Franklin Benjamin Hough, a physician of New York State with very broad scientific interest, was the first forestry agent of the United States Government, and the first Chief of the Division of Forestry in the Department of Agriculture, forerunner of the present Forest Service. He was appointed on August 30, 1876.

Gifford Pinchot, who was the first Chief of the Forest Service, called Hough, "perhaps the chief pioneer in forestry in the United States."

Hough did a prodigious job in gathering and compiling singlehandedly existing forestry knowledge. It was through his efforts that the office was first established. He himself had stimulated the prestigious American Association for the Advancement of Science to formally petition Congress and the President to set up the forestry office three years earlier.

Hough compiled three pioneer reports on forest conditions, practices and marketing in this country and abroad, for which he was highly praised by the leading scientists of his time. He was among the first to urge Congress to take control of timber harvesting on the public domain, through a leasing system safeguarded by inspection agents, as was already being done in Canada. He urged establishment of forestry schools, experiment stations, and tree nurseries in various parts of the country. He also suggested that the States retain and manage forest lands which had reverted for nonpayment of taxes, which many States later did.

Hough was a member of the original commission to recommend creation of the Adirondack State Forest Reserve in New York, first State forest reserve in the Nation.

After the Civil War, the Nation's forests were suffering from rapidly increasing reckless exploitation, often followed by severely destructive fires. Through his experience as director of the New York State Census, and personal observation in the Adirondacks close to his home, Hough became alarmed over the extensive damage to the forests, and felt it his duty to alert the people to this threat to their future timber supplies and the beauty of the natural landscape.

Besides his call to the Nation's scientists and his reports as forestry agent, Hough was very active in the leadership of the new American Forestry Association and the American Forestry Congress; also as writer and publisher of the American Journal of Forestry and writer of the first comprehensive book on forestry published in the United States, called "The Elements of Forestry."

Hough's efforts were instrumental in leading to the Act of 1891 which provided for setting aside the first Federal forest reserves by Presidential proclamation. The reserves came under Forest Service management in 1905 and were renamed National Forests in 1907. They now total 187 million acres in size. For more than 70 years, these forestlands have been managed for the use and enjoyment of the American people. At this time, 100 years after his warning was heeded by the Congress, the President and the Nation, we pause to honor this wise and far-seeing, conscientious public servant.
MEMORIAL FOR GRACE SUTTON
HON. RICHARD L. OTTINGER
OF NEW YORK
IN THE HOUSE OF REPRESENTATIVES
Wednesday, September 15, 1776
Mr. OTTINGER. Mr. Speaker, on August 10, the White Plains community was deeply saddened by the passing of Grace Sutton. Grace was an extraordinary woman who earned the respect and love of all those around her. She had a way of making everyone feel like they were the most important person in the room. Grace was a hard worker who never complained about any task, all the while leaving her warm and gentle touch on every project she worked on. Her legacy will continue to live on long after her departure.

Grace had a deep attachment and concern for everyone. She was a true friend to all who knew her. She was a lifelong member of the United States Government, and the first Chief of the Division of Forestry in the Department of Agriculture, and it is fitting that her pioneering efforts to build forestry into a full-fledged scientific discipline become commemorated. Accordingly, the Forest Service, foremost of the present Forest Service, was appointed on August 10, 1776.

Gifford Pinchot, who was the first Chief of the Forest Service, called Hough, "perhaps the chief pioneer in forestry in the United States."

Hough did a prodigious job in gathering and compiling, single-handedly existing forestry knowledge. It was through his efforts that the office was first established. He himself had emphasized the prestigious American Association for the Advancement of Science to formally petition Congress and the President to set up the forestry office three years earlier.

Hough compiled three pioneer reports on forest conditions, practices, and marketing in this country, and abroad, for which he was highly praised by the leaders of his time. He was among the first to urge Congress to take control of timber harvesting and management, a system safeguarded by inspection agencies, which was already being done in Canada. He urged establishment of forestry schools, experiment stations, and tree nurseries in various parts of the country. He also suggested that the states retain and manage forest lands which had reverted for nonpayment of taxes, which many states later did.

Hough was a member of the original com-
mission to recommend creation of the Adirondack State Forest Reserve in New York, after which he returned to the Adirondacks.

After the Civil War, the nation's forests were suffering from rapidly increasing reckless exploitation, often followed by severe fires. Senator Warner, as director of the New York State Census, and personal observation in the Adirondacks close to his home, found the extensive damage to the forests and felt it his duty to alert the people to this threat to their future timber supplies and then act to prevent it.

Besides his call to the Nation's scientists and his reports as forestry agent, Hop's was very active in the leadership of the new American Forestry Association and American Forestry Congress; also as writer and publisher of the American Journal of Forestry and writer of the first comprehensive book on forestry published in the United States, called "The Elements of Forestry." Hop's efforts were instrumental in leading to the Act of 1901 which provided for setting aside the first Federal forests reserve by Presidential proclamation. The reserves were then under Forest Service management in 1600, but the receipts from the sales increased in the years 1907. They now total 517 million acres in size. For more than 70 years, these forests have furnished for the use under management of the American people. At this time, 100 years after his warning was heeded by the Congress, the President and the Nation, we have this vast forest and far-sounding, conscientious public servant.

TRIBUTE TO JOHN W. WARNER
HON. G. WILLIAM WHITEHURST
OF VIRGINIA
IN THE HOUSE OF REPRESENTATIVES
Wednesday, September 15, 1976

Mr. WHITEHURST. Mr. Speaker, as this Bicentennial Year draws to a close, it seems to me that it is only fitting that due credit be given my good friend and fellow Virginian, the Honorable John W. Warner, Administrator of the American Revolution Bicentennial Commission, for his outstanding efforts, which were a major factor in the success of our 200th birthday celebration.

John Warner brought to the job of Administrator of ARBA the same dedication to the service of our country that he showed in his role as Secretary of the Navy. He traveled many hundreds of thousands of miles, to every State and territory in our Nation, carrying the message of the Bicentennial. I had the opportunity of hearing him speak a number of times, and I can attest to the eloquence with which he presented the story of the ARBA, inspiring people everywhere to participate, so that the celebration of 500 years of freedom for the great Nation of ours might be a beacon not only for ourselves but for all the world.

I think that our Bicentennial celebration has been a dramatic success, and I believe that it has rekindled our faith in the strength of this Nation and the ideals that made it great. I note that NATO's Secretary-General, Joseph Luns, stated in Norfolk, Va., earlier this week that the United States has again found its sense of national purpose, which was missing for awhile, and there is no doubt that that sense of purpose has been reawakened as a result of the Bicentennial observance of 1976—and for that, great credit goes to John Warner. He deserves the gratitude of us all.

TWO WRONG CHOICES AND A WAY OUT
HON. DEL CLA WSON
OF CALIFORNIA
IN THE HOUSE OF REPRESENTATIVES
Wednesday, September 15, 1976

Mr. DEL CLA WSON. Mr. Speaker, the September 20 issue of Business Week calls attention to some factors all too ignored in discussions of methods to reduce unemployment in this country. It provides a broader view of our choices and I commend it to the attention of my colleagues at this point in the Record:

TWO WRONG CHOICES AND A WAY OUT
(By John Cobbe)

No matter what the campaign orators say, the U.S. cannot write its economy up to levels where it will provide a job for everyone who wants one without continuing and possibly inflation. The only times in the past 45 years when the annual average of unemployment has gone below the natural rate of 5%, were when World War II and in 1952 and 1953, when the nation was mobilized for the Korean War.

The end of the Korean War to the inauguration of John F. Kennedy in 1961, unemployment ranged from an average of 4.1% a year to 6.8%, and the highest yearly unemployment index was 3.3%. In the first four years of the Kennedy-Johnson era, unemployment stayed above 5%, and price changes were less than 1.5% a year.

In the years after the Vietnam War and the rapid growth of the world economy shifted the relationship between unemployment and prices to a new—more inflationary—level. In 1969, with unemployment at 5.5%, prices shot up 6.7%. In 1974, with 5.5% out of work, inflation hit the shocking rate of 8.5%. Unemployment in 1975 to get inflation down to 6.5%. This year with unemployment around 7.5%, prices are still rising at a 4% rate.

Clearly, something has given the U.S. economy a built-in bias toward inflation. The terms of the trade-off between unemployment and inflation have worsened. The Phillips curve, which economists use to chart that trade-off, has shifted upward.

A BETTER MATCH
If political candidates and the economists who advise them are in a highly unacceptable situation, the answer is not to plunge ahead making promises that cannot be kept. The country's economic forum, as the facts are, is no more bearable than 5% unemployment. Economics does not say that the nation has no choice but to maintain a pool of unemployed, but it does demand that we keep prices under restraining pressure. It no longer says simply that if the U.S. uses the familiar device of federal spending and easy money to drive the economy's other paradox—that inflation is the real problem—

CORRECTION OF THE RECORD
HON. LARRY WINN, JR.
OF KANSAS
IN THE HOUSE OF REPRESENTATIVES
Wednesday, September 15, 1976

Mr. WINN. Mr. Speaker, in the CONGRESSIONAL RECORD of Tuesday, September 14, 1976, with respect to the treat
A Notable Anniversary

One hundred years ago this week—on 22 August 1873, to be exact—the American Association for the Advancement of Science took an historic action that led to the establishment of forestry policy as a function of the federal government.

At the 22nd AAAS annual meeting, held that year in Portland, Maine, Franklin Benjamin Hough of Lowville, New York, delivered an address titled "On the duty of governments in the preservation of forests." A doctor of medicine, Hough was also an historian, a naturalist, and a statistician. While director of the United States census of 1870, he was impressed and concerned by widespread forest devastation caused by logging and fires throughout the East, the Great Lake states, and then starting in the South.

After the Civil War, a few observant citizens, alarmed at the rapid destruction of the virgin timber and fearing an eventual wood shortage, warned state legislatures and Congress of the need for forest protection, but without effect. Most government officials ignored the threat of timber scarcity and discounted the possible depletion of this valuable natural resource, which, indeed, many people believed to be inexhaustible. Thus, when Hough submitted the problem of forest preservation to the AAAS meeting, he was appealing to the scientists as the only organized citizens' group having sufficient influence to inspire public attention. Hough decided that the scientific community would have to initiate action for forest conservation, if it was to be done at all. In his paper, he emphasized the relationship of woodland to soil stabilization, to maintenance of streamflow, and, of course, to wood production for domestic and industrial use. He urged the AAAS to alert federal and state governments to the need for forest protection.

At his suggestion, the AAAS appointed a committee "to memorialize Congress and the several State Legislatures upon the importance of promoting the cultivation of timber and the preservation of forests, and to recommend proper legislation for securing these objects." Nine scientists served on this committee; Hough was chairman. The others were William Henry Brewer of Yale; George B. Emerson of Boston, educator, and author of a book on trees; Asa Gray, the nation's leading botanist; Eugene W. Hilgard, soil scientist, of the University of Michigan; Lewis Henry Morgan, anthropologist, of New York, later to become president of the AAAS; John Strong Newberry, botanist and geologist, and Charles Whittlesey, a horticulturist, both of Ohio; and Josiah Dwight Whitney, a geologist of California.

The committee's memorial was delivered to President U. S. Grant, who, on 19 February 1874, transmitted it to Congress with a special message of approval. There the proposition languished for 2 years. Finally, on 15 August 1876, Congress enacted legislation appropriating $2000 for the appointment to the Department of Agriculture of a man to investigate forest conditions. Hough was selected on 30 August and thus became the federal government's first forestry agent. From his appointment evolved the present Forest Service, with its nationwide network of forest and range experiment stations and forestry and wood science laboratories, its thousands of professional and scientific personnel, and its 187 million acres of national forests managed in the public interest.

On this centennial anniversary, it is appropriate to recall the extraordinary influence of Hough's paper, presented as a private citizen before a small assemblage of scientists. Historically, it is appropriate also to acknowledge the energizing role of the AAAS in starting forestry work on a national scale in the United States government.—HENRY CLEPPER,
American Forestry Association, 1319 18th Street, NW, Washington, D.C. 20036.

Joseph A. Miller, Librarian and Lecturer in Forest History for the Yale School of Forestry and Environmental Studies, believes that the 1873 memorial of the American Association for the Advancement of Science to Congress on forest preservation instigated by Franklin B. Hough, and Hough's later fact-finding reports after he was appointed the first federal forest agent in 1876, had less to do with the development of a federal forest policy than did the experience observed by Congress resulting from its federal forest legislation in 1870s, which were of necessity compromises, and largely failures.

Miller notes that the AAAS memorial was only one of many, that Congress had several persuasive forest conservation leaders and others advocating legitimate sale of public forest lands, including Richard Haldeman of Pennsylvania, Mark Dunnell of Minnesota, George Boutwell of Massachusetts, John Ingalls of Kansas, James Kelly of Oregon, Richard Oglesby of Illinois, Aaron Sargent of California, and John Sherman of Ohio. Also, Congress held lengthy debates on tree planting incentives, sale of federal timberlands, and on making wood available to settlers during that decade, and passed laws that for the first time recognized the use of public land for its timber resources. Congress passed the Timber Culture Act in 1873, repealed the Southern Homestead Act in 1876, and passed the Free Timber Act and the Timber and Stone Act in 1878. The Timber Culture Act provided 160 acres of land to anyone who would plant and maintain 40 acres in trees. However tree planting was not enforced and the act let small farm owners get enough land for a workable farm or ranch in the dry western plains by combining this land with land acquired under the Homestead Act of 1862. The Free Timber Act allowed citizens of several western states and territories to fell and remove timber for domestic use including mining, on lands of the public domain.
The Timber and Stone Act allowed persons or associations of persons to buy 160 acres of timberland unfit for cultivation for their own use for $2.50 an acre, and also declared that illegal timber cutting on the public domain was to be a misdemeanor. The repeal of the Southern Homestead Act allowed unlimited sale of pine timberlands in the five states of the deep South at $1.25 an acre, instead of limiting this land to small farmers.

The results of all four acts were to open much public forest lands to large groups of speculators and timber companies. Prosecution of timber theft on public lands remained ineffectual, because of western opposition in and out of Congress. Many in Congress wanted to protect public timberlands from unlimited cutting, and others wanted to set up a system of selling such timber to the highest bidder, but both were unsuccessful for a long time because of southern and western opposition to such restrictions on development, and because of the widely supported policy of encouraging settlement, homesteading, and private business throughout the West, Miller points out.

Bernhard Fernow, who succeeded Hough, succeeded partly in providing a solid foundation for forestry in this country, Miller observes, but he had hard going building up his agency. However, after strenuous efforts by the House public lands committee, the Timber Culture and Timber Use Acts were finally repealed in the 1880s, unlimited sale of public lands in the South was repealed in 1888, and in 1891 a clause was inserted in the land reform act to allow the President to set aside forest reserves on the public domain. In 1897 a plan for administering the reserves (the Organic Act) was enacted. The appointment of Gifford Pinchot as Chief in 1898 revigorated the Division of Forestry and his unique relationship with President Theodore Roosevelt gave it great
strength. In 1905 the reserves were transferred to the agency, and in 1907 they became the national forests. (Miller's doctoral dissertation for the University of Minnesota in 1973 was entitled, "Congress and the Origins of Conservation: Natural Resources Policies, 1865-1900.") The above summary was based on his article, "Thoughts on a Centennial of Forest Conservation," in the June 1976 issue of Yale Forest School News, Vol. 64, No. 1.)

F. Harmon, History Sec., F.S.
10/25/77
FRANKLIN BENJAMIN HOUGH  
First Forestry Agent of the United States Government  
1876-1883

Franklin Benjamin Hough was the first forestry agent of the United States Government and the first Chief of the Division of Forestry in the Department of Agriculture. The Division was the forerunner of the present Forest Service. In a real sense he, rather than Gifford Pinchot, was our first Chief. Pinchot himself called him "perhaps the chief pioneer in forestry in the United States."

Hough did a prodigious job in gathering and compiling existing forestry knowledge. He instigated action which resulted in the establishment of the office of forest agent in the Department of Agriculture, and was himself appointed to the position on August 30, 1876. He singlehandedly had stimulated the prestigious American Association for the Advancement of Science, of which he had long been a member, to formally urge Congress to set up the forestry office. The country owes a big debt of gratitude to Franklin B. Hough. Who was he?

He was a man with boundless curiosity, enormous energy, much self-confidence, a strong sense of public duty, and extremely wide interests in natural science and mankind. He was an omniverous reader in both French and English and could rapidly absorb a great deal of knowledge. With his strong self-discipline and enthusiasm he became highly knowledgeable in botany, geology, meteorology, climatology, statistics, history, and finally forestry. He was a competent compiler of local and regional history and battles of the Colonial period.

By profession and training Hough was a physician in northern New York (M.D. 1848, Western Reserve College). He was also briefly a teacher and principal at private academies. His father was the first medical doctor in Lewis County, on the western edge of the Adirondack Mountains. Early close association with the unspoiled forests
encouraged the younger Hough to make long field trips on foot studying the plants and geology of the countryside. He accumulated a large collection of specimens which he scientifically classified, recorded and published. Leading natural scientists of the time—including Louis Agassiz of Harvard, John S. Newberry of Columbia University, and Spencer F. Baird of the Smithsonian Institution in Washington—were impressed by the thoroughness of his writings and collections, and many became lifelong friends and helpful critics. He was an early member of the American Association for the Advancement of Science.

Hough's reputation for scientific care and thoroughness led to his appointment to direct the New York State Census in 1854 and again in 1865. In 1867 he supervised the census of the District of Columbia, and in that same year assisted with preparations for the 1870 decennial Census of the United States (for which Prof. William H. Brewer of Yale, another scientific friend, compiled the forest statistics).

Hough's study of the statistics of these censuses, which revealed drastic declines in lumber production throughout the Northeast in mid-century, caused his increasing alarm for the future of the country's forest resources. He saw that lumbering was migrating westward and national production was rising, but he feared that the timber of these virgin areas would also prove finite. His duties as member of the 1872 New York State commission on a state forest park in the Adirondacks furthered his interest and concern with forest preservation. The commission's report, prepared by Hough, greatly increased his prominence as a forest expert. It is interesting to note that Dr. Hough at this early date recognized the place of lumbermen in forest management while other commission members tended to consider great state parks closed to cutting as the answer to forest problems. He saw forestry as a composite of natural history, geology, mathematics and physics. The New York State legislature in 1885, largely as a result of Hough's 1872 report, created the great Adirondack Forest Reserve, the
first State forest reserve in the Nation.

At the outbreak of the Civil War in 1861, he volunteered as an inspect-
tor with the U.S. Sanitary Commission. The next year he became regimental
surgeon with the 97th New York Volunteers. He wrote and had published ac-
counts of the Virginia and Maryland campaigns under Generals McClellan and
Pope. He translated a French treatise on military medicine.

By 1873 Dr. Hough was convinced of the need for strong action to protect
forests from overexploitation. He prepared and delivered a report and a plea
to the American Association for the Advancement of Science at its annual meet-
ing in Portland, Maine, entitled "On the Duty of Governments in the Preserva-
tion of Forests." This paper showed the influence on him of the landmark book,
"Man and Nature, or, Physical Geography as Modified by Human Action," by George
P. Marsh, first published in 1864. Marsh was a Vermont Congressman and diplo-
mat. He opened the eyes of the educated elite of his day to the fact that man-
kind had become a geologic force of awesome power.

In his report to the scientists, Hough described the ill effects of de-
forestation in Mediterranean and Middle Eastern countries where formerly for-
ested and cultivated areas had become wastelands. He suggested that clearing
of woodlands in the eastern United States might have increased floods and
droughts. (At that time it was thought that forests had a more direct and
pervasive effect on weather and climate than is believed today.) Hough urged
that agricultural and horticultural societies inform landowners and others of
the need to preserve forest resources. He advocated establishment of schools
of forestry and outlined laws which he believed were needed to protect and re-
gulate forest growth, and recommended measures that States might adopt to en-
courage better forest use. One proposal called for States to hold and manage
forest lands returned to State ownership through nonpayment of taxes. In con-
clusion, Hough urged the scientific association "to take measures for bringing
to the notice of our several state governments, and (to) Congress with respect
to the territories, the subject of protection to the forests, and their cul-
tivation, regulation, and encouragement."

The assembled scientists were impressed. The next day, August 22, 1873,
a committee was appointed of nine prominent men, mostly botanists and geolo-
gists but also including a horticulturist, a soil scientist, and an anthropo-
ologist. The Nation's foremost botanist, Asa Gray, compiler of the still auth-
oritative "Gray's Manual of Botany," was in the group, as was Prof. William
Brewer of Yale, first man to deliver lectures on forests at an American college
(that same year, 1873). So was George B. Emerson, Harvard botanist and author
of a book on trees and shrubs of Massachusetts, and Josiah D. Whitney, Califor-
nia geologist for whom Mt. Whitney, highest peak in the Sierras, is named.
They were some of the most eminent scientists of the day.

The Committee was directed to memorialize the United States Congress
and the States, emphasizing the critical national need. The Committee also
requested creation of a Federal commission for forestry, somewhat like that
on fish and fisheries set up two years earlier, to investigate forest conditions.

Hough and Emerson went to Washington the following February to bring the
Memorial to the attention of Congress, President Ulysses Grant, the Departments
of Agriculture and Interior, and the Smithsonian Institution. They received
much encouragement, but Congressional action proved difficult. They first
talked with Joseph Henry, director of the Smithsonian, then several representa-
tives and senators, and Frederick Watts, Commissioner of Agriculture, who
got them an audience with President Grant. Willis Drummond, a conscientious
Commissioner of the General Land Office, supported their proposal and secured
the endorsement of his superior, Secretary of the Interior Columbus Delano.
Drummond said the AAAS recommendations were "indispensably necessary" to stop
destruction of timber and to provide for reforestation, and he drafted a pro-
posed joint resolution for Congress to consider, forwarding it to Grant who
Franklin B. Hough

sent it to Congress on February 19, 1874.

