Earle Hart Clapp - 2

greatest contribution to Forest Service research was his 1926 report, "A National Program of Forest Research," which two years later was incorporated in the McSweeney-McNary Act -- the basic authority governing Forest Service research.

In a 1928 talk Clapp noted the potential value of a forest belt in the Great Plains. Thus he, along with Fernow, Raphael Zon, Charles E. Bessey, J. Sterling Morton, and Carlos Bates, can be credited among the early backers of the idea for the Prairie States Forestry Project (Shelterbelt) of the 1930's.

Clapp consistently pressed for accurate timber statistics. His compilation of such data for the 1920 Capper Report resulted in the first comprehensive survey of the nation's timber supply. In 1933 he directed the publication of A National Plan for American Forestry (the mammoth "Copeland Report"), which updated the timber survey and contained many proposals for dealing with forestry problems during the Great Depression, including a big expansion of the National Forests. Three years later Clapp oversaw the publication of and wrote the summary for another Forest Service classic -- The Western Range.

In 1935 Clapp reluctantly left his research program, which he feared still led a tenous existence within a basically administrative agency, to become Associate Chief. When Ferdinand Silcox died in office on December 20, 1939, he was appointed Acting Chief by Secretary Henry A. Wallace. Clapp skillfully mobilized the Service for the war effort but his tenure was punctuated by a spirited controversy over proposed Federal regulation of private timber cutting, which he had strongly supported since the issue re-surfaced in the
early 1930's, and by an all-out struggle with the Secretary of Interior, Harold Ickes. Clapp fought to prevent the transfer of the Forest Service to a new Department of Natural Resources which Ickes would head. President Franklin Roosevelt supported the proposed reorganization and when congressional opposition blocked the transfer, he blamed Clapp and the Forest Service (calling it "the most obstreperous and disloyal organization in the entire Federal Service") and reportedly denied Clapp the title of Chief. He even wanted to fire him, but Secretary Wallace stood by Clapp. In later years Clapp believed that the hostilities created by the transfer controversy had prevented Roosevelt from working for comprehensive conservation legislation. Moreover, Roosevelt refused Clapp's suggestion to use his war powers to regulate the timber industry. When Lyle Watts was appointed Chief in January 1943, Clapp stayed on for two more years as Associate Chief until his retirement. He died in Washington, D.C., on July 1, 1970, in his 93rd year.

Have you been a good Forest Service Host today?

Earl H. Cleff
Acty Cl/FS
Dec 21, 1939
Jan 15, 1943

In 7.5.
1907 - 1945.

Watts aptmt aned on Jan 8.
Biographical Sketch of Earle Hart Clapp (1877-1970)

By Dennis M. Roth

Earle Clapp was the first Chief of the Forest Service to serve his entire career with the agency, primarily in research. Although he was not appointed Chief, serving as Acting Chief from 1939 to 1943, he was in actual practice the Chief during that period.

Clapp was born in North Rush, N.Y., on October 15, 1877. While engaged in probing Clapp's molars, a solicitous dentist suggested that he consider a forestry career. Clapp entered the Forestry School at Cornell University in 1901, which closed in 1903 after wealthy neighboring landowners vigorously objected to Dean Bernhard Fernow's clearcutting on the school's forest. The Cornell diaspora resulted in Clapp's transfer to the University of Michigan where he graduated in 1905. He immediately entered the Forest Service, serving two years directing timber sales in Wyoming and Montana, then 18 months in Washington, D.C., before heading West again to serve 30 months as the first Assistant Southwestern District/Forester in Albuquerque, N.M. He spent the next four years as a forest inspector working out of the Washington Office.

In 1915 Chief Henry Graves created the Division of Research, in order to give research greater independence and stature, and placed Clapp in charge as Assistant Chief. During the next 20 years Clapp guided the research effort and established most of the Service's research facilities. Perhaps his greatest contribution to Forest Service research was his 1926 report, "A National Program of Forest Research," which two years later was incorporated in the McSweeney-McNary Act -- the basic authority governing Forest Service research.

In a 1928 talk Clapp noted the potential value of a forest belt in the
Plains States. Thus he, along with Fernow, Raphael Zon, and Carlos Bates, can be credited as an originator of the idea for the Prairie States Forest Project (Shelterbelt Project) of 1930s.

Clapp consistently pressed for accurate timber statistics. His compilation of such data for the 1920 Capper Report resulted in the first comprehensive survey of the nation's timber supply. In 1933 he directed the publication of A National Plan for American Forestry ("Copeland Report"), which updated the timber survey and contained many proposals for dealing with forestry problems during the Great Depression. Three years later Clapp oversaw the publication of and wrote the summary for another Forest Service classic -- The Western Range.

In 1935 Clapp reluctantly left his research program, which he feared still led a tenuous existence within a basically administrative agency, to become Associate Chief. When Ferdinand Silcox died in office on December 20, 1939, he was appointed Acting Chief. Clapp skillfully mobilized the Service for the war effort but his tenure was punctuated by a controversy over proposed Federal regulation of private timber cutting, which he had strongly supported since the issue re-surfaced in the early 1930s, and a struggle with the Secretary of Interior, Harold Ickes. Clapp fought to prevent the transfer of the Forest Service to a new Department of Natural Resources which Ickes would head. President Franklin Roosevelt supported the proposed reorganization and when congressional opposition blocked the transfer, he blamed Clapp and the Forest Service (calling it "the most obstreperous and disloyal organization in the entire Federal Service") and reportedly denied Clapp the title of Chief.

In later years Clapp believed that the hostilities created by the transfer controversy had prevented Roosevelt from working for comprehensive
conservation legislation. Moreover, Roosevelt refused Clapp's suggestion to use his war powers to regulate the timber industry. When Lyle Watts was appointed Chief in 1943, Clapp stayed on for two more years as Associate Chief until his retirement. He died in Washington, D.C., July 2, 1970, in his 93rd year.

References:

Upon leaving Research in 1936, Clapp stated uneasy feeling about future of Research in FS. In his opinion, it had not been conclusively shown that it is possible to develop and permanently maintain a strong, effective research organization in a bureau such as the Forest Service which is primarily administrative in its functions.

Feelings based on following:

1. recent transfer of 4 key positions in Research without any assurance that positions could be filled satisfactorily.

2. FS in general has been indifferent to or opposed practically every constructive move to develop research. For years, have been periodic efforts to break it down.

Thankless and difficult duties of man in charge of FS Research to fight constructive research developments through the Forest Service. Difficult to protect and hold onto things which are necessary for effective research. Past years have been full of events which if consummated would have wrecked entire research effort.

Efforts may not be as active now as in past but may be even more dangerous since instead of being advocated by men openly hostile, they are now being advocated by men with academic interest but with little conception of what research is and what the requirements of good work are.

Decision to maintain independent status of forest experiment stations and placing of Research in Washington on par with national forest administration and state and private forestry are distinctly reassuring as far as they go.
8. The Sweeney-McNary Act was MAGNA CARTA OF FOREST SERVICE RESEARCH, Clapp major influence in legislation. Only major revisions have been in authorizations for extra-mural and cooperative research, foreign forest products research, and increasing authorizations for Forest Survey. (One area left out was Shelterbelt which is now included.)
Mr. Frank Harmon  
Forest Service History Unit  
Rm. 4115-S  
U.S. Department of Agriculture  
Washington, D.C. 20250  

Dear Mr. Harmon:

Enclosed are copies of the following:

Raymond Marsh, Correspondence, Interviews, and Writings  
T.T. Swift, "Examination of the Cameron Claims in the Grand Canyon"  
Earle Clapp, Interview, Correspondence, 1931 Memo

The originals of these are in The Bancroft Library.

We have already billed you for the cost of preparing copies for the Forest Service. We appreciate this opportunity of making these historical materials available on both coasts.

Sincerely yours,

(Mrs.) Willa Baum  
Department Head  
Regional Oral History Office

WB:ww  
Encls.
McArdle said he saw the letter Earle H. Clapp, Acting Chief, Forest Service, had written to Forest Service leaders, criticizing Interior Secretary Harold Ickes' attempts to take over the Forest Service. This copy of Clapp's letter was the one someone had sent to Ickes and that Ickes had sent to President Franklin D. Roosevelt, complaining about Clapp's tactics.

The letter had notes in pen written on it by both Roosevelt and Secretary of Agriculture Henry A. Wallace. Roosevelt's note said, "I want this man fired." Wallace's note said, "You'll have to fire me first."

McArdle said that Roosevelt then told Wallace that Clapp must apologize in writing, which Clapp did. However, McArdle said, that Clapp's apology was very mild, not what Roosevelt or Ickes had in mind.

This material must be in Clapp's papers in the National Archives, with restricted access.
THREE GLIMPSES OF EARLE CLAPP

I. INTERVIEW: From Child to Man (With supplemental correspondence)

II. LETTER: The Transfer Battle

III. CONFIDENTIAL 1936 MEMO: The Outlook for Research in the Forest Service
Dr. Clapp, Former Chief
Of U.S. Forest Service

Earl H. Clapp, 91, a former chief of the U.S. Forest
Service and one of the service's charter members, died
last Thursday after a heart attack at the Cosmos Club,
2121 Massachusetts Ave. NW, where he was residing.

Dr. Clapp had a Ph.D. in forestry and wrote a num­erries of books on the subject. One, entitled "A Na­tional
Program of Forest Research," was published in
1926 and became the basis for forest research programs
in this country.

Dr. Clapp first went to work for the forest service
in 1905, following his graduation from the University of
Michigan.

After 10 years of field work in the South and
Southwest, he came to work

at the service's headquarters in Washington.

He was named associate chief in 1935, and in 1939
was appointed chief, a position he held for four years.
Dr. Clapp retired from the service in 1945.

In 1960, Dr. Clapp was awarded the Gifford Pinchot
medal for outstanding service to forestry.

He was a fellow of the Society of American Forestry
and a corresponding member of the Society of For­

estry in Finland. He was also a member of the Cos­
mos Club.

Surviving are a son, Dr. Steward Clapp, of Kensing­
ton; a daughter, Mrs. Harry Williams of Atlanta; two sis­
ters, Mrs. George Hermon of Brockport, N.Y., and Mrs.
Frederic Ganzert of Washington.
Acting Chief (retired) of the Forest Service Earle Clapp was a gracious host at the Cosmos Club in the 60s but an unenthusiastic interviewee. As his correspondence with this interviewer shows, we had discussed for 3 1/2 years the relative merits of taping his memoirs: easier and faster than writing it all out but less controlled syntax, (more methodical but more difficult and slower). Each time we enjoyed a lunch together during one of my eastern forays, he reported he was working on his own manuscript, but laboriously and slowly; each time he demurred taping, even as a first step in organizing his thoughts for a manuscript which he would then write.

Finally, when presumably he was well into his own written account of those tumultuous years in the Forest Service, he agreed to tape record on that portion of his life which he had not considered important enough to write about: his childhood. He began reminiscing on the spot, while we were sitting in the women's parlor of the Cosmos Club waiting for Arthur Ringland to join us, and he talked while I taped until our mutual friend appeared.

Our plan was to provide the transcript as a supplement to his papers and his written record. On my next visit there was no opportunity to continue with an interview around more crucial questions of Forest Service policies and activities, but he did elucidate some of his comments in the original interview. These I added in pencil as we talked, and the inserts are indicated by brackets in the transcription.

There was mounting anxiety among those of us dealing with his era in Forest Service history, for as his arthritis and general health declined there seemed to be no definite plan for a deposition of his files. Ray Marsh and Arthur Ringland gently brought up the topic from time to time, as did the Director of the Forest History Society, Elwood Maunder. Paul Roberts, who was writing his own book, at least persuaded Clapp to write him a letter about a crowning statement of presidential pique at Clapp's opposition to Roosevelt. At issue was the administration's attempt to transfer the Forest Service to a new "Department of Conservation" that would be under Interior Secretary Ickes. It was this statement, allegedly that FDR wanted Clapp's "head on a platter," that forms the crux of Clapp's letter to Paul Roberts. Also included here is correspondence from Roberts.
relating to the context of the statement. Roberts sent the confidential letter to us June 24, 1965, from his home in Prescott, Arizona, and although he put it under seal the following month, he opened it for access in a letter dated December 29, 1967. Clapp's rather unique handwriting was "translated" to a typed version then checked by Roberts.

Finally, from our own research files is a carbon of a Clapp memo which I believe came to us from Raymond Marsh. In it Clapp sums up his advice and prognosis for research in the Forest Service when he steps down as its head in 1936.

Even though his arthritis escalated from a cane to an aluminum walker, he did not let his disability interfere with his zest for projects, people, and public affairs. Slowly and probably painfully, he conducted this visitor on a tour of the Cosmos Club, gave her its history, and showed her through the Pinchot garden. During one visit, the women's dining section downstairs was mercifully undergoing remodeling so we were allowed the pleasure of dining together upstairs in the well-aged elegance of the dining room ordinarily preserved for men. He enjoyed the humor of the moment of grace for women, and showed the delight of a mischievous boy when, once again downstairs, we crossed the forbidden men's lobby on our way to the front door and were politely rebuked by a staff member.

However delightful his company, it was his tutoring of this interviewer which I most want to acknowledge. He knew, and his perspective had allowed him to condense, the vagaries of the balancing act between the executive and the congressional branches of the republic. The contrasts between the theory of this balance and the actual practice were the paradoxes that brought a twinkle to his eye, not too different from that which resulted from our encounter with the Cosmos Club official. It is to be hoped that his own detailed accounts of those specific paradoxes are to be found in his papers.

Amelia R. Fry
Interviewer-Editor

11 June 1974
Regional Oral History Office
486 The Bancroft Library
University of California at Berkeley
INTERVIEW: From Child to Man
Earle Clapp  Recorded November 15, 1967  Cosmos Club, Washington D.C.

[Fr]: Is there a story about how you decided to enter forestry?

Clapp: I happened to be in Hudson, New York. I had to have some dental work done. The dentist's office was on the second floor of a building; I don't know what the first floor was given over to, I don't remember. But from time to time while he was operating some children in the back of his office would start crying. Apparently he was taking care of the children at the same time that he was doing the dental work. He'd grit his teeth and he'd rush back to the kids. He finally said, "What are you going to do when you begin work?"

[Laughter]

I told him I didn't have the slightest idea.

Then he began talking about forestry. It was the first time I'd ever heard of forestry. So, I remembered that.

I started work, entered Cornell, class of 1905. Cornell had the first collegiate institution of forestry in the United States.

In the course of my first year I went around to see the head of the forestry division--I've forgotten what it was, whether it was division, or what it was--Dr. Furnow, and learned more about forestry and the advisability of
Clapp: going into it.

In the course of the conversation he handed me the draft of a book that was afterwards published, which he had written and was well along towards the stage of publication. I read that and took it back to him. And he asked if I had any criticisms. I'd never criticized a manuscript in my life. He didn't like at all my failure to make any suggestions about his manuscript. But from that time on I decided to specialize in forestry.

Fry: What was it about forestry that appealed to you so?

Clapp: Well, it was an opportunity for a worthwhile career, a pioneering job. Forestry is a pioneering job. It has a lot of appeal for a lot of Americans, you know, the pioneer spirit lasted a long time after the first settlers came.

Fry: When did you enter Cornell? What class were you in?

Clapp: I graduated in 1905.

Fry: Now, to back up a little bit, where were you born? Where did you grow up?

Clapp: Western New York, two miles out of Rochester.

Fry: On a farm?
Clapp: Yes.

Fry: What did you do on the farm when you were a boy?

Clapp: Oh, I suppose the normal things for a youngster on a farm.

Fry: Did you have a lot of brothers and sisters?

Clapp: I had one brother and two sisters.

Fry: Were you able to go to school? Did you have good schools around that you could attend regularly?

Clapp: There was a characteristic rural school that I attended first. Then all pupils all the way from kindergarten to preparation for High School.

Fry: Were you able to go to school? Did you have good schools around that you could attend regularly?

Clapp: There was a high school in a little town that's a few miles outside Rochester, Scoville.

Fry: Was your father a first-generation American, or had your family been here a while?

Clapp: Oh, they'd been here a long time. My first ancestor settled in Charleston, South Carolina. But they moved north before 1700. Then there were marriages with a lot of people with New England ancestry. There was a western movement out of New England. I don't know how many New England groups of them there were.

Fry: Your end of the family stayed around New York.
Clapp: They lived in New York. My great-grandfather had twelve sons. Some of them settled around western New York. They wanted what was best you know. [laughter]

Fry: Was this a very large farm? Could you describe it?

Clapp: Not too large. It went through various stages. At one time it was about three hundred acres, in the Genesee Valley. We grew everything: grain, fruit, beans. Great variety of farm crops and farm animals. Lot of horses.

Fry: Were you tempted to go into farming?

Clapp: No. My father liked Morgan horses, from Vermont.

Fry: So you went on to high school, then?

Clapp: I went on to high school.

Fry: Not many kids went to high school in those days. The statistics are pretty low. But you did.

Clapp: A good many did. Most of the people with a good deal of American ancestry went to high school. Some of the recent immigrants didn't. I don't know why the parents apparently weren't particularly interested in the kids.

Fry: Had your father and mother gone to high school?

Clapp: My father went to a — I think they called it a seminary. My mother I don't think ever got beyond the local school.
Fry: That would be about the equivalent of the eighth grade today, wouldn't it?

Clapp: I don't know. There was a great mixture. Of course, these schools are gone out of existence here.

Fry: It's kind of interesting to know how far they went.

Clapp: It depended—oh, I don't know.

Fry: Was there any special reading material that you think was interesting or that influenced you at all? in your early life?

Clapp: Not at that time.

Fry: What did you do for fun and relaxation in those days? What would boys growing up do?

Clapp: What most boys do, sports— not football so much; baseball. I was interested in the Indian relics—arrowheads and tomahawks. The stone implements were about all that remained. I spent time wandering around fields finding Indian arrowheads and that sort of thing. That was Seneca Indian country. The Seneca Indians were one of the tribes of the Iroquois Indians. One great-grandfather went on an expedition to western New York to fight the Seneca Indians during the Revolution. He was so much interested in the country that after the war he moved there, he married and moved there, near Rochester.
Fry: I see.

Clapp: He stopped at Rochester when he moved. Rochester is on the fall line of the Genessee River. There were many copperhead snakes there, he was afraid they would bite the kids and poison them, so he moved out beyond Rochester.

Fry: Did you have adventures with snakes and things like that when you were growing up?

Clapp: There were snakes around there. You'd see them occasionally. I guess some of them were poisonous snakes, but not too much.

Fry: Did you go straight from high school, then, to the dentist's chair and into Cornell?

Clapp: After leaving high school I went to the "normal school," which afterwards became a state college. Then from there I went to college at Cornell.

Fry: You really majored in anything at that point, is that right?

Clapp: No.

Fry: You didn't work between normal school and Cornell, you didn't have a job or anything? Did you have a year out working?

Clapp: Yes. We don't need to discuss that.

Fry: A lot of men did, and I thought maybe you did.
Clapp: I did, I did some work.

Fry: What was it?

Clapp: Oh, I want to forget it. [Laughter]

Fry: I realize it was probably irrelevant to forestry, but sometimes it's interesting to know.

Clapp: It had no relation to forestry. It was just an opportunity to get started.

Fry: Then you went on to Cornell, and you met Furnow.

Clapp: That school was a state school. Furnow was German, had been in forestry in Germany. The first forester to come to the United States as far as I know. He met an American girl; she taught him to speak English. He decided to come to the United States then. A noble German family, von Furnow. The family was very much opposed to tile marriage with a commoner. But he came to the United States, and was in the Department of Agriculture for a number of years and then he went to Cornell, and

I don't think he was dean. I don't think it was large enough. But he was given a tract in the Adirondacks to work with. He followed the German practice of clear cutting. It was a great summer R3 resort besides, and
Clapp: People there threw up their hands, 'Oh devastation,' and so on and so on. They cut out the corporation, Furnow's school.

Fry: Was this while you were in school at Cornell?

Clapp: Yes. So

Fry: It was!

Clapp: Yes. The students there in forestry were scattered to the Yale school, to Harvard, and one at Michigan. I went to the University of Michigan.

Fry: Did you get to know Furnow very well? I wonder if you have anything to relate about his reactions to this unfortunate incident.

Clapp: No. I didn't see him in that. Unless I have my dates mixed, he went to Canada, was dean of some forestry school up in Canada.

Fry: I'm curious about whether you had enough contact with Furnow, who was a German forester, to develop any ideas there about forest management.

Clapp: No, I came into very little contact with him. The first two years were practically no preliminary work, very little actual forestry. I didn't really get into forestry at Cornell.
Clapp: Just the association with some of the men who were taking it. Enough

to build up interest, that was all. A real interest and opportunity
began
to know something about it when I went to the University of Michigan.

Fry: At Michigan who was really outstanding in your mind?

Clapp: Well, they had the school—Roth, Filibert Roth.

Fry: And you had him for a professor?

Clapp: Yes. A small group of men—students and foresters.

Fry: How do you evaluate your training in Michigan?

Clapp: It was good as far as it went. Most of it had to be based on German,
or European, experience, generalizations from that. Not practice.

Fry: How did you evaluate forestry in the United States at that time? Some study of individual species, American

Clapp: There was practically no forestry. There was no practical forestry in the United States at that time. Very little of that. Textbooks were based on European experience and philosophy.

Fry: This is really that all of you students got then, the chief European forestry

and their ways of forest management.

