

AN ORAL HISTORY INTERVIEW¹ WITH MCGARVEY CLINE

Formerly Director,

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U.S. Department of Agriculture

Mr. Coleman: This is an impromptu oral interview with McGarvey Cline, who originated the idea of a Forest Products Laboratory and who later became the first Director of the Forest Products Laboratory.

Now, Mr. Cline, would you mind telling me how you first got into forestry?

Mr. Cline: Well, I was at Purdue University from 1900 to 1904 taking a course in mechanical engineering, and Dr. W. K. Hatt, who was the head professor of mechanics, had a commission from the Forest Service for work on the stressing of timber. The reason for making the tests was the wide use of timber in railroads, and we were going to start making tests on bridge stringers in order to get the fiber strength to be used in the designing of wooden bridges. The type of bridge at that time used stringer decks with fireproofing ballast put over the surface, and Dr. Hatt was my professor, and he wanted to know whether I would be interested in working for a time at least, when I finished school, in this work.

The Forest Service under the direction of Dr. Herman von Schrenck was making some tests at the 1904 World's Fair in St. Louis to determine the strength of wood that had been treated by a wood preservation method. I was to be sent down to St. Louis to operate a machine, and I thought that would also be a wonderful opportunity to see the Fair. So I made my first selection of a job in the Forest Service with Dr. Hatt. I went down to the World's Fair and ran the impact testing machine on wood treated with creosote.

Mr. Coleman: Was the von Schrenck you worked under during the World's Fair, the same man who later went with the railroads and became their technical adviser on wood and preservatives?

Mr. Cline: That's right. I think he was serving as a technical adviser at the time. He was quite a dynamic man, very interesting to work with.

¹This Forest Products Laboratory history interview, conducted by Donald G. Coleman, Chief, Division of Research Publications and Information, was tape recorded in Jacksonville, Fla., November 19, 1961.

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Mr. Coleman: Was all the Forest Service testing work centralized at Purdue?

Mr. Cline: No. It was all decentralized, and only a part of it was going on at Purdue. There were other Forest Service laboratories operating at the time--out at Berkeley, Calif., Eugene, Oreg., and Seattle, Wash.

Mr. Coleman: At Seattle, Wash., was O. P. M. Goss in charge of that Laboratory?

Mr. Cline: That's right, and Joe Knapp was in charge of the laboratory at Eugene, Oreg.

Mr. Coleman: Was that before a Forest Service laboratory was established at Boulder, Colo.?

Mr. Cline: It was before.

Mr. Coleman: So you made the timber tests at the World's Fair. Then after the job was completed, you went to Washington, D.C.?

Mr. Cline: Yes, Dr. Hatt told me that he was going to send me to Washington. So I went and the next assignment was to make the tests on bridge stringers. Of course they wanted to use green timbers to make the tests, because in commercial use the rains and other dampness came into the wood and brought it back to the green moisture content. Dr. Hatt had made arrangements to have the big testing machine set up in the mill of the E. P. Burton Lumber Company in Charleston, S.C., for this work.

Mr. Coleman: Were the tests made on longleaf and loblolly pine?

Mr. Cline: Yes, the tests were made there and H. S. Betts of the Forest Service and I were there, I think, about 9 months.

Mr. Coleman: Then you went back to Washington?

Mr. Cline: I went back to Washington temporarily. Then Dr. Hatt sent me to the Forest Service laboratory in the East at Yale University.

Mr. Coleman: Was that the Yale University Laboratory where Harry Tiemann was in charge?

Mr. Cline: Yes. I worked there with Tiemann and Cornelius Barry and when I was through at Yale I returned to Washington, thinking I had finished my work in the Forest Service. But then they asked me to visit all the laboratories, so I went out to Berkeley, Calif., where Loren E. Hunt was in charge of the laboratory. I arrived in Berkeley in July 1906 just after the great San Francisco fire, and it was interesting to see all the repair going on. I usually stayed a month or so at each laboratory.

