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Amateur Hour: Nathaniel H. Egleston and Professional Forestry in Post-Civil War America

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Nathaniel Egleston, the second head of the U.S. Division of Forestry (1883–1886), is a forgotten figure in the history of early American forestry. The one-time minister became a tireless advocate for trees in the post-Civil War era, writing innumerable and well-received essays and pamphlets. But his enthusiasm did not translate into administrative success, and he was replaced by Bernard Fernow, who in turn was succeeded by Gifford Pinchot; the pair's scientific training signaled the professionalization of American forestry.

AMATEUR HOUR

NATHANIEL H. EGLESTON AND PROFESSIONAL FORESTRY IN POST-CIVIL WAR AMERICA

History has not been kind to Nathaniel Hillyer Egleston (1822–1912), the second chief of the Division of Forestry in the Department of Agriculture. But then neither were his contemporaries. Much of their ire was generated by what they perceived to be the less-than-ethical circumstances of

his hiring: in 1883, Egleston was appointed to his post when Agricultural Commissioner George P. Loring demoted the agency's first head, Franklin B. Hough, a demotion that seemed petty, personal, and political.

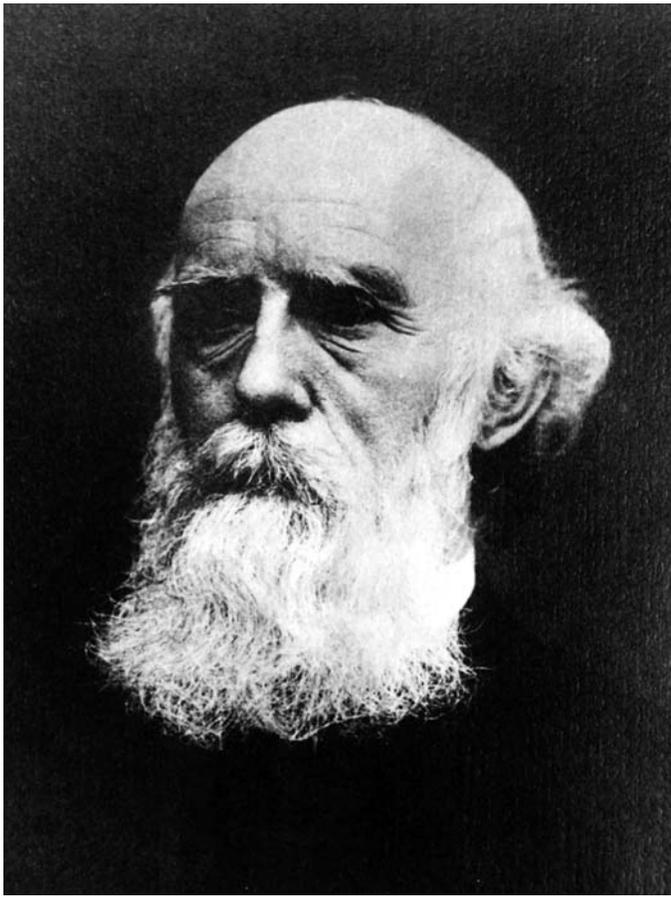
Author of a massive, multi-volume *Report on Forestry* (1876–1884), and a tireless promoter of federal forestry, Hough had initiated, through the American Society for the Advancement of Science, the submission of an 1873 memorial to President Ulysses Grant urging the creation of forest reservations in the west. From that small act grew the impetus for the creation of a federal bureau; in 1876 Hough was hired as the U.S. Agriculture Department's first forest officer, and four years later the Division of Forestry was formally created. No one, in short, had been more closely identified with governmental forestry initiatives than Hough.

Commissioner Loring could have cared less about Hough's qualifications and accomplishments, or so one might judge from the fact that Egleston had amassed nothing like his predecessor's resume. After graduating from Yale in 1840, Egleston had remained in New Haven to secure his degree from the Divinity School in 1844, which launched his successful ministerial career. For the next 25 years, he served congregations in Ellington, Connecticut; Brooklyn; Chicago; Madison, Wisconsin; and, finally, Stockbridge, Massachusetts (where he was called to the church once ministered

to by Jonathan Edwards). Although he moved much, his organizational roots went deep. In the 1850s he had helped found the American Congregational Union and the Chicago Theological Seminary, and was an editor of the *Congregational Herald*, the denomination's major newspaper. In 1870, after teaching at Williams College for a year, Egleston opened a private school in Williamstown, Massachusetts. The clergyman-teacher even looked the part: his full, bushy eyebrows, deep-set eyes, and strong nose, framed by a full white moustache and beard, bespoke Egleston's learned engagement and professorial mien.