Clapp: Yes. I remember being second year in the Forest Service. I had an assignment—
Clapp: there were so few foresters that it meant shifting around, various jobs. An application for Timber in the Cutlerot Valley in western Montana.

I was working in western Montana. It meant the preparation of...

Fry: Cutting plans?

Clapp: Cutting plans and so forth, and so forth. I'd never seen a western yellow pine before. [Laughter]

Fry: Did you recommend clear cutting? [Laughter]

Clapp: No. It was perfectly clear. It was an uneven-aged stand, which meant that you take out the old trees and then take advantage of the younger trees that are already started. That was just an attempt to apply American conditions there.

Fry: Did you get any experience in the summer times when you were in college?

Clapp: Yes, I spent one summer partly in central Michigan, a state group that would go out two or three weeks and work there. It was cut-over area that gave no real idea of forestry. More of a surveying job than anything else.

Fry: In other words, that was the extent of any practical experience you had until you got out. When did you get out of Michigan.
Clapp: Joined the Forest Service in 1905.

Fry: You took the forest exam.

Clapp: Yes, yes. Spent that summer in the Medicine Bow country in Southern Wyoming, examination of an application of a tie company that wanted to buy some timber for railroad ties.

Fry: Who was down there with you?

Clapp: Paul Redington. He was in California forestry. Clarence Buck that was afterwards in the northwest for a good many years. About a dozen men in it; a very operation. We spent the whole summer estimating the timber, and so on.

Fry: Do you cover this in your manuscript you are writing?

Clapp: Yes.

Fry: This experience on the Medicine Bow was your first?

Clapp: First experience in the federal service.

Fry: And then after that where did you go?

Clapp: Washington.

Fry: You went straight to Washington?

Clapp: Paul Redington was in charge of the party, and he worked up the report.
The miners wanted more timber, so they went to the timber cutters. Timber cutters, in order to sell it to miners, from got money for cutting the timber off public land for labs. Had to go, for example, to Rule # 9, to give timber to miners. Had to admit cutting to us to get timber released. So we caught them that way. There were as many of them that I got undeserved credit for activity (laughs).

(now back to p. 12)
When I first met him,

Clapp: He gave a letter in Washington; he took me with him. Then the next summer

I was in western Montana. A lot of trespass cases.

fry: Oh, really?

Clapp: Miners were cutting timber on the public domain without any authority

and just took what they wanted. Roads running out of Butte

broken series of

for miles were piled up with piles and stumps,

mining stumps.

I've covered all this.

Fry: You have this; OK.

Clapp: pile of stumps, mining timber. "Who cut that timber?"

Fry: "I don't know." [laughter]

Clapp: So we just measured the pile and then weighed it. After a while

it might have the mines ran out of timber. We found out who cut

the timber by seeing who was actually tending the pile.

Fry: How did you deliver your complaint, or warnings and get this through?

Clapp: We found out who cut the timber. Much was the case

Sometimes that got pretty exciting. Did you ever have any face-to-face
Fry: confrontations with these miners?

Clapp: Well, they tried to kill us.

Fry: Did you actually have that experience?

Clapp: Well, yes, but-I don't think it was a very serious attempt, but—just a threat. Some of the piles around cabins.

Fry: There was no . . . ?

And the occupant would

Clapp: say, 'If you come here, why— you better look out.'

/Fry: So, it was pretty blatant, then, in some cases?]

Clapp: Yip.

Fry: The miners felt that this should be public? timber?

Clapp: There was this enormous area of

public lands lying out there and they didn't bother

to get permits to come and take it away, but they didn't cut. It was

a blessing to the mining companies. They really just as little regard for

as the actual woodcutters. It was a typical public ownership of the timber. They actually were woodcutters—

outlook of that time.

Fry: Some of these mining companies had headquarters in the East, didn't they?

Clapp: There may have been eastern money. I had very little contact with

the big mining companies. Although I spoke of the western yellow

pine, that was a little later. That was a lumber company, a subsidiary
Clapp: of one of the mining companies. They were local mining concerns, maybe some eastern capital in them.

Fry: Smells. Is this Mr. Ringland?

Clapp: Oh! Hello there!

Fry: Mr. Ringland! I'm not even sure we recongize each other.

Clapp: Hi!

Ringland: Hello, there! You're having a talk and I've interrupted.

Clapp: Oh, don't -- [machine off]
December 31, 1946

W. Amelia R. Fry
University of California
Berkeley, California

Dear Mrs. Fry:

This is a belated reply to your letter of November 30. I shall be glad to look over your statement of our talks if you send them to me or bring them to Washington when you come. I might mention two items here. One was my answer to your question about one of the organizations that wrote a report on a National Program of Adult Education. The other answer should have been the National Academy of Sciences, which I mentioned in my letters.

I have enclosed a letter from Dr. C. E. Rich, who is interested in botany. He has been very encouraging in suggesting possible lines of research. Perhaps the best advice is that while in high school I became very much interested in botany.

[Signature]
When you come to Washington, I shall be glad to answer questions about Chris Quayle, a very able and a very fine man.

A Happy New Year

Earl H. Clapp
Mrs. Amelia R. Ffy
University of California
Berkeley, California

Dear Mrs. Ffy:

On compliance with your request of July 31, I am enclosing a list of subjects which might be
made the basis for question on Sunnyside activities in general from legislation and especially
on the reorganization legislation and the plan to broaden the first
Service Group. After the Pastoral Administrations. While perhaps
far from complete they may help to open up the question.

Ray Marshall has recently moved to the Cosmos Club
with the best of wishes.

Sincerely yours,

[Signature]

August 8, 1965
1. The position which DeWosky held in the California State Chamber.

2. Any significant points in the general forest conservation policy of the Chamber.

3. What he did in support of national legislation and field other than on that on reorganization.

4. Why he worked in opposition to the reorganization plan and the needs of the Forest Service from the Department of Agriculture during the President.

5. His contacts and work on item 4 with Senator Potter of Nevada.

6. His contacts and work with other Members of Congress on item 4.

7. His contacts and cooperation with other organizations on the item 4 reorganization bill.
8. The Contacts and Cooperation in the Union & Reorganization Struggle with:
   (a) Ghost Ranch
   (b) Other Anarchist Men

9. The Science, purpose, history, fate, etc., of the proposed reunion on the
   reorganization committee by the Senate Committee of which Senator
   Mental of Indiana was Chairman.

10. What agency, why, the methods that led to the 3rd, were responsible
    for driving them out of Washington in the midst of the Reorganization
    fight, and for keeping them out of the State Chamber.

11. The connection with any other incidents in the reorganization
    fight of historical concern or importance.
Dear Dr. Clapp:

On the chance you are working on a paper regarding the history of the Forest Service's attempts to establish federal regulation, I am sending you this current article which was written by a forestry professor here. It might be of interest to you, if you have not already seen it.

I went over to see him as soon as I had read the article. He is a Canadian who apparently has had little to do with American forestry except for the last few years, so this paper appears to encapsulate his knowledge of the Forest Service.

Thank you again for the lunch and talk we had last summer. It was most valuable for me at that point in the project. Since then, many foresters have contributed and RFF has given us another small grant to help type the transcripts. So we just keep working.

Good luck to you in getting through another Washington summer without hitting the melting point.

Sincerely,

(Mrs.) Amelia R. Fry
July 11, 1965

Mrs. Alicelee R. Fry
University of California
Berkeley, California

Dear Mrs. Fry:

Many thanks for the April 1965 issue of *First Things* with the interesting article on First Amendment regulation which I had not seen. I shan't know how to plead insolvent to any attempt to write up the First Service efforts on this question except possibly a few lines on my abortion efforts.

By the way, how are you and fallen into touch with Charles Brenwood? Who needs these very interesting records?
He was very active while on the staff of the California State Chamber of Commerce and rendered invaluable services in several capacity positions and especially during the attempt by Secretary Vense during the Franklin Roosevelt Administration to transfer the forest service to the Dept. of the Interior. Deenwood worked closely with Gifford Pinchot and had quite a bit of correspondence with him. His contributions have never been adequately recognized.
Her California address is 381 East Alvarado Avenue, Pasadena, California, 91107. For a number decreases he has been spending his summers in the North as or near Claytom, Washington. If you need more information about him.

Many thanks again for the cord message, and with the best of wishes.

Sincerely,

Carl H. Clark
April 7, 1964

Mrs. Amelia R. Fry

Aunt of California

Berkeley, California

Dear Mrs. Fry, 

This is a delayed reply to your letter of March 23. If you carry out your plan of coming to Washington in May I shall of course be glad to see you.

It is perhaps unnecessary to add that I am more than ever convinced that the best plan for my health would be to start in writing rather than in tape recording; then for reasons already given to you, the problem is to get started in what would undoubtedly be a more meaningful job. Any
decision on what should be done with the proceeds including quite a bit of supporting literature would be a much more selective plan even if the fund is increased. This among other reasons for the reason it finally takes.

Your efforts to get me to do something about my efforts, records etc. which I should, but haven't done is greatly appreciated.

Sincerely,

[Signature]

Earle H. Clark
Feb 14, 1967

Mrs. Amelia R. Fry,
University of California
Berkeley, California

Dear Mrs. Fry:

Your very generous and much appreciated letter of Jan. 27 called for a much earlier reply. Preoccupation with some other questions is not too good an alibi.

A tape recording would have obvious advantages for such a record as you suggest. But I must confess a question—whether another plan might not be better of a record made considered in very case. A
Very considerable preparation would be required which would include the checking of just a few records to insure accuracy and completeness because of possible references to Senators, Cabinet Members, etc., among the White House. It would have to deal with past history, some of which is already several decades old. Any statement I would want to cover more than possible achievements and include major efforts that failed, and action in some highly controversial questions possibly
Quite outside the normal realm, the best disposal of quite a few contemporary supporting memoranda, etc., poses still another question.

My leaning, accordingly if any record is made, would be to start with a written rather than a tape recording version. This could of course consider any questions that might be asked. It would exclude references that should be very carefully drawn because they would deal with controversial questions involving men in important positions. It might exclude questions in which the
University Library was very interested.

As a member of referees etc., I have occasionally considered the preparation of such a statement, but have postponed it because of other interests which seemed to have been more important.

I fear that this is not a very satisfactory response to your very generous offer.

Very sincerely,

Edwin H. Clapp
II

LETTER: The Transfer Battle
Dear Amelia:

Your letter of Dec. 26, 1967. I should have sent you a copy of my letter to Mr. Collins. I don't mind if you show him the Swift letter. In fact Swift died several years ago now and I can see little reason for holding his letter incommunicado, and I see no reason for his not quoting from it if he desires. I don't think I could be sued for libel for making his letter to me public when he certainly did not put any strings on it.

The Clapp letter is in a somewhat different category. Earle is still very much alive to the last of my knowledge. The "I want that man's head on a platter" statement was allegedly made by FDR and related to Clapp's leading the successful fight to stop the transfer of the Forest Service to the Interior Department - a transfer which Secretary Ickes had been doing his best to have made, and one which FDR would apparently have made had it not been for Clapp's ability to organize an opposition. Allegedly the statement was made by FDR to Claude Wickard who was then Secretary of Agriculture. Please check my spelling of Wickard will you? Clapp was absolutely fearless in waging the fight against the transfer and it may be of interest to you to know that when I mentioned this scrap to him at a Cosmos Club lunch on a year ago and I mentioned the high chances he had taken he replied that many days he came to the office in the morning not knowing whether by night he would have a job or not - and to the best of my knowledge that is literally true, as I was quite close to Earle Clapp at that time.

Well we dug the trailer out of the snow and by using chains for the first twelve or fifteen miles got it into a trailer park on the nice sunny desert yesterday afternoon. We expect to take off from home by Thursday the 4th and be at the rendezvous for the Mexican Caravan on the 7th with a few trailer repair operations to be done on the way. Back late in Feb and from then on until fall I expect to devote myself to the Shelterbelt with time out for the Oklahoma City meeting which will actually be contributing to the history. I am hoping that I can wind up the Nurseries and Planting sections by early fall including having them checked by Engstrom and maybe others. That will be the major accomplishment. I don't expect to go into a lot of detail about the financing from WPA funds and other Relief funds which was a mess of a hess and interfered greatly with the efficient functioning of the whole enterprise. So long for now.

Sincerely,

[Signature]

2004 Estrella Road
Prescott, Arizona,
Dec. 29, 1967 86301
Dear Mrs. Fry:

Sorry to be so long answering your letter but house guests plus work in getting out "Them Were The Days" have kept me busy.

I have read over your version of the Clapp letter and have the following corrections: Page 2, 4th paragraph line 2 after "McMary", should be Schwellenbach. I am not sure but I believe that Schwellenbach was the other Senator from Washington, but it could have been Oregon. In your position you should have a book of members of Congress since time immemorial. Page 2, 5th Paragraph first word fifth line is probably "Liglow", and the 4th word same line is "Dokey". Page 3, 2d paragraph, second word is Norris, and next to last line same page is "Colmer" and the next to last word, last line same page is "Martin". Martin was the Republican leader in the House for years and was Speaker during the Eisenhower administration or part of it. In next to last line of Clapp letter, "Carhart" instead of Corhant.

You asked about the "Head on a platter" statement. It was alleged that Roosevelt was quite incensed at the Forest Service and at Clapp personally for the fight made against the transfer of the Forest Service from Agriculture to Interior, and that he told Secretary Wallace, "I want that man's head on a platter". As you say his statement in his letter was in reply to a question I had asked him about this particular incident. And the successful fight waged by Clapp is quite generally accepted by Forest Service old timers as the reason that Clapp was not allowed to become "Chief" of the Forest Service, although he was permitted to become head of the Service for about three years as "Acting Chief".

I worked for Clapp as Administrative Officer for the Branch of Research, of which he was Chief and Assistant Forester, for three years. There is no question but that during a period of years with which I am fairly familiar and extending from around the time Greeley suit as "Chief" Clapp was the real leader of the FS and up to the time Clapp retired he was the most aggressive individual in the Forest Service and promoted most of the farreaching and forwarding looking policies and actions of the Service. He was unquestionably the leader of the fight against the transfer, he promoted and lead most of the progressive Forest legislation advocated by the Forest Service, he promoted and lead the production of "A National Plan for American Forestry" in response to the Copeland Resolution in the Senate, and he promoted and lead the highly controversial "Green Book" The History of the Western "Age" in response to the Norris Resolution in the Senate. He was also for years the most aggressive lead for improvement of Forest Service salaries, and insistance on a high standard of scholarship for men approved for research work. He was also the most prodigious worker and a man of great personal courage.

Sincerely,

Paul A. Roberts

I am sure I told Clapp his letter would be kept under seal for awhile - let's make it ten years. The Smith letter can be released anytime.

#2004 Estrella Road
Prescott, Arizona.
July 28, 1965. 86301
New Paul H. Roberts
Princeton, N.J.

Dear Paul:

Above the only reason that I can give for the long delay in answering the letter was in your letter of March 13 is the procrastination that seems to be one of the products of the aging process.

The reorganization order which included all or a part of the first Service seems to have reached the President's desk the very last of the first week of February 1940 on the beginning of the second week. It seems to have been there on February 7 or 9. I am afraid that I can claim a half hour knowledge of its arrival. I have never known where the order was prepared or whether it included all of the First Service or only the National Forests. However, there is each way, and incidentally the idea of a partial forest kept reappearing then and there.

I wonder if anyone will ever know the full history of what happened. I have tried through a rather voluminous file which included statements of various people, organizations, etc.
And no two of them are alike.

The background for the public and Congressional opposition in February 1940 goes back to a much earlier time in the Steepers when the first Revue worked for and got by various Balkis, excluding previous attempts for a transfer.

A more immediate development which was to prove very important occurred in connection with the passage of the Reorganization Act. Authorizing the President to make reorganizations subject to the veto by both houses of Congress. The President worked field and final authority that didn’t get in. During the struggle he was forced to promise that he would not transfer the first time. This seemed to have been firm in giving to Senator Darrow and verbally or in writing to some half dozen other Senators.

When the word got out about the proposed February 1940 order Congress is reported to have been flooded with protests from all over the country and mainly from...
the war and from all sides of attempting
the entirely spontaneous of course.
Gifford Pinchot was in Washington and was
as active as only he could be.

Several types of action began in Congress.
An influential group of Senators which
is reported to have included Byrnes, Bankhead,
Kennedy, Schacht, McNary, Harrison, and Rethman
for the President. Rethman incidentally had been an
active and very effective supporter of the
'save the Service' for a long time; some periods
of which had been very critical.

Senator Bankhead polled the members of
the Joint Congressional Committee on Military
which had been holding a series of hearings
all over the country, of which he was chairman
and which included Senator Severy, Clark, Arrington, McNary, and Daley
and Representatives Fulmer, Vice-Chairman, Pierce
Reed, and Highbridge. The result was
unanimous opposition to the transfer
with the promise to warn and stale against
such Congressional action as is expected to
to have been especially violent in his opposition. Backhead then tried and failed to get an appointment with the President and later telephoned him about the passage of the Joint Committee.

Conferences among such Senators as those mentioned in a preceding paragraph led among other things to pressure by Pettman on Byrnes who is said to have become more and more incensed over the wording of the President's promise that he would not transfer the force service. He may have arranged for a group to visit the White House—or the President may have requested it—Backhead—very Lon. Allen and member of the group—and many who could ask that scene such message as the following be given to the President: 'He didn't care whether the order excluded the force service or not; even if it does send it up, the Rad & Wats in the Senate for its disapproval,' myself also was told whether the message was delivered. The point that Byrnes emphasized in the conference was FDRs
promise while the Rearmament Bill was
under consideration that he would not trans-
fer the first Service. Byrnes was the
Chairman of the Senate Rearmament Committee
and put the Bill through the Senate. He is
said to have made the longest statements
ever made by a Senator to a President of
the U.S. for breaking his promise. He said
that he would lead the fight against any
such order and that he did not believe that
there would be more than 20 votes in support
of such an order in either House of Congress.

The order may also have gained attention in
the Senate Agricultural Committee.

Senator Norris wrote the White House an
opposition at the time it passed a cellar clan
when the transfer question came up again.
Senator Reed lined and failed to see the President
in opposition but later talked to him on the
telephone.

For less information about the House,
the President is reported to have talked
to Representative Waren, Chairman of
the House Rearmament Committee, over
the telephone, who said that he was opposed to the transfer. Representative Delaney said in a court that all of us are against the transfer. Representative Moloney, minority leader in the House, is reported to Ron said that the Republicans in the House would vote as a block against the transfer. There is some indication that there was a fall of the House leaders.

Factual fragmentary and sometimes conflicting evidence as it now becomes a key larger and perhaps overwhelming, congressional opposition to the transfer. It wonder of this zeal fundamentally reflects a larger vocal and aggressor public opinion as well as a congressional opinion which knew above and approved the work of the Forest Service and believe that the Service belonged and should remain in the Dept. of Agriculture. Furthermore, it was the opinion that it was fundamentally responsible for being 1956 when the reorganization bill was
Under consideration to procure that he would not make the transfer.

The President as you know backed down. The charge of breaching his promise may have been one reason. Another undoubtedly was the certainty of a better fight in Congress with almost certain disapproval in the Senate and also and perhaps somewhat less certain veto in the House. It seems to me that he utterly failed to appreciate the public and congressional understanding and approval of the work of the former Service and of their conviction that the Service belonged in the Dept. of Agriculture and that this was the fundamental basis for their willingness to go so far against the President.

Furthermore it is reported that Assistant Secretary Johnson of the War Department spoke to the President somewhat later against the transfer. He is said to have replied about as fellows: “I can't see why people are so hell-bent against transferring the Army Service.”
The "I won't read on a platter" incident occurred about the Easter 1935. I
came in early one Easter day. Henry Wallace
was then Sec. of Agriculture. He was succeeded
by Claude Wickard in 1940, and Wickard died
in the late 1930s. It was after the Forest
Service had moved from the Old Agriculture
Building to the Department. Selcox and I
talked about what the President would do when he
came with Wallace a day or two later to the
White House. FDR seemed to have changed his
mind. Word the Matter would and began to
describe a wholly unrelated question.

You ask for the name of the Secretary of
the California Chamber of Commerce. His
name will occur later. Before his appointment he
had been the Supervisor of one of the
California National Forests. The Conservation
Director of the Chamber was Charles G.
Woodside who came to Washington
frequently for several years on weather
activity and very effectively for Forest Service
measures on against the droughts, Arizona.
Fortunately he was very keen upon

(P)
the Order he resolutely delivers for the work that he did. It covers all years of a series of very interesting events, which occurred during his work against the war. The poor chap has been suffering from a severe condition allowed for the last 2 or 3 years.

The whole affair, as a matter of fact, I am sorry to say left FPR with a very good opinion of the FPR Service. The reason in a plain statement follows: a long letter on the Service at a Cabinet Meeting, and at a Press Conference FPR is reported to have emphasized the Service as the worst espionage and disloyal organization in the whole FPR Service. The小女孩 struggle of which the February 1940 place was just one part was in some ways tragic for the Foreign Service and Foreign Conservation. One of the passages resolves was to contribute to the prevalence of any comprehensive legislative program among FDR's Administration. When it happens to know that he worked, that he was generally...
Uncles in Congress there can be no
pleasure. Neither can there be any pleasure
about it going down through reality as one
of our great Presidents.

When you come to Washington I would be
delighted to have you look over our other
valuable papers dealing with the Whipple-
battle if you were so inclined. They contain a record
of many interesting incidents which I have not
attempted to convey in these letters.