Mr. Coleman: Was the laboratory in Berkeley at the University of California and was the test work done for the Forest Service and paid for by the Federal Government?

Mr. Cline: The work was for the U.S. Forest Service. Mr. Hunt drew a salary from the Forest Service. The machines, I think, were owned by the university and also the testing laboratory. But Mr. Hunt was in the National Forest Service organization. He worked under the direction of Dr. Hatt. When I was there, I worked as Hunt's assistant. But the purpose of my visit was to acquaint me with the work going on at all of the laboratories, and work out standards and standardized methods so that the tests made at the various laboratories would be comparable and subsequently the work could be unified. Then from Berkeley I went up to the University of Oregon at Eugene, Oreg., and visited the testing laboratory. Then after a month, I went up to the University of Washington at Seattle and visited the laboratory there. Then I went back to Washington. I repeated these inspection trips for 3 years, 1906, 1907, and 1908. In the meantime I had been advanced in the Forest Service organization. My first title was in charge of the Section of Timber Tests.

Mr. Coleman: That was in Washington, D.C.?

Mr. Cline: Yes, that was in Washington, D.C., and I was under Mr. Kellogg.

Mr. Coleman: Mr. Royal S. Kellogg?

Mr. Cline: Yes, Royal S. Kellogg. Mr. William L. Hall was chief of the branch, and Kellogg was chief of wood utilization. And I became chief of the section of timber tests.

Mr. Coleman: Was Tommy Swann there then?

Mr. Cline: Oh, no, this was before Tommy's time. Tommy came into the statistical department. Work was very much scattered. There was even a little work on paper manufacture going on in the basement of the Bureau of Chemistry. Howard Weiss was in the section of wood preservation. Products work was divided into wood preservation and wood utilization. By that time Kellogg had left, and I had been made chief of the office of wood utilization, which was a broader office, and that's why I took the initiative of stopping on my way East from my tour of the Laboratories in the West, to see Professor William F. Goss who had been in charge of Engineering at Purdue when I was a student there. Mr. Goss was at the University of Illinois. (This Professor Goss should not be confused with Mr. O. P. M. Goss who was in the Forest Service.) Mr. William Goss while at Purdue was, as I have said, in charge of Engineering, and Dr. Hatt was under him. At Illinois University he had initiated general engineering research work. They had organized an engineering experiment station and put a good deal of money into it. But I had formulated the idea (since we already had made contacts with some universities, and as each seemed to be interested in what we were doing) that I would ask Goss what he thought if he had a letter from Gifford Pinchot, the Chief of the Forest Service,

suggesting the consolidation of these laboratories I had visited, into one overall laboratory where central supervision could be carried on. In visiting with him at Illinois University Dean Goss said he would be interested and would entertain a proposal to carry into effect my idea and would welcome the concentration of work at the Illinois Experiment Station. Well, fortified with that I went back to Washington, D.C. Now remember, I was chief of the section of wood utilization at that time with contacts up to the Forester. Howard Weiss, who was interested in wood preservatives, had been looking for quarters for a Forest Service wood preservation laboratory, and had found an old carbarn somewhere that he thought could be made into a laboratory. Weiss had a room at the YMCA right down the same hall where I had my room when we lived in Washington, D.C.

Mr. Coleman: Was this carbarn in Washington, D.C.?

