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FOREST PROTECTION AND THE FOUNDING OF PENNSYLVANIA'S FIRST FORESTRY SCHOOL, 1901–1903

The founding of the Pennsylvania State Forest Academy can be said to date from 1877 when a professor of medical botany at the University of Pennsylvania, Joseph Trimble Rothrock, M.D., was appointed to deliver the Michaux Lectures. The lectures, which were open to the public, were given at the Horticultural Hall in Philadelphia and consisted of a series of six or seven lectures each year. According to legend, the first lecture was attended by a sponsor, the janitor, and a man who wandered in from the street. But Rothrock was a natural teacher and an enthusiastic, effective lecturer, and soon the hall was filled to capacity. It continued to be so for each of the fourteen series that Rothrock gave.

As befitting lectures paid for by a legacy from the author of North American Sylva, most of Rothrock's talks were about trees: native trees, famous trees, endangered trees, trees along the roadside, etc. All but one series were illustrated with hundreds of lantern slides. To get material and to take the photographs he needed, Rothrock travelled throughout the commonwealth. He had always had a deep love of the forest compounded of his love for his hometown, McVeytown, and the mountains surrounding it; of his enjoyment of hunting; and of the fact that open air was an "absolute

to him since it alone could restore him to health after
the ill-defined bouts of ill health that plagued him all his life. He
was, therefore, quite naturally horrified by what he saw.

The northern tier of counties, another area which formed a deep,
ragged vee in the center of the state and, indeed, almost any area
where forests and mountains were combined, were now show pieces
of the effects of go-go lumbering. From 1860 until 1870, Pennsyl-
vania had been the greatest timber producing region on the face of
the earth. It had been, and was still being, logged by the small
operators of the day whose rule was to “cut the best and ruin the rest.”

Trees from mixed hardwood forests were felled without regard
for injury to the younger stock which under normal conditions
would have provided the next generation of marketable timber.
Grinnell has estimated that in logging and transporting one mature
tree, an average of fifty saplings were killed.

The logging debris was left as it fell or stacked about in loose
piles. Inevitably this was set on fire. What had not been ruined in the
logging, burned. With the cover removed from steep hill sides,
soil eroded, streams silted up, and heavy rainfall brought flood in
its wake. Lands that Rothrock remembered as dense wood of beech,
yellow birch, sugar maple, white pine and hemlock, were now
shattered wastes of stumps, or empty burned out reaches, or thickets
of worthless nurse trees, briar, sumac, and scrub oak. The desolation
that he was later to call the Pennsylvania Desert was all too apparent.

As Rothrock mourned the destruction of the forest, the Pennsylvania
Dutchman within him was appalled at the financial loss that the
destruction represented. He began to talk forest conservation to
any one who would listen to him.

Then, in 1880, he saw at firsthand the forests of Germany which
had long been managed for a sustained yield of timber. He returned
to Pennsylvania convinced that scientific forest management could
be made to pay and “more determined than ever to arouse public
opinion to the need for forest protection and wise management.”

3. Pennsylvania, Department of Forests and Waters, Forest Trees to Plant in Pennsyl-
vania (Harrisburg, n.d.), p. 2.
2, quoted in John F. Reiger, American Sportsmen and the Origins of Conservation (New York,
1975), p. 82.
He began to campaign even more vigorously. In time his message reached a few prominent Philadelphia women who became interested enough to hold a public meeting on forest conservation. The meeting took place in the hall of the Historical Society on 26 May 1886, and resulted in the formation on 2 June of the Pennsylvania Forestry Association with Rothrock as president. Now he began his crusade in earnest, touring the state with buckboard and limelight lantern giving illustrated lectures on the effects of forest destruction. Almost no valley was too remote nor any group too small for Rothrock to reach. In 1891, he gave up his professorship at the University of Pennsylvania to devote himself full time to forest conservation. The gospel he preached wherever he went was one of multiple use. He spoke of forests preserved as watersheds to guarantee the supply of pure water; for the prevention of soil depletion, floods, and the silting of streams; as settings for all types of outdoor recreation; as places where consumptives from the cities could find health. And he talked of trees which had been raised on land too poor or too steep for agriculture, and brought to sale as cattle are raised and sold. It was a policy that embodied all of his own approaches to the forest, and by accident or careful plan included those of most conservation groups. It was a policy that was instrumental in finally getting for him the whole-hearted backing of Pennsylvania’s citizens.

The first concrete result of his work was his appointment as botanist to the two-man Forestry Commission of 1893. The commission was charged with studying forest conditions and determining what land might well be acquired as state reserves. Two days before the 15 March 1895 due-date of the commission’s report, Governor Hastings approved a bill creating the Pennsylvania Department of Agriculture and providing for a Division of Forestry within the department. Rothrock was named Commissioner of Forestry and also head of the State Forestry Reservation Commission.

Six years later, on 25 February 1901, the division became the Department of Forestry, the first such department established by a state. Rothrock was reappointed as Commissioner. For advice and assistance he had the four other members of the Forestry Reservation

6. Conservation groups also contained nature lovers, travel agents, resort owners, farmers who were convinced that forests changed climate, and scientists interested in the efficient management of renewable resources. Discussions of their motives and work include, Samuel P. Hays, Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890–1920 (Cambridge, Mass., 1959); Jenks Cameron, The Development of Governmental Forest Control in the United States (Baltimore, 1928); and Reiger, American Sportsmen.
Commission who served without salary as they had served when the commission was part of the department; a clerk, Robert S. Conklin; and a part-time forest ranger. Under his care were 110,092 acres of state reservation land, and acreage that would grow to more than one-half million during the following two years.