I am sorry to hear about the long delay
in getting a publisher for your book. I was
hoping for favorable action in the near future
and I am disappointed that Congress did not
act. I have told him about some of my real estate
work so you don't give him anything.

With all good wishes, most sincerely,

Edith H. Clark

P.S. You will realize that no legislation is close
in the proceedings of today. I believe this despite
a somewhat interesting plea during the session
of the House. He made a contribution to the
defeat of the measure which I am pleased
with the present to break his promise.

E.
CONFIDENTIAL 1936 MEMO: The Outlook for Research in the Forest Service
Earle H. Clapp, Acting Chief of the Forest Service, U. S. Department of Agriculture, was born at North Rush, New York, October 15, 1877. He attended Cornell for two years, graduating from the University of Michigan in 1905 with an A.B. degree in Forestry and allied branches. He received an honorary Doctor's degree in 1928 from the University of Michigan.

Dr. Clapp has been with the U. S. Forest Service continuously since 1905. He worked for two years in connection with timber sale administration work in Wyoming and Montana; one and one-half years in administrative work in Washington; two and one-half years as Associate District Forester at Albuquerque, New Mexico; and four years as Forest Inspector at Washington. In April, 1915, when the Division of Research was established in the Forest Service, he became Assistant Chief of the Service in charge of forest research. He has participated in shaping policies and development of plans for the varied research activities of the Service, and for twenty years exercised general supervision over all Forest Service research, including the work of twelve Forest Experiment Stations throughout the country and the Forest Products Laboratory at Madison, Wisconsin.

In 1935 he was named Associate Chief of the Service, and in 1939 on the death of the late Chief Forester, F. A. Silcox, became Acting Chief of the Forest Service.

Dr. Clapp is the author of many technical articles and studies which have been published as Department of Agriculture bulletins, in the Department of Agriculture Yearbook, in such magazines as the "Journal of Forestry," "Cornell Forester," "American Forester," "Chemical and Metallurgical Engineering," "Timborman," "Canadian Forester," and "Lumber."


He is Forest Service representative of the Agricultural War Board, appointed by Secretary of Agriculture Wickard in December, 1941.

Dr. Clapp is a fellow of the Society of American Foresters; corresponding member of the Society of Forestry in Finland; and a member of the Cosmos Club of Washington, D. C., and of the University of Michigan Union, Ann Arbor, Michigan.

Dick July 1970.

###
DIRECTORS ALL STATIONS AND LABORATORY:

I know you will be keenly interested in reading Mr. Clapp’s memorandum of May 19, copy of which is enclosed.

This memorandum, approved by Mr. Silcox, is of much significance to the future of the research organization of the Forest Service.

R. E. MARSH,
Acting Asst. Chief, Forest Service,
In Charge Forest Research.

Enclosure
MEMORANDUM FOR THE FORESTER:

I am leaving Research with an uneasy feeling about its future in the Forest Service which I know is shared by others. As yet it has not in my judgment been conclusively shown that it is possible, in a bureau such as the Forest Service, primarily administrative in its functions, to develop and permanently maintain a strong, effective research organization.

This feeling is based on such things as:

The recent transfer of four men from key positions in Research without any assurance that the vacancies could be filled satisfactorily.

The Forest Service in general has been indifferent to or has actively opposed practically every constructive move to develop research. For many years there have been periodic efforts to break it down.

One of the most thankless and difficult duties of the man in charge of Forest Service research has been to fight constructive research developments through the Forest Service. Another has always been to protect and hold the things which are necessary for effective research. The last few years have had their full share of efforts which if consummated would have wrecked the entire research effort. Such efforts may not be quite as active now as they have been in the past, but they may be even more dangerous, because, instead of being advocated by men openly hostile, they are now being advocated by men with an academic interest but with little conception of what research really is and what the requirements of good work are.
The recent decision to maintain the independent status of the forest experiment stations and the placing of Research in Washington on a par with national forest administration and State and private forestry are decidedly reassuring as far as they go.

The purpose of this memorandum is to urge the approval of some additional principles in order more fully to assure a permanent place for effective research in the Forest Service set-up. If I can have your approval of these principles I can leave Research with a much greater feeling of assurance as to its future, a feeling which I believe will be shared by the entire Research organization.

1. It is the declared purpose and policy of the Forest Service to develop and maintain research as one of its major activities, and to make the provisions necessary to insure a thoroughly effective functioning. The reasons for this are:
   a. To supply the basic biological, social, economic, and other technical information which is necessary for the rapid and well-rounded-out progress of the whole forestry movement in the United States.
   b. To help make the Forest Service into a technical organization in spirit and in fact instead of the nontechnical organization which it now is too largely in spirit as well as in fact.
   c. To have at all times in the Forest Service a group not under administrative domination, idealistic from the very nature of its work, ready when occasion demands to supply the criticism which the Forest Service needs to keep it alive and forward-looking, and also to perform the same function for American forestry as a whole.

2. The fulfillment of the purposes indicated under "1" will, among other things, require an outstanding personnel, not only as to ability but as to training.
This is true of the entire investigative personnel, and it is particularly true of the key positions. The forest experiment station directorships will serve as an example.

If these stations are fully to meet Forest Service and other requirements the directors must be men of outstanding ability, in fact the ablest men in the entire profession we can obtain and hold. In addition to ability they must have strength of character, imagination, daring, and idealism. They should as soon as possible have the training equivalent to a doctor's degree.

In setting up an objective on the qualifications for directors it must be recognized that we shall have to depend upon them for leadership not only to develop and direct research but to help get research results into practice. We should look forward to the time when broad regional and national forestry policies can no longer be based upon mere consensus of opinion, as they largely are now, but on facts which the Research organization must supply. We should recognize now that in 10 or 15 years these positions will be the prize positions of the entire Forest Service. This has been true in Europe for years and will I hope be true in time in the Forest Service.

If the Forest Service is going to reach any such objectives as those indicated, directors who raise their heads above the general level cannot be picked off for any or every administrative vacancy.
It will be necessary to recognize also that in these positions compensating transfers cannot be made from Administration. Vacancies can only be filled by moving up men who have had research training and experience. It is a one-way proposition. The theory of unrestricted interchangeability has originated with men who really know nothing of research requirements.

That there can and should be some transfers between Research and Administration goes without question. But if Forest Service policy is to recruit higher administrative positions from Research without regard to the availability of satisfactory replacements, it can have only one end. After all these years, and with a ten times larger organization, it does seem reasonable that Administration should in the main be able to fill its own key positions.

3. The fulfillment of the purposes under "1" will require that administrative questions relating to research be handled in Research up to the point of general Forest Service correlation.

This question I hope has been settled by the approval of the Larrimer-Miller staff assistant positions in Washington, but it is the sort of question which is likely to keep coming up.

Research has its distinctly administrative phases. Because the nature of the work is entirely different from that in Administration, these are rather highly specialized. In order to get the best results, they require a sympathetic handling which takes into account the needs of Research and the somewhat different type and temperament of men who make up a large part of the Research personnel.

If any other plan is followed the result is going to be that a general Forest Service administrative unit whose work will be 90 per cent on administrative questions is going to settle all questions
On questions affecting procedure, etc., in national forest administration, recommendations to the Forester's office should come from the regional foresters. On general Forest Service policy questions and on general forestry policy questions, the directors may have delved as deeply and often far more deeply than any of the regional foresters because of the nature and requirements of their research effort.

What at bottom I am driving at is this, that in time, and in my judgment the time is already long overdue, major Forest Service policies and major national forestry policies will have to be based on fact and not on opinion, and this means basing them on research results. This means still further, that the Forest Service in its councils should recognize the men who collect and interpret these facts on a basis of equality with the men whose job it is to apply them.

5. It will be the policy of the Forest Service to utilize the Research organization for purposes for which it has been created.

One effective way to make the Research organization into a thoroughly effective instrument in the development of American Forestry is to use it for the big research jobs that come along, as well as for the little ones. I think that there is a growing tendency on the part of administrative officers to call on Research for the smaller jobs. Nearly all of the big research jobs, however, which Research has carried during the last 15 years it has initiated itself or has grabbed off. Other big research jobs have in the
from an administrative point of view. The whole point of view in such a unit is going to be governed by administrative requirements and philosophy, and the attempt will be made to jam Research into an administrative mold. I should say after 20 years' experience in handling Research that this would be a thoroughly effective means of killing off any real research effort.

I don't want to be misunderstood as to the need for ultimate correlation from a general Forest Service point of view, but this ought to take place after the administrative questions in Research are brought together in sharp focus. And further, it should be correlation in the true sense of the word which will take both Administration and Research requirements into account and actually provide for both, and not be mere unification, regardless of ultimate effects.

4. The fulfillment of the purposes under "1" will in a reasonable time mean a much more definite recognition for Research field men in the Forest Service family than they have so far been given.

If research is recognized as a major Forest Service activity in fact, and if the Forest Service recognizes also what this means in qualifications of men for key positions, such for example as the directors of forest experiment stations, these men should be given a larger place and clearer recognition in the formulation of general Forest Service policies, etc.

Take, for example, the regional foresters' conferences, at which the directors now have a very indefinite status.
great majority of cases been assigned to other units. My suggestion is that as a general policy Research be given the opportunity to handle the big jobs and that other disposition be made only in case it appears impossible for the Research organization to carry the work satisfactorily. This might be because of lack of funds or personnel or a program already overloaded. An arrangement of this sort need not preclude cooperative effort wherever this proves necessary or desirable.

Recognition of the principles outlined ought to go a long distance towards minimizing the time spent by the man in charge of Research in protecting it against the rest of the Forest Service.

These recommendations are, I fully realize, pure heresy from the traditional administrative standpoint of the Forest Service. For making them I shall be charged with trying to break the Forest Service down into separate compartments. But this is the time-honored argument that has always been used in the effort to prevent the development of research. Like the "save the Constitution" argument, it really covers something else.

/sgd/ Earle H. Clapp,
Associate Chief, Forest Service.

OK
/sgd/ FAS
Photo J. Copp

As asst. Distric 3

Fruita in

Albuquerque

No. 91034
Earle Hart Clapp
1877-1970

RLE H. CLAPP, Fellow of the Society of American foresters for 40 years, three times elected Society Vice President, former Chief of the U.S. Forest Service for 14 years, died in Washington, D.C. July 2 following heart attack. He was 92 years old.

So might the usual obituary notice read. But Earle Clapp’s death merits more than brief notice. Foresters both public and private employ, now and for years to come, benefit by Clapp’s vision, persistent devotion, resource conservation, and monumental achievements in forestry.

Forestry is so big, so complex, and requires so many resources to obtain results that few foresters can hope for individual achievements of large national significance. But as forestry began in this country those who stand head and shoulders above the rest probably can be counted on the fingers of one hand. Earle Clapp is one of these.

Born in North Rush, N.Y. October 15, 1877, Clapp ended Cornell University for two years but earned a forestry degree at the University of Michigan in 1895. He served continuously with the U.S. Forest Service from 1905 until his retirement in 1945. Among his assignments were timber sale administration, associate Regional Foresty Inspector for all Forest Service work, Chief of forest research, Associate Chief of the Service and, in all but payroll title, Chief for 14 years.

Clapp was chiefly in starting many forestry activities accepted as commonplace today—and in others that anger foresters may never have heard of. It is a sad thing for foresters to pause now and then to reflect on their debt to the energy, vision, and accomplishments of leaders of the profession.

One example of Earle Clapp’s many contributions to his profession is the periodic appraisal of the nation’s timber supply of which the Timber Resource Review and its revisions are the most recent. Clapp worked on these beginning with the Capper Report of the early nineties. He was the driving force in preparing the peland Report of 1933, and the report of the Joint Congressional Committee on Forestry in 1938. This resulted in 1941 in “A National Plan for American Forestry.” The Timber Reappraisal of 1945-1947 was tied out in large part according to plans written by Clapp shortly before his retirement.

“The Western Range, a Great but Neglected Source,” an appraisal of range land conditions similar to those for timber, was published as a Senate Clapp’s great professional ability, he can be cured of his doubt by reading the summary in this report. After more than a year of 12-to 15-hour days directing in minute and specific detail the work of hundreds of office and field people, a task which would have killed most men. Clapp personally prepared this masterful summary. That he could do this explains in part why those who worked closely with him responded to his willingness to drive himself, to his considerable personal abilities, and to his high standards.

Nearly half a century ago he recognized the vital need for accurate statistics on the country’s wood supply situation. The nationwide system known as the Forest Survey was his idea, and more than anyone else he obtained the authorizing legislation in 1928 and the funds to carry out this widely approved project.

Earle Clapp had much to do with organizing the Shelterbelt Program of the mid-1930’s. He had a large part in establishing the Civilian Conservation Corps. One of the first foresters to recognize the value of forests in controlling streamflow Clapp established “forest influences” research some fifty years ago and was active in obtaining the Flood Control Act of 1936. He arranged the Congressional tours and follow-up action which resulted in the Norris-Doxey Cooperative Farm Forestry Act of 1937, and which was replaced in 1950 by the Cooperative Forest Management Act.

Clapp was Chief of the Forest Service during the period of frantic activity of World War II. He originated or supervised many activities connected with the war effort. Older foresters will recall the Gypsum Project to produce natural rubber in this country, the Aircraft Warning Service using fire lookout stations, the Timber Production War Project, and many special activities in connection with lumber production and the War Production Board.

To most foresters, however, Earle Clapp will be remembered as the man who built a solid base for all aspects of forestry research. Early in 1915 when the Forest Service established a separate division of research, Clapp became Assistant Chief in charge of research. The comprehensive “A National Plan for Forest Research” which he wrote in 1926 was the basis for the McSweeny-McNary Act of 1928, the broad charter for the Service’s research programs. The regional experiment stations were established under this charter. Expansion of the Forest Products Laboratory at Madison, Wis. was a special interest during the twenty years Clapp headed research.

Earle Clapp was a corresponding member of Finland’s Society of Forestry and was widely known in many countries. The University of Michigan gave him the honorary doctorate of Science in 1928. In 1960 he was awarded SAF’s Gifford Pinchot Medal for outstanding service to forestry. In presenting this medal, President Connaughton’s final words were, “With it goes the esteem of your colleagues in the profession which you did so much to help establish.” There can be no doubt that foresters are indebted to Earle Clapp for much of their prestige in scientific competence, their ability to look far ahead, and their professional integrity, for he had these essential qualities in large measure himself.

Richard E. McArdle
EARLE HARRITT CLAPP
1877 - 1930

Born N. Rush, N.Y., 8/15

Forestry Degree, Univ. of Mich., 1905

1905-1945 - 40 yrs. Continuous service w/F.S.

Tobacco 8-ce administration - 2 yrs (Wyoming & Montana)

Associate Regional Forester - 1/2 yrs (Albuquerque, N.M.)

Inspector General Forest Service - 3 yrs (Forest Inspector of Washington) 4 yrs

Ass't Chief of Forest Research - March 1915 became

Ass't Chief - 20 yrs as General Supervisor of all Forest Research - shaped policies

+ developed of plans of research activities including

the work of 12 Forest Experiment stations & Prod. Products Lab.

at Madison, Wisc.

1935-1939 + Acting Chief

Associate Chief of Service

Chief for 14 yrs 1939-43
Cooperative Farm Forest Act (1937) - arranged Congressional 
Forest Follow-up action creating impetus for Act 

Acting Chief during WWII 

Activities included: supervision of 
Guayule Project to produce natural 
rubber in U.S. An aircraft warning 
Service dry-laid fire lookout 
station. 

- Production 
- War Project - Forest Service 

- representative of the A special 
- War Board - Civil Production 

- Board originated & supervised 
many war connected activities 

Research - scheduled for efforts 
to establish solid base for all 
aspects of forest research - was 

appointed Chief of Research in 1915 when 
separate division of research was 
established. 

Wrote "AN Otome" 

Logan's Forest Research (1926) 

became Acting Chief Bureau 

McNary Act (1928), the basis 
for FS. Research programs 

for fire, disease, insect, 

established under McNary - 

McNary Act - Forest Products 

Lab was special interest during 
20 yrs as Chief of Research; 

- War research contributed
APPRAISALS OF FORESTRY SITUATIONS: 1920

CARROT NATIONAL FOREST RESEARCH PROGRAM: 1925

A NATIONAL PLAN FOR AMERICAN FORESTRY (Cope and McFadden 1926)

Joint Congressional Commission on Forestry 1938

Timber reappraisals 1945-47

Cooperation - N. S. S. - State Farm Forestry 1919

Carpenter report 1920 prepared by FS 36/48 most complete

Joint Congressional Committee

Carpenter report 1923 - review all phases of forest situation

State forest - started 1929

Carpenter report perhaps Copeland report 1928 advocated it

Joint Congressional Committee

Revised 1938 advocated it

Advocated by CAROLINA FOUNDATION.
Check 1) All Public papers
2) NDL Corr
3) Chiefs Report (impending)

We have Copeland Report yet only

To emphasize research activities among Copper Repri.

...and any clues by Coppe... ( illegible)

...still holds CCE even in cool... (illegible)

Journal of Forestry: Dr. Emile H. Clapp returns from F.S. 43:9
( illegible)

Does research offer career to 1923
( illegible)
(more technical & specific studies published in detail)

Clapp, John W.  
Tobin: Maine 1
Clapp, USDA
year born: 1922
82-88
1923

"The Commercial Value of the Woods & Forests in Amer. Forests"
30: 259-64, 320. 1923

Our Future Forest Needs
Jour. of Forestry 28: 147-153 (1930)

A Timber Survey: what it should include: Jumber 66 (868)
21-22. 1920

Why a Timber Survey?
Jumber 67 (871) 53-7 1921

Graves & Clapp
Policing of FS
more and its cooperation
private owners Timberman
13 (2): 50, 52-53 1911

Fire Protection in the N.F.'s Amer.
Forestry 17: 573-584: 652-657 1911
The major range problem is their solution. (By Ed. Clapp) Manifestly of a report prepared in response to Senate resolution 289, "The Western Range, a great but depleted national resource." By F.S., USDA Wash., U.S.G.P.O., 1936 (U.S. 74th Cong. 2nd sess.) Senate document no. 190 - separate no. 1

U.S. F.S.
Reduction as principal factor in soil conservation, flood control. Wash. 1936.

U.S. Forest Service
Approved for

Ref: Copy Report
Command Report
Range Problem (Summary)

Defence

I
1) Interest in BTO
2) Progress Spent
3) Details Earn
4) Schooling

II
1) Early T.S. Career

III
1) Research + Surveys

IV
1) Work on Milestone events

V
1) Controversial facets of issues

Very aggressive force
well in F.S. (see Paul Roberts)
Letter to Mrs. F. 1/28/45
also for clothing, from 
asked Balby - "I want
and in latter"
Chief Ciff acknowledgment receipt of letters in the mail from the Magna Carta FS Research and Transfer NF for attendance to the present time. Also, the Magna Carta FS Research in the FS.

Problem in research is one of maintaining a strong, effective research team in a bureau with large FS. Primarily, administrative units questioned Ciff and bid removal in the FS.

FPL stressed the importance of studies being timely, prosperous, and practical. They argued for financial improvement in maintaining a balance between fundamental research and applied research. Discussing the growth of the industry was difficult to the Ciff.

As seen, we need "urgent" in most cases considered as the most urgent.
Summarize

Our plan was to reduce and wherever there was opportunity for more
refinement or improvement, to do so. This led to some additional research
in fundamental research on the design of research. It was clear that the
research had to proceed
more feasible or profitable. It led then back to the study of
pure research and 64/45th FPL.

As a general rule, it might be said that the lab had,

has stressed fundamental studies during times of prosperity and
practical studies during times of financial
stringency. Somewhat dishing a
proper balance between fundamental research and applied research in
one's work.
173.2  US CCC

CCC bioclimatography

Compiled by Office of the Director

CCC

Wash. 1939
Ramifications of Reorganization: The Land, The Sea And The Air

By EARLE H. CLAPP

REPRINTED FROM AMERICAN FORESTS
September, 1968

The Magazine of
The American Forestry Association
Ramifications of Reorganization:

THE LAND, THE SEA, and THE AIR

By EARLE H. CLAPP

During the last four decades the reorganization of the federal government has received a great deal of attention from federal administrations, Congress and the general public.

This was especially true in the Roosevelt Administration, at which you might say I had a front row seat. Among the bills introduced in Congress, one that passed during the early years of the FDR regime and another that passed in 1939 gave the President authority to make transfers between Departments subject to Congressional veto.

Highly controversial questions that colored the history of the unpassed bills and the bill of 1939 centered to some extent around the renaming of the Department of the Interior as the Department of Conservation, or the Department of Natural Resources. But more specifically the battle hummed around a proposal to transfer the U.S. Forest Service from Agriculture to Interior.

A group of questions of varied importance threw enough light on the soundness and justification of the proposed transfer of the Forest Service to be mentioned. Some of those reasons seem to deal only by inference with proposals to include all of the natural resource activities in one Department. Among reasons for the transfer that were set forth were:

There should be a Federal Conservation Department and the Forest Service should be in it.

The Secretary of Agriculture was overburdened with the size and complexity of the strictly agricultural phases of his job, didn’t know what was going on in forestry, and was unable to give forestry needed attention.
Commentary on proposed shift of Forest Service from Agriculture to Interior by conservation cartoonist Ding Darling as it appeared in New York Tribune

A terse reason heard most frequently was "that's where it belongs"—meaning the Forest Service in the renamed Interior Department.

