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# French Lessons: F.P. Baker, American Forestry, and the 1878 Paris Universal Exposition

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*Although he never became a forester, F. P. Baker did much to advance the profession's cause. Its potential became clear to him while serving as a U.S. Commissioner to the 1878 Paris Exposition, during which he reported on European forestry, its scientific methods and political meaning. Returning home, he was inspired to advance forestry in America.*

# FRENCH LESSONS

**F. P. BAKER, AMERICAN FORESTRY,  
AND THE 1878 PARIS UNIVERSAL EXPOSITION**

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**B**y a stroke of good fortune, Floyd Perry Baker, a Kansan fascinated by trees, was appointed an “Additional U.S. Commissioner” to the 1878 Paris Universal Exposition, there to report on European innovations in forestry. He had not been the government’s first choice: the honor of President Rutherford B.

Hayes’ invitation went initially to Alfred Gray, Secretary of the Kansas Board of Agriculture. “But he declined the appointment, as the statistical year had not commenced, and plans for the yearly work [of the Board] were not sufficiently matured or developed to be entrusted to others. He considered this work to be of paramount importance to Kansas, and he deemed it impossible for him to continue the same here, and also devote sufficient time and thought to the duties of such commissioner.” However garrulous its description, Gray’s touching devotion to duty opened the way for Baker, also active in the Kansas society, to serve his country. His selection as a commissioner makes as much sense as any other would have done, for his limited knowledge of forestry was on a par with most his fellow Americans. But Paris would open Baker’s eyes, impelling him to become one of forestry’s most energetic promoters in the U.S. in the late nineteenth century.<sup>1</sup>

Born on November 16, 1820, in Fort Ann, New York, Baker led a peripatetic life. When he was 18, after ten years serving as hired labor on a neighbor’s farm, the largely self-educated Baker

moved to Hamburg, New York, to run a school; six months later he was in Michigan operating a blacksmith shop, and a year later he had returned to New York, working as an agent on the Champlain Canal. By the mid-1840s, he and his first wife and son were farming in Racine, Wisconsin. But three years later, after remarrying in the wake of his first wife’s death, and with the subsequent demise of his son, Baker once more was on the move—this time to Hawaii, arriving there in June 1853. Almost immediately, he was appointed crown attorney and clerk of the islands’ district court. His meteoric rise is not shocking: the islands’ politics were notoriously mercurial, and fresh faces such as Baker often were tapped for important posts in part because they were unknowns. Hawaii was especially tumultuous that June due to a killer smallpox epidemic then raging. No doubt that was why the island kingdom, despite Baker’s new-won clout, was without enduring satisfaction: “tiring of his semi-barbarous surroundings,” in the words of Kansas historian George Cutler, he left Hawaii in January 1855. He and his wife settled for five years in Missouri, and then pulled up stakes once more, moving to

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**BY CHAR MILLER**



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The French pavilion of forestry at 1878 Paris Universal Exposition was also known as “The Chalet.” F. P. Baker noted that the exhibition was not confined entirely to the products and processes of forestry. It also contained birds, quadrupeds, and insects, and housed a model of mountain forestry.

Kansas in 1860. There Baker found the home he seemed to have been seeking for the preceding twenty years.<sup>2</sup>

Throwing himself into the territory’s public affairs, the farmer-teacher-attorney found himself lured to journalism, and by 1863 he was the publisher of the *Kansas State Record*. After seven years of editing the Topeka paper—followed by a three-year hiatus in Denison, Texas, as editor of its daily—he assumed control of the *Topeka Commonwealth*. As its editor-in-chief and publisher, he used its pages to influence Republican Party politics and promote its causes and to become an active force in the Kansas Editors and Publishers Association; through the latter organization, he helped organize the Kansas State Historical Society (1875). A busy and engaged man, Baker’s was a life in full motion.

Maybe that was why he was attracted to a species so rooted as trees. Whatever the source of his forest activism, it was undoubtedly of a piece from his work for the Kansas Board of Agriculture, and public enough to have made him an apparently logical choice to serve on the U.S. Commission to the Paris Universal Exposition, substituting for the over-worked Alfred Gray. Surely it did not hurt that Baker had impeccable Republican Party credentials and thus

would have been politically acceptable to the Hayes administration. With his ticket punched, the well-connected and well-traveled Kansan embarked on a career-altering trip.