Mr. Cline: Yes. So I said, "Howard, don't go into a carbarn. If Congress doesn't appropriate the money to build us a laboratory, I think we can get it fixed with one of the big universities." Howard was very skeptical. He didn't want to give up his only hope for a laboratory. But finally he did. And I then went up and talked with Mr. Gifford Pinchot, Chief Forester, and Associate Forester Overton W. Price about this new building and decentralizing, and they thought it was impossible to do such a thing, but I kept saying, "Well just write a letter and ask about it." So Mr. Pinchot said I should write a draft of the letter and I did, and it went through critical analysis and he signed it and sent one to Purdue, but we knew that Purdue wouldn't be able to do any more. We sent one to Illinois--I picked out the list of schools--and one to the University of Wisconsin and one to the University of Michigan and one to the University of Minnesota and Cornell. And then the replies all came back--they all thought that it was a wonderful idea and they said, "Come, we welcome you." But only two of them really offered to build new buildings for us, and they were Wisconsin and the University of Michigan. Then, having gone that far, I was the one who had to go around and interview them, look at the sites, and see what they had to offer. And so I visited all of them, and it was a very pleasant experience meeting President Angell at Michigan, Sherman at Cornell, Van Hise at Wisconsin, President Northrop of Minnesota, and, of course, Goss at Illinois. So I picked out the site in Madison out on University Avenue. In those days we had to have a railroad, you know, and Wisconsin offered us a site down by a siding where we could build a laboratory. So I took that as the ideal site. Then when I got back to Washington I submitted my report to Mr. Pinchot and Mr. Price and recommended that we go to Wisconsin. Well, then I sent word to E. M. Griffith, State Forester of Wisconsin. He had been very interested in getting it at Wisconsin, and I sent word to him in a letter that it had been approved, that Mr. Pinchot had approved the laboratory going to Madison. Griffith put it in the newspaper.

Mr. Coleman: I recall seeing an old clipping of the item.

Mr. Cline: He put it in the paper and then Michigan heard of it. And a Congressman from Michigan who was a member of the agricultural appropriation committee went into action.

Mr. Coleman: Oh, I didn't realize that the Michigan congressman was on the appropriation committee.

Mr. Cline: Yes. He called Mr. Pinchot and Mr. Price and said that he thought that I had not been adequately equipped to make such a decision, and he demanded that it be revoked and Michigan again considered.

Mr. Coleman: Was this when Pinchot was enroute to Mexico and Regent Chase S. Osborne of the University of Michigan met him and talked to him on the train?

Mr. Cline: I don't know that. Mr. Pinchot didn't tell me that. But Price called me up to his office and told me about this situation. He said, "Cline, we're just going to have to say when you let out that information, that it was incorrect." And I said, "Well, Mr. Price, I didn't do that until I had Mr. Pinchot's approval on the memorandum." And he said, "Well, it won't amount to anything." And I said, "Well as far as I am concerned, Mr. Price, I've been around meeting those people and I don't care to be picked out as a scapegoat in this thing because I am not. I did not act prematurely at all." And he laughed and tried to pass it off, and when Mr. Pinchot returned, he called me up to his office, Price told him the situation, and Mr. Pinchot asked a very simple question. He said, "Mr. Cline, you didn't write to Griffith until you got my signed memorandum, did you?" I said, "No, I didn't." And he turned to Price and said, "Well Cline's all right. I will have to take full responsibility, that I changed my mind. And we will reopen the subject again, and I will write to President Van Hise and tell him of the situation. He is fully versed on the way we have to work for appropriations. They have threatened to hold us up in our money unless we do this. And then when the storm blows over, we will reconfirm Madison, Wis.," which was done. Mr. Pinchot reconfirmed his reasons for giving it to Wisconsin.

Mr. Coleman: Now was that after the delegation made up of old Bob LaFollette and all the Wisconsin congressmen called on Pinchot in Washington?

Mr. Cline: Well, I don't know, I wasn't at that conference if they did. All I know is that the fight got into Congress and all that I heard was the echo which came back to me which is what I have been telling you.

Mr. Coleman: You know that's very interesting because from the old newspaper accounts it looks as though you were out on a limb there for a while.

Mr. Cline: Well, it may have, but Mr. Pinchot, a very fine man, did not blame me at all as long as I hadn't been premature. So that is the way the Laboratory finally got back to Wisconsin. After that was done I went to Wisconsin and worked with the supervising architect, and I stayed there while we worked up the floor plans for the building. I didn't have anything to do with the type of architecture but he did make a very good looking building. The floor plans crowded us into less space than we had contemplated, but Mr. Peabody, the University architect, put in another wing for the chemical laboratory from the extra space he saved in the building.

Mr. Coleman: Was Rolf Thielen out there at that time?