The draft resolution and the Memorial, which asked for a study and report on the extent and distribution of woodlands, the influence of forests upon climate, and on European forestry methods which might be applied here, were referred to the public lands committees of the House and Senate. Emerson returned to Boston, leaving Hough to press for enactment. He met frequently with congressmen who showed interest in the proposal and spoke to the House public lands committee. Rep. Mark H. Dunnell of Minnesota became his sturdy ally, and had a bill drafted and introduced in the House of Representatives. The bill provided for appointment by the President and approval by the Senate, of a man "of approved attainments" who knew statistical methods and was familiar with forestry.

Much progress had been made, but Congress was preoccupied with other matters and the bill died in committee. Secretary Delano had also asked Congress that year without effect for action to stop destruction of timber on public lands. The year 1875 also passed without consideration of the AAAS proposal, although Commissioner Watts, in his 1875 report, noted that "forestry has excited much attention in the United States" due to "rapid deforestation," and he feared "a timber famine at no distant day" unless appropriate actions were taken. Carl Schurz, the next Secretary of the Interior, expressed similar fears in his annual report of 1877; he had hired special agents to halt timber thievery that year.

Meanwhile, Hough did a lot of studying and writing. While in Washington he had spent many hours at the Library of Congress reading everything he could find about forestry, including European methods. Seeking the origin of the word, he found it was "quite new to the" (English) "language". He continued to study available materials on forestry during 1874 and 1875. Also, in 1874, he delivered a series of lectures at Lowville Academy, N.Y., in his home town, and to the New York State Agricultural Society in Albany. In 1875 he presented a series of lectures on forestry at the Lowell Institute of Boston, which Professor
Emerson attended and praised.

The topics covered in his lectures included: Distribution of forest species; Qualities, chemical properties and special products of various species; Tree growth and the physiology of timber; Timbers in commerce and their supply and demand; Planting and management, irrigation; Climate and its relation to forests; Destructive agencies and preservative processes; Ages of timber and time of cutting; Transportation of timber; Forest restoration; Protection afforded by woodlands; Investments and profits in forests; and Duties to the present in the management of woodlands. Hough also wrote and published the book, "Forestry in the United States" in 1875. He continued to practice medicine. He was indeed a busy man. He also lectured at the Peabody Institute in Baltimore.

Hough kept up a correspondence with Congressman Dunnell, determined not to "accept failure as a defeat". His confidence and foresight are shown in this prediction to Dunnell: "I am convinced that this is destined to be one of the great questions of the near future and that those who take active interest in it now, whether in or out of Congress, will deserve and hereafter secure an honorable place in the Annals of our Forestry."

Dunnell again introduced his forestry bill in January 1876. Hough again made the midwinter train journey to Washington in February to testify before the House public lands committee, but their interest appeared slight, although Dunnell was optimistic and confided to Hough that he was sure to get the appointment when the bill passed. At the end of the session when the bill appeared dead again, Dunnell got the House to transfer the item as a rider to the general appropriations bill, authorizing $2,000 for a forest study along with funds to distribute seeds for the Department of Agriculture. The maneuver succeeded and the bill with the forest study intact received final approval by Congress on August 15. It gave the Commissioner of Agriculture the right to make the appointment.
So the forestry agent and his office were placed in the Department of Agriculture, setting a precedent which continues to this day. Commissioner Watts appointed Hough on August 30, gave him a free hand and promised to make sure that the report was published. (That same year a bill was actually introduced into Congress to preserve forests in the public domain adjacent to navigable streams and their sources, but it did not pass. However, it was the forerunner of the landmark Creative Act of 1891 under which the forest reserves, later called national forests, were established, and which came under Forest Service administration in 1905.) Hough confided to his private diary on August 23, 1876 that he would "do credit to myself and the country". Fearful that the small fund would not permit him to do a complete job, he urged the public land committees at the next session of Congress in the spring of 1877 to increase the amount, but was unsuccessful. At that time he also presented his plan of work to Commissioner Watts, who approved it and gave his cordial encouragement.

Dr. Hough early became active in the new American Forestry Association, which was organized in 1875, and in the American Forestry Congress which was organized in 1882 and merged that year with the American Forestry Association (AFA). Almost immediately after being appointed the first forestry official of the United States Government, he read his 1873 paper ("On the Duty of Governments in the Preservation of Forests") at the second annual meeting of AFA in September 1876, held at Philadelphia during the Centennial Exhibition of the American Revolution. Hough became treasurer of AFA in January 1880.

By the time of his appointment as forestry agent, he had been gathering material related to forestry for at least five years. During his three visits to Washington he had spent considerable time reading, indexing and taking notes at the Library of Congress. He read nearly everything available on forestry there and at other libraries, in English and French. He compiled a list of sources of data throughout the United States, Canada and Europe. He wrote to
bureaus in every State and to lumber companies, manufacturers, dealers, college instructors in botany and forestry, hobbyists, nurserymen, horticulturists, and to government agencies abroad and their embassies in Washington. The forestry data of the 1870 Census were available, prepared by his friend Professor Brewer of Yale. He wrote to many Federal land offices and Army posts to secure information about the local forests.

Congress had provided Hough with no salary, no assistants, and no clerical help. He had no money for travel unless he took it out of the $2,000 appropriation. However, since he was a Government official, he could travel free by rail, and he took full advantage of this provision which was part of the land-grant bargain made when railroads were being built in mid-century. During the spring and summer of 1877 he travelled extensively throughout the country on this rapidly developing rail system. His itinerary covered more than 8,000 miles. He visited lumbering operations and mills, wood products industries, tree plantations, universities and colleges, State governors and legislatures and other prominent leaders. He urged encouragement of the practice of forestry through legislation. Michigan, Nebraska and Utah are mentioned in two of his diary entries. He started late in March from his home in northern New York, and returned in July.

During the next five months he assembled his mammoth report from voluminous notes and correspondence. It was a potpourri of miscellaneous materials reflecting the wide range of sources which he had contacted throughout this country, Canada, Europe and other countries. He assembled the report in two parts: one mainly narrative and the other mainly a historical statistical collection of data on the production, import and export of wood products from the United States and Canada for nearly a century. Congress was rather amazed at the size of the report, and set a limit of 650 pages but then generously approved a printing of 25,000 copies, highly unusual in that day for an unfamiliar subject. So the report was divided in two and the first one was printed in 1878.
The statistical compilation was printed in 1880. Both were of 650 pages, the limit allowed. Hough still kept gathering new material, and answers to his wide-ranging questionnaires kept dribbling in, so a third volume half the size of the first two was published in 1882. Hough also contributed substantially to the fourth volume, issued in 1885.

Volume I includes a general discussion of forests in the United States, and its timber problems and needs; the ineffective legislation which tried to allow use without abuse; the early naval timber reserves; abuses of timber on the public lands; the Timber Culture Acts which tried to encourage tree planting on farms; State efforts to encourage forest planting; suggestions for future management of Federal timberlands; advice and experience in sowing and planting here and abroad, including cultural practices; tree planting by railroads; use of wood for railroads, papermaking, charcoal, tanning, resin products, gas, distilled products, and cork; damages from fire, insects and diseases; forests and climate; reforestation experience in Europe; U.S. Census figures and various reports from the States on timber resources of the United States; and a list and discussion of forestry schools in Europe.

Volume II contains 515 pages of statistics on imports, exports and production in Canada and the United States, some going back to early years of the Republic. The rest of the data combined recent Federal and State legislation, lumber statistics for Illinois, and notes on growth, planting and cultivation of trees, gathered from this country and Europe.

By the time Hough was ready to submit his first report, Commissioner Watts, a Pennsylvanian appointed by Grant, had been succeeded by William G. LeDuc who hailed from Minnesota and had been appointed that spring by President Rutherford B. Hayes. However, LeDuc was favorably impressed by Hough, and referred to his "wonderful industry". Hough remained busy. The same month of December that he sent his report to LeDuc, he went on a tour through the
Great Lakes States and the eastern Canadian provinces, making contacts and gathering material for his next volume. Early in 1879 he received the $2,000 compensation for his year's work, and conferred with LeDuc who approved his plans for the second report. LeDuc's annual Report for the Department of Agriculture for the year 1878 praised Hough's efforts, and he asked for $6,000 for the forestry office. Hough lobbied with his friend, Repr. Dunnell of Minnesota, while in Washington early in 1879, for more funds for his office and for funds to print the second volume of his report. Congress did approve $6,000 for the office for the fiscal year 1879-80, and then in a special session approved printing of the statistical material comprising Volume II. However the President vetoed the printing bill and it was not until the summer of 1880 that Volume II could go to press.

Hough's recommendations of 1877 showed that he had already given them considerable thought. He suggested adoption of the practice already then in use for some time in Canada, of leasing timber on public lands to private operators for cutting, for a fee. He said the most practical method would be to base the fee on a percentage of the value of the lumber or other wood products removed. He regarded this as a minimum means of conserving public timber, assuring careful use, retention of land in timber for the future, and paying for itself or yielding some net revenue, at the same time.

He noted the need to fix a time limit for the leasing privilege, and to set a size limit on trees to be cut, reserving young trees for future growth. He pointed out that this system would require at the least the employment of agents to prevent deprivations and to collect revenues, but that they would not have to be trained foresters. If a fee were charged by the acre, however, then an expert check of the forests in advance would be needed, he noted.

Hough conceded that in order to get the most from the public forests, skilled men would be needed to manage them, as was being done then in Europe, including forbidding fire and needless injury to the remaining growth. However, he noted that it would be difficult to do this since the United States had no such trained men.
He pointed out that foresters require thorough training and preliminary practice under competent direction, as well as assurance of steady employment at a reasonable salary. All of these conditions applied then in Europe, but, he said, would not be so in this country for years to come. Neither did we have any large private forest owners who were willing to hire foresters, he added. Therefore, young men in America had no inducement to make forestry their career.

Hough then asserted, "so long as forestry remains in its present rude and elementary condition among us, there is more to be gained by teaching its general principles to many than its thorough details to a few."

Our first forestry agent applied this maxim through his public lectures, his official reports, and the books on forestry which he wrote. He wrote in 1881 a book, "Elements of Forestry," which was published in 1882. It was the first book on practical forestry written in the United States. Hough also embarked on a more ambitious project that same year—the monthly "American Journal of Forestry". Although it only lasted one year because of a lack of enough subscribers to pay for its costs, it was later resumed by others and today continues as the official magazine of the professional Society of American Foresters.

Hough's writing gained considerable public recognition, and he was widely acclaimed by scientists and reviewers in periodicals. His first "Report" was called by Bernhard E. Fernow, the German forester who had emigrated to the United States shortly before, as "by far the best and most useful publication of its kind on forestry in this country." At the same time he noted some unavoidable shortcomings due to Hough's lack of professional training in forestry.

Ralph S. Hosmer, one of the first five men in the United States to take forestry instruction in Europe and one of Gifford Pinchot's first assistants when Pinchot succeeded Fernow as Chief of the Division in 1898, said Hough's "Elements of Forestry" was "one of the first modern books on forestry in the English language."
Hough's two Reports received a special diploma of honor award in 1882 at an international geophysical congress in Venice. At this congress, a prominent German forester and university professor from Württemberg remarked: "It awakens our surprise that a man not a specialist should have mastered the whole body of American and European forestry literature and legislation."

Hough's 1873 recommendation to the American Association for the Advancement of Science, that the governors and legislatures of the various States be urged to actively support forest conservation so as to assure adequate supplies for future needs, was finally carried out in 1880.

The legislatures were asked to give attention "to the great and increasing importance of providing, by adequate legislation, for the protection of the existing woodlands of the country against needless waste, and for the encouragement of measures tending to the more economical use and the proper maintenance of our timber supply." Suggested were:

- Tax laws and premiums encouraging and protecting trees planted along highways and in private plantations,
- State-operated plantations under the care of professional foresters,
- Courses in "practical sylviculture" at educational institutions,
- Laws to prevent forest fires and to impose penalties against willful and careless setting of fires,
- Laws strengthening the powers of local officers to get assistance,
- Adoption of suppression measures,
- Creation of State commissions of forestry,
- Awarding prizes for best essays and reports on practical forest culture and providing for publication and distribution of them.

The memorials to the States probably had some effect in getting forest commissions started, forestry laws passed, and forestry lectures underway at State colleges during the 1880s and 1890s.

The Department of Agriculture made Hough's office a Division of Forestry by administrative action in 1881, following steady pressure by Dunnell and Hough. Also, as they and Secretary LeDuc had planned, Hough went to Europe that summer to confer with forestry officials and professors there. He compiled his third Report after his return. In it he amplified considerably his recommendations for American forestry.
Most of Volume III deals with damages to forests worldwide from fire, insects, and human waste and carelessness, together with means being used and suggested for control. The section on fire is very extensive and exhaustive for the time, composing the bulk of the book. It includes a general discussion, summaries of State legislation, reports of recent damage State by State, discussion of deliberate burning practices by settlers, Canadian reports about fires, Canadian laws to prevent and control forest fires, historical fires in America including Canada, foreign laws and experience with forest fires. This volume also reviewed the effects of forest use in various countries, the neglect and of forests in the public domain in this country, Canadian experience in controlling forest use. Included were the 1880 report of the committee on forest management of the American Association for the Advancement of Science, and its model Memorial to the governments of the various States which was sent out that year, after much delay. (It had been suggested by Hough in his 1873 talk.) The Memorial urged attention to the continuing excessive consumption and waste of the country's forests, and the need to conserve forests for future needs by encouraging "more economical use and the proper maintenance of our timber supply." Plantations under the care of professional foresters were urged, as were courses in "practical sylviculture" at State colleges, and establishment of State commissioners of forestry.

By this time Hough had further developed and refined his ideas about the means the Federal Government should take to advance forestry. He recommended reservation of forest lands still in the public domain, but leasing cutting privileges under strict rules, as in Canada, and establishment of experimental stations for forest culture, principal experimental plantings. For the lush forests of the Pacific Coast States, he suggested Federal management using the practice European trained foresters to stop of conspicuous waste already being noticed. Hough also suggested repurchase of private lands, both timbered and denuded, in certain situations as to even up reserve boundaries or in convenient locations.
The appointment of a new Commissioner of Agriculture, Dr. George B. Loring of Massachusetts, also a physician, by the incoming President, James A. Garfield, on July 1, 1881, had a dampening effect on Hough, although he was now Chief of a Forestry Division, not just a forestry agent, and Loring approved in November his planned trip to Europe. After his return they could not agree on plans for the Division. From the personal records of Hough and others it appears that Loring took a dislike to him and made things difficult for him. Congressman Dunnell tried but was unable to win Loring over, however Dunnell promised to back up Hough if needed. Loring appointed two forestry agents without consulting Hough, who did not want them, and held up publication of Hough's third report for a year, according to Hough, by not sending it to Congress until May 1882. He also refused to have Hough's report of his European trip published. However, Hough remained Chief of the Division for two years. Loring was a Harvard graduate, a member of the Massachusetts Board of Agriculture, and had been a Congressman.

Both Loring and Hough attended the organizational meeting of the American Forestry Congress in Cincinnati in April 1882. Hough had been invited to deliver an address, "Forestry of the Future," at the gathering, but Loring did not permit him to travel at Government expense or on Government time. Both served on the committee on permanent organization, with Hough taking the lead and receiving the support of the committee. Hough discussed how overcutting would make timber scarce and drive prices up, and presented a detailed economic justification for a national policy of reforestation. He may have mentioned some of his recommendations as given in his third "Report Upon Forestry," although it had not yet been published. Hough also presided at this section, devoted to papers covering governmental forest policy.

Another speaker was Bernhard E. Fernow, the German forester who was to succeed him in 1886 as Chief of the Division of Forestry. Fernow spoke on the historical development of the forest policy in Germany, including the development of the economics and management of State and privately owned forests. He
pointed out that in Germany, government regulation of privately owned forests had practically ceased except where it was required for public safety. Fernow, either at this time or later, commented favorably on Hough's suggestion (made in his 1882 Report) that private forest lands in the United States be purchased by the Government in certain cases; he pointed out that such a policy had recently been started in Germany. Fernow conceded that although "impetus to action will come mainly through private interest... the national government, as owner of large tracts of woodlands, is called to precede with good example in the management of the same." About 90 scientific papers were presented on trees at the Cincinnati meeting and several were of historic interest, but little was said about forest management. The Congress adjourned but planned to resume deliberations at Montreal later in the year.

Nathaniel H. Egleston of Williamstown, Mass., a Congregational minister, was a delegate to the Cincinnati Congress from the Massachusetts State Board of Agriculture. He presided over the section on forestry education. He was appointed by Dr. Loring, who had been a fellow Board member, to succeed Dr. Hough in May 1883. (Coincidentally, Dr. Hough's first wife, who died young, was named Eggleston.) Egleston's term lasted only three years before Fernow took over as (chief) the first professional forester to be director of the Division.

The original American Forestry Association held its last meeting in late June of 1882 in Rochester, N.Y., before merging with the Forestry Congress. Dr. Loring was elected president and continued as president at the meeting where the merger took place, in Montreal in August of the same year. Dr. Hough became recording secretary at the Montreal meeting, and again presided over one of the sectional meetings. The merged organization took on the name of American Forestry Congress. (It reverted to an Association in 1889.)

The meeting in Montreal had very strong Canadian participation, both government and forest industry. A member of the Canadian Council of Agriculture with forestry interests, Henri G. Joly of Quebec, was temporary president at the
meeting. Sixty-four papers were presented. The Congress approved the recommendations of a committee composed of Hough, Fernow, Joly, Sargent and others, urging the governments of the two countries each to create a protective force for their forests, financed by taxing the owners and leasers of timber lands, in order to reduce losses from forest fires.

Hough continued as recording secretary of the Congress in 1883 and Fernow became corresponding secretary early that year. The Division of Forestry was host to a special meeting of the Congress May 7-8, 1884 in Washington, D.C. An administrative staff for managing Government timberlands in the West was advocated by Hough, Fernow and some of the Division staff. Hough read a paper he had prepared on "The Proper Value and Management of Government Timber Lands." The Division at this meeting endorsed Hough's proposals made in his third Report Upon Forestry, and urged the training of foresters at forestry schools, establishment of forest experiment stations in various parts of the country, reorganization of the Division of Forestry, hiring of competent men to administer Government forest lands, protection of the Government forests from fire, limitations on cutting, sale of Government timber at close to actual value, surveying of timber on the public forest lands.

The Division suggested that 85 million acres of Government timber land be withdrawn from sale to individuals and from entry. A bill was introduced in Congress to accomplish these ends, but was not passed. In this year the Division was authorized to conduct experimental tests with timber, and its fourth Report on Forestry was published. The report contained four articles by Hough (use of wood by railroads, Ohio woodlands, lumber trade in New Hampshire and West Virginia, and maple sugar production).

In 1884 Hough took part in a renewed and successful effort to get New York State to establish a forest reserve. At the fourth American Forestry Congress in Saratoga, N.Y., he presented a paper on the subject and described a
bill he had drawn up for the purpose, including a provision for an organized system of fire suppression. The State legislature set up a new commission headed by Charles Sargent which gathered new data. Finally it passed a bill drawn up by Fernow, which became law on May 11, 1885, setting up a three-man forest commission. This was just one month before Dr. Hough died at his home in Lowville, N.Y., just short of his 63rd birthday. (He had been born not far away in Martinsville, N.Y., July 22, 1822.) Ironically, Loring was also replaced as Commissioner of Agriculture in May 1885.

America owes a tremendous debt of gratitude to this broadly educated, energetic, dedicated public servant, through whose efforts forestry got its start and became established as a Federal Government activity of major importance. He also contributed greatly to the beginnings of State forestry. He holds an eminent place in the history of American forestry. Hough received high praise in a tribute from the most eminent forester of that day, Dr. Dietrich Brandis of Germany, in an article in Indian Forester magazine for October 1885.

Dr. Hough had nine children. One of his sons, Rorney B. Hough, compiled and had published a bulky 11-volume series on American Woods, Handbook of the Trees of North America, which contained actual wood samples; a set is at the Northeastern Forest Experiment Station, Upper Darby, Pa. Three sons (Franklin, Elida and Abraham) worked in professional jobs in Washington, D.C. A grandson, Philip R. Hough, was a 1917 graduate of the New York State College of Forestry, Syracuse, N.Y., and was the first superintendent of the George Washington Birthplace National Monument, Wakefield, Va. (1932-53). A granddaughter, Helen Yale Hough, lived in Washington, D.C., until her death three years ago. The only surviving grandchild of Dr. Hough is Edith D. (Hough) Greer of Portland, Oregon, who has two married sons and a married daughter and several grandchildren. She is a daughter of Rorney B. Hough Sr. Marjorie Hough, a granddaughter, was the last Hough to live in the Hough mansion. Also a daughter of Rorney B. Hough Sr. Two adults still bear the family surname. One is Robert L. Hough of Framingham, Mass., son of Philip R. Hough. The other is D. Patricia Hough of New York City, a reporter-researcher for Fortune magazine. She is a granddaughter of Rorney B. Hough Sr. A sister of Robert Hough, Barbara (Hough) Miller, lives in Middlethian, Virginia. There are 11 great-grandchildren surviving as of September 1976.

