

**HISTORY OF FORESTRY IN VERMONT**  
Written in 1916 by Austin F. Hawes

The first interest in Forestry in Vermont was taken by Professor L. R. Jones, Professor of Botany of the University of Vermont. Some time previous to 1900 he began to realize the importance of the subject to the welfare of the State, looking at it from a broad standpoint, and realizing the social conditions, especially in the mountains. He succeeded in interesting in the beginning Mr. W. J. VanPatten of Burlington, Mr. Ernest Hitchcock of Pittsford, Mr. Charles Green of White River Junction, Mr. George Aitken of Woodstock and won after such men as Governor Fletcher Proctor and Allen M. Fletcher. They organized the Vermont Forestry Association. The first president was W. J. VanPatten.

Mr. VanPatten was a successful business man in Burlington, had been Mayor of the city, and connected from its earliest times with the Burlington Drug Company, manufacturers of Paine's Celery Compound, Diamond Dyes and other products. He had always taken an active interest in Y.M.C.A. and other philanthropic work and was interested in Forestry from the same standpoint.

Professor Jones had approached Forestry from the standpoint of a scientist. Coming to Vermont from Wisconsin, he had seen the destruction of forests there and realized the importance of Forestry in non-agricultural sections. He was one of the best teachers in the University, and was later called in 1909 to the University of Wisconsin as professor of plant pathology. In Burlington he came more and more to specialize in Plant Pathology and was the means of sending many graduates of the University to the Department of Agriculture in Washington.

Mr. Charles Green approached Forestry from the standpoint of the lumberman. (Insert life of Green).

Mr. Hitchcock, a prominent farmer of Pittsford was a graduate of Wesleyan College, Connecticut, and a very independent thinker, had been a prominent Democrat in Vermont and saw the importance of Forestry from the standpoint of the farmer. He was also particularly interested in the state purchase of large areas of forests.

Fletcher Proctor, one of the most progressive governors Vermont has had, also a very successful businessman, being the president of the Vermont Marble Company, saw the Forestry movement as a part of the general policy of state improvement. While no important action was taken during his administration, he recommended in his retiring message the abolishment of the old Board of Agriculture and the establishment of the positions of Commissioner of Agriculture and the State Forester.

The Forestry Association had all of the most influential foresters in the country come to Vermont and address their several meetings. These speakers included Dr. B. E. Farnow, Gifford Pinchot, H. S. Graves and J. W. Toumey. When Professor Jones first began lecturing about Forestry he said there was absolutely no response, but within five or six years there was a marked increase of interest.

In the Legislature of 1904 the Association succeeded in having passed the first forestry legislation, making the first selectmen in each town forest fire warden, and creating the position of Forestry Commissioner. This position was first filled by Ernest Hitchcock and later by Arthur Vaughan. Mr. Vaughan was a graduate of the University of Vermont and a prominent horticulturalist of Orange County. He had no very marked interest in Forestry and did not show a great deal of initiative in forwarding the movement but perhaps as much as was possible under the circumstances. This fire legislation was very largely made possible because of the very serious forest fires in the spring of 1903, the year when a great deal of damage was done, not only in Vermont but in the Adirondacks and other sections of the East.

In the legislature of 1906 a law was passed creating a State Nursery with an annual appropriation for five years of five hundred dollars. It was provided that the University of Vermont should furnish the land for the nursery, and that the trees should be sold at cost price. This legislation was passed at the instigation of Professor Jones following the precedent which had already been established in Connecticut and New York. In the spring of 1907 Professor Jones started the nursery in the Centennial Field at Burlington, employing soon afterward Mr. H. B. Hall, a retired farmer, to do the work.

About this time the Experiment Station arranged with Mr. C. R. Pettis of the New York Forestry Department that he should spend a certain amount of time in Vermont advising land owners about Forestry. Mr. Pettis made one or two trips to Vermont in this capacity and was especially valuable in the advice he gave to Jones and Hall in the establishment of the nursery, Mr. Pettis being the best authority in the country upon this subject. At one time Mr. Hall visited the New York nurseries. Besides beds in the Centennial Field, experimental beds on the clay soil in the present apple orchard of the University were planted, but with less success.

In 1906 Governor Proctor had recommended the abolishment of the old Board of Agriculture. This board had existed for a great many years and had done a good deal of valuable missionary work, although by many it was considered somewhat of a joke. It had for years carried on institute work throughout the state mostly with local talent for speakers, but also employing some out of state experts. The last secretary of the board had been Mr. Aitken of Woodstock. George Aitken was a Scotchman who had come over to this country as a young man and became superintendent of the Billings Estate in Woodstock. He was a large, well built man of a very enthusiastic nature, full of fun, and a man of interesting experiences. He was one of the best companions to travel with, and made the trips of the board very entertaining to the speakers as well as to the public. He was always ready with a joke and probably carried it too far, so that the farmers in many cases could not tell whether he was joking or giving serious advice. Since the Board was abolished after his administration he was made one of the new members of the Board of Agriculture and Forestry upon its creation.

Governor George Prouty of Newport succeeded Proctor. He was one of the best lumbermen of the state, although the operations of his company are chiefly carried on in Canada. He therefore looked at things entirely from the standpoint of a lumberman and was rather antagonistic to forestry at first. In the fall of 1906 Governor Curtis Guild of Massachusetts called a conference in Boston to consider conservation subjects:- Forestry, Fish and Game, Roads, and various other subjects. There were present all of

the governors of New England and Governors elect and experts on the various subjects. (The writer was a delegate from Connecticut.) A large banquet was given by Governor Guild, and the addresses filled two days at the Tremont theater. On this occasion Governor Prouty became converted to the importance of forestry, at least from a political standpoint.

Some of the prominent members of the legislature of 1908 were Mr. Joseph DeBoer, president of the National Life Insurance Company of Montpelier, Ernest Hitchcock, O. L. Martin of Plainfield, Thomas Cheney of Morrisville, Speaker of the House, and Allen M. Fletcher of Cavendish. Mr. DeBoer came to this country as a boy from Holland, worked his way through the common schools and Dartmouth College, became a school teacher in Montpelier, later actuary of the National Life Insurance Company, and finally president. He was probably the ablest man of Vermont at that time, a very intellectual man, a man of remarkable memory, and a splendid speaker. He was one of the few men of this age who read Latin for enjoyment. He was chairman of the committee on taxation, of which Mr. Hitchcock was another member. This committee went very deeply into the subject of taxation and made an extensive report on the subject. Two bills were before the Legislature creating positions of Commissioner of Agriculture and State Forester. Both bills were killed and it seemed for a time that it would be impossible to create the position of State Forester, but Hitchcock, DeBoer and Fletcher together with Martin and others interested in the Agricultural bill drew up a compromise measure creating a Board of Agriculture and Forestry which was to appoint a State Forester. The bill also provided for a Commissioner of Agriculture appointed by the Governor. Both salaries were to be fixed by the Board but the maximum salary of the State Forester was fixed at \$2,500 and of the Commissioner of Agriculture at \$1,000. Probably the reason that the Commissioner of Agriculture was appointed by the Governor instead of by the Board was that Mr. Martin, a prominent member of the Highways Committee was sure that he would be appointed by the Governor. The bill carried an appropriation of twelve thousand dollars a year, to be divided between Agriculture and Forestry by the Board.

Mr. Fred Davis of White River Junction, State Cattle Commissioner, tried to secure the position of Commissioner of Agriculture. He was finally appointed to the position by Governor Prouty, after having promised the Governor not to accept it. Mr. O. L. Martin had been given to understand that he would have the position, but he became somewhat worried when Mr. Davis delayed refusing it. Professor J. L. Hills of Burlington would not recommend Davis for it. He did not particularly recommend Mr. Martin but had no special candidate. Mr. Martin had been very helpful on the Highway Committee to Mr. Charles Gates, State Highway Commissioner, and it was probably through his influence that Governor Prouty appointed him Commissioner of Agriculture. Martin had been a school teacher and farmer, and was a good speaker. He was distantly related to the writer through H. J. Lewis an old Universalist minister and lecturer on the Passion Play and the Vermont Beautiful.

The Board of Agriculture and Forestry as first constituted was made up of Governor Prouty Ex. Officio, Chairman; J. L. Hills, Director of the Vermont Experiment, Secretary Ex. Officio; George Aikken of Woodstock, Clement Smith of Morrisville, the latter two appointed by the Governor, one for four years and the other for two. Mr. Smith was a large man, and had been a very successful farmer in Morrisville. He had always been progressive in agricultural lines, was one of the first to use the separator, and built the first silo in his section. He was prominent in the Grange matters and was master of the State Grange. Governor Prouty appointed Aikken as

the forestry member of the Board because of his activity in planting forests on the Billings Estate, and Smith as the Agricultural member because he was Master of the State Grange. Smith had succeeded Governor Bell as Master of the Grange and had aspirations of succeeding him further as governor. It is probable that Mr. Vaughan would have liked to have been appointed State Forester, but he was not considered seriously. Several applications were received by the Board, among them those of Mr. Pettis who had done advisory work for the Experiment Station, Mr. Harold Foster of the U. S. Forest Service, who was a graduate of Norwich University and later State Forester of New Hampshire, Mr. Besley, State Forester of Maryland, A. F. Hawes, State Forester of Connecticut and others.

Some time elapsed after the passage of the act before Governor Prouty called a meeting of the Board. Professor Jones had been given to believe that his advice in the appointment of the State Forester would be followed but he became somewhat worried at the delay of the Governor and feared that some non-technical man might be appointed. He had corresponded considerable with me and we had a conference in Connecticut at New Years time, 1909. A few weeks later I was called to Woodstock to meet the Board at Mr. Aitken's office. Mr. Aitken in accepting the position on the Board had laughingly stipulated that they should meet at his office and the first meeting was held there. All the members of the Board were present and after some conversation Governor Prouty told me that the Board had appointed me at a salary of two thousand dollars from the state and five hundred dollars from the College and Station. At this meeting Mr. Aitken showed cross sections of Norway spruce which had made a remarkable growth in thirty-two years on the Billings Estate. Four open grown trees had been cut which made a cord of wood. The trees had been planted eight feet apart. The number planted when divided by four he estimated would give the number of cords. Taking the market value of cord wood in Bellows Falls it showed a return per acre of over a thousand dollars in thirty two years. I did not wish to offend Mr. Aitken, but took his story with a considerable grain of salt. Mr. Aitken was always an advocate of wide spacing, advocating 8 x 8 feet because he thought that thinning was out of the question with our market conditions. In Connecticut I had been in the habit of advising 1,500 trees per acre, which is a spacing of 5 x 6 feet. As a concession to Mr. Aitken I recommended 6 x 6 feet or 1200 trees per acre in Vermont.