Mr. Cline: No, Rolf Thielen, I believe was brought into the Laboratory when the building was started in 1909.

The next big problem was about the organization of the work, especially the relation of the laboratory to the Washington organization.

Mr. Coleman: That's what I want to know. Who was responsible for determining whether the Laboratory would have a wood preservation division, a timber division, and all that?

Mr. Cline: I was responsible for taking the stand that we wanted all of those divisions centralized at Madison and if the branch chief, Mr. William S. Hall was to operate it he should have his office in Madison. I took that stand. I, myself would go in charge of my branch of Wood Utilization, but the other branch heads had to come too. Mr. Pinchot at that time felt the need to decentralize from Washington so strongly that he ruled that the various heads had to go to Madison. Howard Weiss was in charge of Wood Preservation after Mr. W. F. Sherfesse resigned and came in that capacity to Madison, as well as Assistant Director of the Forest Products Laboratory.

Then we gathered up the work that was going on at the Bureau of Chemistry with Dr. H. S. Bristol in charge of work on paper manufacture, and Dr. Lee F. Hawley in charge of wood distillation. They came to Madison with me and Bristol was also made Assistant Director. We had to sort of make jobs. Mr. Hall went out and had his office there for some time, but he realized that the work was getting out of forestry management a great deal, and he asked to be released as branch chief and he went into other work. Then I was made branch chief of products at Madison but I chose to keep the title of Director of the Forest Products Laboratory. We had our own accounting and our own authorization direct from the Secretary of Agriculture and there was a great feeling of independence that came into being there. We were left alone in Madison as far as Washington contact was concerned. Of course the Service was in turmoil at the time of Mr. Pinchot's dismissal and the coming in of Mr. Henry S. Graves. But we had at least a year and a half of peace with nobody coming to see us.

Mr. Coleman: Were you responsible for calling the Laboratory sections together and talking things over so that you had genuine coordination on research problems?

Mr. Cline: Oh yes, we organized staff meetings, talked the problems over, working plans, outlines of the plans, made the filing system. We did not make it a "Dewey Decimal Filing System." Each line of work was given a number.

Mr. Coleman: Did you initiate the idea of the Laboratory working closely with industry? In other words, the Forest Service as a whole had not been on particularly friendly relations with the lumbermen and the stockmen. Yet the Laboratory always worked very close with industry.

Mr. Cline: Oh no, I didn't start the cooperation with industry. There had been cooperation in the wood preservation industry, and we were even cooperating with the railroads. Von Schrenck was working with industry and the early bridge stringer tests I made were in cooperation with the railroads. Oh no, I didn't initiate cooperation. We only extended it.

Mr. Coleman: You encouraged it.

Mr. Cline: Yes. Industries put up money to pay part of the expense.

Mr. Coleman: Were you instrumental in promoting the pulp and paper work. In other words, broadening the species base for pulp and paper?

Mr. Cline: Oh, yes, I was instrumental as Director of the Forest Products Laboratory in building the Wausau, Wis., laboratory. J. H. Thickers was in charge of it. That was pioneer research on ground wood. That was a good laboratory. There is a very interesting side story. Finally after this period of big independence for the new Laboratory who should call on us in Madison but Mr. Graves, the Chief of the Forest Service. He was very impressed with the way the Laboratory had developed public relations and word of its work had come back to Washington. The same night Graves was there with us at a dinner at the University Club, I was called to the telephone and a tremendous voice said, "Mr. McGarvey Cline? I am the Secretary of Agriculture Wilson." I was much surprised. He was down in a little hotel in Madison with no elevators in it. And I asked him if he wanted me to come down to see him, and he said, "No, but what time do you start work in the morning?" I told him 8 o'clock. He said, "Well, you be here at the hotel at 7 in the morning." When I went back to the dinner table to Graves, I said, "Mr. Graves, I'll bet you can't guess who that was who called me." And he said, "No, of course I can't." I said, "That was the Secretary of Agriculture. He's in Madison." Graves said, "Cline, you aren't joking now, are you?" I said, "Mr. Graves, at least that's who he said he was--the Secretary of Agriculture." He said, "I've been having a good deal of trouble with him." (They had been out in the district forests Graves said, "I don't want to see him." Then he said, "Is there any way that I can get out of town?" Mr. Coleman, you know that little train that ran from Madison up to Portage and made connections with the main line? Well, we took Mr. Graves down to the train right away and put him on and let him go to make connections with the main line. And Graves said, "Now, Cline, I don't want to ask any man to lie for me, but I will ask you, if the Secretary doesn't mention my name, don't you mention it." I said, "All right, Mr. Graves. I'll keep it quiet about your being here."