But he was not schooled in the virtue of trees until after the Civil War. Living in the Taconic Mountains in far northwest Massachusetts, Egleston could not fail to observe that Williamstown, and farming communities like it, battered as they were by wartime loss of life, were shrinking further as young men and women left the New England countryside for industrial cities, near and far: Springfield, Hartford, and New Haven, like Boston, Providence, and New York, were magnets for youth fleeing cramped, small-town life in search of better work, wider prospects, and brighter lights. Like others of his era, Egleston worried about the Industrial Revolution's influence on landscape and demography; like them, he too came to believe that arboriculture—tree-planting—might help stem the migratory tide.

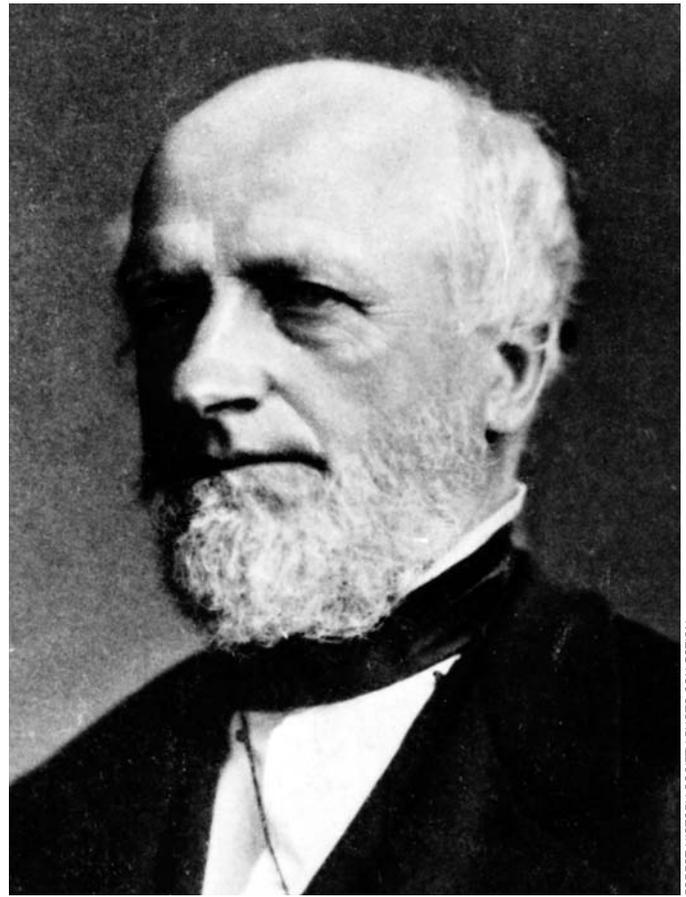
BY CHAR MILLER



Nathaniel Egleston, chief of the Division of Forestry from 1883–86. His tenure at the division got off to shaky start and remained that way throughout.

More beautiful townscapes, he reasoned, would enable the young better to resist the siren call of modernity, a conviction he sketched out in his first major work on what would become a consuming subject: *The Home and its Surroundings, or, Villages and Village Life*, with hints for their improvement (1878). For Egleston and his peers there was no better tree than the stately elm to anchor those who might drift away. As Thomas J. Campanella has demonstrated in *Republic of Shade: New England and the American Elm* (2003), innumerable late-nineteenth-century provincial hill towns and valley communities—as well as urban behemoths—launched an elm-planting frenzy, which, at its peak, topped 25 million seedlings; from Williamstown to New Haven (which claimed the title, “Elm City”), Sacramento to Buffalo to Keene, New Hampshire (another “Elm City” claimant), *Ulmus americana* became America’s tree. Yet for all its national appeal, its distinctive wine-glass shape was especially associated with New England, becoming, in Campanella’s words, “an essential feature in the commodified image of a rural Yankee town.”¹