The official reason for the U.S. presence at and contribution to the Paris Exposition was to change the world’s impression of American commercial prowess. As President Hayes would later observe in his 1878 Annual Message to Congress: “The exhibition of the products of American industry was creditable and gratifying in scope and character.” He anticipated, moreover, that “[o]ur participation in this international competition for the favor and the trade of the world may be expected to produce useful and important results—in promoting intercourse, friendship, and commerce with other nations.” But Baker’s report on forestry, however, made it clear that Americans had much to learn from their European contemporaries; we were students—they were teachers.<sup>3</sup>

All Baker knew about the potential for the scientific management of forests in advance of his voyage to France had been what he had read. But he had read George Perkins Marsh’s *Man and Nature* (1864), and that pathbreaking book would frame his reactions to the exposition. It would also shape his editorial intent,



A French raisinier (below left) scraping the resin off the “face” of a maritime pine in the Landes region of southwestern France, around 1910. The stands in both photos were first tapped around the time Baker visited the Paris expo in 1878. French forest conservation practices benefited its once moribund turpentine industry. Researchers taught turpentiners how to draw from the same tree for around eighty years before it gave out. In contrast, Americans exhausted a pine tree in less than twenty years.

which, as he put it in his subsequent report, a segment of which is reproduced below, was to “impress upon the American people of the United States the vital importance of the subject of forestry.”<sup>4</sup>

The magnificent French forestry pavilion at the fair, dubbed “The Chalet,” was particularly impressive. Built “entirely of woods grown in France, at least 200 varieties being used in its construction,” it contained a stunning model of mountain forestry. Trudging up a “zigzag track” carved into a fabricated hillside were workers “dressed in the peculiar costume of the country;” on their backs were heavy sleds. When they reached the peak, they loaded logs on the sleds, and sent them down a “timber slide,” which curved past charming representations of “the natural features of mountain scenery, the yawning ravines and plunging water-courses....” This captivating display, and those demonstrating French investment in reforestation and afforestation, convinced Baker of the great benefits derived from “French skill and industry;” through it, “every foot of earth” was “preserved and patiently and laboriously cultivated.”<sup>5</sup>

Yet whether improvident Americans could replicate French conservation was unclear. After all, France law granted considerable governmental jurisdiction over public forests, communal

woods, and private woodlots; its administrative structures, rigorous training for foresters in the national forest schools, and stiff penalties associated with timber poaching, amazed the American commissioner. As Baker's domestic migrations must have revealed, having established residences from upstate New York to Michigan, Wisconsin and Missouri to Kansas (and even Hawaii), his fellow citizens had been "famous destroyers of the forest." As he noted in his report: "It is a significant fact that the American ax takes precedence in the markets in the world, and that the American chopper is the most expert axman." Driven to rid the earth of its arboreal splendor, he wrote, the "Western pioneer has passed his life in the toilsome labor of chopping and burning trees which his descendants would gladly replace."<sup>6</sup>

But would subsequent generations be able to regenerate once well-wooded lands? Absent a strong central state, and without cultural support for conservation, what could Americans "do to preserve and restore our forests, to repair the waste of the past, and provide for the needs of the future?" While acknowledging that "a growing sentiment has sprung up in favor of the preservation and cultivation of trees both for ornament and use," Baker was not yet convinced the public would support the level of governmental "interference" that gave European foresters such authority. He doubted, moreover, that legislative mandates would be effective: "few statutes have been more persistently violated" than those prohibiting "cutting timber on government land."<sup>7</sup>

It is odd therefore that he put his faith in the Timber Culture Act of 1873, one of the most consistently ignored of federal laws. Yet Baker felt that the act could have a beneficial impact if faithfully enforced, for it promoted forestry through "substantial inducements for the cultivation of trees," and becoming thereby "the patron and encourager of forestry, and thus fosters a popular sentiment in favor of tree-growing." What would not work, he concluded after reading through continental forestry codes, was the replication in the U.S. of "a host of minute regulations, such as are

suiited to the genius of European countries, but [which] would prove irksome and thus inoperative here." He had instead greater faith in the kind of small-town voluntarism on display during Arbor Day celebrations. "In one day in Topeka, the capital of Kansas, more was done toward beautifying the grounds belonging to the State, by the free and voluntary labors of its citizens, than had been done in years under the authority of the legislature and at the expense of several thousand dollars of the public money." Unlike the European monarchical states and statutes, "[w]ith us, the people are everything, the government very little."<sup>8</sup>