Mr. Coleman: That's very, very interesting. Last Monday we had a visit from the Secretary of Agriculture Freeman. He came to the Laboratory and spent an hour there and with him was Gaylord Nelson, the governor of Wisconsin, and that makes about only the fourth Secretary of Agriculture who has ever been at the Forest Products Laboratory. So that was Jim Wilson's initial visit--what did you do the next day when you picked him up?"

Mr. Cline: Well, I got a carriage from some stable, a rubber-tired carriage and we drove over Observatory Hill and I pointed out Mendota lake to

him, and the old fellow said, "Yes, very interesting, but I came to see your work." I said, "Well, Mr. Secretary, we'll go right to the Laboratory then, and I'll stop showing you any sights." So we went to the Laboratory, and the old man was delighted with the work under way. And the thing that got me off on this story was your mention of the paper work. He was especially delighted down in the paper mill. We had the little paper machine running and everything was going along fine. I don't know whether you remember Mr. Lang or not. The one they called "Paper Maker."

Mr. Coleman: "Paper Maker" Lang was in charge of the Laboratory paper machine. He had worked in China at one time and he could swear like the dickens.

Mr. Cline: Well, he didn't do that before me. But he never had taken the Civil Service examination, and we had a temporary appointment for Lang. He was such a good man that we hated to lose him. The Secretary, while in the paper laboratory, and very pleased with everything he saw, said, "Isn't there some way I can help you with the work you are doing here?" And I replied, "Well, you see that man over there running the machine?" He said, "Yes. He knows his job." I said, "Yes, he does, but he has only a temporary appointment. The Civil Service is demanding that we get rid of him and hold an examination and put his successor in." The old Secretary of Agriculture said, "Well, that's where I can help you. The Civil Service is a great institution. It stands between me and the Congress. But it never has stood between me and the man I want. Temporary appointments can last for years." He said, "If you have any trouble, now that's where I can help you." Well, we never had any trouble with Lang's appointment after that.

Secretary Wilson was delighted with our work. I gave a little luncheon for him down at the University Club to which College of Agriculture Emeritus Dean Henry, Dean Russell, and State Forester E. M. Griffith, were among those invited. The Secretary, of course, sat at the head of the table, and I, as host, sat at the other end. He brought up his visit to the Laboratory, and he spoke about his interest in it and he mentioned the difficulty of my paper job. He said, "Mr. Cline has a very, very difficult problem. He is trying to find a paper cheap enough to print a yellow journal on."

Mr. Coleman: He had a sense of humor, then?

Mr. Cline: Yes, a fine sense of humor. Sometime later I was coming out of the Cosmos Club in Washington and I met Secretary Wilson and I said, "Mr. Secretary, I don't suppose you remember me." He replied, "Yes I do, you're the young man who's trying to make paper cheap enough to print a yellow journal on."

Mr. Coleman: That's a very interesting sidelight.

Mr. Cline: Well, then the other funny thing about it was that I had a little boat there on the lake called the "G.P." (Gifford Pinchot). And in the afternoon I thought I would take him over to the country club. But he said he wouldn't go out in the boat. I think it was too little for him anyhow. He

was a great big huge fellow. He said, "No, Mr. Cline, I think you had better take me back to the hotel. I want you to come down for dinner, you and Mr. Weiss." "Oh, Mr. Secretary," I said, "we wouldn't want to bother you." "Turn about is fair play," he said, so we went down and spent the evening with him, and he told us about his side of the Pinchot account, which I have always thought of as confidential. Well, that takes you down to the paper work.

