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.

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istory 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
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 paens to a well-wooded

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 the heavy influence of George Perkins Marsh on Egleston’s newfound 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
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 not withstanding, 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 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
fight, until now at length, after a century or two of this sort of acting for the most part as though all the while in a frolic or a freebooter style, cutting and burning more than we could cut, care of itself. Has seemed to be abundant, and the future has been left to take they have arisen he has been reckless of the future. The supply material of the industrial arts, and in satisfying these wants as 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 inhabitation 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 know 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 remotest 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 Apenines, 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 destructive 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 conden-
sation and precipitation of the moisture of the atmosphere in a
wooded region than in one destitute of trees. The lower tem-
perature of the woods will also make trees, and tend to precipi-
tate 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 abun-
dant, and would seem to leave no doubt that the forest increase
the rain-fall in their immediate vicinity, and are fountains of mois-
ture for the atmosphere and the lands about them.

But the forests…are also the fountains whence issue the
streams which flow down the hil-sides and along the valleys, fur-
nishing those supplies of water so necessary for man and beast,
carrying moisture through the fields and increasing their ferti-
licity, 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, how-
ever, that water-courses have disappeared or been greatly less-
ened 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 them-
selves 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 dimin-
ished 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 val-
leys, 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 occu-
pations 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 noth-
ing to detain them. They rush at once down the hill-sides, filling
the beds of brooks and rivers, overflowing the adjacent fields,
enven 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 proph-
esy “smooth things.” More recently, however, the subject has
been forcing itself upon our notice. The history of the destruc-
tion 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 interest-
ing 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 for-
est 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.

The report made under this appointment has been recently
published in part, and embodies a great number of information
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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…. It 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 belong-
ing 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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