The writer came to Vermont in February, 1909 to give some talks before, and at the first Farmer's Week held by the AGRICULTURAL College. The college had only recently moved into Morrill Hall, and was beginning to develop the Extension idea, although there were no special funds available at the time. The work was carried on in cooperation with the newly appointed Commissioner of Agriculture. On April first, the writer moved to Burlington and started in the regular work of the department, establishing an office on the second floor of Morrill Hall in the South West corner. This office was equipped with furniture, books, etc., which were the property of the State. The office was furnished rent free by the University, with heat, light, etc. Professor Jones was of great assistance in starting the new work and gave the new encumbrant a great deal of valuable advice and information about the situation in the State. In 1898 he had started some forest plantations on Sand Plain in South Burlington. This land had been given to the University by President Wheeler, covered with forests, with the condition that the income should be used for the department of Botany and Zoology. The trustees had cut off the forest clean, leaving waste land without the knowledge of Professor Jones. He was very much disappointed as he would have preferred to handle the forest under correct principles and secured his income in that way. The plantings made with his Botany class were white pine, locust,

European larch, white birch, oak, and box elder, had been very successful, so far as white pine was concerned and some of the larch. Most of the locust had been culled by the boxer and the box elder had grown very crooked and was of no value. The pine had been planted in straight rows four feet apart and made an excellent demonstration. The writer continued these plantations from time to time and had at first the cooperation of the Botany department, but the Zoology department never showed any interest in this form of an investment for its own benefit. A thesis of a Botany student working under Professor Jones describes these plantations and shows conclusively the need of sound Forestry teaching at the Agricultural College. The student had read Government Bulletins about the rate of growth of the forest trees and had come to some astounding conclusions about the profit of various kinds of plantations.

Before coming to Vermont the writer had prepared a bulletin which was published as 139 of the Experiment Station Number 1 of the Forestry Department giving a brief statement of the forestry condition in the state, etc. The magazine, "The Vermonter" had published an illustrated article at the time of my appointment.

At the suggestion of Professor Jones, I made a special offer to school teachers to furnish them with Arbor Day packages, a small number of trees of different varieties, and two or three kinds of tree seeds. These packages were never very popular but were taken by a few interested superintendents. The results of one of these packages may be seen today in some very thrifty trees in front of an abandoned school house near Fort Ethan Allen.

In the summer of 1909 four assistants were employed by the department, Walter K. Wildes and George Cromie, Juniors of the Yale Forest School; James Reed and Howard Ames, students in the Agricultural College of U.V.M. Wildes worked in the department in the summer of 1909 and 1910 and then became a consulting forester in New York and later went into the excelsior business, and at this time is in the bond business in New York. Cromie became city forester of New Haven, Connecticut. Reed had become a school principal in Massachusetts, and Ames is at present superintendent of the farm of the Vergennes School of Correction. The principal line of work engaged in 1909 was the study of the serious forest fires of the previous year. These fires had been a large expense to the state because in many towns the cost of fighting had exceeded the five percent of the Grant List. There had been little supervision of the fire fighting on the part of the selectmen, and undoubtedly many bills were allowed which should not have been. The result was considerable criticism of Mr. Faughan, then Commissioner of Forestry, on the part of Governor Froudy and the State Auditor. It was my aim to find out the cost of the fires, why the expense had been so great, how the fires could be prevented, and expense kept down. The results of this study were published in Bulletin 2, and it may be said at this point that the expense to the state of fighting fires for the years 1909 to 1916 inclusive, has not been as great as that for the single year 1908, although there have been several seasons fully as dry.

Besides the fire study two or three working plans were undertaken, the chief one being for the farm of Dr. William Stanford Stevens in Enosburg. Dr. Stevens was a graduate of Harvard University in the same class with President Roosevelt whom he entertained during his campaign of 1912 at St. Albans. He had a great deal of money left him and had never been obliged to work. Among other things he had inherited his grandfather's farm in Enosburg. In the cottage on this farm which commands a splendid view to the west, there is a picture which Dr. Stevens called his fifty thousand dollar picture. It portrayed some farm in New York state or elsewhere, with splendid farm buildings

As a young man it was the ambition of Dr. Stevens to copy this picture on his own farm, and he spent about the above amount of money in doing so. Each agricultural venture in cattle, sheep, etc., was a failure with the result that he had become thoroughly discouraged with farming at the time I first saw him. His sentiment for the farm, however, was so great that he did not wish to dispose of it. Consequently he took up with great enthusiasm the idea of reforestation. The working plan made under my direction outlined a series of cuttings for the improvement of the wood lots, in the successive winters and a series of plantings on the pastures in the successive springs, until everything but the meadows were reforested. Dr. Stevens had been in the habit of spending his winters with his family in Florence, Algiers and elsewhere, on the Mediterranean, and at one time told me that the adoption of forestry on his farm had saved him the price of his annual trip to Europe. It was understood that later through the decline of New York, New Haven and Hartford Railroad stock, he became considerably embarrassed financially, and sold his beautiful place in St. Albans. I enjoyed a dinner with him at the Harvard Club in Boston in the company of State Forester Kane of Massachusetts and Mr. Chandler in January 1916. <sup>Only a month afterwards he died.</sup> Dr. Stevens was a very pleasant companion, was a Progressive in politics, and a very ardent upholder of the cause of Woman Suffrage. He was a small man, very peculiar looking and struck a stranger as a rather eccentric character. He was very devoted to his family and particularly proud of his two sons, one in Harvard, and the other in Groton at the time of his death. The plantations were made largely for their benefit. The writer published an article about this plantation in "American Forestry" in May 1916 using data furnished by Dr. Stevens.

For the first four or five years after I came to the state there were many demands for lectures on forestry on the part of Granges, Women's Clubs, Y.N.C.A. Associations, etc. One of the main features of my work each winter for several years was in connection with the institute work carried on by the Commissioner of Agriculture, Commissioner Martin, followed very closely the system employed by the old Board of Agriculture in holding institutes in various places. Because it was more convenient for the farmers these institutes were held largely in the winter months. We would have a large sleigh load of speakers, some local men and some from away, and travel from place to place, somethings going wholly by sleigh and sometimes partly by train. The rides were often very long and cold and the places stopped at were lacking in conveniences, but on the whole, the work was interesting. The speakers were usually interesting men, and the opportunity of presenting Forestry to a great variety of people was very much better than anything which had been possible during the last few years since the establishment of the Agricultural Extension Service. Among the speakers who went with Martin I may mention Mr. McSparin of Pennsylvania, Mr. McKean of Maine, Mr. Brigham, a successful potato grower in St. Albans, later Commissioner, Mr. Lamberton, a publicity man, and Mr. Andrew Elliot of Gault, Ontario.

Among the places which I visited with Mr. Martin's party were the following:  
in Franklin County: Enosburg Falls, East Berkshire, Fletcher, and Georgia;  
in Orleans County: South Troy, Coventry, Orleans; Essex County: Guildhall, Lunenburg;  
in Caledonia County: Ryegate and Danville; in Lamoille County: Eden, Hyde Park, Waterville, Jeffersonville, Morristown; in Washington County: Cabot, Marshfield, Middlesex, Waitsfield; Reading in Windsor County; Mount Holly in Rutland County; in Windham County: Dummerston, Newfane, Townshend, Grafton, and Rockingham; and many others in various parts of the State which I have forgotten.

Another feature of the early days were the farm trains which were run through the cooperation of the railroads with the Commissioner of Agriculture. Under the old board such a train has been run on the Boston and Maine Railroad. Mr. Martin, Professor Hills and I met the officials of the Rutland Railroad at the Van Ness hotel and arranged for a special on their road. This train consisted of three or four exhibit cars and a diner. Each car was devoted to some special phase of Agriculture, one to dairying, one to Home Economics, ours to Forestry and Horticulture, Professor Cummings sharing the car with me. We had our exhibits consisting of photographs, samples of seedlings, mattocks, etc., in the front of the car. The most interesting feature of the forestry exhibit was a large cross section of white pine tree that had been sent to me by Mr. Chapin of Middlesex. This was about thirty three inches in diameter, and the tree was reported to have cut 1500 feet and was seventy-seven years old. I had marked off each ten year period by a heavy pencil so as to show the growth for the different decades. One boy asked whether every tree made a dark ring of that kind every ten years. When the train came to a stop at a station, the people who were waiting for us would swarm in to the car in which they were most interested, there being a label on each car. Each speaker would then give a ten minute talk on his subject and these would be followed for about half an hour with inspections of the exhibits. Several hundred people would swarm through the trains showing considerable interest in the work. Among the places visited by this train were North Hero, Burlington, Middlebury, Brandon, Rutland, Mount Holly, Ludlow, Chester, Bellows Falls, Wallingford, Manchester, Arlington and Bennington, and several other small stations were stopped at. There was a very congenial party of speakers on board and we had many interesting times between stops, so that the work was not only satisfactory but very enjoyable although rather tiring. Another year a similar train was run over the Central Vermont Railroad making stops at Richford, Enosburg Falls, Sheldon Junction, St. Albans, Georgia, Essex Junction, Underhill, Cambridge, Richmond, Waterbury, Montpelier, Northfield, Randolph, South Royalton, White River Junction, and Windsor. Illustrated lectures were usually given in the evening at the places where we stayed. Altogether several thousand people were reached by these two trains. Farmers came in with their families from long distances, and several years afterwards I met people who said that they had seen my exhibit on the farm train. In each case the railroad company furnished the train and paid for the running of it, the college and Mr. Martin and I furnishing the speakers and exhibits.

In the summer of 1910 we made a study of the hemlock, which was later published in Bulletin 161 of the Experiment Station. Ames and Reed were the assistants employed in collecting this data. Wildes was also employed during the summer but largely on working plans of the Downer State Forest, Speedwell farms and other tracts.

The work under Governor Prouty's administration was very satisfactory. He showed more intelligent interest in forestry than any of the three succeeding governors. Governor Prouty was a fine looking man, a good speaker, and always made a good appearance. He went very carefully into all branches of the state government, and wished not only to know what was going on, but to have it go according to his ideas. The only dissatisfaction which he ever showed in regard to forestry was in connection with the state forest in Plainfield where he felt at first that the price was somewhat high. Mr. Aitken who had visited it persuaded him to the contrary. Governor Prouty was a member of a prominent lumber family in Newport, brother of Commissioner Prouty of the Interstate Commerce Commission. Their home in Newport was simple, and he was very democratic in his relations with people of the state.

At this point I wish to insert a brief mention of some of the previous governors whom I have met. Among them Ormsby of Brandon, Stewart of Middlebury, Grout of Derby, Stickney of Ludlow, Bell of Walden, Smith of St. Albans, Woodbury of Burlington, Proctor of Proctor, and Pingree of White River Junction.

The one time that I met Governor Bell was on the occasion of a Grange meeting at West Barnet. After the meeting when I was introduced, the Governor said that he had followed the legislation of the previous winter but that he had been unable to see why the man with the axe should receive a larger salary than the man with the hoe. As governor he was chiefly noted for refusing to pardon Mrs. Rogers for which he received general commendation. He ran for Congress but was defeated. Soon after I saw him he died suddenly on a train.

Governor Smith was a very wealthy man of a prominent Vermont family, his father having been Governor during the time of the Civil War. They had been interested in the Central Vermont Railroad from its earliest beginning and the second governor later became ~~the~~ its president. He was prominent in banking circles in New York as well as St. Albans and had also started the Robin Hood Ammunition Plant which was later purchased by the Remington Arms Company during the Great War. I first met Governor Smith at the Vermont Yale dinner at the Ethan Allen Club in Burlington, he being one of the prominent Yale graduates in the state. He was considerably interested in forestry and invited me to come up and look over his estate, which I did. Next to Mr. Vail, Governor Smith had the most elaborate establishment in Vermont, that is more style was maintained with a retinue of servants. The house was very beautiful, on the whole more attractive than Mr. Vail's. The Governor was a man of wide experience and was a very interesting conversationalist. At the time I visited them they were entertaining an Englishman who owned extensive pineapple plantations in Jamaica. I remember Governor Smith's telling of his experience in London where his hotel cost him a hundred dollars a day. He apparently never made any attempt to appear democratic, or to cater to popular sentiment, and for this reason was one of the most unpopular governors of recent times. It is said that he never made a speech without putting his foot in it.