Pinchot summed up the crusade that led to the Department of Forestry's creation by saying, "In the face of public indifference, in the face of ridicule, of open opposition and of secret detraction, he carried to every part of the commonwealth the story which at last brought the people of Pennsylvania squarely behind his program of forest protection and rehabilitation." Forest protection and forest rehabilitation: the problem lay in whether they could be accomplished together with the resources at Rothrock's disposal, and, if not, which was to come first. It was a dilemma on which he seesawed for his remaining three and one-half years in office.

The forests that were Rothrock's responsibility were in approximately the same condition as they were in 1910 when he stated that if the commonwealth would plant and protect twenty million trees annually it would merely be trifling with a situation that required an effort fifty times as great to reforest those areas in immediate need of forest cover. But planting goes for nothing without protection. Efficient management is impossible on a forest that is being continually burned to the ground. And the forest fire problem in Pennsylvania reached frightening proportions. It was estimated, in 1896, that each year the burned-over area for the state as a whole was equal to a strip one mile wide and 208 miles long. In Centre County, "fires overrun the country about once in three years, lasting from one to four weeks on the mountains. There is no part of the country from which one may not see signs of extensive fires. In some parts the land is wholly burnt over."

8. Gifford Pinchot, Address at McVeytown, 1 November 1924, in Harrisburg Telegraph, 3 November 1924.
same report states that one firm had had 125,000 acres of forest devastated in one season.2 The total forest area burned in 1900 and 1901 is given as 339,032 acres with a dollar loss, including fences, buildings, and timber, of $1,072,557;3 a sizable amount in the day when ten cents an hour was a good wage for a man with a family to support.

Lightning and railroad sparks started fires. Others were the direct result of human activity. Spring fires were caused by fishermen who were careless with matches or who failed to douse the smoldering fires they built beside streams in the belief that smoke encourages trout to rise. Hunters, campers, picnickers, and people who just liked to watch things burn, set fires. Farmers deliberately fired woodlands to stimulate the growth of berry patches, or to open new land for pasture or the plow. Fires were also charged in 1908 statistics to, among others, “bee hunters—30, sawmills—20, boys and children—13, tramps—2, toy balloon—1.”4 Fire-setting even developed a folklore of its own. A warden in Pike County reported overhearing a farmer say, “Now is the time to burn the woods, in the old of the moon, when the sap is down, then the pasture will start quickly.”5

Among Rothrock’s first acts as head of the Division of Forestry had been attending to the passage of a spate of laws aimed at reducing fire. The laws gave constables and wardens the power to arrest persons or businesses which fired the woods, enabled the same officers to call out citizens to fight fires, allowed payment for fire fighting with the state and the country contributing equal shares, and prescribed fines.6 These measures failed miserably. Many local constables were loath to irritate their neighbors by arresting them for practices that were part of their way of life. The general public remained unconvinced of the harm done by forest fire. And it was suspected that the twelve cents an hour paid to the fire fighters encouraged them to provide themselves with work. For a solution to the fire problem, Rothrock needed more than unenforceable laws. Then, too, there was the problem of rehabilitation.

12. Ibid., p. 61.
13. Pennsylvania, Department of Forestry, Report, 1901–1902 (Harrisburg, 1902), pp. 147, 149.
Rothrock was rightly convinced that forest conservation would never be effected in Pennsylvania until it could be proved to pay. No matter what use the forest was put to, it must show a cash profit. This was especially necessary in regard to timber farming. It was up to the state, therefore, to demonstrate by the efficient management of its own lands that given equitable tax laws, growing timber as a crop could be profitable. Hays has stated that conservation, above all was a scientific movement whose goal, in part, was the application of scientific and technical principles to management, including the utilization of expert, disinterested personnel. In his day, Rothrock was an outspoken advocate of professional forest management below the policy level. He believed it was essential to use trained, scientific personnel to carry out the policies that he and the commission had decided upon. What he wanted, then, were foresters to supervise the corps of rangers he was hiring. Foresters were in short supply. Although for a quarter of a century forestry courses had been offered by a number of state agricultural colleges, the first schools devoted entirely to the education of foresters, Biltmore in North Carolina and the New York State College of Forestry at Cornell, had been in existence for three years. Yale had been offering a two-year graduate course leading to a master of forestry for less than one. Biltmore alone had produced graduates. Under Carl A. Schenck, a German forester in charge of forest land belonging to George W. Vanderbilt, Biltmore gave a one-year course that combined theory with practical instruction. Most years it graduated ten to twelve foresters, a number that did not begin to meet demand. The U.S. Bureau of Forestry, in fact, was taking general science students, giving them field training, and allowing them to take civil service examinations as professional foresters.

Not that Rothrock lacked applicants for the jobs offered by his department. He was inundated with applicants, all of them unsuitable:

Men who had spent their lives in the woods in connection with lumbering operations made this fact their plea. They were in their own belief "practical foresters". The fact is, however, that their training was the worst possible for constructive forestry purposes. Their lives had been spent in destruction of the forests.

They had no idea whatever of the processes of restoration. The majority of them had never seen a white pine or a hemlock seed, and would not have known where to look for it, much less would they have understood how to plant and rear it into a tree.¹⁹

Rothrock, however, had prepared for this eventuality. He had the first of the foresters he needed, if not waiting in the wings, at least on the way to the theatre. In the fall of 1899, he had made a journey home to McVeytown to visit Jacob Wirt who had been his friend for twenty years. Rothrock went to recommend that Jacob’s son, George, leave Juniata College where he was a freshman studying toward a degree in classics and a career as a teacher, and attend Biltmore to earn a B.F. in forestry. The words that passed between the two men are irretrievable, but the substance of Rothrock’s remarks are contained in a letter of a few months later. “There will come a

time when this profession like all others will be overcrowded. Those who go in now go in with the tide.” And in the same letter, “Of course I can promise nothing but this I do know. We are purchasing land for the State. There will have to be someone to look after it. The probabilities are that there will be an opening immediately after the next session of the Legislature.”

