

THE SOCIETY OF AMERICAN FORESTERS

Committee on Accrediting Schools of Forestry

Report of the Harvard Forest

1942

THE SOCIETY OF AMERICAN FORESTERS
STUDY OF SCHOOLS OF FORESTRY

Classification of Subjects Taught in Schools of Forestry.

Subjects credited to other faculties and time not to be credited to forestry instruction.

General:

English including composition, literature, and public speaking; mathematics including statistical methods; physics, chemistry.

Economic and Social:

Economics, history, government, accounting, business law and administration.

Engineering:

Surveying, drawing and mapping, agricultural and other engineering.

Physical and Biological:

Soils, general botany, ecology, plant physiology and pathology, general biology, zoology, physiography, geology, mineralogy, entomology.

Technical Forestry Subjects:

1. Forest Economics:
General forestry, forest history, forest economics, forest policy and legislation, forest finance.
2. Forest Management:
Forest mensuration, forest survey, forest organization, regulation, management plans, forest administration, forest improvements (engineering) including recreational improvements.
3. Silviculture:
Forest soils and site, dendrology, silvics and ecology of forest, silviculture including forest types, treatment of woodlands, reforestation including seeding and planting.
4. Forest Protection:
Forest influences, protection methods (fire, insects, diseases, wind, etc.), forest entomology, forest pathology.
5. Forest Utilization:
Wood anatomy, wood identification, properties, uses; logging, milling and manufacturing; timber mechanics; wood preservation and conditioning; forest products (paper manufacturing, etc.); lumber business.
6. Curricula allied to technical forestry:
Range management, wild life management, park and landscape management, arboriculture or shade trees, soil conservation in relation to forestry.

*Corrected copy
by acc
Oct. 14, 1942*

THE SOCIETY OF AMERICAN FORESTERS

Committee on Accrediting Schools of Forestry

Report of Institutions

Forms for data

School year 1941-42

Schedule 1.

(1) Institution Harvard Forest

Degrees given in forestry.*

Undergraduate none

Postgraduate 8

Organization of the department of forestry within the institution, i.e., separate school of forestry, school of forestry combined with other fields of conservation, department with separate head responsible to president and regents, division responsible to a department head, curriculum responsible to division head. **Department with separate head responsible to the President and the Corporation.**

*Degrees given in fields covered by Group 6 subjects separately, (see page 1), guide, catalogue or prospectus.

none

Schedule 2. Faculty.

Under group 1-5 list number, for each rank, engaged in teaching subjects listed under groups 1 to 5, classes as technical forestry. If employed part time or wholly in research, exclusive of teaching, list as, e.g., 1/2 under teaching, 1/2 under research, or research only. Full credit on salaries and budget is given for research in technical forestry, conducted by members of the forestry faculty, even if as much as half time is under other supervision such as experiment stations.

List teachers on other faculties engaged in teaching technical forestry subjects, group 1 to 5, on Schedule 5, and not here (see provisions of accrediting to total faculty and budget, Schedule 10).

List teachers of subjects in group 6 (see) separately.

Teachers of subjects not listed under groups 1 to 6 are to be omitted from faculty, e.g., elements of surveying, land surveying, etc. Members of faculty employed in extension and not in teaching are to be listed but not credited on faculty or budget.

Field assistants, nursery superintendents and other employees are not credited to faculty, but included in budget 4a 2' administrators, unless engaged in self-supporting business operations not requiring additions to budget, in which case omit them.

FACULTY SUMMARY

	: Head	: Professor	: Associate : Professor	: Assistant : Professor	: Instructor	: Assistant : Instructor	: Total
Group 1-5	:	:	:	:	:	:	:
Technical Forestry	: 1	:	:	: 1	: 2	:	: 4
Group 6	:	:	:	:	:	:	:
Allied Subjects	: None	:	:	:	:	:	:
Research and no teaching	: None	:	:	:	:	:	:
Extension	: None	:	:	:	:	:	:

Superintendents, Forest 1 Nursery None Others None
 Laboratory 1*
 Assistants, Field 1* Woods crew 4

* Assistants spend about 10% of their time in instruction.

Schedule 5. For forestry faculty only.

(2b. 3') Associate or supplementary instruction in forestry, consisting of members of other faculties who teach subjects listed under technical forestry on page 1. (Such teaching is credited as additions to forestry faculties on the basis of dividing the credit hours so taught by the average credit hours taught by the forestry faculty.)

(When subjects taught fall in Group 6, allied subjects, list names in separate group.)

Name	Subjects taught	Semester credit hours
<u>Groups 1-5</u>		
John D. Black	Seminar in Agricultural, Forestry and Land Policy (Ec. 179)	Direction of doctoral dissertations (Ec. 20)
Hugh M. Raup	General Ecology (Bio. 22)	
<u>Group 6</u>		
John D. Black	Economics of Agriculture (Ec. 171)	
	Commodity Distribution and Prices (Ec. 107)	
	See attached sheet	

Schedule 5

Instruction Offered by Faculty Members Located at Cambridge

Candidates for the degree of Master in Forestry may specialize in forest economics or forest biology and spend most of the academic year in Cambridge. Of particular interest is the curriculum in agricultural economics offered by the Department of Economics and the Graduate School of Public Administration, and the various curricula in ecology, physiology, and genetics offered by the Department of Biology. Students in these fields are required to spend a minimum of six weeks at Petersham for purposes of general instruction in forestry. Ordinarily such students report at the Forest several weeks before the start of the regular academic year, then go to Cambridge for course work, and finally return to Petersham to prepare their theses. Frequently they are unable to finish their work in one academic year. Degrees are awarded on the satisfactory completion of their theses.

The faculties of the Departments of Biology and Economics also participate in the instruction of students who stay in Petersham. Several members each year spend a day or more at the Forest leading seminars and field trips. Ecology, taxonomy, physiology, and forest economics are usually included as subjects of discussion. In addition, students at Petersham make one or more trips to Cambridge each year to attend seminars on forest and agricultural land use.

Schedule 5

Instruction Offered by Faculty Members Located at Cambridge

Candidates for the degree of Master in Forestry may specialize in forest economics or forest biology and spend ^{most of} the academic year in Cambridge. Of particular interest is the curriculum in agricultural economics offered by the Department of Economics and the Graduate School of Public Administration, and the various curricula in ecology, physiology, and genetics offered by the Department of Biology. Students in these fields ~~ordinarily are required to spend a minimum of six weeks at Petersham for purposes~~ spend a month or more in Petersham, then ~~go~~ to Cambridge for ~~the academic year~~, and finally return to Petersham to prepare ^{course work} their theses. ~~Ordinarily~~ ^{frequently} they ~~are unable to~~ finish their work in one academic year. Degrees are awarded on the satisfactory completion of their theses.

The faculties of the Departments of Biology and Economics also participate in the instruction of students who stay in Petersham. Several members each year spend a day or more at the Forest leading seminars and field trips. Ecology, taxonomy, physiology, and forest economics are usually included as subjects of discussion. In addition, students at Petersham make one or more trips to Cambridge each year to attend seminars on forest and agricultural land use.

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of general instruction in forestry

Schedule 6. In full, for each member of faculty.

(2c.) Average time devoted to research and character of projects undertaken.

Separate sheet for each member of faculty

Name	Semesters		3rd hrs.	Summer weeks
	1st hrs.	2nd hrs.	(quarter)	
Percentage of time devoted to research				
A. C. Cline	25	(See attached sheet ^s)		
P. R. Gast	65	"		
R. J. Lutz	25	"		
S. H. Spurr	75	"		

Sabbatical year.

When taken _____

How spent _____

Character of projects under investigation: See attached sheets.

Dr. James Vlamis, laboratory assistant, devotes about 90% of his time to laboratory determinations in connection with the experiments undertaken by Dr. Gast.

Dr. James W. Johnston, field assistant, devotes about 25% of his time to field analyses in connection with the experiments of Mr. Cline and Mr. Lutz.

Schedule 6

A. C. Cline

Research in silviculture with special regard for the improvement of tree quality. One experiment deals with improving the quality of white pine by growing it under the protection of an overtopping partial cover of hardwoods, the density of which is regulated by periodic release cuttings. Nearby control plots containing free-to-grow white pines provide a measure of the effectiveness of partial shading in reducing weevil damage and in other ways improving the quality of the pine.

Another experiment deals with the improvement of coppice composed largely of stump sprouts of oak and maple. A middle-aged stand of hardwood was cut clear - in order to duplicate the conditions so commonly found following commercial cordwood operations. With the aid of forest pathologists, the development of the coppice will be carefully studied from the standpoint of its improvement and possible transformation to prospective sawtimber. Factors affecting butt rot, stem form, growth rate, etc. will be analyzed, and periodic removal of undesirable stems will be based on year by year examination and records of individual sprout clumps, starting with the condition of the parent trees before they were cut.

P. R. Cast

The research projects may be grouped, using a more or less artificial and arbitrary distinction, into two parts: (a) the effect of external environment on the growth rate of pine; b) the effect of inherited factors on the growth rate of pine.

Under (a), the effect of external factors, the supplies of nitrogen, phosphorus, and potassium at critical intensities, as well as the effects of varying intensities of solar radiation, have been investigated in nursery and field experiments and in laboratory cultures. Incidental to these studies, in order to improve the precision of the experiments, it has been necessary to investigate the effect of size of seed on size of plant grown under specific conditions, and analogous problems incidental to the main object of the experiments.

These studies are useful in three directions. The first is the development of techniques for assessing the chemical fertility of forest sites, assessing the effect of silvicultural practices on improving chemical fertility of forest sites, and assessing the values of fertilizer amendments in nursery practice. The second field of usefulness for these results is in the development of techniques for examining the place of mycorrhizae in the economy of plant nutrition. Certain results of these two lines of investigations, which are being continued as part of a long range program, have already appeared as contributions from this and collaborating laboratories. The third field of usefulness can be mentioned only in anticipation. We have not yet accomplished our purpose of developing a wholly satisfactory substrate for culturing white pines in studies on the effects of inherited differences in growth rate. Such a substrate should provide the essential nutrients at the highest possible useful level or any predetermined, uniform lower level, and should permit the introduction of mycorrhizal forming fungi under conditions where their influence can be quantitatively determined.

While it is believed that in the study of the effect of inherited factors on the growth of pine the use of some controllable substrate will ultimately be necessary, initial experiments with white pine have already been underway for five years. These studies are those referred to under b) in the first paragraph. Some 150 lots of seed from individual mother trees, about half of which were local and the other half from places widely scattered over the range of white pine have been grown in the nursery. Forty-two of these lots, which the records for the first four years showed to be fastest growing, have been moved to plantations. As the branches develop, further selections will be made on basis of habit--narrow-crowned trees with a minimum tendency toward branchiness naturally being chosen. Other tests, for instance resistance to white pine blister rust, are contemplated. Some seed were collected from supposedly blister rust resistant trees.

All these experiments are part of a larger program on tree breeding supported by the Maria Moors Cabot Foundation for Botanical Research.

Russell J. Lutz

Development of forest stands as related to factors of site and silvicultural treatment

This project entails a detailed study of the development of representative stands within the Forest resulting from all kinds of reproduction cuttings and different subsequent silvicultural treatments under various conditions of site. Most of the stands are volunteer hardwoods following the cutting of "old field" white pine. Others are conifers, chiefly white pine and hemlock, growing on land whose history has been continuous woodland. A smaller number are volunteer hardwoods following the cutting of "old field" hardwoods. In addition to these volunteer stands, the most important coniferous plantations are being studied to determine the adaptability of certain species to local conditions and to work out silvical aspects in relation to factors of site, spacing, and composition.

The history of some of these stands dates back to 1908, the first year the Harvard Forest was operated. Complete records are available for all past treatments. The effectiveness of these treatments, in the light of the original objectives, is determined by an analysis of present-day conditions.

The results of these studies have been embodied in a report comprising three parts: Part I, The Conversion of Stands of Old Field Origin by Various Methods of Cutting and Subsequent Treatment; Part II, Reproduction Methods Applied to Culled Old Growth Stands on Light Soil; Part III, Coniferous Plantations in the Harvard Forest. This work is being carried out in collaboration with A. C. Cline, Director, and is nearing completion for publication.

Wood Preservatives

This experiment deals with the impregnation of living trees with various chemicals for the purpose of producing decay-resistant posts and poles. With the loss of chestnut, there is no local wood suitable for these purposes, and it is hoped to develop a cheap preservative method that can be applied to any of the local species. This work is being carried on jointly with Dr. B. Wilford of the Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture.

Forest Succession on Hurricane Blowdown Areas

This study is being carried out to determine the kind and amount of reproduction coming in on hurricane destroyed lands. Special emphasis is placed on soil type, composition of the previous stand, nearness of seed trees, and growth forms.

Schedule 6.

Stephen H. Spurr

(2c.) Average time devoted to research and character of projects undertaken.

Time devoted to research: 75% of full time.

Character of projects:

Ecological study of old growth stands

This project, which has been under way off and on for 15 years, dealt largely with the Pisgah section of southwestern New Hampshire. During the past year, the accumulated data has been reduced to its final form as a bulletin now in press. Reproduction counts on areas of unsalvaged windthrown virgin timber have been made.

Seed weight in relation to early development of white pine

In this project, 1000 white pine seeds from a total of 10 mother trees were weighed to a hundredth of a milligram. The subsequent development of each was followed individually. The primary purpose is to study the relationship of growth rate to seed weight but other factors such as percent germination, time of germination, early mortality and seedling form are also considered.

Growth substances and the growth of white pine seedlings

The influence of four growth substances upon the growth of white pine seedlings under varied nutrient conditions was studied under the direction of Dr. P. R. Gast in two series of pot culture experiments.

Soil types and the regeneration of hurricane blowdown areas

This extensive project, now in its initial phases, is concerned with the composition and growth of the young stands developing where previous stands were destroyed by the 1938 hurricane. Particular emphasis is placed on the importance of soil types.

Schedule 7.

(3a.) Faculty.

Name Albert Collins Cline

Education . - Institutions and degrees, with dates.

Syracuse, B.S., 1920
 Syracuse, M.F., 1922
 Harvard, M.F., 1923

Occupation, by years, since graduation.

Forest Assistant, U. S. Forest Service, 1920-21.
 Research Assistant, Harvard Forest, 1923-24
 Assistant to Director and Instructor in Forestry,
 Harvard Forest, 1924-30.
 Assistant Director, 1930-40.
 Director, 1940-

Responsibility for course work at the Harvard
 Forest is not apportioned to instructors by credit hours.

My time is divided approximately as follows:

Teaching: Silviculture, certain aspects of forest ecology, forest protection, and forest management,	25%
Research,	25%
Administration,	50%

Schedule 7.

(3a.) Faculty

Name Paul Rupert Gast

Education. Institutions and degrees, with dates.

Brown, Ph.B., 1920
 Syracuse, M.S., 1922
 Harvard, S.D., 1927

Occupation, by years, since graduation

Assistant in botany, Syracuse, 1920-22
 Assistant, Harvard Forest, 1922-24
 Instructor, Harvard Forest, 1924-29
 Assistant in Biophysics Lab., Harvard, 1922-27
 Agent, U. S. Forest Service (Northeastern Forest
 Experiment Station), 1924-29
 National Research Council Fellow, Sweden, 1929-30
 Assistant Professor, Harvard, 1930-

As responsibility for course work at the
 Harvard Forest is not apportioned to instructors by credit
 hours, the alternative is to state time spent on various
 activities, as below:

Teaching, tree physiology and soils,	35%
Research,	65%

Schedule 7.

(Jr.) Faculty

Name Russell James Lutz

Education. Institutions and degrees, with dates.

B.S.F. Syracuse, 1933
M.F. Harvard 1938

Occupation, by years, since graduation

Superintendent C.C.C. Camp	1933-34
Inspector, U.S. Forest Service,	1934-35
Assistant Ranger and Chief Foreman C & M, USFS	1935-37
Student, Harvard Forest	1937-38
Instructor and Assistant to Director, Harvard Forest	1938-

Teaching at the Harvard Forest is not organized on a credit hour basis. My time is divided approximately as shown below:

Administration	25%
Teaching, Silviculture, Forest ecology, management	50%
Research, silviculture	25%

Schedule 7.

(3a.) Faculty.

Name Stephen H. Spurr

Education . - Institutions and degrees, with dates.

University of Florida	BS	1938
Yale School of Forestry	MF	1940

Occupation, by years, since graduation.

Teaching and research 2 years

teaching at the
 As the/Harvard Forest is not organized on a credit
 hour basis, the appended statement of subjects
 taught is given in terms of the distribution of
 my time between them.

Forest ecology	15%
Silviculture	10%
Research	75%

Harvard University
Graduate School

Summary of Faculty: Director; Assistant Professor; 2 Instructors, one also assistant to Director. Statement on members of the Faculty and such others as may collaborate with the staff of the Harvard Forest in instructing M.F. candidates not included in report: "We are placing quite a little weight on an ecological background for students specializing in silviculture, and for instruction in this field we depend to a considerable extent upon Dr. Hugh M. Raup of the Arnold Arboretum staff. In economics, instruction is supervised by Dr. John D. Black of the Department of Economics and the Graduate School of Public Administration."