I had very little to do with Governor Stickney of Ludlow. My first experience with him was in connection with a tract of land that the Attorney General Sargeant recommended for purchase. This tract located in Chester I looked over, but found that it was not worth any where near the price asked by Governor Stickney, the administrator. I later saw him, and had a conversation about it and he apparently could not understand why I did not buy it. He was a partner of Mr. Sargeant. At another time I came up in the parlor car in a seat opposite Governor Stickney, and we found that we were each reading one of Scott's novels of the same edition. He was reading "Woodstock" and I was reading "Quentin Durward". He had always been much interested in the Vermont Historical Association, and seems to be a man of considerable breadth of culture, but was considered rather cold as a governor. He was on the board in charge of building the addition to the State House in 1915-16.

Senator Dillingham, formerly governor, lived originally in Waterbury. I have met him once or twice at the National Life Insurance office, and elsewhere, but he never remembers me. He is a reactionary in politics and has

little interest in forestry. He stood up for Taft in his controversy with Pinchot, and he has been a strong opponent of the Weeks law. It is said that he was made chairman of the committee which at first whitewashed Lorimer in the Senate because the Republican party felt that Vermont was absolutely safe. Considerable capital was made out of Dillingham's stand on this question by opponents, especially by Commissioner Prouty who ran against him in 1914. Dillingham, however, had a very strong political machine, and won out by a big majority such to the surprise of the Progressive element.

Senator Page, also formerly governor, has lived most of his life at Hyde Park where he built up a very extensive industry in calf skins. He has also been very successful as the President of the Hyde Park Bank, one of the largest rural banks of the state. Senator Page is a very much more agreeable man than Dillingham, and has a good memory for people and carries on voluminous correspondence with people all over the state. He has always been ready to put himself out to please his constituents. During the campaign waged against him in 1916 by Governor Fletcher, a great deal of capital was made of his banking methods but the habit of reelecting senators was so strongly ingrained in Vermont that he was reelected by a strong majority.

Governor Fletcher Proctor of Proctor was probably the best governor of recent years. He was the son of Senator Redfield Proctor, who was at one time Secretary of War, and who started The Vermont Marble Company. Governor Proctor was a man rather over medium size, rather plain looking, but very kindly and courteous in his manner. He always had time to talk with people, and his great success as governor was due largely to the fact that he met the members of the legislature and others in a perfectly free and easy manner. He was very painstaking and went carefully into every subject that came to his attention. I remember taking him over the state nursery at one time with Mr. Hitchcock, when he asked a great many intelligent questions about the nursery. We went over to the college barn, and he showed the same interest in cows. I later heard him discuss horses with Mr. Boyce when they were considering raising horses for the company. He said that they owned sixty thousand dollars worth of horses. I visited at his house once or twice in Proctor. On one occasion speaking at the Y.M.C. building when Governor Proctor himself was present. His house was very homelike, free from any show, and in every way he was exceedingly democratic. The family did not dress for dinner, as in some families of the same wealth. Undoubtedly he was a very good politician and was in line for the United States Senate, if he had not died suddenly. I went to his funeral which was very largely attended by people from all over the state. There were several thousand employees of the Marble Company who marched in the procession, and they had done at the funeral of Senator Proctor a few years previously. The minister's prayer was one of the finest I ever heard.

Early in the summer of 1909 Professor Jones and I took a very interesting trip up through Essex County. It was the first time that I had been into that country and I had always wanted to go there. We went first to Willoughby Lake where we spoke before a convention of school superintendents, and drove from there to Island Pond. I wished to appoint some fire wardens, as none had ever been appointed in the unorganized towns. We met at Island Pond Mr. Hobson, father of Mr. H. H. Hobson now custom house officer at Island Pond. The old gentleman

had been a successful lumberman in the early days in that section. Both he and his son were considerably interested in forestry as they appreciated the increased price of lumber since they had been in the business. From Island Pond we drove down into the edge of Ferdinand and then returned and took the train to Norton Mills. From there we drove over to Averill Pond and saw this section of the county, one of the wildest regions of the state, and rove from there back to Derby through Stanstead, Quebec, with my father and brother who came after us. I believe that it was on this trip that Professor Jones told me that he had accepted a position in the University of Wisconsin. It came as a great blow to me because he was such a compassionate person and had been such a great help in starting the forestry work. I had looked forward to working with him.

Governor Prouty was succeeded by Lieutenant Governor Abner Mead. He had started out as a private in the Civil War and later as a doctor, but had gone into business and became the president of the Howe Scales Company of Rutland. He was also ~~wildly~~ interested in other enterprises, as the Mead Manufacturing Company and in real estate in Rutland, and in other lines. In 1916 he sold out his interests in the Howe Scales Company for approximately a million dollars. Not liking to call anyone a hypocrite, it nevertheless has always seemed to me that Governor Mead fitted this description as well as anyone could. He was one of the kindest appearing, and the most fatherly old gentlemen that one could meet, and without knowing anything about his business dealings, one would think that he was nearly a saint. There was however apparently no degree of meanness which he would not stoop to, to make a dollar. He probably spent money freely for political purposes and later gave away considerable to Middlebury College and other institutions, but he and his wife were noted for their closeness. I first met him at a grange field meeting at Lake Umbagog, where he gave a rather interesting historical sketch of the region. He never showed any interest in forestry as lieutenant governor and we were naturally quite worried as to what his attitude would be.

In September 1910 Mr. Aitken died very suddenly. I had been with him earlier in the summer on an excursion to Soldiertown on Moosehead Lake, Maine, as the guests of a promotion company. Mr. Aitken and I were the first of the guests to reach the camp after a long tramp over a tote road. He seemed in splendid condition and his sudden death came as a tremendous shock to his family. (His widow died just about a year later.) I attended his funeral at Woodstock and afterwards had occasion to speak to Governor Prouty and Ex. Governor Proctor about his successor on the Board. In view of the fact that Mead was to become governor within a few weeks and fearing that he would be antagonistic to forestry, Gov. Prouty asked Mr. Charles Downer to serve for the remainder of the term in appreciation of his recent gift to the State. Mr. Downer had been actively interested in the candidacy of Fred Fleetwood for governor and did not feel that it would be courteous to accept Prouty's appointment such a short time before Mead assumed office. The place therefore remained unfilled until the convening of the legislature.

One of the chief political agents of Mead's in his campaign was Lambertson, mentioned above as one of Mr. Martin's institute lecturers. He was a very large, fleshy man, a tremendous eater, very cynical and entirely unscrupulous. At the same time he was very bright and quite an intellectual man. The combina-

tion of these characteristics made him the most dangerous political agent in the state. Shortly before the convening of the Legislature Mr. Lamberton asked me to call at his office in the old Burlington Library. When I did so, he explained that there was a movement on foot to create a State Publicity Department. He had decided that the best way of bringing this about was to have another member added to the Board of Agriculture and Forestry and have this Board then appoint him as head of the Publicity Department. He intimated that it was Governor Mead's wish to repay him in this way for the service he had done the Governor. As the appropriation was to be divided among the three departments, it naturally meant less for Martin and me. However, if it was the wish of the Governor I could not see any way out of it.

In the Legislature of 1910 Mr. Howe, editor of the Bennington Banner, who later became lieutenant-governor, was Speaker. Mr. Fletcher was chairman of the Ways and Means Committee. Some of the other members were Col. Joseph Battell of Middlebury, Mr. Amey of Island Pond, Judge Hamilton Peck of Burlington. Soon after the session convened, Professor Hills, Mr. Martin and I held a conference with Mr. Fletcher in his room at the Pavilion to discuss Mr. Lamberton's proposition. Mr. Fletcher sent word to Governor Mead who was also rooming in the hotel and asked him to come to his room. When Governor Mead appeared, Mr. Fletcher asked him if it was his wish that Mr. Lamberton should be appointed as State Publicity Agent, and that the appropriation for Agriculture and Forestry should be divided into three parts. Governor Mead avoided answering and gave a considerable discourse on the importance of Agriculture in Vermont, whereupon Mr. Fletcher asked him again what his wishes were in the matter. After considerable delay, the Governor said that it was not his desire to have Mr. Lamberton appointed. Mr. Fletcher then asked him if he would be favorable to having the appropriation for Agriculture and Forestry increased from twelve thousand to twenty thousand dollars. Governor Mead then gave us a considerable talk upon the importance of the sheep questions and the damage done by dogs. Asked further what his opinion was upon the size of the appropriation, he told of his visit to Palestine and the damage done by the destruction of the forests there. Finally upon being pressed by Mr. Fletcher, he agreed to increasing the appropriation to twenty thousand. This conference was the most interesting political conference that I have attended. Mr. Fletcher handled the Governor absolutely without gloves.

Shortly after this, Mr. Fletcher told Lamberton, who was lobbying for his measure, that he would be opposed. Mr. Lamberton threatened to have the Forestry Department abolished, but was unable to do anything. Personally, I did very little in this legislature except to attend some committee hearings and speak in behalf of our increased appropriation. I had never understood legislative matters in Connecticut, and did not make much headway during that session. Mr. Martin did most of the lobbying for the increased appropriation which was finally passed."

Shortly after being appointed State Forester before I came to Vermont I was visited in Connecticut by Mr. George Chedel, Superintendent of Vermont Forests for the International Paper Company. He wished me to come out publicly in favor of the protective tariff on pulp, at the time that it was up before Congress. I declined to do this, thinking that it was not part of my job to interfere with national politics. During the session of 1910 Mr. Chedel tried to get through the Legislature charters for driving the Mad River and Ottoqueeschie River. His company had had holdings of valuable spruce in the towns of Rochester, Granville, Hancock, etc. and wished to drive these two streams. They had had a charter for driving the White River for a number of years. People in Woodstock and vicinity became very much excited over the proposition of driving the Ottoqueeschie. They said that it would be a great damage to the town of Woodstock, and that they did not want to have a gang of river drivers going through the town. Mr. W. B. C. Stickney handled the bills for the company before the Legislature and at the suggestion of Mr. Chedel asked me to appear before the committee in behalf of the company. It seemed to me that the driving privileges were reasonable and that comparatively little damage would be done, and that it would

enable the company to get their wood to the mill at much lower prices, and would be an encouragement to them to practice Forestry. They had already a nursery at Randolph where they were raising large quantities of Norway spruce for planting on open lands. I proposed to Mr. Chedel that he frame his charter in such a way that his company would be bound to practice Forestry according to the approval of the State Forester, and he was willing to do this, doubtless thinking that he could handle the State Forester. Colonel Joseph Battell had been somewhat of a conundrum to the Speaker of the House in making his committee appointments. He had accordingly created a new committee, that of Conservation, in order to give Mr. Battell a chairmanship. These river driving bills were referred to this committee, and Mr. Battell was violently opposed to the paper companies. I met him at Burlington while this matter was under discussion, and tried to explain to him my attitude in regard to the matter, but he would not listen. He afterwards told Chandler that I was either a fool or crooked. The bills were killed and the company has not up to this time secured this driving privilege. Somewhat later the management of the company was entirely changed, Mr. Chedel losing his position. The new management did not even care to make a bluff at practicing Forestry and abandoned their nursery, selling it to Mr. Chedel at a very nominal price, so that he was enabled to sell Norway spruce at prices much less than those charged by the State Nursery. Chedel has always pretended to be friendly to forestry and to me, but underneath he has worked against me. He has never had much use for foresters since he had a fire in New Hampshire and some foresters of the U. S. Forest Service refused to help extinguish it. He complained to Mr. Graves about this matter, and I understand that the men, who were looking up lands under the Weeks Law, were reprimanded.