George Wirt first heard of this the day he arrived home for Christmas vacation. His father met him at the railroad station with a horse and buggy and said that instead of going directly home, they would drive down the valley as he, Jacob, wanted to see some people on business. As they rode along, Jacob spoke of Rothrock’s suggestion. The thought of a career as a forester had no immediate appeal for Wirt. What did, however, was the chance of a year in North Carolina. He had always wanted to live for a while in the South. Then, too, there was the trip to Germany that was part of Biltmore’s curriculum. Between his father’s talk of the prospects and his own urge to travel, Wirt was almost persuaded before the buggy reached home.

Could Wirt have chosen his own career, it would have been in an altogether different field. “My hobby was engineering. I wanted to become an electrical engineer,” he said. And, again, “An engineer was what I wanted.” But an engineering education was prohibitively expensive and he had a scholarship to Juniata. Even financing the year at Biltmore presented problems. Tuition was $200, one-half of which would go to Schenck, one-half to Vanderbilt. In addition there were the charges for a field trip to Florida and Alabama, and for the three months tour to study European forestry first-hand. These tours were mandated by Schenck because of his belief that “it is just as little possible for a young man to be a thorough forester without knowledge of the forests of this country, and of the old country, as it is for a physician to be an efficient practitioner without having some hospital experience.” All in all, Wirt borrowed $2,000 from C. P. Dull, the owner of the sand company that was McVeytown’s largest business. This barely saw him through the European trip. He was obliged to borrow from his family before his time at the school had run out.

20. Rothrock to George H. Wirt, 17 January 1900, George H. Wirt collection, Forest History, Box 3, Pattee Library (PL).
22. Ibid., pp. 26, 4.
23. Carl A. Schenck to George H. Wirt, 3 January 1900, Wirt Papers, PL.
The would-be engineer, the almost teacher who had studied Latin, French, German, and Greek, thus became an incipient forester. Then Wirt received news that a $400 scholarship at Princeton was his for the study of philology. It was almost too much. But it came too late. Wirt’s mind was made up. Whatever doubts he may have had in later years, in early 1900 forestry looked a lot more interesting than teaching or philology. He left for North Carolina on 9 January.

House Bill 24 which established the Pennsylvania Department of Forestry had also authorized its commissioner to hire the men he needed. Less than one month later, Wirt was elected to do forestry duty for one year at $60 per month plus necessary travel expenses. The appointment needed Governor Stone’s signature to become effective, and as he was a busy man at the time, Rothrock feared it might be weeks before a suitable moment could be found for laying the matter before him. The time came on 23 March 1901. A letter was immediately dispatched informing Wirt that he had been appointed as the first State Forester of Pennsylvania and ordering him to report for work on 1 April. He was twenty-one years old.

"An earnest upright Christian gentleman. His influence among those with whom he may come in contact cannot but be helpful." 24 "You are not physically strong for hard manual effort and you have a fine mind." 25 "A man of ample training, good sense, and an honest devotion to his calling." 26 Thus went descriptions of Wirt as he was in his late teens and early twenties. At maturity he was “a 100-pound ball of fire,” 27 best described in the following appraisal by Henry Clepper who served as a forester in the department from 1921 to 1936:

At first he scared the tar out of me. He was caustic; he was sarcastic; he was not generous with praise. But I realized later that this was a device, so to speak, of his in order to find out how a young forester reacted to adversity. In time, as I got to know Mr. Wirt better, I presume that I can truthfully say that I revered him as much as I did any man, including my own father. He was absolutely honest; he was candid; he was forthright. He was not infallible by any means, but he was the kind of man whom I took great pride in serving under. And, when on the rare occasions he did have

24. J. Allan Myers to Whom it May Concern, 23 May 1889, Wirt Papers, PL.
25. I. Harvey Brumbaugh to George H. Wirt, 29 July 1899, Wirt Papers, PL.
something praiseworthy to say of my work, doubling my salary couldn't have meant more to me than approbation from George H. Wirt.  

Wirt reported for work as directed and took on as his first assignment, the writing of the department's first technical bulletin Propagation of Forest Trees Having Commercial Value and Adapted to Pennsylvania. This booklet, which gave simple practical instructions on raising trees from seeds, was prepared with the farmer in mind. Hopefully, it might interest him in starting a woodlot on eroded, worn-out land that was not suited to agriculture.

This done, Wirt travelled the state inspecting and evaluating land being offered for sale and visiting the few rangers and crews then employed on the forest reserves. But whenever he was in Harrisburg, he sat at a desk next to Rothrock's, and the two of them whiled away days and nights discussing European forestry schools and Wirt's experiences at Biltmore. Many of these conversations centered on the study of forest theory in the light of actual forest conditions, closely tied to practical work. The education of the foresters needed to supervise the state reserves had been a concern of Rothrock's for some time. His first thinking had been that such an education could best be offered in a college or university with an on-going agricultural or general sciences program. In 1898, as General Secretary of the Pennsylvania Forestry Association, he had asked formally that a forestry curriculum be introduced at State College or at the University of Pennsylvania. He was requested to call on the president of the latter institution in mid-1900 and complied. But nothing came of the meeting. Nor was Penn State receptive. "As year succeeded year and no help came," he began to consider the establishment of a school to be administered by his own department. There were many advantages to such a plan. The courses could be tailored to Pennsylvania's forests, climate, soil, and needs. Student field practicums could consist of work done on, and the improvement of, state forests. If scholarships were given in return for a set number of years' service after graduation, the state would have a steady complement of trained foresters who might be paid lower salaries than those prevailing in Washington. Although some of the men were sure to leave state service as soon as possible, others would just as surely

remain for long terms out of loyalty.\textsuperscript{30} And most important, the school could be founded, as Wirt said in 1953, "with the understanding that the graduates would be assigned to duty on State Forest Reserves without political strings of any kind."\textsuperscript{31}