Albert C. Cline. Director.

N. Y. State Col. of For. B.S. 1920; M.F. 1922; Harvard Univ. M.F. 1923.

1920-21 Forest Assistant, U. S. Forest Service.

1923-24 Research Asst., Harvard Forest, Harvard Univ.

1924-30 Asst. to Director and Instructor in Forestry.

1930-40 Assistant Director.

1940- Director.

Teaching*, - Silviculture, certain aspects of Forest Ecology, Forest Protection and Forest Management, 25%; Research, 25%, Administration 50%.

Paul R. Gast. Asst. Prof.

Brown Univ. Ph.B. 1920; Syracuse Univ. M.S. 1922; Harvard Univ. S.D. 1927.

1920-22 Asst. in Botany, Syracuse.

1922-24 Asst. Harvard Forest

1924-29 Instructor, Harvard Forest ; Agent, U.S. For. Ser., Northeastern Forest Experiment Station; also, 1922-27, Asst. in Biophysics Lab., Harvard Univ.

1929-30 National Research Council Fellow, Sweden.

1930- Assistant Prof., Harvard.

Teaching, - Tree physiology and soils, 35%; Research 65%.

Russell J. Lutz. Instructor and Asst. to Director.

Syracuse Univ. B.S.F. 1933; Harvard Univ. M.F. 1938.

1933-34 Superintendent, C.C.C. camp.

1934-35 Inspector, U. S. For. Ser.

1935-37 Asst. Ranger and Chief Foremen C & M, U. S. For. Ser.

1937-38 Student, Harvard Forest.

1938- Instructor and Asst. to Director, Harvard Forest.

Teaching, - Silviculture, Forest ecology, management, 50%; Administration 25%; Research, silviculture, 25%.

Stephen H. Spurr. Instructor.

Univ. of Florida, B.S. 1938; Yale Univ. M.F. 1940.

1940- Teaching and research

Teaching, - Forest ecology 15%; Silviculture 10%; Research 75%.

*Responsibility for course work is not apportioned to instructor by credit hours at this institution. The time of each faculty member is divided approximately as shown.

Schedule 8. Bibliography of faculty members.

The weights attached to publications are as follows:

- | | |
|---|----|
| 1. Textbooks or publications of substantial form and merit. | 40 |
| 2. Publications or bulletins presenting original research,
such as theses, etc. | 15 |
| 3. Shorter articles containing scientific material, and
appearing in scientific magazines. | 5 |
| 4. Other publications of merit in advancing professional
forestry, which cannot be classed under 3 but which
represent professional knowledge or contributions.
These may appear in any publication. | 1 |
| 5. Popular articles not qualifying under 4, excluded. | |

List separately under classes 1, 2, and 3 above, with dates of publication.

Name _____

List

See attached lists.

A. C. Cline

Publications

2. Mixed white pine and hardwood. With C. R. Lockard. Harvard Forest Bulletin No. 8, 1925.

The marketing of lumber in New Hampshire. Harvard Forest Bulletin No. 10, 1926.

Pruning for profit as applied to eastern white pine. With E. D. Fletcher. Joint publication of Harvard Forest and Massachusetts Forestry Association, 1928.

Forest weeding with special reference to young natural stands in central New England. Joint publication of Harvard Forest and Massachusetts Forestry Association, 1929.

A method of reclaiming severely weeviled white pine plantations. With H. J. MacAloney. Massachusetts Forestry Association, Bulletin No. 152, 1931.

The improvement of weeviled white pine plantations. With H. J. MacAloney. Connecticut Forest and Park Association, Publication No. 24, 1933.

Cutover old field pine lands in central New England. With F. S. McKinnon and G. R. Hyde. Harvard Forest Bulletin No. 18, 1935.

Improvement cutting and thinning as applied to central New England hardwoods. Massachusetts Forest and Park Association, Bulletin 155. 1935.

Silvicultural control of the gypsy moth. With C. Edward Behre and W. L. Baker. Massachusetts Forest and Park Association, August 1936.

The virgin upland forest of central New England. With S. H. Spurr. Harvard Forest Bulletin 21, 1942. (In press)

3. Forest management. Empire Forester, New York State College of Forestry, 1921.

The group selection method with white pine. Jour. of Forestry, 22(2):February 1924.

Lumber consumption in the Springfield district. With other staff members. Special publication of the Harvard Forest, 1925.

Conquering the forest weeds. The Empire Forester, New York State College of Forestry, 1930.

- The William H. Walker forest and wood-using industry. Journal of Forestry, 29(4):April 1931.
- Progress report of the reclamation of severely weeviled white pine plantations. With H. J. MacAloney. Jour. of Forestry, 33(2):November 1935.
- Stereum Sanguinolentum: A dangerous fungus in pruning wounds on northern white pine. Northeastern For. Exp. Sta., Tech. Note No. 19, March 1935.
- A study of the gypsy moth in the town of Petersham, Mass., in 1935. With W. L. Baker, Jour. of Forestry, 34(8):August, 1936.
- Ecological forestry in central New England. With S. H. Spurr. Jour. of Forestry, May 1942.
- The white pine weevil and its control by the application of concentrated sprays. With Samuel F. Potts and Henry L. McIntyre. Jour. of Forestry, May 1942.
4. Pure white pine versus pine in mixtures. American Forests and Forest Life, 1924.
- The William H. Walker Forest. American Forests and Forest Life, December 1930.
- Weeding the farm wood lot. The Old Farmer's Almanac, 142nd ed., 1934.
- Opportunities for profit in New England Forestry. The Old Farmer's Almanac, 144th ed., 1936.
- A new outlook for the woodlot owner. The Old Farmer's Almanac, 145th ed., 1937.
- ✓ Silvicultural aids in the control of the gypsy moth in watershed forests. Jour. of New England Water Works Assoc., Vol. LI, No. 3, September 1937.
- A sounder basis for woodlot forestry. The Old Farmer's Almanac, 146th ed., 1938.
- The restoration of watershed forests in the hurricane area. Jour. of New England Water Works Assoc., June 1939.
- Our forests and the hurricane. The Old Farmer's Almanac, 147th ed., 1939.
- Growing a crop of trees, Conservation week in the schools of Massachusetts. New England Wild Flower Preservation Society, 1939.
- The hurricane area of New England: a problem in forest restoration. The Alumni News, N. Y. State Ranger School, 1939.
- Forestry should begin with the forest. Conn. Woodlands, May 1941.

P. R. Gast

Publications

2. A thermoelectric radiometer for silvical research. Harvard Forest Bulletin No. 14, 1930.

Studies on the development of conifers in raw humus. III. The growth of Scots pine (Pinus silvestris L.) seedlings in pot cultures of different soils under varied radiation intensities. Meddelanden fran Statens Skogsforsoksanstalt, 29(7):587-682. 1937.

3. Report on window glass substitutes, with members of the Council on Physical Therapy of the American Medical Association. Journal American Medical Ass'n, 88:1562-1567. May 1927.

A correlation between solar radiation intensities and relative humidities. Monthly Weather Review, 57:464-465. 1929.

Solar radiation and relative humidity in relation to duff moisture and forest fire hazard. With P. W. Stickel. Monthly Weather Review, 57:466-468. 1929.

Pyrheliometers - when invented, types and characteristics, and uses to which their records have been put. (Symposium on light measurement). Proc. New Eng. Sec. Am. Soc. Plant Phys., pp. 13-25. May 1936.

Contrasts between the soil profiles developed under pines and under hardwoods. Jour. For., XXV(1):11-16. 1937.

S. H. Spurr

Publications

2. The virgin upland forest of central New England. With A. C. Cline. Harvard Forest Bull. 21, 1942. (In press)
3. Compression wood in weeviled northern white pine. Journal of Forestry, 39:1005-1006, 1941.
Ecological forestry in central New England. With A. C. Cline. Paper presented before Ecological Society of America, Philadelphia, 1940.
The influence of two *Juniperus* species on soil reaction. Soil Science, Oct. 1940. pp. 289-294.
Notes on the distribution and habits of ferns and northern peninsular Florida. Proc. Fla. Acad. Sci. 1941.
Factors determining the distribution of Florida ferns. Amer. Fern Journal, Sept. 1941.
4. The pine that isn't a pine. American Forests, March 1941.

Schedule 9.

Enrollment for current year in Department of Forestry only.

	First Semester	Second Semester
Freshmen		
Sophomores		
Juniors		
Seniors		
Total Undergraduates		
Candidates for:		
Masters	8*	8
Doctors	1	1
Total Postgraduates		
Total regular		
Special		
Ranger Schools		
*Actual Enrollment		
Masters	5	4

Schedule 10a Budget for Teaching.

4a.1' Salaries for instructors. Year 1941-42

Adjustments. a. Salary of head may be divided between instruction 1' and administration 2' on basis of proportionate time for each.

b. Add to budget the proportion of salaries of members of other faculties who teach regular forestry subjects (see first sheet) which represents the proportion of their time given to instruction. List below

c. Add to budget one half of the proportion of salaries of members of other faculties teaching Group 6 subjects which represent the above stated ratio of time.

d. If regular forestry faculty members teach one half or more of their time in Group 6 subjects, deduct one half of their proportionate salary for the time devoted to these Group 6 subjects,

e. Keep extension budget separate for both instruction and administration

(4a 2')

Budget for year instruction, \$4,555.

Adjustments made to derive above budget

Director's
a. Dean's salary. Teaching and Research Administration \$2,250

b. Other faculties teaching forestry subjects.

Name	Total hrs. on Forestry	Per cent of total time	Total salary	Salary for teaching Forestry
A. C. Cline		25	\$4,500	1,125.00
P. R. Gast		35	4,500	1,575.00
R. J. Lutz		50	2,400*	1,200.00
S. H. Spurr		25	1,650*	412.50
J. W. Johnston		10	1,200*	120.00
J. Vlamis		10	1,225	122.50
J. D. Black ^x				
H. M. Raup ^x				

Group 6, Faculty (Regular and others)

Name	Total hrs. on Group 6	Per cent of total time	Total salary	Group 6 salary	1/2 Group 6 salary
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J. D. Black^x

* including extras

^x see description of instruction offered by these faculty members under Schedule 5.

Schedule 10b. Budget for administration and research.

4a. 2'

Administration as distinguished from teaching should carry that part of the director's salary which represents the proportion of his time given to such duties instead of class work, and the cost of all clerical and assistant help, except that engaged directly in instruction. For administration of school forests or nurseries, yielding income, include only net cost to budget.

Research should include (a) funds budgeted for expense of research projects, (b) salaries of faculty members engaged exclusively in research, (c) no portion of other salaries unless entire semesters are devoted exclusively to research, when the salary should be so apportioned.

Group 6, research and administration. The purpose is to allow one half the funds budgeted for research in Group 6 subjects. Consistent with other credits under salaries and time. An effort should be made to approximate the totals spent for administration and for research separately but exactness is not necessary.

Contributions from federal funds are not to be included in the budget.

Budget for administration and research*

<u>Regular</u>		
Administration	A. C. Cline	\$2,250
Research	A. C. Cline	\$1,125
Group 6 Total	One half	
Administration	<u>None</u>	_____
Research	<u>None</u>	_____
Total budget allowance (10b)		<u>22,186.90</u>
Budget for teaching (10a)		<u>4,555.00</u>
Total budget		<u>\$26,741.90</u>
Extension budget, total	<u>None</u>	_____

Why not subtract Teaching budget of \$4,555. from total budget, and show remainder as Budget for Admin- istration & Research?

* The activities of the members of the staff are such a varied combination of teaching, administration, and research that only a rough estimate can be made of the time devoted to each. No division is made in the budget. The amount of time spent by each member of the staff on the different classes of work depends upon the current research projects, the fields in which the students are pursuing their studies, and other variables which are impossible to predict from year to year. See Schedule 17.

Schedule 11. Give in full

(4b. 1') Salary. For each individual. Names not necessary. All information will be kept confidential.

List each individual under his own grade, as: Head of Department, Professor, Associate Professor, Assistant Professor, Instructor, Assistant in Instruction. List separately men engaged in research for full time, and those for part time (see Schedule 2).

Salary Scale

<u>Grade</u>	<u>Salary paid 1940-41</u>	<u>Months on Salary</u>	<u>Average salary per month</u>	<u>Additional salary for summer instruction</u>
Director	\$4,500	12	\$375	none
Asst. Professor	4,500	12	375	none
Asst. to Director	2,000	12	166.67	none
Instructor	1,500	12	125	none
Lab. Assistant	1,225	12	102	none
Field Assistant	1,080	12	90	none

14,805

Schedule 12.

(4b. 2⁺) Salary Accessories.* General.

- 1. Arrangements for sabbatical years in respect to custom, frequency of actual occurrence, salary adjustments. Summarize actual number of sabbatical years or half years taken by faculty.

No schedule of sabbatical years has been fixed. In 1934-35 one instructor used a year of sabbatical leave for advanced study, receiving half pay.

*How about
cost?
Had six weeks
or less in 1930.
Had six weeks in 1935.
These 9 that of as
accumulated vacations - not sabbatical leave.
PRS.*

- 2. Travel allowances in addition to salary. Custom; budgetary provision; approximate amounts granted, total and per individual, omitting instructors.

Travel allowance for attendance of Director and Asst. Professor at scientific meetings, etc., \$20 per year, average for five years. No specific budgetary provision for this expense.

*Would also
include
travel by motor
car with
students - Cape Cod, northern trips, nearby trips, etc.
No - this is travel
to scientific meetings -
according to my understanding!
PRS*

- 3. Clerical assistance^x(time, in decimals of one person per year) granted:
 - To head of department _____;
 - to individual professors, total _____;
 - Average _____.

* Director, instructor, and field assistant receive free room rent, light, and heat.
Assistant to Director receives free house rent and heat.

^x Two full time secretaries available to members of the staff for clerical assistance.

Schedule 13. Changes since July 1, 1935.

(5a.) Equipment. Buildings. Classrooms or laboratories used in common with other departments are stated separately.

For classrooms, give proportion of total use, by Department, and total floor space. (See laboratories.)

Three new buildings in 1940-41

Total floor space now available, square feet. Where used exclusively by forestry, include hall and storage space in building, including laboratories (which are also stated separately in Schedule 15.)

Offices, etc.	6,000 sq. ft.	
Laboratories and stock room	3,200	
Museum	5,500	
Storage	<u>11,600</u>	26,300

Library. Statement on Schedule 14, substituting 14a.

It is practically impossible within the limits of reasonable cost to appraise the contents of a forestry library on the basis of its intrinsic value for forestry education and research. Any attempt to do so would introduce the variable element of judgment. For instance, the North Central Association of Colleges and Secondary Schools, in measuring the output of the faculty, merely lists the number of articles published, without reference to their quality, regardless of the criticisms which this procedure may arouse. In our first attempt to measure forestry libraries we resorted to a classification by number, of books, weight 10, pamphlets, weight 1, and periodicals, weight 50. The only distinction between books and pamphlets which can be applied without discrimination is that books are bound, pamphlets are not. A distinction classing books as publications of over 100 pages and pamphlets under 100 pages is fully as arbitrary. Bound pamphlets would thus become books and books if unbound would be pamphlets. What is wanted in this case, as in other items, is a rough approximate total measurement of the library for comparative purposes with other libraries.

Periodicals on the arbitrary basis of 50 points for one series falls down by reason of the fact that the series may not be complete and the great range of years covered by different series. Also if periodicals are unbound, 12 issues count 12, while 1 bound volume is 10 or if bound in two volumes it is 20.

For these reasons the instructions for reporting on contents of forestry libraries will be as follows.

Forestry includes ¹⁾ forest management and mensuration, ²⁾ forest economics and valuation, ³⁾ silviculture, ⁴⁾ forest protection, and ⁵⁾ forest utilization; also forest engineering, forest surveying, and forest improvements, but not general surveying or engineering. It includes forest soils but not general soils, etc. See Page 1 of forms.

Group 6, Allied subjects (page 1), does not include general literature on basic sciences, economics, or other items not directly dealing with range management, wildlife, etc.

All other literature is part of general library contents, and not of forestry library, and is classed as auxiliary library whether or not it is part of the forestry library.

The report on the forestry library will be on the enclosed form, Schedule 14a, which please substitute for lower half of Schedule 14 in the forms for report already sent you.

H. H. Chapman
Chairman, Committee on Accrediting
Schools of Forestry, S.A.F.

January 21, 1942.

Schedule 14. For current year.

(5b.) Libraries.

1. Form of organization of forestry library; separately housed and with separate librarian; combined with general library of institution; if so, degree of accessibility and of separate attention given to forestry.

Time of librarian devoted to forestry exclusively, in decimals of one person per year .75.

Budget for forestry library. For salaries _____ For Accessions \$250.

2. Contents of library. Forestry. Includes Silviculture, management, protection, utilization, and forest economics including forest policy. Excludes allied subjects such as grazing, wild life, recreation, landscape architecture, arboriculture, erosion control.

Allied subjects exclusive of forestry, include all the above additional subjects, but do not include agriculture, horticulture, engineering, etc.

(The contents of libraries will embrace the above together with agriculture, sciences, economics, engineering and many other subjects not directly related to forestry, and not to be included.)