The tree was a commodity, Egleston felt certain, that could be and should be transplanted across the American West, regardless of climate, rainfall, or soil. In *Handbook of tree-planting* (1884), he asserted that “tree planting is almost the first necessity of life” on the Great Plains; without an arboreal domestication of its vastness, “barbarism” would bloom in Kansas and the Dakotas. Egleston was not alone in preaching arboriculture’s social virtues and civilizing consequences, but his paeans to a well-wooded



Franklin Hough, whom Egleston replaced as Division of Forestry chief under dubious circumstances. Neither man had any formal training in forestry but both helped popularize the idea of introducing it in the United States.

country life, and the palpable need to reinvigorate it, when linked to his staunch advocacy of Arbor Day—he was in contact with J. Sterling Morton, the salt magnate who did so much to advance the national celebration of a day of trees—gave him an ever-larger audience in the late 1870s and early 1880s.

“What We Owe to the Trees” (1882), an edited version of which is reprinted below, was one of a series of essays he published in major periodicals and in pamphlet form. Each reflects

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the heavy influence of George Perkins Marsh on Egleston’s new-found faith in the necessity for and capacity of human stewardship to restore cut-over and abused lands; taken together, they suggest that his signal role in the emerging forestry movement



New Haven, Connecticut, at the turn of the last century. The city was one of many that embraced tree planting on a large scale and took to calling itself “Elm City.”

was as a popularizer of Marsh’s compelling ethic.²

Such work made Egleston popular, too, so much so that he represented Massachusetts at the 1882 American Forest Congress, at which he was tapped to be one of the vice presidents of the American Forestry Association. When the next year Agriculture Commissioner Loring elevated Egleston to head the national government’s forestry division, the 61-year-old retired minister seemed to have gained a new, if secular, pulpit.

His tenure at the division was shaky from the start, not least due to the manner of his ascension. Loring’s dislike of the previous chief, Franklin Hough, had led him to push Egleston into the top position, and charges swirled that the good reverend had benefited from a bit of bureaucratic corruption. These contemporary allegations entered the historical record when a future chief forester, Gifford Pinchot, wrote witheringly in *Breaking New Ground* that Egleston was “one of those failures in life whom the spoils system is constantly catapulting into responsible positions.”³ Pinchot’s retrospective slam was unfair in this respect: Egleston had had a distinguished career in the clergy; and he had had precisely as much scientific training in forestry as had Hough—none. But he was so unfavorably compared to Hough because of his lax administrative efforts and vacillating personality.⁴

Consider what transpired after the 1884 presidential election. Grover Cleveland’s defeat of Republican James G. Blaine triggered a chain of events within the Department of Agriculture

that cast Egleston’s failings in sharp relief. Commissioner Loring, a Republican appointee, was replaced by Norman J. Colman, who froze out the forestry chief. Fretting because he could not secure an appointment with his new supervisor, Egleston felt so intimidated that he could not even formulate an agenda for his agency, so unclear was he about his status in the new administration. It would have helped had he asked the commissioner about his future, but he feared to do so; and when Colman finally requested his resignation, and he complied, Colman shocked him by returning it. The new commissioner no doubt figured that he could easily control the manipulable Egleston, a strategy he tested when, without consultation, he hired two agents for the division; Egleston failed to protest. His inaction was part of crippling pattern, historian Harold K. Steen has concluded: “Befuddled by indecision and uncertainty, Egleston meekly waited to be fired. He lingered in anguished limbo for three years until relieved by a professional forester, Bernard E. Fernow, in 1886.”⁵

That humiliation notwithstanding, Egleston remained in the division until Fernow himself retired in 1898. That he preferred to be a subordinate to a supervisor who paid him scant attention, that he reconciled himself to being marginalized in an office over which he once had had jurisdiction, speaks to Egleston’s troubled psychological state.