Governor Mead had promised so many more positions to his workers than he was able to fill, that it considerably embarrassed him. He accordingly planned to give the two positions on the Board of Agriculture and Forestry, made vacant by the death of Mr. Aitken and the expiration of Mr. Smith's term to two of these men. When they found that there was no salary connected with the positions, they were not willing to accept them as pay for the services they had rendered. The Governor, accordingly appointed Mr. Smith and was finally persuaded to appoint Mr. Van Patten to fill out Mr. Aitken's term. Mr. Van Patten had promised to accept, but when appointed changed his mind. We then tried to get the Governor to appoint Mr. Hitchcock, but he apparently thought that he lived too near Governor Procter, and would be too readily influenced by him. After considerable delay, he appointed Mr. Chas. Green.

About the only special legislation which I attempted in this session was the amendment of the Forest Fire law whereby district wardens could be appointed, and wardens could establish patrols where they desired.

During this winter Congress passed the so-called Weeks Law, one of the provisions of which was an appropriation of two hundred thousand dollars for forest fire protection. The Forest Service was authorized to allot this to the various states which had established fire protective systems. Under this law Vermont was one of the first states to receive such an allotment. In the spring of 1911 I went down to New Haven to give a lecture before the Yale Forest School, and in a conference with Professor Chapman, selected B. A. Chandler of the graduating class to come up as assistant in the Forestry Department, and also in the college. The chief work during the summer of 1911 was the installation of a patrol and lookout service made possible by the Weeks Law. Mr. Chandler made a careful examination of Essex County with regard to the danger of forest fires and became pretty thoroughly acquainted with that section. The final result of this work was the establishment of two lookout stations by the landowners, one on Gore Mountain in Avery's Gore, and the other on Burke Mountain in the town of Burke. Some of the other men employed during that summer were Mr. Darrow of Middlebury College, later employed by the United States Department of Agriculture,

Robert Ross, a graduate of the Biltmore Forest School, C. Kenney Smith, a graduate of the Engineering Department of the University of Vermont and Frank Hoag, who was appointed a patrolman in Essex County, and Ames, who had been employed during two previous seasons, was also a patrolman in Essex County in the Paul Stream country. Ross was in the Hancock region, and Darrow in Rochester. The work was new, and we were a little at sea as to just how to go at it. Men were employed chiefly in mapping their sections so that by the knowledge each had acquired, the Forestry Department as a whole was made better acquainted with the state.

In giving the state forest in Sharon, Mr. Downer had expressed a wish that it might be used for school purposes. We, accordingly, arranged to hold a ten-day course in Forestry and Horticulture at the forest in August, 1911. The program of this school is given in publication Number 8. The faculty consisted in Professor Burns, who taught botany, Professor Cummings, horticulture, and Mr. Chandler and I, forestry. Tents were secured from the state militia and there was a good attendance of about 18 boys and men varying in ages from sixteen to seventy. The spirit of the school was good, and everybody seemed to enjoy the work. The following year the school was given again, but with very much poorer attendance so that it was not at all encouraging. In connection with each one of these schools a Sharon Day was held when there was a basket picnic for the people of the region, and lectures by prominent men were given. At some of these gatherings we had as many as two hundred people. The program for the school for 1912 was published in bulletin Number 10 with the list of the students of the previous year. Among them were Lewis Flint who later went through the University of Vermont, Mr. H. H. R. Page who took the forestry course at the Biltmore School, and Homer Russel who became a farm owner in Royalton. In the school of 1912 Mr. H. H. Hobson of Island Pond was one of the men interested, also Mr. Chauncey Brownell of Burlington. In connection with the 1912 school a later school was held on the L. R. Jones state forest in Plainfield, but this was not a success, so was not repeated. The Sharon School was repeated in 1913 with some modification of program. Sharon Days were kept up after that in the summers of 1914 and 1915, so that altogether five have been held. One was arranged for 1916 but was given up because of lack of interest. Among the speakers at these various occasions, without attempting to give them in the proper year might be mentioned Governor Fletcher, Mr. Charles Gates, Highway Commissioner, Mr. James P. Taylor, Secretary of the Greater Vermont Association, Mr. Amos Eaton of South Royalton, Professor J. L. Hills, Mr. Elliot of Gault, Ontario, Clement Smith, Mr. Fred Davis, Cattle Commissioner, and Mr. Esty of Montpelier.

As the Sharon Day was one of our interesting institutions, it may be described somewhat more in detail. Families would begin to arrive about 10:00 a.m., would hitch their horses, and then swarm into the house and register. The women of the neighborhood who had never had an opportunity to see the interior of the Downer house thought it a great chance. Some even went upstairs. Then they roamed about the nursery and ate their lunches under the trees. The speaking took place on the bank right after lunch and later a few people would go over and inspect the plantations. One year we tried having the picnic over in the woods so that more would see the plantations, but they didn't like this as what they wanted most was to wander around the grand rooms of the house. An amusing incident of that picnic was the baby who played about Governor Fletcher. It is safe to say that the fond parents supported him for the Senate. Mr. Downer was always urged to come to these gatherings, but never attended. There was usually a ball game after the speaking.

In the summer of 1911 Mr. Chedel spoke to me about putting into practice some forestry operations in their cuttings that they had in the White River valley. This had been suggested to him by my attitude during the previous legislature, and he undoubtedly hoped that by following our plans he could secure the backing of the Forestry Department,

and sufficient public sentiment to get through, at a later legislature, his river-driving bills. Mr. Chandler was sent into this section and laid out a scheme of cutting for the company's operations in Granville, Rochester, Pittsfield and Ripton. He did considerable marking himself and advised various schemes of cutting it which seemed suitable for the region. Through the recommendation of the Department, the company employed Dana Jewett and Howard Ames to take charge of this marking work under Mr. Chandler's direction. The best work was done on a small job in Granville run by a man by the name of Bessoir, where the system of leaving groups of spruce in the form of a checkerboard was carried out most intensively. In the Deer Hollow camp very little marking was done, because early in the season, when the policy was mapped out, all the timber being cut was situated on the tops of the ranges where the timber was very much overmature, and the reproduction underneath was very good, and where the wind was so severe that even groups of trees would have been laid flat if left. The boss of this camp, however, was opposed to the work, and between inspection trips shifted his crew into the valley, into a comparatively young and thrifty stand of spruce, and cut about 100,000 feet before another inspection revealed his tactics. He was severely reprimanded both by us and by Mr. Chedel for this, but had covered all of the area that was adapted to marking before his work was discovered. In Austin Hollow there were two types in which marking was done. Quite a large area of mixed hardwoods and spruce was marked with the idea of removing all the spruce except that which was situated where it had an opportunity for good growth, and which showed by the form of its crown that it had the ability to grow rapidly for some years to come. In the pure spruce further up on the slopes, the checkerboard system of groups was tried to some extent, but this jobber was working under a contract which was rather loosely worded, so that he was able to violate a great deal of the marking by location of roads through groups left. In Rochester the character of the stand did not lend itself to marking any better than Deer Hollow, and almost no marking was done. In Pittsfield, considerable marking was done of much the same character as that in Austin Hollow, except that the wind situation was much worse so that comparatively little could be left.

None of these cuttings have been visited since the marking was completed except Austin Hollow. This was in the spring of 1915 when a small class of Agricultural students taking Forestry in the University of Vermont, visited this valley. We found that the groups had stood up against the wind remarkably well, and almost no windfalls had resulted even where groups had been left, through which roads had been cut. However, the soil had apparently dried out so much on the clear cut areas, that no spruce reproduction had resulted.

In the fall of 1912 Mr. Chedel wished to continue this work, but wanted to dictate his own policy. He had a man working for him at this time who had taken some work in the Biltmore Forest School. Mr. Chandler went down there and went over the previous winter's cuttings with this man and discussed the whole program with him, but found that he had received some rather concrete instructions from Mr. Chedel, or someone higher up, and did not feel inclined to follow our instructions where they conflicted with the instructions that he had received from the company. Therefore, after an interview with Mr. Chedel, Chandler came back and reported that it was not feasible to continue the work any longer. It is understood that the work was carried on for one more winter under this man's direction in a half-hearted manner.

During Governor Head's administration Mr. Martin requested a raise in salary. The Board met at the Van Ness house, the Governor in the chair. After dividing the appropriation between Agriculture and Forestry, Mr. Martin and I retired from the room. Mr. Martin's salary was finally raised through the efforts of Professor Hillis and Mr. Smith, but not until Governor Head had expressed his conviction that there was not a farmer in the state but would be glad of the job at a thousand dollars.

The first state forest acquired was the property given by Mr. Charles Downer which will be described in detail later. The second forest was a tract purchased in the portion of Plainfield known as the old Coahen Gore, which was afterwards increased to the area of 600 acres. This was purchased by me through Mr. Martin and Mr. John Foss, postmaster of Plainfield. I went over the tract in the spring of 1909, and approved the purchase. The Board agreed upon the purchase price at the time of our first Blister Rust Conference in Montpelier, June 1909, but later Mr. Foss informed me that the owners had raised their price. Disliking to tell the Board of this fact, I finally persuaded Mr. Aitken to go with me and look over the property late in the fall. He considered it a very good purchase and so recommended it to the Board even at the advanced price. Governor Prouty objected somewhat, thinking the price rather high, for cut over lands, as he was used to dealing in Canadian timber. However, the Board finally approved and the property was purchased, Mr. Foss being given a commission of five percent. State Auditor raised some objection to this commission, but it was paid upon an explanation by Professor Hills, and the arrangement was made with Mr. Foss that he would thereafter be allowed fifteen cents an acre for the land which he purchased for the state instead of a percentage. The land came into the possession of the state early in 1910 and was surveyed in that summer by Mr. Walter Wildes.