The late Ashbel F. Hough was a distinguished silvicultural researcher for the Forest Service at the Northeastern Forest Experiment Station at Upper Darby, Pa. His son, Walter A. Hough, is a forest fire specialist for the agency in Washington, D.C.
References for Biography of Dr. Franklin B. Hough


The Late Franklin B. Hough, by Dr. Dietrich Brandis. Indian Forester, 11 (October 1885), p. 429 et seq.


Leaders of American Conservation, by Henry Clepper, Ronald Press, New York, 1971, p. 172 (Note references following above biographical sketch.)


Memorial from the American Association for the Advancement of Science Upon the Cultivation of Timber and the Preservation of Forests. (In Report No. 259, 43 Congress 1, March 17, 1874.


Franklin Benjamin Hough was the first forestry agent of the United States Government and the first Chief of the Division of Forestry in the Department of Agriculture. The Division was the forerunner of the present Forest Service. In a real sense he, rather than Gifford Pinchot, was our first Chief. Pinchot himself called him "perhaps the chief pioneer in forestry in the United States."

Hough did a prodigious job in gathering and compiling existing forestry knowledge. He instigated action which resulted in the establishment of the office of forest agent in the Department of Agriculture, and was himself appointed to the position on August 30, 1876. He singlehandedly had stimulated the prestigious American Association for the Advancement of Science, of which he had long been a member, to formally urge Congress to set up the forestry office. The country owes a big debt of gratitude to Franklin B. Hough. Who was he?

He was a man with boundless curiosity, enormous energy, much self-confidence, a strong sense of public duty, and extremely wide interests in natural science and mankind. He was an omniverous reader in both French and English and could rapidly absorb a great deal of knowledge. With his strong self-discipline and enthusiasm he became highly knowledgeable in botany, geology, meteorology, climatology, statistics, history, and finally forestry. He was a competent compiler of local and regional history and battles of the Colonial period.

By profession and training Hough was a physician in northern New York (B.A., Union College, Schenectady, N.Y.; M.D., 1848, Western Reserve College, Cleveland State. He was also briefly a teacher and principal at private academies. His father was the first medical doctor in Lewis County, on the western edge of the Adirondack Mountains. Early close association with the unspoiled forests
encouraged the younger Hough to make long field trips on foot studying the
plants and geology of the countryside. He accumulated a large collection of
specimens which he scientifically classified, recorded and published. Leading
natural scientists of the time—including Louis Agassiz of Harvard, John S.
Newberry of Columbia University, and Spencer F. Baird of the Smithsonian In-
stitution in Washington—were impressed by the thoroughness of his writings
and collections, and many became lifelong friends and helpful critics. He
was an early member of the American Association for the Advancement of Science.

Hough's reputation for scientific care and thoroughness led to his ap-
pointment to direct the New York State Census in 1854 and again in 1865. In
1867 he supervised the census of the District of Columbia, and in that same
year assisted with preparations for the 1870 decennial Census of the United
States (for which Prof. William H. Brewer of Yale, another scientific friend,
compiled the forest statistics).

Hough's study of the statistics of these censuses, which revealed drastic
declines in lumber production throughout the Northeast in mid-century, caused
his increasing alarm for the future of the country's forest resources. He saw
that lumbering was migrating westward and national production was rising, but
he feared that the timber of these virgin areas would also prove finite. His
duties as member of the 1872 New York State commission on a state forest park
in the Adirondacks furthered his interest and concern with forest preservation.
The commission's report, prepared by Hough, greatly increased his prominence as
a forest expert. It is interesting to note that Dr. Hough at this early date
recognized the place of lumbermen in forest management while other commission
members tended to consider great state parks closed to cutting as the answer
to forest problems. He saw forestry as a composite of natural history, geology,
mathematics and physics. The New York State legislature in 1885, largely as a
result of Hough's 1872 report, created the great Adirondack Forest Reserve, the
first State forest reserve in the Nation.

At the outbreak of the Civil War in 1861, he volunteered as an inspector with the U.S. Sanitary Commission. The next year he became regimental surgeon with the 97th New York Volunteers. He wrote and had published accounts of the Virginia and Maryland campaigns under Generals McClellan and Pope. He translated a French treatise on military medicine.

By 1873 Dr. Hough was convinced of the need for strong action to protect forests from overexploitation. He prepared and delivered a report and a plea to the American Association for the Advancement of Science at its annual meeting in Portland, Maine, entitled "On the Duty of Governments in the Preservation of Forests." This paper showed the influence on him of the landmark book, "Man and Nature, or, Physical Geography as Modified by Human Action," by George P. Marsh, first published in 1864. Marsh was a Vermont Congressman and diplomat. He opened the eyes of the educated elite of his day to the fact that mankind had become a geologic force of awesome power.

In his report to the scientists, Hough described the ill effects of deforestation in Mediterranean and Middle Eastern countries where formerly forested and cultivated areas had become wastelands. He suggested that clearing of woodlands in the eastern United States might have increased floods and droughts. (At that time it was thought that forests had a more direct and pervasive effect on weather and climate than is believed today.) Hough urged that agricultural and horticultural societies inform landowners and others of the need to preserve forest resources. He advocated establishment of schools of forestry and outlined laws which he believed were needed to protect and regulate forest growth, and recommended measures that States might adopt to encourage better forest use. One proposal called for States to hold and manage forest lands returned to State ownership through nonpayment of taxes. In conclusion, Hough urged the scientific association "to take measures for bringing to the notice of our several state governments, and (to) Congress with respect
to the territories, the subject of protection to the forests, and their cul-
tivation, regulation, and encouragement."

The assembled scientists were impressed. The next day, August 22, 1873, a committee was appointed of nine prominent men, mostly botanists and geologists but also including a horticulturist, a soil scientist, and an anthropologist. The Nation's foremost botanist, Asa Gray, compiler of the still authoritative "Gray's Manual of Botany," was in the group, as was Prof. William Brewer of Yale, first man to deliver lectures on forests at an American college (that same year, 1873). So was George B. Emerson, Harvard botanist and author of a book on trees and shrubs of Massachusetts, and Josiah D. Whitney, California geologist for whom Mt. Whitney, highest peak in the Sierras, is named. They were some of the most eminent scientists of the day.

The Committee was directed to memorialize the United States Congress and the States, emphasizing the critical national need. The Committee also requested creation of a Federal commission for forestry, somewhat like that on fish and fisheries set up two years earlier, to investigate forest conditions.

Hough and Emerson went to Washington the following February to bring the Memorial to the attention of Congress, President Ulysses Grant, the Departments of Agriculture and Interior, and the Smithsonian Institution. They received much encouragement, but Congressional action proved difficult. They first talked with Joseph Henry, director of the Smithsonian, then several representatives and senators, and Frederick Watts, Commissioner of Agriculture, who got them an audience with President Grant. Willis Drummond, a conscientious Commissioner of the General Land Office, supported their proposal and secured the endorsement of his superior, Secretary of the Interior Columbus Delano. Drummond said the AAAS recommendations were "indispensably necessary" to stop destruction of timber and to provide for reforestation, and he drafted a proposed joint resolution for Congress to consider, forwarding it to Grant who
sent it to Congress on February 19, 1874.

The draft resolution and the Memorial, which asked for a study and report on the extent and distribution of woodlands, the influence of forests upon climate, and on European forestry methods which might be applied here, were referred to the public lands committees of the House and Senate. Emerson returned to Boston, leaving Hough to press for enactment. He met frequently with congressmen who showed interest in the proposal and spoke to the House public lands committee. Rep. Mark H. Dunnell of Minnesota became his sturdy ally, and had a bill drafted and introduced in the House of Representatives. The bill provided for appointment by the President and approval by the Senate, of a man "of approved attainments" who knew statistical methods and was familiar with forestry.

Much progress had been made, but Congress was preoccupied with other matters and the bill died in committee. Secretary Delano had also asked Congress that year without effect for action to stop destruction of timber on public lands. The year 1875 also passed without consideration of the AAAS proposal, although Commissioner Watts, in his 1875 report, noted that "forestry has excited much attention in the United States" due to "rapid deforestation," and he feared "a timber famine at no distant day" unless appropriate actions were taken. Carl Schurz, the next Secretary of the Interior, expressed similar fears in his annual report of 1877; he had hired special agents to halt timber thievery that year.

Meanwhile, Hough did a lot of studying and writing. While in Washington he had spent many hours at the Library of Congress reading everything he could find about forestry, including European methods. Seeking the origin of the word, he found it was "quite new to the" (English) "Language". He continued to study available materials on forestry during 1874 and 1875. Also, in 1874, he delivered a series of lectures at Lowville Academy, N.Y., in his home town, and to the New York State Agricultural Society in Albany. In 1875 he presented a series of lectures on forestry at the Lowell Institute of Boston, which Professor
Emerson attended and praised.

The topics covered in his lectures included: Distribution of forest species; Qualities, chemical properties and special products of various species; Tree growth and the physiology of timber; Timbers in commerce and their supply and demand; Planting and management, irrigation; Climate and its relation to forests; Destructive agencies and preservative processes; Ages of timber and time of cutting; Transportation of timber; Forest restoration; Protection afforded by woodlands; Investments and profits in forests; and Duties to the present in the management of woodlands. Hough also wrote and published the book, "Forestry in the United States" in 1875. He continued to practice medicine. He was indeed a busy man. He also lectured at the Peabody Institute in Baltimore.

Hough kept up a correspondence with Congressman Dunnell, determined not to "accept failure as a defeat". His confidence and foresight are shown in this prediction to Dunnell: "I am convinced that this is destined to be one of the great questions of the near future and that those who take active interest in it now, whether in or out of Congress, will deserve and hereafter secure an honorable place in the Annals of our Forestry."

Dunnell again introduced his forestry bill in January 1876. Hough again made the midwinter train journey to Washington in February to testify before the House public lands committee, but their interest appeared slight, although Dunnell was optimistic and confided to Hough that he was sure to get the appointment when the bill passed. At the end of the session when the bill appeared dead again, Dunnell got the House to transfer the item as a rider to the general appropriations bill, authorizing $2,000 for a forest study along with funds to distribute seeds for the Department of Agriculture. The maneuver succeeded and the bill with the forest study intact received final approval by Congress on August 15. It gave the Commissioner of Agriculture the right to make the appointment.
So the forestry agent and his office were placed in the Department of Agriculture, setting a precedent which continues to this day. Commissioner Watts appointed Hough on August 30, gave him a free hand and promised to make sure that the report was published. (That same year a bill was actually introduced into Congress to preserve forests in the public domain adjacent to navigable streams and their sources, but it did not pass. However, it was one of the forerunners of the landmark Creative Act of 1891 under which the forest reserves, later called national forests, were established, and which came under Forest Service administration in 1905.) Hough confided to his private diary on August 23, 1876 that he would "do credit to myself and the country". Fearful that the small fund would not permit him to do a complete job, he urged the public land committees at the next session of Congress in the spring of 1877 to increase the amount, but was unsuccessful. At that time he also presented his plan of work to Commissioner Watts, who approved it and gave his cordial encouragement.

Dr. Hough early became active in the new American Forestry Association, which was organized in 1875, and in the American Forestry Congress which was organized in 1882 and merged that year with the American Forestry Association (AFA). Almost immediately after being appointed the first forestry official of the United States Government, he read his 1873 paper ("On the Duty of Governments in the Preservation of Forests") at the second annual meeting of AFA in September 1876, held at Philadelphia during the Centennial Exhibition of the American Revolution. Hough became treasurer of AFA in January 1880.

By the time of his appointment as forestry agent, he had been gathering material related to forestry for at least five years. During his three visits to Washington he had spent considerable time reading, indexing and taking notes at the Library of Congress. He read nearly everything available on forestry there and at other libraries, in English and French. He compiled a list of sources of data throughout the United States, Canada and Europe. He wrote to
bureaus in every State and to lumber companies, manufacturers, dealers, college instructors in botany and forestry, hobbyists, nurserymen, horticulturists, and to government agencies abroad and their embassies in Washington. The forestry data of the 1870 Census were available, prepared by his friend Professor Brewer of Yale. He wrote to many Federal land offices and Army posts to secure information about the local forests.

Congress had provided Hough with no salary, no assistants, and no clerical help. He had no money for travel unless he took it out of the $2,000 appropriation. However, since he was a Government official, he could travel free by rail, and he took full advantage of this provision which was part of the land-grant bargain made when railroads were being built in mid-century. During the spring and summer of 1877 he travelled extensively throughout the country on this rapidly developing rail system. His itinerary covered more than 8,000 miles. He visited lumbering operations and mills, wood products industries, tree plantations, universities and colleges, State governors and legislatures and other prominent leaders. He urged encouragement of the practice of forestry through legislation. Michigan, Nebraska and Utah are mentioned in two of his diary entries. He started late in March from his home in northern New York, and returned in July.

During the next five months he assembled his mammoth report from voluminous notes and correspondence. It was a potpourri of miscellaneous materials reflecting the wide range of sources which he had contacted throughout this country, Canada, Europe and other countries. He assembled the report in two parts: one mainly narrative and the other mainly a historical statistical collection of data on the production, import and export of wood products from the United States and Canada for nearly a century. Congress was rather amazed at the size of the report, and set a limit of 650 pages but then generously approved a printing of 25,000 copies, highly unusual in that day for an unfamiliar subject. So the report was divided in two and the first one was printed in 1878.
The statistical compilation was printed in 1880. Both were of 650 pages, the limit allowed. Hough still kept gathering new material, and answers to his wide-ranging questionnaires kept dribbling in, so a third volume half the size of the first two was published in 1882. Hough also contributed substantially to the fourth volume, issued in 1885.

Volume I includes a general discussion of forests in the United States, and its timber problems and needs; the ineffective legislation which tried to allow use without abuse; the early naval timber reserves; abuses of timber on the public lands; the Timber Culture Acts which tried to encourage tree planting on farms; State efforts to encourage forest planting; suggestions for future management of Federal timberlands; advice and experience in sowing and planting here and abroad, including cultural practices; tree planting by railroads; use of wood for railroads, papermaking, charcoal, tanning, resin products, gas, distilled products, and cork; damages from fire, insects and diseases; forests and climate; reforestation experience in Europe; U.S. Census figures and various reports from the States on timber resources of the United States; and a list and discussion of forestry schools in Europe.

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By the time Hough was ready to submit his first report, Commissioner Watts, a Pennsylvanian appointed by Grant, had been succeeded by William G. LeDuc who hailed from Minnesota and had been appointed that spring by President Rutherford B. Hayes. However, LeDuc was favorably impressed by Hough, and referred to his "wonderful industry". Hough remained busy. The same month of December that he sent his report to LeDuc, he went on a tour through the
Great Lakes States and the eastern Canadian provinces, making contacts and gathering material for his next volume. Early in 1879 he received the $2,000 compensation for his year's work, and conferred with LeDuc who approved his plans for the second report. LeDuc's annual Report for the Department of Agriculture for the year 1878 praised Hough's efforts, and he asked for $6,000 for the forestry office. Hough lobbied with his friend, Repr. Dunnell of Minnesota, while in Washington early in 1879, for more funds for his office and for funds to print the second volume of his report. Congress did approve $6,000 for the office for the fiscal year 1879-80, but the President vetoed the printing bill and it was not approved printing of the statistical material comprising Volume II, until the summer of 1880 that Volume II could go to press.

Hough's recommendations of 1877 showed that he had already given them considerable thought. He suggested adoption of the practice already then in use for some time by Canada, of leasing timber on public lands to private operators for cutting, for a fee. He said the fee on a percentage of the value of the lumber or other wood products removed. He regarded this as a minimum means of conserving public timber, assuring careful use, retention of land in timber for the future, and paying for itself or yielding some net revenue, at the same time.

He noted the need to fix a time limit for the leasing privilege, and to set a size limit on trees to be cut, reserving young trees for future growth. He pointed out that this system would require at the least the employment of agents to prevent degradations and to collect revenues, but they would not have to be trained foresters. If a fee were charged by the acre, then an expert check of the forests in advance would be needed.

Hough conceded that in order to get the most from the public forests, skilled men would be needed to manage them, as was being done then in Europe, including forbidding fire and needless injury to the remaining growth. However, he noted that it would be difficult to do this since we had no trained men.
He pointed out that foresters require thorough training and preliminary practice under competent direction, as well as assurance of steady employment at a reasonable salary. All of these conditions applied then in Europe, but, he said, would not be so in this country for years to come. Neither did we have any large private forest owners who were willing to hire foresters, he added. Therefore, young men in America had no inducement to make forestry their career.

Hough then asserted, "so long as forestry remains in its present rude and elementary condition among us, there is more to be gained by teaching its general principles to many than its thorough details to a few."

Our first forestry agent applied this maxim through his public lectures, his official reports, and books on forestry, which he wrote. Besides his "Forestry in the United States," previously mentioned, he wrote in 1881 a more technical book, "Elements of Forestry," which was published in 1882. This was the first book on practical forestry written in the United States. Hough also embarked on a more ambitious project that same year—the monthly "American Journal of Forestry". Although it only lasted one year because of a lack of enough subscribers to pay for its costs, it was later resumed by others and today continues as the official magazine of the professional Society of American Foresters.

Hough's writing gained considerable public recognition, and he was widely acclaimed by scientists and reviewers in periodicals. His first "Report" was called by Bernhard E. Fernow, the German forester who had emigrated to the United States shortly before, as "by far the best and most useful publication of its kind on forestry in this country." At the same time he noted some unavoidable shortcomings due to Hough's lack of professional training in forestry. Ralph S. Hosmer, one of the first five men in the United States to take forestry instruction in Europe and one of Gifford Pinchot's first assistants when Pinchot succeeded Fernow as Chief of the Division in 1898, said Hough's "Elements of Forestry" was "one of the first modern books on forestry in the English language."
Franklin B. Hough

Hough's three Reports received a special diploma of honor award in 1882 at an international geophysical congress in Venice. At this congress, a prominent German forester and university professor from Wurttemberg remarked: "It awakens our surprise that a man not a specialist should have mastered the whole body of American and European forestry literature and legislation."

Hough's 1873 recommendation to the American Association for the Advancement of Science, that the governors and legislatures of the various States be actively support urged to / forest conservation so as to assure adequate supplies for future needs, was finally carried out in 1880.

The legislatures were asked to give attention "to the great and increasing importance of providing, by adequate legislation, for the protection of the existing woodlands of the country against needless waste, and for the encouragement of measures tending to the more economical use and the proper maintenance of our timber supply." Suggested were:

Tax laws and premiums encouraging and protecting trees planted along highways and in private plantations, State-operated plantations under the care of professional foresters, courses in "practical sylviculture" at educational institutions, laws to prevent forest fires and to impose penalties against willful and careless setting of fires, laws strengthening the powers of local officers to get assistance, adoption of suppression measures, creation of State commissions of forestry, awarding prizes for best essays and reports on practical forest culture and providing for publication and distribution of them.

The memorials to the States probably had some effect in getting forest commissions started, forestry laws passed, and forestry lectures underway at State colleges during the 1880s and 1890s.

The Department of Agriculture made Hough's office a Division of Forestry in 1881, following steady pressure by Dunnell, Ellicott, and Hough. Also, as they had planned, Hough went to Europe that summer to study European forestry and education and to confer with forestry officials and professors there. He compiled his third Report after his return. In it he amplified considerably his recommendation for American forestry.
Most of Volume III deals with damages to forests worldwide from fire, insects, and human waste and carelessness, together with means being used and suggested for control. The section on fire is very extensive and exhaustive for the time, composing the bulk of the book. It includes a general discussion, summaries of State legislation, reports of recent damage State by State, discussion of deliberate burning practices by settlers, Canadian reports about fires, Canadian laws to prevent and control forest fires, historical fires in America including Canada, foreign laws and experience with forest fires. This volume also reviewed the effects of forest use in various countries, the neglect and of forests in the public domain in this country, Canadian experience in controlling forest use. Included were the 1880 report of the committee on forest management of the American Association for the Advancement of Science, and its model Memorial to the governments of the various States which was sent out that year, after much delay. (It had been suggested by Hough in his 1873 talk.) The Memorial urged attention to the continuing excessive consumption and waste of the country's forests, and the need to conserve forests for future needs by encouraging "more economical use and the proper maintenance of our timber supply." Plantations under the care of professional foresters were urged, as were courses in "practical silviculture" at State colleges, and establishment of State commissioners of forestry.

By this time Hough had further developed and refined his ideas about the means the Federal Government should take to advance forestry. He recommended reservation of forest lands still in the public domain, but leasing cutting privileges under strict rules, as in Canada, and establishment of experimental stations for forest culture, principally experimental plantings. For the lush forests of the Pacific Coast States, he suggested Federal management using European trained foresters to stop of conspicuous waste already being noticed. Hough also suggested repurchase of private lands, both timbered and denuded, in certain situations as to even up reserve boundaries or in convenient locations.
The appointment of a new Commissioner of Agriculture, Dr. George B. Loring of Massachusetts, also a physician, by the incoming President, James A. Garfield, on July 1, 1881, had a dampening effect on Hough, although he was now Chief of a Forestry Division, not just a forestry agent, and Loring approved his planned trip to Europe. After his return they could not agree on plans for the Division. From the personal records of Hough and others it appears that Loring took a dislike to him and made things difficult for him. Congressman Dunnell tried but was unable to win Loring over, however Dunnell promised to back up Hough if needed. Loring appointed two forestry agents without consulting Hough, who did not want them, and held up publication of Hough's third report for a year, according to Hough, by not sending it to Congress until May 1882. He also refused to have Hough's report of his European trip published. However, Hough remained Chief of the Division for two years. Loring was a Harvard graduate, a member of the Massachusetts Board of Agriculture, and had been a Congressman.

