has but slight effect in itself; but now the mechanical iteration begins. He reprints the brief, clear statement on a hundred thousand postal cards, for instance, crediting it to the influential newspaper in which it first appeared, and he sends it to the editors of a thousand other influential journals, and in a few days it meets the eyes of a million readers. He reprints some of the comments which suit his purpose, and sends them out in turn to hundreds of thousands of readers, always along with the brief, clear statement of the essential idea.



In a little while the "literature" of the idea appears everywhere. People see something about it the last thing at night and the first thing in the morning, and its reverberations fill the air of the time. The axemen in the lumber camps on the shores of Puget Sound, the miserable serfs who dredge for oysters in Chesapeake Bay, and the white-bonneted Acadian girls who paddle their canoes up and down the Bayou Teche, begin to say, "Why, I have seen something about this several times before, and here it is again."

We cannot be certain, beforehand, what the people will do after such an awakening and the resulting discussion; but while they are in this condition of aroused attention we can present all the plans, reasons, arguments, and convictions we may have on hand, and they will give heed. It would have been useless to bring them forward before. This is the hour and the opportunity for success.

Whatever the people conclude or decide upon after such a thorough awakening and discussion will be the best thing that is possible at the time and under the conditions then existing, and it is likely to be better than any of the plans that were matured beforehand. The people, after a thorough discussion, are always wiser than any one man—or small number of men—was before the discussion.

Every winter there are two or three articles in Boston newspapers which might arouse the country, and permanently extend the frontiers of the kingdom of light, if they had any chance for their lives, and their natural influence and work; but no such chance is given them. They never get upon their feet. Their very authors forget them before the next winter, and produce other articles which are left to perish in the same way. Societies are sometimes organized to promote the ideas set forth in such newspaper utterances. Many well-known and influential public men become members, and they have all the money they need for the purposes of their association. They hold great meetings, and have eloquent addresses—so much the worse for their objects—and

there are editorial articles in the leading newspapers the next morning, with glowing prophecies of the success of the movement. That is all. In most cases that is the end. A boy or girl eighteen years old, with alert wits and a hundred dollars for printing and postage, could do more in three months to promote the objects of such a society, than all its officers and members will accomplish with its elaborate machinery in five years.

We have to a great extent lost by disuse the knowledge and readiness which the people of former generations had acquired by experience and practice in the propagation of ideas. If we should ever again feel anything very seriously in this country, or should have any adequate discipline of hardship, we shall probably again learn how to influence the mass of our countrymen in behalf of the ideas which we then regard as of vital importance to the public welfare. It would be very easy to influence them now, under existing conditions, if anybody cared to do so. There has never before been a time when so many millions of people were so accessible to teaching, or could be so easily aroused to attention to any matter of public interest and importance.

These simple and natural methods for the diffusion of knowledge and the propagation of ideas were successfully employed in the work for the rescue of Niagara, and they have also been applied with remarkable effect, under very unfavorable conditions, in the effort to awaken public interest and attention regarding forestry matters in New York and New Hampshire. They should be used on the largest scale throughout our country in connection with various objects which are vitally related to our national interests and duties. The agitation and discussion produced by a few months' use of these methods in New Hampshire last year compelled the enactment of a law establishing a permanent forestry commission.

This State has for several years expended thousands of dollars annually in officially advertising the attractions of scenery, and of summer boarding-houses and hotels, all, without exception, private



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property. If the State can rightly pay the bills for thus advertising private business enterprises with money from the State treasury which has been raised by general taxation, it is strange if it can do nothing to take care of the very scenery that is thus officially advertised. The best possible method of advertising the scenery of New Hampshire would be to begin to take care of it, with a view to the permanent preservation of its remarkable beauty and attractiveness.

The men who are destroying the forests of the White Mountain region have recently denied that cutting off the forests has affected the equable flow of the rivers which have their sources there; but the same element of unreality which pervades most of what they say on forestry subjects vitiates this denial. The truth is that the upper course of most of these streams has been dammed and reservoirized to such an extent that a large proportion of the water in times of flood is stored up and retained in the basins thus artificially formed, so that it can be used to turn the wheels of the mills in time of drought. Some of our large lakes are also used as reservoirs for this purpose. Yet this very extensive system of reservoirs does not entirely prevent the effect of cutting off the mountain forests from manifesting itself in the diminished flow of the rivers in summer. The *Manchester Union*, after a careful investigation of this matter, declared in its issue of Oct. 15, 1892, that —

"There is no question but the destruction of the forests of the upper Merrimac valley and along its tributaries has resulted in a marked decrease of the flow of water in the river. Not only this, but it has made the stream subject to sudden rises and falls, it being almost as sensitive as a mountain brook to a heavy shower or storm. To-day the mills on the lower level are bothered by high water; to-morrow there is so little water that steam has to be called to aid the waning power of the water wheel. It was not so in the early remembrance of our older residents. When one finds all along the valley dry brook-beds, where once water flowed the year through, and learns that in every case this condition followed upon stripping the banks of trees, the conclusion is inevitable that here is a question that concerns us all, one in which, as good citizens, we ought to be interested."