Incorporating the National Forests into Interior would present a most effective way to end the prolonged controversies in the handling of claims in the National Forests and shifts of lands from those forests to National Parks.

The claim that forest trees are a crop is a joke.

Secretary of the Interior Harold Ickes' celebrated Diary contains such criticisms of the Forest Service as:

It is an independent, tight, little, and the most inbred organization in Washington.

It (the Forest Service) is a law unto itself, goes hog-wild at times and neither the Secretary of Agriculture nor the Chief of the Forest Service knows what is going on or is able to control it.

It has too many generals and too few privates in its organization.

It has never been able to handle the National Forests at a profit.

It has the most powerful lobby in Washington and is able to use it.

Ickes stated that one of his great ambitions was to build up a great Department of the Interior renamed Conservation, to recapture the Forest Service, and to make it the keystone of the Conservation Department to redeem the reputation of the Department in the public esteem.

The Secretary of Agriculture was sharply opposed to the transfer of the Forest Service and in his recommendations to the President cited without success the fundamental relationship between agriculture and

AUTHOR

Dr. Earle H. Clapp was born at North Rush, New York, in 1877—two years after the founding of The American Forestry Association. After attending Cornell for two years he graduated from the University of Michigan in 1905 with an A.B. degree in forestry. When he retired from the Forest Service in 1935 after 40 years of government service he had served as Acting Chief and also as Associate Chief. Dr. Clapp was responsible for raising forest research from obscurity to a vital place in American forestry. He stimulated private forestry by campaigning vigorously for government regulation of all forest lands. But he is perhaps even better known and remembered for his successful effort to block the transfer of the Forest Service to the Interior Department as proposed by former Interior Secretary Ickes and favored by President Franklin D. Roosevelt. Clapp is a crusader in the Pinchot mold and his crusade against transfer earned him the displeasure of FDR and cost him the permanent position as Forest Service Chief. He rounded out his career as an Associate Chief. When Senator Moss and others introduced their reorganization bills, Dr. Clapp, now living at the Cosmos Club, started work on the article that starts in this issue and ends in the next. He writes as an observer who had a ringside seat at previous reorganization efforts. Now 90, Dr. Clapp has lost none of his ability to weigh an issue and express an opinion. According to Dr. S. T. Dana, Dr. Clapp was one of the most vigorous Chiefs in Forest Service history.
forestry, which will be discussed later. It is hardly necessary to state that the Forest Service was opposed to it.

One of the most striking indications of the character and extent of the public interest and opposition to the transfer of the Forest Service was the list of national, regional, state and local organizations prepared by The American Forestry Association. It included about 180 organizations. The Kiplinger Agency notified its constituents that about 200 organizations were more or less active opponents of the transfer. In contrast all of the available information indicates that one or at the most only a very few public organizations favored the transfer.

The 1939 bill became highly controversial in Congress before its passage in part because of the widespread opposition to the transfer by the Forest Service and the Administration support for it. The bill was finally passed with a narrow margin and only after what was considered as assurance by the President that he would not transfer the Forest Service.

Finally, late in 1939 and early in 1940, the President had on his desk the draft of an Executive Order which included a provision for the transfer of the Forest Service. This had been prepared in the Bureau of the Budget with the President's knowledge, consideration and approval, if not by his order.

An attempt was made to keep the preparation of the Order secret to avoid stirring up opposition. When information about it leaked, it stirred up a violent opposition in Congress which was backed by outside organizations.

A small group visited the President in protest. Chairman of Committees like Senator Byrnes and Representative Bankhead protested to him. Senator McNary boasted of having 62 opposition votes in the Senate if the Order was sent to Congress, and Congressman Martin is reported to have stated that he would take the unprecedented action of voting the Republican majority in the House as a block in a veto of the Order. The opposition became so overwhelming that the President finally decided to eliminate the Forest Service transfer provision from the transfer Order.

Thus the monument set up by the first Roosevelt was upheld as the second Roosevelt tried to change it. The episode is cited in the light of the fact that the reorganization issue has once again been brought into the picture by several members of Congress led by Senator Moss of Utah. He is deeply interested in our natural resources and conservation questions, but also believes that conservation, despite its importance, has not been receiving the attention that it should. One way to meet this neglect, he believes, is by reorganizing these activities of the federal government.

The Moss bill now pending in the 90th Congress would rename the Department of the Interior as the Department of Natural Resources. The bill would transfer the Bureau of Indian Affairs and the Office of Territories from Interior to the Department of Health, Education, and Welfare. It would transfer the Forest Service and Soil Conservation Service from Agriculture to Natural Resources; the Civil Works function of the Corps of Engineers from the Army; the National Oceanographic Data Center from the Navy; the functions of the National Science Foundation relating to sea grant programs; air pollution activities would be removed from Health, Education, and Welfare; and federal power activities from the Army. This shift of considerable number of natural resource agencies obviously would be
a major buildup for the renamed Department of the Interior.

In a speech in the Senate about his bill, Senator Moss said: "What the bill will do is to enable one executive department to coordinate, at the levels of Under Secretary and Secretary, the activities of all agencies dealing with natural resources. It will enable the President, the Congress, and an executive department to effectively evaluate the nation's resource requirements and the investment needed to meet them. It will provide the data and management structure on which long-range planning can be based. It will enable us to consider with sufficient lead-time the raw material requirements of our industries. It will provide coordinated administration of far-flung resource programs." In his speech and elsewhere he cited defects and deficiencies in the administration of existing agencies that, in his opinion, the enactment of his bill would make it possible to surmount.

Gifford Pinchot while Chief of the Forest Service in the Department of Agriculture conceived the idea of conservation, picked the name and indicated the scope. "From birth to death, natural resources transformed for human use, feed, clothe, shelter and transport us. Upon them we depend for every material necessity, comfort, convenience and protection in our lives. Without abundant resources, prosperity is out of reach. Therefore, the conservation of natural resources is the fundamental material problem." This is one of the great conceptions of history and the appreciation of its significance on human existence and welfare has been increasing ever since.

The Department of the Interior now includes the Bureau of Sport and Commercial Fisheries, Geological Survey, Mines, Indian Affairs, Land Management, National Park Service, Outdoor Recreation, Reclamation, and the Office of Territories. Recent additions include activities provided for by the Resource Act of 1965 and the transfer of Water Pollution control from Health, Education, and Welfare.

It is true that a precedent can be cited for this proposed transfer—the Defense Department which includes all the armed services. Nevertheless, something more than a superficial examination of this resource shuffle is indicated at this time and it has to do with such factors as the relation of these moves to other conservation activities as they deal with applied conservation on the land.

Look to the Land

In examining the ramifications of reorganization it is necessary to look to the land itself; there is no other practical way to do it. The 450 million acres of farm lands in the United States—crop land including pastures, and excluding forest and woodland and Alaska and Hawaii—are undoubtedly the most important natural resources of the nation. Agricultural conservation including research and its application began about a century ago and has today become one of the nation's greatest conservation activities. This land resource and its conservation has helped to make the United States one of the few countries of the world that has been able to meet its own major food needs and, in addition, to help feed people of other nations who face starvation. Cotton and tobacco have been additional large crops. America's corn production is unsurpassed anywhere in the world and is the envy of many foreign countries both in the Communist and non-Communist orbit. In fact, production has been so great that in some recent years federal actions to hold down production of some major crops has been necessary.

In looking to the land, one immediately notes that the proposal for the transfer of the Soil Conservation Service would apparently place the conservation of the soil on farms in one Department and the growing of crops in another. This would obviously cause agriculture people some concern. As for the Forest Service, the move would make one Department responsible for the growing of food and related products on one part of the farm, and a second Department for the growing of forest crops on the remainder. The proposed transfers would accordingly divide the responsibility for agriculture between two Departments.

Would this work for agriculture? Would this work for forestry? Look to the land itself for the answers and let Congress itself look well.

The Department of Agriculture, the Forest Service, and the general public opposed the transfer of the Forest Service during the Roosevelt Administration. It would be surprising if Agriculture did not oppose that of both the Forest and Soil Conservation Services now. The fundamental relationship between agriculture and forestry and the record of the Forest Service will be taken up in detail later.

Look to the Resources

As one studies the Moss proposal to establish a new Department of Natural Resources, one is struck by the omission of many of the resources and resource agencies. The Tennessee Valley Authority is a conspicuous example of a federal organization with natural resource and conservation responsibilities which is not to be transferred to the proposed Natural Resource Department. The responsibility includes all of the natural resources of the Valley and their coordinated conservation for the social and economic welfare of the inhabitants. The Valley Authority has opposed incorporation into any Department. It has made such a conspicuous record that it has attracted world-wide attention.

The Department of Health, Edu-
cation, and Welfare is responsible for maintaining high standards for human use, benefit and protection of a rapidly expanding number of drugs. The basis for these drugs is a variety of plants and other natural resources which are then utilized in the research of the manufacturing companies, federal government, colleges and other agencies, and in later production. Progress during recent years has been very great. The importance of the basic research, the derived drug products, the protection of the public and of the responsibility of H.E.W. cannot be overemphasized. This carries the question of taking natural resources and conservation a step further than the purification of streams and of the atmosphere and raises a question of where the conservation line should be drawn. Without any question, however, drug regulation and responsibility does have natural resource and conservation implications.

The Atomic Energy Commission, which is not to be transferred, has the responsibility for the production of energy from such special natural resources as uranium and plutonium. They have been used in the production of the atom bomb, to produce power to desalt ocean water, and to produce power for general consumption. The possibility of harnessing the hydrogen bomb reaction to produce electricity has been reported along with word that the Soviets and other countries are working on the problem. Other reports indicate the possibility that atomic energy may be made to reproduce itself in perpetuity. It seems doubtful whether the future importance of natural resources and conservation in this field can be overestimated.

The Defense Department is responsible for a large use of a great variety of natural resources some of which depend upon exacting requirements. Extensive special research programs are utilized to develop more effective arms and munitions including atomic bombs, long-distance missiles, anti-missiles, airplanes, and special types of sea-going vessels. Resources are intimately involved in all of these endeavors. The Corps of Engineers, of course, would be transferred under the Moss proposal. Military reservations of the Army, Navy and Air Force that would not be transferred include a substantial acreage of forest, wildlife and recreational lands. During recent years these lands have been placed under improved conservation management. The Secretary of Defense has been giving annual awards for improvement in their management since 1962. He ordered the Department of Defense personnel in 1965 to support national conservation policies. He set up a natural resources group which included representation from the Secretary's office and from the Army, Navy, Air Force, and Marine Corps. A supplement on forest management calls for multiple use and sustained yield forest management on all military reservations which contain suitable forest lands.

The National Aeronautics and Space Administration, not to be transferred, is a relatively new organization that is responsible for a comprehensive and generously financed program including such activities as the exploration of space, a human trip to the moon, and a study of Mars. What its work may develop in the more effective use of natural resources, in the development of new forms of energy, and on conditions in space that influence those on earth, may be largely in the future but should not be overlooked.

Most scientists today are exhibiting keen interest in the oceans of the world as a source of important minerals and as a source of food from sea farming, yet, with two exceptions, the Moss bill does not appear to delve deeply into all the ramifications in this coming key area. Much broader effort is now going on than in the fields of commercial fisheries and whaling. This new research interest has been stimulated by the discovery and exploration of gas and petroleum, of sulfur, of some mining of tin and gold from undersea deposits, of the recent discovery of large deposits of manganese oxide off the coast of Florida, Georgia and the Carolinas, and the pioneer desalting of water. Marked attention to the importance of all aspects of oceanography is being given in college curriculums.

It has been asserted of late that the oceans are a vast source of industrial minerals. Their utilization under modern day “sea farming” is certain to lead to difficult international complications.

The importance and breadth of interest in the oceanic resource question is shown by a 1966 Act of Congress which authorizes the creation of a National Council and by the appointment in 1967 of a Presidential Commission.

The National Council of Marine Resources and Engineering Development includes the Secretaries of State, Treasury, Interior, Commerce, and Health, Education and Welfare, the sub-Secretary of the Navy, the Chairman of the Atomic Energy Commission, the Director of the National Science Foundation, and the Vice President of the United States as Chairman. The Council has the major responsibility for such current questions as coordinating federal marine programs and for initiating new federal activities.

The President's Commission has a diversified membership from industrial and academic institutions, professional ocean oriented organizations, and federal and state governments. It has begun work on such questions as an examination of the national stake in the oceanic subject, the adequacy of current scientific action, the formation of a long-term national scientific program, and the formation of a plan of government organization. Senators Pell and Goodwin's "Challenge of the Seven Seas" states that 32 federal agencies are involved in the ocean problem, 24 of which have legislative authority and receive appropriations.

The Moss bill provides for the transfer only of the National Oceanographic Data Center of the Navy and of the functions of the National Science Foundation under Title II of the Marine Resources and Engineering Development Act of 1966 relating to sea grant programs to the Department of Natural Resources.

Gradations in Tree Crops

A principle that came into the picture during the controversy in the FDR Administration over the proposal to transfer the Forest Service to Interior was that fundamental relations should guide the grouping of activities in Departments. The following discussion deals with the fundamental relations between the activities of the Forest Service and those of other parts of the Department of Agriculture, with some related questions.

The natural resources for which the Department of Agriculture now has a very large responsibility fall into the renewable resource class. They include the soils upon which all agricultural and forest crops de-
pend, plant and animal foods, pasture and range products, cotton and other natural fibers, fruit and nut orchards, maple syrup, naval stores, lumber, pulpwood, and other wood products. Not to be overlooked is an important supply of water from crop, forest and range lands which is becoming a crucial supply question.

Lands used for crops are those with the richest soils having favorable conditions for cultivation. Commercial forests occupy poorer soils. Rainfall limitations are partly responsible for the non-commercial forest lands which supply limited amounts of wood and are partly used for livestock grazing. Range lands, unless changed by irrigation, are used for livestock grazing, an agricultural activity. Significant shifts between forest and croplands have taken place in the past and may also in the future.

When the supplies of the essential non-renewable natural resources are no longer available, some of the renewable products such as wood may serve an even greater demand than at present. Various aspects of the question such as potential oceanic and even land supplies are unpredictable.

Land with its topsoil is one of our most important renewable natural resources. Some 90 percent of the land in the United States is crop, pasture, range, and forest land. Seventy percent of the 90 percent is in private ownership. Present responsibilities of the Department of Agriculture cover 90 percent of the farm land, 25 percent of the pastures and ranges, and practically all of the croplands in the 48 continental states. The largest area of public range lands is in the Bureau of Land Management of the Department of the Interior. The National Forests contain the largest area of public forests which are intermingled with range lands.

One of the striking aspects of the proposed transfer of the Forest Service from Agriculture, since it includes the responsibility for private lands, is the extent of the commercial forest lands in farms. The farms of the continental United States include 151 million acres of commercial forest land. This is nearly six times the 26 million acres owned by lumber companies, more than four times the 35 million acres owned by pulp and paper companies, and more than 25 times the 5.5 million acres owned by other forest industries. All other private ownerships, a widely diversified group, total 149.3 million acres. More or less of this group is mingled with farms. This seems to mean that about the only way to avoid complications in organization is to leave the federal responsibility for the National Forests and for all classes of private forest ownership where it is right now.

The Western Lumber Manufacturers Association and the American Forest Products Institute are founders of an organization of private owners of forest lands who agreed to put and to keep their lands under forest management. Their lands would, incidentally, make additional contributions to soil, water, and wildlife conservation. This organization recently celebrated its 25th birthday.

The first entry of 120,000 acres was made by the Weyerhaeuser Company in Grays Harbor County, Washington. On July 1, 1968, 32,632 private forest landowners of all classes had certified 72,620,851 acres in 48 states. What the founders of the organization thought of the fundamental relationship of their certified entries was shown in calling their organization the American Tree Farm System.

Forest trees and fruits and nuts, maple syrup and naval stores trees, and human and domestic animal food plants—depend upon the same fundamental processes of plant life. Both require a personal familiarity with related sciences. For purposes of practical application, both have to take into account such factors as soils, climate, topography, and plant species. Both require much of the same kinds of research. For forestry this includes: the characteristics of forest lands and forest types and their soil, moisture, topographical and environmental requirements, soil erosion, streamflow and water relations, nursery practices, genetics to improve properties, yields, etc., protection against insects and diseases and fire, range research on the National Forests, the most effective methods of management, the properties and the method of handling of wood products and a search for new uses, a nationwide forest survey and various economic questions to furnish a basis for national policy.

Some advocates of the transfer of the Forest Service have refused to recognize timber as a crop. Actually there are a series of gradations between the farm products which are commonly regarded as crops and the lumber, pulpwood, and related wood products of forest management. Examples of tree crops are the fruit orchards, nuts for food from trees, maple syrup from trees, and naval stores (the latter has been recognized by federal law as an agricultural product).

Where the Contacts Are

One justification of the transfer of the Forest Service to the renamed Department of the Interior cites contacts with Interior organizations, presumably to indicate close relationship with them. References to contact with users of the National Forests and to different classes of private owners through State organizations, either directly or indirectly, are not mentioned.

More than 19,000 farmers and stockmen graze livestock on the National Forests under permits and require varying contacts from the administration with practically all of them. This is contact with Agriculture. A large number of small and large purchasers are now cutting some 12.1 billion feet B.M. of timber on the National Forests and varying amounts of contact are required with all of them. A considerable number of special use permits are granted to a diversified group of people and organizations and these call for some contacts. The number of National Forest recreation visitors has passed 100 million annually and the volume of contacts with them far exceeds those with Interior. Close cooperation in forest fire, insect and disease protection is required with private owners of forest lands in or adjacent to the National Forests.

Federal appropriations for the fiscal year 1968 of $20,851,000 to supplement state appropriations are administered by the Forest Service. The largest item of $14,344,000 is for forest fire control. The remainder is for tree planting, forest management and processing and general forestry assistance. This involves close contact with the forest organizations of 39 states. Almost inevitably it results in additional contacts with people who are interested in the rank and file forest landowners who participate in and work with the program.

Practically every phase of Forest Service research has initiated a wide range of contacts. This includes the
members of other research organizations, especially collegiate and departmental. Various phases of the nationwide forest survey call for cooperation with other public and private agencies. The results of all the research are available and lead to calls for information from owners of forest lands and others. Seekers of information from members of the forest industries and even from foreign countries visit the Forest Products Laboratory in large numbers. The Department has recently been given authority and appropriations for grants for forest research to the State Agricultural Experiment Stations.

The Forest Service has handled occasional projects which require direct contact with large numbers of farmers. During several years beginning in March, 1935, the Forest Service planted 217 million trees in 18,600 miles of shelterbelt on farms in the Dakotas, Nebraska, Kansas, Oklahoma, and northern Texas. More than 38,000 farmers participated. A 1944 survey indicated that 90 percent of the shelterbelts were in a satisfactory condition despite droughts during a part of the period.

The Forest Service salvaged more than 660 million board feet of sawlogs and 35,000 cords of pulpwood timber blown down by the 1938 New England hurricane. This was purchased from 13,000 forest landowners, many of whom were farmers. It helped to reduce a serious fire menace, rendered a great service to the forest landowners, and furnished badly needed timber products to help meet World War II needs.

The Forest Service was given charge of the production of rubber from guayule shrubs during World War II, and the Agricultural Research Organization that of guayule rubber. The Japanese entry into the war had severed the supply of rubber obtained from trees in the Far East. Some 30,000 acres of land leased from farmers and concentrated in California had been planted before the project was discontinued, and nearly three million pounds of guayule rubber had been milled out. The project illustrates the basic relationship between Far Eastern rubber trees, the guayule shrub of Mexico, the Goldenrod from the American continent, and the Russian dandelion, all of which are sources of rubber.

Other nations may or may not have faced the same organizational problem as the United States. But foreign nations with well developed agricultural and forestry organizations have with almost no exceptions included forestry in their agricultural establishments.

The Food and Agricultural Organization of the United Nations includes a Branch of Forestry and Forest Products. It keeps in touch with forestry activities over the entire world, studies world forestry problems, renders aid wherever it can, and is responsible for periodic world conferences in forestry.

Land and especially that in federal ownership in Interior's Bureau of Land Management seems to have been one reason for the proposed transfer of Agriculture's Forest Service which is responsible for the federal lands in the National Forests. The BLM's land had been available under existing laws for transfer to private ownership for many years. It is now being used largely for the grazing of livestock. These lands are located in regions containing large acres of privately owned ranges and are lands which are grazed by livestock and are obviously agricultural. Perhaps the Bureau of Land Management should be transferred to Agriculture? Such reasons as these as well as those in the preceding discussion of fundamental relationships support the idea that the use of land is a more appropriate basis, in some cases at least, for a determination of the Department in which it is included, than the ownership of the land.

Secretary Henry Wallace seems to have been amply justified during the Roosevelt Administration in using the argument of the fundamental relations between the work of the Forest Service and that of the rest of Agriculture in his protest against the transfer of the Forest Service to Interior.
Mr. Paul Roberts
Prescott, Ariz.

Dear Paul:

About the only reason that I can give for the long delay in answering the questions in your letter of March 13 is the procrastination that seems to be one of the products of the aging process.

The reorganization order which included all or a part of the Forest Service seems to have reached the President's desk the very last of the first week of February 1940 or the beginning of the second week. It seems to have been there on February 7 or 9. I am afraid that I can't claim a half hour knowledge of its arrival, and have never known where the order was prepared or whether it included all of the Forest Service or only the National Forests: rumors have it both ways, and incidentally the idea of a partial transfer kept reappearing then and later.