In the summer of 1910 I received an invitation from Colonel Battell to come to Breadloaf Inn and meet President Thomas to discuss a his policy in regard to his forests. I was unable to go at that time, but went up about a week later when I was entertained very cordially by Colonel Battell. He brought me back to Middlebury with his rapid Morgans, and we discussed with Mr. Boyce, his secretary, his plan for giving a tract on Camel's Hump to the state. However, as he said that he was going to tie it up in such a way that no trees could be cut, I did not give him such encouragement, and did not care whether he gave it or not. During the Legislative session following while Mr. Battell was in the House, he was anxious to secure legislation to prevent the use of the Hancock-Ripton road for automobiles, and proposed a bill to that effect. At the same time he made a gift to the state of his tract of about 12 thousand (or hundred?) acres on Camel's Hump. This property was accepted by Governor Head, and the Legislature passed a resolution of thanks. They did not, however, pass his bill in regard to the Hancock road. The deed specifies that "no growing trees" except for purpose of building roads are to be cut. There has been at times considerable criticism of this restriction, and I have talked with Attorney General Barber in regard to the matter. He told me informally that he believed the state could cut mature timber under this deed on the ground that it is not growing. Whether Colonel Battell intended the word "growing" to mean trees which were actually making a growth or not, I am unable to say. Up to this time no standing trees have been cut on this state forest, but some which were blown over in the severe wind of September, 1915, were cut and removed. In the spring of 1911 the Camel's Hump Club of Waterbury secured a lease for their campsite for a period of five years through the State Forester. The lease was signed by Governor Head and Auditor Graham; I previously saw Governor Head in Rutland and asked him whether the Camel's Hump forest was to be handled by the Forestry Department or not, and he told me frankly that Colonel Battell did not like me, but he saw no reason why the forest should not be handled by the Forestry Department, although of course it was not given primarily for forestry purposes. In the summer of 1911 a telephone was constructed by Kinney Smith to the Camel's Hump camp and an employe of the club was paid a slight sum for serving as lookout man.

During the Legislative session Mr. M. H. Mappood of Peru also created considerable interest by giving a tract to the state. He hung around the Governor's office several weeks drafting and redrafting his proposed deed. Finally with the aid of Attorney General Sargeant they drew up one to his satisfaction, whereby he gave to the state 100 acres on the summit of Bromley Mountain in Peru, upon condition that no trees should be cut. In addition, he included in his deed the control of about 800 acres of forest land. By this he placed himself and his heirs in such a position that they

cannot cut timber from this 600 acres except such as may be indicated by the Forestry Department. Mr. Hapgood has always considered that this policy of placing private lands under state control is very important, and has tried on many occasions to have the State Forester adopt it in place of the policy of state purchase. He has maintained that by the expenditure of the same amount of money in securing control, the state could acquire control of very much larger holdings, than they can purchase. As a matter of fact, of course, no landowner will deed away the control of his property for any less sum than he would sell it outright. Mr. Hapgood probably knows this perfectly well but likes to make political capital out of his idea. In reality his plan is not very different from one in operation in Germany and Austria where private families often place their forest property under state control. The idea, there, however, is not to help the state but to secure notoriety or to insure for their heirs a fixed definite income.

Mr. Hapgood is one of the unique characters of Vermont. Like Colonel Battell, he runs a summer hotel very largely for the pleasure he gets by associating with cultured people. They, in turn, enjoy him as an odd genius. The only time I ever visited him he was very courteous to me, though very inquisitive. He took me over his woods in which he was very proud and entertained me at his mountain camp where his friend Richardson stays. After asking my salary, whether I had my expenses paid, and whether this was an official visit, he said I might pay him \$2 but he would be glad to have me come again sometime privately when it would cost me nothing. He was a great admirer of Roosevelt and loves to be called "Vermont's rugged reformer."

During the winter of 1911 and 1912 I had a few interviews with Judge James Merrill of Rutland relative to a tract of land in the vicinity of Rutland which he thought would be suitable for a state forest. He was much interested in having the state acquire it because as a bird hunter he was an enthusiast over the woods. Sometime during the winter before the snow was gone, I went to Rutland and examined this tract which was in the southwest corner of the town of Mendon. Judge Merrill found out that it could be purchased from Morse of the Vermont Marble Company at a reasonable figure, amounting to about \$2.25 per acre. He did not let Morse know who the purchase was made for, and after the option was secured, Morse was quite indignant because he would have charged more if he had known it was for the state. It was necessary to secure the approval of the Board of Agriculture and Forestry for purchase at that time, and Judge Merrill thought that we might have difficulty in securing Governor Head's approval because he was a bitter political enemy of Morse's. The Governor could not, however, very well object to it, but told me later that he would have bought the tract for himself if he had known it was in the market at such a low price.

There was a little money available for purchases, and since it had to be expended before the end of the fiscal year, June 30, I hurried around to find a suitable tract. Through the West River Association of Windham County, I got into touch at Townshend with Mr. John Ware, Mr. Charles Willard, and Mr. Chas. Evans. We looked over several properties and I finally made arrangements for the purchase of a tract of about 750 acres on the west side of the river about a mile from Townshend village. In order to secure this it was necessary to find a purchaser for the buildings and farmland. Mr. Tibbitts finally arranged the selling of this portion of his property to a Mr. Watson, but under condition that we would let Watson have an irregular pasture, and right-of-way to it. Chandler had charge of the survey of this tract, and had with him Hastings and Hamilton, both Biltmore men. They were in a great hurry in order to complete the deed by July 1, and we found later that Hastings and Hamilton were unreliable.

It is probable that the survey is none too accurate. This tract is probably the poorest purchase of any of the state forests, the reason being the shortness of time

available for the proper business dealings. The tract, however, was well located for demonstration purposes, and plantations made there subsequently have done very well, and have attracted considerable attention. A lookout station was established on the summit of the mountain which commands a splendid view of Ascutney, Stratton and other high points. This station was occupied in the summer of 1912 by Lewis Flint, who had taken the Sharon Summer School course. In 1913 Philip Chamberlin occupied it with his bride and fixed up the house. In 1914 it was occupied by Frank Hoag and his wife. Foster and I inspected it in that season. It was not occupied in 1915 or 1916.

Before the purchase of these two tracts I purchased in the town of Lyndon 7 1/2 acres of sand land just south of Red Village, at \$2 an acre. Mr. Charles Green and I looked over this whole section before deciding on the exact location. This tract was selected in 1911 and Mr. Whitney, a student of the Yale Forest School, and I first surveyed it. The survey was corrected and completed later on by Chandler. The deed was secured in the spring of 1912 when the planting was begun. This plantation, which is largely of Scotch pine, has been of very great educational value. At the time the first planting was done there was general skepticism on the part of people in the region about making anything grow on this sand. Several field meetings have been held on the tract, and it has done more to arouse interest in Forestry than anything else in the northeastern part of the state. The sand wave still remains to be covered, but considerable success has been secured by the various methods employed. One of these is an open board fence recommended by the United States Department of Agriculture. It is raised every few weeks in order to keep it on the crest of the wave, and has stopped the advance of the wave. Willow cuttings planted on top have done fairly well, about half of them being left. Scotch pine planted in hollows on top have mostly lived, but those on slopes, where sand is blown, have died. Sand-binding grasses purchased from Cape Cod have now been planted for three successive falls, the first being done in 1914. These grasses have done remarkably well, having already spread considerable distances, and bid fair to stop the shifting sand.

The appropriations received under the Weeks Law necessitated the employment of much larger field forces in the summer than we had had before. In the summer of 1912 this work was somewhat better organized than in the former year and was still under the direction of Mr. Chandler. We had in the vicinity of Rochester two men: Devereaux and Glendon. While they were employed primarily for fire patrolling they spend a good share of their time in mapping, since this part of the state had not been covered by the Geological Survey. Mr. Ross was patrolling the section about Pico and Killington. He located a trail from the Woodstock-Rutland stage road into the summit of Killington and made considerable headway in the construction of the trail. Mr. Redfield Proctor became so much interested in the trail that he and his sister later subscribed \$100 towards it.

Soon after the establishment of the Forestry Department, Mr. James P. Taylor, history teacher at the Saxons River Academy, came to me to discuss a project of opening up the Green Mountains. Since there had never been very much interest in the Green Mountains, it seemed to me a very good proposition, and I was much interested in it, and at the meeting of the Vermont Forestry Association held in Brattleboro, I believe in December, 1911, I invited Mr. Taylor to speak upon the subject. He did so and created considerable interest and later established the Green Mountain Club of which I was one of the first members. I was not present at the business meeting, but found later that I had been appointed chairman of the trail committee by Mr. Taylor, who was the first president. As I was much interested in the project of developing the mountains, and as I thought the Forestry Department could very nicely help out in this work, because of the Weeks Law money, I was willing to accept. I had seen the splendid trails of the Black Forest and the Vosges mountains, which followed a 15 per cent grade, and which are traveled by thousands of people annually. It seemed to me that

there was an excellent possibility in Vermont, and that the trails would also be of use in fire protection. The work done by Ross in the summer and fall of 1912 was in this connection. Largely because of the splendid work done by Ross in trail construction near Pico in 1912, Mr. Redfield Proctor and his sister gave \$100 for work on the trail. This led to other donations as listed below:

Brandon Section	\$ 40
Brandon Section through Mr. Farr	200
State Treasury of the Club	185
Rutland Section	50
Mr. C. P. Smith, Burlington	175
Hon. Redfield and Miss Emily Proctor	100
Appalachian Mt. Club	100
Woodstock Inn	25
Green Mt. Club - state treasurer	50
Brandon Section	25
Rutland Section	25
Proctor Shelter House Fund	25
Mrs. Proctor and Miss Emily Dutton Proctor	175
Total	\$ 1175

#### SUMMARY OF EXPENDITURES

Wages	631.79
Provisions	264.41
Transportation	59.98
Miscellaneous	34.32
	<u>990.50</u>
4 shelter houses	162.96
	<u>1153.46</u>
Balance on hand	21.54
U. S. expenditure on salaries	118.00
State "	72.50
	<u>\$ 1365.50</u>

In the spring of 1913 we started a crew under F. B. Clark to work north toward Mount Herried, using the money which had been subscribed by the Proctors for the labor and supplies, Mr. Clark being paid by the Government. The trail was laid out by Ross. While the trail was being built I invited Mr. Levi Smith of Burlington to take a tramp with me, and we went into Moyes Pond, where Mr. Clark and his party were then camping. Mr. Smith was so much impressed with the trail and its purpose that he persuaded his father, Mr. C. P. Smith of Burlington to give \$175 towards the work. Above is an itemized statement of the receipts and expenditures of this operation. Mr. Ross, who had charge of the financial matters, estimated that 100 miles were built at an average cost of \$10.53 per mile. There was more interest in the trail during the summer of 1913 than in any subsequent year, and more credit for the trail is due to Mr. Ross than to anyone else, unless it is Mr. Taylor who originated the idea. Unfortunately, the club has not kept up very much of this trail, and a considerable part of it is now in bad repair.

In the spring of 1916 the Green Mountain Club, not having done anything on the trail the previous year, was reorganized. I took an active part in bringing this about, and Mr. Mortimer Proctor, son of Fletcher Proctor, was elected president. Mr. Theron Bean of Burlington was elected treasurer, and an executive committee was appointed to take charge of the club work. This committee of which I was a member voted to take up the completion of the trail as fast as money was available, and to finish each section of the trail as rapidly as possible, beginning with the Mansfield section. Money was to be raised by getting out a fancy circular. This project which was left to Mr. Bean and Mr. Taylor was never completed. In the fall of 1916 after the rush of Forestry work was over, I offered to relocate part of the Mansfield trail and put it in good condition with the money which the club then had, including \$100 received from Mortimer Proctor. Mr. Bean objected to the expenditure of the money for this purpose and claimed it was unnecessary. Earlier in the summer Mr. Mumroe, Professor of Psychology in the University of Vermont Summer School, had built a trail from Camel's Hump south connecting with the Ross trail near Mansville. Mr. Mumroe entirely disregarded grade and all principles of the proper location of trails, placing his trail directly over the main peaks of the range, so that it was full of steep pitches. Mr. Mumroe had done considerable work in the Carpathian Mountains and claimed that he was an expert in trail construction, and that the idea of the graded trail was wholly obsolete. He succeeded in forming a New York section of the Green Mountain club with the evident intention of dictating the policy of trail construction in the Green Mountains. A resolution was passed by this section stating that they looked upon the graded trail with disfavor and that the trail building should not be tied up with the Forestry Department. Since our work in connection with the trails had been entirely for the purpose of benefiting the club, their position in the matter seemed rather uncalled for. Mr. Ross confined his work in the fall of 1916, therefore, to the building of a new trail on the Mansfield State Forest, starting at the Hutchville cabin and following a good grade to Nebraska notch, where it joins the Long Trail.