It also illustrates the larger transition then underway in the American forestry movement. In the mid-nineteenth century, all

forestry reformers had been self-taught, even the transcendent George Perkins Marsh, whose *Man and Nature* (1864) would define the conservationist ethos for subsequent generations. Ditto for Franklin Hough. A physician and statistician, he had come to forestry through observation tempered by assiduous research; few in the United States had read as deeply in county documents, census records, and federal government reports to ascertain trends in timber harvest and lumber production, and track them across time and space. When in 1875 Hough presented a well-received paper entitled “On the Duty of Governments in the Preservation of Forests” to the American Association for the Advancement of Science, an address that prompted Congress to fund a position for him in Agriculture, he had done his homework.⁶

Like Marsh and Eggleston, however, Hough had no degree in forestry, and, by the late nineteenth century, the world was beginning to belong to the credentialed. That was why the Prussian-born Fernow, thoroughly educated in a German forest academy, represented the future. Even more so did Gifford Pinchot. Following his studies at the French national forestry school in Nancy, he returned to the United States and proclaimed himself to be “the first scientifically trained American forester,” a description he wielded to separate himself from his all predecessors, professional and non-professional alike.

Implicit in his declaration is also a clue why Pinchot was so dismissive of Eggleston’s term in office, which he scathingly described as three years of “innocuous desuetude.” Lacking the

proper education, and devoid of post-graduate training, the one-time minister had contributed little to what Pinchot assumed was the grand project for his generation of foresters—the creation of a federal agency of experts who would manage millions of acres of public forests. “In spite of all the efforts of all the [early] lovers of the forest,” Pinchot later reflected, “in spite of the meetings and the writings and the attempted legislation,” they had failed to bring “a single acre of forest under forest management anywhere in the United States.”⁷ In 1898, as Pinchot stepped into Fernow’s old office as the fourth head of federal forestry, he expected to do better.

One mark of Pinchot’s confidence was his request that James Wilson, Secretary of Agriculture, change his job title. Because the brash, 33-year-old forester believed that “the time of the old Division was up,” and because he wanted to distinguish himself from those whom he had succeeded, he asked not to be called chief, for in “Washington chiefs of divisions were thick as leaves in Vallombrosa.” The Secretary acceded to his request to break with tradition, and henceforth Pinchot bore a unique title commensurate with the professionalization he embodied: Forester. Two years later he reinforced this assertion through the establishment of the Society of American Foresters (1900), whose voting membership—unlike the inclusive American Forestry Association (1875)—was restricted to “professional foresters of achievement” who gathered to “further the cause of forestry.” There could be no mistaking Pinchot’s purpose: to make the amateurs history.⁸

“WHAT WE OWE TO THE TREES”⁹

BY NATHANIEL H. EGLESTON, 1882

The trees are man’s best friends; but man has treated them as his enemies. The history of our race may be said to be the history of warfare upon the tree world. But while man has seemed to be the victor, his victories have brought upon him inevitable disasters.

In more civilized periods and places the poetic sentiment has found sweet companionship in the trees, and peopled the groves with dryads and hamadryads, while taste and refinement have planted them near the household dwelling-place, and found pleasure in their beauty and shade. The general feeling and course of action, however, have been in an opposite direction. The trees have not only been regarded by man as his lawful plunder, but he has even seemed to find a positive pleasure in their destruction. He has attached no value to them, except for the satisfaction of his physical wants, to furnish him fuel and shelter and the material of the industrial arts, and in satisfying these wants as they have arisen he has been reckless of the future. The supply has seemed to be abundant, and the future has been left to take care of itself.

In our own country we have gone to the forest in a kind of freebooter style, cutting and burning more than we could cut, acting for the most part as though all the while in a frolic or a fight, until now at length, after a century or two of this sort of work, we are waking up to the facts that our once boundless

woods are disappearing, and that we are likely to suffer no little less thereby. But it is only the few who seem now to have any adequate sense of our condition as effected by the threatened loss of trees. In a recent publication, issued by authority of one of our Western States for the express purpose of attracting settlers from European countries, the statistics of its great lumber production are elaborately set forth, accompanied by the assurance that the present enormous consumption of trees for this purpose may be continued ten or fifteen years longer before the forest will be destroyed. The cool unconcern in regard to the future shown in this is very noticeable. “After us, the deluge.” A corresponding feeling, though working on a much smaller scale, is seen in an advertisement, and of a class often appearing in our older States, “Brace up, Young Man. You have lived on your parents long enough. Buy this farm, cut off the wood, haul it to the market, get your money for it, and pay for the farm... The owner estimates there will be 500 cords of market wood.” And so, all over the country, on the large scale and on the small, the axe is laid at the roots of the trees, and our forests are disappearing. It is estimated that 8,000,000 acres of forest land are cleared every year, and that in the ten years previous to 1870, 12,000,000 acres were burned over simply to clear the land...