I doubt if anyone will ever know the full history of what happened. I have run through a rather voluminous file which includes statements of various people, organizations, etc. and no two of them are alike.

The background for the public and congressional opposition in February 1940 goes back to a much earlier time in the support which the Forest Service worked for and got in various battles including previous attempts for a transfer.

A more immediate development which was to prove very important occurred in connection with the passage of the reorganization act authorizing the President to make re-
organizations subject to the veto by both houses of Congress. The President wanted full and final authority but didn't get it. During the struggle he was forced to promise that he would not transfer the Forest Service. This seems to have been given in writing to Senator Pope and verbally or in writing to some half dozen other senators.

When the word got out about the proposed February 1940 order Congress is reported to have been flooded with protests from all over the country but mainly from the west and from all sorts of organizations etc. - entirely spontaneous of course. Gifford Pinchot was in Washington and was as active as only he could be.

Several kinds of action began in Congress.

An influential group of Senators which is reported to have included Byrnes, Bankhead, McNary, Schwellenbach, Harrison and Pittman got busy. Pittman incidentally had been an active and very effective supporter of the Forest Service for a long time: some periods of which had been very critical.

Senator Bankhead polled the members of the Joint Congressional Committee on Forestry which had been holding a series of hearings, all over the country, of which he was chairman and which included Senators Smith, Clark, Bulow, McNary and Doxey and Representatives Fulmer-Vice-chairman, Pierce, Reed and Englebright. The result was unanimous opposition to the transfer with the promise to work and vote against it. Congressman Fulmer is reported to have been especially violent in his opposition. Bankhead then tried and failed to get an appointment with the President but later telephoned him about the position of the Joint Committee.

Conferences among such Senators as those mentioned in a preceding paragraph led among other things to pres-
sure by Pittman on Byrnes who is said to have become more and more incensed over the breaking of the President's promise that he would not transfer the Forest Service. He may have arranged for a group to visit the White House - or the President may have requested it. Bankhead may have been one member of the group, and McNary who couldn't go asked that some such message as the following be given to the President: "He didn't care whether the order included the Forest Service or not; but if it does send it up. He had 62 votes in the Senate for its disapproval." My files do not show whether the message was delivered. The point that Byrnes emphasized in the conference was FDR's promise while the reorganization bill was under consideration that he would not transfer the Forest Service. Byrnes was the chairman of the Senate Reorganization Committee and put the bill through the Senate. He is said to have made the toughest statements ever made by a Senator to a President of the U.S. for breaking his promise. He said that he would lead the fight against any such order and that he did not believe that there would be more than 20 votes in support of such an order in either house of Congress. The order may also have gotten attention in the Senate Agricultural Committee.

Senator Norris wrote the White House in opposition at the time or possibly a little later when the transfer question came up again. Senator Pope tried and failed to see the President in opposition but later talked to him on the telephone.

I have less information about the House. The President is reported to have talked to Representative Warren, Chairman of the House Reorganization Committee, over the telephone, who said that he was opposed to the transfer. Representative Colmer said in a letter that all of us are against a transfer. Representative Martin, Minor-
ity Leader in the House is reported to have said that the Republicans in the House would vote as a block against the transfer. There is some indication that there was a poll of the House Members.

Such fragmentary and sometimes conflicting evidence as I have indicates a very large and perhaps overwhelming congressional opposition to the transfer. I wonder if this didn't fundamentally reflect a large vocal and aggressive public opinion as well as well as [sic] a congressional opinion which knew about and approved the work of the Forest Service and believed that the Service belonged and should remain in the Dept. of Agriculture. Furthermore, it was this opinion that was fundamentally responsible for forcing F.D.R. when the reorganization bill was under consideration to promise that he would not make the transfer.

The President as you know backed down. The charge of breaking his promise may have been one reason. Another undoubtedly was the certainty of a bitter fight in Congress with almost certain disapproval in the Senate and also but perhaps somewhat less certain veto in the House. It seems to me that he utterly failed to appreciate the public and Congressional understanding and approval of the work of the Forest Service and of their conviction that the Service belonged in the Dept. of Agriculture; that this was the fundamental basis for their willingness to go to bat against the transfer. For instance it is reported that assistant Secretary Johnson of the War Department spoke with the President somewhat later against the transfer. F.D.R. is said to have replied about as follows: "I can't see why
people are so bull-headed about transferring the Forest Service."

The "I want heads on a platter" incident occurred about the middle of the 1930's. I can't give you an exact date. Henry Wallace was still Sec. of Agriculture. He was succeeded by Claude Wickard in 1940, and Silcox died in the late [sic] 1939. It was after the Forest Service had moved from the old Atlantic building to the Department. Silcox and I talked about what the President wanted before he went with Wallace a day or two later to the White House. F.D.R. seems to have changed his mind, waved the matter aside and began to discuss a wholly unrelated question.

You ask for the name of the Secretary of the California Chamber of Commerce. This I can't remember but before his appointment he had been the Supervisor of one of the California National Forests. The Conservation Director of the Chamber was Charles G. Dunwoody who came to Washington frequently for several years and worked actively and very effectively for Forest Service measures and against the transfer. Unfortunately he has never been given the credit he richly deserves for the work that he did. I could tell you of a series of very interesting incidents which occurred during his work against the transfer. The poor chap has been suffering from a severe arthritis attack for the last 2 or 3 years.

The whole transfer business I am sorry to say left F.D.R. with a very bad opinion of the Forest Service. The heads on a platter statement followed a long attack on the Service at a Cabinet meeting. And at a press conference F.D.R. is reported to have
lambasted the Service as "the most obstreperous and disloyal organization in the entire Federal Services." The protracted struggle of which the February 1940 phase was just one part was in some ways a tragedy for the Forest Service and forest conservation. One of the possible results was to contribute to the prevention of any comprehensive legislative program during F.D.R.'s administration which I happen to know that he wanted. That he was genuinely interested in conservation there can be no question. Neither can there be any question about his going down through history as one of our great Presidents.

When you come to Washington I would be delighted to have you look over my rather voluminous files dealing with the transfer battle if you care to do so. They contain a reserve of many interesting incidents which I have not attempted to cover in this letter.

I am sorry to hear about the long delay in getting a publisher for your books. Here's hoping for favorable action in the near future. I am also sorry that Carhart missed you. I have told him about some of my material but so far haven't given him anything.

With all good wishes, most sincerely

Earle H. Clapp

P.S. You will notice that no mention is made in the preceding of Secy. of Interior Ickes despite a somewhat interesting file about his activities. This is because his major contribution to the defeat of the transfer may have been pressure on the President to break his promise.

E.
Earle Hart Clapp

Successful careers often seem to be launched by incidental occurrences that somehow provide just the proper measure of effervescence to set one on a heady course of not necessarily success but satisfaction in putting singular talents to work at the proper tasks. Late in life Earle Clapp was asked what made him decide to enter forestry. He did grow up on a farm; he did have a youthful interest in botany; maybe more to the point he was infused with the pioneer spirit that first brought his ancestors as settlers to the western New York farmland, near Rochester, where he grew up. The potential was there awaiting a christening. It happened in a dentist's chair. Young Clapp, undergoing the periodical painful rites most of us mortals are obliged to suffer at the hands of the medical profession's dental ally, was the proverbial captive audience. The dentist probed his young client's molars and career aspirations simultaneously. Dental work he was trained to handle but he also had a prescription for his patient who had not the "slightest idea" what he wanted to do, forestry. Clapp had never heard of forestry. The dentist began to describe the new science; the dye was cast.

Clapp entered the New York State College of Forestry at Cornell University soon afterwards. The school had been established in 1898 by Bernhard Fernow. It was the first college level school of forestry in the Western Hemisphere but was forced to close in 1903 due to altercations with wealthy neighboring land owners vehemently opposed to scientifically controlled clearcutting on the college's 30,000 acre experimental tract and by association, to the college of forestry itself. Besides the preliminary forestry courses, Clapp in his
two years at Cornell, became acquainted with fellow students such as Rapheal Aon, Clyde Leavitt and Ralph C. Bryant who were to loom large as pioneers in the evolving forestry field. After the school's closure, the small student body dispersed to newly created forestry schools at Yale, Harvard and the University of Michigan. Clapp attended the University of Michigan graduating with his forestry degree in 1905. He went directly from the University into the Forest Service, his berth for the next 40 years, until he retired from the Service in 1945.

His first 2 with the Agency were spent out West in Wyoming and Montana as a timber sales administrator, developing cutting plans, devising contracts, laying the ground-work for timber sales on National Forests. His first summer with the Forest Service was spent processing applications for lumber for railroad ties in the Medicine Bow country of Southern Wyoming. He spent time in Western Montana where untrammeled timber and mining interests still attempted to exercise their "rights" under the prevailing philosophy of laizzes-faire cutting on the public domain. Efforts to thwart these would be robbers of the public's lumber larder were often met with threats and even attempts on the lives of rangers charged with enforcing the permit and trespass regulations. It was really these 2 years of western Forest Service work that gave Clapp his first practical experience with applied American forestry. At Cornell and Michigan instruction was based on European experience and philosophy in forest management. The American forester, in that primordial time, had to get his experience in the field, on the job training as it were. Following his initial 2 years of field experience Clapp spent a year and a half in administrative work in Washington, DC; two and one-half years as Associate District Forester at Albuquerque, New
Mexico; and four years as Forest Inspector in Washington, DC. In April, 1915, when the Division of Research was established in the Forest Service, he became Assistant Chief of the Service in charge of forest research. For the next 20 years he was to play a leading role in shaping policies and developing plans for the varied research activities of the Service.

Research was in some respects the foster child of the Agency. In a 1936 memo sent to Directors at all research stations laboratories Clapp succinctly stated one cause for the neglected child status of research, saying in part, that in his judgement it had not "been conclusively shown that it is possible, in a bureau such as the Forest Service, primarily administrative in its functions, to develop and permanently maintain a strong, effective research organization". Tangential to maintaining the status quo of a research division within an administrative body was the need to justify to justify research on practicable and profitable grounds or stated differently to maintain a proper balance between fundamental research and applied research. Generally during times of prosperity fundamental research was encouraged during times of financial belt-tightening applied research was stressed resulting at times in dwindling funds for important research projects near completion. Another unfortunate aspect of the research program was the necessity of demonstrating an urgent need for any one specific project to justify funding. Too often the urgent need corresponded to what industry considered as most urgent. Despite these handicaps Clapp's direction was fundamental to the successful future of Forest Service research.

Perhaps his greatest contribution to Forest Service research was his work on a report commissioned in 1924 by the Washington, DC section of the Soc-
iety of American Foresters outlining the place of forest research in a national forestry program. The report entitled "A National Program of Forest Research" was completed by July 1926. This report created the impetus and indeed laid the framework for the 1928 McSweeney-McNary bill sometimes referred to as the Magna Carta of Forest Service research. The comprehensive program first reviewed the forestry problem as it had been analyzed by prominent foresters in the early 1920's (including Clapp). It proscribed expanded programs of research in all aspects of forestry: forest management, forest economics, forest influences, fire and disease protection and forest products. Its main tenets, incorporated into the McSweeney-McNary bill, recognized the important role of forest research in the national forestry program and set down a long-range program of expanded forest research in the Forest Service.

Clapp's visionary influence can be felt in many procedures taken for granted by present day foresters. Periodic comprehensive appraisals of the Nation's timber situation, as one example, had there start in the Capper Report prepared by the Forest Service in 1920. Despite its strong stance on the necessity of federal regulation of private industry, the Capper Report was conceded to be the most authoritative statement on the country's forest situation up to that time. Clapp was the driving force behind the report. The appraisals continued. The next major review was the watershed "A National Plan for American Forestry", popularly known as the "Copeland Report". The plan prepared by the Forest Service and issued in 1933 was in response to a Senate resolution calling for information on a combined federal-state program of forest utilization. The detailed survey, including a masterful 75 page introductory summary of the report's findings prepared by Clapp personally, was compiled largely under Clapp's direction. It contained
the most detailed statistics on all aspects of American forest conditions to date. The plan's proposals had their origin in one major premise: that the major problems of American forestry were centered in, or grew from, private ownership. It proposed an increase in public ownership of forests and more intensive management of all timberlands including public woodlands. A need for public regulation was suggested in the report but it was hoped that private industry given an opportunity would redeem itself. Finally the report recognized the unstable nature of American forest conditions, the constant influx of new data and emphasized the importance of periodic revisions of national plans perhaps as often as every decade.

Clapp was instrumental in the propagation of two more timber appraisals during his career with the Forest Service. In 1938 a Joint Congressional Committee on Forestry was directed by President Roosevelt to investigate a realm of forest problems. Regulatory controls to "protect private as well as the broad public interests in all forest lands" were to be specified. Clapp's testimony before the Committee in 1940 was in the form of a comprehensive program covering all conceivable aspects of the forest situation. The basic purpose of the program was to create and maintain a nationwide economy that, through productive use of forest land, and by helping solve problems such as rural poverty and unemployment, and by creating added security and stability for families, communities, industry and labor, would help protect our country from armed aggression and economic invasion. Once again the hallmark of his recommended program was regulation. Between 1945 and 1947 the Forest Service completed a post-war reappraisal of the forest situation. The reappraisal conducted largely in accordance with plans drawn up by Clapp before his retirement held forth some gloomy statistics.
It showed that the volume of sawtimber in the country's forests had declined some 43 percent in 36 years, that sawtimber was being drained from the forests one-and-a-half times as fast as it was being replaced by growth, and that there had been a marked deterioration in quality as well as quantity of timber. It showed that cutting practices on 64 percent of all private forest land was poor to destructive; 28 percent was fair; only 8 percent was good or better. Finally it recommended that sawtimber growing stock be doubled in volume to meet prospective future requirements.

Clapp's ability to appraise resource situations was not relagated to timber. "The Western Range-A Great But Neglected Natural Resource, the classic reference work on the range, was prepared under Clapp's direction. The comprehensive summary prefacing the work was done by Clapp personally. In it he depicted traditional attitudes toward range use in much the same light as early timber interests were portrayed i.e., ascribing to a philosophy of inexhaustibility and its corollary that no provision need be made for either wise use or perpetuation. Clapp's recommendations called, among other things, for intensive research measures in range management be undertaken for which little precedent existed, the rule-of-thumb principle having previously prevailed among the independent stockmen.

Clapp's foresight as a forestry theorist helped him to forecast many future forestry needs. His aggressive competence led him to promote many far-reaching and forward looking Forest Service activities. In 1928, in a speech before the Society of American Foresters, he cited the potential usefulness of a forest belt in the prairie states as a means to ameliorate "severe climatic conditions". He based his theory on Russian successes in forest belt
planting on dry windswept plains to increase precipitation. His predictions along with others involved in research, including Raphael Son and Carlos Bates, anticipated the popular Prairie States Shelterbelt Planting project, inaugurated in 1934, by several years. Long aware of the value of forests in stabilizing streamflow, and reducing flood and erosion damage, Clapp was instrumental in obtaining the Omnibus Flood Control Act of 1936. He played a large role in the congressional liaison work involved in passage of the Norris-Doxey Cooperative Farm Forestry Act of 1937.

Clapp, associate Chief of the Service since 1935, became Acting Chief during the last days of 1939 upon the death of former Chief Ferdinand Silcox. The Service along with the rest of the nation was mobilizing personnel and resources for the massive war effort. Clapp as Chief originated, approved or supervised many war connected Forest Service activities. Research facilities discontinued for the most part fundamental research concentrating on forest products research in support of the war program. Successful applied research was accomplished on such diverse schemes as developing a truck equipped with a wood-gas generator utilizing a process for the production of ethyl alcohol or high-protein livestock feed from wood waste and low-quality timber. Naval stores production were increased substantially utilizing a research developed application of a chemical to the resin bearing pines. Range research brought about increased livestock production, forest and stream flow research aided in the more efficient operation of reservoirs. Responsibility for emergency rubber production from native was assigned to the Forest Service. Ersatz rubber products were manufactured from the Guayule plant native to Mexico, Kok-saghyz (or Russian Dandelion), and from the domestic goldenrod. Economic data gathered by the
Forest Service relating to compilations of stumpage, log and lumber prices and of production and distribution of lumber and other forest products was drawn upon heavily by war-production agencies. A year round aircraft warning system using forest lookout stations was manned along both east and west coasts. Despite the full cooperation of the Service with the War Production Board, the Office of Public Administration and the military to stimulate timber production for wartime requirements, Clapp was concerned about the widespread use of destructive cutting methods unnecessarily undermining future forest productivity. The cuts were justified in some quarters as a means to meet war requirements. To stem the tide of destructive cutting and guarantee an adequate volume of timber needed for the war Clapp advocated Nation-wide regulation of cutting practices on private forest lands as necessary precaution. The recommendation was denied.

While engaged in the war effort the Forest Service had to fight a rear guard action with their perennial nemesis on the administrative front, Interior Secretary Harold Ickes. Icke's was bent on incorporating the Forest Service into Roosevelt's proposed Department of Conservation to be administered by Interior. The transfer was to be effected under the Roosevelt administration's broad reorganization bill. Congressional and public approval of Forest Service work and sympathy for its rightful position under Agriculture led to influential protests against the transfer. Clapp took a particularly active role in mustering Forest Service opposition to the transfer. His outspokenness on both the transfer matter and on the need for public regulation incurred the President's displeasure and perhaps cost him the actual title of Chief. Roosevelt was forced to back down on the measure at one point labeling the Agency as "the most obstreperous and disloyal organization in the entire Federal Services". The protracted struggle engendered nothing but hostility.
The passage of constructive, forward looking conservation legislation suffered as a result.

Mr. Clapp stepped down as Acting Chief in 1943 reassuming his former position as Associate Chief. He retired from the Service in 1945. In retirement, his experience and advice were sought on many national and international forestry matters. He was a corresponding member of Finland's Society of Forestry and as such had an international reputation. In 1960 he was awarded the Society of American Forester's Gifford Pinchot Medal, for outstanding service to forestry. Earle Clapp died in 1970 at the age of 92.
1. 1915-1944 CLAPP PERIOD including Marsh and Forsling
2. 1945-1950 KOTOK PERIOD
3. 1951-1968 HARPER (plus Jemison's)
4. 1969-1974 ARNOLD PERIOD

Though each period combined to more or less extent the policies of the previous period, each was different.

Clapp and Harper periods marked by policies aimed at independence of Research to serve scientific objectivity and the quality of research to serve long-run ends of forestry.

Kotok and Arnold era seems to be marked by emphasis on Forest Service togetherness and problem solving for Forest Service action programs.

Less Harper suggested that following might be considered:

1. Is Forest Service research objective - especially in sensitive areas where established Forest Service policy is involved?
   Ashley Schiff's book says it is not objective.
2. Is Forest Service Research competent - and where does it rank within the community of scholarly research?
   Has it retarded or helped university or industry research?
3. Has it solved action program problems - in short run only or with an eye also to the long run?
Successful careers often seem to be launched from incidental occurrences. This is just the proper measure of effervescence to set one on a heady course of not necessarily success but satisfaction in putting singular talents to work at the proper tasks. Late in life Earle Clapp was asked what made him decide to enter forestry. He admitted he did grow up on a farm; he did have a youthful interest in botany; maybe more to the point he was infusd with the pioneer spirit that first brought his ancestors as settlers to the Western New York farmland, near Rochester, where he grew up. The potential was there awaiting a christening. It happened in a dentist’s chair. Young Clapp, undergoing the periodic painful rites most of us mortals are obliged to suffer at the hands of the medical professions, the dental ally, was a captive audience to the proverbial captive audience. The dentist probed his young patient’s molars and career aspirations simultaneously. Dental work he was trained to handle but he also had a prescription for his patient who had not the slightest idea what he wanted to do: forestry. Clapp had never heard of forestry. The dentist began to talk about forestry, the dye was cast, about the new science; the dye was cast. 

Clapp entered the Cornell Forestry School soon afterwards, the class of 1905.

Clapp entered the New York State College of Forestry at Cornell University soon afterwards, the class of 1905. The school had been established in 1898, by Bernard Fernow, and was the first college level school of forestry in the Western Hemisphere but was forced to close in 1903 due to altercations with wealthy neighboring land owners vehemently opposed to scientifically controlled clearcutting on the college’s 30,000 acre experimental tract and, by association to the college itself. Besides the preliminary forestry courses, Clapp in his two years at Cornell, became acquainted with fellow students such as Raphael Zon, Clyde Leavitt and Ralph C. Bryant who were to loom large in the evolving forestry field. After the school’s closure, the small student body dispersed to newly created forestry schools at Yale, Harvard and the University of Michigan. Clapp attended the University of Michigan graduating with his forestry degree in 1905. He went directly from the University into the Forest Service, his berth until the next 40 years, until he retired from the Service in 1945.

His first 2 years with the Agency were spent out West in Wyoming and Montana on timber sales, developing cutting plans, devising contracts, timber sales administration. His first summer with the Forest Service was spent processing an application for timber for railroad ties in the Medicine Bow country of Southern Wyoming. He spent time in Western Montana where untrammeled timber and mining interests still attempted to exercise their “rights” under the prevailing philosophy of laissez-faire cutting on the public domain. Efforts to thwart these would be efforts of the public’s lumber larder were often met with threats and even attempts on the lives of rangers charged with enforcing the permit and trespass regulations. It was really during these 2 years of western Forest Service work that gave Clapp his first practical experience with applied American Forestry. At Cornell and Michigan his textbooks were based on European experience and philosophy in forest management. The American Forester had to get his experience in the field, on the job training as it were.
Following his initial 2 years of field experience Clapp spent a year and a half in administrative work in Washington; two and one-half years as Associate District Forester at Albuquerque, New Mexico; and four years as Forest Inspector at Washington. In April, 1915, when the Division of Research was established in the Forest Service, he became Assistant Chief of the Service in charge of forest research. For the next 20 years he was to play a leading role in shaping policies and developing plans for the varied research activities of the Service.