The data on the library should show the extent of the literature available to professional forestry students, in their own field, rather than a total figure of miscellaneous topics.

Data should show:

For separate forestry library, number of units in

	<u>Books</u>	<u>Pamphlets and Bulletins</u>	<u>Periodicals; number of series, and total units or volumes</u>
FORESTRY ONLY	_____	_____	_____
SUBJECTS ALLIED TO FORESTRY	_____	_____	_____
(IF DESIRED) OTHER SUBJECTS	_____	_____	_____

For forestry library incorporated in general library of institution

FORESTRY ONLY	_____	_____	_____
SUBJECTS ALLIED TO FORESTRY	_____	_____	_____
OTHER SUBJECTS	_____	_____	_____

Other general libraries available in vicinity for research

TOTAL CONTENTS	_____	_____	_____
----------------	-------	-------	-------

See 14a

Schedule 14a.

1. Linear feet of shelf space included in

- a. Forestry subjects 658 ft.
- b. Group 6 subjects 8 ft.
- c. Auxiliary subjects if incorporated in forestry library 10 ft.

2. Forestry subjects

- a. Bound volumes
 - 1' Books 450
 - 2' Periodicals or serials 2177
- b. Unbound publications
 - 1' If serials are unbound, number of years represented for serials issued monthly or oftener (otherwise class as pamphlets). 1-2 yrs.
 - 2' Other unbound publications or pamphlets 6174

3. Group 6 subjects (allied to forestry).

- a. Bound volumes
 - 1' Books 35
 - 2' Periodicals or serials _____
- b. Unbound publications
 - 1' Periodicals (see above) 16
 - 2' Other unbound publications or pamphlets 110

4. Other general or institutional libraries available.*
If more than one, separately.

- a. Bound volumes (approximately) _____
- b. Pamphlets (approximately) _____

The arbitrary scale, classing periodicals as either books (including 1 year as a book, counting 10) or as pamphlets (counting 1) will be used. Another arbitrary rule is that duplicates should not be counted except for shelf space. A third is that volumes in paper or cardboard covers are counted as pamphlets, not books.

* Loans available from any Harvard University library.

Schedule 15.

(5c.) Laboratories; equipment.

1' Space, square feet, exclusively for forestry 3,200 sq. ft.
 (If laboratories are used in common with other departments, state separately and give space, and proportion of total use (time basis) by forestry department.)

2' Equipment. Inventory value.

a. Fixed equipment and machinery, total inventory value \$4,000.*

b. Hand equipment, instruments, tools, total inventory value \$6,750.X
 for instruction in forestry subjects (mensuration, etc.).
 (Surveying equipment, transits, levels, etc., are assumed to be adequate or to fall in other departments.)

c. Research equipment not included in a and b above, total inventory value \$100#

Total value of machinery and equipment, excluding surveying items

\$9,850.

Adequacy of surveying equipment. Adequate, value about \$1,000.

Comments:

* This figure is the cost of the laboratory furniture: chemical tables and fixtures, hoods, hoods for ventilating fan, etc.

X This figure is the value of the equipment used for the measurement of solar radiation and for the chemical and physical determinations of soils. The solar radiation equipment includes pyrhelimeter with recording and integrating potentiometer, photronic cells, and adjunct radiometric and electrical apparatus. The laboratory equipment includes the usual chemical balances, ovens, water bath, and other equipment useful for the determination of soil texture, moisture constant, chemical content of nutrient elements in the soil and in plant tissues.

This figure is the estimated value of miscellaneous drafting equipment.

Schedule 16.

(6a.) Forest land available for field instruction.

In attempting to evaluate the factor of forest land owned and controlled by the schools and available for field instruction, it is obvious that mere area in acres is not the answer. The four factors enumerated below determine the value of any tract for this purpose. Each separate tract or group of similar (small) tracts (nurseries separate) must be appraised under each of the four headings, grading each point on a scale of 100.

- a. Accessibility of location for current instruction or for camps of long duration, judged by the use to which they are put for purposes of instruction. Each tract separately.
- b. Character and diversity of forest cover, topography and soil conditions, the greater utility attaching to the greater diversity. Take the maximum needed diversity for the region as 100. For tracts that are different, each of which is accessible or usable, the per cent for the whole can be applied separately to each.
- c. Accessibility to markets and to logging; desirability increasing with accessibility. Each tract separately.
- d. Development of the tract under management, and extent and period over which management plans, protection and research have been carried with 20 years and good development as 100 per cent.

If the tract is not owned by the school, state the character of control exercised over it such as,

- 1' Owned by the institution in which the school is located but not under forestry contract; under contract for use by the school; informal agreement for use by school.
- 2' Public lands available for school use, but not under permit or definite agreement.
- 3' Any other lands available and terms of use, if used by school.

Forest land owned or controlled by school.

<u>Tract</u>	<u>Area</u>	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>Owned</u>	<u>Controlled</u> (See Note)
Harvard Forest proper	2,292	100	100	100	100	yes	
Black Brook	106	50	*	100	100	yes	
Pisgah	20	75	*			yes	
Schwarz	45	100	*	100	50	yes	
Higginson	25	100	75	100	50	yes	

*These three tracts given to Harvard Forest for special purposes.

See attached sheet

Schedule 16

The Harvard Forest is located mainly in the town of Petersham, in northern Worcester County, Massachusetts. A very small portion extends into the adjoining town of Phillipston. The Forest proper consists of three separate blocks, lying northeast, northwest, and southeast of Petersham village. All of these tracts are within easy access from the headquarters buildings, situated some three miles north of Petersham village along state highway No. 32. In toto, they comprise 1970 acres of upland, 116 acres of forested bog, and 206 acres of water, marsh, and other non-forested areas. The three main blocks are divided into twenty-eight compartments, and the compartments into some five hundred stands. In continuity of intensive silviculture and completeness of stand records, these are probably the oldest managed tracts in America.

Well represented within the Forest are the complex and diverse conditions of tree cover, soil, and topography characteristic of central New England -- a transition zone marked by the overlapping of the northern forest and the central hardwood forest.

A wide variety of silvicultural operations have been carried out in the Forest yearly since 1908, the date which marks the beginning of the Harvard Forest. In these operations students participate under the guidance of staff members. Not all of the Forest is given cultural treatment. Some areas are set aside as representative cases in forest history or condition, because of their special value as places to study the ecological basis for the practice of silviculture. Others are left untreated as control areas for comparison with experimental plots.

A wildlife sanctuary, maintained in cooperation with the Massachusetts Department of Conservation and adjoining woodland owners, provides an opportunity to study the relation of wildlife to forest management.

In addition to these three main tracts, the Forest owns four outlying tracts, two in Petersham, one in Hamilton, Massachusetts, and one in Winchester, New Hampshire. The two in Petersham include the Schwarz Tract and the Higginson Tract. The former, a 45-acre parcel, was donated for the development and demonstration of landscape forestry. Detailed plans had been prepared and work had already been started along these lines, only to be interrupted by the hurricane of 1938. Much of the standing timber was destroyed by this storm, and the initial plans will have to be revised to conform to the changed conditions. By no means has this tract been rendered useless for the purpose intended. Many forest estates are in a similar condition, and the future work contemplated for this area may well lead to demonstrate how forest estates within the hurricane area can be rehabilitated. The Higginson Tract of 25 acres is similar in every respect to areas within the Forest proper and is used for the same purposes.

At Hamilton the Forest owns 106 acres of closely spaced exotic plantations, the oldest ones dating back to 1897. Conifers and hardwoods are included, with the former much in the majority. Both groups consist of trees from the north temperate zone, and

were planted in all manner of mixtures, furnishing an unequalled opportunity for the study of important exotics under forest conditions. Although much work has been done by way of thinning and improvement cutting in the oldest and densest stands, and sample plots have been established to follow certain methods of treatment, the chief function of the tract will be that of an arboretum. Located as it is, some 100 miles away from the headquarters at Petersham, and in a community where importance for timber growing is secondary to aesthetics, the use of this tract as an arboretum and for recreation is perhaps the best disposition, at least for the time being.

At Winchester, New Hampshire, the Forest owns a 20-acre tract of virgin timber on Pisgah Mountain -- one of the very few authentic areas of undisturbed original forest in this region. This tract is reserved strictly for study and observation; no cutting of any kind is permitted. It suffered heavy losses from the hurricane, but even in their prostrate form these veteran trees, with their huge upturned roots and boles nearly 150 feet long, make an impressive scene seldom witnessed before in this section of New England. The usefulness of this tract for the purposes intended has by no means been destroyed.

Schedule 17.

(6b.) Field instruction for current year. *

By credit hours (3 hours of work = 1 credit)
or 1 week of field work = 1 credit.

1' Summer terms. **None**

Subjects taught (list separately).

Credit hours.

2' Given during regular terms, by subjects.

(In mixed field and class courses, only the actual hours in field,
reduced to credit hours as above, are desired.)

Subjects taught.

Credit hours
(field work only)

* By special permission of the University, the Harvard Forest autumn term in 1941 began August 15 in order to provide a longer field season than would normally have been possible.

Subjects: Regional forest history
 Forest ecology
 Forest soil science
 Forest tree physiology
 Silviculture and management
 Forest protection
 Utilization

See attached sheet.

Schedule 17

The Harvard Forest, as a unit of the Graduate School of Arts and Sciences of Harvard University, offers only graduate instruction in forestry. The work is very largely biological in character, with special emphasis on silviculture and certain of the natural sciences which underlie and support it. The acquisition of the forest property in 1907 filled an indispensable need for a place where instructors and students could work together in the forest throughout the year. Men specializing in forest economics spend part of their time in Cambridge to take courses in economics given by the Department of Economics and the Faculty of the Graduate School of Public Administration.

Two general methods of instruction, the research project method and the case method, are given to students at Petersham.

The research project method is especially suitable for men desiring to fit themselves for research or teaching in forestry. Following the completion of a period of general instruction, the student devotes most of his time to one or more research projects under the direction of the staff. The thesis forms the major test of the student's ability and the basis for his final grade.

A wide variety of research projects may be undertaken. The Forest has been under intensive management for over thirty years, and hundreds of stands have received silvicultural treatment. Successional stages in forest history are well defined, as well as remnants of the original forest. These conditions provide unusual opportunities for investigations in silviculture and forest ecology.

Continuing research projects in tree nutrition and growth offer another field of concentration. The relation to tree growth of such environmental factors as light and soil nutrients and such adjunct biological factors as symbiotic fungi on the roots (mycorrhizae) is being investigated. Some of the studies in tree breeding supported by the Maria Moors Cabot Foundation for Botanical Research are conducted at Petersham.

In the field of forest protection, the student may benefit through participation in the experimental work being carried on jointly with the Division of Forest Insect Investigations and the Division of Forest Pathology of the U. S. Department of Agriculture.

The case method of instruction is designed especially for students planning a career in specialized professional practice in silviculture. Representative stands which have been under treatment for a number of years are studied as cases illustrating forest history and the application of silviculture. The cases are taken up in the same order as that generally followed by text books of silviculture, that is, the several standard reproduction methods first, followed by the intermediate treatments. Each case is assigned for reading, then examined in the field, and its various aspects discussed with the instructor. The cases also serve as material for short original studies and for actual silvicultural treatment by the students.

Schedule 18.

(7. 6') Alumni, Number of. Graduates of school with professional degrees, since origin of such institution. 126; living, 113.

Returns from graduates,	100	Non-graduates with 1 or more years of technical Forestry (Junior and Senior Equivalents).
from non-graduates,	8	
Undergraduate Degrees	Graduate Degrees	
	From Institution	From other Schools
9	91	11*

*Eleven of the 91 have taken further advanced degrees.

Alumni, Employment.

Graduates, eliminating duplication

<u>Technical Forestry</u>	<u>Lumbering and Products</u>	<u>Fields¹ Allied to Forestry</u>	<u>Other Occupations</u>	
69	6	6	19	100
Non-Graduates	1	4	3	8

¹See Schedule 2.

Schedule 20.

Alumni Income. Under point 7b 1' (page 148) efficiency of alumni was graded on earnings or professional income in forestry, compared with a sliding scale standard to equalize the time element. The basis was the questionnaire of 1929, by Guise.

Part of the efficiency of a school lies in keeping track of its alumni. An institution desiring regrading is asked to assemble, by questionnaire, the following data from its alumni (also useful in submitting list under point 7b 2'). The data will be graded on (a) completeness of returns, and (b) income indicated.

88.5

Data desired:

Institution _____ Fiscal year 1941 (Jan. 1 to Dec. 31), or
if data were so gathered, for 1940.

Name _____ Degree _____ Year _____

Address _____ Occupation, position, and title _____

_____ Name of employer _____

Address of employer _____

Income, professional:

Salary _____

Additions to salary (expenses, etc.) _____

Other professional income (royalties, fees, etc.) _____

Total professional income _____

For non-graduates with one or more years of professional training, whom the institution desires to keep on their records, the same data may be secured, but this will not be included in grading.

	Average Income
Technical Forestry	
Prominent	\$4190
Other	2525
Lumbering	
Prominent	6613
Allied Fields	
Prominent	4380
Other	2593

Schedule 20

Year	No. Living Graduates	Returns from	Average Salary	Remarks
1941	5	5	\$2420	Average of 3; other 2 in army.
1940	1	1	4400	Degree granted to older man who is technically prominent in forestry and who took his work at intervals over a period of years.
1939	4	4	2613	
1938	3	3	2600	1 not in forestry*
1937	2	2	2243	
1936	2	1	1080	part time work
1935	6	5	3327	average of 4; 1 doing graduate work
1934	3	2	2900	
1933	0			
1932	5	4	3466	1 not in forestry*
1931	4	3	3800	
1930	5	5	3620	
1929	3	3	3510	1 not in forestry*
1928	2	2	4200	1 not in forestry*
1927	6	6	3458	1 not in forestry*
1926	2	2	3975	
1925	3	3	3998	1 not in forestry*
1924	3	3	3662	
1923	2	2	3713	
1922	3	3	4126	
1921	1	0		
1920	3	3	4250	
1919	0			
1918	1	1	3000	
1917	0			
1916	1	1	--	not in forestry

*Salaries of those not in forestry not included in averages.

Year	No. Living Graduates	Returns from	Average Salary	Remarks
1915	1	1	3300	
1914	5	5	4187	2 not in forestry*
1913	7	5	4769	1 not in forestry*
1912	4	4	7900	1 of 3 in forestry owns his business (lumber) but does not indicate income.
1911	2	2	3400	1 not in forestry*
1910	4	3	7100	1 not in forestry*
1909	6	4	5467	average of 3; one owns his business (lumber) but does not indicate income.
1908	6	6	5530	1 not in forestry*
1907	5	3	4200	1 of 2 in forestry owns his business (lumber) but does not indicate income.
1906	3	2	6200	1 not in forestry*
1905	2	1	3800	

*Salaries of those not in forestry not included in averages.

Schedule 19.

(7b. 2*) Alumni prominence.

List names and occupations of alumni to be included in the "prominent" class. (Confine preferably to graduates from the undergraduate courses; separate list can be made of men with post graduate degrees who have not graduated from the institution in the undergraduate courses.)

In government service, list only those who have attained to the rank of forest supervisor or higher positions.

In state work, those attaining the rank of district forester or up.

In education those of professorial grades.

In Private work, superintendents of operations or higher positions.

In research, those who have produced important contributions or whose rank is equal to supervisor.

In association work, secretaries and others to correspond, if not covered above.

Include only those engaged in forestry or land management allied to forestry (qualified presumably for senior grade in the Society).

Technical Forestry

Prominent	51
Other	18

Lumbering

Prominent	6
-----------	---

Allied Fields

Prominent	4
Other	2

Other Occupations	19
-------------------	----

See attached lists.