Both Loring and Hough attended the organizational meeting of the American Forestry Congress in Cincinnati in April 1882. Hough had been invited to deliver an address, "Forestry of the Future," at the gathering, but Loring did not permit him to travel at Government expense or on Government time. Both served on the committee on permanent organization, with Hough taking the lead and receiving the support of the committee. Hough discussed how overcutting would make timber scarce and drive prices up, and presented a detailed economic justification for a national policy of reforestation. He may have mentioned some of his recommendations as given in his third "Report Upon Forestry," although it had not yet been published. Hough also presided at this section, devoted to papers covering governmental forest policy.

Another speaker was Bernhard E. Fernow, the German forester who was to succeed him in 1886 as Chief of the Division of Forestry. Fernow spoke on the historical development of the forest policy in Germany, including the development of the economics and management of State and privately owned forests. He
pointed out that in Germany, government regulation of privately owned forests had practically ceased except where it was required for public safety. Fernow, either at this time or later, commented favorably on Hough's suggestion (made in his 1882 Report) that private forest lands in the United States be purchased by the Government in certain cases; he pointed out that such a policy had recently been started in Germany. Fernow conceded that although "impetus to action will come mainly through private interest... the national government, as owner of large tracts of woodlands, is called to precede with good example in the management of the same." About 90 scientific papers were presented on trees at the Cincinnati meeting and several were of historic interest, but little was said about forest management. The Congress adjourned but planned to resume deliberations at Montreal later in the year.

Nathaniel H. Eggleston of Williamstown, Mass., a Congregational minister, was a delegate to the Cincinnati Congress from the Massachusetts State Board of Agriculture. He presided over the section on forestry education. He was appointed by Dr. Loring, who had been a fellow Board member, to succeed Dr. Hough in May 1883. (Coincidentally, Dr. Hough's first wife, who died young, was named Eggleston.) Eggleston's term lasted only three years before Fernow took over as (chief) the first professional forester to be director of the Division.

The original American Forestry Association held its last meeting in late June of 1882 in Rochester, N.Y., before merging with the Forestry Congress. Dr. Loring was elected president and continued as president at the meeting where the merger took place, in Montreal in August of the same year. Dr. Hough became recording secretary at the Montreal meeting, and again presided over one of the sectional meetings. The merged organization took on the name of American Forestry Congress. (It reverted to an Association in 1889.)

The meeting in Montreal had very strong Canadian participation, both government and forest industry. A member of the Canadian Council of Agriculture with forestry interests, Henri G. Joly of Quebec, was temporary president at the
Franklin B. Hough -16-

meeting. Sixty-four papers were presented. The Congress approved the recom-
mendations of a committee composed of Hough, Fernow, Joly, Sargent and others, urging the governments of the two countries each to create a protective force for their forests, financed by taxing the owners and leasers of timber lands, in order to reduce losses from forest fires.

Hough continued as recording secretary of the Congress in 1883 and Fernow became corresponding secretary early that year. The Division of Forestry was host to a special meeting of the Congress May 7-8, 1884 in Washington, D.C. An administrative staff for managing Government timberlands in the West was advocated by Hough, Fernow and some of the Division staff. Hough read a paper he had prepared on "The Proper Value and Management of Government Timber Lands."

The Division at this meeting endorsed Hough's proposals made in his third Report Upon Forestry, and urged the training of foresters at forestry schools, establishment of forest experiment stations in various parts of the country, reorganization of the Division of Forestry, hiring of competent men to administer Government forest lands, protection of the Government forests from fire, limitations and on cutting, sale of Government timber at close to actual value, surveying of timber on the public forest lands.

The Division suggested that 85 million acres of Government timber land be withdrawn from sale to individuals and from entry. A bill was introduced in Congress to accomplish these ends, but was not passed. In this year the Division was authorized to conduct experimental tests with timber, and its fourth Report on Forestry was published. The report contained four articles by Hough (use of wood by railroads, Ohio woodlands, lumber trade in New Hampshire and West Virginia, and maple sugar production).

In 1884 Hough took part in a renewed and successful effort to get New York State to establish a forest reserve. At the fourth American Forestry Congress in Saratoga, N.Y., he presented a paper on the subject and described a
Franklin B. Hough

bill he had drawn up for the purpose, including a provision for an organized system for fire suppression. The State legislature set up a new commission headed by Charles Sargent which gathered new data. Finally it passed a bill drawn up by Fernow, which became law on May 11, 1885, setting up a three-man forest commission. This was just one month before Dr. Hough died, just short of his 63rd birthday. Ironically, Loring was also replaced as Commissioner of Agriculture in May 1885.

America owes a tremendous debt of gratitude to this broadly educated, energetic, dedicated public servant, through whose efforts forestry got its start and became established as a Federal Government activity of major importance. He also contributed greatly to the beginnings of State forestry. He holds an eminent place in the history of American forestry.

Dr. Hough had nine children. One of his sons, Romeyn B. Hough, compiled and had published a bulky 16-volume series on "American Woods; Handbook of the Trees of North America," which contained actual wood samples. A set is at the Northeastern Forest Experiment Station, Upper Darby, Pa. A grandson, Philip R. Hough, was a 1917 graduate of the New York State College of Forestry, Syracuse, N.Y., and was the first superintendent of the George Washington Birthplace National Monument, Wakefield, Va. (1932-53). A granddaughter, Helen Yale Hough, lived in Washington, D.C., until her death three years ago. Several sons worked in Federal or private professional jobs in Washington. A son of Philip R. Hough, Robert L. Hough, is the only one of his generation carrying the family surname. Born in Washington, D.C., in 1935, he now lives in Framingham, Mass., and has a son, Philip J. Hough, born in 1958. Robert's sister, Barbara Hough Miller, lives in Midlothian, Va.

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Robert's sister, Barbara Hough Miller, lives in Midlothian, Va.
FRANKLIN BENJAMIN HOUGH

19th century knowledge was such that a determined individual could acquire a respectable overview of a variety of disciplines. Franklin Hough was just such an omniverous amasser of knowledge and scientific fact. His interests ranged from the study of our native American inhabitants to forestry. He was the indefatigable 19th century man titillated by ever expanding vistas of an increasingly sophisticated world. His interest in forest preservation was a natural by-product of an adventuresome intellect. His concern for our forest resources was timely; the pioneer passion for clearing the land was beginning to take its toll.

Dr. Horatio G. Hough, Franklin's father, emigrated from Massachusetts to New York State in 1797. He was the first physician to settle in Lewis County. Franklin, born July 20, 1822, in Martinsburg, Lewis County, New York, would follow in his father's professional footsteps. The precocious youngster would not however, limit himself to life as a small town physician.

Dr. Hough's formal education began at Lowville Academy in Lewis County. He later attended the Black River Institute in Watertown, New York. At Union College, Hough distinguished himself as an advanced student, entering the College in 1840, he graduated in 1843. In 1846, he entered Western Reserve Medical College, receiving his M.D. in 1848. The two years between college and medical school were spent teaching and as Principal of an Academy in his native New York state. This was also a period of personal tragedy for Hough. A year before entering medical school he married. His first wife died in 1845 leaving him a daughter. Hough remarried however, in 1849, and had eight children by

Maria C. Eggleson.
his second marriage. His enthusiasm for all scientific research combined with reputedly astonishing powers of mental concentration was noted during his days as student and academician. His academic discipline and an eclectic taste for knowledge enabled him to successively become a competent botanist, geologist, compiler of history, statistician, meteorologist, climatologist, and finally forester. He was a highly knowledgeable in the field of natural history and battles.

Returning to Lewis County in 1848 from Western Reserve University, Dr. Hough set up shop as a physician in Somerville, New York. Here his medical practice did not prevent him from making comprehensive botanical and geological studies of the surrounding countryside. His extensive field trips, made on foot, yielded him the beginnings of what was to become a large personal scientific collection. His observations were recorded and published. Leading scientists of the day including Louis Agassiz, John S. Newberry, and Spencer F. Baird were impressed by the thoroughness of Dr. Hough's writings and collections. Many became lifelong friends and helpful critics. A mineral Houghite was named in his honor.

Hough's intellectual curiosity was not limited to scientific research. Besides, or perhaps in spite of his medical practice, and his scientific interests, he began to compile and research historical data. His historical publications included Lewis County and New York State histories, numerous publications on the French and Indian wars and on the American Revolution. His mastery of French would later allow him to translate French accounts of North American warfare as well as a French treatise on military medicine entitled "On Military and Camp Hospitals".

Dr. Hough's increasing prominence as a man of letters, a collector, and
as a thorough scientist made him a natural choice to direct the New York State census in 1854. Again, in 1865, he was chosen as Superintendent of the New York census. In 1867, he supervised the District of Columbia census and in 1870 became Superintendent of the United States census. These census statistics were later to form the basis of Dr. Hough's concern for United States forest resources.

Hough continued his New York medical practice until the Civil War. At the war's inception he became an inspector with the United States Sanitary Commission. Later, in 1862, he enlisted as regimental surgeon with the 97th New York Volunteers. His accounts of Virginia and Maryland Campaigns under Generals McClellan and Pope were published.

After the war he resumed his medical practice in Lowell, New York, but was soon called upon to head the 1865 New York census. The census statistics confronted Dr. Hough with an alarming trend. Timber production in New York state was declining, the lumber industry was migrating to more fertile territory. National production of timber was rising while, in just the ten year census period (1855–65), local supplies were showing signs of exhaustion. What did these data bode for the future? As the demand for timber increased would national timber resources prove finite, as statistics showed New York state's to be? Later duties as a member of a commission appointed in 1872 to look into the possibility of a state park in the Adirondacks furthered Hough's interest and concern with forest preservation. The commission's report, prepared by Hough, greatly increased his prominence as a forest expert. It is interesting to note that Dr. Hough, at this early date, recognized the place of lumbermen in forest management while other commission members tended to consider great state parks the answer to forest problems.
In 1873, Hough, now convinced of forest fragility in the face of exploitative, unmanaged use, addressed the American Association for the Advancement of Science, "On the Duty of Governments in the Preservation of Forests." In his address he vividly depicted the historical consequences of deforestation citing "the presence of stately ruins in solitary deserts..., of "eastern countries, once highly cultivated and densely peopled, but now arid wastes." He went on to describe forest conditions in the United States, linking an increase in floods and droughts to the clearing of woodlands. He suggested that agricultural societies and similar associations be encouraged to educate rural populations and landowners to the need for preserving our forest resources. He advocated the creation of schools of forestry. He outlined laws needed to protect and regulate forest growth and recommended measures states might adopt to encourage better forest use. One proposal called for the retention and management by the state of forest lands returned to state ownership through non-payment of taxes. In conclusion he urged the Association "take measures for bringing to the notice of our several state governments and Congress with respect to the territories, the subject of protection to the forests, and their cultivation, regulation, and encouragement."

The Association was impressed. A committee was formed to memorialize Congress and the state legislatures on the importance of formulating legislation to encourage forest preservation and cultivation. With Dr. Hough as chairman the committee began its task. Working with Hough were some of the most eminent scientists of the day, including Asa
Gray, the country's foremost botanist; Eugene Hilgard, University of Michigan Professor and well-known soil scientist; William H. Brewer, of Yale, and California geologist, J.D. Whitney (Mt. Whitney was named in his honor). This small group precipitated the events leading to government concern with forests and eventually to a federal forestry program. Also, George R. Emerson, educator and author of a book on trees of Boston; Lewis H. Morgan, anthropologist of New York, later president of AAAS; John S. Newberry, botanist and geologist of Ohio; and Charles Whittlesey, Ohio horticulturist.

Its objective clearly in mind, the committee prepared a memorial emphasizing a critical national need for forest preservation and cultivation. A request was also made for the creation of a federal commission for forestry—somewhat on the order of the Commission of Fish and Fisheries established in 1871—to investigate forest conditions. Despite presidential acceptance and Interior Department approval, the memorial was met with benign apathy when submitted to Congress. A bill providing for the appointment of a commission to investigate forest destruction and preservation was [hammered out] by the House Committee on Public Lands in 1874. But to no avail; an indifferent congress could hardly be cajoled into debating the measure, let alone into making a decision.

Federal forestry had to wait until 1876 for its "debut." A much modified form of the bill was attached, almost unnoticed, as a rider to a clause in the Agriculture Appropriations bill, signed by President Grant August 15, 1876. The rider authorized Agriculture Secretary Frederick Watts the sum of $2,000 to be utilized by the Department in determining annual lumber consumption, the influence of forest upon climate, the sufficiency of supply for future needs, and foreign forestry methods applicable to United States effort to preserve, restore, and plant forests. Though was appointed to gather the data. Designated special agent, he became the progenitor of subsequent federal forestry officials in the Department of Agriculture.
Our present-day Forest Service with its far-flung network of National Forests, administered from within the Department of Agriculture evolved from this "insignificant" rider passed in 1876 by a Congress largely unaware of the bill's future import.

With his characteristic capacity for hard work Dr. Hough began immediately to compile the information requested by Congress. In pursuing the information needed for his first report, and despite a limited budget, Hough journeyed over 8,000 miles throughout the country visiting lumber districts, tree plantations, and wood products industries. He corresponded with European Forestry experts. Federal land offices throughout the country were circularized, eliciting information on forest conditions. From wood using manufactures he received data about kinds and grades needed, sources and sufficiency of supply and rates of consumption. He visited state governors and legislatures seeking advice and aid in implementing state forestry measures. A number of states were receptive to Dr. Hough and the need for forest legislation; their legislatures began to consider the forest question.

In a year's time Hough had amassed a tremendous amount of material. He submitted his 650-page first "Report Upon Forestry" to Agriculture Commissioner William G. LeDuc—Commissioner Watt's successor—in 1877. Commissioner LeDuc commented on Dr. Hough's "wonderful industry." The report was transmitted to Congress, December 13, 1877, by President Rutherford B. Hayes. Congress ordered 25,000 copies printed and distributed, a large order for the time on a relatively esoteric subject. His second report, compiled with equal assiduousness, was completed in 1878. Congress, however, did not supply the necessary funds for printing until late 1880. These two reports reviewed the United States forest
situation from the beginning of our government to Hough's time. Aside from the mass of historical and statistical data on forest resources represented in the reports, Hough included his recommendations. One far-seeing recommendation suggested the establishment of research stations in forested areas to investigate forest fires and to observe the weather as means of determining forest influence on climate. Hough's third and final "Report on Forestry" was published in 1882. The previous year he had been sent to Europe to survey European forest practices and education. His findings formed an important part of the third report.

Dr. Hough's three reports were widely acclaimed by specialists, the public, and favorably reviewed in periodicals. In Europe they were awarded a diploma of honor at an international geophysical congress held in Vienna in 1882. At the congress a prominent German forester remarked: "It awakens our surprise that a man not a specialist should have mastered the whole body of American and European forestry literature and legislation."

Astonishingly, Hough found time in 1881 to write his book "Elements of Forestry" published in 1882. His "Forestry in the United States" published in 1875 was probably the first book on practical forestry printed in the United States and is now considered a classic in forest literature. Hough's two books and three reports were for some time the only comprehensive references available on American forestry. They played an undeniable role in bringing about the public's evolving consciousness of America's forest needs.

1882 was Dr. Hough's last full year as leader of what now was the Divi-
sion of Forestry—the forest agency in the Department of Agriculture was given Division status in 1881. Hough founded the American Journal of Forestry in 1882. This first journal of technical forestry published in the United States applied itself to the problems of forest management and forest tree planting. Financial losses limited the magazine's publication to one year but it did chronicle an important year in American forest history and remains an important record of the era.

A new Commissioner of Agriculture from Massachusetts, Dr. George B. Loring, replaced Dr. Hough in 1883 by Nathaniel H. Claus, He remained with the Division to assist in the preparation of the fourth official report published in 1885. Shortly before his death, June 11, 1885, Dr. Hough drafted legislation creating a New York state forestry commission—his last important contribution to American forestry.

Franklin Hough, our first federal forest agent, did much to inculcate into the public consciousness the need for responsible use of our forest resources. He performed the spade work that would later allow federal and private forestry to take root.

References:
Franklin B. Hough, A Once Forgotten Pioneer of American Forestry
(Talk to Lewis County, New York, Historical Society, Lyons Falls, New York)
May 19, 1977

by
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When your Director, Arthur Einhorn, asked me to come to speak to you about Dr. Franklin B. Hough, I was glad to oblige. I had been doing a lot of reading about him, reading his first forestry reports, reading new material brought out in the new book "The U.S. Forest Service: A History" by Harold Steen of the Forest History Society, reading old magazine articles, reading about him in Andrew Rodger's biography of Bernhard E. Fernow. Mr. Einhorn furnished me with much material--his own article on Dr. Hough's pioneer anthropological work, Dr. Hough's article on the future of forestry, Dr. Detrich Brandis' obituary and tribute.

What is so striking to any one who goes through this material is the man's wide breadth of interests, his great curiosity, his quick grasp of new subjects, his knowledge of the interrelationships of the various sciences and humanities. And he was not just a dilettante. Although largely self-trained, he was accepted by so many of the most prominent scientists of his day as an equal and an authority. But, he also had the artist's and poet's sensitive appreciation of the beauty of nature, and the beneficial effects of communion with nature on the mind and body of man.

He was truly the complete man, the well-rounded man, the well-informed generalist of the type of Washington and Jefferson and Franklin, who did not limit himself to compartments and narrow fields. His curiosity, his energy, his dedication to public needs, and the future of his country, his overwhelming compulsion to find out and to write and tell everyone what he had found and

* - a German forester who became Chief U.S. Forester after Hough.
† - the leading German forester of the 19th Century, whom Hough met on his forestry tour of Europe in 1881.
learned. These qualities are so evident to anyone who reads him and about him. And he was able to move others to see what he saw and feel what he felt.

His great achievement was to get the foremost scientists of his day to press his project for a comprehensive nationwide study of forests and lumbering—and to get governments to take measures to assure the management of forests in the public interest to assure necessary timber harvest, but protect the land and assure continuous supplies for later generations. This was his mission... And he succeeded magnificently. It was a great personal triumph... He not only clearly saw the need; he composed talks and articles; he spoke in Lowville and Albany and Boston and Baltimore—and he was able to get the use of a powerful forum, the American Association for the Advancement of Science, to which he long belonged, to press it... He got the scientists to support him. Then he went to Washington himself to urge the program endorsed by the scientists on Congress and the President, who was Ulysses Grant. Fortunately there was a conscientious director of the General Land Office at the time, Willis Drummond, and a good Secretary of the Interior, Columbus Delano. He stayed in Washington for months, speaking at hearings, talking to Congressmen, and reading up on forestry in the Library of Congress. He endured the usual disappointments and delays, but persisted and was successful although it took two and a half years. His dedication, energy, and persistence are remarkable.

Then he finally received the appointment—and his job had just begun. He had to do it all almost alone. He wrote hundreds of letters to gather information. He traveled thousands of miles on the new railroads of the time to meet State officials and lumbering men, to make his own inspection of conditions. He was very active in the new forestry organizations of his time, American Forestry Association, and American Forestry Congress, which
finally merged, and the Association is still going, bigger and stronger than ever.

I am sure much of this is not new to most of you. You already know much of Dr. Hough or you would not be here tonight, you would not belong to this Society. When Mr. Einhorn asked me to come, I really wondered what I could tell you that you didn't already know. So I told him that I would not give a formal speech. I would give some general remarks, and then ask for questions. I know how boring long speeches can be, and I don't intend to give one. With Mr. Einhorn's help, I will try to answer your questions. We have copies of American Forests magazine which has my article on Dr. Hough, and also reprints of the article which you are welcome to have. This magazine, of course, is the official organ of the American Forestry Association.

When you look the article over, you will see how comprehensive Dr. Hough's official reports were for his time. Although not organized into a science of forestry, they brought together valuable material from all over the world. And his recommendations for public forestry in the United States showed familiarity with the systems in use in Canada, Europe and New Zealand, and his suggestions were excellent and practical for the times. With his help and others, the Federal Government finally did set aside great areas of public forests in the West, and finally acquired many in the East where they had been heavily damaged, but were helped to recover and now are priceless national assets.

As all of you know, his contributions to forestry and conservation in his own State of New York were great. He was one of the most influential members of the first Adirondack Commission in the 1870s, whose report he himself wrote. And again in 1884, when he drafted a bill and lobbied for it, he was asked to speak to a legislative committee about the Reserve, and...
He had major responsibility for actual establishment of this great reserve, first State forest reserve in the Nation and still by far the largest. It is larger than Yellowstone National Park. As you probably know, Hough Peak in the high Adirondacks was named in his honor. It is over 4,000 feet high and just a few miles east of Mt. Marcy—highest in the State.

Hough's recommendations in his Federal Reports Upon Forestry included many which were later carried out by the Federal Government and the States—including management of the forests, selling of timber under strict regulation, planting of trees, fighting fires, establishing forest experiment stations, establishing forestry schools, and others.

This Centennial of Federal Forestry project which the Forest Service has engaged in has brought back recognition of Hough's great contributions among the present generation of foresters among us, as well as the general conservation-minded public. Unfortunately, he and his work had been largely forgotten by most of our people in the Forest Service, and even by many of his own descendants. We have been able to trace most of his descendants, with the help of a genealogical record left by a granddaughter, Helen Yale Hough, in the Library of Congress, and page of a will of another granddaughter, provided by Mr. Fred Johnson, State Regional Forester in Lowville. We are also indebted to The New York Division of Forestry in Albany for photographs of the early engraving of Dr. Hough used in the American Forests article, and to your Society for prints of the portrait of Dr. Hough which hangs in Union College in Schenectady. This was his alma mater—he graduated in 1843.