Research was in some respects the foster child of the Agency. In a 1936 memo sent to Directors at all research stations and laboratories Clapp succinctly stated one cause for the neglected child status of research, saying in part that in his judgement it had not been conclusively shown that it is possible, in a bureau such as the Forest Service, primarily administrative in its functions, to develop and permanently maintain a strong, effective research organization. Tangential to maintaining the status quo of a research division within an administrative body was the need to justify research on practicable and profitable grounds or stated differently to maintain a proper balance between fundamental research and applied research. During times of prosperity fundamental research was encouraged during times of financial belt-tightening applied research was stressed resulting at times in dwindling funds for important research projects near completion. Another unfortunate aspect of the research program was the necessity of demonstrating an urgent need for any one specific project to justify funding. Too often the urgent need corresponded to what industry considered as most urgent. Despite these handicaps Clapp was successful with research was fundamental to the successful future of Forest Service.
Perhaps his greatest contribution to Forest Service research was his work on a report commissioned in 1924 by the Washington section of the Society of American Foresters outlining the place of forest research in a national forestry program. The report entitled *A National Program of Forest Research* was completed by July 1926. This report created the impetus and indeed laid the framework for the 1928 McSweeney-McNary bill, labeled the Magna Carta of Forest Research by Chief Clapp in 1970.

The comprehensive report first reviewed the forestry problem as it had been analyzed by prominent foresters in the early 1920's (including Clapp). It proscribed expanded programs of research in all aspects of forestry: forest management, forest economics, forest influences, fire and disease protection, and forest products. Its main tenets, incorporated into the McSweeney-McNary bill, recognized the important role of forest research in the national forestry program and set down a long-range program of expanded forest research in the *United States* Forest Service.

Clapp's visionary influence can be felt in many of the procedures taken for granted by present day foresters. Periodic appraisals of the Nation's timber supply, a fact since authorized by a clause in the McSweeney-McNary Law, had their start in the Capper Report prepared by the Forest Service in 1920. Clapp Report played a major role in preparing the Capper and in the preparation of every subsequent forest resource survey until his retirement in 1933. Despite its strong stance on the necessity of federal regulation of private industry, the Capper Report was conceded to contain the most complete description of the country's forest situation up to that time. Clapp was the (author) driving force behind the report.
The Plan's proposals deal
with one major
principle: that of the
central role of American
forestry in the
management of
wants from
private
ownership.

A need for
private
regulation
was suggested in
the
report, but it was hoped
that private industry
given an opportunity
could be redeemed.
The appraisals continued. The next major review was the watershed "A National Plan for American Forestry", popularly known as the "Copeland Report". The plan prepared by the Forest Service and issued in 1933 was in response to a Senate resolution calling for information on a combined federal-state program of forest utilization. The report, including a masterful 75-page introductory summary of the report's findings was compiled largely under Clapp's direction. It was conceded to contain the most detailed statistics on all aspects of American forest conditions. It proposed an increase in public ownership of forests and more intensive management of all timberland including public woodlands. Public regulation was suggested in the report but not as a Forest Service (Dept. of AC)'s recommendation. Finally, the report recognized the unstable nature of American forest conditions and the constant influx of new data emphasized the importance of periodic revisions and revisions of national plans perhaps as often as every decade.

Clapp was instrumental in the propagation of two more timbers during his career with the Forest Service. In 1938 a Joint Congressional Committee was directed by President Roosevelt to investigate a realm of forestry problems. Regulatory controls to "protect private as well as the broad public interests in all forest lands" were to be specified. Clapp's testimony before the Joint Congressional Committee in 1940, Clapp's contribution to the committee's testimony before the Committee in 1940 was in the form of a comprehensive program covering all conceivable aspects of the forest situation. Once again the hallmark of his program was regulation. Between 1945 and 1947 the Forest Service completed a post-war reappraisal of the forest situation. The reappraisal conducted largely in accordance with plans drawn up by Clapp before his retirement held forth some gloomy statistics. It showed that the volume of sawtimber in the country's forests had declined some 43 percent in 36 years,
as fast as it was being replaced by growth, and that there had been a marked
deterioration in quality as well as quantity of timber. It showed that cut-
ting practice on 64 percent of all private forest land was poor to destructiv-
28 percent was fair; only 8 percent was good or better. The appraisals
recommended that sawtimber growing stock be built up to double the present
volume to meet prospective future requirements.

Clapp's ability to appraise resource situations was not relagated to timber.
The Western Range-A Great But Neglected Natural Resource, the classic
reference work on the range, was prepared under Clapp's direction. The
comprehensive summary prefacing the work was done by Clapp personally.
Clapp depicted traditional attitude toward range use in much the same
light as early timber interests were portrayed i.e., ascribing to a
philosophy of inexhaustibility and its corollary that no provision need be made
for either wise use or perpetuation. Clapp's recommendation's called, in
among other things, for intensive research to range range range management
measures to be undertaken for which little precedent existed. He also called for

Clapp's influence was felt on many major activities during of the Forest Service during the depression era including the Shelterbelt Program, the Civilian Conservation Corp, the Flood Control Act of 1936, and the Norris-Doxey Cooperative Farm Forestry Act of 1937.

Clapp's foresight as a forestry theorist helped him to forecast anticipate future forestry needs and Forest Service activities. In 1928, in a speech before the Society of American Foresters, he anticipated the potential usefulness of a forest belt in the prairie states as a means to ameliorate "severe climatic conditions. He based his theory on Russian successes in increasing precipitation on dry windswept plains.
on Russian successes in forest belt planting on dry windswept plains to increase precipitation, the popular shelterbelt planting program was not launched until 1934. His predictions along with others involved in the research including Rapheal Zon and Carlos Bates anticipated the popular Prairie States Shelterbelt Planting Program inaugurated in 1934, stabilizing by some years. Long aware of the value of forests in controlling streamflow, and reducing flood and erosion damage, Clapp was instrumental in obtaining the Omnibus Soil Control Act of 1936. He had a hand in the congressional liaison work involved in passage of the Norris-Doxey Cooperative Farm Forestry Act of 1937.

Clapp, associate Chief of the Service since 1935, became Acting Chief in 1939 upon the death of former chief Ferdinand Silcox. The Service along with the rest of the nation was mobilizing personnel and resources for the massive war effort. Clapp as Chief originated, approved or supervised responsibility.

Emergency rubber production from native sources was assigned to the Forest Service. Erzatz rubber products were manufactured from the Guayule plant native to Mexico, Kok-saghyz (or Russian Dandelion), and from the domestic goldenrod. Economic data gathered by the Forest Service relating to compilations of stumpage, log, and lumber prices and of production and distribution of lumber and other forest products was drawn upon heavily by war-production agencies. Despite the full cooperation of the Service with the War Production Board, the Office of Public Administration and the military to stimulate timber production for the wartime requirements, Clapp was concerned...
about the widespread use of destructive cutting methods unnecessarily undermining future forest productivity in the same meeting war requirements. To stem the tide of destructive cutting and guarantee an adequate volume of timber needed for the war Clapp advocated nation-wide regulation of cutting practices on private forest lands as a necessary precaution. The recommendation was denied.

While engaged in the war effort the Forest Service had to fight a rear guard action with their perennial nemesis on the administrative front, Interior Secretary Harold Ickes's was bent on incorporating the Forest Service into the Roosevelt's proposed Department of Conservation to be administered by the Interior. The transfer was to be effected under the Roosevelt administrations broad reorganization bill. Congressional and public approval of Forest Service work and sympathy for its rightful position under Agriculture led to influential protests against the transfer. Clapp took a particularly active role in mustering Forest Service opposition to the transfer incurring the President's displeasure and perhaps costing him the actual title of Chief. Roosevelt was forced to back down on the measure at one point labeling the Agency as "the most obstreperous and disloyal organization in the entire Federal Services." The protracted struggle engendered nothing but hostility. One possible result from negative result was the prevention of The passage of constructive, forward looking conservation legislation suffered as a result.

/Acting
Mr. Clapp stepped down as Chief in 1943 reassuming his former position as Associate Chief. He retired from the Service in 1945. Clapp's retirement years were spent on international correspondence. He was a corresponding member of Finland's Society of Forestry and as such had an international reputation. His advice was sought on many national forestry matters. The 14 November 1970 at the age of 92.
CHIEF FORESTER

HAS the position of Chief Forester of the United States Forest Service fallen to the low estate of a political job? There is a growing opinion that it has. How else, it is being asserted, can the failure to appoint a successor to former Chief Forester F. A. Silcox be explained? *

Mr. Silcox died nine months ago and for nine months the position of head of the most important government agency in the field of conservation has remained vacant. When the vacancy first occurred it was expected Mr. Silcox's successor would be named promptly as he has always been done and as efficiency and continuity of administrative leadership demanded. But after weeks and then months went by with no action taken, speculation and conjecture became rife as to why the delay.

According to one report, the President had taken the appointment out of the hands of Secretary Wallace and was withholding action in the expectation of effecting the transfer of the Forest Service to the Department of the Interior at which time he would appoint a Chief Forester of Secretary Ickes' selection. This report lost substance, however, when the Forest Service transfer failed to materialize and still no action to fill the position was taken. Other reports similarly have been nullified out by the lapse of time and action. No explanation for the prolonged delay has come from either the Agricultural Department or the White House. Today the situation remains a greater enigma than ever.

Against this background of inaction and unfulfilled dreams, it is natural that political implications should now be read into the situation and that opinion should be sharpened by reports that the place was offered to Paul Appleby, who was Mr. Wallace's first forester secretary; that it was offered to and rejected by Rexford Tugwell, former member of the President's brain trust; and that other men untrained in forestry but of political moment are under consideration.

These reports may be wholly unfounded. If, however, later events prove the political theory correctly based, the Forest Service faces a new and serious threat—that of losing its traditional leadership by a qualified trained forester free of political entanglement. Such a loss would play havoc with its spirit de corps and would weaken immeasurably its strength and unity as a technical and career service.

Furthermore, politicizing the position is of concern and moment to the general public which the Forest Service now serves in virtually every section of the country. It goes without saying that the people of the United States do not want and will resent policies dictating the appointment of their Chief Forester. The fact that this fear is growing and that the incalculable delay in filling the position with a man of recognized forestry leadership is causing increasing uncertainty, disorganization and inefficiency in the Service calls, we believe, for action—or at least explanation for the delay—by the newly appointed Secretary of Agriculture or by the President.

A COMMON BOND

AMONG the hundreds of thousands of men, women and children enlisted today in the great conservation movement, the great sport of archery, and the service of foresters, is a bond of friendly feeling. This bond was developed in the days when every wood held secrets of beauty, strength, resistance, endurance and even romance. Both archer and forester speak the same language and have the same thrill when they find the woods that provide shotgun qualities. And having found them, both want to see them propagated and maintained in plenty.

But between the two groups, Mr. Andrews clearly feels, there is a gulf. Largely by experience and the fame of renowned bowmen, archers have learned what kinds of woods are suitable for their bows and arrows. Their best bow woods have become scarce and exceedingly high priced. Toxylon—the lowly, oft departed orange, discovered as a bow wood by the Indian long ago—is one of them. What bow or arrow virtues may be hidden in many of our other trees, archers do not know and foresters, it would seem, have never been interested enough to find out or to promote the scientific growing of trees such as Toxylon known to possess bow wood qualities. Here, indeed, may be a profitable venture for many a small woodland owner.

Certainly, says Mr. Andrews in effect, we archers need the foresters. If we can't have their warm, active friendship and sympathy, then let us have their abstract cold-blooded help.

By all means let it be the former. Foresters thereby will render a needed service to the archers and the sport that has come to us out of the dim past and they will at the same time win warm friends by the hundreds of thousands.
Earle H. Clapp, Acting Chief of the Forest Service, U. S. Department of Agriculture, was born at North Rush, New York, October 15, 1877. He attended Cornell for two years, graduating from the University of Michigan in 1905 with an A.B. degree in Forestry and allied branches. He received an honorary Doctor's degree in 1928 from the University of Michigan.

Dr. Clapp has been with the U. S. Forest Service continuously since 1905. He worked for two years in connection with timber sale administration work in Wyoming and Montana; one and one-half years in administrative work in Washington; two and one-half years as Associate District Forester at Albuquerque, New Mexico; and four years as Forest Inspector at Washington. In April, 1915, when the Division of Research was established in the Forest Service, he became Assistant Chief of the Service in charge of forest research. He has participated in shaping policies and development of plans for the varied research activities of the Service, and for twenty years exercised general supervision over all Forest Service research, including the work of twelve Forest Experiment Stations throughout the country and the Forest Products Laboratory at Madison, Wisconsin.

In 1935 he was named Associate Chief of the Service, and in 1939 on the death of the late Chief Forester, F. A. Silcox, became Acting Chief of the Forest Service.

Dr. Clapp is the author of many technical articles and studies which have been published as Department of Agriculture bulletins, in the Department of Agriculture Yearbook, in such magazines as the "Journal of Forestry," "Cornell Forester," "American Foresters," "Chemical and Metallurgical Engineering," "Timborman," "Canadian Forestry," and "Lumber."


He is Forest Service representative of the Agricultural War Board, appointed by Secretary of Agriculture Wickard in December, 1941.

Dr. Clapp is a fellow of the Society of American Foresters; corresponding member of the Society of Forestry in Finland; and a member of the Cosmos Club of Washington, D. C.; and of the University of Michigan Union, Ann Arbor, Michigan.

# # # # #

July 1970
In order to get a true picture of the joys of retirement, about twenty mem-
ers of the W. O. called on Earle Clapp at his home the afternoon of Sunday,
March 11. His smile was calm and untroubled, his figure more sylphlike than
it has been for some time, and his only adverse comment was the fact that
he is now subject almost wholly to feminine domination since he is the only
male in a family at present consisting of his wife, his daughter, his daughter-
in-law, and his granddaughter. However, his whole appearance indicated that
the control was most benign and beneficial. He stressed the fact that were he
to have his life to live over he would choose no career other than forestry
nor any organization other than the Forest Service. Also, that while he re-
gretted the conditions which impelled him to certain actions he had no regret
for the actions themselves.

In evidence of the esteem of the Forest Service Mr. Clapp was presented with
a highly artistic scroll, which succinctly outlined his official career and
accomplishments, a bound book of letters from his old associates, and a future
junket for himself and Mrs. Clapp to some interesting National Forest, this
latter assuming the form of a couple of bonds which are to be transmuted into
such junket when travel-conditions become more normal.

A Message from the Clapps

Since the recent visit to the Clapps by members of the Washington Office
(see Digest of March 14) the following letter has been received, which we
believe should reach their many friends throughout the Service:

Dear Forest Service Friends:

Helen and I have the deepest appreciation of the recent visit which
some of you made, and of all that you left with us.

The time away from the job has already been long enough so that I can
appreciate some of the pleasant aspects of retirement, and can also
realize some of the difficulties of adjustment. In a small and per-
sonal way it puts one in much the same state of mind that seems to be
troubling the recently liberated countries of Europe.

Your overgenerous letters, which both of us will always treasure,
soften the sting of having to leave unfinished jobs, but what I fear
you have done is to credit me with what I would have liked to do
rather than with what I actually did, and to leave unsaid the things
that would have given a really balanced picture. Furthermore, unfail-
ing help and understanding and encouragement at home have been no
small part in what I actually may have done.

The work on the scroll is exquisite. As for the rest, we are looking
forward to the time when we can take advantage of the suggestions for
enjoying them.

Life with the Forest Service has been one of high adventure. If there
were the opportunity to live it over again I should want to be a for-
ester, and if it were permitted in the light of all that has happened
I should ask for nothing better than to spend it with the Forest Ser-
vice. No organization can boast a finer group of men and women.

Thanks again and the best of wishes to everyone from both of us.

Most sincerely,

EARLE H. CLAPP
MANAGEMENT AND USE OF FOREST AND RANGE LANDS

By Earle H. Clapp, Associate Chief, Forest Service
U. S. Department of Agriculture

(Presented at the Up-Stream Engineering Conference, Washington, D. C., September 22, 1936)

What can forest and range management contribute to the control and use of soil and water? Or, in the terminology of this conference, what can they contribute to upstream engineering broadly defined to include the conservation of land and inland water resources and their products.

In attempting to answer these questions for forest and range lands, it is fully recognized that other lands, and primarily those cultivated for crops, have an important place. But as a background, let me indicate the area in the forest and range category, with which this discussion deals. It falls but little short of two-thirds of our total land area of somewhat less than two billion acres.

It is generally conceded that regulation of run-off, whether by natural or artificial storage, constitutes one of the fundamental aspects of control and use of water. It is commonly recognized, also, that the most favorable streamflow is obtained when the earth mantle of the drainage basin has a high capacity to absorb precipitation.

Research is more and more conclusively establishing the fact that the capacity of this earth mantle to absorb water varies with the condition of the vegetation upon it, and that excessive run-off from the surface and accelerated erosion ordinarily follow overuse or destruction of the plant cover. Maximum yields of timber and forage and optimum conditions for wildlife and recreation depend absolutely on the maintenance of an adequate plant cover. Thus it is that in the restoration and maintenance of optimum conditions for organic resources, the forester and range manager are also creating conditions favorable for regulated run-off and for water control and use.

It is not claimed that plant cover alone will control run-off adequately in all cases. The Mississippi River was in major flood stage when first seen by white men in 1541, long before there had been any cutting of timber or cultivation of land. We have proof, however, that floods have greatly increased in number and intensity since those early days. We have proof that natural factors favorable to absorption have been greatly reduced in many drainage basins of the United States as our natural resources have been exploited. We have an accumulation of evidence showing why and with what degree of intimacy the increase in floods and erosion and the increased depletion of forest and range cover are related.
There is a growing accumulation of factual data to show that good forest and range management will largely decrease the menace of floods and the costly waste of soil erosion.

Our research is showing that forest and range management reduce excessive erosion and run-off from the surface mainly because it maintains the interacting physical and biological conditions that help to get water into the ground. This process is influenced by (1) a porous soil, that permits percolation to the water table; (2) a supply of humus that prevents the clogging of soil passageways by fine particles of clay and silt, and that also absorbs some of the water; (3) a litter cover that protects the soil from the mechanical action of rain and flowing water; and (4) the plant cover, that produces the litter, binds the soil with its roots, provides channels for water to pass through the surface soil, spreads and delays surface run-off, and intercepts and lessens the destructive impact of rainfall. With the wild life supported by the vegetation, which may influence run-off and erosion one way or the other, I will not attempt to deal.

Deplete or destroy this plant mantle by overuse, and litter and humus are not renewed; the impact of rain and the rush of water from melting snow are unopposed; roots no longer hold the soil; unobstructed run-off sweeps away the accumulated litter, humus, and topsoil; silt is impacted in the soil pores, practically halting infiltration; water rushes down the slope directly into the streams; absorption, infiltration, and percolation to underground storage are largely nonporative.

The function and importance of litter in maintaining absorptive conditions in the soil is shown by laboratory tests in which 2 percent of silt in water reduced percolation into an unprotected soil by 90 percent. Field tests show that rainfall filtered through litter and humus causes no such stoppage; in one series of such tests run-off from soil surfaces so protected was, at worst, 50 percent and, at best, 6 percent of that on bare soils. Even on compact soil with a 10 percent gradient, forest litter cut run-off to one-half and reduced soil loss to little more than 1 percent of that on bare soil.

The plant litter and roots not only protect the porosity of the soil; they are responsible for much of it. They supply the food and shelter for a tooming soil life which helps to incorporate organic matter into the soil and so to insulate the soil particles from each other and accentuate natural soil cleavages and interstices through which water may pass. In this way a soil well-clothed with a vigorous grass, shrub, or tree cover becomes porous and absorptive. To maintain or to restore these conditions is a crucial objective of both forest and range management.

Investigations are also showing that plant growth shelters the soil and reduces evaporation. It holds the loose litter and humus from washing under torrential rains or sudden snowmelt. It slows up the rush of waters that the soil cannot absorb, and so prevents the formation of gullies which otherwise would gather and quickly discharge water from the
slopes. With an adequate forest cover, snow will remain on the ground from a few days to several weeks longer than in the open. In upper New York in March 1936, when heavy rainfall, deep snow, and warm winds combined to produce many floods and all snow was gone on the open fields, there was still 12 inches of snow in adjacent beech-maple forests.

The contrast between what occurs when cover is reduced or stripped off and the results when vegetative cover is protected or restored through management is strikingly brought out in many tests of surface run-off and erosion in outdoor forest and range laboratories. Let me give examples of the effects of cultivation of watersheds of forests; of fires; and of unregulated timber cutting and grazing.

The severe Yazoo River flood in Mississippi in 1931-32 followed 27 inches of rainfall on the watershed, an appreciable part of which had been cleared. Sample plots showed that 62 percent of the rain run off immediately from cultivated fields and 54 percent from abandoned fields, but in scrub oak forests only 2 percent run off, and under an undisturbed oak forest only 0.5 percent. In Wisconsin an average of 3 percent of the total summer rainfall run off beneath hardwood forests of varying density, and about 7 percent from wild pastures; whereas from cultivated hay fields the run-off was nearly 18 percent, and from fallow land 25 percent.