See Outdoors Power Read

PROMINENT ALUMNAE

With Undergraduate Degrees

- Richard F. Hammatt, Assistant to the Chief, U.S. Forest Service
- C. J. Heller, Forest Engineer, In Charge of general woods work and sawmills and box shoo mill, The Texas Company, N. Y.
- Guy W. Lucas, District Forester, Mass. Dept. of Conservation
- Ray F. Weston, Chief Forester, Hollingsworth & Whitney Co., Mobile

With Graduate Degrees

- Clarence C. Averill, Assistant to Assistant Regional Forester, Region 2, U. S. Forest Service
- Robert W. Averill, Member of firm-consulting Foresters, Prentiss & Carlisle Co. Inc.
- I. W. Bailey, Prof. of Plant Anatomy, Biological Laboratories, Harvard University
- Kenneth E. Barraclough, Extension Forester, University of New Hampshire Extension Service
- Eitel Bauer, Forest Manager, Blue Springs Farms, Hamilton, Ga.
- Willis C. Branch, Forest Supervisor, Ozark National Forest, U. S. Forest Service
- Philip P. Brooks, President of Montan Pole Company, Boston
- Edward S. Bryant, Timberland owner
- Joseph W. Butler, Wholesale Hardwood Lumber, Own Business
- R. R. Chaffee, Forester & General Manager, Wolf Creek Timber Co., and Rogue River Timber Co.
- Kenneth McR. Clark, Administrative officer C.C.C. (Forester P4) in charge of state and private forest CCC camps in New England and New Jersey, U. S. Forest Service (R-7)
- A. C. Cline, Director of the Harvard Forest, Harvard University
- Harold O. Cook, Chief Forester and Acting Director of Division of Forestry, Mass. Dept. of Conservation
- James D. Curtis, Assistant Prof. of Forestry, University of Maine
- S. M. Dohanian, Director, Filbert Insect Laboratory, Bureau of Entomology & Plant Quarantine

- Clifford H. Foster, Director of Pack Demonstration Forest and Assistant Professor of Forest Management, New York State College of Forestry
- Louis J. Freedman, Woods Manager, Penobscot Chemical Fibre Co.
- Francis S. Fuller, Chief Division of Marketing, N.E.T.S.A., U. S. Forest Service
- P. R. Gast, Assistant Professor of Forestry, Harvard Forest, Harvard University
- S. R. Gevorkiantz, Silviculturist, Lake States Forest Experiment Station
- Albert W. Gottlieb, Assistant State Forester, Vermont Forest Service
- B. G. Griffith, Assistant Professor of Forestry, University of British Columbia
- C. B. Gutchess, Proprietor of a lumber business ~~Employed~~
- William R. Haddow, Forest Pathologist, Dept. Lands & Forests Toronto
- Warren F. Hale, Assistant State Forester, State of New Hampshire
- Ralph C. Hall, Associate Entomologist, Forest Insect Laboratory, University of California
- Alden B. Hatch, Regional Inspector of U. S. Fish & Wildlife Service, U. S. Dept. Agric.
- Clarence S. Herr, Assistant Extension Forester, Extension Service, Durham, N. H.
- R. Milton Hick, District Forester, State of N.Y. Conservation Dept.
- Torkel Holsoe, Assistant Professor of Silviculture, West Virginia University
- N. W. Hosley, Associate Professor of Forestry & Wildlife Management, University of Connecticut
- William G. Howard, Director of Lands & Forests, N. Y. State Conservation Dept.
- Stuart S. Hunt, District Forester, N. Y. State Conservation Dept.
- George W. Kimball, Assistant Regional Forester, Division of Operation, U. S. Forest Service, Albuquerque
- Joseph Kittredge, Professor of Forestry, University of California

Paul D. Kneeland, President & Treasurer, Kneeland Lumber Co., Inc.

Charles R. Lockard, Forest Economist in charge of Cooperstown
Forest Cooperative Research Project, Northeastern Forest Experiment
Station

Thomas Lotti, Forester, Appalachian Forest Experiment Station

Benton MacKaye, Conservationist, U. S. Forest Service

F. S. McKinnon, Forester in charge Economics Division and Parks
Division, Provincial Forest Service, Victoria

J. Edward Martin, Vice-president and Managing Editor, The
California Lumber Merchant

Harold L. Mitchell, ^{(Senior) fall of 1942} Silviculturist, Southern Forest Experiment
Station

H. B. Peirson, State Entomologist, State of Maine

C. C. Perry, State Leader, in charge of the control of the White
Pine Blister Rust disease in the State of Massachusetts, U. S.
Bureau of Entomology & Plant Quarantine

District

Grant M. Powell, Forester, N. Y. Conservation Department

Paul M. Reed, Forester, ^{in charge of a farm forestry project in Vt.?} Fillmore Farms, Inc.

A. H. Richardson, Forester, Reforestation Division, Dept. Lands
and Forests, Toronto

Harold F. Scholz, In charge of a Norris-Doxey Project in Farm
Forestry in Wisconsin, Associate Silviculturist, Lake States
Forest Experiment Station

Thomas E. Shaw, Extension Forester of Indiana, Purdue University

Harold B. Shepard, Senior Forest Economist, Division of Forest
Economics, U. S. Forest Service

J. Nelson Spaeth, Professor of Forestry, University of Illinois

Wingate I. Stevens, Forester, Division of Lands, U. S. Forest
Service

Lewis C. Swain, Assistant Professor of Forestry, University of
New Hampshire

Kenneth D. Swan, Senior Exhibits and Publishing Assistant, U. S.
Forest Service

Elwood I. Terry, Professor of Geography & Conservation, Winthrop
College

Henry H. Tryon, Director, Black Rock Forest

Lenthall Wyman, Professor of Forestry, North Carolina State
College

To be returned to
H. F.

THE SOCIETY OF AMERICAN FORESTERS

March 22, 1943.

To Committee on Accrediting Schools of Forestry,
Subject: - Status of the "Harvard Forest," Harvard University.

In order to fix a status for this institution some action is called for. The statistical report for Harvard was submitted and graded in September 1942 with a grade of 85.51. It was my intention to complete the inspection of the plant and faculty during the summer of 1942 when I went to Maine, or sooner. Mr. Cline, the director, was unable, after repeated attempts on my part, to arrange for the inspection and on January 14, 1943 wrote me as follows.

"While I regret that the grading of Harvard had to be postponed because of my inability to join you for a visit of inspection, it is perhaps just as well, under the circumstances. In 1942, we had a very 'good' year, and undoubtedly an inspection would have resulted in a better grade than that received in 1935. We had brand new buildings, with greatly increased laboratory and library assets, a very active teaching staff and student group, and an adequate budget. Today, however, we are reduced to a skeleton organization, just large enough to keep things going. We do not have any students this year, and nearly all of the staff members are on leave for the 'duration'. So, in a way, it will be a matter of starting over again after the war. It would appear to me, in view of our present situation, that the regrading should be postponed until such time as we are able to resume fairly normal operations."

I enclose copy of this report and of the grading sheet.

The weakness of this School lies in its faculty. Based on pre-war conditions the faculty numbers 4 and grades 75.00. Reputation as established by vote of all schools is 75.61. Budget for the institution 48.64. The faculty's weakness lies not only in numbers. The institution is primarily for research in silviculture and related subjects including markets. It offers instruction to postgraduate students by means of field studies and thesis, with supporting departments at Harvard College, Cambridge. The number of enrolled students was 8 in 1941-42 and remains consistently small. The institution is well endowed and equipped with buildings at the Harvard Forest, which Forest has been under intensive management since 1909. A series of 21 technical bulletins has been published, with a high standard of quality. The late R. T. Fisher, until his death on June 9, 1934, gave character to the School by his studies in silvicultural management of the pine and hardwood stands on the Forest. Ward Shepard, who succeeded him, was unsuccessful as an administrator and finally resigned, to be succeeded by A. C. Cline, Fisher's assistant, in 1940.

Mr. Cline has a good reputation in New England as a research worker and is personally held in high esteem. As an administrator he distinctly lacks the power of making decisions, tending to procrastinate and postpone action.

The weakest link on the faculty is P. R. Gast, Asst. Professor. Mr. Gast is not a sound or able research man, tending to be erratic, never conclusive, striving for new ideas and never carrying them through. He is even poorer in any administrative capacity....

Russell Lutz, Syracuse '33, Harvard M.F. '38, is an able man, as yet somewhat too immature to attract postgraduate students to take work with him. He left in '42 for the army.

Stephen H. Spurr, Yale M.F. '40, is still younger. He has real ability and versatility as a research man and instructor....

In order to fulfill its manifest opportunity as an institution devoted to research and the training of research workers, this School needs a complete reorganization of its faculty when war conditions permit. Men of ability and reputation are needed if students are to be attracted to the institution.

Under the circumstances it appears that an inspection of the plant and forest is not necessary, since it is known to be adequate. Further information on the faculty, in its present condition, is superfluous. If no action is taken, Harvard will automatically remain in the approved list of institutions and be the only one not included in the revision of 1942.

I therefore recommend that reaccrediting for this institution be withheld until a reorganization of the faculty is effected and ask for your vote on the question.

Respectfully,

H. H. Chapman
Chairman

HARVARD FOREST, HARVARD UNIVERSITY

September 1942.

<u>Group and Class</u>	<u>Title</u>	<u>Grade</u>	<u>Class Standard</u>	<u>Class Weight</u>	<u>Group Standard</u>	<u>1941 Group Weight</u>	<u>1934 Group Weight</u>
1	Departmental status	90.00			6.0	5.40	3.90
2	Faculty, provision for instruction						
	a. Number	75.00	36.5	27.37			
	b. Teaching load	100.00	41.5	41.50			
	c. Research	100.00	<u>22.0</u>	<u>22.00</u>			
	Total 2		100.00	90.87	16.0	14.53	13.96
3	Faculty, personnel						
	a. Experience	70.00	56.5	39.55			
	b. Bibliography	100.00	15.0	15.00			
	c. Reputation	75.61	<u>28.5</u>	<u>21.59</u>			
	Total 3		100.00	76.14	24.0	18.28	10.97
4	Financial support						
	a. Budget						
	1' Instruction	48.64	55.5	27.00			
	2' Administration and research	89.56	<u>44.5</u>	<u>39.85</u>			
			100.0	66.85			
	Subtotal		75.5	50.47			
	b. Salaries	83.98	<u>24.5</u>	<u>20.58</u>			
	Total 4		100.0	71.05	17.0	12.08	11.87
5	Equipment						
	a. Buildings	100.00	30.0	30.00			
	b. Libraries	79.61	32.0	25.48			
	c. Laboratories	100.00	<u>38.0</u>	<u>38.00</u>			
	Total 5		100.0	93.48	12.5	11.69	10.08
6	Field instruction						
	a. Forest proper-ties	100.00	42.0	42.00			
	b. Field work	100.00	<u>58.0</u>	<u>58.00</u>			
			100.00	100.00	12.5	12.50	12.50
7	School and alumni						
	a. Origin and record of School	82.00	31.5	25.83			
	b. Alumni						
	Salaries	93.71					
	Prominence	<u>100.00</u>					
	Subtotal	96.86	<u>68.5</u>	<u>66.35</u>			
	Total 7		100.00	91.88	12.0	<u>11.03</u>	<u>9.39</u>
					Final Grade	85.51	72.67

October 11, 1948

Mr. Henry Clepper
Society of American Foresters
Mills Building
Washington 6, D.C.

Dear Mr. Clepper:

Your letter of July 26 addressed to the Director of the Harvard Forest was acknowledged, in my absence, by my secretary, Miss Carpenter. I was away throughout the summer and did not return to Boston until the 19th of September. I hope you will pardon this delay in my giving attention to the matter, but the press of other work made it necessary for me to catch up with my correspondence by stages.

You ask me a direct question as to whether Harvard University wishes to be considered for reaccreditation in 1950. I do not at the moment know what the criteria will be for reaccreditation. I think that a general statement with some explanation, however, may make clear our position.

During the past two years, since I became Director of the Forest in July 1946, we have given a great deal of thought to questions of long term policy for the operation of the Harvard Forest, not only as a managed forest but also as an institution of instruction. The broad outlines of this policy are gradually taking form, and I think I may say that the question of reaccreditation will be determined by whether or not it would make any serious modification in this policy. Our general policy, in turn, is being determined not only by our desires, but must also be tailored to our resources.

By way of explanation, I would like to take this occasion to tell you briefly what we are doing and hope to do at the Harvard Forest. A year ago last spring I wrote a letter which was sent to all the alumni of the Harvard Forest and in which I attempted to describe our position at that time. This letter may perchance have come to your attention, and if so, you will find some duplication between it and what I have to say here.

We have on our staff at present, besides myself, two assistant professors of forestry. One of these is Mr. Stephen H. Spurr, who at the moment is on leave of absence for a year to pursue his studies toward a doctor's degree. He is at Yale. The other is Dr. Scott S. Pauley. He is a tree geneticist who lives at the Forest, but is a joint appointment between the Harvard Forest and the Maria Moors Cabot Foundation at Harvard. The significance of this appointment will perhaps be made clearer below. My own position in the University is that of Associate Professor of Plant Geography in the Department of Biology and Director of the Harvard Forest. We have one full time technical associate, Mr. Earl P. Stephens. Mr.

Stephens took his master's degree in forestry here last winter, and expects to pursue his studies at Harvard toward a doctor's degree in biology a year from now.

We offer one course in forestry. It is listed in the Harvard College catalogue as Biology 209 and is labeled Forest Practice and Research. This course is essentially a credit vehicle, and carries from one to four credits per term, depending upon the student's time and requirements. We offer a master's degree in forestry, which is usually granted after one academic year of residence and the preparation of a thesis.

It is impossible for me to go further with a discussion of the position of the Harvard Forest without explaining its present relationship to the whole structure of biological science as it is represented at Harvard. You have probably heard of the recent reorganization of botany here, for the essential facts concerning it have been published on several occasions. Nevertheless I shall describe it briefly, particularly as it is related to the Forest's problems.

Botany at Harvard has for several generations consisted of a group of independent agencies, each with its own endowment, and all of them rather loosely connected with each other and with the central administration of the University. Some of these agencies are the Arnold Arboretum, the Bussey Institution, the Gray Herbarium, the Botanical Museum, the Harvard Forest, the Cabot Foundation, and the Atkins Garden in Cuba. The independence with which they have grown and functioned is difficult to conceive of in terms of ordinary University administration, and is probably peculiar to Harvard. Some of them have succeeded in securing adequate endowments, while others have found it difficult or impossible to do this. If they have been unsuccessful at raising funds, they have tended to become relatively inactive and ineffective. In any case, they have existed always in more or less separate compartments, with no effective common ground for administration, research, or instruction.

A conviction that this situation was becoming untenable has been growing for some years. The unification of the separate agencies, however, has always presented great difficulties, due to differing ideologies and financial positions, and to the fact that a great part of the supporting funds have been given for specific purposes. Nevertheless, about four years ago, Professor Irving W. Bailey was commissioned by the Dean of the University Faculty of Arts and Sciences to prepare a report on the entire situation, with recommendations for remedial measures. Professor Bailey completed this report, called "Botany and its Applications at Harvard", in June of 1945. It is an extremely thorough and careful analysis of Harvard's botanical affairs, and contains what we believe to be eminently reasonable and feasible suggestions for future development. The report was accepted in its entirety by the Administration of the University, and has been put into effect. It provides for a "Biological Council" to serve as an administrative core for all biological research and instruction at the University, and to act as a bridge to the central Administration. This Council has as its chairman the Provost of the University, and for its membership representatives from the major areas in biological science. Within the botanical area two new institutes have been set up. One of these is the Institute for Research in General Plant Morphology. It is administered by a chairman and an executive committee. The present chairman is Professor Bailey, and

the agencies involved are those containing our large herbaria and libraries, as well as the Botanical Museum. It is planned to build a new building near the Biological Laboratories to house these combined units. The second part of the botanical area is the Institute for Research in Experimental and Applied Botany, with Dr. Paul C. Mangelsdorf as its chairman. It involves the living collections at the Arnold Arboretum, the Bussey Institution, the Harvard Forest, the Atkins Garden in Cuba, and the Cabot Foundation. The term "Institute" has been used, not in the sense of a research and teaching institution settled in a fixed establishment, but rather as an aggregate of several such institutions united to form a single administrative and budgetary area. The chairmen of the two Institutes are both members of the Biological Council.

The question may be raised as to whether it is wise to make this separation into two institutes. Why not bring them into a single administrative area? The division has been made for purely practical reasons which are concerned with geographic position and the fixed allocation of funds for specific purposes. We are confident that any tendency of the institutions to draw apart can be eliminated by having as many staff members as possible functioning in both. This arrangement exists now, and we have no doubt that it can be continued in the future. Another unifying factor is the centralization of most of our instruction in the Department of Biology, which becomes common ground for the Institutes as it has been in the past for some staff members who have been members of the outlying agencies.

I believe that one of the major problems at the Harvard Forest has always been the removal of the intellectual barriers between it and the other parts of the University, and I believe that we are now in a fair way to accomplish this. The Forest now ceases to be administratively isolated, and becomes an integral and highly significant part of Harvard's coordinated "Botanical Empire". A flexible and usable mechanism now exists for the interplay of ideas among students and staff in the whole organization. There will be new stimuli for the utilization of all our biological resources by the staff and students of the Forest, and at the same time for the utilization of the Harvard Forest as a research station by people at Cambridge and Jamaica Plain. Our first duty at the Forest, of course, is the maintenance of continuity in the program of research and instruction for which the Forest is best equipped, and upon which its reputation is based. I believe that under the new organization this can be accomplished with far greater vision and effectiveness than has been possible in the past.

I have sensed some apprehension on the part of a few friends of the Forest that under the new organization our institution would become only an adjunct to the Department of Biology at Cambridge, and that experiment and instruction in forestry would be minimized in favor of the use of the Forest as a sort of field station of the Department of Biology. This apprehension is entirely groundless. As I stated before, one of the most serious difficulties experienced by the Forest over the years has been its intellectual isolation from those other parts of the University to which it is related. By the same token, one of the largest contributions we can now make will be the elimination of such isolation. Far from constituting a danger, it is rather an end to be sought after by every means we can devise. That the Harvard Forest should, by such a procedure, lose its identity as an institution for research and instruction in silviculture and management is hardly conceivable.