The summer of 1912 was an unusually interesting one from the political standpoint throughout the country, and equally so in Vermont. After Roosevelt formed the National Progressive Party a branch organization was formed in Vermont. The nominees for governor were Allen R. Fletcher, republican, Harlan B. Howe, democrat, Frazier Metzger, Progressive, and Clement Smith, Prohibition. During the latter part of the summer Roosevelt made a speaking tour through the state and later Mr. Pinchot came to Vermont once or twice. Mr. Ralph Hosmer, Superintendent of Forests of Hawaii, was visiting me at the time, and we went over to Bradford to hear Mr. Pinchot speak. A curious alignment took place in Townshend where the progressives opposed forestry. They claimed that the state forest in Townshend had been purchased through the republican leaders and that the town was going to lose taxes, but of course were finally shown that this was not the case. Because of the fact that there were three parties, there was no election for governor. Election therefore went to the Legislature, which elected Mr. Fletcher. Mr. Joseph DeBoer of Montpelier had tried for the republican nomination of governor and this had antagonized Mr. Fletcher so much that he was very bitter against Montpelier. Mr. Fletcher was a very fine looking man, and very brilliant, but extremely sarcastic, and as it turned out after his election, very vindictive. Some of the more influential members of the Legislature of 1912 were the following: Mr. Redfield Proctor of Proctor, Mr. Amos Eaton of Royalton, Mr. M. J. Hapgood of Peru, Mr. Cook of Lynden, Mr. Jose of Johnson, Judge Weeks of Middlebury, Mr. Charles Plumley of Northfield who was Speaker of the House, and Mr. Howe of the Bennington Banner, who was lieutenant governor in this administration.

Mr. Hapgood wished to be chairman of the conservation committee and asked me to help him secure this position, but I did not feel that he would be a suitable man for it. Mr. Plumley appointed him on the committee but made someone else chairman.

Early in the session it developed that Governor Fletcher was not going to appoint Mr. Martin as Commissioner of Agriculture. Martin had helped him in the campaign and had been given every reason to expect that he would be reappointed. In some way he had antagonized the Governor and the more political pressure he brought to bear, the more the Governor decided he would not reappoint him. Mr. Elbert Brigham of St. Albans was finally appointed in his place. Governor Fletcher had always been interested in forestry and advocated a special appropriation of \$10,000 a year for the purchase of state forests. We had a hearing before the Farmers Club at which Mr. Green and I spoke, and Governor Fletcher himself made a very good speech in behalf of Forestry. Everything looked as though the bill would pass when it came up for its third reading one evening. It would unquestionably have passed if it had not been for Mr. Joss who moved that it be laid on the table while he looked into the matter, because he felt that some other official besides the State Forester should have a word in the purchase of the state forests. He consulted with Governor Fletcher, and later brought in the amendment that these forests should be purchased by the State Forester with the approval of the Governor. By the time this had been done, considerable opposition was aroused on the part of some members on the ground of economy, and the bill finally passed the House carrying an appropriation of \$5000. When I went to Governor Fletcher with this information, he said that we had better be satisfied with this small amount, but I suggested that we have it amended in the Senate. By taking the matter up with Senator Blanchard of Windsor and a few others, we succeeded in having it amended and passed in the Senate for ten thousand. The bill then went back to the House for their acceptance, but Mr. Joss refused to concur. A committee of conference was appointed and this committee agreed upon \$7500 which was finally passed. The appropriation for buying land, surveying, and planting has been \$7500 a year since 1912.

#### forest

Another measure of importance in this Legislature was the question of taxation of forests. Not feeling very confident of getting any drastic taxation legislation, I had prepared a bill having to do only with plantations. This was introduced by Mr. Eaton, who had shown considerable interest in the Sharon forest, but it was killed. This was because the bill did not go far enough to cover growing forests. It was therefore reconsidered and amended. Mr. Taft, representative from Townshend, was much interested in this question of taxation, and drew up the bill covering the taxation of standing timber. Early in June I attended a meeting of the Society of Eastern Foresters at Lakewood, New Jersey, and secured there from Professor Chapman of the Yale Forest School, the taxation bill which the Connecticut commission was proposing for that state. I redrafted this bill into two bills with the hope that we might secure the passage of one, if we couldn't both. Mr. Eaton introduced the bill having to do with young timber, No. 40. This was carried with practically no opposition; No. 41 was carried at almost the last minute of the Legislature, making Vermont the second or third state to pass legislation of this kind. The bill did not pass in Connecticut until some time later. During the same session other matters of importance came up. The forest fire law was considerably amended. Hitherto the first selectman had acted as fire warden. The law was changed so that the fire warden was to be appointed by the selectmen with the approval of the State Forester. This bill was backed in the Senate by Senator Newman Chaffee of Rutland. Altogether this Legislature was very progressive and interested in forestry, and the members asked me questions about the subject, and for my advice on legislation.

In the spring of 1912 I received a telegram from Dean Davenport of the University of Illinois asking me to meet him in Amherst, Mass., to consider a professorship in Forestry in his University. We had dinner together at Hotel Worthy in Springfield and went over the situation at length. The combination of extension work and a small amount of college teaching without any idea of founding a forestry school appealed to me. I liked Dean Davenport very much, and he appeared to approve of my ideas, for he offered me the position at a salary of \$3000. On my return, I told Professor Hills,

and he immediately took the matter up with the Board, i.e., Green and Smith. They agreed, with the approval of Governor Head, to raise me to the maximum of \$2500 allowed by statute. This, together with the \$500 from the College, gave me a salary of \$3000. Professor Mills consulted Mr. Fletcher, who was evidently to be the next governor, and he raised no objection to the arrangement. When I refused the Illinois position, Dean Davenport wired asking what salary I would consider. As the Board had acted so generously, and I much preferred Vermont to Illinois, I replied that I did not care to consider the position further at any salary. So far as I know, this position was never filled. It seemed to Professor Mills and me at this time that my position in Vermont was assured and would not be mixed up in politics. In looking back over the work here, it seems that I reached the height of my success in Vermont in the legislative session of 1912-13.

Under the cooperation of the Forestry Department with the Department of Agriculture under Mr. Brigham, the work went on about the same as under Mr. Martin. Mr. Brigham was a graduate of Middlebury College, and was a very bright fellow. He was a man who read a great deal, not only in agricultural lines, but in other ways. At his suggestion, I read Roger Hagar's book on agriculture in Denmark. After his graduation from college he had taken up farming on the ancestral farm near the village of St. Albans, and had been successful in finding a market in Virginia for seed potatoes. He had developed the potato and bean industry to such a point that it was very profitable to him. In his reading he had picked up a great deal of information about cooperative marketing, and his chief policies as commissioner were to develop better markets and to get a better class of labor into the state. The first year or two he conducted institutes very much as Mr. Martin had done, and I went with him on some of these trips. Among the places which we visited, I remember especially a very severe winter drive of about 30 miles from Chelsea to Wadford with the temperature about 25 below zero. We spoke at Chelsea, Newbury, Danville, Wheelock, and Newport. On other occasions I went with him to Bakersfield, West Haven, Shoreham, Starkboro, Morretown, Middlesex, Cabot, Craftsbury, and several other places that I have forgotten. Later on with the establishment of the extension work in the University of Vermont, Mr. Brigham gave up the institute work and specialized on the question of marketing. Since then the cooperation of the departments has been less, and since the Extension Service did not put much emphasis on forestry there has been very much less opportunity to bring forestry directly to the attention of the farmers than there was under the old days of institutes. From the forestry standpoint the creation of the Extension Service, so far, has been a handicap. Because of his plans for developing markets, Mr. Brigham needed more money than Mr. Martin had. The result was a decrease in the appropriation for forestry. However, the relation between Mr. Brigham and myself has always been extremely pleasant.

Soon after the establishment of the Extension Service in the summer of 1913, Mr. Chandler and I arranged a series of Forest Conferences in cooperation with the county agents. The plan was for the county agent to arrange for about two field conferences a day; to take Mr. Chandler and myself to a wood-lot, meeting the owner and others who were interested, and discussing points with them. Then in the evening I gave an illustrated lecture and Mr. Chandler talked on markets. During that summer, conferences were held at the following places; West Woodstock, North Thetford, Topsham, East Burke, Greensboro, Stowe, Middlesex, Worcester, Calais, Enosburg, Berkshire, Wilmington, East Dover, Wardsboro, Townshend, East Braintree, Calais, West Topsham, Glover, Bristol, Westfield, West Charlestown, East Charlestown, Barton, Springfield, Athens, Windham, Norwich, and Duxbury, altogether about 2000 people attended these meetings, but the discussion in the woods proved the most valuable part of them. We later decided that it was not worth while to have two speakers, and either Mr. Chandler or I went alone. The county agents who were particularly interested in this

work were Sweeton of Windham County, Demary of Orange County, and Coryell of Windsor County. We had several interesting experiences, perhaps the most interesting was at Topsham. Because of the fact that we had been to supper at the Dodds at East Corinth, and because Mr. Demary's car was not working very well, we arrived at Topsham at ten minutes after eight, and as the meeting had been advertised at eight, everyone had gone home and gone to bed. We had to send someone out to get them to come back and finally had a very good meeting.

There was published during the year 1913-1914 Bulletin No. 13 on 176 of the Experiment Station. This was a discussion of the second growth hardwoods by Chandler and myself. It was the result of two summers' field investigations which we had carried on in even age second growth hardwoods. The field force for this work consisted of Clarence, Frink, Philip Chamberlin, Dana Jewett, and F. D. Forbes, then a student in the Yale Forest School, and who later became assistant state forester in New Jersey. Plots were selected in in even age second growth, and studies of the stand made. We found the best stands available for this purpose those which had originally been cut off for supplying wood for the old locomotives, which in the early days of railroading had burned wood. Many of these stands had reproduced very well with desirable hardwood species, but the study proved that the growth of these trees was very slow. Chamberlin and Forbes had a serious mishap in this work in the town of Norwich. They had hired a farmer's team to take them to the village. Going down a steep hill the harness broke so that the horse was unable to hold back, and ran away, upsetting the wagon, breaking one of Chamberlin's ribs and the horse's leg, so that it had to be killed. The farmer claimed the horse was worth about \$300. As the work was Experiment Station work and Professor Hills had no way of paying it out of the station funds, we all divided it up. Professor Hills paid part personally, Chamberlin, Chandler, Forbes and I each paid part, and some of the people of the region subscribed. Undoubtedly the whole amount should legally have been paid by the Experiment Station. This hardwood bulletin was, perhaps, the most satisfactory from a scientific standpoint of anything we have published in Vermont. There has been considerable demand for it.