Protection against fire is a practically universal requisite in forest management. Fire - even a light fire - reduces the ground litter and plant understorey and may materially accelerate erosion and surface run-off. A hot fire often destroys the entire plant cover, and consumes the litter as well as a large part of the soil humus. Serious acceleration of washing, gullying, and silting ordinarily follows.

Forest fires in an old-growth pine-hardwood forest in the southern Appalachians increased surface run-off on an average by 10 times over that of unburned forests of the same type, and as much as 32 times in individual storms.

In the Sierra pine region a 5-year record shows that surface run-off from repeatedly burned plots was from 31 to 463 times that from comparable unburned plots. The yearly erosion from the burned plots was 22 to 239 times that from the unburned.

During prolonged rains at Guthrie, Oklahoma, in 1930 the run-off from burned-over ground was nearly 28 thousand gallons of silt-laden water per acre, in contrast to a loss of 250 gallons per acre of clear water from the same soil and slope under unburned forest.

The form and extent of timber cutting also materially influences surface run-off and erosion. During March 1936, when some of the Tennessee tributaries reached flood stage, the maximum rate of discharge from a small drainage covered with hardwood forest was 18 cubic feet per second per square mile. From an adjoining clear cut drainage the maximum discharge was

- 3 -
at the rate of 232 cubic feet, despite the fact that the basin had been partially reclothed with herbaceous cover.

One of the most common forms of poor range management is the attempt to graze more livestock than the range can carry. That range depletion inevitably follows has been conclusively shown. Tests on Boise River watershed ranges in different stages of depletion and supporting different kinds of vegetation showed that typical bunchgrass virgin ranges, subjected to artificial rainfall, yielded only 0.4 percent surface run-off and but 6 pounds of soil per acre. Similar tests on overgrazed and depleted ranges averaged 45.4 percent run-off and 7,362 pounds of soil per acre. On the most severely depleted ranges, run-off from the equivalent of 1.80 inches of rainfall, applied at the rate of 1 inch in 16.6 minutes, amounted to 60.8 percent; and soil was removed at the rate of 15,280 pounds per acre, or 2,500 times more rapidly than from the well managed undepleted range.

This Idaho study substantiates the results of earlier research on range lands of the Wasatch Plateau where, during the period 1915 to 1929, restoration of the density of the range cover to 40 percent from 16, by regulated grazing, resulted in a 64-percent decrease in surface run-off from torrential storms and a 54-percent reduction in soil loss. During the past two years treatment of the plots has been reversed, and already the run-off and erosion figures are verifying the effectiveness of increased plant density.

Small scale results are substantiated by tests on drainages of several thousand acres.

The normal run-off from two forest and chaparral-covered watersheds in southern California was measured for seven years. One of the areas then burned over. In the next year, while the unburned area reacted normally, run-off increased 221 percent from the burned watershed and the maximum daily discharge increased 1,700 percent.

The disastrous flood of January 1, 1934, in Los Angeles County, California, corroborated the research findings on numerous experimental plots. About 12 inches of rain fell during 2-1/2 days. From one drainage of 4,000 acres, nearly all of which burned a few weeks earlier, came a flood which destroyed 34 lives and caused damage estimated at $5,000,000. The maximum flood discharge from the burned basin reached 1,100 second-feet per square mile, and altogether about 67,000 cubic yards of eroded debris, per square mile of watershed, were carried to the valley. From a nearby unburned canyon, with the same precipitation, the peak flow was at the rate of only 50 second-feet of water and the debris discharge was at the rate of 56 cubic yards per square mile of watershed. The run-off ratio was, therefore, about 22 to 1 and the debris ratio more than 1,100 to 1.

Results on large areas of poorly managed range lands parallel those from forest lands.

In northern Utah, beginning in 1923 and continuing to 1936, the steep Wasatch canyons have flooded with increasing frequency and severity.
A single canyon flooded four times in the summer of 1930, destroyed several homes, piled boulders weighing up to 200 tons on orchards and truck gardens, and caused several hundred thousand dollars damage to valley lands and improvements. Intensive examinations proved conclusively that the floods originated on unbelievably small upstream areas denuded by overgrazing. The valley sediments gave unmistakable geological evidence that no floods comparable to those in 1930 had occurred in the 20,000 years since ancient Lake Bonneville receded from the valley floor. The volume of debris from these recent floods exceeded all that produced during 20 centuries of normal erosion and deposition.

During the past few decades floods of this nature have occurred in such numbers throughout the West, in the torrential rainy season, that the local western newspapers have carried almost daily accounts of loss of life and property damage from walls of water and mudflows originating on depleted range lands. Between Salt Lake City and Ogden, for example, 15 canyons on the Wasatch front have flooded seriously in the last 15 years.

The primary justification for research is human betterment. How then shall we best apply on forest and range lands for the highest human good such findings as those indicated, and they are merely random selections from the rapidly growing number already available - together with other observational findings and the results of many years experience in actual forest and range management.

The application of such findings and experience in forest and range management has two great advantages. The first is the opportunity to attack the erosion and flood control problem at its source, to prevent enormously destructive forces from starting rather than to attempt to control them after they have been unleashed.

The second advantage is that the vegetative cover, whether range or forest, is the only natural factor that man can materially modify. Such other factors as climate, geological formation and topography must be taken as they are.

One important phase of our application should be, through land planning, to draw the best possible lines between lands which should be retained in forest and range and those which should remain in cultivation, and as far as possible to correct mistakes and rectify maladjustments of past trial and error, and to prevent repetition of mistakes and maladjustments.

Further destruction of forest and range watersheds could be stopped and in most cases satisfactory watershed conditions restored and maintained by fire protection and non-use. This, however, would needlessly deny all other uses for one. Watershed use is rightly multiple. It should yield usable supplies of water for industrial and domestic purposes, irrigation and navigation, and it should offer protection against floods rather than constant danger from them. But except for very limited areas it should
also include the production and use of timber, forage, wild life, and many other resources. It should provide essential recreational facilities. Permanent civilization depends upon the sustained production of these resources and services.

Continued full use of forest and range watershed land depends, however, upon a satisfactory balance between the destructive forces of erosion and the constructive processes of plant growth and soil formation. I do not mean that we should attempt to regain the exact balance of virgin forest or range for that would ignore many demands of human use; but a balance that will maintain for wise use all the basic resources of the land.

In the arid and semi-arid west the maximum yield of usable water is essential because water is the key to the entire industrial and social structure. The theory that on such watersheds water-consuming plant cover should be eliminated will not hold. We have ample evidence that disastrous floods and erosion result from denudation. Many watersheds are steep, soils are relatively thin, and with torrential rains and heavy snows the erosion and flood potential is critically high. The small gain, if any, in usable water would never compensate for the flood and erosion problem created by denudation. Forest and range management in the semi-arid west must accept as a first consideration the necessity for protecting watersheds from erosion and rapid surface run-off.

In humid sections forest watershed management to increase total water yields is largely unnecessary. But efforts to decrease high peak flows and if possible to increase low stream stages by all feasible forms of upstream engineering are a critical need.

More specific application of research findings and practical experience in forest management may for the purposes of this discussion be reduced to a few major operations: protection against fire, reforestation, and methods of cutting and cultural operations in timber stands to increase the quantity and quality of the product and also the effectiveness of erosion control and streamflow regulation.

On an average during the 5-year period (1926 to 1930), some 41-1/2 million acres of forest land were burned over annually in the United States. One reason for this excessive acreage is that 190 million acres, largely on important drainages, lack any organized protection. A primary requisite is that organized protection be extended to this area. Watershed requirements as well as those of timber production make it essential also that the standard of existing protection on approximately 320 million acres be raised as rapidly as possible.

Reforestation is a second major form of forest management. Any constructive program requires the rehabilitation of lands submarginal for agriculture. Such land is now under unprofitable cultivation or has been abandoned because erosion has removed the top soil or because productive capacity is naturally low. A portion may be suitable for pasture and some, with protection, will reforest naturally, but the
remainder will require planting. This in the aggregate might involve as much as 50 million acres. An additional area of at least 10 million acres of cut-over and burned-over forest land will not reforest naturally within a reasonable time and should be planted to re-establish a watershed cover as well as for other purposes.

Much of our remaining forest area is only partially productive for timber growing and ragged irregular stands are not fully and satisfactorily meeting watershed requirements. Better methods of timber cutting and various other forms of management are called for. For example, about 10 million acres of forest land were being cut over annually during the years immediately preceding the depression. Through a combination of cutting and fire, an average of 850,000 acres annually were practically devastated and made subject to erosion and rapid run-off. On only a small part of the remainder were systems of cutting followed that were wholly satisfactory either from the timber culture or watershed management standpoints. The total area needing more intensive management runs into hundreds of millions of acres.

Unfortunately, mismanagement is not confined to our forest lands. The natural plant-soil-water balance has been seriously disturbed on from 85 to 90 percent of the 728 million acres of range land. About 60 million acres of major water yielding importance and an additional 232 million acres of low water yielding capacity are contributing heavily to the silt burden of major streams and intensifying the problems of water use. Unsatisfactory conditions on an additional 237 million acres are aggravating the difficulties in local water economy.

By far the most important step needed to stop further destruction is the reduction of numbers of domestic livestock to a level which will start the range on the upgrade. This will require reduction of some 40 percent in present numbers. Systems of grazing worked out by research and experience which will promote the re-establishment and maintenance of the natural plant-soil-water balance by natural revegetation should supplement such reductions.

As on forest lands, extensive watershed range areas are so seriously depleted that artificial reseeding will be necessary. About 36 million acres need this treatment.

After segregating all the land on which grazing may be continued, an area of some 11-1/2 million acres will remain on which, because of its critical importance in erosion control and water conservation, grazing should not be permitted. This area is characterized by such conditions as steep slopes or loose soils or difficult growing conditions. Usually such lands are submarginal for grazing so that nonuse involves no permanent waste of forage.

Engineering must play an extensive part in good forest and range management, and in the control and use of water.
Temporary works, such as silt-holding dams and drainage terraces, are needed in many instances to make possible the restoration of plant cover. Such structures as small reservoirs, retarding dams, the restoration of unwisely drained lakes and swamps, revetments, and other forms of bank control, spreading works, etc., should supplement what forest or range cover alone can supply in water and erosion control. Many of these will improve wild life environment, increase recreational facilities, and provide small water storages for irrigation and small hydro-electric developments. Even in the high rainfall country engineering projects such as drainage pits and terraces to improve on the best that nature can do in the conservation of water may be desirable.

Land ownership presents one of the most difficult problems in a coordinated program of forest and range management. This is because of the long standing American philosophy that all land, regardless of its character and productivity, should be privately owned. It is also because each owner has been and is still largely free to manage his land as he pleases, regardless of how this may affect either the public interest or his own. Since the private owner may not be able to take needed remedial action or may not be interested, various forms of State and Federal cooperation have been devised and applied. In this field a big undertaking still lies ahead. Furthermore, the possibility should not be entirely overlooked that the American public may become sufficiently aroused to take drastic action to insure the management needed in the public interest.

Even though everything is done to encourage and assist such a program on private land, areas will remain on which satisfactory results cannot be obtained under private ownership. These include lands of especially high public value for flood and erosion control, or where the cost of maintenance of plant cover and necessary engineering renders the land submarginal for private ownership, or areas in such a stage of deterioration that individual enterprise cannot expect to rehabilitate them. Here State and Federal ownership must step in. A start has already been made by retaining in Government ownership a large part of the public domain in the West and by land acquisition. The best information now available indicates that it will be necessary to increase State and Federal ownership of forest lands in the entire United States by approximately 150 million acres, and of western range lands by 125 million acres.

Last, but not least in any constructive program of forest and range management is the need for much additional research on all phases of management. This need should not delay action along the many lines for which workable information is already available, but provide instead for the increasingly intensive requirements of the future.

On the strictly watershed phase at least 25 major investigative installations or projects are required, each including and ranging down from watersheds of several thousand acres to small sample plots and laboratory tests, and designed to ascertain for its own peculiar set of conditions all of the facts of the cover-erosion-water relationship. To meet the highly diversified conditions of cover, climate, soil, topography,
geological formation, and forest and range economy in the United States, at least 25 additional projects, less intensive in character, will also be required.

In order to obtain detailed information on existing conditions as a basis for appropriate planning and action, these projects must be supplemented by watershed surveys such as those provided in the recently approved Omnibus Flood Control Act.

The considerable progress already made on many phases of the watershed problem have not been overlooked and should not be minimized, even though time limitations have prevented more detailed reference in this very sketchy discussion of a future program.

Forest and range management constitute only one phase of upstream engineering. They must be integrated and correlated with all other phases. But taken alone they must deal with an enormous land and water resource and a wide variety of products and services. To carry out any program which measurably approaches our present and foreseeable future national requirements will challenge the best efforts of many scientific and professional groups, among which the forester and range manager, and the engineer, must take a leading part.
**ATTENTION:**
(1) USE ONE SET FOR EACH TITLE OR DOCUMENT
(2) USE BALL-POINT PEN OR TYPEWRITER FOR CLEAR COPIES
(3) KEEP PART 4 OF THIS FORM FOR YOUR FILE

**NAL USE ONLY**

<table>
<thead>
<tr>
<th>SPECIAL</th>
<th>SEND</th>
<th>REPORT TO REQUESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>NOT SENT BECAUSE:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• NOT OWNED</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• NON-CIRCULATING</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• IN USE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• INSUFFICIENT DESCRIP.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PLEASE VERIFY</td>
</tr>
</tbody>
</table>

**REQUEST FOR PUBLICATION**

**U.S. DEPARTMENT OF AGRICULTURE**
**NATIONAL AGRICULTURAL LIBRARY**
**LENDING DIVISION**
**BELTSVILLE, MD 20705**

**DATE:** 10/24/74

<table>
<thead>
<tr>
<th>CALL NO.</th>
<th>USE</th>
<th>BELTSVILLE, MD 20705</th>
</tr>
</thead>
<tbody>
<tr>
<td>99.8</td>
<td></td>
<td>10/24/74</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>YOUR NAME, AGENCY &amp; BUSINESS ADDRESS (INCLUDE ZIP CODE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• USDA FOREST SERVICE</td>
</tr>
<tr>
<td>• DANIEL DILDINE</td>
</tr>
<tr>
<td>• RM 4115</td>
</tr>
<tr>
<td>• HIST. PROGRAM</td>
</tr>
</tbody>
</table>

**TELEPHONE:** 447-2018  **DATE OF REQUEST:** 10/14/74

**DESCRIPTION OF PUBLICATION:** (AUTHOR, TITLE, PERIODICAL TITLE, VOLUME, YEAR, PAGE, ETC.)

| Dr. E. H. Clapp's Forest Service of Forestry 43:9 Jan 1945 |

**REFERENCE SOURCE OF THE REQUESTED PUBLICATION, IF AVAILABLE:**

**PART 1 - WORK ORDER**
The Public's Stake

id very little so far about the public's matter, though of course in the last it is the crux of the whole business. there is plenty of anything the question of public's interest in it remains dor: we have come to realize that we do lenty of practically anything in this th as it is, and the public has jus- some restless over the wastage of natu- es. Sometimes it gets panicky and e brake too hard, which is bad for ncerned but is still an understandable pattern of human behavior.

o pretence of being qualified to pass the apparent discrepancies between produced by the industry and the ice regarding existing timber stands, but they must be largely a mation of terms. After all, you can't the figures on a scale stick. But ust be conscious that a great many acres of fine forest land in this coun- een ruined in the logging and that is still going on in many places, that can continue I am not prepared as immutable as the laws of the Medes is the principle that when you sub- quantity from another you always come reduced total.

Dr. Earle H. Clapp Retires From Forest Service

DR. EARLE H. CLAPP, associate chief of the U.S. Forest Service and one of the nation's foremost conservation leaders, is retiring from active duty after nearly forty years of government service, the Department of Agriculture announced December 11.

Dr. Clapp has served as associate chief of the Forest Service since 1935. From 1939, follow- ing the death of the late Chief Forester F. A. Silcox, until 1943, when Mr. Watts became chief, Mr. Clapp served as acting chief of the Service, carrying the Service through some of its most difficult years.

His earlier work in organizing and establishing the research program of the Forest Service made him widely known among professional for- esters both in the United States and abroad. The twelve regional forest experiment stations maintained by the Forest Service were organized under his leadership and the work of the Forest Products Laboratory at Madison, Wis., was greatly expanded during the time he was in charge of research. He prepared the report A National Program of Forest Research, published in 1926, which formed the basis of the entire governmental research program for forestry, au- thorized in the McSweeney-McNary Act of 1928.

He supervised the preparation of the monumental National Plan for American Forestry, the so-called Copeland report. Designed to detail the basic needs in an adequate, long-term program for development of forest resources, this was the most comprehensive report ever assembled on the American forest situation. Dr. Clapp also super- vised the preparation of The Western Range, an authoritative study of the history, present condi- tion, and means for improvement of the nation's range resources.

Important conservation activities which have been especially furthered by Dr. Clapp include public acquisition and management of low-wage or submarginal lands for forest rehabilitation and watershed protection; development of national-forest areas to insure stability of forest communities and industries; and programs looking to improved management practices on pri- vately owned forest lands. He has worked for higher standards of scholarship and attainment in forestry education, for better international rela- tions among foresters in various countries, and has insisted upon high ideals in public service.

He emphasized the need for a scientific approach in handling conservation problems. He held con- stantly to the idea that forestry must do more than grow timber; it must help solve social and economic problems and serve human needs.

Born at North Rush, N.Y., in 1877, he attended Cornell for two years, and was graduated from the University of Michigan in 1905 with an A.B. degree in forestry. In 1928 he received an honorary doctor's degree from the University of Michigan.

He has been with the Forest Service continuously since entering government service in 1905. For two years he worked on timber sales and surveys in Wyoming and Montana. Later he served at Albuquerque, N.M., as associate district forester for the southwestern region, and as forest inspector, with headquarters in Wash- ington. In 1915, he was named as assistant chief of the Service and placed in charge of forest re- search activities. He became associate chief in 1933.

Dr. Clapp became a member of the Society of American Foresters in 1907, and was elected Fellow in 1930. He served as vice president in 1916, and again for two terms during 1934-1935.
ATTENTION:
1) USE ONE SET FOR EACH TITLE OR DOCUMENT.
2) USE BALL-POINT PEN OR TYPEWRITER FOR CLEAR COPIES.

MAIL CALL NO. AD 245-2
99.8
F 768

U.S. DEPARTMENT OF AGRICULTURE
NATIONAL AGRICULTURAL LIBRARY
LENDING DIVISION
BELTSVILLE, MD 20705
058088 II 10/24/74

REQUEST FOR PUBLICATION

MAIL USE ONLY

SPECIAL
HOLD

SPECIAL
HOLD

SEND
MAIL
TELEPHONE

REPORT TO REQUESTER

NOT SENT BECAUSE:
☐ NOT OWNED ☐ NON-CIRCULATING
☐ IN USE ☐ INSUFFICIENT DESCRIPTION

PLEASE VERIFY

THE LIBRARY HAS TAKEN THE FOLLOWING ACTION ON YOUR REQUEST:
☐ RESERVE PLACED, WILL SEND WHEN IT BECOMES AVAILABLE
☐ TRY TO OBTAIN FROM ANOTHER LIBRARY
☐ PURCHASE ORDER PLACED

RESULTS OF ABOVE ACTION MAY BE EXPECTED WITHIN

REMARKS:

REFERENCE SOURCE OF THE REQUESTED PUBLICATION, IF AVAILABLE:

PART 1-REQUESTOR'S COPY

YOUR NAME, AGENCY & BUSINESS ADDRESS (INCLUDE ZIP CODE):

DANIEL BILDBIE
USDA-FOREST SER.
BMW-115 HIST PROGRAM

TELEPHONE: 447-2418 DATE OF REQUEST: 10/16/74

DESCRIPTION OF PUBLICATION (AUTHOR, TITLE, PERIODICAL TITLE, VOLUME, YEAR, PAGE, ETC.):

JOURNAL OF FORESTRY
OUR FUTURE FORESTRY NEEDS
28: 147-153 1930

REFERENCE SOURCE OF THE REQUESTED PUBLICATION, IF AVAILABLE:
FORESTRY

the industry itself, has recently largely regained a number of important markets previously lost to substitutes for lumber. Again, the rate of increase of substitution of other materials for lumber during the past few years has greatly declined. It begins to appear that the lumber industry if it advances its organized research and promotion activities, is now able, by and large, to hold its own in competition.

A few years more should demonstrate that fact, if it is a fact. Then can be made, with more confidence than now, a forecast of the probable continuing needs for forests to supply forest products in industry and commerce. Until then future commercial forestry plans will be based largely upon hopes,—hopes, in my judgment, well founded in the probable future prospects of the lumber and the wood-using industries. In the meantime, whatever forestry progress may be made through public agencies and private enterprise combined guided by present knowledge will be none too much. This should be done in a manner to encourage and stimulate private enterprise,—hence the dominant reliance of the American people for timber supply. The uncertainties of the future should not and need not blur our understanding and our acceptance of the clearly defined needs of the present.