Dr. Hough inspired one of his sons, Romeyn Hough, to study and write about forestry. Romeyn has two books to his credit, one on American Woods, and one on Trees of North America. Also Hough's granddaughter, Marjorie Hough, carried on much historical work here in Lewis County, as you know.
and as Mike Blair described in your recent Journal. One granddaughter is still living, Edith Greer of Portland, Oregon. And Patricia Hough, great-granddaughter, is an associate editor (reporter-researcher) for Fortune magazine.

We in the Forest Service in Washington and in our regional offices all over the country called attention to our Centennial of Federal Forestry which Dr. Hough initiated by bringing about his own appointment 100 years ago. We distributed this one-page summary of which I have brought some copies to show you here. This summary was printed in the Congressional Record of September 15, 1976. It was inserted by Representative Frederick W. Richmond of New York State, a member of the House Agriculture Committee.

Also, we had a symbolic tree-planting ceremony in our Department patio. The former Secretary of Agriculture, Earl Butz; our Chief of the Forest Service, John McGuire; and officials of the National Atmosphere and Space Administration, including astronaut Rusty Schweickert; and men from the White House participated. The tree was a loblolly pine seedling (a species of southern yellow pine), which had been grown from seeds taken to the Moon on the Apollo 14 trip in 1971. Also, our artist, Rudy Wendelin, drew a wash portrait of Dr. Hough, which we distributed copies of widely, including this Museum. The original framed portrait is in our Washington Office and will later be displayed permanently at our Forestry Museum at Asheville, North Carolina. That is where practical field forestry had its start in the United States, under Gifford Pinchot and Carl Schenck. Schenck was a German forester who started the old Biltmore School. Both men worked as foresters on the old Biltmore Estate of George Vanderbilt, of the famous wealthy railroad family.

There are many interesting sidelights to Dr. Hough's career. He had triumphs and he had setbacks. Unfortunately a new Secretary of Agriculture from
Massachusetts, George Loring, also a physician, did not appreciate Dr. Hough. He was perhaps jealous of him and dealt very unfairly with him, in spite of Hough's three historic reports on forestry, and after Hough had been honored for his work by an international conference in Venice. Loring replaced Hough as Chief of Forestry in 1883 by a friend of Loring, but Hough continued to work for the Division for another year. Hough did become discouraged at this time, and in February 1884 wrote: "I do not see much hope of any thing being done by Congress." He said he relied on "an awakening of popular interest and a diffusion of intelligence among the people, especially the owners of land." He added that "ere long they will begin to learn that dollars can be earned in growing trees as well as grain." However, despite this humiliation, Hough was highly esteemed by his associates and friends and the men he worked with in the forestry associations. And his high place in the ranks of American forestry is unquestioned today. He was aware of the historic position he had taken. Quotes from his personal diaries tell this.

In a letter to a Minnesota Congressman, who was helping him influence the Congress to get a bill passed to create the forest agent's office, Dr. Hough said (This was after the bill failed to pass the second time.): "I am determined not to accept/failure as a defeat. I am convinced that this is destined to be one of the great questions of the near future, and that those who take active interest in it now, whether in or out of Congress, will deserve and hereafter secure an honorable place in the Annals of our Forestry." His prediction of course did indeed become true.

The New York State Board of Regents thought so much of his work in the State that they conferred on him an honorary Doctor of Philosophy degree. And at the 50th anniversary of the establishment of the Adirondack Forest
Reserve in 1935, his work was praised and a portrait was commissioned which now hangs in Union College. Not only a mountain but a mineral, Houghsite, perpetuates his name. (It is a variety of hydrastalcite, a pearly-white mixture of aluminum and magnesium hydroxides.)

The best tributes to Dr. Hough were given by others. In 1886, David Murphy, Secretary of the New York State Board of Regents, said: "In all things he was the genuine man, the true and honest heart which despises shams, one of the world's workers and not an idler."

Dr. Hough, like Gifford Pinchot and other Forest Service leaders, combined both the esthetic and utilitarian viewpoints of forest lands. This is shown by a portion of a chapter of his autobiography which Hough wrote in April or May of 1885, just before his death. This was printed in your Lewis County Historical Society Journal in December 1976.

In this fragment, Hough referred to the old French Ordinance of Waters and Forests under Louis the 14th in 1669 which greatly restricted the grazing and cutting of woodlands, both private and public.

He said that he preferred to see forests used to make the many products that people need -- lath, boards and shingles for buildings; hoops, staves and heading for tubs and barrels; wood for grinding into paper pulp; stakes and poles for fences and fence posts; wood for railroad ties; tree tops, branches and chips for fuel and charcoal. Like Pinchot, he emphasized that forests could be viewed as a crop, that with good management could be continuous without harm to the land.

However, Hough also pointed out that such forest management does not mean that we cannot also enjoy, in his words, "everything that is beautiful and harmonious in nature. The opening buds of spring, the verdure of summer, the fruits and brilliant foliage of autumn, and even the snowy mantle of winter have their pleasures which none can so thoroughly enjoy as those who live.
among them. There is music in the morning dawn and the evening twilight, in
the murmuring noonday breeze, and in the sighing of midnight winds through
November pines." Hough mentioned that ___, to quote, "is aesthetic and
sentimental in groves and woodlands, and much ___ is romantic and poetic in
wild wood haunts, cool shaded streams where lovers like to walk, sylvan fountains,
singing birds..." He was no doubt recalling the long forest walks of his boy-
hood in these hills. When older he would walk 20 miles or more a day collecting botan
and mineral specimens.

Thank you for this opportunity to meet with you and talk about this
wonderful man. If you have any questions or more information, please give
them to me.
BIBLIOGRAPHY for DR. FRANKLIN BENJAMIN HOUGH (1822-1885)

First Federal Forestry Agent in the United States (1876-1883)


**Franklin B. Hough, A Tribute** -- *American Forests* magazine, July 1922.


**Reports Upon Forestry.** 4 volumes, published in 1877, 1880, 1882 and 1884. (First three compiled by F.B. Hough. (U.S. Government Printing Office.)

"On the Duty of Governments in the Preservation of Forests" -- Speech by Dr. Franklin B. Hough, delivered to the 1873 annual meeting of the American Association for the Advancement of Science, Portland, Maine. (Proceedings 1873 The American Forestry Association)

A collection of Hough's public and private papers is in the manuscript and history section of the New York State Library in Albany, New York. It includes numerous letters and diaries.


Also see *Commissioners of Agriculture, Annual Reports*, 1875-1883.

"Memorial from the American Association for the Advancement of Science upon the Cultivation of Timber and the Preservation of Forests. In Report No. 259, 43 Congr. 1, March 17, 1874."
BIBLIOGRAPHY for DR. FRANKLIN BENJAMIN HOUGH (1822-1885), Continued


*Progress of Forestry Investigation in the U.S. Dept. of Agriculture, 1880. 672 pp., illustrated, indexed. GPO, 1881.


Hough prepared a series of forestry lectures in 1874, which he delivered from time to time.


*The Late Franklin B. Hough -- tribute by Dr. Dietrich Brandis, Germany's master forester, in the Indian Forrester, Vol. 11, October 1885, p. 429.


(Hough wrote 78 papers and books on a wide variety of subjects during his lifetime)

*There is an Autobiography written by Hough in manuscript form (unpublished) in the New York State Library in Albany, N.Y.

The numerous papers of George B. Emerson, close friend of Hough, include many letters from Hough, in the Massachusetts Historical Society in Boston. The Society appears to make access difficult, from the experience of Harold K. Steen of the Forest History Society.

Franklin B. Hough's son, Romeyn Hough, published a bulky 10-volume series on Wood Identification containing actual wood samples, including hinges in the binding. A copy is at the Northeastern Forest Experiment Station and at the Forest History Society in Santa Cruz, Calif., and Duke University. Also Patricia Hough, Robert Hough and Barbara Hough Miller. He also wrote "Trees of North America."
Notes on Ancestors of Dr. Franklin B. Hough of Lowville, N.Y., first forestry agent of the Federal Government, 1876-1885.


The Hough families came from the following countries to the United States: Canada, Ireland, England, Germany, Norway, and Austria. They and their descendants (according to Granville Hough, 1971) pronounced their name as corresponding to the following sounds: huff, how, hoe, hoaf, hoak, hoff, high, and huft.

The Huff families came from England, Germany, Norway, Russia, Canada, and Holland. Many adopted the spelling Huff as a simplification of more complex or less popular forms, such as Hougham, Houghtaling, Houghland, Hufstadler. Hoff is another variation, and there are some 20 other various spellings. Some English Hough families who preferred the Huff pronunciation changed the spelling to Huff.

Dr. Franklin B. Hough's ancestor was William Hough, who was a carpenter from Cheshire in the west of England, who came to Boston in the Massachusetts Colony in 1640 with the party of Rev. Richard Blyman. William Hough married Sarah Caulkins in 1645. They have probably more descendants than any other of the Hough immigrants. He was the third recorded Hough to come to America, and the second to New England; the other went to Virginia. The William Hough family stayed in New England for several generations. (The direct male line is: William, Samuel, James, Daniel, Thomas, Horatio Gates, and Franklin B.)

William Hough lived first in Gloucester, Mass., then moved to Saybrook, Conn., then to New London, Conn. He was born in 1619 in Westchester, Cheshire, England, and died in 1683 in New London, Conn. His first son, Samuel, was born in Saybrook in 1652 and died in 1714 and is the ancestor of Franklin B. Hough. Samuel was married first in 1679 and again in 1685, this time to Mary Bates. Tracing only the direct line to Franklin B. Hough, the descendants are as follows:

James Hough, son of Samuel and Mary, was born in 1688 and was married in 1711 and again in 1718, and died in 1740. His son Daniel, by his second wife, Sarah Mitchell, was born in 1721 and died in 1768. Daniel married in 1741 and again in 1743. His son Thomas, by his second wife, Violet Benton, was born in 1749 or 1750, married Rebecca Ives in 1772, and died in 1815. Thomas was the grandfather of Dr. Franklin B. Hough. Thomas lived in Southwick, Mass., and served in the Massachusetts militia during the Revolutionary War. His second child was Horatio Gates Hough, born 1778. Horatio G. Hough married Martha Pitcher (Year - ?) probably in the vicinity of Southwick, Mass., and they moved to a farm near Martinsburg, Lewis County, in north-central New York State, just west of the Adirondack Mountains and east of Lake Ontario. When Martinsburg became a town in 1814 he was one of the first town commissioners. He was the first medical doctor in Lewis County. Asahel Hough, the town inspector in 1814, was a distant cousin.

Franklin B. Hough (first named Benjamin Franklin Hough), was born in 1822 on the farm near Martinsburg, Lewis County, N.Y. (See the genealogy compiled by Miss Helen Yale Hough in 1969.) Franklin Hough was the son of Horatio Gates Hough and Martha Pitcher Hough. Franklin B. Hough died June 11, 1885 at his home in Lowville, N.Y.
Franklin Benjamin Hough (1822-1885)
First Federal Forestry Agent (1876-1881)
First Chief of USDA Division of Forestry (1881-1883)

Franklin Hough was born on July 22, 1822, on a farm near the hamlet of Martinsburg, in Northern New York State, and became a physician, like his father. He learned of serious forest depletion while directing the New York State censuses of 1854 and 1865, and developed broad interests in natural sciences and forest conservation. In an address at the 1873 annual meeting of the American Association for the Advancement of Science (AAAS), he urged Congress and the States to act on behalf of forest protection. AAAS decided to petition Congress to create a commission to investigate and report on forest conditions, wood products, future wood supplies, the influence of forests on climate, and European forestry practices. In 1880, AAAS sent memorials to all the States urging the governors and legislatures to actively promote conservation and economical use of forests, public and private, through legislation, the creation of forestry commissions, and the establishment of college forestry courses.

In 1876 Congress responded to the AAAS petition by appropriating $2,000 for a study to be undertaken by the Department of Agriculture. Hough was named to conduct this inquiry. Gathering a vast amount of data through wide reading and numerous mail inquiries and extensive travels in the United States, Canada, and Europe, he compiled three large volumes and most of a fourth. These Reports Upon Forestry (1878-1884) embodied Hough's recommendations for a strong policy for the reservation and management of Federal forest lands, including the control of timber harvesting on them by leases similar to those used in Canada; the establishment of Federal forest experiment stations and tree plantings; and a vigorous Federal effort to educate the public on the need for forest protection and management.
Hough became Chief of the Division of Forestry when it was created in 1881 and he spent the summer of that year in Europe gathering information about forestry practices and speaking with prominent forestry leaders. He wrote the first book on practical forestry in the United States, \textit{Elements of Forestry} (1882). For a year, 1882-1883, he also edited and published a monthly \textit{American Journal of Forestry}. In 1882, in recognition of his tireless work to promote forestry, Hough was awarded a special diploma of honor by an international geophysical congress in Vienna. He took a prominent part in the young American Forestry Association (AFA) and in its merger with the American Forestry Congress in 1882 at Montreal. He served AFA as its treasurer in 1880 and later as its recording secretary.

Hough also promoted establishment of the Adirondack Forest Preserve and commission by New York State, as did Bernhard E. Fernow, a German forester who became chief of Hough's Division of Forestry in 1886. Fernow called Hough's first \textit{Report Upon Forestry} "by far the best and most useful publication on forestry in this country." Gifford Pinchot, who succeeded Fernow in 1898, called Hough "perhaps the chief pioneer in forestry in the United States." Dietrich Brandis, the leading German forester of that period, also had high praise for Hough.

Despite his accomplishments, Hough was removed as Chief of the Division of Forestry in 1883 by Commissioner of Agriculture George B. Loring. Hough remained, however, as an agent of the Division until 1885. He died at home in Lowville, N.Y., on June 11 of that year, a month after the Adirondack Preserve was established, of a respiratory ailment aggravated by hectic activity on behalf of the new law during the previous winter. He had almost completed his 63rd year.

--Frank J. Harmon
Biographical Sketch of Franklin B. Hough

By Frank J. Harmon

Franklin B. Hough (1822-1885) was a rural upstate New York physician with broad interests in natural sciences and forest conservation who became the first forestry agent of the United States Government in 1876, largely through his own efforts. Gathering data from wide reading, and through numerous mail requests and extensive travels in this country, Canada, and abroad, he compiled three voluminous reports for Congress, and most of a fourth, which were published between 1878 and 1884. They included his recommendations for (1) a strong Federal forest policy for reserving and managing public lands by using a leasing procedure to control timber harvesting similar to one in Canada, (2) for forest experiment stations and tree plantings, and (3) a vigorous effort to educate the general public on the need for forest protection and management.

Dr. Hough had become aware of serious forest depletion while directing the New York State censuses of 1854 and 1865. At the 1873 annual meeting of the American Association for the Advancement of Science (AAAS) he urged Congress and the States to act. AAAS asked Congress to create a Federal commission to investigate and report on forest conditions. The report would include data on woodlands and wood products, suggest measures to assure wood supplies for the future, examine influence of forests on climate, and provide data on forestry practices in Europe. In 1876 Congress authorized $2,000 for the study by the Department of Agriculture and Hough was appointed to conduct it. He had been reading, writing, and speaking on forestry for five years.
Dr. Hough became Chief of the Division of Forestry when it was created in 1881 and spent that summer in Europe gathering information about forestry practices and speaking with prominent forestry leaders there. He wrote the first book on practical forestry in the United States, *Elements of Forestry*, published in 1882. For a year, 1882-83, he also wrote and published a monthly *American Journal of Forestry*. In 1882 he was awarded a special diploma of honor by an international geophysical congress in Vienna, in recognition of his tireless work to promote forestry. He took a prominent part in the young American Forestry Association, of which he became treasurer in 1880 and later recording secretary, and in its merger with the American Forestry Congress in 1882 at Montreal. His 1873 recommendation that the governors and legislatures of the various States be urged to actively promote conservation and economical use of forests, public and private, by proper laws, including state forestry commissions and college forestry courses, was carried out by AAAS in memoranda to all States in 1880.

Hough was very active in getting the Adirondack Forest Reserve and Commission established by New York State, as was B. E. Fernow, the German forester who became Chief of Hough's Division in 1886. Fernow called Hough's first report "by far the best and most useful publication of its kind on forestry in this country," and Gifford Pinchot, who succeeded Fernow in 1898, called Hough "perhaps the chief pioneer in forestry in the United States." Dr. Dietrich Brandis, leading German forester of that period, also had high praise for Hough.
Despite his accomplishments and tributes, however, Hough was removed as Chief of the Division of Forestry in 1883 by an appointee of President Garfield, George B. Loring of Massachusetts, but remained on the staff until 1885, the year of his death.

References:


The names, relationships, and addresses of all distributees, of each person designated in the Will hereinafter presented as proxy executor, of all persons adversely affected by the purported exercise by such Will of any power or appointment, of all persons adversely affected by any codicil and of all persons having an interest under any prior will of the decedent on file in the Surrogate's office, are hereinafter set forth in subdivisions (a) and (b):

(a) All persons and parties so interested who are of full age and sound mind, or which are corporations or associations, are as follows:

<table>
<thead>
<tr>
<th>Name and Address</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edith H. Grear</td>
<td>Sister</td>
</tr>
<tr>
<td>3460 Southeast Shell's Ferry Road</td>
<td></td>
</tr>
<tr>
<td>Portland, Oregon 97221</td>
<td></td>
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<tr>
<td>(Multnomah County)</td>
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</tbody>
</table>

Carruda H. Seborg, predeceased sister, leaving her surviving:

(b) Marjorie S. Kleinberg | Niece |
| 1765 Vicellas Road  |
| Altadena, California 91001  |
| (Los Angeles County) |

(b) Dorothy S. Barrus | Niece |
| Camp Calo  |
| Burnsville, North Carolina  |
| (Yancey County) |
| 20714 |

(c) Robert Seborg | Nephew |
| 63 Oakvale Avenue  |
| Oakland, California 94705  |
| (Alameda Co.) |

Minifred H. Misner, predeceased sister, leaving her surviving:

(a) Elizabeth W. Ball | Niece |
| Coral Springs, Florida 33013 |

(b) John S. Misner | Nephew |
| (adopted)  |
| Edenderry Drive  |
| Northville, Michigan  |
| (Wayne County) |

Romeyn B. Hough, Jr., predeceased brother, leaving him surviving:

(c) D. Patricia Hough | Niece |
| 325 Central Park, West  |
| New York, New York 10023  |

(b) Mark S. H. Hough | None |
| 323 Central Park, West  |
| New York, New York 10023  |

Will of Marjorie G. Hough, unmarried

Living Aug. 1976 |

Husband Lloyd D. Somers living in Rochester, N.Y., October 1976.

Died about 1970, the description of legagy, devise or other interest, or nature of fiduciary status

None
FRANKLIN B. HOUGH--A TRIBUTE

S July 20th of this year is the centennial anniversary of the birth of Dr. Franklin B. Hough, the acknowledged “Father of American Forestry,” it is betting that we note in this issue something of his personality and the thoughts which started him in a career which resulted in interesting the United States government in the care of its forests. For his unselfish devotion to this cause until accomplished the American nation will always owe him a debt of gratitude.

We learn from his biographer that as a young man he was of a studious nature, and that he acquired an advanced education in spite of the hardships which young men have to encounter who work their way to a college degree.

He graduated from Union College in 1843, and from Western Reserve Medical college in 1848.

His enthusiasm in scientific search from boyhood up was boundless. It was of the kind which inspired others with whom he came in contact, and while he appreciated enthusiasm in others, all branches of science, his special interest lay in the fields of geology and botany.

His extensive journeys afield, pursuit of these studies doubtless did much to build up the exceptionally good physique with which he was endowed, for he was wont to refer to his journeys afoot of twenty or more miles in a day, and carrying, perhaps, as many pounds of precious mineral specimens, as merely incidents.

He amassed considerable collections, and his articles in the press on his early observations in various fields of natural science were full of enlightenment and interest.

They naturally came to the attention of others of kindred interest elsewhere, and acquaintance would result which sometimes ripened into friendships waxing stronger and of more mutual interest as time went on. Among the strong personal friendships thus formed in early days were those with Louis Agassiz, John S. Newberry, Spencer F. Baird and others who have left lasting influence in their respective fields of science.

After his return from service in the Civil War as a surgeon he devoted himself entirely to scientific and literary work, and in the years which followed wrote many books and articles of importance. His biographer referring to them states:

“There is probably no son of New York whose bibliographical record shows so many, so varied, so extended and so valuable a contribution to the literature of the state.”

In referring to Dr. Hough’s characteristics this biographer, after a long personal acquaintance, writes:

“He had a very remarkable power of concentrating his mental energies on one subject, and therefore made himself master of it with unusual rapidity. He made himself, in this way, successively, a good botanist, a good mineralogist, a good compiler of history, a good statistician, a good forester.

“He had a good working memory, so that new facts with him fell easily into place with others he had gained.

“He was conscientiously thorough in his work. He spared no labor himself to bring his statements down to the last degree of certainty.”

Such was the make-up of the man who was destined, in the self-imposed task, to effectually stem the tide of public sentiment regarding the use of our forests, and to formulate and carry into execution plans which resulted in the commencement of their management by the government—the establishment of the United States Division of Forestry (now called the Forest Service) of the Department of Agriculture.

To understand some of the obstacles he had to contend with we must appreciate that from the commencement of settlement by white man the policy had been to destroy all the forests possible and make ready for agriculture. That became a maxim which governed generations and was still being blindly followed by the masses of landowners; but thinking men

had begun to reason that such measures should not be continued indefinitely.

In those days Dr. Hough was twice Superintendent of the New York State Census, for the years 1855 and 1865, and while comparing these two census reports he noticed a great falling off of timber supplies in certain localities during the period of ten years. “It did not take much reasoning,” quoting his own words, “to reach the inquiry, ‘How long will the supplies last—and what then?’”