Under the new appropriation passed by the legislature of 1912 Mr. Robert Ross was employed as the second permanent assistant. The state was divided into two sections, and the one comprising the navigable water sheds was put under his direction; the other section tributary to Lake Champlain and Lake Memphremagog was under Ames so far as fire direction was concerned. We began that year to hold fire warden's meetings. These were held at Montpelier, Hyde Park, and at one or two other points. In the spring of 1914 more of these warden's meetings were held at Brattleboro, Wells River, Montpelier, Lyndon and Middlebury. At Lyndon Mr. C. M. Darling, the warden of the town, entertained the crowd and furnished conveyances to take us to the plantations at Red Village. In 1915 there were very good meetings at Rutland addressed by Mr. Mortimer Proctor, Bellows Falls, addressed by Mr. Gilson and by Mr. McKulty, of New Hampshire, and Lyndonville, addressed by Professor Foster of the New Hampshire Agricultural College. Mr. Darling again entertained the crowd. In 1916 a particularly good set of meetings was held, with Mr. J. G. Peters of the United States Forest Service as chief speaker. The first meeting in Bellows Falls was fairly good, and the wardens were entertained at lunch by the Board of Trade. The meeting at Rutland was particularly good, and was addressed by Mayor Stafford, who had taken an active interest in Forestry. The meeting in Burlington was the poorest of the series. The one in Montpelier was well attended and was addressed by De-mayor Stee, the president of the Board of Trade. Later on in the summer in cooperation with the Vermont Forestry Association the wardens' meeting was held at Lyndon, the wardens and members were entertained by Mr. Charles Darling at the Old Brick Tea Shop, and were also taken to the plantation. Mr. Darling was an interesting Vermont character, a man of considerable private means, and of unusual public spirit. If Vermont had a man like him in every town, the state would be very much better off than it is, public-spirit being so much of a rarity.

## Blister Rust Disease

While I was state forester of Connecticut, I imported considerable white pine from Germany and at one time received a letter from Professor L. R. Jones asking me whether I thought there was any danger of the Blister Rust disease. I consulted with Dr. G. P. Clinton, botanist of the Connecticut Experiment Station, but he did not think there was any danger, and continued the practice of importing. When I came to Vermont in 1909 the nursery was very limited, and as the demand was much greater than the supply, I ordered a considerable quantity of nursery stock from two European nurseries, Heinz & Sons, and Peter Schot. The trees from Heinz arrived apparently in splendid condition, but those from Schot were very bad due to heating because they had been poorly packed. They were therefore largely put into the nursery while Heinz' trees were shipped out, although a considerable quantity of them were placed in the nursery. Soon after the planting season I received word from New York state that Mr. Pettis had found the Blister Rust disease on a number of trees which he had imported from Heinz. Dr. Spaulding of the Bureau of Plant Industry came to see us and found indications of the disease in the form of swellings on the seedlings. Either in June or early July, 1909, there was a meeting in New York City of foresters, nursery inspectors, etc. to discuss the situation, as the disease had been found in other eastern states on imported stock. The seriousness of the disease was emphasized by Dr. Metcalf of the Bureau of Plant Industry, and others, and all agreed not to import any more white pine. The matter of federal quarantine was discussed, and other measures. We began immediately to inspect the plantations for the disease, and Ames and Reed were employed on this work with another student of the University. Because we could not tell which plantations had been made with European stock, and which with native stock, we had to visit every plantation of white pine made in 1909. A number of trees with swellings were destroyed, but no definite indication of the disease was found since the inspections were too late for the fruiting bodies. In 1910 the portion of the stock which had been held over in the nursery was planted out. It was only sold to a few owners in large amounts with the understanding that it might be diseased, and that any diseased trees would be replaced. It was planted chiefly on the Downer State Forest in Sharon, the L. R. Jones forest in Plainfield, Dr. Steven's estate in Enosburg, and the W. D. Wilson tract in Springfield. The trees were then 2 years old and very bushy. We continued our inspections employing in 1910 Mr. C. K. Smith, recently graduated from the Engineering College, Burlington. Every year thereafter we inspected all of these plantations carefully, and destroyed any trees which showed any indications of the disease, and published results in the annual reports. As less and less was found, indications seemed to be that the diseased trees had been practically all killed, or destroyed, and in 1915 it seemed hardly worthwhile to inspect; however, inspection was continued, and more of the disease was discovered, principally on account of wet weather and better inspection in previous years. Some of the inspection was done in that year by Chandler and some by Ross, and some by Squires. In the summer of 1915 the disease was found very commonly on the Ribes throughout eastern Massachusetts in the Berkshire district, and the Massachusetts nursery inspector became quite alarmed over the situation. He called the matter to the attention of Mr. Reynolds, secretary of the Massachusetts Forestry Association. Mr. Reynolds and Mr. Hirst, State Forester of New Hampshire, and a few others formed an interstate committee to consider the seriousness of the disease.

Mr. Chandler and I were both appointed to this committee, and attended a meeting in Boston in January 1916 when it was decided to ask Congress for an appropriation to fight the disease. This was finally secured largely through the activity of Messrs. Reynolds and Hirst, and in the spring of 1916 Dr. Metcalf, Dr. Spaulding and Mr. Detwiler, all of the Bureau of Plant Industry, came to Burlington to make arrangements for the Blister Rust work. It was decided that Vermont should have about \$1000 of the federal allotment and that we could employ five assistants. Mr. Squires was given direct charge of the Blister Rust work. He was a graduate of the Agricultural College

of the University and had been in the Forestry Department for two or three summers. The other men employed were Alexander MacNab, a graduate of the Syracuse Forest School, who had been with the Forestry Department in 1915, Mr. Richard Marble, a graduate of the Harvard Forest School, Mr. Putnam of Michigan Agricultural College and Mr. Harry Coombs of the Yale Forest School. A more detailed inspection of the 1909 and 1910 plantations was made than in any previous year. Diseased trees were found on the Plainfield State Forest, the Stevens plantations, Lyndonville, Woodstock, Dummerston, and one or two other points, which did not seem to be at all alarming. Mention should be made at this point of the fact that about 1911 or 1912 the disease had been found on older trees on the Vail estate in Lyndonville. Mr. Vail purchased some trees through the American Forestry Company and employed Mr. Borst to plant them under contract. Mr. Borst discovered the Blister Rust disease on some of Mr. Vail's large pines which he has set out near the house, several years previous to 1909. It was found that the disease had spread from these trees to the larger tree near the house. Mr. Borst called Mr. Vail's attention to the matter but urged secrecy, claiming that he could treat it. The Vails, however, reported the matter to this office, and we took it up with Dr. Spaulding. He made a visit to the place with Mr. Chandler. It was evident that the disease had been there for a number of years. He urged very strongly that all the diseased trees be destroyed, but Mr. Vail objected and Dr. Spaulding compromised since he had no authority, and persuaded Mr. Titcomb, the manager of the estate, to have the diseased branches pruned from the trees. Dr. Spaulding visited the place once or twice and finally persuaded Mr. Vail to remove all of the originally planted trees. These were cleaned out about 1914. In the spring of 1915 Dr. Spaulding and I inspected the estate during the fruiting period. We found several of the trees from 15 to 20 feet high, near the gardener's house and ice house, diseased, and Mr. Titcomb had these cut out. In the spring of 1916, we again examined them and found more diseased trees. All were cut except the large tree near the house. The following letter from a federal inspector employed by Mr. Detweiler is of interest in this connection:

Lyndonville, Vermont  
September 19, 1916

Dear Dr. Spaulding:

I have traced the blister rust on current and gooseberry bushes from Cornish, New Hampshire, to this place where I have found a heavy white pine infection. After tracing the disease to Monroe, I then went to St. Johnsbury, Vermont, where I found very heavily infected current and gooseberry bushes within the city limits. While in St. Johnsbury, I learned that Mr. Theodore Vail of Lyndonville, Vermont, made a planting of white pine trees a number of years ago. I visited the Vail estate. Three infections, two of which had fruited for two or three years, were taken from a large pine tree near the southeast corner of the house. About 100 yards below the house, near the ice house, I found six infections in a large pine tree, all of which had been fruiting for some time. There were three or four trees near the chicken yard which were just showing infections. I cut down two of these, and am sending specimens from them to the laboratory at Providence.

Mr. Vail made a planting of white pine in 1913. I found this plantation very heavily infected. More than 50 diseased trees were taken from it in about an hour's time. The infection was heaviest on the northwest slope of the planting. About 600 yards still farther northwest, I found a dozen current bushes on the Edmonds' estate, the leaves of which were almost completely plastered with blister rust. Approximately 100 yards

north of these currant bushes there are about 50 white pine trees, many of which I know to be infected. These diseased currants and pines are evidently the source of infection in the planting which was made in 1913. It seemed to me that almost every tree in the greater part of this planting is infected. I regard the situation in Lyndonville a most serious one. I believe that the greater part of the infection which was found in the Connecticut River Valley had its source in this vicinity.

Very truly yours,

H. M. York

The above letter proves conclusively that the worst infection in the state originated previous to 1909, and the same is true of the one on the Billings estate. In the summer of 1916 we destroyed an entire plantation of 20,000 trees on the Billings estate made in 1909 and a plantation of about 7,000 trees on the Stevens estate in Enosburg. In each case we agreed to replant the land with some other variety. We also destroyed a plantation of several thousand trees set out in 1910 on the Plainfield forest and three or four thousand trees planted in Sharon. We did this thinking that by these drastic measures the disease might be eradicated from the state.

After the fruiting state on the pine was over our men were continued inspecting ribes in the southern part of the state. Coombs spent several weeks in Bennington County in July but did not find any indication of the disease. Putnam and McNab were employed scouting in Windham County and the first indications of the disease were discovered by the former in the town of Dover. Later he and McNab and Squire found other infections on ribes in Wilmington, Marlboro, Dummerston, Wardsboro, Jamaica, Townshend and Londonderry. About this time there was a meeting held in Massachusetts at one of the worst infected plantations, to show the damage which the disease is capable of doing to pine. Squire attended this meeting and on his return Detwiler and he found the disease on ribes in Lyndon, North Troy, and Enosburg. Later in the season it was also found in Burlington, Colchester, Montpelier, New Haven, Pittsford, Chester, Windsor, West Windsor, White River Junction and Norwich. Our conclusion was by the end of September that the disease might be found almost anywhere we took the trouble to look carefully, and succeeded in finding black currants growing in moist places. It became evident that we would have to change our method of handling the disease, and abandon the idea of eradicating it.

At the meeting of the inter-state committee on the suppression of the Blister Rust, which was held at Albany in November, 1916, Chandler and I represented the state. There were delegates from practically all of the white pine states and Ontario and Quebec. The situation was discussed very thoroughly, and it was decided to try to have a fairly uniform law passed by the various legislatures looking to the control of this disease. This would give the state authority power to enter private lands and destroy ribes or diseased pine, and it was decided that no compensation should be made for either diseased pine or ribes, but that we should make a compensation for the destruction of healthy cultivated ribes.