The resolve to keep his department outside of Pennsylvania’s noted patronage system was strong in Rothrock’s mind. He mentioned it again and again. “I am anxious to keep politics out of forestry business so far as its professional aspect is concerned. It will creep in unavoidably in the lower grades of the work.”\textsuperscript{32} The efficiency of state foresters must be such that they will be retained on the job and “all hope of mere political appointments effectively cut off.”\textsuperscript{33} “A man’s political creed neither fits nor unfits him for this work.”\textsuperscript{34} And finally, “Forestry is a profession which requires trained foresters. Even for its common workmen it demands honest, temperate, industrious laborers . . . I desire therefore to declare in the most emphatic terms that the Forestry Department should never be turned over to political direction, and that no one should ever receive an appointment in it for other reasons than because of merit and fitness for the work.”\textsuperscript{35}

The more Rothrock considered the advantages of having the state train its own foresters, the more attractive the idea became. As it happened, the state now owned or was finalizing the contract for two pieces of property both of which were suitable for a school, one preeminently so. They lay in Franklin County in south-central Pennsylvania about forty miles from Harrisburg. One, the Caledonia tract along the Lincoln Pike, included the Graeffenburg Inn which could easily be adapted into a classroom-dormitory. The second was the former property of the Mont Alto Iron Company whose headquarters stood at the western foot of South Mountain.

The latter estate’s soil was excellent and its climate mild. A village a mile away would assure a supply of manual labor. The property itself had, as well as the blast furnace, a forge, a foundry, numerous sheds and shops, two sawmills, several cottages, the ironmaster’s

\textsuperscript{32} Rothrock to Wirt, 23 March 1901, Wirt Papers, PL.
\textsuperscript{33} Rothrock to Andrew Carnegie, 3 January 1902, copy, PBFL.
\textsuperscript{35} Ibid., p. 56.
house, an office, and a stable. Beside and behind spread 23,000 acres of forest which had been managed for one-half century as a source of charcoal. The property had suffered comparatively little damage from fire. It did contain a number of burnt-out pockets but had escaped large fires of the type that had devastated nearby areas. In addition, it supported a wide variety of trees and shrubs which could be used as specimens in the study of identification and of silvicultural characteristics. Wirt, in the department’s report for 1903–04, mentions some of the trees he had encountered at Mont Alto. “Chestnut, rock oak and red oak are predominant in numbers and more widely distributed. Locust, white oak, hickory, white ash, black oak, wild cherry and others are found mixed with them. Along the streams and in the few swamps, hemlock, white pine, black gum, yellow poplar and red maple are growing in abundance. Jack pine and white pine have come up in almost pure stands in many places.” And a 1930 survey of the woody plants in the area lists 144 species of native trees or shrubs and notes the presence of a number of escaped exotics. The presence of this flourishing forest was a decided influence on the final choice of a site. Rothrock echoed Schenck’s dictum that the forest was to forestry as the hospital was to the doctor and stated further that the forest is “the final and best ‘laboratory’ for the forester.” Wirt was in complete agreement. “Forestry is, primarily, as a study, the study of nature, and this can best be done under natural conditions rather than from text-books and dried specimens.”

The Furnace land had one final, compelling advantage. The track of the Mont Alto Railroad passed in front of the former iron-master’s house. This branch line of the Cumberland Valley Railroad which ran from Waynesboro in the south to Chambersburg in the north east, was a part of the Pennsylvania Railroad system. Thus, it provided an easy means of access for students and a comparatively quick route for Rothrock on visits from the state capitol.

39. Rothrock, “The State Forest Academy,” p. 120.
The decision having been made to establish a school wherein the Department of Forestry would educate foresters for the state reserves, and a suitable location in mind, it remained to insure the passage of the necessary legislative act. The first step was to publicize the plan in such a manner as to insure its support by individuals and groups who would bring pressure to bear on their legislators. Accordingly, Rothrock published in the October, 1901, issue of the official organ of the Pennsylvania Forestry Association, *Forest Leaves*, an article titled, “A Suggested Pennsylvania Forestry School.” In it he stated the major points of what he disclaimed as “but an outline of the plan which has been gradually shaping itself in my mind.” That the state open a school at one of the locations it then owned. That it be staffed by the State Forester; a professor to teach mathematics, surveying, and road building; and a man with a thorough knowledge of Pennsylvania trees and wildlife. That twenty students be chosen by competitive examination and then pass a physical one. That these students would be forest apprentices who would give bond for their behavior and scholastic performance. They would receive food, lodging, tuition, and a modest monthly sum for clothing. In return, each student would spend one-half of his time in study and one-half, except Saturdays and Sundays, in actual work on the forest. At the end of two years, after passing examinations and putting up further bond, the student would be a uniformed Forest Cadet authorized as a peace officer to arrest any one caught violating forest law, and would also be authorized to head working parties. He would receive a slight advance in the amount of his monthly allowance. At the end of a further four years of satisfactory work and academic performance, a total of six years in all, he would be granted the degree of Forester. Rothrock then mentioned some of the advantages of his plan and concluded that the state could not hope for the best results in its forestry operations, “until we fully realize that a competent forester must be much more than a wood-chopper or a wood-ranger.”