But, after all, we are only following in this respect the course of nations which has gone before us. The nations of Europe and

Asia have been as reckless in their destruction of the forests as we have been, and by that recklessness have brought upon themselves immeasurable evils, and upon the land itself barrenness and desolation. The face of the earth in many instances has been changed, as the result of the destruction of the forests, from a condition of fertility and abundance to that of a desert. Such are the relations of the trees to the currents of the air, to temperature, to moisture, and to the soil itself, that without them the earth refuses to be a fitting place for the inhabitancy of man.

Never was any region of the earth better fitted by climate, soil, and natural adjustments of land and water to each other, for the abode of man in highest state of civilization, and in the possession of the greatest power, intelligence, and happiness—in short, with the promise of the greatest and most permanent prosperity...than that which borders the Mediterranean, and which stretches through Europe from the Straits of Gibraltar on the west to ancient Phoenicia on the east, and back through Africa to the Atlantic...These lands were once rich and fertile, the very garden of earth. Their vales and meadows yielded every fruit abundantly. Their hills and mountain-sides were green with luxuriant forests. Now what are they? The mere wrecks of their former greatness, like stranded ships upon the shore of time for men to gaze at and take warning. Mr. George P. Marsh, one of our most careful and competent authorities, puts the case even more strongly, and few will be disposed to controvert his statements. He says: "There are parts of Asia Minor, of Northern Africa, of Greece, and even of Alpine Europe where causes set in action by man have brought the face of the earth to a desolation as complete as that of the moon, and yet they are known to have been once covered with luxuriant woods, verdant pastures, and fertile meadows, and a dense population formerly inhabited those now lonely districts. The fairest and fruitfulness provinces of the Roman Empire, once endowed with the greatest superiority of soil, climate, and position, are completely exhausted of their fertility, or so diminished in their productiveness as, with the exception of a few favored cases that have escaped the general ruin, to be no longer capable of affording sustenance to civilized man. If to this realm of desolation we add the now wasted and solitary soils of Persia and the remoter East, that once fed their millions with milk and honey, we shall see that a territory larger than all Europe, the abundance of which sustained in by-gone centuries a population scarcely inferior to that of the whole Christian world at the present day, has been entirely withdrawn from human use or, at best, is inhabited by tribes too few, poor, and uncultivated to contribute anything to the general moral or material interest of mankind. The destructive changes occasioned by the agency of man upon the flanks of the Alps, the Apennines, the Pyrenees, and other mountain ranges of Central and Southern Europe, and the progress of physical deterioration, have become so rapid that in some localities a single generation has witnessed the beginning and the end of the melancholy revolution."

The destructive changes of which Mr. Marsh speaks so strongly have been occasioned mainly by the removal of the forest, the natural friends and protectors of man and of the earth. The harmonies of nature were thus broken up, and disturbance and destruction came as a matter of course. Undisturbed by man, the woods, would maintain themselves. The tree, falling in the forest by natural decay or from any other cause, would soon have its place filled by another, and so the succession of vegetable life

would be maintained from age to age. But when the trees are swept off in masses, where by fire or by the axe...the places thus denuded of trees often remain so. And when in any country large portions of its area are thus from any cause laid bare, it requires but a little consideration of the subject to see that such a changed condition of the surface may bring about other changes. The careful observer will see that natural causes not only produce great and even unexpected results in the field of nature, but that they are productive also of great political and moral results. Within the memory of the present generation a single article of commerce of vegetable growth [tobacco], which England is obliged to import from another country, has determined her system of trade with that country, and in a measure shaped the policy of her government—has ruled the rulers themselves.

Looked at in the economic character alone, the importance of the forests to any civilized country, and their bearing upon its welfare and prosperity, will be seen if we give the subject only a little attention...The census of 1870 gives as the reported product of lumber in the United States 12,755,543 thousand feet. This does not include laths or shingles. The same census reports 63,928 establishments engaged in the manufacture of articles made entirely of wood, employing 393,388 persons, and using materials worth \$309,921,403 annually, besides 109,512 establishments in which wood is an important part of the material used, as in the manufacture of carriages, furniture, sewing-machines, agricultural implements, bridges, etc., employing 709,915 persons, and using materials worth \$488,530,844. The statistics of a single State—Michigan—gives us for the year 1873 these remarkable figures: 3,231,470,804 feet of lumber sawed, at a valuation of \$39,850,156 to which are to be added more than \$4,000,000 as the value of shingles, headings, staves, hoops, etc.