The great storage reservoirs, which now partly conceal the effects of the

destruction of forest conditions in parts of the mountain region, are gradually filling up. Thousands of tons of saw-mill refuse, and of earth from sloping land denuded of forest growth, are being deposited in the reservoirs and the slack-water portions of the rivers. Our people appear to think that because these accumulating banks and masses of refuse and of earth are out of sight beneath the surface of the water, they are therefore harmless, and can be safely regarded as non-existent; but the accumulation goes on, and the water shoals more and more, and the rank growth of aquatic plants increases the depth and fixity of these deposits. The beds of the rivers are being gradually raised in long reaches of their course.

If the present methods of treatment of the forests and streams of northern New Hampshire are continued unchanged, the inevitable result will be reached in time, that is, the extirpation of both the forests and the streams. The extinction of forest conditions on the mountain slopes and high lands around the sources of the Connecticut and the Merrimac, the Androscoggin and the Saco involves the destruction of the rivers themselves. More and more of the whole region is cut off each year, and much of it is afterward burned over; and if these processes go on there will in time be vast tracts of the mountain country of New Hampshire in which there will be no timber, or shade, or verdure, or springs of water. If forest conditions are ever fully destroyed on any considerable proportion of the area of the Appalachian Mountain system they can never be restored, and the mountains themselves will in consequence be destroyed by erosion. What I wrote of the situation in Pennsylvania many years ago, after examining the mountain region of that State for the State Forestry Association, may rightly be applied to all the mountain forest regions of the eastern United States at least: —

"If the woods on the mountains become extinct, the streams will be destructive torrents in the spring season, and their channels will be dusty and wind-swept in summer, so that, as now in the West, the course of a river can be traced from afar by the clouds of dust always rising from its bed in dry weather. The soil will be washed



down from the mountains into the streams, the inert clay, sand, and gravel will follow, and will bury the fertile lands near the foothills. The area of farm land will thus be diminished more and more, and the fertility and productiveness of what is still cultivated will steadily decline.

"It is in every way probable that this is what will in time actually occur. If existing conditions and tendencies are continued, that is, if the mountain forests are still burned as now, the time will inevitably come when there will be no trees or verdure on the mountains of Pennsylvania, and no soil. Instead of the noble and satisfying sylvan beauty which was formerly the pride of the State, there will remain only the wrecks and skeletons of the mountain chains, unsightly mounds and ridges, eroded by the wind which will fill the air of the lowland regions with dust, seamed and scarred by torrents and rent by horrid gulfs and chasms, a blasted and ruined land, the result and monument of man's incapacity."

Man has no power to create a new world, but his ability to wreck and exhaust the planet on which he lives is almost without limit. I have observed the relations between the thought of our people and their treatment of all our great natural resources in nearly all the states of our country. The illustrations of this relation which are presented here might be greatly multiplied. The fancies and fictions which are popularly assumed to be true, and are believed and repeated without adequate observation or evidence, are innumerable. A good specimen of them is the notion that oaks and pines succeed each other in regular alternation when forests are cut off. It is often said that no scientific man has been able to

explain this succession; but no one has been able to find that there is, in fact, any such law or invariable sequence in the matter. The succession of different kinds of trees when forests are cut off depends, in each instance, upon local and special conditions, and there is no general law which determines the result; or at least we infer the absence of any such general law from the fact that there is no uniformity of result. The mystery of the supposed uniformity appears to be entirely a matter of unscientific and inadequate observation. The mass of our people are not certain that oak-trees and pines can grow only from their own seeds. They think that these trees, and "fire-weeds" and some other plants, sometimes "just grow up, without any seeds to produce them, because the right conditions are there in the soil."

The object of this writing is to present and describe clearly two features of the life of our time:—

1. The close and vital relations between the popular treatment of our forests, water sources, and scenery, and the general contents of the American mind.

2. The antiquated and inadequate character of the methods now in use for the diffusion of knowledge and the propagation of ideas among the mass of our people, and the urgent need for the adoption of more efficient methods for the accomplishment of these objects.



## A NEW ENGLAND WOMAN.

*By Annie E. Smiley.*

HE sought her, flushed with victory like wine,  
And told her of his love's successful quest;  
She listened with a smile serene, divine,—  
The woman who for years had loved him best.

Another woman he had loved and won,—  
And told his triumph like an eager boy;  
He saw her smile, and blundered blindly on,  
Nor dreamed his words could bring her aught but joy.