Publication of this article would automatically enlist the support of the Forestry Association, one of whose constitutional objectives was to secure the enactment and enforcement of laws tending to preserve or increase the forests throughout the state. Membership

42. Ibid.
toted 1,630 as of December 1901, but their influence was all out of proportion to their number because of the caliber and dedication of the men and women Rothrock had gathered to his cause. The newspapers would help as they had done before. So would the other members of the Forestry Reservation Commission, political appointees all. Especially valuable in this respect was the newly appointed Miss Mira Dock. She possessed great enthusiasm, intelligence, and energy and had already made real contributions to the Harrisburg Civic Club and the State Federation of Women. Governor Stone would give overt support. He had tangled with pro-Rothrock forces in 1899 when he had tried to appoint his own man as Commissioner of Forestry. Having lost that battle, he was not anxious to enter the fray again. In addition, according to Wirt, Rothrock could count on the assistance of his friend and fellow West Chester resident, Thomas J. Edge, Pennsylvania's Secretary of Agriculture from 1895 to 1899, and of the boss of the state senate. Wirt mentioned in this connection U.S. Senator Boies Penrose, who had served in the Pennsylvania senate from 1887 until 1897, and who in 1904, would become the head of the Republican machine that had controlled Pennsylvania since the days of the Civil War. Finally, Rothrock could rely on the backing of ordinary citizens. They knew and respected him from his work as a conservationist, botanist, teacher, or practicing physician, or from his avocations as hunter, photographer, yachtsman, explorer, and author.

It was this combination of friendly voters and energetic, influential friends that, coupled with forestry-minded governors, had resulted in the former passage of four major forest conservation bills through a series of legislatures not particularly renowned for progressiveness nor public spirit. It now remained to see if the present body, or the succeeding one, could be persuaded to pass the bill needed to establish the forestry school.

Slowly the wheels began to turn. On 21 January, 1902, a meeting was held in Harrisburg by the Allied Interests of Agriculture. This was a rather loose organization of men connected with horticulture, forestry, and farming. Members came from commonwealth government departments, the grange, State College, county agricultural societies, cattle and poultry clubs, and breeders' associations. Its importance lay in the fact that it represented "a population of

250,000 men." The first of the two resolutions passed at the meeting called for the legislature to provide funds for a "training school of elementary forestry," but gave its location as Graeffenburg in Adams County. The following day the State Board of Agriculture also endorsed this resolution and sent it on to the legislators.

In the event that they should prove refractory, Dr. Rothrock had a second string to his bow. Earlier in the month he had sent an appeal for aid to Pennsylvania's most redoubted philanthropist, but to no avail. The minutes of the forestry commission for 2 February, 1902, note that Andrew Carnegie declined to take action on the matter. This was Carnegie's reply to a 3 January letter in which Rothrock had outlined the need for the school and had asked for funds to run it for two years. The list of estimated expenses as given in the letter has been summarized. It proves the worth of the dollar at the turn of the century, indicates the make-up of the proposed school, and demonstrates Rothrock's commitment to a year-round educational system that would provide student labor on the forests in all seasons. The total requested was $26,625, and since the expenses of the second year agree in general with those estimated for the first, only the latter will be given here.

**SUMMARY OF ESTIMATED EXPENSES FOR THE FIRST YEAR OF THE PROPOSED FORESTRY SCHOOL**

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boarding 20 pupils, 52 weeks at $3.50 per week each</td>
<td>$3,640.00</td>
</tr>
<tr>
<td>Boarding 4 instructors, 52 weeks at $3.50 per week each</td>
<td>546.00</td>
</tr>
<tr>
<td>Clothing 20 pupils for one year at $75.00</td>
<td>1,500.00</td>
</tr>
<tr>
<td>Salary for 3 instructors, $60.00 per month each for 1 year</td>
<td>2,160.00</td>
</tr>
<tr>
<td>Furnishings for rooms for the above</td>
<td>625.00</td>
</tr>
<tr>
<td>Instrumental outfit, books, etc.</td>
<td>1,000.00</td>
</tr>
<tr>
<td>Two horses, a wagon, harness, feed, shoeing, etc.</td>
<td>590.00</td>
</tr>
<tr>
<td>Driver, 52 weeks at $7.00 per week</td>
<td>364.00</td>
</tr>
<tr>
<td>Light and fuel</td>
<td>175.00</td>
</tr>
<tr>
<td>Medical attendance, infirmary and incidentals</td>
<td>800.00</td>
</tr>
</tbody>
</table>

$11,400.00

The apparent discrepancy between the number of instructors receiving board and those on salary is caused by the fact that one instructor, the State Forester, would be paid from regular funds.


46. Rothrock to Carnegie.
In addition to listing expenses, the letter states, "We feel assured that if sufficient funds could be secured to maintain the school for two years, it would be adopted and maintained by the State." Rothrock, according to Wirt, was not a political animal. He was anything but active in politics and, indeed, rarely turned his hand in that direction. Even his party allegiance was lukewarm enough to permit him to say that he was "in religious faith an Episcopalian, and politically a Republican, when my conscience will endure it." 47 The fact remains that he had been head of a government division or department for almost ten years. He could hardly have helped noticing that legislative bodies are much more apt to be forthcoming in support of an existing and flourishing institution whose usefulness had been noted and approved by the voters than they are to undertake new, and possibly unsuccessful, experiments. Nothing succeeds like success. The subsidy would come, then, almost automatically if Rothrock could somehow manage to get the school underway.

By April it was obvious that nothing would come out of the present legislature. One month later Wirt was sent to Mont Alto accompanied by a "student assistant." The assistant, Ralph E. Brock, was a black high-school graduate from West Chester who had done some excellent work in botany at the University of Pennsylvania. Mrs. Irene Bortree, Wirt's widowed sister, soon joined them to act as matron. The final member of the original group was already at Mont Alto. David Knepper had been appointed a receiver for the Mont Alto Iron Company in 1891. After the furnace had closed for good two years later, he had stayed on to superintend the buildings and grounds. He was hired by the state to continue in that job. In later years he also acted as a ranger on the Mont Alto forest and gave instruction in practical forestry.