With regard to instruction in forestry, we are carrying on at present in much the same manner as before the war. We still offer a degree of Master in Forestry, commonly completed in one year, and open to students who are graduates of accredited forestry schools or have equivalent training. One may obtain a doctor's degree majoring in forestry; but in this case he has to satisfy the requirements of the Graduate School of Arts and Sciences in Cambridge and take his degree in the Department of Biology. We have for some time been debating the wisdom of continuing the school on this plan. We are not equipped in staff or materials to give a more rounded master's degree in forestry, nor have we been for many years. Our degree is a more or less specialized one, based upon training and research in silviculture and management as it can be applied in the Northeast. We are thoroughly convinced that any plan to alter greatly such emphasis and to attempt expansion of the school to cover more fields in forestry would be unsound. Thereby we would be in danger of spreading our resources too thinly, and failing of our basic objective as an institution for research and demonstration in silviculture and management.

We believe rather that we should concentrate our attention and energies on the field in which we are best equipped to make a contribution, and that we should adjust our research and instruction to this end. Furthermore, we feel that our fundamental problems in applied silviculture are biological ones, using the term in the broadest sense, and that we can best attack these problems by bringing to bear all the facilities that Harvard Biology has to offer. In order to do this, our students and staff should avail themselves of facilities not only at Petersham but also in Jamaica Plain and in Cambridge, and we propose that candidates for the master's degree in forestry be asked to satisfy, after a date set reasonably in advance, the requirements of the Graduate School of Arts and Sciences as they are interpreted in the Department of Biology. This would be something of a new departure, for it would require that candidates have a somewhat broader training in language and in the natural sciences and humanities than is usual with students from undergraduate schools of forestry. We are fully cognizant of the fact that this proposal, if put into practice, would restrict for a time the number of students acceptable to us. Those that do qualify, however, would be better able to utilize the kind of training and facilities we have to offer. Whatever changes we make in our requirements and offerings should, we believe, be made gradually and with the understanding of other schools.

At present we have five students here who are candidates for the master's degree. They have been selected from those applicants who were primarily interested in silviculture and management. We limited ourselves to five students this year because we are somewhat shorthanded with Mr. Spurr away. Even with him here, however, we would set our limit at seven or eight students at any one time, for we feel that with our present staff and methods of training we cannot do an adequate job with a much larger number.

Our training of these students is on an informal basis. We are utilizing a modification of the "case" method, having the student, during the first term, write a series of short reports on individual problems which are designed to acquaint him with our materials and staff. During the second term, the students will concentrate on thesis problems. The whole method stresses individual initiative and accomplishment, and sets up a minimum of fixed general requirements.

Mr. Clepper

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10/11/48

Needless to say, I shall be pleased to have your comments on the policies and proposals that are set forth above. We are firmly convinced that we have at the Harvard Forest a unique opportunity for the free development of ideas in research and instruction.

Sincerely yours,

Hugh M. Raup
Director



SOCIETY OF AMERICAN FORESTERS

MILLS' BUILDING
WASHINGTON 6, D. C.

May 1, 1950

Dr. Hugh M. Raup, Director
Harvard Forest
Harvard University
Petersham, Massachusetts

PLEASE ADDRESS REPLY TO:
MYRON KRUEGER
243 FORESTRY BUILDING
UNIVERSITY OF CALIFORNIA
BERKELEY 4, CALIFORNIA

Dear Doctor Raup:

Under separate cover you are being sent two copies of "BASES FOR ACCREDITING - April 15, 1950." From this publication you should be able to determine whether you wish to be examined for possible accrediting by the Society of American Foresters. While the Committee on Accrediting has established no definite minimum rating, it is extremely unlikely that any institution with a rating of 70 or less will be accredited. It is quite possible that a rating between 70 and 75 will permit an institution to be "provisionally accredited" as defined below. The ruling on these points for any given institution will depend on the report of a Visiting Committee.

The Committee on Accrediting has asked the Council to approve discontinuance of the "listed" grade. Therefore in the accrediting process of this year an institution will be either "accredited" or "non-accredited." Some institutions on the border line will be designated as "provisionally accredited" with a two-year period within which to remove certain stipulated weaknesses. However this status will be known only to the head of the forestry faculty at the institution affected, the members of the Committee on Accrediting and the members of the Council. So far as the public is concerned the institution will be "accredited" and will enjoy all the rights pertaining to that status.

An early reply to this letter will be appreciated so that we may know definitely as to whether you desire Harvard Forest to be examined. If you wish to present data for accrediting will you please send me the following information, immediately:

1. The name and address of the President of Harvard University
2. The title by which he prefers to be addressed
3. The number on the forestry faculty with rank of instructor or better.

May 1, 1950

The proper number of questionnaires will be sent to you as soon as I receive this information. A letter will be sent to the President informing him of this fact so that he will be informed that the institution is to be examined both by means of a questionnaire and a Visiting Committee.

Very sincerely yours,



Myron Krueger, Chairman
Committee on Accrediting

May 19, 1950

Professor Myron Krueger
243 Forestry Building
University of California
Berkeley 4, California

Dear Professor Krueger:

I have your letter of May 1, asking whether the Harvard Forest wishes to be examined for possible accrediting by the Society of American Foresters.

On July 26, 1948 I received a letter from Mr. Henry Clepper which asked the same question. I was away in the Yukon at the time, and did not answer him until October 11, 1948. I then wrote Mr. Clepper a rather long letter which was devoted very largely to a description of the administration, structure, and aims of the Harvard Forest. I described its staff, its offerings in instruction, its administrative and educational relationships with Harvard University as a whole, and its long-term policy with regard to research and instruction. I presume that you have seen this letter, and that there is no need for me to restate its contents at length. I refrained from saying that the Harvard Forest did or did not wish to be considered for reaccreditation in 1950, because Mr. Clepper gave me no indication of what criteria would be used by the Society of American Foresters in its decisions. Perhaps the most significant sentences in my reply to him, so far as a direct answer to his question was concerned, were as follows:

"During the past two years since I became Director of the Forest in July 1946, we have given a great deal of thought to questions of long term policy for the operation of the Harvard Forest, not only as a managed forest but also as an institution of instruction. The broad outlines of this policy are gradually taking form and I think I may say that the question of reaccreditation will be determined by whether or not it would make any serious modification in this policy."

The Harvard Forest is devoted primarily to research and advanced instruction in silviculture. The term "silviculture" is here used in its broadest sense, to include management, and to indicate the productional aspects of forestry in contrast to the recovery or exploitative aspects. The Forest regards as its primary aim the training of men for the development of research in silviculture. For the accomplishment of this aim it has three basic assets.

The first is the Harvard Forest itself, with its living experiments in silviculture, its records of over forty years' intensive research, its library, its laboratories for the study of the life processes of trees, and its living quarters for staff, students, and visiting research workers located in the midst of the Forest.

Second is a close administrative and policy-making relationship between the Forest and Harvard University as a whole, whereby the rich resources for research and instruction in such departments as Biology, Economics, and the Graduate Schools of Public and Business Administration are brought to bear upon the complex problems of silviculture.

Third is an asset equalling the preceding in significance, and losing nothing by being intangible. It is the tradition of complete freedom and independence in the development of research and instruction. It is this tradition that makes possible our present program of instruction which though informal and flexible, is rigorous in its insistence upon individual initiative and hard thinking in the realities of the biology and economics of wood production. The same tradition, lived to the fullest extent, will greatly enlarge the usefulness of the institution; for it knows no barriers to the collaboration and team play among contemporary disciplines that are necessary for the solution of the basic problems.

Plans for the future development of forestry at Harvard are based solidly upon these assets. The latter are of proven stability and worth. They place Harvard in an unusually favorable position for an attack upon urgent problems in the rehabilitation of forest capital. We consider the largest single complex of problems in American forestry to be in silviculture. We propose to continue and enlarge the research in silviculture that has been current at the Harvard Forest for many years, and to use it as a medium for the training of men for research in this field. The Faculty which carries on this training program is not limited to the small group that lives and works at the Forest, but is the Faculty of Arts and Sciences at Harvard University. By the same token our students have full access to the facilities and resources offered by the University for the furtherance of their training and research.

Student admissions to the Harvard Forest, and the granting of degrees, are administered by the Harvard Graduate School of Arts and Sciences. At present we give a degree of "Master in Forestry". It could as well, and perhaps better, be called a "Master of Science in Silviculture". What we call it is of relatively small consequence, for its ultimate worth will not depend upon its name. Although we do not offer the degree of Doctor of Philosophy in Forestry, we offer a Doctor's Degree in Biology with concentration in the field of silviculture. Likewise students interested in the economic aspects of forestry may take a Doctor's Degree in our Department of Economics with concentration in the field of forest economics.

May 19, 1950

Students admitted to the Harvard Forest are at present drawn from undergraduate schools of forestry, or are men who have had equivalent training. We are seriously considering broadening the source of our candidates by accepting men with Bachelor of Arts or Bachelor of Science Degrees who are especially well grounded in natural sciences. We are convinced that such men commonly are excellent material for advanced training and research in silviculture.

It is rather obvious to me that within the structure of the "Bases for accrediting schools of forestry" recently sent to me there is no provision for an institution resembling the Harvard Forest. Nevertheless, if the Society of American Foresters wishes to examine the Harvard Forest for reaccreditation it is entirely at liberty to do so. If it does do so you may be assured that it will be given every assistance by the Forest in its study of the situation. It should be clearly understood, however, that the Harvard Forest will make no effort to become accredited, either by alterations in its basic policy or by the redistribution of its resources. It could do so, I believe, and adjust itself to the present fixed requirements for accreditation, only at the expense of the present and future effectiveness of its research and instruction in the fundamental aspects of silviculture. A decision on whether or not the Society will examine the Harvard Forest for reaccreditation rests therefore, it seems to me, with the Society itself, and will depend upon whether or not the Society has, or will have at some future time, a category of approval into which our institution might be placed.

Sincerely yours,

Hugh M. Raup
Director

HARVARD FOREST
HARVARD UNIVERSITY
Petersham, Massachusetts



May 15¹⁹, 1950

Professor Myron Krueger
243 Forestry Building
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Berkeley 4, California

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Students in Dept of Forestry may

mentioned in the

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memorandum

The Faculty which carries on this training program is not limited to the small group that lives and works at the Forest, but is the Faculty of Arts and Sciences at Harvard University. By the same token our students have full access to the facilities and resources offered by the University for the furtherance of their training and research.

If the Society of American Foresters wishes to examine the Harvard Forest for reaccreditation it is entirely at liberty to do so. If it does do so you may be assured that it will be given every assistance by the Forest in its study of the situation. It should clearly understand, however, that the Harvard Forest will make no effort to become accredited, either by alterations in its basic policy or by the redistribution of its resources. A decision on whether or not the Society will examine the Harvard Forest for reaccreditation will rest, it seems to me, ~~in view of what I wrote in my letter to Mr. Clapper and of what I have said above,~~ upon whether or not the

It is rather obvious ^{to me} that within the structure of the "Bases for accrediting schools of forestry" recently sent ^{me} there is no provision for an institution ~~even remotely~~ resembling the Harvard Forest. Nevertheless, if the Society of American Foresters wishes to examine the Harvard Forest for reaccreditation it is entirely at liberty to do so. If it does do so you may be assured that it will be given every assistance by the Forest in its study of the situation. It should be clearly understood, however, that the Harvard Forest will make no effort to become accredited, either by alterations in its basic policy or by the redispotion of its resources. It could do so, I believe, and adjust itself to the present fixed requirements for accreditation, only at the expense of the present and future effectiveness of ^{its} research and instruction in the fundamental aspects of silviculture. A decision on whether or not the Society will examine the Harvard Forest for reaccreditation rests ^{therefore,} it seems to me, with the Society itself, and will depend upon whether or not the Society has, or will have at some future

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Sincerely yours,

Hugh M. Raup
Director.

UNIVERSITY OF CALIFORNIA
COLLEGE OF AGRICULTURE
AGRICULTURAL EXPERIMENT STATION

SCHOOL OF FORESTRY
BERKELEY 4, CALIFORNIA

May 31, 1950

Dr. Hugh M. Raup, Director
Harvard Forest
Harvard University
Petersham, Massachusetts


Dear Dr. Raup:

This is to acknowledge your letter of May 19, 1950. I appreciate very much your having gone into a complete explanation of the present situation at Harvard.

At the present time I do not know what the attitude of the Committee on Accrediting will be. It seems to me that Harvard Forest has set up certain objectives which are a contribution to forestry but which are not of necessity training for the profession of forestry. As I view it at the present moment, the training at Harvard Forest is somewhat analogous to highly intensive training in human anatomy. This training may be of immense benefit to the advancement of medicine but the graduates of such an institution are not per se trained for the practice of medicine. However, please understand this is my personal viewpoint and I shall abide by the decision of my colleagues on the Committee on Accrediting. The final decision as to whether Harvard shall be examined for possible accreditation rests with the Council of the Society.

The Society of American Foresters, through its officers and Council, has been exploring for a number of years the possibility of examining institutions for their offering in the graduate field. It is entirely possible that this sort of approach will be much more applicable to the aims and objectives of Harvard University.

Very sincerely yours,


Myron Krueger, Chairman
Committee on Accrediting

MK:jb



SOCIETY OF AMERICAN FORESTERS

MILLS BUILDING

WASHINGTON 6, D. C.

December 28, 1950

The President
Harvard University
Cambridge,
Massachusetts

Dear Sir:

The Committee on Accrediting of the Society of American Foresters has reviewed an exchange of letters between Professor Hugh M. Raup, director of Harvard Forest, and Professor Myron Krueger of the University of California, chairman of the Committee on Accrediting. The Committee is unanimously of the opinion that the work offered at Harvard Forest does not constitute complete professional training in forestry. Consequently, the Committee did not submit a questionnaire or make an official visit for the purpose of rating the institution.

However, the Committee considers that the stated aim of Harvard Forest, "the training of men for the development of research in silviculture," can be a noteworthy contribution to the solution of some of the problems confronting forestry.

In behalf of the Council of the Society, I have the honor to inform you as to the attitude of the Committee on Accrediting. The Council desires to commend the University for choosing to take a unique approach in making its contribution to forestry.

Sincerely yours,

Henry Clepper

HENRY CLEPPER
Executive Secretary

hec:bw

COPY

SOCIETY OF AMERICAN FORESTERS
Mills Building
Washington, D. C.

September 26, 1952

Dr. H. M. Raup
Harvard Forest
Harvard University
Petersham, Mass.

Dear Dr. Raup:

Graduates of nonaccredited forestry schools may apply for Affiliate Membership in the Society, immediately following graduation, provided they have completed all the basic forestry courses required for a curriculum to be approved in an accredited institution.

An approved curriculum contains, as a minimum, all the following five courses of study which the Council, on recommendation of the Committee on Accrediting, decided are basic to a professional career in forestry.

1. Silviculture ----- 3 semester units
2. Protection (fire, insects, or disease) ---- 3 semester units
3. Management ----- 3 semester units
4. Economics ----- 3 semester units
5. Utilization ----- 3 semester units

Our Council Committee on Membership desires to list the nonaccredited institutions which offer the five basic forestry courses together with their foundation courses, and therefore qualify their graduates for the Affiliate Member grade.

If your graduates pursue a curriculum containing the minimum courses listed above, a statement from you to that effect will be all that is necessary to make them eligible for Affiliate membership.

If your graduates do not take all these courses, please indicate wherein there are deficiencies. They may still be eligible if the deficiencies are minor, since the Council has requested the Committee on Accrediting to interpret these standards somewhat liberally.

September 26, 1952

If you operate on a quarter-unit basis, rather than on a semester-unit basis, you can interpolate the comparative value to conform to the quarter system.

May we hear from you promptly?

Cordially yours,

S/ Henry Clepper

HENRY CLEPPER
Executive Secretary

dec:bw

COPY

October 9, 1952

Mr. Henry Clepper
Society of American Foresters
Mills Building
Washington 6, D. C.

Dear Mr. Clepper:

This is in reply to your letter of September 26. I must apologize for the delay, but it has been necessary to study the Harvard Forest situation in the light of the suggestions made in your letter, and the whole has come at a time when we have been very busy with the beginning of the Fall Term.

I enclose herewith the official announcement of Harvard's offerings in the field of forestry. Undoubtedly you have this already, but I enclose it as a point of reference. The approved curriculum given in your letter is made up in terms of "courses" and "semester units." Because our system of training here is not figured in these terms specifically, it is necessary to interpret what we do so that it can be viewed in such terms.

Harvard University conducts training in forestry only at the graduate level. Within the field as a whole, it is more or less specialized in the general area of forest production as contrasted with wood recovery and utilization. In other words, its training is more or less concentrated in the fields of silviculture and what might be thought of as "management-economics."

We accept only students who have a bachelor's degree or its equivalent. In the past two years half of our students have come from undergraduate schools of forestry, and have had B. S. degrees in forestry. The other half have come from colleges of liberal arts, and have had either B. A. or B. S. degrees. Those from arts colleges are required to have majored in biology. All our applicants must meet the requirements for admission to the Graduate School of Arts and Sciences at Harvard as they are interpreted in the Department of Biology.

You will note that Harvard lists in its catalogue only a single course in forestry. This is entitled "Forest Practice and Research." It is merely a credit vehicle, and carries credits up to four in any single term. Actual instruction is entirely upon an informal basis. It is carried on by the "case" and "research project" methods. It is possible for us to do this because we are dealing with very small numbers of students who live at the Forest where our facilities and staff are also located.