#### LATE FORESTS

Continuing the subject of state forests, in the spring of 1913 after the passage of the special appropriation for buying state forests, I secured a tract of 225 acres in Arlington. There was considerable timber on this area, and it was well located for demonstration purposes, and while no cuttings have yet been made, the open lands have been planted, and are already becoming good demonstrations of planting work.

In the fall of the same year Mr. Boyce of the Vermont Marble Company called my attention to a tract of land for sale in West Rutland. Examination showed that it had a large amount of timber, and white birch wood, that the price was reasonable and that on account of its being lease land, it was a particularly good investment. I should have preferred to have bought this tract personally with someone else, but did not feel that I would be justified in doing so while I was looking for lands for the state. Part of the tract was lease land of The Society for The Propagation of the Gospel. The other part was a school lot belonging to the town of Rutland, although located in West Rutland.

Early in the spring of 1914 Ross and Chandler and I looked over a large tract of land on the west side of the Mansfield range. This area consisted of over 3000 acres protecting the head waters of Stevens Brook, Clay Brook, and Lee River, and was eventually purchased for \$9500. The owners originally asked \$20,000 for it, but came down to \$10,000 before we considered it. It was purchased through Mr. H. B. Shaw and Ira Thorp of Underhill, for which they received a commission from the owners, and I understood that Mr. Titcomb also obtained a small commission from them. While the best lumber had been culled out about 25 years previous, there was still a great deal of soft and hardwood of rather inferior quality, and altogether the tract seemed a splendid purchase.

In the spring of 1915 I looked over a tract of land in Peacham belonging to George May, a lumberman. This area of 1200 acres of land enclosing a very pretty little pond could be bought at that time for \$3 an acre. While there was not very much lumber on it, it was an excellent place to plant pine, and there was a good deal of reproduction of fir and spruce, so that it seemed to me a good purchase, especially as it was only about three miles from the Wells River Railroad. At the meeting of the Board of Agriculture and Forestry in Randolph I recommended the purchase of this tract. The Board considered the matter favorably, but Governor Gates never seemed interested in the project. Later in the summer he wrote me that he had been up into Smugglers Notch with a party from Stowe, and that he understood that a large tract could be purchased there very reasonably. Mrs. Henry Holt of Burlington had spoken to me sometime ago about Smugglers Notch and the desirability of protecting the scenery there. I had several times consulted with Craig Burt of Stowe about buying some of their land, but he had never seemed interested. The people of Stowe were anxious to have a highway built through Smugglers Notch, and for this reason Burt told the Governor that he would be willing to sell if it would help along toward the construction of the road.

I visited the area in September with Burt and Olzendas who was running a camp in Smugglers Notch. We went up over the Elephant's Head and got a general idea of the country. The Burt Lumber Company and H. E. Shaw of Stowe had been in a law suit for some little time over the line. The suit was apparently going in favor of Shaw when the Burts called the matter off, but they threatened to renew the suit, and neither they nor Shaw wished to go to the expense of fighting it further in the courts. On the other hand, neither one wished to admit that he was beaten. For this reason they were both willing to sell to the state and the result was that the state finally secured about 2000 acres of land in the town of Stowe, a part of which was covered by a warranty deed from both Shaw and the Burts. This dispute was one of historical interest and was due to defects in the original survey in the town. At the time the town of Mansfield was laid out, the surveyor only laid out lots to the foot of the mountain, thinking that the mountain itself would never be of any value. About the year 1839 the town of Mansfield was divided between the towns of Stowe and Underhill and Cambridge. No survey of the dividing line, however, was made at that time, but it was understood that it was the line west of a certain tier of lots which was supposed to be just east of the top of the mountain.

A hotel was built on the summit of Mansfield about 1850, and this was supposed to be in the town of Underhill, but no survey had been made. The hotel was owned by Wheeler and Bingham, called "Governor Bingham," because he had several times been a democratic candidate for governor. They also owned thousands of acres of timber land on the mountain which they had secured largely by quit claim deeds. The hotel was a popular resort and a good deal of liquor was sold there. Bingham was sheriff of Stowe, and wanted to get the fees for arresting people who drank too much at his own hotel. Not having authority to arrest anyone in Underhill, he decided to have the town line located in such a way that the hotel would be in Stowe. The legislature about 1859 appointed a commission to locate the line between Stowe and Underhill. They employed Wheeler as surveyor and Bingham as guide, and it is doubtful whether the commission themselves ever went far up onto the mountain. The line was located one tier of lots further west than it was supposed to be, and it was permanently marked by iron pins, some of which still stand there. This placed the hotel in Stowe. At the same time in the description of the line, they said that they had followed the line laid out by the act of legislature dividing the towns. When this territory was first surveyed when the lumber began to be valuable about 1912, it was found that the line as located on the ground did not correspond with the line on paper, and the difference between the Burts and Shaw originated from this cause.

Another interesting complication was that Lot 1a was a school lot, belonging to the town of Stowe, and that this lot had never been leased of them, although Shaw had cut a good deal of the timber from it. Since the Supreme Court had decided that a town cannot dispose of the title of a school lot, the state secured a permanent lease of this land for \$5 a year. There was a good deal of lumber on this area, and both Shaw and Burt reserved the right for a year or so longer, but we limited them in the purchase, to certain diameters, 10 inches in the case of softwoods, and 12 and 15 inches for hardwoods. The price agreed upon was \$2100 to the Burts and \$2000 to Shaw, making \$4100 for about 2000 acres. As this tract joined on to the one already purchased in Underhill, it made a total holding of 5000 acres purchased for \$13,500. This is now the second largest state forest in New England, the largest one being in Crawford Notch, New Hampshire. The State of New Hampshire purchased 6000 acres there for \$100,000. There is, of course, a good deal more spruce on their tract, but not enough to make the difference in the purchase price.

In the spring of 1916 I had Mr. Chandler look over a tract of about 700 acres in Townshend and Jamaica, belonging to Holden and Martin of Brattleboro. They had offered this originally for \$3 per acre, but had come down to \$2.50. Mr. Chandler looked over the property, and considered it a good purchase, especially as there was a good deal of land suitable for planting pine. I wrote Mr. Holden telling him that the land seemed suitable, but a lower price would make it more attractive to the Board, and he wrote back offering to sell it for \$2 per acre. In September I brought the matter before Governor Gates, and Mr. Eaton in a meeting in Sharon, but evidently the Governor did not favor the purchase. He has always been against buying small scattered tracts and practically told Mr. Eaton that he should not approve any more purchases during his administration. Subsequently I wrote Mr. Holden the decision of the Governor that the tract was not suitable, and again made a strenuous search for a large tract located in the Green Mountains. I had already attempted to buy land joining the Mansfield State forest and had had some correspondence with Mr. George Bartlett of Richmond relative to his land south of the Camels Hump forest. He asked me again at this time whether we would be interested in such a tract, and I told him that we might be if the price was satisfactory. Mr. Bartlett came into the office early in October and asked me to look over this property which he estimated about 2300 acres. I told him that I could not bother to look it over unless the price was satisfactory. He asked me if \$20,000 would be reasonable, and I replied that I could not bother to look it over at any such figure. He finally came down to \$12,000 and Mr. Chandler and I spent two or three days in looking it over with Mr. Gardner of Huntington, who was well acquainted

with the tract. When I returned we told Bartlett that we considered it worth about \$7500 and would recommend the purchase at that price. He came down to \$10,000 but did not feel that he would be justified in accepting less, and urged us to look over the southern portion more at length. I had Chandler do this, and we raised our offer to \$8000. At the next conference Mr. Bartlett came down to \$9000. We finally came to an agreement upon \$8300. I then gave the matter to the press, and it was widely circulated throughout the state that I had recommended the purchase to Governor Gates, and at the same time I wrote a letter to the Governor. Shortly afterwards I received a reply from him approving the purchase. The titles have now been examined by Mr. Hopkins, State's Attorney of Chittenden County, and the titles proved by Attorney General Barber. The acquisition of this tract will make the total area of the Camel's Hump state forest about 3,500 acres and on a portion of it there is some very valuable lumber, spruce and yellow birch, but a considerable portion has been badly cut over as might be expected in consideration of the low price.

Speedwell Farms and T. E. Vail, President of the American Telephone and Telegraph Co.

In the summer of 1910 Mr. Wildes and I made a Working Plan of the wood lots on the Speedwell Farms, areas amounting to three or 4 thousand acres, belonging to Hon. T. E. Vail in Lyndon. Mr. Wildes did most of the field work and made ocular estimates of the different stands. It proved later that these estimates were considerably too high because of the fact that he did not deduct for decay in the maple. Both his and my experience had been largely in Connecticut hardwoods which run much more sound than those of Vermont. While making the Plan I was entertained at the Vail residence while Mr. Wildes boarded at the gardener's house. This was not very satisfactory to him, as he was quite a society fellow. Mr. Vail was a very large man weighing about 300 pounds, and at that time about 62 years old. He was very austere in appearance, had a very penetrating eye, and a good deal of the time was as cross as a bear. Occasionally, however, he chuckled and seemed to enjoy himself. He had bought this farm years ago in connection with some valuable horses which he had owned and had gradually added on to the house until it was more or less of a monstrosity as viewed from the exterior. Inside, however, it was very elaborately furnished and exceedingly attractive. There was a large church organ in the center which Mr. Vail played with a pianola attachment. He was very fond of fine music. Mr. John W. Titcomb, an expert on fish culture, and formerly Fish and Game Commissioner of the state was, at the time we made our working plan, private secretary and general manager of the Vail estate, and he told me that Mr. Vail was well satisfied with the plan, but so far as I know it was never carried out.

Not long after we bought the Plainfield state forest, telephone linemen came to me and asked for permission to put a main telephone line across our forest. The small compensation which they offered did not appeal to me, and I told them that if they would put in a 'phone at our cabin, which would mean about a mile of wire, we wouldn't charge them anything for going across the property. This seemed reasonable to the agents, and they gave me to understand that it would probably be arranged in that way, but I later heard from Boston that they couldn't make such an arrangement because it would be establishing a precedent. I rather foolishly wrote Mr. Vail telling him my reasons why I considered it as much in the interests of the company as in the interests of the state to have a telephone available at the camp for a lookout man since their whole line would be endangered by a forest fire. This letter, which probably was not very tactfully worded, irritated Mr. Vail a good deal, and Mr. Titcomb sent me quite a sharp reply.

Mr. Vail was much interested in the development of agriculture and established an agricultural school at Lyndonville and courses in home economics for girls. He never

was so very much interested, however, in forestry as a branch of farming. He did not think it was possible for private capital to invest in forestry ways, but he was considerably interested in large state forests along the line of the New York preserves. In the summer of 1916 I succeeded in interesting him in a meeting of the Vermont Forestry Association which was held in Lyndonville, and he prepared and delivered an address on forestry, which was afterwards printed and widely distributed. It was also printed in American Forestry with his photograph. At the time of this meeting he and his niece entertained all of the speakers and officers of the association, seven or eight in all. He seemed in such better humor than on the occasion when I had seen him several years previous, joking a good deal, and was altogether more companionable.

In private conversation I mentioned my relationship to Judge Foster of Chicago and that I believed he had met him in Georgia. My uncle had charge of an immense suit against the American Tel. and Tel. Co., and Mr. Vail did not warm up much to the subject.

This history was never finished.

A. F. H.