He was convinced that wanton destruction of the forests must stop as soon as possible, and provision be made for the proper use and perpetuation of those that are left. He reasoned that it was a matter in which the gov-
gment should act, and he lost no opportunity to impress upon others of influence the importance of his subject.

But what could a private individual do to change a deeply rooted belief on the part of the public that the forests should be destroyed?

A plan finally occurred to him which proved true to his hopes. He was a member of the American Association for the Advancement of Science, and he reasoned that if he could secure action by that august body recommending that the government take steps in the management and preservation of its forests it would be sure to have weight with the authorities at Washington.

He accordingly prepared a forcible paper entitled "The Duty of Government in the Preservation of Forests," and read it before the A. A. A. S. at its meeting in August, 1873. In it he suggested that a committee be appointed to memorialize Congress and the state legislatures on the importance of the subject. This was done, and he was made chairman of the committee.

We cannot here review the many months of anxious labor, interviews, rebuffs, disappointments, and only occasional encouragements with which Dr. Hough and the few that were with him met before final action by Congress was taken. (See "The Incipiency of the Forestry Movement in America," American Forestry, August, 1913.)

At the last moment before the close of the second session of Congress in which the subject had been brought up, final favorable action was taken, and the law was passed establishing the Forestry Division of the United States Department of Agriculture. It was a victory won by Dr. Hough and his small band of adherents, which has been of ever-increasing value and importance to the nation.

As illustrative of the general lack of appreciation of this subject in those days only a paltry appropriation of $3,000 was made for the first year's expenditures of the new division.

Dr. Hough was appointed the first Chief of the new division in 1876, and prepared the first reports issued. They have been looked upon as "the foundation upon which our forestry system has been building since," using the words of one of his successors in office.

In a review of the first report, by an officer of the Wurtemburg forest service the following statement was made:

"It awakens our surprise that a man not a specialist should have so mastered the whole body of American and European forestry and legislation."

THE FAXON WHITE PINE PLANTATION

A TWENTY-EIGHT-YEAR-OLD plantation of white pine is shown in the foreground of the picture, on the side. Mr. Faxon, the owner of this plantation, began planting white pine 36 years ago. He has the honor of having set out the oldest white pine plantation in New York State, although he is still a comparatively young man. For the portion of the plantation which is now 36 years old, Mr. Faxon has been offered $500 per acre for the timber "on the stump."

As the trees are making their most vigorous and profitable growth at this age, Mr. Faxon has refused to sell. In the background is shown a white pine stand which has been left "unreduced." This stand years ago is still plainly in evidence. A dense stand of natural growth white pine is just as profitable as planted pine. This fact is illustrated by a statement contained in a bulletin of the United States Department of Agriculture as follows: "Two acres of white pine, near Keene, New Hampshire, were sold three or four years ago, before the war prices, for $2,000, on the stump. The total stand was 254 cords, which equals 170,000 board feet, or an average of 85,000 feet per acre. The trees were from 80 to 85 years old; so the growth on each acre was about 1,000 feet per annum and the gross returns about $12.20 per
Forestry Centennial. -- August 1976 marks the 100th anniversary of establishing a forestry office in the United States Department of Agriculture. Congress on August 15, 1876, appropriated $2,000 for a study and report by "a man of approved attainments" on forest conditions, the extent and distribution of woodlands, and forestry methods. Dr. Franklin B. Hough, a physician and naturalist of Louisville, New York, was appointed Forest Agent by Commissioner of Agriculture Frederick Watts on August 30. Hough's appointment originated the agency that 29 years later became the Forest Service.

Hough's prodigious efforts first aroused the public interest in forestry that eventually led to establishment of Federal and State forest reserves, public forest management, college courses in forestry, and various studies and research activities. His three pioneer reports published by the government in the late 1870s and early 1880s, received high praise from prominent scientists of his time and from Bernhard Fernow and Gifford Pinchot, who succeeded him in the office. They also gained Hough a special award from an international forestry congress in Vienna in 1882. After extensive travels here and abroad to gather and digest material for his reports, Hough advanced proposals for managing the public forests based on a leasing system already being used then in Canada. Dr. Hough was instrumental in establishing the first State forest reserve, the Adirondack in New York State, in 1885.

The Forest Service plans to mark the centenary of Dr. Hough's appointment with an appropriate ceremony in Washington, D.C. A one-page summary of his accomplishments is being sent to Regional, Station, and Area offices.

50th Year for BWCA. -- June 30 was the 50th anniversary of establishment of the Boundary Waters Canoe Area wilderness in the Superior National Forest of northern Minnesota. On that date in 1926, Edward A. Sherman, Acting Chief, gave official approval to the plan of A.L. Richey, Forest Supervisor, for managing recreational development of the Border Lakes region. The plan established for the first time a Wilderness-Canoe area to be preserved in its natural state. It was a modification of the original recreational plan of Arthur Carhart made in May 1922. The Secretary of Agriculture, William M. Jardine, gave specific endorsement to the plan on September 17, 1926, in a nine-page memorandum reserving "not less than" 1,000 square miles of wilderness.
New Historian. -- David A. Clary has assumed the position of Head, History Section of the Forest Service, as of July 18, 1976. He will have overall responsibility for the historical programs of the Service. Dave comes to the position from a career in the National Park Service that began in 1968 with his work as a historian at Fort Davis National Historic Site, Texas. Following that assignment came four years in the Park Service Division of History in Washington, where he worked in the history and historic preservation programs of NPS, and served as Coordinator of Environmental and Protection Activities for the Office of Archeology and Historic Preservation. In that role, he developed government-wide guidelines for the discussion of cultural resources in environmental impact statements, and for compliance with Section 106 of the National Historic Preservation Act and Executive Order 11593. He also prepared policies and standards for historic preservation and historical research, and was an adviser to the Alaska Task Force. Dave has spent the last two years as Regional Historian in the NPS Midwest Region, based in Omaha, where he worked in historic preservation and completed an inventory of the region's historic resources and nominated all of them to the National Register of Historic Places. On the outside, Dave's work has been in military and western history, and he is a member of several professional organizations. Among his publications is a history of Yellowstone National Park. His degrees are from Indiana University and the University of Texas.

Completed Projects. -- A number of book and interview projects have been completed since the last issue of this newsletter. A major one is the study of the Forest Service by the Forest History Society entitled, "The Greatest Good of the Greatest Number: A History of the U.S. Forest Service," compiled by Dr. Harold K. Steen, a forester and historian. Just published by the University of Washington Press, copies are being furnished to offices throughout the Forest Service to allow employees to become more familiar with the background of their agency as seen by a young western historian who also served the Forest Service in research and National Forest administration.

"Trees, Prairies, and People: Tree Planting in the Plains States," by Dr. Wilmon Droze, provost of Texas Woman's University, Denton, Texas, is another book project just completed. Copies will also be distributed to Forest Service offices. This book covers the famous Shelterbelt Project of the 1930s and early 1940s. Many of the plantings made then are still visible throughout the Great Plains to the benefit of agriculture and aesthetics in that region.

A new oral history interview entitled, "Forty-Three Years in the Field with the U.S. Forest Service," conducted by Elwood Maunder, Executive Director, Forest History Society, with Charles A. Connaughton, retired Forest Service Regional Forester and Experiment Station Director, was issued this spring by the Society. Maunder has completed interviews with Dr. V.L. Harper, retired Research Chief for the Forest Service. This fall, he will interview retired Forest Service researchers Clarence Forsling and George Jamison. His interviews with former Chief R.E. McArdle, published a year ago, were reviewed in Journal of Forestry by Samuel Dana, and in the American Archivist (April 1976) by Dr. Harold Pinkett.

The Regional Oral History Office at the University of California, Berkeley, this spring finished editing and binding of interviews with former Assistant Chief Edward Crafts ("Congress and the Forest Service, 1950-62," 69 pages) and the
late Edward I. Kotok, who was former Assistant Chief for Research and for State and Private Forestry. He was also former Director of the agency's Experiment Station at Berkeley.

The Crafts volume includes material on interagency and timber industry relations, and changes in Forest Service policies in addition to Congressional relations.

The Kotok volume, subtitled, "The U.S. Forest Service: Research, State Forestry, and FAO," also includes an interview with Mrs. Kotok and runs to 346 pages.

We are now preparing a volume on Leon F. Kneipp, former Assistant Chief for Land Acquisition and Planning. It will complete the series begun over 10 years ago under sponsorship of Resources for the Future. The Forest Service has financed the final editing and printing.

Eliot Zimmerman, retired Director of Cooperative Forest Fire Control for the Forest Service, has written under contract a brief summary history of the agency's State and Private Forestry operations. This document expands and updates the in-Service publication originated by Earl S. Peirce and revised by William J. Stahl in 1969, entitled, "Cooperative Forest Fire Control, A History of Its Origin and Development Under the Weeks and Clarke-McNary Acts."

An interpretive history of the Weeks Law of 1911 and the Clarke-McNary Act of 1924 has been written by Gerald E. Ogden, a staff historian of the U.S. Department of Agriculture's History Branch. The draft is now undergoing review in the Forest Service which sponsored the work.

Ogden's "Historical Bibliography of the U.S. Forest Service," published in 1973 by the Forest History Society for the Forest Service, was revised and updated by Ogden and is in the process of publication. The publisher is the Agricultural History Society at the University of California, Davis, California.

Another recent book about the Forest Service was published by John Hopkins University Press, Baltimore, Maryland, entitled, "The Forest Service: A Study of Public Land Management (1876-1975)." It is by Glen O. Robinson, former Commissioner, Federal Communications Commission.

The Forest History Society has completed two major compilations: "North American Forest and Conservation History: A Bibliography," gathered by Ronald J. Fahl; and "North American Forest History: A Guide to Archives and Manuscripts in the United States and Canada," put together by Richard C. Davis. The first has over 8,000 entries, many annotated, of books, articles, and unpublished master and doctoral theses. The latter cites nearly 4,000 collections in over 300 libraries and other institutions. Work on the two volumes was supported by a grant from the National Endowment for the Humanities. Publisher is ABC-Clio Press, Santa Barbara, California. The Society has also...
published a Guide to its Oral History Collection which covers the past 25 years and includes over 200 interviews.


An oral history interview with George L. Drake, Vice-president of Simpson Logging Company, Seattle, was published by the Society. A former Forest Service man, he retired from Simpson in 1954.

The Society has received the correspondence, diaries, and photos of the late Thomas H. Gill, from the Society of American Foresters. Gill was a pioneer leader in international and tropical forestry.

I. Forest and Range Experiment Stations

Pacific Northwest Station. -- "Early Forestry Research, A History of the Pacific Northwest Forest and Range Experiment Station, 1925-75," was issued in February. Author Ivan Doig made use of a recently compiled detailed manuscript history of Robert Cowlin, retired Station Director, and also taped interviews with the former directors. It is a 38-page illustrated booklet. Doig was also author of the article, "The Beginning of the Forest Survey," in the January issue of the Journal of Forest History, and he assisted Harold Steen in preliminary editing of Steen's new history of the Forest Service.

Rocky Mountain and old Southwestern Stations. -- A history is to be released in August, compiled by Raymond Price, retired Director of both Stations. It has been checked by 10 former Station Directors and edited by the Station editorial staff.

Lake States Experiment Station. -- History is being compiled by Paul O. Rudolph, retired principal silviculturist. Also, a history of the Forest Watershed Lab at LaCrosse, Wisconsin, is being written by Richard S. Sartz. He will include all work of the Lake States and the Central States' Stations. And the recently completed history of the Carbondale, Illinois, unit is being readied for publication.

Southeastern Experiment Station. -- Edwin Bjorkman, a professional writer-reporter with some books to his credit, is working on this one under the Emergency Jobs Program, and is tape recording interviews with several retirees. Bob Bieserfeldt, Station editor, has found an early history of the Station in the form of a 75-page typed manuscript done in 1934-35 by a professional journalist. He plans to publish excerpts for in-Service use. This manuscript gives a review and appraisal with some personal views.

Forest Products Laboratory. -- Just published is, "Wood in the First 200 Years of USA--1776-1976," which includes a projection to 2076. Authors are Herb Fleischer and John Youngquist.

Fernow Experimental Forest (Parsons, West Virginia). -- A history is being written by retiree Dick Trimble.

Priest River Experimental Forest (originally Experiment Station) Idaho. -- A history is being compiled by Chuck Wellner, retired researcher. It celebrated its 65th anniversary in August.

A history of the white pine blister rust control program is being started by Warren Benedict, retired director of the program.
Histories have been compiled by two Washington Office divisions: International Forestry (L.M. LaMois), and Program and Policy Analysis (Clayton Libeau).

E.L. Demmon, retired Forest Service Experiment Station Director, has published a new book, "Opportunities in Forestry Careers," in the Vocational Manual Series.

II. National Forest System

Pacific Northwest Region (6). -- Larry Mays' finished draft is under review by the Regional Office. A history of Wenatchee NF is being written.

Southern Region (8). -- Taped interviews with retirees are planned. Charles Blankenship, Recreation Chief on the Jefferson NF, is writing a history of that Forest. The Monongahela NF has a manuscript history on hand and is seeking to prepare it for publication. The National Forests in Florida are making inquiries for histories of the Osceola and Ocala. Former Supervisor, Bob Collins' history of the Daniel Boone (formerly Cumberland) NF is being published by University of Kentucky Press ($7.50, 349 pages).

A series of 13 taped interviews and notes made with men associated with the Yazoo-Little Tallahatchie River Basin Project in Mississippi, by Professor Michael Mamarato of the University of Mississippi, will be placed in the University's Archives.

Northern Region (1). -- Floyd Sharrock of University of Montana has been appointed Regional archeologist. He conducted its 1973 inventory and prepared a field guide. Two historical and archeological river basin reports have been completed; one of western Montana and one of the Snake River Basin. Ralph Space is revising and updating his Clearwater history. Warren Peterson is compiling a history of the Kaniksu-Pend Oreille-Priest River National Forests (combined last year into the Idaho Panhandle NF). Volume 4 in the Region's series, "Early Days in the Forest Service," 269 pages of further reminiscences of retirees, has been published.

The Northern Rocky Mountain Section of Society of American Foresters is planning a bibliography of private, State and Federal forest activities in Montana. E. Arnold Hansen, Forest Service retired, is chairman.

Eastern Region (9). -- A history of the Chippewa NF, Minnesota, is being compiled by Stan Johnson, who just retired after 41 years on the job there.

California Region (5). -- A committee has been organized with Gil Davis of Yreka as chairman to gather history of the Klamath NF through interviews with retirees.

Intermountain Region (4). -- Thomas Ortmann has written a history of his old Ranger District (Krassel) on the Payette NF, central Idaho, called "Bury My Soul Near Krassel Hole." (20 pages, Mimeo.)

Miscellaneous. -- Another book on the Forest Service, "The Forest Service and Amenity Values, 1905-1916," by Professor Lawrence Rakestraw of Michigan Technological University, has been published by San Jose State University, California.

The University of Washington Library, with a special grant from the American Bicentennial Commission, is completing a North Cascade History Project.
Forest Service people planning to conduct oral history interviews can be helped by studying a manual written by Willa K. Baum, Director of the Oral History Office at the Bancroft Library, University of California, Berkeley. It is entitled, "Oral History for the Local Historical Society," and is available in the West from the Conference of California Historical Societies, University of the Pacific, Stockton, California 95204. In the East, it is being issued by the American Association for State and Local History, 1315 Eighth Avenue, South, Nashville, Tennessee 37203. Price is $2.25.

The book, "Interpretation of Historic Sites," by William Alderson and Shirley Low is also available from AASLH. Price is $6.00.
Franklin B. Hough's fame went far beyond the boundaries of even the United States, as evidenced by this article written in Bonn, Germany, in September 1885...

THE LATE FRANKLIN B. HOUGH.

Dr. Franklin B. Hough, the enthusiastic advocate of Forest Conservancy in the United States of North America, died at his home in Lowville, New York, on 11th June, 1885. He was born in 1822 at Martinsburg in Lewis county, studied medicine, and from 1848 to 1852 practised his profession in the village of Somerville, New York. In 1852 he removed to Lowville, and since then his time has almost wholly been occupied in literary, historical and statistical work. His first publication was a catalogue of the plants of Lewis county, printed in 1847. In 1853 he published a history of St. Lawrence and Franklin counties, in 1854 the history of Jefferson county, and in 1856 the history of Lewis county. Dr. Hough is regarded as the pioneer historian of counties in New York State. About this time he began his statistical work, as the Superintendent of the State Census of 1855, the first complete census taken of the New York State. He was also the Superintendent of Census in 1865, and was charged with the duty of making the preparations for the census of 1875. In 1861 he commenced the annual publication known as the New York Civil List, and in 1872 he published the Gazetteer of New York. While engaged on these works, he was constantly occupied with researches on a variety of historical and statistical subjects. The greatest literary undertaking of his life was the digest of the legislative history of New York State, which contains a concise summary of legislative action upon every topic of public interest since the foundation of the State. This work has not yet been published.

In 1872 we find his name as one of seven Commissioners of Parks for the State of New York. Around the head waters of the Hudson river in Northern New York is an elevated plateau, interspersed with swamps and lakes, on the eastern part rising into lofty mountains. This region, which is generally known as the Adirondack wilderness, is surrounded by open, well cultivated districts, but it has itself proved incapable of agricultural improvement, being generally frosty and barren. Within the memory of man this region was an unbroken forest. Much of the timber worth taking has been got out; fires have done immense injuries, and great tanneries have used up much of the hemlock bark (Tsuga canadensis), the wood being left to rot or burn. The waters from the mountains afford valuable hydraulic power, and are taken from its southern part for feeding the Erie Canal, which could scarcely be kept navigable in summer but...
The clearings, and especially the fires, told heavily upon the flow of waters, the Hudson above tide waters had become a brook, and the canals of New York State could scarcely be kept full in summer. These considerations, though they were not at that time generally realized, led to the passing of a State Act in 1872 for the appointment of Commissioners of Parks for the State of New York. The act named seven persons, citizens of the State, who were directed to enquire into the expediency of providing for vesting in the State the title to the timbered regions lying in certain counties, and converting the same into a public park, such Commission to continue two years and to report to the legislature. The Commission reported in 1873, but no action was taken at that time.

In 1876 an Act was passed by the United States Legislature, requiring the Commissioner of Agriculture to appoint a man of approved attainments and practically well acquainted with the methods of statistical enquiry, to report upon the forest question in the United States. Since 1873 Dr. Hough had been engaged in efforts to awaken an interest in behalf of forestry with Congress, and it is believed that to some extent the passing of this Act was due to his influence. To a great extent it was also due to the exertions of Karl Schurz, a native of Rhenish Prussia, who, after completing his studies at the University of Bonn, was compelled, by the political troubles of 1848 and 1849, to emigrate to America, where in 1869 he was elected Senator for Missouri in the United States Senate, and having been re-elected in 1875, was appointed Secretary of the Interior in March 1877. In accordance with the Act mentioned, Dr. Hough was, in August 1876, appointed as Forestry Agent in the Department of Agriculture. Dr. Hough understood one of the main duties required of him to be, to spread correct information on the subject, and he was thus led to undertake a number of publications in which he embodied the result of his enquiries. He published three official reports upon Forestry, the first of which appeared in 1878, while the last was printed in 1883. These reports contain a vast amount of information regarding the forest resources of most States of the Union, as well as of the adjoining States of British North America. They also treat of forests in Europe, and they discuss special questions, such as the injury done by forest fires and the measures for their prevention, the influence of forests upon climate, in regulating surface drainage and moderating inundations, and the system of instruction in forestry in Europe. The third report contains definite recommendations regarding the reservation of timber lands for public purposes.

Under the title of Elements of Forestry he published a systematic hand-book of the subject, which has been adopted as a college textbook in several public institutions in the United States. A review of this work appeared in the Indian Forest
of 1884, page 136, and at the time of his death the author was engaged in revising it for a second edition.

In July 1881 Dr. Hough undertook, under instructions from the Commissioner of Agriculture, a journey through the principal countries of Europe in order to study the management of public forests. An account of a portion of this tour Dr. Hough published in the American Journal of Forestry edited by him, a monthly periodical, of which one volume only has appeared (1882-83), as want of support compelled him to discontinue it. This periodical has on several occasions been noticed in these pages, and it may suffice here to draw attention to the account given in it of the American Forestry Congress, which held its first meeting at Cincinnati (Ohio), in April 1882, its second meeting at Montreal in August of the same year, and its third meeting at St. Paul, Minnesota, in August 1883. In the proceedings of this Association Dr. Hough took a prominent part. The same periodical also contains an account of the Ohio State Forestry Association, which was formed in 1883, chiefly through the exertions of the late Dr. John A. Warder, who was its first President. Dr. Hough also interested himself much in the planting of trees in school grounds and a memorandum written by him, in 1883, was widely circulated by the Bureau of Education, together with a pamphlet, entitled "Trees and Tree Planting," by Hon'ble John Peaslee, Superintendent of the public schools of Cincinnati. For the purpose of planting trees in school grounds, along roads, and on lands adjoining, one day in the year is set aside in several of the Western States, sometimes appointed by law, and at other times designated by other authority or fixed upon by agreement. This day is wholly devoted to the planting of trees, and the Forestry Congress held at St. Paul passed a resolution, recommending the appointment of an arbor day in all States and in the provinces of the dominion of Canada.