We require that the students be in residence for 15 months to qualify for the degree of Master in Forestry. This is one academic year and its two adjacent summers. We figure that this is equivalent to 59 semester units as the latter are used in your letter. On the average, the students spend six to eight months working directly with the staff of the Forest, and the other seven to nine months working on a piece of original research under the supervision of the staff members. The first of these segments is devoted to studies of Forest case histories, and to active apprenticeship to the Forest's overall research program.

As noted above, graduate work at the Forest is not divided into the five basic courses, with supporting courses, noted in your letter. The following is a considered estimate of a breakdown of our work in terms of the five courses.

	<u>Work with Staff</u>	<u>Thesis</u>
1. Silviculture	11 semester units)	36 semester units --
2. Management	4 " ")	usually covering all
3. Economics	4 " ")	three fields
4. Utilization	3 " "	
5. Protection	1 " "	
	23	36
		59 semester units

This distribution is extremely flexible and is adjusted to the needs of the individual students. Those who lack training in specific subjects are given extra assignments in those fields to bring them up to reasonable standards of proficiency.

I will not complicate the above statements by explaining, in this letter, how we arrived at them. We shall be very glad to go into more detail if this is desired. As I have told you before, we would welcome a visit from the Council of the Society at any time that is convenient. In many ways such a visit would be by far the best method of acquainting the Council with what we are doing here.

Sincerely yours,

Hugh M. Raup
Director

C O P Y

(Not for Publication)

MICHIGAN STATE COLLEGE
East Lansing

Department of Forestry

December 5, 1952

Mr. Henry Clepper, Executive Secretary
Society of American Foresters
Mills Building
Washington, D.C.

Dear Mr. Clepper:

As Secretary of the Council of Forestry School Executives I am instructed to inform you of the following policy statement which was unanimously passed at the November 15 meeting of the Council:

"It has been brought to the attention of the Council of Forestry School Executives that instruction leading to the degree Master of Forestry is being offered at Harvard University for students without prior forestry training. This program of study covers a period of 15 months and lacks formal course work in any aspect of forestry. The instruction, based on the "case" system, is further handled by a faculty considered inadequate for the purpose, by virtue of either lack of formal training or adequate experience. In consideration of the efforts of the Society of American Foresters and the Council of Forestry School Executives to establish and maintain adequate standards of instruction for degrees in forestry, the above mentioned program is deemed entirely inadequate to meet the needs of properly trained professional foresters.

"Under the circumstances it is considered that the Society of American Foresters should look with disfavor upon the continuation of such a program of instruction and the potentially grave danger it offers to any endeavor to maintain high standards of professional instruction.

"The Council takes no exception to the "case" method of training but does consider that it is not suited for a degree in forestry unless accompanied by supporting and complementing formal courses in the several fundamental aspects of forestry."

Very truly yours,

T. D. Stevens, Secretary
Council of Forestry School
Executives

C O P Y

SOCIETY OF AMERICAN FORESTERS

Mills Building
Washington 6, D.C.

December 8, 1952

Hugh M. Raup, Director
Harvard Forest
Petersham, Mass.

Dear Dr. Raup:

In accordance with your letter of December 4, we shall reprint the January 1952 announcement about Harvard research fellowships in the JOURNAL OF FORESTRY. Since your letter was not received until December 8, and we had sent the January issue to the printer on the 1st, the earliest issue in which it can appear will be February.

In the same mail that brought your letter, I received the attached communication from Dr. T. D. Stevens, secretary of the Council of Forestry School Executives. The Council, which is not directly affiliated with the Society, is composed of the heads of the 25 accredited schools of forestry. The Council's meeting, at which the policy statement was adopted, was held at Syracuse on November 15, 1952. Dr. R. J. Preston of North Carolina State College is, or was, the chairman.

It is not my intention to publish this letter, though the Council of the Society and the Committee on Accrediting should see it.

In the light of this letter do you wish to make any changes in the announcement in the JOURNAL for January 1952, or shall we publish it exactly "as is"?

Cordially yours,

HENRY CLEPPER
Executive Secretary

hec:bw

COPY

December 18, 1952

Mr. Henry Clepper
Society of American Foresters
Mills Building
Washington 6, D.C.

Dear Mr. Clepper:

This is in reply to your letter of December 8. Thank you very much for your arrangements for putting our notice in the Journal of Forestry. I am sorry that it did not get into the January issue, for that is where we need it. However, the February issue will probably be reasonably good.

Thank you also for sending me a copy of the communication from the Council of Forestry School Executives. The matter brought up in it is being given due consideration in our University. There are two things I should like very much to know about it, and perhaps you can tell me. Was the content of my letter to you dated October 9, 1952 known to the Council when the latter took its vote? This is the letter I wrote describing our program and giving an estimated breakdown of the program into the five basic areas of forestry instruction. It was in reply to a request for such a breakdown which you made in a letter dated September 26th. Second, can you tell me whether the content of my letters to the Society and to the Committee on Accrediting written two or three years ago were known to the Council?

The wording of our Announcement will have to stand for the time being. It is hardly possible to change plans for the next academic year at this date.

Sincerely yours,

Hugh M. Raup
Director

COPY

SOCIETY OF AMERICAN FORESTERS
Mills Building
Washington, D. C.

January 5, 1953

Hugh M. Raup, Director
Harvard Forest
Peterham, Massachusetts

Dear Dr. Raup:

This is in reply to your inquiry of December 18.

Your letter of October 9, 1952 was not made known by me to the Council of Forestry School Executives when the Council adopted its policy statement with respect to the graduate program at your institution leading to the degree of Master in Forestry. Your letter was written in answer to mine of September 26 which was an inquiry to determine whether graduates with the M.F. degree are eligible for membership in the Society. I did not consider it germane to the Council's activities.

I was not present at the Council's meeting on November 15, but neither this letter nor your previous letters to the Society and the Committee on Accrediting were made known to the Council by me or by anyone else, so far as I am aware.

The information which I made available to Dr. R. J. Preston, chairman of the Council, at his invitation, was a report of the conversation I had with you and Professor Gould at Norfolk, Conn. in September; a copy of your supplement to the University's general announcement in which the degree of Master in Forestry is described; and a letter from a Harvard alumnus (whose name was withheld) criticizing the program under which the M.F. degree is granted in 15 months to men without any prior education in forestry.

As I explained to you in September, we have received numerous queries about your M.F. program. You appeared to be convinced that the University is giving adequate work by the case method to prepare men for the M.F. degree. Although you said that it was frankly an experiment you said you hoped to continue with the present program and the degree. Hence, on the basis of the University's announcement, I asked the Council this specific question: "Should any institution grant the M.F. degree for this kind of education?"

That was all I did ask. Presumably, the Council's resolution was its own idea.

Cordially yours,

S/ Henry Clepper

HENRY CLEPPER
Executive Secretary

hec:bw

January 28, 1953

Provost Paul H. Buck
5 University Hall
Cambridge 38, Massachusetts

Dear Mr. Buck:

One of the matters to be discussed at the proposed meeting of the Biological Council on February 3 pertains to the validity of our master's degree in forestry, particularly as it applies to students coming to us from colleges of liberal arts. When last I spoke to you about this you suggested that I send you a memorandum on it. This I enclose herewith. In an earlier series of memoranda that I sent you there were copies of a letter to me from Mr. Henry Clepper, Executive Secretary of the Society of American Foresters, dated December 8, 1952, and of a letter to Mr. Clepper from Mr. T. D. Stevens, Secretary to the Council of Forestry School Executives. I shall not duplicate these letters in the enclosed material.

Sincerely yours,

Hugh M. Raup
Director

Memorandum Concerning the Master's Degree in Forestry at Harvard

Harvard now offers a degree of Master in Forestry, with study for this degree centered at the Harvard Forest in Petersham. The degree is of long standing at Harvard, dating back to the early days of instruction in forestry here, particularly after 1914 when all our instruction was limited to the graduate level.

In the early days of forestry education in America men were selected for graduate work from various undergraduate sources, and in the nature of things they came to Harvard primarily from arts colleges, because undergraduate forestry curricula were only in the process of formation. As time went on, and the undergraduate schools of forestry became well-organized, most of our students came from these schools. When I became Director of the Forest in 1946, and for some years prior to that time, only graduates of these forestry schools were accepted as candidates for our M.F. degree. The usual requirements made by us for the degree were resident study at the Harvard Forest for one academic year, and the preparation of an acceptable thesis based upon individual research.

Several schools in this country have been for many years accepting candidates for the M.F. from arts colleges. However, operating in a pattern probably set by the Yale School of Forestry, they have required two academic years of residence for such candidates, and a rigorous adherence to formal technical courses.

Taking into account the whole status of forestry education, and the need for development of men in silvicultural research more broadly trained in the natural and social sciences as well as in the humanities, it has seemed to me that our institution ought to broaden its source of students

to include the arts colleges. Therefore, about two years ago, I proposed that we accept candidates for the M.F. degree from arts colleges and at the same time extend our residence requirements, not to the two full academic years used by some schools, but to 15 months (one academic year and its two adjacent summers) with a thesis requirement similar to that now in vogue. I recognized when I made this proposal that the necessary training for men not previously exposed to an undergraduate technical school in forestry could be accomplished only by a rather intensive program of instruction, probably best carried out by the case method. This would necessitate a great deal of individual instruction, and would automatically limit our student enrollment to small numbers so long as our resources should remain as they were. The basis for my belief that we could do this was in the general success of this type of instruction over many years at Petersham, and in my observations of the ease with which good students from arts colleges absorbed basic techniques here in the 12-weeks summer courses we offered in 1947. Furthermore, I discussed the whole matter with a number of people who knew the Forest and its program, and found that there was considerable confidence that the program would work. It was therefore put into operation in the summer of 1951. Throughout, I have regarded it as an experiment in advanced forestry education, and will continue to consider it as such for some time to come. It is quite clear that only time and experience will demonstrate success or failure.

During the past few years I have had considerable correspondence on the status of the Harvard Forest with representatives of the Society of American Foresters, which is the principal agency representing the profession. This correspondence was centered around the question of whether or not the Harvard Forest would become accredited by the Society. I made a

clear statement of what the Harvard Forest was doing and proposed to do in its training program. Finally the Council of the Society, in a letter to Mr. Conant, indicated that though Harvard was not a candidate for accreditation, the institution should be commended for its approach to its teaching problems.

In the past couple of years, subsequent to my proposal that we take men from arts colleges, there has been a certain amount of discussion among the alumni about the propriety of our proceeding with this program. I have tried to keep in touch with this discussion as best I could, and to weigh the criticisms and influences involved. I believe that the principal aversion to the program is coming from not more than two or three of the alumni. These men, notably Dr. Hugo Kramer who is at present employed by the U. S. Forest Service in Washington, and Mr. J. Nelson Spaeth, head of the forestry school of the University of Illinois, have been the most articulate. If there are any others in this category among the alumni, I have not learned of it. On the other hand, also among the alumni, we have had several ardent supporters whose influence has considerably outweighed that of the most active critics. The larger number of alumni have remained inarticulate so far as I am aware. Under the circumstances we have felt considerable confidence in going ahead as we are.

This was the situation until I received the letter and enclosure from Mr. Clepper dated December 8. At this time Mr. Clepper transmitted to me a vote taken on November 15 by the "Council of Forestry School Executives." By this vote the Council expressed the view that the Society of American Foresters should look with disfavor upon the Harvard program so far as it applied to undergraduates from arts colleges.

I am as yet unable completely to evaluate the significance of this

vote. As Mr. Clepper says, the Council of Forestry School Executives is not directly affiliated with the Society of American Foresters, but is composed of the heads of the 25 accredited schools of forestry. These accredited schools are, of course, nearly all operating at the undergraduate level although many of them also have graduate student programs. The accrediting of graduate schools has never progressed very far.

During the autumn of 1952 I had some conversation and correspondence with Mr. Clepper concerning our method of training. These discussions had nothing to do with the activities of the Council of Forestry School Executives, but were concerned with an effort on the part of the Society's Committee on Accrediting to evaluate the operations of nonaccredited schools. Mr. Clepper asked us specifically to break down our training program so as to put it in terms that might be comparable with those used by other schools. This we attempted to do, and I gave Mr. Clepper a report on it in a letter dated October 9. I enclose herewith copies of this correspondence.

It appeared to me a strange circumstance that the Council of Forestry School Executives should take such a vote as they did without investigation of the Harvard Forest. When I first reported the matter to you I had heard nothing of any such investigation, nor was anyone on our staff conscious that any had been made. Subsequently I wrote to Mr. Clepper asking whether my letter to him of October 9 or my earlier correspondence with the Committee on Accrediting had been available to the Council of Forestry School Executives. In reply Mr. Clepper says that so far as he is aware the Council had none of these documents at hand when they took their vote. I enclose a copy of Mr. Clepper's letter to me dated January 5. You will note that the chairman of the Council did, however, have a report of a conversation I had with Mr. Clepper at Norfolk, Connecticut, in September.

This conversation was merely a prelude to the request sent to me by Mr. Clepper on September 26. The Council also had a copy of our Catalog Supplement describing our offerings, and a letter from an unidentified Harvard alumnus criticizing our program. At the moment we can only surmise that this alumnus was either Dr. Kramer or Mr. Spaeth.

I think it is quite clear that the Council took its vote without any real investigation of our work here at the Harvard Forest, or of the training program which is based upon it. The nearest approach to such an investigation might be found in the letter from the unidentified alumnus.

With regard to possible courses of action for the future, it seems to me there are four that should be considered. First, we can disregard the vote above-mentioned, and carry on with what we are doing. Second, we can desist completely from our present policy of accepting candidates from undergraduate arts colleges, and go back to the system we were using prior to 1951. Third, we can amplify our offerings in the way of instruction so as to make the training program for the M.F. degree sufficiently like that now widely used in other schools to reassure these schools. Fourth, we might change the name, and possibly the kind of degree offered, perhaps calling it an M. S. in Silviculture.

I have talked these matters over with a number of people, both in the University and outside, who are familiar with what we are doing. Thus far support for the program as a whole far outweighs the criticism. Most of the criticism comes from those who have not really looked into our program. It seems to me that this tends to eliminate the second of the above alternatives. If we were to go back to our previous policy, and make it impossible for men of broader undergraduate training to utilize our facilities, I believe we would jeopardize one of the principal aims of the program as a

whole -- to raise the level at which basic silvicultural research is being carried on.

To pursue the third alternative could very well lead to far-reaching consequences. It would take us into the maelstrom of competition for accreditation in a general academic pattern which is at the level of technical training. The policy of the Harvard Forest for many years has led it away from the development of a technical school for foresters. This policy is based upon the need for men trained and able to carry on the basic research necessary to adequate forest production. It has been extremely fruitful, and is consistent with general University policy. It seems to me that these considerations make pursuit of the third alternative very unwise indeed.

A decision between the first and fourth alternatives has to be weighed pretty carefully. If we follow the first proposal, we will tend to alienate the undergraduate forestry schools, and this might make it difficult, at least for a time, to attract students from them. On the other hand, if we follow the fourth alternative, we might be retreating from a position we have stated clearly -- that we believe some experiment is needed in the advanced training of foresters. If we so adjust our experiment as to train men so that they can practice forestry at the same time we are developing their research ability, we will be turning out men who can measure up to those coming from the more usual M.F. programs. Because we have been confident that we could accomplish this, even if the students had no previous technical training in forestry, it has seemed that we could just as well continue to call the degree an M.F.

There is actually precedent for a great variety of Harvard degrees in the general field of forestry. Originally the University gave an A.E., but this was discontinued in 1907. Other degrees granted at various times

have been S.B., S.M. Forestry, S.M. Silviculture, S.M. Zoology, S. D., and of course the M.F.

In forestry circles a distinction is sometimes made between so-called "professional degrees" and "philosophical degrees." Because we weight our instructional program in the direction of basic research rather than immediately utilitarian problems, we might eliminate the M.F., which is now widely considered to be a "professional degree," and give an M.S. In terms of common usage among forestry schools the M.S. would come under the general heading of "philosophical degrees," and it is generally awarded for work leading to research and teaching.

I find it difficult to make the above distinctions. They seem artificial and unrealistic, especially in a field of natural science where the boundaries between the "pure" and "applied" are either nonexistent or at most so hazy as to be undefinable. However, it is possible that merely by changing the name of our degree we could resolve the differences of opinion now extant over the validity of our M.F.

In the long run, and provided we are successful with our program, I do not believe it makes much difference what we call our degree. It is probable that for the time being a principal reason for holding to the M.F. is that a less well-known degree might be a detriment to students trying to find positions.

I understand that a "National Commission on Accrediting" is making a rigorous study of all accrediting institutions. I do not know how the findings of this commission eventually will affect the accrediting of forestry schools. It is possible that it might affect our status as well as that of other institutions in the field. It is possible also that the

existence and activities of the commission make it advisable to make no changes in our present program until more is known about the findings of this group.

Hugh N. Raup

EUGENE H. CLAPP. PRESIDENT

PENOBSCOT DEVELOPMENT COMPANY
GREAT WORKS, MAINE

CHARLES H. CORNELL. TREASURER

TIMBERLAND SUBSIDIARY
OF
PENOBSCOT CHEMICAL FIBRE CO.