Wirt went armed. On his first trip to Mont Alto, Knepper had driven him up the valley in an old buckboard drawn by two mules. As they went along the mountains Knepper had commented, "Now, you see that schoolhouse over there? Not so long ago one of the fellows that lived there pounded the brains out of his wife. . . . There so-and-so stabbed his neighbor and killed him. . . . There a fellow shot a neighboring farmer for interfering with his wife." 48 This made a deep impression on Wirt for he had just come from Pike County where

he had been responsible for the arrest of a man and his sons for stealing wood and where he had met a great deal of hostility. In addition, the area had a reputation for toughness because of the men who had been charcoal burners or laborers for the iron company and had stayed nearby supporting themselves by an economy based to a large extent on hunting and gathering. This way of life they passed on to their descendants. Fathers and sons alike pastured their cows on state land. They cut firewood from its forests and made extra money felling its trees to make ties that they sold to the railroad. That Wirt never needed the Colt .22 revolver he carried stuck in his belt is a tribute to his personality and his ability to convince his neighbors that the income they would receive for materials purchased by the state, and the wages that would be paid to crews used to improve roads, fight fires, and help prune and plant in the forest would more than make up for any income lost.

Policing state land and making friends were not the major part of Wirt’s charge. He had been assigned the task of improving the forest and of starting a tree nursery. White pine seedlings and transplants were to be produced and given to farmers who could not afford to buy them from commercial growers. This free distribution was another unsuccessful attempt to interest farmers in starting woodlots. The plot chosen for the nursery was poorly drained. Its heavy siliceous soil was full of weed seeds. Far from ideal, it was the only practicable area that was flat and unforested. The plot was plowed and planted with six pounds of white pine seeds and 2,400 two-year seedlings.49

Five dilapidated dwellings with weed-filled gardens stood on the estate across a road from a deep, unsightly clay-pit, a reminder of the days when part of the area had been a brickyard. A start was made in pulling down the old houses and using the tin roofs, chimneys, and other debris to fill the clay-pit.50 In the middle of the summer another student assistant arrived, but he did not like the work and soon left. He was replaced in November by Robert G. Conklin,51 the son of the forestry department’s clerk. This crew worked at tearing down houses and the old foundry building. They did road improvement work that consisted, in the main, of removing large

50. The Oak Leaf, 1924–1927 (Mont Alto, 1927), p. 117.
51. Minutes of the State Forestry Reservation Commission, 1 May, 6 November, 1902, PBFL.
ELIZABETH H. THOMAS

stones from the dirt roads that ran through the reservation. They also did a great deal of work more directly connected with forestry. They pruned and thinned a pure, natural stand of white pine. They cleaned out brush and saplings to encourage the growth of worthwhile timber, favoring the straight, rapid-growing chestnut at the expense of oak and maple. They marked out boundary lines.

There was no regular course of study laid out for these boys but as work was done in forest and nursery, explanations were made as to why things were done and as to what might reasonably be expected as a result of the operation. Books and bulletins were assigned for reading and outlining in evenings and rainy days. Also, common school subjects were reviewed and advanced studies followed. True, there was a great deal of work to be done around the old furnace and furnace village and through the forest which hardly had any relationship to forestry, but in spite of that the boys made real progress and as I remember had a pretty enjoyable time of it.52

This life, though, did have its lonely side, especially for Brock who was accustomed to the bustling towns and gently rolling fields of Chester County. Now, hemmed in by mountain and forest he would sit for hours on rainy days staring out of the window and muttering, "Trees, trees, nothing but trees!"53

Rothrock and his clerk made several visits to Mont Alto and the discussions with Wirt about the proposed school continued. A number of items listed in the previously cited outline which appeared in the October 1901 issue of Forest Leaves were later incorporated into the school regulations. They included: competitive entrance examinations, uniformed students, the posting of bond, work on state lands, and free room, board, and instruction. The number of students in each class, however, fell from twenty to ten, and the six-year program was an early casualty. The issue of Forest Leaves for December 1901 contains another of Rothrock’s reports as secretary to the PFA. In it he gives a general description of his plan but mentions only four years of schooling. The words, elementary forester, in the recommendations which were sent out a month later by the Allied Interests and the Board of Agriculture, seem to indicate that Rothrock had never pushed for a full four-year curriculum, much less one that included graduate study. In this he may have

been influenced by doubts of getting legislative support for such extended programs, but the overriding factor was simply that he was desperate for trained men. The state would soon own or have under contract 572,722 acres of forest land.\textsuperscript{54} All of it needed policing, protection from fire, and management toward the goal of producing marketable timber. There was an immeasurable amount of work to be done.

Work presupposes workers. It is imperative that there should be trained workers. Such men are not now available. There are now enough of foresters of high grade in the country to supply immediate demands. There is, however, urgent need of a lower grade of employees; that is, of men who can be trusted to supervise actual forestry operations. I know of no better way of providing such help than by educating young men on the reservations, where, by a combination of work and study, they may be immediately fitted for practical field operations. It is not enough that they should have a general knowledge of practical forestry. They should recognize what a day's work is, and be able to do a day's work themselves, and so be fitted to take charge of working-gangs in the woods. They should be able to fight fires, to survey land, to make roads, to manage forest nurseries, to transplant trees, and to do all the manual labor which falls to the lot of the working forester.\textsuperscript{55}

To produce these men Rothrock, at this time, in his report as commissioner, called for a school of elementary forestry with a two-year work-study program. The effective class of foresters who were its graduates would serve to suppress fire and to spread the word on the economic loss it caused. They would also do most of the work on the reserves and would "diffuse among the masses proper ideas of what forestry is and how necessary it is to the State."\textsuperscript{56}

Thus, from October 1901 to December 1902, proposals for a six-year school graduating professional foresters had become plans for a two-year school producing men for practical field operations. And, as it happened, the State Forester "has of his own motion, undertaken to lay the foundation of such a forestry school at Mont Alto. It is now in order for the State to officially recognize the importance of this and to provide funds that will enable the educational


\textsuperscript{56} Rothrock, "Report of the Commissioner of Forestry," p. 22.
work to be done on a scale commensurate with the importance of forestry in Pennsylvania.”