Such figures show us the value of the forests in connection with the traffic and various industries which occupy man, and what a serious loss to a nation in this aspect the loss of its forest must be.

And then the importance of the forests as a supply of fuel, and so for the comfort of man and the prosecution of various industries, is to be considered. We must not forget that the coal, which is simply the surplus forests of former ages stored up and provided for our use, will some time be exhausted, and there is no more coal to be formed. Ultimately, then, so far as we can now see, the world must go back to the forests for its fuel for the purpose of domestic warmth, and the needs of the various arts and manufactures. Already England is calculating with alarm the date, not very distant, when her coal mines will be exhausted, and her fuel must be to a great extent imported from other countries.

Looked at therefore, in this aspect of the case, we see that a country cannot continue to be populous nor highly civilized when its forests, or their equivalent in coal, are lost to it...Humboldt is reported as saying: "Men in all climates seem to bring upon future generations two calamities at once—a want of fuel and scarcity of water." The two come alike from the destruction of the forest, as a little consideration will show.

The importance of water for successful agricultural operations has always been understood. It is only within a comparatively recent period, however, that the relations of the forests to the water supply and its distribution have been ascertained, and they are not fully understood even now. Enough is known, nevertheless, to warrant some very important conclusions. It is well established that the forest, except in winter, is cooler than the

open ground. There will naturally, therefore, be more condensation and precipitation of the moisture of the atmosphere in a wooded region than in one destitute of trees. The lower temperature of the woods will also make trees, and tend to precipitate the moisture of the higher air. Then, also, without making anything of a somewhat extended popular belief that the forest, especially when situated upon hills and mountains, draw the clouds and the rain, we can see the elevated forests would as an impediment to passing clouds, and by their very obstruction tend to condense their moisture and cause its precipitation. This effect of the forests will not be limited to their own area, but extend more or less to the open ground beyond them causing the rain to fall upon them for a considerable distance when but for the vicinity of the forest they might not have been touched by it...Facts like these, gathered from all parts of the world, are abundant, and would seem to leave no doubt that the forest increase the rain-fall in their immediate vicinity, and are fountains of moisture for the atmosphere and the lands about them.

But the forests...are also the fountains whence issue the streams which flow down the hill sides and along the valleys, furnishing those supplies of water so necessary for man and beast, carrying moisture through the fields and increasing their fertility, supplying power to man by which to drive all the mechanisms of industry and invention, and, as they swell into rivers, bearing on their bosoms to the ocean and to distant parts the products of a nation's harvest fields and factories. Left to themselves, the forests would thus bless the lands continually, and be abidingly man's best friends. It is a matter of a common observation, however, that water-courses have disappeared or been greatly lessened in volume as the forests in their vicinity have been destroyed. Few persons can have grown to maturity in the open country without having had occasion to remark the disappearance of streams with which in their childhood days they were familiar. The pond or the brook where they formerly disported themselves has gone from sight, as have the neighboring woods where they rambled in search of nuts and game....And as this springs and rivulets and brooks have vanished for dwindled in volume, so have the larger water-courses into which they flowed, and which they fed, been lessened in size. They have furnished diminished supplies to the farmer for the irrigation of his fields, and lessened power to the wheels of the manufacturer...

But an evil as important as the diminution of the streams is the irregularity of their flow, which is also the result of the removal of the forest. The fall of the leaves from year to year, and their accumulation in the forest, create there a soft spongy soil, or humus, which catches the rain as it falls from the clouds, or the water of the dissolving snows, and instead of allowing it to flow off at once, retains it as in a great reservoir, from which it oozes away gradually through a thousand springs and rivulets, which find their way down the hill-sides and slopes into the valleys, and there unite in larger streams, which are kept in steady volume by the regular flow of the many head springs above. Thus the forests become great store-houses of power and fertility for man, upon which he can safely count in all his pursuits and occupations which are at all dependent upon the flow of water. But let the forest be swept off by the recklessness of the cupidity of man, and the first effect, besides lessening the rain-fall, is to dry up this humus, as it is exposed to the sun and the winds. As it is thus dried, it is soon carried away by both wind and rain. The

spongy surface being thus removed, the falling rains have nothing to detain them. They rush at once down the hill-sides, filling the beds of brooks and rivers, overflowing the adjacent fields, and even sweeping away houses, crops, factories, bridges, and not infrequently destroying life. In the intervals between the rains the streams are low, there being no great forest reservoirs to feed them as before. The mill-wheels can no longer turn with full force, the cattle miss their wonted springs, the crops suffer for lack of water, busy industries languish, and suffering of various kinds ensues....