By the early 1880s, he had changed his mind, arguing for a much more robust governmental intervention in forestry matters. This shift in his perspective was the result of his two-year stint as a forestry agent for the USDA Division of Forestry, during which he published *Preliminary report on the forestry of the Mississippi Valley* (1883), work and writing that prepared him to deliver a key speech at the 1884 American Forest Congress. In it, he advocated the creation of a series of regulated federal forests in the Rocky Mountains to protect the headwaters of the Platte, Rio Grande, and Arkansas rivers. As for how to preserve and manage this vast landscape, he proposed the development of forestry schools and regional forest experiment stations, and the funding of federal surveys to establish the inventory and value of these timbered lands; he also called for protection against fire and illegal cutting, and the end to low-cost sales of wood harvested on public lands. Like George Perkins Marsh and Franklin Hough before him, Floyd P. Baker had concluded that the accelerating destruction of the nation's woods required a more aggressive governmental presence in western public-land management, much as the French had instituted over its woodlands. That conclusion opened the way for a subsequent cohort of professionally trained foresters to take up that argument, and, twenty years later, to realize Baker's dream with the establishment of the U.S. Forest Service and the national forest system.<sup>9</sup>

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## "REPORT ON FORESTRY"<sup>10</sup>

BY F. P. BAKER, 1878

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Doubtless an exhaustive, and possibly an interesting, report might be made of the features of the exhibition of forest products, implements of forestry, etc., made at Paris; but, in the understanding of the writer, such is not the object of these reports, but rather to lay before the people of the United States, in a concise form, the general information derived from an examination of the products and processes exhibited; to deal with causes rather than effects; and to give an idea of the systems by which, in European countries, under difficulties unknown in America, the science of forestry has been fostered, protected, and well nigh perfected, and the magnificent exhibition at Paris made a possibility.

Restricted thus to one view of the question, the reporter is further hampered by the reflection that already the whole subject has been ably treated by writers who have brought to bear upon it the resources of immense observation and profound scholarship. The labors of the Hon. George P. Marsh in his "Earth as

Modified by Human Action"; of the Hon. F. F. Hough in his reports to the Commissioner of Agriculture; and of that veteran in this department, Dr. John A. Warder, one of the Commissioners at the Vienna Exposition of 1873, to say nothing of scores of other writers, have left little to be said. If, under such circumstances, the present writer can bring down the history of forestry in Europe to a later period, can speak somewhat of hitherto unrecorded progress, and, what is far more important, impress upon the people of the United States the vital importance of the subject of forestry, he will have achieved his object, and have accomplished all that can be reasonably expected of him.

In this connection he may say that it is not so much the value of forest culture as its practicability upon which the people of the United States need information. The time has happily passed, it is to be hoped, when, throughout the United States, trees are considered encumbrances of the soil, to be got rid of by the most

wasteful and destructive methods possible. There is now as much anxiety felt for the reforestation of our bare hillsides as once was felt for stripping them of the last vestige of covering. Yet, when our people consider the area thus deforested, and in addition the vast prairies of Kansas and other Western States, themselves treeless, and creating in the course of settlement a demand for the destruction of countless acres of the fine forests of Wisconsin, Michigan, and Minnesota, the American, unacquainted with any system of forest culture, unaccustomed to any State or Federal legislation on the subject, is apt to exclaim, "Who is sufficient for these things?"

The object of this brief report will be to call the attention of American doubters to the ancient adage, "What man has done, man may do," and, by speaking of the progression of forest culture, inspire a hope which may lead to practical and successful effort in the United States. As to the detail as to what legislation is best for a country where the people are jealous of governmental interference, that question must be left to the statesman; and as to the proper varieties of trees, mode of culture, and the like, that can be safely left to the intelligence of our nurserymen and farmers.