OUR FUTURE FOREST NEEDS

By EARLE H. CLAPP
Assistant Forester, U. S. Forest Service

FROM the forester's point of view one of the most significant declarations in Dr. Compton's paper is that there is a forestry problem in the United States and that something ought to be done about it. This is all the more welcome because a growing number of people, including some foresters, hold that there is nothing to be alarmed about in our forest situation. They say that demands for lumber and other forest products are decreasing, that we shall not in the future need high-grade timber. They hold that a timber shortage is improbable but that should one occur it will not work any particular hardship upon the American people. This leads them to the conclusion that only a part of our present area of forest land will be needed to meet future requirements. They hold, in short, that we have no forest problem and that an aggressive development of forestry will create the same critical problem of overproduction that has crippled agriculture during the last decade.

At the same time another group of people is seriously disturbed about the slow recovery of agriculture. They regard overproduction as the primary trouble. In the growing of timber on submarginal agricultural lands they see a way to reduce agricultural production. No one knows exactly what areas are involved, but estimates range from 50 to 100 million acres.

Thus we have in striking contrast at one and the same time one group denying practically or altogether the existence of a forest problem, and another group desiring to aid agriculture by throwing into forest production an area of from 50 to 100 million acres in addition to the 500 million commonly regarded as forest lands.

While Dr. Compton asserts unequivocally his belief in the existence of a forest problem, much of his paper is devoted to a discussion which does not differ greatly from the point of view already outlined as being held by the group who asserts that there is no forest problem. His paper, as he himself anticipates, is therefore likely to be construed as a declaration that there is a forest problem and as an attempt to prove that there is not.

A considerable part of his discussion may be summarized in the statement that the possibility of a timber famine is a myth. Falling off in demand for such an important forest product as lumber, the difficulties of lumber manufacturers in finding markets, increasing competition from substitutes, the shrinking list of purposes for which wood alone can be used, are among the reasons for this position.

For one I cannot accept without serious question the belief that we shall
have no timber shortage or that a shortage will not be seriously detrimental to the public interest.

Consider lumber consumption and production in the United States by regions. Using imports in the sense of shipments from other portions of the United States, the New England States were net importers of lumber in 1926 to the tune of about 2 billion board feet. The Middle Atlantic States fell in the same category by about 6½ billion feet, the Lake States by 3½ billion feet, and the Central States by 7 billion.

Only two groups of states were net exporters to other portions of the country, the South by about 8½ billion feet and the Pacific Northwest by nearly 9 billion feet. Individual states within even these groups are already importers or approaching that condition. California does not cut enough lumber to meet its own requirements, although it is one of the few remaining states having large reserves of virgin timber. Texas barely meets its own requirements.

Exports from the South are much less of a factor than 20 years ago. Southern consumption now approximately equals the cut from second-growth timber. This in effect means that only the equivalent of the lumber cut from virgin timber is now available for shipment to other portions of the United States. Unless, therefore, something more is done in the future than is being done now, there is little room to hope that the Southern States can long continue on an export basis.

Those familiar with the Pacific Northwest know that history is repeating itself in lumber production there, and we can expect that region ultimately to reach a status where the lumber cut will fall below local requirements or merely meet them.

Look ahead to the time when no region of the United States can cut the lumber now used. Will there be no public distress? Will the average consumer and the average industry be as well off as today? We experienced a temporary shortage of lumber supplies no longer ago than 1920. Many of us at that time were convinced that there was serious distress because the public and the industries could not obtain lumber. Has our economic structure changed so radically in the last ten years that we can now rest assured that lumber can pass out of the picture without industrial and social maladjustments?

References are made in Dr. Compton's paper to forecasts in the Forest Service report on Senate Resolution 311 in 1920, and again in "Timber: Mine or Crop?" published in 1922. These references seem to me misleading. A quotation from the latter is cited as a forecast and the impression left that the Forest Service predicted an annual consumption of 76 billion board feet of lumber in the United States by 1930. A closer reading of the quotation will in itself indicate that it was not intended as a forecast, and this will be even more clear from the context. Sawtimber, that is, trees above a certain size which may be cut into a variety of products, is confused with lumber. On lumber consumption what the Forest Service actually forecast in the Capper Report was:

"It follows that any future lumber production falling below approximately 35 billion feet, unless we can make up the difference by imports, will result in hardship to many classes of consumers and to many industries like that experi-

enced within the last year. Any such reduced consumption will unquestionably be the result of economic pressure from lumber shortages and high prices rather than of economic convenience. We hope our warning in the present situation as the result of economic distress resulting from lumber shortage in 1919 and the export of 1920 was still fresh in our minds as a matter of fact the lumber cut of the United States since 1920 has averaged almost exactly 35 billion feet a year, a figure at least ten years at least the forecast has been remarkably accurate.

Moreover, there are good reasons for thinking that the actual requirements of the country have not been fully met during the last ten years. Agriculture perhaps the outstanding example. The cause of the depression many farm have been practically out of the lumber market. Repairs have been neglected and urgently needed new construction has been postponed. While the purchasing power of the average citizen in the United States may have been higher, the farmer has been so low that lumber has been out of his reach. Who is prepared to say that this has not meant hardships?

Perhaps this is the best place to refer to statistics quoted by Dr. Compton which show a falling off of 24 per cent in the lumber used by industries between 1912 and 1928. By eliminating from these figures the consumption by planing mills, in many cases the adjunct of saw mills, consumption by industries should instead an increase of one per cent. This is rather striking in the face of a fall off in the total lumber cut of 12 per cent between the years in question. There is room for speculation on the part who
ORESTRY

low local requirements or merely meet them. Look ahead to the time when no region the United States can cut the lumber used. Will there be no public stress? Will the average consumer and average industry be as well off asjay? We experienced a temporary shortage of lumber supplies no longer ago in 1920. Many of us at that time were convinced that there was serious distress cause the public and the industries will not obtain lumber. Has our economic structure changed so radically in the last ten years that we can now rest assured that lumber can pass out of the tree without industrial and social adjustments?

References are made in Dr. Compton's per to forecasts in the Forest Service report on Senate Resolution 311 in 1920, and again in "Timber: Mine or Crop?" published in 1922. These references in to me misleading. A quotation from the latter is cited as a forest and the impression left that the Forest Service predicted an annual consumption of 76 billion board feet of lumber in the United States by 1950. A closer reading of the quotation will in elf indicate that it was not intended as a forecast, and this will be even more far from the context. Sawtimber, that trees above a certain size which may cut into a variety of products, is con- sed with lumber. On lumber consumption what the Forest Service actu- y forecast in the Capper Report was: "It follows that any future lumber oduction falling below approximately billion feet, unless we can make up the difference by imports, will result in hardship to many classes of consumers. The 20 years ago. The lumber cut in 1919 shows that the farmer has been so low that lumber has been out of his reach. Who is prepared to say that this has not meant hardships? Perhaps this is the best place to refer to statistics quoted by Dr. Compton which show a falling off of 24 per cent in the lumber used by industries between 1912 and 1928. By eliminating from these figures the consumption by planing mills, in many cases the adjunct of sawmills, consumption by industries shows instead an increase of one per cent. This is rather striking in the face of a falling off in the total lumber cut of 12 per cent between the years in question. There is room for speculation on the part which the falling off in agricultural consumption, including that of the small towns primarily dependent upon agriculture for their prosperity, had to do with the decreased demand for planing-mill products.

All close students of the timber situation in the United States recognize that factors have come into the competitive situation which were not particularly obvious 30 and even 20 years ago. The number of materials which can be used for specific purposes has increased where wood and nearly all other commodities are involved. Possibly we shall never again in the United States see the time when any commodity, regardless of its intrinsic merits, can hold its markets intact, to say nothing of increasing them, without effort. I have wondered if future lumber consumption may not work out about as follows: That we can look forward indefinitely to a fairly large demand and consumption of lumber almost regardless of its availability. Countries like England, for example, having little timber of their own have imported lumber at high prices for many years. In fact, up to the time of the war both total and per capita consumption in England had steadily increased for more than 60 years. With its wealth, high standards of living, and traditional use of wood, I should expect to see the United States if necessary compete in world markets for a considerably larger per capita amount than most of the countries of Europe utilize.

Beyond this amount, however, my personal belief is that lumber will have to compete in American markets with other commodities. Successful competition is going to mean the adoption of...
modern methods and the discarding of antiquated methods.

One of these modern methods is trade extension. The recently formed extension organization of the National Lumber Manufacturers' Association is a move in this direction. Dr. Compton will probably agree that it would have been much better for the lumber industry if this effort had begun 10 or 15 years earlier.

I want to refer in more detail to another modern competitive weapon which up to the present has been largely neglected so far as lumber manufacture and use is concerned but which will have to be used if large markets for lumber are to be held in the future. Arthur D. Little has recently published a book entitled "The Handwriting on the Wall." He says that the handwriting which confronts our industry reads: "The price of progress is research, which alone assures the security of dividends." And he might well have added "...and which alone assures the holding of present and the expansion of future markets."

The fate of industries and corporations which have not utilized research as a weapon in modern competition is in point. The time-honored indigo industry disappeared altogether because it could not meet the competition of synthetic indigo, a product of coal-tar research. It has been reported that only one out of 44 American companies which were producing potash during the World War survives. This company alone used research as a competitive weapon. Cotton and silk have long been established in the markets of the world, but I wonder if manufacturers of both are not disturbed over the competition of rayon, a new material which had its foundation in fundamental research of cellulose.

These are negative illustrations but it is easily possible to build up an impressive list on the positive side. Quinine was originally a monopoly product of the South American forests. Research, however, has made it possible to furnish three-fourths of the world's present supply from one of the Dutch East Indies. American rayon production for 1929 is estimated at 140,000,000 pounds, a 40 per cent increase over 1928. The entire industry has been developed since 1900. Wood supplies three-fifths of the raw material. Research developed the first telephone some 50 years ago, and expenditures for research, reported to be in the neighborhood of $15,000,000 a year by a single corporation, the American Telephone and Telegraph Company, are probably the outstanding factor in the existence of from 20 to 30 million telephone sets in the world today. All of the electrical industries are in fact the direct outgrowth of research. The cellulose lacquer industry, founded on research hardly a decade ago, is growing by leaps and bounds. Probably no one yet fully appreciates its possibilities of expansion or what it will do to competing materials.

Examples of this character might be multiplied almost indefinitely. If upon a research foundation wood-using industries like rayon and cellulose lacquer, and pulp and paper, which has doubled its markets in the United States every decade during the last 40 years, can rapidly in the face of modern competition build up enormous consumption from little or nothing, is there not a reasonable possibility that the lumber industry could at least hold its own by aggressive and large-scale adoption of the same methods.

Lumber in general and for lumber manufacture in particular, what would be of greater aid in competition than the solution of the waste problem? What offers a better opportunity for such a solution than research? Consider the advantage to lumber, for example, if shrinkage and expansion could be controlled practically or if we had a fully satisfactory fire retardant. What other means offers even comparable opportunities for spectacular new uses of lumber or wood in other forms or for the recapture of old markets?

Research more than any other means in modern competition offers the possibility of flexibility of use. If through economic change one channel is closed, research may open others. Research offers the greatest possibility of integration of industry so that each class of wood goes into the product for which it is best suited. It becomes possible to divert raw material, depending upon demand and price, into those channels which offer the greatest opportunity for profit.

So, it seems to me, that there are very substantial grounds for Arthur D. Little's thesis that research is the price of progress in industry, and hence markets held and expanded. If investments are to be safeguarded, the obligation for this research lies upon the lumber industry on a scale hitherto undreamed of. It lies in very much larger measure also upon the public if the full use of forest lands is to be assured.

As our understanding of the forest problem increases, the desirability from the public standpoint of the full and profitable use of forest land becomes more and more apparent. This is without re-
material which had its foundation in fundamental research of cellulose.
These are negative illustrations but it is easily possible to build up an impressive list on the positive side. Quinine was originally a monopoly product of the South American forests. Research, however, has made it possible to divert three-fourths of the world's present supply from one of the Dutch East Indies. American rayon production for 1929 is estimated at 140,000,000 pounds, a 40 per cent increase over 1928. The entire industry has been developed since 1900. Wood supplies three-fifths of the raw material. Research developed the first telephone some 50 years ago, and expenditures for research, reported to be in the neighborhood of $15,000,000 a year by a single corporation, the American Telephone and Telegraph Company, are probably the outstanding factor in the existence of from 20 to 30 million telephone sets in the world today. All of the electrical industries are in fact the direct outgrowth of research. The cellulose lacquer industry, founded on research hardly a decade ago, is growing by leaps and bounds. Probably no one yet fully appreciates its possibilities of expansion or what it will do to competing materials.
Examples of this character might be multiplied almost indefinitely. If upon a research foundation wood-using industries like rayon and cellulose lacquer, and pulp and paper, which has doubled its markets in the United States every decade during the last 40 years, can rapidly in the face of modern competition build up enormous consumption from little or nothing, is there not a reasonable possibility that the lumber industry could at least hold its own by aggressive and large-scale adoption of the same methods?
For wood in general and for lumber manufacture in particular, what would be of greater aid in competition than the solution of the waste problem? What offers a better opportunity for such a solution than research? Consider the advantage to lumber, for example, if shrinkage and expansion could be controlled practically or if we had a fully satisfactory fire retardant. What other means offers even comparable opportunities for spectacular new uses of lumber or wood in other forms or for the recapture of old markets?
Research more than any other means in modern competition offers the possibility of flexibility of use. If through economic change one channel is closed, research may open others. Research offers the greatest possibility of integration of industry so that each class of wood goes into the product for which it is best suited. It becomes possible to divert raw material, depending upon demand and price, into those channels which offer the greatest opportunity for profit.
So, it seems to me, that there are very substantial grounds for Arthur D. Little's thesis that research is the price of progress in industry, and hence markets held and expanded. If investments are to be safeguarded, the obligation for this research lies upon the lumber industry on a scale hitherto undreamed of. It lies in very much larger measure also upon the public if the full use of forest lands is to be assured.
As our understanding of the forest problem increases, the desirability from the public standpoint of the full and profitable use of forest land becomes more and more apparent. This is without regard to the desirability, if not the necessity, of having lumber and other forest products available for industrial and other uses.
Sparhawk's Michigan investigation has shown some of the injurious economic and social effects of non-use of forest lands resulting from forest devastation. Employees in the lumber industry decreased 30,000 between 1889 and 1919. The population, including both cities and country of the northern portion of lower Michigan, decreased by 50,000, or one-eighth, between 1910 and 1920. More than one-half of the two billion feet of timber consumed in Michigan in 1920 was imported. Many local wood-using industries closed down because of difficulty in getting raw material. Chieftly because of loss of traffic from forest depletion, railroad mileage decreased 559 miles from 1919 to 1924—more than in any other state. Road mileage in cut-over portions of the state was only half that in the southern portion, but the cost to tax payers was 75 per cent greater.
School expenditures per child were 26 per cent less in the north than in the south, teachers' salaries 20 per cent less, but school taxes 38 per cent higher. Only one-half as many children in proportion to total numbers came to school in the northern counties as in the southern. The ratio of illiteracy in the northern counties was double that of the southern.
Savings bank deposits in 1920 averaged $80 per capita in northern counties and $185 in the southern. The ratio of paupers to total population was 4.0 per cent greater in northern counties. In 1919, 48 northern counties drew from the state treasury for roads, schools, etc., $1,000,000 more than they contributed in taxes, and this the southern counties
paid. In spite of less adequate schools and roads and of heavy contributions from the state, the average tax rate in cut-over counties in 1921 averaged $40 per $1000 assessed value compared with $28 for southern agricultural counties, not including the larger cities.

On the positive side it would be equally easy to show the contrasting social and economic benefits derived from used forest land. As Dr. Compton indicates, however, the growing of timber is by no means the only use for forest lands.

The demand for forest lands for recreation is increasing. For example, visitors to the national forests are estimated to have increased about seven times, to 23,000,000 during the last ten years. Nearly 4,000,000 acres of forest land have already been included in the national park. There is a growing demand for wilderness areas in the national forests. State parks already include some 2,500,000 acres. A rough approximation of state, municipal, and county parks, hunting, fishing, and game preserves, etc., in the Lake States, exceeds 5,000,000 acres. Large areas have been acquired for game preserves, etc., along the southern Atlantic seaboard. The growing recreational demand will undoubtedly be accentuated still further by increasing leisure time, as for example by the growing prevalence of the 5-hour day.

American foresters have taken too lightly the need for protection forests. Much skepticism has existed regarding the effect of forests upon streamflow. Lowdermilk's recent work in California on the ratio of run-off between bare and forest-litter-covered slopes of 30 to 1 on some soils is a striking confirmation of one beneficial effect. Such results are helping to bring public opinion in California to the view that it may be cheaper to hold the slopes of the mountains in forest and in chaparral than to build dams. Recent experience indicates that under some conditions it may not be safe to build dams and that protection forests and chaparral will be the only recourse. If we had the facts it would not be surprising if the same reason held for parts and perhaps for large areas in the Mississippi drainage.

Lowdermilk's work has shown erosion on bare and litter-covered slopes to run as high as 3,000 to 1. Public recognition of the national loss through erosion is growing. It would not be surprising if in many sections of the country it might be in the public interest to hold extensive areas in forests solely to prevent erosion, regardless of whether a stick of timber is ever cut from them.

Enormous areas of our forest lands are worn out through ill-advised agriculture, usually the direct result of erosion. Re-forestation and the holding of these lands in forests may prove to be the simplest and most feasible and cheapest means of restoration to their original fertility against the day when they may again be needed for agriculture.

The American public accepts practically without question the beneficial effect of forests on precipitation, while among professional groups, including some foresters, there has been and is a good deal of skepticism. Bearing on this question a Russian investigation of many years seems to show that the gridironing of dry, wind-swept plains with forest belts has been responsible, among other benefits, for average annual increases in precipitation of 3 inches. This suggests that we may after checking Russian results under our own conditions wish to extend forest belts into the middle western plains region.

It is impossible with present knowledge to estimate the total area of land which should be held in forest in the public interest, and regardless of whether timber is cut, for such purposes as recreation, the regulation of streamflow, the prevention of erosion, restoration to fertility, the increase in precipitation, and the amelioration of other severe climatic conditions. The aggregate will, however, run into many millions of acres.

So far as I am concerned personally, the sum total of all of these forces, economic and otherwise, calls for driving ahead as rapidly as we can with every
helping to bring public opinion in California to the view that it may be cheaper to hold the slopes of the mountains in forest and in chaparral than to build dams. Recent experience indicates that under some conditions it may not be safe to build dams and that protection forests and chaparral will be the only recourse. If we had the facts it would not be surprising if the same reason held for parts and perhaps for large areas in the Mississippi drainage.

Lowdermilk's work has shown erosion on bare and litter-covered slopes to run as high as 3,000 to 1. Public recognition of the national loss through erosion is growing. It would not be surprising if in many sections of the country it might be in the public interest to hold extensive areas in forests solely to prevent erosion, regardless of whether a stick of timber is ever cut from them.

Enormous areas of our forest lands are worn out through ill-advised agriculture, usually the direct result of erosion. Reforestation and the holding of these lands in forests may prove to be the simplest and most feasible and cheapest means of restoration to their original fertility against the day when they may again be needed for agriculture.

The American public accepts practically without question the beneficial effect of forests on precipitation, while among professional groups, including some foresters, there has been and is a good deal of skepticism. Bearing on this question a Russian investigation of many years seems to show that the gridironing of dry, wind-swept plains with forest belts has been responsible, among other benefits, for average annual increases in precipitation of 3 inches. This suggests that we may after checking Russian results under our own conditions wish to extend forest belts into the middle-western plains region.

It is impossible with present knowledge to estimate the total area of land which should be held in forest in the public interest, and regardless of whether timber is cut, for such purposes as recreation, the regulation of streamflow, the prevention of erosion, restoration to fertility, the increase in precipitation, and the amelioration of other severe climatic conditions. The aggregate will, however, run into many millions of acres.

So far as I am concerned personally, the sum total of all of these forces, economic and otherwise, calls for driving ahead as rapidly as we can with every means at our disposal in putting every possible acre of forest land into production, whether privately or publicly owned. At the very best it is going to be a good many years before our lands are producing the timber which we now consume and which in my judgment we really need. Through modern competitive methods in which I would give research a high priority, the possibilities of increasing the demand for and the consumption of forest products, including lumber, is as great as for any other products. Regardless of the developments in pulp and paper making and other uses of cellulose, I would not exclude saw timber, and high-grade saw timber, from the scheme of production.
EARLE H. CLAPP

Forest Service career officer

Acting Chief Forester, 1939-43

Led the Forest Service during mobilization of the Nation's forest resources behind the World War II effort.

Fought courageously and successfully to keep the Forest Service in the Department of Agriculture. It is generally believed that this effort cost him the title of Chief.
Earle H. Clapp, who had been Associate Chief of the Forest Service became Acting Chief following the death of Mr. Silcox.

Acting Chief Clapp led the Forest Service through three difficult years. World War II was underway and there was tremendous pressure for product of wood products.

Mr. Clapp is best remembered for his vigorous and courageous fight to keep the Forest Service in the Department of Agriculture. He succeeded in this effort, but it is generally believed that it cost him the title of Chief of the Forest Service.
Ralph H. Chipps, who had been Associate Chief of the Forest Service

became Acting Chief following the death of Mr. Stillcox.

Acting Chief Chipps led the Forest Service through the difficulties

years of World War II and our nation was in need of tremendous resources for

production of wood products.

Mr. Chipps is well remembered for his vigorous and courageous efforts
to keep the Forest Service in the Department of Agriculture. He succeeded

in this effort, part of his effectiveness being that he was one of the

Chief of the Forest Service.