May 31, 1955

L. J. FREEDMAN. VICE PRESIDENT

R. W. MERRILL. SUPT.

Dr. Hugh M. Raup, Director
Harvard Forest
Harvard University
Petersham, Massachusetts

Dear Hugh:

I am enclosing a copy of a letter from
Demmon. He got some of the implications of my letter,
but not all. How long since they have written you,
or examined you, or done anything about this accreditation?
I have talked some with Demeritt who is on the Council and
I think he understands our situation.

I should be glad to hear from you.

Very truly yours,

By: L. J. Freedman



Vice-President

LJF:G

SOCIETY OF AMERICAN FORESTERS

Mills Building

Washington 6, D.C.

Box 2570
Asheville, N.C.
May 25, 1955

Mr. L. J. Freedman, Vice-President
Penobscot Development Company
Great Works, Maine

Dear Lou:

I have your letter of May 23 concerning the accrediting of forestry schools. You are correct in that this is handled by our Committee for the Advancement of Forestry Education. Schools are examined and accredited upon invitation from the school. The committee looks into the situation for the Society, and their findings are submitted to the Council for final action. This is covered in By-Law No. 3.

As I recall it, the Harvard Forest School was at one time accredited but later was taken off the list because of a reorganization in the School whereby it didn't come up to the standards set for accreditation. Should the Harvard Forest School at any time wish to again be considered for accreditation this could easily be arranged.

So long as Harvard University maintains a forestry school, I believe we would want to list it along with all the other schools of forestry just as we do on page 378 of the May issue of the Journal. The situation has never come to my attention that the school might want to be left off this list. However, if that is the case I would be glad to look into it and see what might be done. When I get a little more information on this, I will write you again.

With best regards,

Very sincerely yours,

E. L. Demmon, President

cc Henry Clepper

from LJF to Hugh M. Raup

Preliminary Program and Information for the National Meeting of the Society of American Foresters

The 1948 national meeting of the Society of American Foresters will be held in Boston, Mass., December 16, 17, and 18. The headquarters will be the Statler Hotel.

There follows descriptions of all scheduled functions. Members of the Society are at liberty to invite guests to all meetings except the Society Affairs session on the afternoon of Friday, December 18; this session is primarily for members only. Ladies are particularly invited to attend the annual dinner on Friday evening.

Preceding the regularly scheduled sessions will be a meeting of the Council on the morning and evening of Wednesday, December 15. On the afternoon of December 15 will be held a joint conference of the Council and delegates from each of the 21 Sections of the Society. Members other than delegates may attend this session, but only those officially designated to represent the Sections will be recognized as having voting privileges.

No events have been scheduled for Thursday evening, December 16, which has been held open for forestry school alumni meetings and other informal gatherings. The Committee on Local Arrangements cannot be responsible for arranging alumni functions and the committee should not be called on for such service. Those wishing to schedule alumni dinners or meetings should deal direct with the hotels or restaurants where they desire to hold their functions. Numerous facilities for such functions are available in Boston.

Proceedings of the Meeting

All papers presented at the meeting will be published, as was done last year at the Minneapolis meeting, in a separate volume of proceedings. Last year the *Proceedings* was sent free to every member whose dues were paid for 1947.

Because of high printing cost it will be impossible to provide each member with a free copy

this year. The price of the *Proceedings* for members will be the cost of publication and mailing, \$2.

To avoid overprinting, only a limited number of copies will be published. Accordingly, every member desiring the *Proceedings* of this meeting should notify the Society promptly in order that a copy may be reserved for him.

Division of Forest Products

THURSDAY MORNING, DECEMBER 16

FRANK H. KAUFERT, DIVISION CHAIRMAN

Theme: "Utilization of Low-Value Timber and Its Relationship to Forest Management."

1. "The Increased Utilization of Aspen and Forest Management in the Lake States." Herford Garland, associate professor of forest products research, Michigan College of Mining and Technology, Houghton, Mich.; and Zigmund A. Zasada, forester, Lake States Forest Experiment Station, St. Paul, Minn.

2. "The Effect of Utilization and Cutting Practices on the Forest and Wood Industries in the Northeast." Robert I. Ashman, head, Department of Forestry, University of Maine, Orono, Me.; and Albert D. Nutting, State Forest Commissioner, Augusta, Me.

3. "Beech Utilization and Management Problems and Possibilities." David B. Cook, supervising forester, New York Conservation Department, Albany, N. Y., and I. H. Sims, chief, Forest Management Division, Northeastern Forest Experiment Station, Upper Darby, Pa.

4. "Increased Utilization of Low-Quality Southern Hardwoods and its Effect on Forest Management." Paul M. Garrison, chief forester, Gaylor Container Corporation, Bogalusa, La.

5. "Utilization of Low-Value Hardwoods and Softwoods in the Pacific Northwest." George Drake, Simpson Logging Company, Shelton, Wash.

6. Business session.

Division of Private Forestry

THURSDAY MORNING, DECEMBER 16

KARL SWENNING, DIVISION CHAIRMAN

1. "What Is Private Forestry Doing in the South?" A panel discussion.

2. "What Is Private Forestry Doing in the West?" A panel discussion.

THURSDAY AFTERNOON, DECEMBER 16

3. "What Is Private Forestry Doing in the Lake States?" A panel discussion.

4. "What Is Private Forestry Doing in the Northeast?" A panel discussion.

5. Business session:

Discussion of canons of ethics.

Discussion of licensing of foresters.

Discussion of editorials in the *JOURNAL OF FORESTRY* dealing with private forestry. Recommendations to the Council.

Division of Forest Economics

THURSDAY MORNING, DECEMBER 16

R. B. THOMSON, DIVISION CHAIRMAN

1. "Problems of the Committee on Scope and Method of Research in the Economics of Forestry." William A. Duerr, Southern Forest Experiment Station, New Orleans, La.

2. Comments:

S. T. Dana, School of Forestry, University of Michigan, Ann Arbor, Mich.

J. D. Black, School of Public Administration, Harvard University, Cambridge, Mass.

R. H. Van Voorhis, West Virginia Pulp and Paper Company, Summerville, S.C.

J. D. B. Harrison, Food and Agriculture Organization of the United Nations, Washington, D. C.

THURSDAY AFTERNOON, DECEMBER 16

3. "Education, Training, and Demand for Forest Economists." Edward C. Crafts and H. R. Josephson, U. S. Forest Service, Washington, D. C.

4. Comments:

Walter J. Damtoft, Champion Paper and Fibre Company, Canton, N. C.

Alfred C. Neal, Federal Reserve Bank, Boston, Mass.

Charles H. Stoddard, Consulting Forester, Minong, Wis.

Ernest Wohletz, School of Forestry, University of Idaho, Moscow, Idaho.

5. Business session.

Division of Silviculture

THURSDAY MORNING, DECEMBER 16

H. J. LUTZ, DIVISION CHAIRMAN

1. "Mappable Characteristics of Forest Soils." Herbert A. Lunt, Connecticut Agricultural Experiment Station, New Haven, Conn.

Discussion.

2. "Photo Classification of Forest Sites." Karl E. Moessner, Central States Forest Experiment Station, Columbus, Ohio.

Discussion.

3. "Biological Control of Forest Insects." Philip Dowden, Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture, New Haven, Conn.

Discussion.

4. "Recovery of Birch Fifteen Years after Partial Cutting." Victor S. Jensen, Northeastern Forest Experiment Station, Laconia, N. H. and H. J. MacAloney, Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture, New Haven, Conn.

Discussion.

THURSDAY AFTERNOON, DECEMBER 16

5. "Fashioning an American Silviculture." J. A. Larsen, Iowa State College, Ames, Iowa.

Discussion.

6. "Airplane Seeding: A New Venture in Reforestation." M. Westveld, Northeastern Forest Experiment Station, Upper Darby, Pa.

Discussion.

7. "Physiological Grades of Southern Pine Nursery Stock." P. C. Wakeley, Southern Forest Experiment Station, New Orleans, La.

Discussion.

8. "Realism in Silviculture Terminology." Clarence F. Korstian, School of Forestry, Duke University, Durham, N. C.

9. Report of Committee on Technical Procedures and Standards. F. H. Eyre, Lake States Forest Experiment Station, St. Paul, Minn.

Discussion.

10. Report of Committee on Forest Practices. K. P. Davis, School of Forestry, Montana State University, Missoula, Mont.

Discussion.

11. Report of the Secretary. P. C. Wakeley, Southern Forest Experiment Station, New Orleans, La.

12. Report of the Nominating Committee.

13. Election of a new Secretary.

14. Other business.

Division of Range Management

THURSDAY MORNING, DECEMBER 16

LINCOLN ELLISON, DIVISION CHAIRMAN

PAUL C. LEMON, PROGRAM CHAIRMAN

1. "Forest Grazing Work in the Deep South." Robert S. Campbell, Southern Forest Experiment Station, New Orleans, La.

2. "Grazing Problems of the Missouri Ozarks." Leon W. Hornkohl, U. S. Forest Service, Rolla, Mo.

3. "Stock-Poisoning Plants of the Eastern Seaboard." W. A. Dayton, Division of Dendrology and Range Forage Investigations, U. S. Forest Service, Washington, D. C.

4. "Preliminary Data on the Woodland Forage of the Arkansas Ozarks." Ralph Read, School of Forestry, Yale University, New Haven, Conn.

5. "Forest Grazing in the North Carolina Piedmont." C. M. Kaufman, Division of Forestry, North Carolina State College of Agriculture and Engineering, Raleigh, N. C.

THURSDAY AFTERNOON, DECEMBER 16

6. "The Forest Grazing Problem Created by Deer in Eastern Forests." W. C. Bramble and P. F. English, Department of Forestry, Pennsylvania State College, State College, Pa.

7. "The Forest Grazing Question in New England." Irene H. Stuckey, Agricultural Experiment Station, Kingston, R. I.

8. "Soil Type as a Factor in Forest Grazing in the Northeast." Herbert A. Lunt, Connecticut Agricultural Experiment Station, New Haven, Conn.

9. "Woodland Forage Plants of Northern Maine as Related to Soils." Robert L. Carter, Georgia Coastal Plain Experiment Station, Tifton, Ga.

10. Committee reports and business session.

Division of Forest Recreation

THURSDAY MORNING, DECEMBER 16

J. V. K. WAGAR, DIVISION CHAIRMAN

1. Report of Secretary. James H. Tyndall, Forest Preserve District of Cook County, River Forest, Ill.

2. "Priorities in Wilderness Use." Shirley W. Allen, School of Forestry and Conservation, University of Michigan, Ann Arbor, Mich.

3. "The Status of Airplane Use in National Forest Wilderness Areas." John Sieker, chief, Division of Recreation and Lands, U. S. Forest Service, Washington, D. C.

4. "The Status of Airplane Use in National Parks." John D. Coffman, chief forester, National Park Service, Washington, D. C.

5. "The Status of Airplane Use in Maine Forest Recreation Areas." John T. Clark, director, State Aeronautics Commission, Augusta, Maine.

THURSDAY AFTERNOON, DECEMBER 16

6. "Recreational Deterioration in New England." Robert S. Monahan, forester, Dartmouth College, Hanover, N. H.

7. "Conservation Camp as a valuable Recreation Device." Douglas E. Wade, naturalist, Dartmouth College, Hanover, N. H.

8. In response to requests by members of the Division, the afternoon session will be a forum devoted to discussion of pressing forest recreation problems concerning the New England states and related to other areas throughout the nation.

9. Business session.

Division of Education

THURSDAY AFTERNOON, DECEMBER 16

J. LEE DEEN, DIVISION CHAIRMAN

1. "A Program of Instruction in Wood Utilization." R. J. Preston, director, Division of Forestry, North Carolina State College of Agriculture and Engineering, Raleigh, N. C.

Discussion.

2. "Forestry Education in Terms of the Report of the President's Commission on Higher Education." J. S. Illick, dean, New York State College of Forestry, Syracuse, N. Y.

Discussion.

3. "Are We Set Up to Train Too Many Professional Foresters?" P. A. Herbert, head, Department of Forestry, Michigan State College, East Lansing, Mich.

Discussion.

4. "Basic Concepts of the Master's Degree in Forestry." G. A. Garratt, dean, School of Forestry, Yale University, New Haven, Conn.

Discussion.

5. Business Meeting.

Division of Forest-Wildlife Management

THURSDAY MORNING, DECEMBER 16

WILLIAM H. MARSHALL, DIVISION CHAIRMAN

RALPH T. KING, PROGRAM CHAIRMAN

1. "Coordinating Wildlife Management Where Forest Management Is in Effect." Lloyd W. Swift, chief, Division of Wildlife Management, U. S. Forest Service, Washington, D. C.; and T. C. Fearnow, U. S. Forest Service, Philadelphia, Pa.

Discussion. Lansing A. Parker, Fish and Wildlife Service, U. S. Department of the Interior, Washington, D. C.

2. "Problems of Land Management Where Timber Production Is Secondary to Game." John Langenbach, Pennsylvania Game Commission, Harrisburg, Pa.

Discussion. David B. Cook, New York Conservation Department, Albany, N. Y.

THURSDAY AFTERNOON, DECEMBER 16

3. "Management of Farm Woodlands for Timber Production, Wildlife, and Soil Conservation." Edward H. Graham, chief, Biology Division, Soil Conservation Service, Washington, D. C.

Discussion. Arthur C. McIntyre, chief, Regional Forestry Division, Soil Conservation Service, Upper Darby, Pa.

4. "The Research Program in Which Forest Management and Wildlife Management Are Given Equal Consideration." Ralph T. King and William L. Webb, Roosevelt Wildlife Forest Experiment Station, Syracuse, N. Y.

Discussion. Neil W. Hosley, Fish and Wildlife Service, U. S. Department of the Interior, Washington, D. C.

Division of Public Relations

THURSDAY AFTERNOON, DECEMBER 16

ALBERT G. HALL, DIVISION CHAIRMAN

1. Call to order and introduction of temporary officers.

2. "Industry's Concerted Approach to Forestry Public Relations." Chapin Collins, American Forest Products Industries, Inc., Washington, D. C.

Discussion.

3. "Teachers' Workshops: An Avenue to Teacher, Pupil, and Parent." C. W. Mattison, U. S. Forest Service, Washington, D. C.

Discussion.

4. "Regional Coordination in Public Education." J. H. Kitchens, Jr., Louisiana Forestry Commission, Baton Rouge, La.

Discussion.

5. "Television: The Newest Tool in Public Education." Floyd Carlson, New York State College of Forestry, Syracuse, N. Y.

Discussion.

6. Formal organization of Division.

First General Session

FRIDAY MORNING, DECEMBER 17

HENRY SCHMITZ, CHAIRMAN

Theme: "The Golden Anniversary of Professional Forestry Education in America, 1898-1948."¹

1. "The Beginning of Forestry Education in America." Henry S. Graves, dean emeritus,

¹Special program to celebrate the fiftieth anniversary of the founding of the first professional college of forestry in America at Cornell University in 1898.

School of Forestry, Yale University, New Haven, Conn.

2. "Special Statements on the Beginning of Forestry Education at Cornell:

"Recollections of a Faculty Member." John C. Gifford, University of Miami, Miami, Fla.

"Recollections of Students." Walter Mulford, dean emeritus, School of Forestry, University of California, Berkeley, Calif. and Raphael Zon, director (retired), Lake States Forest Experiment Station, St. Paul, Minn.

3. "The Development of Forestry Education in America." Cedric H. Guise, Department of Forestry, Cornell University, Ithaca, N. Y.

Discussion. Harold S. Newins, School of Forestry, University of Florida, Gainesville, Fla.

4. "Current Developments in Forestry Education." Walter F. McCulloch, School of Forestry, Oregon State College, Corvallis, Ore.

Discussion. G. B. MacDonald, Department of Forestry, Iowa State College, Ames, Iowa.

5. "Looking Ahead in Forestry Education." Kenneth P. Davis, School of Forestry, Montana State University, Missoula, Mont.

Discussion. W. C. Percival, Division of Forestry, University of West Virginia, Morgantown, W. Va.

Society Affairs Session

FRIDAY AFTERNOON, DECEMBER 17

CLYDE MARTIN, CHAIRMAN

1. Report of the President. Clyde Martin.

2. Report of the Editor-in-Chief. Hardy L. Shirley.

3. Report of the Executive Secretary. Henry Clepper.

4. Committee reports.

5. Open forum discussion.

The Annual Society Dinner

FRIDAY EVENING, DECEMBER 17

(The dinner will be preceded by a social hour to which all members and their ladies will be the guests of the New England forest products industries.

1. "Forestry in Human Welfare." William P. Tolley, chancellor of Syracuse University, Syracuse, N. Y.

2. Award of Sir William Schlich Memorial Medal. Clyde Martin, president, Society of American Foresters.

3. "In Recognition of Loyalty and Service." Henry Schmitz, dean, College of Agriculture,

Forestry, and Home Economics, University of Minnesota, St. Paul, Minn.

4. "Development of Forestry Education in Canada." Albert W. Trueman, president, University of New Brunswick, Fredericton, N. B.

Second General Session

SATURDAY MORNING, DECEMBER 18

LOUIS J. FREEDMAN, CHAIRMAN

Theme: "Forest Practices and Uses in the Northeast."