Of forestry as an art or science we know very little in this country. Even the word is new to us. With our almost unlimited domain, the single State of Texas exceeding in area some of the larger kingdoms of Europe, we have had little thought of there being any need of care for our forests. Now and then attention has been turned to the need of preserving our ship timber, and to the fact that our pine woods are being consumed very rapidly in some portions of the country, and that this is threatening as with a scarcity of desirable lumber, and high prices for it in the near future. But we have refused to take alarm, or use measures to prevent the impending evil. The belief seems almost to be born with every American that his country is the greatest in the world, and its supplies of every kind inexhaustible. Prophets of danger are not listened to. We give ear to those only who prophesy "smooth things." More recently, however, the subject has been forcing itself upon our notice. The history of the destruction of forests in the Old World, and the disastrous effects which have followed, the facts which we have already cited, have engaged the attention of observing men among us. One and another have written more or less largely upon the subject.

The work of Mr. George P. Marsh entitled *Man and Nature*, which is received as an authority in Europe, where the literature of forestry forms a considerable library of itself, and includes the works of some of the most scientific and nicest observers in the world, presented the subject to many in a new and very interesting light. Some efforts have been made within the last few years to secure Congressional action for the protection of what forests yet remain in the public possession. As the result of a memorial from the American Association for the Advancement of Science in 1876, the Commissioner of Agriculture was directed to appoint some competent person to inquire and report concerning our forest products, the means of preserving and renewing forests, the efforts of forests upon climate, and the methods that have been adopted in our countries with success in the management of them.¹⁰ The report made under this appointment has been recently published in part, and embodies a great number of information upon the subject of which it treats....¹¹ [I]t shows the general unconcern in relation to the matter that the Secretary of the Interior [Carl Schurz], who, with an intelligent knowledge of the importance of the subject, and a familiarity with the European methods of treatment, would be glad to take efficient measures for the preservation of the national forests, is unable to procure from Congress the appropriations necessary for the prosecution of those who commit depredations upon the timber lands belonging to the government, and who are threatening them with irreparable injury.

Ignore the matter as we may, shut our eyes to the facts as we please, we are rapidly approaching the condition of things in Europe which has called for the interposition of governmental

authority for the preservation of the very soil itself from hopeless barrenness, and to protect great national industries from permanent injury....

The work before us, therefore, is but just begun. With the utmost that we are likely to do, or can do now, we shall inevitably suffer more than we yet have done before the evils of our present condition can be remedied. Our streams will flow with still less volume than they now do. Floods and droughts more distressing and destructive than those which have marked the last twenty-five years will yet make us their victims. Tornadoes and sweeping blasts, coming over vast regions where the course is unimpeded by the friendly and protecting trees, will be scourges still of man and beast. Nature bears long with those who wrong her. She is patient under abuse. But when abuse has gone too far, when the time of reckoning finally comes, she is equally slow to be appeased and to turn away her wrath. We must bear her resentments for a time, do what we will. But if we are ready to take lessons from the nations that have gone before us, we may escape most of the bitter sufferings which have been their lot. We can do that which will put a period to the evil results of our own misconduct....

How far the general or State government should be looked to for aid in protecting the existing forests, or in planting where there are none, is a question which will be answered differently by different persons. The magnitude of the interests concerned is such, and their relation to the welfare of the country so direct and important, that, in itself considered, the legislative power might be unhesitatingly invoked. But it is not the policy of the State or national governments to be the owners and managers of great tracts of land, like the European governments. Besides, there would be great danger of mismanagement if the government authority were directly engaged. But so long as the nation or the separate States are holders of public lands, they may well be expected to protect them from wanton destruction. And it is a sad indication of our ignorance of the true value of the trees, and our consequent indifference, that there should have been any hesitation on the part of Congress to protect by all its power the timber lands of the West, scanty in amount at the best, from the thieves and marauders who are threatening by their course to convert vast tracts of land into a desert, and bring upon that portion of our country irreparable evils.