I will now give an outline of the leading exhibits at Paris leaving the seeker after further and more precise investigation to the catalogues and other publications resulting from the Exposition.

## FRANCE

As might be naturally expected, the French exhibit was by far the largest and most complete. The displays made not only by the government but by individuals, were unequalled elsewhere.

The governmental exhibit was divided into two groups, the principal being made in the pavilion of the "Administration of Forests" at the Trocadéro.

The Chalet was built entirely of woods grown in France, at least 200 varieties being used in its construction. This building contained the geological and entomological collections made by the School of Forestry, maps, plans, photographs, and models representing the processes of reforestation of mountains and of retaining the shifting surface of sand hills. On the walls was exhibited a complete collection of the implements used in forestry. An interesting feature of this exhibition was a model showing a section of a mountain. A zigzag track, constructed of logs, somewhat after the manner of the ancient "corduroy" known in this country, was represented. In the logs notches were cut, forming a continuous groove for the runners of the sleds upon which the timber was transported to the foot of the mountain.

The workmen, dressed in the peculiar costume of the country, were represented carefully running the loaded sleds down the steep descent, while others were toiling up the mountain with the sleds on their backs, to be again loaded and forwarded on the wooden way to the foot of the declivity. To make the scene more life like, the natural features of mountain scenery, the yawning ravines, and plunging water courses were represented.

Another view of the mountain showed the plantations of trees of various growths, and nearby were shown the bleak mountain sides, as yet untouched by the labors of the forester. A statement was affixed showing the length of time required to transform the seemingly bare rocks to the thrifty woodland. Other portions of the model exhibited the massive and costly stone embankment built to prevent the soil on the slopes of the mountains from

being washed into the valleys below. These structures form a prominent feature of the landscape in the mountainous portions of France and Italy, where every foot of earth is carefully preserved and patiently and laboriously cultivated.

The exhibition at the Chalet was not confined entirely to the products of processes of forestry, for in connection with them were shown the quadrupeds and birds of France, beautiful specimens of taxidermy, and also a magnificent entomological collection.

Around the Chalet were planted over two hundred varieties of resinous trees, some already successfully grown in France, others in process of acclimatization. The drawing given includes the latter plantation....

## FORESTAL LEGISLATION AND STATISTICS

In order to further show the interest taken in the subject of forestry in several countries, I purpose giving such information as I was able to procure touching the extent of forests, the traffic in the products of forests, and the laws and regulations bearing upon the subject of preserving them and reforestation of the districts made bare from various causes. The information is taken for the most part from reports made to the several governments and printed in the Official Catalogues of the Paris Exposition.

## FRANCE

...At the time when France was occupied by the Romans the country was in nearly the situation of the region now covered by the United States during the first 300 to 400 years of its occupancy by Europeans. It was then that uprooting and clearing the land of timber was carried on in order to produce cereals and to provide for sanitary interests. It was about the year 800 A. D. when the first steps were taken to protect the forests from destruction; but it was as late as 1280 before an ordinance was passed to control this subject and officers were appointed to enforce it. This ordinance and the orders enforcing it were from time to time modified and enlarged, but continued without change down to 1669. In that year Louis XIV issued an ordinance rearranging preceding laws and making new ones. Its preamble clearly indicates that its design was to cause the general interest, which was menaced by the destruction of forests, to prevail over the often opposed interests of the communes, of the civil or religious communities, and even of private persons.

The corps charged with the application of this celebrated ordinance, and constituted by it, extended its jurisdiction not only to the estates of the royal domain, but also to those of communes, convents, and civil and religious corporations. Every mortmain, in a word, was administered by masterships, and the woods of private persons themselves were subjected to restrictions judged indispensable to assure their preservation. The hunt, fishing, and in fact everything pertaining to the administration of forests were also confided to the vigilance of officers of the masterships. The difficulties which the parliaments opposed to the registering of the ordinance of 1669 proves how much authority it conferred upon the King's officers, and how much it injured the privileges of the nobles and religious corporations; but the royal power energetically maintained its right of protecting the great social interests; and, moreover, being sustained by the public opinion, which was already powerful, it overcame the interested resistances offered by

several parliaments. This superior right of protecting forests, whose preservation has from all time been recognized as necessary to the existence of civilized society, has been claimed by all governments which have succeeded ancient monarchy in France.