From his published writings as well as from the private letters which I had the pleasure of receiving from him at various times, it is clear, that Dr. Hough regarded the problem before him as mainly an educational one. In one of his letters to me (August 1883) he writes: "We must teach the people their opportunities and their duties. Those who have spent their lives in clearing the forests, may be too old to reform, but the younger generations, who are in a few years to become the owners of these lands, are susceptible to instruction, and upon them the hopes of forestry in the future must with me chiefly depend." He did not anticipate that any effective action would be taken by the United States Government. In February 1884, he writes: "I do not see much hope of anything being done by Congress. No attention is paid to my advice, and I doubt whether a single member of Congress has ever read the recommendations in my report. The only solution I can see to the
question is, an awakening of popular interest and a diffusion of intelligence among the people, and especially the owners of land. Already wild broken woodlands among us are worth more than cultivated fields. If the "Yankee" can see a dollar, he will make his best effort to get it, and ere long they will begin to learn that dollars can be earned in growing trees as well as grain. As a means for preparing the way for this, I am endeavouring to awaken an interest in the common schools, for the scholars of to-day will be land owners and farmers ten or twenty years hence."

Reservations of forest lands have at different times been made by the United States Government. Soon after the establishment of a Federal Navy was commenced under an Act passed in 1794, the importance of securing a sufficient permanent supply of timber for ship-building was felt, and this led to an Act of 1799, appropriating 200,000 dollars for the purchase of timber or of lands on which timber was growing suitable for the Navy. Live oak (Quercus virginiana) and cedar (Juniperus virginiana) were then the woods most valued for ship-building, and after Florida and Louisiana, which contained the most extensive forests of these trees, had become incorporated in the United States, extensive areas of these forests were reserved, and, nominally at least, placed under protection. Thus from 1830 to 1860, 208,824 acres of forest land were reserved in Florida, and 35,628 acres in Mississippi (on the gulf coast), in Louisiana and Alabama. Large tracts have also been reserved as parks, and some of these contain forest. The protection however of the forest in these parks is nominal. In the Yellowstone Park millions of large trees have been killed by the annual fires, only the charred branchless trunks remaining. Some forest is also contained in the large tracts which have been reserved for the Indian population. But systematic measures for the formation, protection and good management of large State forests have not been taken. From reliable sources, I know that Karl Schurz, while in the United States Senate, made great but ineffectual efforts in this direction.

Dr. Hough fully appreciated the importance of forming extensive State forests; but he was not sanguine in expecting that any large and really useful measures for this object could be carried at the present time. Shortly before his death he was requested by a Joint Committee of the Senate and Assembly of the New York State to present his views on the formation of State forests in that State with especial reference to the Adirondack region, which had already engaged his attention in 1873. In 1894 he had tried to get a hearing on the subject, but was told by the Chairman of the Assembly Committee that they did not want any information. But in a letter of 50th April he writes, "This year I found everything changed. I was requested by a large Joint Committee to present my views and
they listened with profound attention. They made many en-
quiries and ended in putting all the Bills before them (six or
seven in number) into my hands, with the request, that with
or without these, I would present such a draft of a law as I
thought the State ought to have.”

Dr. Hough then set to work and submitted to the Committee
a memorandum on the duty of the New York Legislature with
reference to its woodlands, accompanied by the draft of an Act
to establish a State Forestry Commission, and to define its
powers and duties. The Bill was accompanied by an explana-
tory Appendix. These papers were printed for the Senate, and
with the letter already quoted I received a copy. Dr. Hough
added: “They appeared pleased with the plan, and requested
me to give it to them complete with all the arguments I chose
to offer—for preservation in permanent form, and said they
would select such parts as appeared of immediate importance
and as much as they could carry, leaving the rest to be perfected
by future amendments. This was a most unexpected and grat-
ifying token of confidence, and I felt the very great respon-
sibility of the occasion, for there is not now a State in the Union
with any Forest Code whatsoever, and this might become the
germ of something of wide and permanent value.”

On receipt of these papers, I wrote to him fully upon the
subject, dwelling upon several points, which I recommended to
his attention, and urging as the first step the formation of an
efficient staff of professionally trained officers for the manage-
ment of the public forest lands. When my letter reached him,
he was ill, but commenced dictating a reply, which his son sent
me with the news of his death.

Dr. Hough had an iron constitution, which, his family think,
might have carried him through to an old age, had he not
overworked himself during last winter at Albany in connection
with the proposals submitted by him to the New York State
Legislature. The Bill did not pass exactly as he had prepared
it, but the first step in providing for the good management of
the public forests in the State has been taken, and we will hope
that steady progress will follow, and that his labors for the
cause of forest conservancy in the United States will not have
been in vain.

D. Brandis.

Bonn: 20th July, 1885.

(24)
In 1880 the American Association for the Advancement of Science finally sent memorials to the legislatures of the various States, urging attention to excessive consumption and waste of the country's forests, and the need to conserve forests for future needs by encouraging "more economical use and the proper maintenance of our timber supply." Plants under the care of professional foresters were urged, as were courses in "practical sylviculture" at state colleges, and State commissioners of forestry.

Hough became Treasurer of the American Forestry Association at its January 1880 meeting in Washington, D-C.

George B. Loring, of Massachusetts, a physician and member of the Mass. Board of Agriculture was elected President of the American Forestry Association in 1882 at its convention in Rochester, N-Y. June 29, 1882. (Loring had become Commissioner of Agriculture in 1881 and set up a Division of Forests in that same year. AFA merged with the American Forestry Congress at Montreal, in August 1882. The meeting in Montreal coincided with that of the AAAS there.

The April 1882 organization meeting of the AFC was stimulated by the visit to this country of Baron von Steuben, descendant of General Baron von Steuben who had helped the American Army in the Revolutionary War. The current Baron von Steuben was a Prussian forester and had been invited with 6 other descendants as an honored guest for the centennial of the surrender of General Cornwallis at Yorktown, Virginia in 1881. He had spoken at length about forestry in Germany.

(There were three general forestry association meetings in 1882; one of the AFA and two of the new AFC).

Nathaniel H. Egleston was a delegate to the American Forestry Congress meeting in Cincinnati, April 24-29, from the Mass. Board of Agriculture. He presided over one of the sections, on forest education.

Many scientific papers (about 90) on trees were presented at the Cincinnati AFC meeting. Several monographs were landmark reports, but very little was said about forest management.

Hough also presided over one section at the AFC meeting in Cincinnati in April 1882. He read his paper, "Forestry of the Future." He suggested that national state or local governments might repurchase lands unfit for farming, for reforestation, as had been done in Germany, to serve as an example to private interests. In the fall Hough had returned from his official visit to Europe. In 1882 he received an award at an international congress in Vienna in recognition for his Reports Upon Forestry. His 3rd Report included his observations in Europe.

Hough's first report was called by Bernhard E. Fernow, a German forester who emigrated to the United States shortly before, "by far the best and most useful publication of its kind on forestry in this country."

It appears from Rodgers' account that the AFC did not elect a regular President at its April 1882 meeting in Cincinnati. Although John Simpkinson of Cincinnati was elected President at an organizational meeting, he did not preside at the executive committee's meeting just before the Congress opened (April 23, 1882); Judge Warren Higley of Cincinnati did so in his place.

At the Cincinnati AFC Congress, B. E. Fernow gave a talk on the historical development of the forest policy in Germany, including the development of the economics and management of State and privately owned forests.

The meeting of the American Forestry Congress in Montreal in August was an international meeting, with Canada strongly represented.

Dr. Hough became recording secretary of AFC at the Montreal meeting.

Dr. Geo. B. Loring continued as President of the AFC when AFA merged with AFC at Montreal. However, Henri G. Joly of Quebec was made temporary president at the meeting. He was a
prominent Canadian official with interests in forestry. He was a member of the Canadian Council of Agriculture. Dr. Hough presented him with a copy of his new book, "Elements of Forestry" which had just been published in Cincinnati.

Dr. Hough again presided at one of the sectional meetings at the Montreal convention of the American Forestry Congress. His "Elements" was the first book on forestry in Sixty-four papers were presented at the Montreal meeting, mostly on tree planting.

The Montreal meeting was an adjourned session of the April AFC organisational meeting in Cincinnati. Ralph S. Hosmer Pinaoht's assistant forester (Nov 1898) called Hough "book" one of the first modern books on forestry in the English language. Fernow spoke on fire control at this meeting.

Dr. Hough agreed to publish his monthly American Journal of Forestry at the Montreal meeting. It lasted one year... (Oct. 1882-Oct. 1883) due to lack of sufficient subscription. One of the first public reports given on forest fires was by Joseph S. Pay of Woods Hole, Mass., and others at the American Forestry Congress in Montreal in August 1882. An account by Hough of the origins of AFA was published in the AFC Proceedings of 1882. The Montreal American Forestry Congress approved the recommendations of a committee composed of Hough, Fernow, Joly, Sargent and others, urging that the governments of the two countries each create a protective force for their forests, financed by taxing the owners and lessees of timber lands, to reduce losses from forest fires.

1883-1884

The 1883 meeting of the American Forestry Congress was held in St. Paul, Minn. It coincided with meetings of the AAAS and Society for the Promotion of Agriculture in Minneapolis. Hough continued as recording secretary.

Fernow spoke on fire control at this meeting. Early in 1883 Fernow had become corresponding secretary of the merged AFC-AFA. Warren Higley of Cincinnati, Ohio, replaced George Loring as President of AFC at the fourth American Forestry Congress in Saratoga, N.Y. in September 1884.

At this convention Dr. Hough presented a paper on the "Duty of the State of New York with Respect to the Management of its Waste Lands and the Encouragement of Forestry." He also outlined a bill he had drawn up to set aside the reserves.

In this same year, 1884, Charles S. Sargent, the botanist of Harvard, was appointed chairman of a committee to investigate Adirondack forest conditions and report to the state legislature on a system of preservation. The committee was in 1879:

Hough drew up a bill which was submitted by the commission to the New York Legislature, along with others, for a State forest preserve with an organized fire suppression system. A bill drawn up by B.E. Fernow finally was passed, and became law on May 11, 1885. It set up a 3-man forest commission. This was just one month before Dr. Hough died. Ironically also, George Loring, the U.S. Commissioner of Agriculture who made the forestso difficult for Hough, also was replaced.

At a special meeting of the American Forestry Congress in Washington, D.C., at the Department of Agriculture, May 7-8, 1884, an administrative staff for managing Government timberlands in the West was advocated by Fernow and men of the Division of Forestry. By this time Nathaniel Egleston had been named to succeed Hough as Chief. Hough read his paper on "The Proper Value and Management of Government Timberlands." The Division of Forestry urged the training of foresters at forestry schools, establishment of forest experiment stations in various parts of the country, reorganization of the Division of Forestry, hiring competent men to administer the Government forest lands, protection of the Government forests from fire, limitations on cutting, sale of Government timber at close to actual value, surveys of timber to be conducted.

The Division urged that 85 million acres of Government timber lands be withdrawn from sale to individuals and from entry. Hough had advocated all this except the exact figure in his third Report Upon Forestry, 1882.

A bill was introduced in Congress to do this, but was not passed.

In 1876, a bill was introduced in Congress to create national forests adjacent to navigable streams and their sources, but did not pass.

In the fall of 1876 Hough visited the Canadian provinces and studied their official forest reports.

The AFC held its 5th Congress in Boston in July 1885.

Hough wrote 78 papers and books on many subjects during his lifetime. He was a member of 38 historical, statistical and scientific organizations, including the
Other articles on Franklin B. Hough:

By Henry Cifiter.


By Romeyn B. Hough.
Dear Mr. Harmon:

Here is the material you asked for. I'm sorry I held on to it so long. If I've missed anything, let me know.

Thanks for the suggested feature photo. We will probably use it in a future issue. It's a good one.

Irene McManus

5/12/77
FRANKLIN HOUGH
To the Editor:
I missed the Woodmen’s Day festival for the first time in several years. An article from Utica sent me your Herald issue of the observance-Dip of the Mutuals, the latter issue of the Republican Paper, as it had finished reading over the dinner table. I noticed I adhered to the former Franklin Hough in the endnotes which brought to mind the fact that I had overlooked writing or completing the report. Franklin Hough was from Utica, New York, and the Forest Service is now celebrating its 100th anniversary last year and the 50th this year. In the American Forests magazine I was called to the association. Mention of Hough was included, but not in great detail. I have been a contributor to this magazine for over 35 years and called them to have a copy sent. I am retired and the Samoa Forest was pleased to hear of your Hough that they hoped could appear in the August issue to coincide with this year. For some reason for that other it was not possible and may appear this year. She is selling a book, the signing of which is impressing to me. If the N.Y. Press is willing it might pass on to the Library.

Incidentally, when next you are in Utica, take a look at a book in the two sides to see if the earliest possible connection. Cross, radial, and tangential ones of wood are very useful to them. These are stored in a book. Would be nice if some sort of a permanent display or some of those items could be made at the library and loaned out. I was reminded the other day of the July 3rd, Fourth.

FRANKLIN HOUGH

FRANKLIN HOUGH
To the Editor:
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Incidentally, when next you are in Utica, take a look at a book in the two sides to see if the earliest possible connection. Cross, radial, and tangential ones of wood are very useful to them. These are stored in a book. Would be nice if some sort of a permanent display or some of those items could be made at the library and loaned out. I was reminded the other day of the July 3rd, Fourth.

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Franklin Benjamin Hough
First Forestry Agent of the U.S. Gov't. 1876-1883

by Frank J. Harmon, Editor Section Forestry Service, U.S. Dept. of Agriculture

Ed note: Franklin B. Hough was a member of the original commission to recommend creation of the Adirondack State Forest Preserve in New York, the first state forest reserve in the nation. The following is the first part of his life story. Hough was a native of Lowville.

Franklin Benjamin Hough was the first forestry agent of the United States Government and the first Chief of the Division of Forestry in the Department of Agriculture.

The Division was the forerunner of the present Forest Service. In a real sense, he, rather than Gifford Pinchot, was our first Chief. Pinchot himself called Hough "perhaps the chief pioneer in the United States Forest Service.

Hough did a prodigious job in gathering and compiling existing forestry knowledge. He instigated action which resulted in the establishment of the office of forest agent in the Department of Agriculture, and as himself appointed to the position on August 30, 1876. He single-handedly had stimulated the prestigious American Association for the Advancement of Science, of which he had long been a member, to formally urge Congress to set up the forest service. He is also credited with having the largest request for federal funds to be granted at that time, $100,000.

He was a man with boundless curiosity, enormous energy, much self-confidence, a strong sense of public duty, and extremely wide interests in natural science and mankind. He was an omnivorous reader in both French and English and could rapidly absorb a great deal of knowledge. With his strong self-discipline and enthusiasm he became highly knowledgeable in botany, geology, meteorology, climatology, statistics, history, and finally forestry. He was a competent compiler of local and regional history and battles of the Colonial period.

By profession and training Hough was a physician in northern New York State. He was also briefly a teacher and principal at private schools. He opened the great Adirondack Forest Reserve, the first State forest reserve in the Nation.

At the outbreak of the Civil War in 1861, he volunteered as a inspector with the U.S. Sanitary Commission. The next year he became regimental surgeon with the 97th New York Volunteers. He had published recommendations for the Virginia and Maryland campaigns under Generals McClellan and Pope. He translated a French treatise on military medicine.

By 1873 Dr. Hough was convinced of the need for a strong action that forest for a forest exploitation. He prepared and delivered a report and a plea to the American Association for the Advancement of Science at its annual meeting in Portland, Maine, entitled "On the Duty of Governments in the Preservation of Forests." This paper had the influence on him of the landmark book, "Man and Nature, or, Physical Geography as Modified by Human Action," by George P. Marsh, first published in 1864. Marsh was a Vermont Congressman and diplomat. He opened the eyes of the educated elite of his day to the fact that mankind had become a geologic force of awesome power.

In his report to the scientists, Hough described the ill effects of deforestation in the Mediterranean and Middle Eastern countries where formerly forested and cultivated areas had become wastelands. He suggested that clearing of woodlands in the eastern United States might have increased floods and droughts. At that time it was thought that forests had a more direct and pervasive effect on weather and climate than is believed today. Hough urged that agricultural and horticultural societies form landowners and others of the need to preserve forest resources. He advocated establishment of schools of forestry and outlines laws which he believed were needed to protect and regulate forest growth, and recommended measures that States might adopt to encourage better forest use. One proposal called for States to hold and manage forest lands returned to State ownership through nonpayment of taxes. In conclusion, Hough urged the scientific association, "to take measures for bringing to the notice of our several state governments, and (to) Congress with respect to the territories, the subject of protection to the forests, and their cultivation, regulation, and encouragement."

Awarded Scholarship

The New York State Bankers Association will provide $2,500 in two scholarships for the 1976-1977 term at the New York State College of Agriculture and Life Sciences, Cornell University. NYSSBA executive vice president James F. Murphy announced that the scholarship fund would be divided equally between two students at the Cornell A.L.S. College. They are John Morgan of Turin and Sandra Darrow of Sprakers.

Continued Funding of Jobs Programs A 'Must' Says Mitchell

HERKIMER Rep. Donald J. Mitchell (R-C, NY-31) recently said a "decent life and suitable living environment for all Americans is a national goal of the permitted Economic Development Administrators, which has been helpful to our area, to expand its work."

Continuing, the Congressmen said, "I haven't just made the grant to Cornell, site of the Bankers School of Agriculture since 1946."
northern New York State. He was also briefly a teacher and principal at private academies. His father was the first medical doctor in Lewis County on the western edge of the Adirondack Mountains. Early close association with the unspoiled forests encouraged the young Hough to make long field trips on foot studying the plants and geology of the countryside. He accumulated a large collection of specimens which he scientifically classified, recorded and published. Leading natural scientists of the time, including Louis Agassiz of Harvard, John S. Newberry of Columbia University, and Spencer F. Baird of the Smithsonian Institution in Washington - were impressed by the thoroughness of his writings and collections, and many became lifelong friends and helpful critics. He was an early member of the American Association for the Advancement of Science.

Hough's reputation for scientific care and thoroughness led to his appointment to direct the New York State Census in 1854 and again in 1856. In 1867 he supervised the census of the District of Columbia, and in that same year assisted with preparations for the 1870 decennial Census of the United States (for which Prof. William H. Brewer of Yale, another scientific friend, compiled the forest statistics).

Hough's study of the statistics of these censuses, which revealed drastic declines in lumber production throughout the Northeast in mid-century, caused his increasing alarm for the future of the country's forest resources. He saw that lumbering was migrating westward and national production was rising, but he feared that the timber of these virgin areas would also prove finite. His duties as member of the 1872 New York State commission on a state forest park in the Adirondacks furthered his interest and concern with forest preservation. The commission's report, prepared by Hough, greatly increased the public's awareness of the need for forest care and development.

Continuing, he said, "essential to that 'decent life' and very much part of that 'suitable living environment' is a job, at least for all the millions of adult, able-bodied Americans who seek employment as means of providing the daily bread for the table and the basics of life, along with some extras, for self and dependents!"

Speaking at the graduation exercises for the federally-funded nursing training program, sponsored locally by the Herkimer Board of Cooperative Educational Services, the Congressman said, "the sad fact of the matter is there is unemployment. People ready, willing and able to go to work are without jobs!"

According to Rep. Mitchell, this is an "emergency situation requiring special action by the federal government." He said his response has been to "support worthy programs, such as the Comprehensive Employment and Training Act, which has pumped billions of dollars into job-creating efforts."

"At times," he continued, "I have been at odds with the Administration over this issue!

The Congressman told the graduating nurses, "without question I favor programs under which comprehensive training is provided in a definite skill area to fill a specific proven need in the private sector.

"But I also long ago came to grips with the reality and gravity of our nation's unemployment problem, particularly in our depressed northeast. While I'm not completely enamored with the public services jobs concept, preferring instead to have our job opportunities developed in the private sector, an emergency is an emergency and requires special action on a temporary basis!"

Rep. Mitchell pointed out that his record "is one of consistency in support of job creating programs under sponsorship." He recalled during his first year in Congress, 1973, he voted for the first Comprehensive Employment and Training Act which was termed "a significant legislative achievement."

Continuing, he said, "since then I have voted for every extension of the CETA program as well as the multi-billion dollar Public Works Employment Act of 1976 and area, to expand its work!"

Concluding, the Congressman said, "I haven't just talked about the need for more job-producing programs, I have backed up my words with deeds. As a Congressman attempting to take a broad national outlook on what is best for the nation, I continue to do what I can to help attain the goal of a decent life and suitable living environment - including a job - for all Americans."

"As your special man in Washington, the Representative of the 31st District of New York, I will also continue to do everything I can to promote greater industrial stability for our area and more job security for our people!"

**Navyman In NATO Exercise**

Navy Machinist's Mate Fireman Apprentice Alan J. Davies, son of Gilbert F. Davies of Route 1, Remsen, is participating in a major NATO maritime exercise: "Team Work '76."

He is serving as a crew member aboard the aircraft carrier USS John F. Kennedy.

The two-week exercise involves more than 80,000 personnel, 200 surface ships, 30 submarines, and 300 aircraft from nine NATO countries and France.

"Team Work '76" units will be operating in the North Atlantic Ocean, English Channel and Baltic Sea. In addition, a major combined amphibious landing will be made in Norway, with a secondary amphibious landing in Denmark.

Admiral Isaac C. Kidd, Jr., USN, the Supreme Allied Commander Atlantic, is coordinating the overall conduct of the exercise.

Vice Admiral John Shahan, USN, Commander of the Atlantic Standing Fleet, is the tactical commander of all NATO naval forces.

The primary objectives of the exercise are to test and improve the combat readiness of the allied forces and to test plans for the defense of Western Europe. Participating units will evaluate increased standardization of doctrines, equipment and armaments among NATO forces, plus test command and control procedures for coordinated action by NATO sea, land and air forces.

A 1975 graduate of Remsen Central High School, he joined the Navy in February, 1976.
SHOCK GROUP continued

The group concerned with the present energy situation urged all interested persons to obtain copies of five bills proposed by Joseph R. Pisani from James Donovan’s office. He said letters should be sent to federal energy conservation officials and that changes should be made in the bills.