The national government has done something in the right direction by the passage of an act, a few years ago, by which public lands were made an outright gift to the settler on condition of his planting a certain portion of it with trees, and cultivating them for a definite period [Timber Culture Act of 1873]. It has been thought by some that a Bureau of Forestry might be established in connection with the Department of the Interior, to which might be committed the care of the so-called "timber lands" belonging to the government, and of the great parks of the Rocky Mountain region, and which might do good service in collecting facts relating to the growth and uses of trees, disseminating them throughout the country. Others fear the strong tendency of all bureaus in our country to fall into the hands of mere politicians, and so to fail of accomplishing any good. Possibly the end desired may be attained in connection with the Smithsonian Institution, aided as occasion may demand by Congressional co-operation. Possibly there may grow up by-and-by in this way a central national arboretum, in addition to those established as we have suggested in the several States, and perhaps a School of Forestry, or something

answering the purpose of such. But for the present, it would seem best to rely upon what may be done within the narrower circle of State action, whether it be of the local government or of the voluntary societies and scientific associations. These organizations will be comparatively safe from political influence, while they will be likely to be more effective as they are closer to the various theatres of action, and will understand more fully the special needs of their particular localities. □

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NOTES

1. Thomas J. Campenella, *Republic of Shade: New England and the American Elm* (New Haven: Yale University Press, 2003), 92–98.
2. Nathaniel H. Egleston, *Handbook of tree-planting; or, Why to plant, where to plant, what to plant, how to plant* (New York: D. Appleton, 1884), 1–26; Blake Gumprecht, "Transforming the Prairie: Early Tree Planting in an Oklahoma Town," *Historical Geography*, 29: 2001, 116–134; Nathaniel H. Egleston, "What We Owe to the Trees," *Harper's New Monthly Magazine*, 64(383): 675–687; Nathaniel H. Egleston, *Arbor Day: its history and observance*, (Washington, D.C.: GPO, 1896).
3. Gifford Pinchot, *Breaking New Ground*, 4th. ed. (Washington, D.C.: Island Press, 1998), 135.
4. Andrew Denny Rodgers, III, *Bernhard Eduard Fernow: A Story of North American Forestry*, rep. ed. (Durham: Forest History Society, 1991), 86, relates Hough's perfunctory dismissal: "In May 1883...I was sent home," he confided to a friend, and kept "doing what I was told...realizing the utter impossibility of doing anything to please the Commissioner [Loring]—or preparing anything that he would accept." Hough died two years later.
5. Harold K. Steen, *The U.S. Forest Service: A History*, Centennial Edition (Durham, N.C. and Seattle: Forest History Society and University of Washington Press, 2004), 20–21.
6. David Lowenthal, *George Perkins Marsh: Prophet of Conservation* (Seattle: University of Washington Press, 2000), 428–29; Steen, *U.S. Forest Service*, 9–14.
7. Pinchot, *Breaking New Ground*, 29.
8. Pinchot, *Breaking New Ground*, 133–37, 150; however barred from the profession of forestry, the amateurs' contributions to the conservation movement was (and remains) critical. Marsh and his contemporaries, David Lowenthal has reminded us, brought to the public debates over the future of America's forests a wealth of experience and breadth of knowledge that transcended narrow academic specialization. "Marsh sought to breach not just the walls between academic disciplines, but also the boundaries that segregated academe from active life. The popularizing of science, some 130 years ago, led Marsh to hope that 'the world of the mind, like the world of politics, is becoming a democratic republic.'" Marsh's insight, Lowenthal concludes, remains relevant, for in "our yet more specialized present the need for generalists is greater still. In no realm is the tyranny of the expert more socially obnoxious than in environmental management"; Lowenthal, *George Perkins Marsh*, 428–29.
9. *Harper's New Monthly Magazine* 64(383) April 1882: 675–687.
10. Franklin Hough was appointed the first federal forest officer in the Department of Agriculture, with an appropriation of a meager \$2000.
11. Franklin B. Hough, *Report on Forestry* (Washington, D.C.: GPO, 1878–1884).