Rothrock had in fact, though in a very small way, managed to get a school started. If his prognostication were correct, the legislature would now provide the funds needed to keep it going. The signs appeared to be favorable. Governor Stone’s final address to the legislature spoke highly of the idea and said its benefits would far outweigh the cost. And on 22 January 1903, the Honorable Joseph P. Rahausser of Franklin County introduced House Bill No. 33, an act calling for the expenditure of not more than $6,000 to purchase buildings at Mont Alto or to erect buildings on the reservation, and a further $10,000 for the two fiscal years ending 1 June 1905 to provide “practical instruction in Forestry, to prepare forest wardens for the proper care of the State Forestry Reservation lands.” The bill passed its second reading and was sent to the Committee on Appropriations.

At Mont Alto, the same month saw an addition to the work force; Paul E. Arnold, a German who had graduated from one of the country’s most famous forestry schools—Tharandt. His conversational English was passable. It was hoped that he would be able to translate German texts, as forestry texts in English were virtually non-existent at the time. This hope was unrealized, and Arnold did not prove to be an effective teacher, perhaps because of the language barrier. He remained at Mont Alto for little more than a year. April brought the last of the student assistants. Harry E. Frankenfield, a native of Resica Falls and a former surveyor, was transferred from the Monroe and Pike County reserves where he had been serving as a special ranger. The augmented crew continued work as before. White pine, catalpa, and red spruce seeds were planted in the nursery. Sixteen hundred two-year-old pines were set out in a forest plantation. Pruning and thinning continued, and the site of the old furnace building was almost ready for ivy vines and trees.

House Bill 33 was released from committee, passed its final reading and on 13 May 1903, was signed by Governor Pennypacker. The only school ever established by a state to educate men to manage

state forest reserves now had an official existence. It would function for its first year as the School for Training Forest Wardens and student contracts were sent out under that name.

The founding came none too soon. Four months previously Rothrock had written to Mira Dock of his continued intention to retire at the first possible moment because he was convinced his life depended upon it. He was sixty-four years old. A delicate youth, he had always spent as much time as he could in the open air. This had always cured his recurrent bouts of poor health, but he had never become robust. For the past fifteen years he had driven himself unmercifully in the cause of forest conservation in Pennsylvania. The Forest Reservation Commission, the State Reserves, the Department of Forestry, the new fire and timber-tax laws, the school; all these had been his doing. Indeed, it is almost axiomatic that the state's early forestry movement was indigenous, wholly apart from events on the national scene, so completely was it the work of this one man, the Father of Pennsylvania Forestry. Pinchot, who was not a man to give credit unless it was fully due, has said of him, "There is no other man in any state of the Union who has ever done for forestry in that state what Dr. Rothrock has done for forestry in this state of Pennsylvania."  

The possible moment for Rothrock's retirement had not yet arrived. The realization of his dream for a state forest school brought with it the task of seeing it through its first year.

It was after 1 July before Wirt was ordered to prepare to take charge of the school and get it in working order for the entrance of the first class in September. Feeding and sleeping arrangements had to be made. Furniture, equipment, and supplies purchased. Quarters made ready, and most important of all, a curriculum had to be established. This posed a very special problem. Despite all the previous discussion, it was difficult to determine the precise, final objectives Rothrock intended for the school. Was it to produce wardens or foresters? Was protection alone or protection, coupled with development and management to be the primary concern of its graduates? The evidence suggests the former in both cases. Rothrock had written of an elementary forestry school and of foresters, practical foresters, trained foresters, working foresters as the men needed

60. Rothrock to Mira L. Dock, 29 January 1903, Wirt Papers, PL.
on the reserves. But the word used in the legislative act and on the students’ contracts was wardens.

In his eighty-second year, Rothrock claimed that he had not wavered from his plan for a professional forestry school and had used the term warden because forestry was so new to the country that the legislators would not have known what the word forester implied. He negates this statement, however, by going on to say that the term warden was only used in the infancy of the school when there was doubt that it would survive. “If it has grown into something better than was originally proposed for it, is that to be the base of a charge against it?” In other words, the original proposition was for a school to train wardens, and its evolution into an academy to educate foresters came later. It also seems probable that most of the legislators would have been quite familiar with the word forester from the work of Gifford Pinchot, America’s first native born forester. In drawing up working plans for Biltmore and other estates, as a member of the National Forest Commission, and as chief since 1898 of the U.S. Division of Forestry, Pinchot’s work had received a great deal of publicity, especially in Pennsylvania.