This ordinance, with various modifications, remained in force until 1791, when there was a complete reorganization. At that time, by a special decree, the number of officers was fixed at 35 conservators and 303 instructors. But it was not until 1801 that this law was put into practical operation....

The decree of January 26, 1801, divided the woods and forests of the republic into 27 conservations.

The first acts of the new administration were to begin the regeneration of the forest property, which was seconded in a very energetic manner by the tribunals. This, like all former laws, has been changed as necessity seemed to require, until at the present time the head of the Forest Department is one of the principal bureaus of the government.

There are forestry schools of a high order, where pupils are trained in all the sciences, as much as those in military academies. The students graduated from these schools are bound to serve as foresters, as much as are those from military and naval schools required to serve in the army and navy. There is discipline and penalty as there is in the army, and it is as much a profession to be a forester as to be an army officer.

A recent French writer on this subject says:

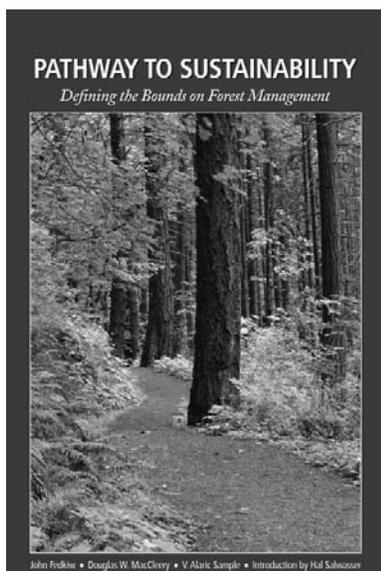
*"It remains for us now to say what the past induces us to predict for the future. Every one has been able, indeed, to see that the forest corps, gradually separating itself from the traditions of ancient governments, has finished by taking its place beside the great public services, directed by the scientific skill and industry which characterize our age. Since the law of July 28, 1860, the Administration of forests has ceased to be a simple financial administration. The part it plays at present is not simply to increase by a few millions the receipts of the treasury. To augment the public wealth by the development of forest cultivation, to furnish the marine, agriculture, and industry with ever growing resources; to protect, against the combined influences of*

*atmosphere and water, the soil and all the riches that human work and labor have thus accumulated, to increase its fertility by a wise application of forces of organic nature—such is the high mission leagued by the past to the forest corps and the latter has been for a long time in a condition to fulfill it."* □

Char Miller is professor of history and director of urban studies at Trinity University. He is the author of *Gifford Pinchot and the Making of Modern Environmentalism* and co-author of *The Greatest Good: 100 Years of Forestry in America*.

## NOTES

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6. *Ibid.*, 423.
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9. F.P. Baker, *Preliminary report on the forestry of the Mississippi Valley* (Washington, D.C.: Government Printing Office, 1883); F. P. Baker, "The value and management of the timber lands of the United States," in *The proper value and management of government timber lands and the distribution of North American forest trees, being papers read at the U.S. Dept. of Agriculture, May 7–8, 1884* (Washington, D.C.: Government Printing Office, 1884).
10. Baker, "Forestry," 389–431.



## Pathway to Sustainability: Defining the Bounds on Forest Management

John Fedkiw, Douglas W. MacCleery & V. Alaric Sample; Introduction by Hal Salwasser

Four noted scholars offer their views on the evolution of forestry. Hal Salwasser, dean and director of the forest research laboratory at Oregon State University's College of Forestry, poses provocative questions about the nature of forestry as the discipline seeks to meet society's needs while conserving the resource. John Fedkiw, senior policy advisor and analyst for USDA Secretary's Office for 28 years, believes the same pathway that has led forestry through the thickets of multiple-use and ecosystem management can now take us to our new goal, sustainability. Douglas W. MacCleery, senior policy analyst in forest and rangeland management for the National Forest System, finds reason for optimism in the record of the past, where he sees evidence that forestry can meet its latest challenge. V. Alaric Sample, president of the Pinchot Institute for Conservation, cautions that conserving biodiversity will require new approaches and adjustment of our course along the pathway.

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