Mr. Coleman: Well, in chemistry you had Dr. Lee Hawley.

Mr. Cline: Dr. Hawley was in wood distillation and in chemistry we had Ernest Bateman. After I left the Laboratory--Hawley resigned and went with Arthur D. Little but he came back subsequently.

Mr. Coleman: How about John Newlin of timber mechanics? Did you know him at Purdue?

Mr. Cline: Oh, yes, John Newlin was one of the men in timber tests where I started. John was really an unusually bright fellow. He was good in mathematics and very ingenious in planning tests. As to my direction of him, I'd never go out of my sphere to try to direct John to do anything. He knew how to take care of himself, very nicely, and do you recall the derby he always wore at work?

Mr. Coleman: He did a good job all along the line. The stress values that he assigned for the different species still hold.

Mr. Cline: Oh, yes, and then he was ingenious in testing boxes. That came later though.

Mr. Coleman: What was Thielen's part in the early days of the Laboratory?

Mr. Cline: He was in charge of a little sawmill in the shops of the Laboratory, and anything in the way of mechanical engineering work. He was a kind of laboratory chief of engineering service.

Mr. Coleman: Now, was there any special attempt made to select the Laboratory personnel or were they just taken off the Civil Service register? After all, what has made the Laboratory is its technical personnel. Did you weed them out carefully?

Mr. Cline: That again was part of my manipulation of Civil Service. I never had a list of eligibles. When there was an examination held, there would be a man on a temporary appointment who had served 6 months or longer. It was very easy to make the questions so specific about the Laboratory work that no other person whom you didn't want, would be able to pass unless he had worked at the Laboratory.

Mr. Coleman: That technique then is what led to building up a staff of competent researchers who really made the Laboratory what it is today. Did you promote from within the organization?

Mr. Cline: Well, I did to a certain limited degree. You must remember though that I didn't stay at the Laboratory very long. So much of that was done after I left. I only stayed at the Laboratory about 3 years.

Mr. Coleman: It was those initial steps that put the Laboratory on the right track.

Mr. Cline: Well, I hope so. It was well organized, I think.

Mr. Coleman: Now to go back to Pinchot. You worked closely with Pinchot in those early days. What was your impression of him? Did he foresee that utilization would be a major factor in forestry?

Mr. Cline: Well, I don't know. While Mr. Pinchot was always very nice to me and very considerate, I never discussed broad phases of his work with him at all. What I did was to be specific about the very few things concerning the Laboratory, and he supported me at a crucially initial time. I notice, however, in his book, "Breaking New Ground" that he mentions the Laboratory in very complimentary remarks and he said I had the greatest credit for having started it.

Mr. Coleman: I recently interviewed Dr. Eloise Gerry and I asked her about the early days of the Laboratory and she was very high in her praise of you initially starting the Laboratory and getting the work organized and the way you held the research together as a group.

Mr. Cline: Well, I did do that and there is one thing I took great pride in and that is that no decision I ever made there was ever appealed.

I should very much like to say at this point that Miss Gerry, or Dr. Gerry as she is better known, has been a most able woman in science. She originally dealt with wood structure and a fine piece of her work was based on her efforts to discover the origin of oleoresin in pine trees, longleaf and slash, which was the basis of the naval stores industry. It was always an inspiration to talk with her and her happy spirit permeated all she did.

I should also like to say here at this time, as I am relating a brief account of the Forest Products Laboratory's beginnings and an early history of the Laboratory, that Howard Weiss, my assistant and successor as Director, was a fine friend and a most able Director. However, he did not remain long but went into industry as I had on leaving the Service. He was succeeded by Carlile Winslow, better known as "Cap," who remained to develop the Laboratory into its present state of usefulness, and until he passed away recently we were devoted friends.

Mr. Coleman: Well, I certainly appreciate talking with you here and your giving us this background on the early days of the Laboratory. Thank you very much.