BQOJWILLE HERALD, Boonville, N.Y. September 22, 1976 Page 3

First License

continued from page 1

Hall Displays Turin of the Past


“Turin Retrospective” is a joint exhibit effort on the part of Mrs. Clarence Benedict, town historian; Mrs. Kurt Franke, village historian; and Mrs. Philip Wurts, of Constable Hall.

The display depicts the history and social life of the town and village over the course of 110 years. There are four panels showing Turin’s history. The first panel shows photographs of buildings past and present, with their locations indicated on a map.

Another panel shows various scenes of Turin’s social life. A third panel pictures Turin as a central hub for the community in the 1840s. The final panel shows the exhibition today, a nationally-known ski resort.

Franklin Benjamin Hough

First Forestry Agent of the U.S. Gov’t. 1876-1883

by Frank J. Harmon, History Section

Forest Service, U.S. Dept. of Agriculture

continued from last week

The assembled scientists were impressed. The next day, August 9th, 1876, a committee was appointed of nine prominent men, mostly botanists and geologists, but also including a horticulturist, a soil scientist, and an anthropologist. The Nation’s foremost botanist, Gray, compiler of the still authoritative “Gray’s Manual of Botany,” was in the group, as was Prof. William Brewer of Yale, first man to deliver lectures on forests at an American college (that same year, 1873). So was George B. Emerson, Harvard botanist and author of a book on trees and shrubs of Massachusetts, and Josiah D. Whitney, California geologist for whom Mt. Whitney, highest peak in the Sierras, is named.

They were some of the most eminent scientists of the day. The Committee was directed to memorialize the United States Congress and recommend the critical national need. The Committee also requested creation of a Federal commission for forestry, somewhat like the fish and fisheries set up two years earlier, to investigate forest conditions.

Hough and Emerson went to Washington the following Februrary to present the report to the attention of Congress, President Ulysses Grant, the Departments of Agriculture and Interior and the Smithsonian Institution.

They received much encouragement, but Congressional action proved difficult. They first talked with Joseph Henry, director of the Smithsonian, then several representatives and senators, and Frederick Watts, Commissioner of Agriculture, to get them an audience with President Grant. Willis Drummund, a conscientious Commissioner of the General Land Office, supported the proposal and secured the endorsement of his superior, Secretary of the Interior Columbus Delano. Drummund said the AAAS recommendations were “indispensably necessary” to stop destruction of timber and to provide for reforestation, and he drafted a proposed joint resolution for Congress to consider, forwarding it to Grant who sent it to Congress on February 19, 1874.

continued next week

AREA CULTURAL EVENTS

Thursday, Sept. 30

ROME — Rome Art & Community Center. “Batiking — The History — The Process — The Dyes” by Tarbell Hoes & Denise Hawkridge. 10:30-2:30 p.m. 308 W. Bloomfield St.

Friday, Oct. 1


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Franklin Benjamin Hough
First Forestry Agent of the
U.S. Gov't. 1876-1883

continued from last week
Secretary Delano had also
asked Congress that year but,
without effect, for action to
stop destruction of timber on
public lands. The year 1875
also passed without consid­
eration of the AAAS proposal,
although Commissioner
Watts, in his 1875 report,
noted that “forestry has
excited much attention in
the United States” (due to) “rapid
deforestation,” and he feared
“a timber famine at no distant
day” unless appropriate
actions were taken. Carl
Schurz, the next Secretary of
the Interior, expressed similar
fears in his annual report of
1876; he had hired special
agents to halt timber thievery
that year.

Meanwhile, Hough did a lot
of studying and writing. While
in Washington he had spent
many hours at the Library of
Congress reading everything
he could find about forestry,
including European methods.
Seeking the origin of the word,
he found it was “quite new to
the” (English) “language.”
He continued to study avail­
able materials on forestry
during 1874 and 1875. Also, in
1874, he delivered a series of
lectures at Lowville Academy,
N.Y., in his home town, and to
the New York State Agricul­
tural Society in Albany. In
1875 he presented a series of
lectures on forestry at the
Lowell Institute of Boston,
which Professor Emerson
attended and praised.

The topics covered in his
lectures included: Distribution of
forest species; Qualities of
chemical products and special
products of various species;
Tree growth and the
physiology of timber; Timbers
in commerce and their supply
and demand; Planting and
management, irrigation;
Climate and its relation to
forests; Destructive agencies
and preservation processes;
Ages of timber and time of
cutting; Transportation of
timber; Forest restoration;
Protection afforded by
woodlands; Investments and
profits in forests; and Duties
to the present in the management
of woodlands. He continued to
practice medicine. He was
indeed a busy man. He also
lectured at the Peabody
Institute in Baltimore.

Hough kept up a correspon­
dence with Congressman
Dunnell, determined not to
accept failure as a defeat.

His confidence and foresight
are shown in this prediction to
Dunnell: “I am convinced that
this is destined to be one of
the great questions of the near
future and that those who take
active interest in it now,
whether in or out of Congress,
will deserve and hereafter
secure an honorable place in
the Annals of our Forestry.”

Dunnell again introduced
his forestry bill in January
1876. Hough again made the
winter train journey to
Washington in February to
testify before the House public
lands committee, but their
interest appeared slight,
although Dunnell was optimis­
tic and confident to Hough that
he was sure to get the appoint­
ment when the bill passed. At
the end of the session when
the bill appeared dead again,
Dunnell got the House to
transfer the item as a rider to
the general appropriations
bill, authorizing $2,000 for a
forest study along with funds
to distribute seeds for the
Department of Agriculture.

The maneuver succeeded and
the bill with the forest study
intact received final approval
by Congress on August 15. It
gave the Commissioner of
Agriculture the right to make
the appointment.

continued next week
LOCAL MUSEUMS

1) Dodge-Pratt-Northam Art and Community Center

106 Schuyler Street, Boonville, N.Y. 13309. Phone: 315-942-5133. Registered National Historical Landmark, a Victorian mansion built in 1875 featuring arts & crafts classes, art exhibits, free tour and exclusively local handcrafts in gift shop. Open Tuesday - Saturday, 10 A.M. - 4 P.M. Public invited.

2) National Maple Museum

Community Hall, Beaver Falls, N.Y. 13327. Phone: 315-346-6654. Museum established just this year (officially open fall 1976). Maple products shop open offering syrup, sugar, candy, cream and local crafts. Lewis County produces the largest volume of maple syrup in New York State. Open everyday.

3) Constable Hall

Constableville, N.Y. 13325. Phone: 315-397-2323. Registered National Historical Landmark, a Georgian mansion built in 1817, featuring period furniture. Guided tour. Open May to November, Monday - Saturday, 10 A.M. - 5 P.M., Sunday 1 P.M. - 5 P.M.

4) Gould Mansion

Lyons Falls, N.Y. 13368. Phone: 315-348-8089. Late Victorian mansion (candidate for National Historic Register), built in 1902. Home of Lewis County Historical Society, featuring exhibits and documents focusing on local, state and national history; dioramas; displays on archaeology, revolutionary and Civil War, and the lumber industry. Open Tuesday - Saturday, 10:30 A.M. - 5:30 P.M., Sunday 2 P.M. - 5 P.M., Tuesday & Friday 7 P.M. - 9 P.M.

Open All Year

Houghton Exhibit - 2nd Floor

Tuesday - Friday
renowned for plastic surgery of the eye, he taught at Rush Medical College and at Presbyterian Hospital post 1898.

HOUDINI, HARRY (b. Appleton, Wis., 1874; d. Detroit, Mich., 1926), magician, author. Family name, Ehrich Weiss; celebrated for sensational feats as escape artist.


HOUGH, EMMERSON (b. Newton, Iowa, 1857; d. 1923), journalist. Author of the Singing Mouse Stories (1895), the Mississippi Bubble (1902) and many other popular novels. His The Covered Wagon (1922) became a famous motion picture. He was a lifelong propagandist for conservation and for the national park idea.

HOUGH, FRANKLIN BENJAMIN (b. Martinsburg, N.Y., 1822; d. 1885), forester. Graduated Union, 1843; Western Reserve, M.D., 1848. Practiced medicine at Somerville, N.Y., was army surgeon during Civil War. Served as superintendent of 1870 U.S. Census. The Census revealing a need for publicizing rapid depletion of the country's forest reserves, Hough submitted a series of reports on this subject to the federal government even before his appointment as forestry agent in the Department of Agriculture, 1876. Traveling widely through the United States and Europe, he investigated forestry systems and embodied his findings in official reports, books and pamphlets. His activities paved the way for the successful conservation movement of later years.

HOUGH, GEORGE WASHINGTON (b. Tribes Hill, N.Y., 1836; d. 1909), astronomer, inventor of astronomical and meteorological instruments. Made systematic study of surface details of Jupiter as director of Dearborn Observatory, 1879–1909; he also discovered and measured difficult double stars.

HOUGH, THEODORE (b. Front Royal, Va., 1865; d. Charlottesville, Va., 1924), physiologist. Graduated Johns Hopkins, 1886; Ph.D., 1893. Taught at Massachusetts Institute of Technology, Simmons College, and University of Virginia; dean of medicine, University of Virginia, 1916–24; an authority on the medical school curriculum.

HOUGH, WALTER (b. Morgantown, W. Va., 1839; d. 1935), anthropologist. Graduated West Virginia University, 1883; Ph.D., 1894. Served for many years with the U.S. National Museum; was head curator at his death. Made extensive researches in the Southwest, and was author of a wide range of technical articles. [Supp. 1]


HOUGHTON, GEORGE HENDRICK (b. Deer Mass., 1820; d. New York, N.Y., 1897), Episcopalian clergyman. Founded the New York City parish of Transfiguration, 1849, known as "The Little Church Around the Corner." Active in charity.


HOUK, LEONIDAS CAMPBELL (b. near Big Creek, Tenn., 1836; d. 1891), lawyer, Tennessee Unionist and soldier, jurist. Congressman, Repub.
can, from Tennessee, 1879–91. Early advocate of equal rights for former Confederates.

HOURWICH, ISAAC AARONOVICH (b. Vilna, Russia, 1860; d. New York, N.Y., 1924), statistician, lawyer. Came to America, 1890. Author of Conversational Immigration and Labor (1912).


HOUSE, EDWARD MANDELL (b. Houston, Texas, 1858; d. New York, N.Y., 1928), presidential advisor, known as "Colonel House." Active, 1892–1902, in Texas politics as campaign manager and adviser to Gov. James S. Hogg and his successors. Vigorous supporter of Woodrow Wilson's candidacy, 1912. House became the president's most intimet advisor and chief deputy. Primarily interested in foreign affairs, House attempted conciliatory negotiations before and during World War I and he set up an advisory group called "The Inquiry," to formulate peace strategy and policies. Thrown in the shadow by Wilson’s presence in the Paris peace talks and more realistic and conciliatory than the president, House broke off relations with Wilson after the conduct of negotiations, June 1919. Other American of his time was on such close terms with so many men of international fame. [Supp. 1]

HOUSE, HENRY ALONZO (b. Brooklyn, N.Y., 1840; d. Bridgeport, Conn., 1930), inventor, manufacturer. Nephew of Royal E. House. Patented machine to work buttonholes, 1862, and other sewing-machine inventions. Designed a steam mot...
Forests and Forestry, Second Edition


In this revised and expanded edition of their original 1970 volume, the authors have again provided a fine, easy-to-read book especially suitable for forest landowners and the general public. In my opinion, the book is too simplified for use in professional forestry curricula, but it would be an excellent basic text in a course designed for non-majors—farm forestry, for example.

From a good, non-technical definition of forestry to dendrology: from forest ecology to silviculture: forest resources management to economics; timber harvesting to wood identification, use, and preservation: artificial reforestation to protection and use—this book covers them all in simplified, general discussion. The suggested activities and bibliography at the end of each chapter permit the reader to delve to greater depth.

It is unfortunate that forest survey and economic data are usually several years old when a book is released; nonetheless, the 1976 edition does contain reasonably current (1973) information in tables which can be updated as needed by the user. A new chapter on forests and ecology, the addition of brief discussions of forest practice laws and urban forestry, and additional information in the appendix are among the major changes.

Instructors and students should find the review questions at the end of each chapter to be quite helpful. I would have preferred a somewhat different sequence in chapters. For example, Chapter VIII on economics could well be studied after the chapter on measurements, Chapter IV (which, by the way, is incorrectly numbered II in the table of contents of my review copy—one of the relatively few errors noted)

And the last two chapters, XIII: Fire in the Forests, and XIV: Protecting Forests from Other Destructive Agents could have come before the three on wood characteristics, harvesting, and wood preservation. I also noted an absence of photographs to illustrate present-day skidders and other kinds of harvesting equipment. However, these are not serious deficiencies.

Although emphasis is on the South, I agree with the authors' statement that "...the text contains information about all forest regions of the nation and is applicable throughout the continental United States." Certainly, no other work of this kind is available specifically for other regions, this one should be considered. On balance, I would say it is well worth the purchase price for a lay person or non-forestry student who wants to learn about forestry from one book.

Norwin E. Linnartz
School of Forestry & Wildlife
Louisiana State University
Baton Rouge

The U.S. Forest Service—A History


Historical works dealing with the U.S. Forest Service are numerous and varied in emphasis. Steen's history does two things in a highly readable manner. The leaders of the Forest Service and its predecessor agencies are shown as the agents and initiators of the legislation and policies which have shaped the custody, use, and management of the multiple forest-related resources of one-twelfth of the land area of the United States. In his documentation of sources, the author has provided an up-to-date guide to the history of forestry in this country.

The story opens with the appointment of Franklin B. Hough as a federal forestry agent in 1876. Skillful use of the correspondence of the early "chiefs" and their contemporaries clothes the chronological skeleton with the muscles of personality—and the blood of controversy. Recent chiefs of the service receive less attention.

The organization of the book is chronological with digressions to deal with certain main themes, some of which have been perennial or recurrent. Examples are departmental affiliation, custody vs. use, regulation vs. cooperation, development and emancipation of research, and recreation vs. multiple use. The concluding chapters pose the question whether multiple use can survive the accelerating intensity of use and the rising expectations of the multitude of users.

An increasing proportion of membership of the profession of forestry has had little direct contact with the Forest Service. Indeed, this may be viewed as a measure of the success of one of the early directions—promotion of cooperation—initiated by Pinchot. Yet, the clausal, self-employed, or academically employed forester can have little understanding of the roots of his profession unless he is acquainted with at least the broad lines of the service's history.

Steen's book is a timely and needed contribution in a new cycle of change and controversy involving our profession.

John W. Duffield
North Carolina State University
Raleigh

Trees and Man


What every educated person should know about trees might best describe the contents of this interesting and readable book. Its scope is broad, covering the full subject range of trees, forests, and forestry. Consequently, no topic can be explored in depth. Nevertheless, even the professional forester is sure to discover interesting bits of new knowledge.

The book begins with the biology of individual trees, then proceeds to the forest ecosystem and the interactions of trees with each other and their physical environment. Next comes a description of the major forest regions of the world, accompanied by stories of their evolution and relationship to mankind. A final section is devoted to the many uses of trees by man, and this discourse is enlivened by anecdotes drawn from history and the author's own wide experience.

The forester reading this book will note some technical inaccuracies here and there, but these are minor and do not detract from the story. Forestry and the practice of forest management are presented from the perspective of the European forester. To an American, some of this discussion will seem strange, outdated, or incomplete. The book is not really intended for the forester, however, but for the interested layman. For him, it provides a good, easily understood description of what forestry, in its broadest sense, is all about. The book might also be useful in an introductory course in environmental science, though it does not include a bibliography or references for further reading.

W. D. Boyer
U.S. Forest Service
Auburn, Alabama
Thank you for letting me copy these!

M. Smith

Adirondack Museum
Blue Mt. Lake, N.Y.
May 20, 1977
Naturalists and Nature
The Bicentennial Project
of
North Country Bird Club, Inc.
Dr. Franklin B. Hough
1822-1885

The North Country Bird Club, Inc. prepared a series of articles concerning naturalists and nature as a bicentennial project. The final segment was written by:

Lee Chamberlain

Franklin B. Hough was born July 20, 1822 at Martinsburg, Lewis County. His father, Dr. Horatio Gates Hough of Meridan, Conn. was the first physician in Lewis County and started his practice at Constableville in 1798. In 1803, Dr. Horatio Hough married Martha Pitcher. They had five children, of whom Franklin was the youngest.

Dr. Hough attended grade school at Martinsburg. In 1836, he attended a select school taught by a Stephen Moulton at Turin and in 1837 went to the Lowville Academy. It was at this time that an interest in mineralogy developed and he made trips on foot to the Natural Bridge area to collect specimens. At the age of 18, he entered Union College at Schenectady, paying for his education by teaching school at Martinsburg during the winters.

He graduated from Union College Phi Beta Kappa in 1843 and began a teaching career at the Champion Academy at Champion in Jefferson County. At this time Dr. Hough wished to

at Cleveland. In 1848, Dr. Hough purchased property and a medical practice at Somerville in St. Lawrence County.

After practicing medicine for four years in Somerville during which he collected botanical specimens, meteorological data, minerals, fish, reptiles, bones and historical information, as well as developing a fair practice, he moved to Brownville, relinquishing his practice and devoted himself to historical investigation.

His only return to his profession was during the Civil War when he served one year and three months as a sanitary inspector and nine months as a surgeon.

Dr. Hough’s writings were prolific and he is probably best known for his Histories of St. Lawrence and Franklin Counties and his native county of Lewis, as well as the History of Jefferson County. His other writings or editings covered over 80 books, pamphlets, and articles on subjects from early American history, through physical science, linguistics, archaeology, American Indians, botany, forestry, constitutional law, statistics, biography, genealogy, and other miscellaneous topics.

Other accomplishments in his career were as follows:

1. Conducted the first comprehensive State census in 1855.
2. Worked on the beginning legislation for the later Forest Preserve.
3. Chief of a forestry division with the U.S. Department of Agriculture.
4. May be considered the beginning of the New York State Conservation Department.

In 1872, Dr. Hough was appointed a Commissioner of State Parks. This was Hough’s introduction to the subject of forestry to which his remaining years were devoted with great vigor and voluminous writing.

Dr. Hough, at the time of his death in Lowville at a residence he had established there, had amassed a book collection of about 15,000 books mostly on the government proceedings of New York State. Much of Dr. Hough's writings proved invaluable since a fire at the State Capitol in Albany in 1911 destroyed many of the early records on historical information.
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Itinerary and
Telephone Numbers to reach Frank Harmon
on Trip to Lewis County, N.Y.
May 19-20, 1977
History Section, Forest Service

Thursday, May 19

Leave National Airport, Washington, D.C.,
at 8:50 a.m. on Allegheny Airlines Flight No.105

Arrive at Syracuse, N.Y., Airport at 9:50 a.m.

I will be picked up by car at airport by Ken Dag­
gett, assistant to Arthur Einhorn, director of the
Lewis County Historical Society and Museum at Lyon
Falls, N.Y. He has arranged a 5-minute TV intervi­
taping for use on news program that evening.
We will spend the day in the Lyons Falls-Lowville
area. There will be a reception before the evening
program, at a restaurant in Lyons Falls. Among the
guests will be the northeastern chief of Georgia­
Pacific Corp. and a number of foresters, perhaps
some State people, local historians, etc.
I will give a short talk at the evening meeting,
which will probably be from about 8 to 10 p.m.
After the meeting, Daggett will take me to the
Adirondack Museum at Blue Mountain Lake, N.Y., about
65 miles. We will stay there overnight at a motel,
and look through the Museum the next morning.(Fri.)
We will return to the Syracuse airport about noon.

I will leave Syracuse probably on the 3:30 flight
arriving at Washington National airport at 4:30 p.m.

Telephone Numbers:  Lewis County Museum, LyonsFalls
                    315-348-8089.
                    Arthur Einhorn (Lowville Academy):315-376-3544
                    Adirondack Museum, Blue Mountain Lake, N.Y.
                    (Craig Gilborn, Director) 518-352-7311,12
1. Hector Land Use Area
   Paul A. Shaw, Jr., in charge
   Rural-Urban Center, 208 Broadway, Montour Falls, N.Y. 14865.
   Under supervision of Green Mtn. Natl. Forest

2. Forest Recreation Research - in cooperation with the State University of New York at Syracuse College of Environmental Science and Forestr
   Syracuse, N.Y. 13210.
   Telephone: 315-473-8680
   J. Alan Wager, in charge
   Herbert E. Echelberger
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   Paul A. Shaw, Jr., in charge
   Rural-Urban Center, 208 Broadway, Montour Falls, N.Y. 14865.
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   J. Alan Wager, in charge
   Herbert E. Schelberger
FRANKLIN B. BOUGH
In Charge of Forest Service
before 1905.
Copied for ME - October, 1907

Chief, Division of Forestry
1881-1883

PHOTOUSED WITH CHAR. RANDALLO'S ARTICLE
ABOUT HOUUGH IN AMERICAN FORESTS MAGAZINE
MAY 1961.
These are Xerox copies of 3 original sketches by Rudolph Wendelin, Forest Service artist, done for a projected Forestry Centennial U.S. postage stamp. The sketches are dated May 6, 9 and 10, 1973. The Postal Service rejected the request by the Forest Service for a forestry centennial stamp. It would have marked the 100th anniversary of the appointment of Dr. Franklin B. Hough as the first forestry agent of the federal government on August 30, 1876.

Wendelin has the originals.
FRANKLIN B. HOUGH

FORESTRY IN AMERICA
1876-1976

U.S. POSTAGE 8c