Again, in his 1901-02 report as commissioner, Rothrock had stated that the graduates would transmit the idea that “they were a ‘peculiar people’—Foresters.” He had listed the subjects to be offered as those “related to forestry, viz: Arithmetic, geometry, trigonometry, surveying, road making, leveling, drafting plain and topographic maps, botany, zoology, geology, bookkeeping, commercial law, estimating rate of timber production, making plans for forestry work, etc., etc.” At the same time, he wrote of a student body composed of “lads of the regions adjacent to the reservations, lads whose opportunities for education have been few and poor, lads who knew the mountains and were familiar with hard work.” In actual practice this meant that the majority of the eleven freshmen chosen by Rothrock to complement the three student assistants already at Mont Alto, lacked high school diplomas, or even ones from grade school. Hardly the educational background that would enable them

62. Rothrock, Henry W. Shoemaker, and Edwin A. Ziegler, Report of Committee of Pennsylvania Forestry Commission of Forest Education in Pennsylvania (Unpublished, 1921), p. 9, copy PBFL. The paragraph quoted is attributed here to Rothrock because it not only discusses the founding of the school in his compositional style, but also lapses into the first person singular on two occasions.

to master the listed courses and become proficient enough to supervise all aspects of forest work after two years of a schooling that allotted equal time to classroom study and to labor on the reserves. Fittingly enough, this page about the school appears in a section of the report headed *The Forest Fire Problem*.

In mentioning the graduates' duties, Rothrock almost without exception gave that of protection first, although he also mentioned public relations, low level supervisory responsibilities, and the manual labor required of a working forester. Again, such duties belong more nearly to those of a ranger/warden than a forester. In fact, the practical on-the-job instruction that Wirt had so far provided to his assistants would be sufficient to train men to carry out forestry of such an elementary nature. No formal schooling would be needed, especially in light of the theoretical knowledge available at the time.

Finally, there is the testimony of two men intimately connected with the school during its early days. The first of these is Forrest H. Dutlinger who attended the Academy from 1905 until graduating in 1908 and who knew Rothrock as a frequent and accessible guest lecturer. Speaking of fire fighting as the reason each student was required to own a horse, Dutlinger has said, "Forest protection was basically the reason back of the formation of the school here and the purchase of land by the Commonwealth of Pennsylvania."\(^4\)

The other man was, of course, Wirt. He believed that Rothrock had settled for the training of wardens and he disagreed with that decision. "And as I told the doctor from the very beginning, we didn't want rangers or wardens; it was in the bill—we didn't want wardens, we wanted foresters."\(^5\)

Planting goes for nothing without protection. But the converse is also true. As Wirt wrote officially in 1904, when discussing the school's objectives, "The need of rangers is not questioned, but foresters are needed as well as rangers, and the latter without the former are of little value except for protection."\(^6\)

A man in his early twenties, Wirt took a longer, broader view than that of the senior Rothrock. Wirt looked toward the time when efficient development and management would rank equally with care as responsibilities for those entrusted with the state's

\(^4\) Dutlinger, "Interview," p. 10.
\(^5\) Wirt, "Interview," p. 29.
With this background of conflict over the school’s educational objectives in mind, Wirt approached his problem of formulating a curriculum. He was worried about whether he would measure up to the students’ requirements, and at the same time please Rothrock. There was little precedent or example for him to follow. He was on his own. He collected his textbooks, a recently issued U.S. government publication giving the curricula of European forestry schools, and bulletins from schools in this country. These in hand, he ponied up into the mountain and with meditation and prayer devised a course of study four years in length which followed the usual college schedule. Wirt’s curriculum was put into effect in September 1904, when the first “class of native Pennsylvania forest administrative officers” entered as freshmen. At this time, the school’s name was changed to the Pennsylvania State Forest Academy. Academy because the school’s final design echoed those of four-year professional schools such as Tharandt in Germany, Annapolis, or West Point. And because Rothrock hoped that his uniformed students would have the same honesty, loyalty, and spirit as did the cadets at this country’s military schools. The program at Mont Alto, however, was compressed into three years as Rothrock was wedded to the idea of having students available for work on the reserves throughout the year. At first, the school year was fifty weeks long for a total graduation requirement of 150 weeks. This dropped to 144, but even so was longer than those college courses which are based on eight sixteen-week semesters.

The curriculum Wirt drew up has been called “almost inspired” in its anticipation of that adapted as standard by a 1912 conference representing all the forestry schools in the United States. Just one small hitch stood between it and realization in 1903. The forest commission’s attorney reported, on 1 September, that he had found a defect in the title to 209 acres, 134 perches of the iron company’s

68. Wirt, “Pennsylvania’s Forest Academy,” p. 155.
70. Perry, “A Short Student History,” p. 37.
land. Since in securing a deed from the company, the commonwealth would acquire fee simple title, the commission hurriedly finalized the purchase. 71

Students were arriving, the property was legally the state's, all was ready for the opening of an institution which for a quarter of a century would produce foresters who would make Pennsylvania the envy of other, less fortunate states. Foresters fired with an esprit-de-corps in the best tradition of Annapolis or West Point. Men appointed on education and merit, working outside of Pennsylvania's patronage system. Out of his life-long devotion to the mountainous land of his birth, and of his concern for the protection of its forests, Rothrock had achieved the school's foundation. He had formulated its regulations, set up its balance of classroom and in-the-field study, and found its first students. Wirt, believing in the need for foresters, not wardens, had contributed the school's curriculum and professional goals. Rothrock was the true founder of the Pennsylvania State Forest Academy. But its architect was George H. Wirt.

71. Minutes of the Forestry Reservation Commission. 1 September 1903, PBFL.

THE TURN THE OTHER CHEEK DEPARTMENT

California Locals. [The Crusaders are hard at work] praying in public and private . . . The greatest opposition they have met as yet, is found in the parsonage of the M. E. minister of this place. On last Sabbath night he publicly stated from the sacred desk, that they were crusading against and had left the church, and that he was not their pastor.

* * * * *

From Sagamore [the California post office was known as Sagamore in 1874 and 1875]. I will not attempt a formall reply to this article, but will just state that it is made up of low, durty, Lying Slang.

W. Johnson
Pastor of the M. E. Church
in California, Pittsburgh Conference.

Waynesburg Republican, 24 June, 22 July 1874.

CONTRIBUTED BY SCHUYLER C. MARSHALL, CALIFORNIA STATE COLLEGE.