1. "Forest Economics." Curtis M. Hutchins, president, Dead River Company, Bangor, Maine. Discussion.

2. "Forest Utilization." George A. Garratt, dean, School of Forestry, Yale University, New Haven, Conn.

Discussion. Roy M. Carter, Northeastern Forest Experiment Station, Upper Darby, Pa.

3. "Forest Recreation." John W. McNair, Division of Recreation and Lands, U. S. Forest Service, Philadelphia, Pa.

Discussion. Perry H. Merrill, state forester, Montpelier, Vt.

4. "Forest Protection." W. M. Foss, New York Conservation Department, Albany, N. Y.

Discussion. R. E. Balch, Dominion Entomological Service, Fredericton, New Brunswick, Canada.

Adjournment.

Entertainment for Ladies

For Thursday, December 16, the New England Section has arranged a specially conducted tour to historical and educational points of interest in Cambridge, Lexington, and Concord, Mass. Transportation and luncheon will be provided by the Section. The tour will start from the registration desk at the Hotel Statler, Boston, at 10:30 A. M. Luncheon will be served at the Colonial Inn, Concord, at 1 P. M. Return to Boston will be completed by 4 P. M.

On Friday morning, December 17, ladies will be available at 9:30 A. M. at the registration desk, Hotel Statler, to act as guides to any groups wishing to visit specific points of interest in Boston. Guides may be identified by their red carnations and S.A.F. identification cards.

Note to Members of S.A.F.: At the time of registration, be sure to indicate on your registration card whether any female members of your party desire to make the trips on December 16 and 17.

Hotel Accommodations

All functions and sessions for this meeting will be held at the Hotel Statler, Arlington Street and Park Square, Boston 17, Mass.

The Statler has quoted rates for this meeting as follows. Single room with bath, \$4.50 to \$9; double room with bath, \$7.25 to \$9.75 (double bed); \$9 to \$12 (twin beds).

Members desiring to stay at the headquarters hotel are advised to make their reservations promptly. Those requesting reservations should emphasize that they are attending the annual meeting of the Society of American Foresters and should indicate probable time of arrival as well as the dates of arrival and departure. Inasmuch as double rooms will probably be easier to obtain than single rooms and because double rooms for comparable accommodations may be slightly cheaper than single rooms, members are urged to team up when possible.

OTHER HOTELS

Several other hotels are available within walking distance of the Statler. They are as follows:

Berkeley Hotel, 26 Chandler Street (10-minute walk from Statler). Single with bath, \$4 and up; double with bath, \$6 and up.

Bradford Hotel, 275 Tremont Street (8-minute walk from Statler). Single with bath, \$4 and up; double with bath, \$6 and up.

Copley-Plaza, Copley Square (7-minute walk from Statler). Single with bath, \$7 and up; double with bath, \$9 and up.

Lenox Hotel, Exeter Street (12-minute walk from Statler). Single with bath, \$5 and up; double with bath, \$7.50 and up.

Touraine Hotel, 62 Boylston Street (8-minute walk from Statler). Single with bath, \$4.25 and up; double with bath, \$6.50 and \$7.50 (double bed); \$7.50 and up (twin beds).

Vendome Hotel, 160 Commonwealth Avenue (8-minute walk from Statler). Single with bath, \$3.75 and up; double with bath, \$5.50 (double bed); \$6.50 and up (twin beds).

Committees for the Meeting

Two special committees of the Society are responsible for the program and activities for this meeting.

The Program Committee consists of D. B. Demeritt, chairman, Dead River Company, 6 State Street, Bangor, Maine; assisted by J. Miles Gibson, J. S. Illick, H. J. MacAloney, and A. D. Nutting.

The Committee on Local Arrangements consists of Harris A. Reynolds, chairman, 3 Joy Street, Boston 8, Mass.; together with E. C. Filler, F. G. Hills, H. P. Shepard, and Karl Swenning.

School of Forestry
University of California
Berkeley 4, California
August 30, 1949

To Deans or Administrative Heads of Schools or
Departments of Forestry:

The Committee on Graduate Instruction in Forestry of the Society of American Foresters is undertaking a study of the current status of graduate work in forestry. Data for the study are to be obtained initially from the accompanying questionnaire which is modeled closely after that used by the U. S. Office of Education and the Society for the Promotion of Engineering Education which conducted a similar study on graduate instruction in engineering. The results of their study were compiled by Walton C. John and H. F. Hammond, and published under the title, "Graduate Work in Engineering in Universities and Colleges of the United States," as Bulletin No. 8 of the U. S. Office of Education. It is hoped that our study will provide the basis for a similar report on forestry education.

We should appreciate it if you would supply as fully as possible the information requested. Three copies of the questionnaire are being supplied, one may be used as a work sheet, one can be retained for your files, and one we should like returned with the requested information, at your earliest convenience.

Sincerely yours,



Robert A. Cockrell, Chairman
S. A. F. Committee on
Graduate Instruction in Forestry

w

Explanatory Notes to Society of American Foresters'
Questionnaire on Graduate Instruction

If your institution gives no graduate instruction in forestry a reply to that effect would be appreciated by the Committee for the completeness of its records. If, however, you wish in addition to state your opinion regarding some of the items in the questionnaire, the Committee would be glad to have you do so.

It is suggested that the questionnaire be read through carefully before any answers are prepared.

It is recognized that certain of the data requested can be supplied, if at all, only with considerable difficulty by some institutions. There is no desire unduly to burden anyone with the preparation of such data. It is merely hoped that the replies will be as complete as is reasonably possible. Where answers can be given most readily by reference to published documents, such as catalogs, excerpts from these may be pasted either on the questionnaire or on additional sheets with reference to the questionnaire item.

Where the word administration is used in the questionnaire it refers to registration and classification of graduate students, approval of courses, clerical work of recording credits, checking time in residence and similar matters. Where the term supervision of graduate work is used it means, in general, activities connected with the actual teaching side of graduate work as distinguished from the clerical.

When the answer space provided in the questionnaire is insufficient, please use additional sheets, indicating thereon the item of the questionnaire to which the additional comments relate.

Society of American Foresters

Survey of Graduate Instruction in Forestry

1. Please enumerate fields of work (as silviculture, wood technology, recreation, etc.) in which graduate instruction is provided at your institution.

a. For the master's degree

Silviculture and forest management

b. For the doctor's degree

Ph.D. may be taken at Harvard in
biology or economics based upon forest problems.

2. Enrollments and degrees conferred.

a. Enrollment in program leading to master's degree, second semester or second quarter, 1938-39. _____, 1948-49 _____

b. Number of master's degrees conferred 1933-39 _____, 1948-49 _____

c. Enrollment in program leading to the doctor's degree, second semester or second quarter, 1938-39 _____, 1948-49 _____

d. Number of doctor's degrees conferred 1933-39 _____, 1948-49 _____

e. Please state year in which the first master's degree in forestry was conferred by your institution _____
Similarly, please state the year in which the first doctor's degree was conferred _____

See 1-b

3. Administration of graduate instruction in forestry. Please check type of administrative organization in spaces provided below, or, if no appropriate designation is given, please describe the form of administrative organization in your institution.

a. General administrative control by:	<u>Master's degree</u>	<u>Doctor's degree</u>
College, school or division of forestry	_____	_____
Graduate school distinct from college of forestry	_____	_____
Special committee of forestry faculty	_____	<u>x</u>
Other arrangement	<u>x</u>	_____

b. Individual in immediate responsible charge.

	<u>Master's degree</u>	<u>Doctor's degree</u>
Dean of school or head of department of forestry	_____	_____
Dean of graduate school	<u>x</u>	_____
Chairman of committee	_____	<u>x</u>
Other supervisor (please specify)	_____	_____

c. Please describe briefly the manner in which your forestry school or department directs graduate work; in particular, please state any differences between departmental organization as to undergraduate and graduate work.

~~case method~~

d. Please explain the general relationship of administration and supervision of graduate work in forestry to other graduate work in your institution, particularly in the related biological and physical sciences and economics.

~~General policy with relation to graduate work in forestry is determined in consultation between the staff of the Forest and the Departments of Biology and Economics in the University.~~

4. Faculty.

a. To what extent do you relieve those teaching graduate students from the teaching of undergraduates? Specifically, in adjusting teaching loads, what relative weight is given to graduate teaching as compared with undergraduate teaching? If a definite policy is pursued, please outline it.

b. What percentage of your staff gives graduate instruction? 100 What percentage engages in directing graduate research? 100 Must individual staff members meet any special requirements before engaging in graduate instruction? no

c. In choosing new members of your teaching staff, what weight is given to possession of advanced degrees by applicants?

~~An advanced degree is an important consideration~~

Similarly, what weight is given to possession of practical experience? some

Do you require the holding of a degree beyond the baccalaureate by new applicants? yes

Has there been any change in this situation in recent years? no

If your institution has a definite policy in this connection, please state it.

- d. Have you any definite plan for the encouragement of younger members of your staff to pursue graduate work? yes
 In your own institution? yes Or elsewhere? yes
 Are sabbatical leaves granted for this purpose? yes
 To what extent are members of your forestry staff now pursuing graduate work? Number? one Percentage? 25
- e. Please outline the practice of your institution in conferring advanced degrees, for work in course, upon members of your own staff. Is there any limitation as to the rank (or title) of teachers upon whom you will confer such degrees? no practice

5. Nature of programs of graduate work.

- a. Please state the practice of your forestry school or department as to the relative emphasis upon and time to be devoted to supporting sciences, forestry, and humanities in graduate study in comparison with undergraduate study.
- (1) For the master's degree _____
- (2) For the doctor's degree _____
- b. What percentage of your requirements must be satisfied by work in courses and what percentage by research -
- | | Work in courses
including seminar | Research in-
cluding thesis |
|-------------------------|--------------------------------------|--------------------------------|
| For the master's degree | _____ | _____ |
| For the doctor's degree | _____ | _____ |
- c. To what extent do you use the seminar type of work in graduate courses:
- | | |
|-------------------------|-------------|
| For the master's degree | <u>100%</u> |
| For the doctor's degree | _____ |
- d. Have you a definite plan of prescribed "majors" and "minors"?
 If so, please outline it as regards work for the -
- Master's degree no
- Doctor's degree _____
- e. Please state your requirements as to time in residence for the -
- | | Maximum time
permitted | Minimum time
permitted |
|-----------------|---------------------------|---------------------------|
| Master's degree | _____ | <u>one academic year</u> |
| Doctor's degree | _____ | _____ |

- f. Please outline your requirements and practice as to continuity of residence, transfer of credits from other institutions, and like matters. Continuity of residence is usually required.
- _____
- _____
- _____
- _____

6. Admission requirements.

- a. Are specifications imposed as to the quality of undergraduate records of applicants for admission to graduate work? Not specifically expressed, but heavily considered.
- _____
- b. Please outline your procedure as to admission of graduates from non-forestry curricula. Have you any system of prerequisites in this connection? Do not admit such students, unless they can demonstrate equivalent training or experience.
- _____
- c. Please outline your requirements and procedure as to the admission of a graduate of one forestry curriculum who desires to work for an advanced degree in another field (Silviculture to wood technology, for example). Have you any system of prerequisites in this connection? Our degree is primarily in silvicultural management. We will accept men from other fields provided they wish to shift their emphasis. The only requirement is that they demonstrate sufficient training in biology.
- _____
- d. On what basis are credentials of graduates of other institutions evaluated?
As to specific courses pursued? _____
- _____
- On the general standing of the institution? _____
- _____
- On the quality of the undergraduate record of the applicant? _____
- _____
- Please explain your policy and methods.
We prefer men with training in the fundamentals of biology, economics, and the physical sciences. Their performance, as undergraduates, is heavily weighted in our decisions.
- _____
- e. Are examinations given for admission to graduate courses (aside from those required for formal admission to candidacy for a degree)? no. If so, what is their nature?
- _____
- _____

f. Does your school make use of the graduate record examination? no If so, what has been your experience in its use? _____

g. How are admission procedures administered? By an individual? _____ By a committee? by the Staff

h. Please outline your requirements and procedures as to formal admission to candidacy for -
The master's degree See enclosed folder

The doctor's degree _____

(excerpts from catalog may be used to furnish this information)

i. What is your foreign language requirement for -
The master's degree See enclosed folder

The doctor's degree _____

What is your view, in general, as to the requirement of modern foreign languages for advanced degrees in forestry?
They should be required, and training should be given in undergraduate schools.

7. Graduation requirements.

a. Please state your course requirements, in semester hours and minimum average grade or in other terms in accordance with the practice of your institution, for the award of -
The master's degree See folder

The doctor's degree _____

b. What proportion of the course requirement must be strictly graduate level for -
The master's degree See folder
The doctor's degree _____

c. Are undergraduate courses not taken by the student as an undergraduate accepted as partial fulfillment of requirements for an advanced degree? no If so, in what proportion? _____ Under what conditions?

- d. Are undergraduates admitted to any graduate courses? no
 _____ . If so, what conditions are imposed? _____

Can these courses be offered toward fulfillment of advanced degree requirements? _____ .

8. The thesis.

Please outline your methods of conducting thesis work and your requirements therein under the following heads: (1) Selection of topics; (2) time required and maximum time permitted; (3) credit given; (4) methods of administration and of supervision; (5) relationship to institutional and departmental research programs; (6) other aspects of importance in your institution. Indicate any advanced degrees that are granted with no thesis requirement.

Please supply answers on separate sheets as to -

- (a) The master's degree **See other side**
 (b) The doctor's degree

9. Examinations.

Please outline your methods as to (1) examinations in prescribed and other formal courses; (2) examinations for admission to candidacy for a degree; (3) final (comprehensive) examinations. In particular please state the extent to which the oral examination and the combination of oral and written examination are employed and, in instances where the oral examination is employed, the manner in which the examiners are chosen. Indicate if any advanced degree is granted without the requirement of a comprehensive examination.

(Please use additional sheets for this discussion.)

See other side

10. Please state the form of earned degrees conferred by your institution.

- (a) The master's degree (as M.S., M.S. in For., M.F., etc.)
Master in Forestry
 (b) The doctor's degree (as Ph.D., D.Sc., D.F., etc.)

11. Relationship of graduate to undergraduate work.

- a. Has there been any perceptible tendency, as work for advanced degrees in forestry has been developing during the past two decades, to transfer any of the more advanced forestry courses from the undergraduate curriculum to the graduate program? no undergraduate curriculum

- b. Has the development of graduate work in the past two decades had any other perceptible influence upon the content, purpose, scope or other characteristics of undergraduate curricula? If so, please describe the situation in this connection in your institution. _____

- c. If longer curricula, for example, 5 years, are offered for the first degree in forestry in your institution, what is the relationship of such programs to programs for advanced degrees? _____

12. Costs.

- a. Are the costs of forestry graduate work budgeted separately from the other activities of your school or department? _____
 If so, under what major items? _____
- b. Please state the fees for graduate work and the basis of such charges, i.e., whether the charge is made per course unit, a single charge per term, a stipulated minimum total for the degree, etc. ~~See folder. Regular Harvard tuition is \$600 per year.~~

- c. Does your school provide materials and specialized equipment necessary for graduate student problem and research work? yes If so, to what extent and under what conditions? _____

- d. If such data can be readily given please state the costs of graduate work in your institution in terms of dollars per full time student per year, or in terms of cost per course unit, or in such other units of expression as you may employ. If costs of graduate work in forestry are kept separately, please give data both as to costs in forestry and costs in related fields. Use separate sheet.

13. Fellowships, scholarships and assistantships.

Please give the following information for the academic year ending June 1949.

- a. Number of institutional fellowships or scholarships filled by forestry students which make no demand on students for assistance of any kind. 4 Stipend per school year for each type _____
- b. Number of institutional ~~tuition or less~~ fellowships or assistantships available to forestry graduate students, requiring part-time work on assigned research or other school tasks. ~~none at present~~
 _____ Stipend per school year and hours of service required per week for each type _____

- c. Number of teaching or laboratory assistantships available to forestry graduate students, requiring part-time assistance in the conduct of class or laboratory section ~~none~~
 _____ Stipend per school year and hours of service per week for each type _____

- d. Please give similar information relative to other fellowships, assistantships or awards in support of forestry graduate work not falling under any of above groupings.
- _____
- _____

- e. If there has been any marked change as to number of fellowships and scholarships available or any material change in stipends during the past 2 or 3 years, please describe briefly no
- _____
- _____

- f. Total value of stipends available to forestry graduate students:

During the year 1938-39	<u>\$2100</u>
During the year 1948-49	<u>\$2825</u>

14. Facilities for graduate work.

Please state the funds allotted in 1948-49 for extension of and maintenance of facilities for forestry graduate work and for research.

	For laboratories (space and equipment)	For the library
For maintenance	\$ _____	\$ _____
For new accessions	\$ _____	\$ _____

How does your situation in this respect in 1948-49 compare with that in 1938-39? About the same. Impossible to separate the figures in order to answer the above questions.

15. Please state your experience and your views as to any other aspects of forestry graduate work that would be helpful to the committee either in appraising the existing status of graduate work or in considering means by which it may be strengthened. If, in particular, there are any specific problems relating to graduate work in your institution not covered by the foregoing questions, please outline them.

We feel the need for a broader undergraduate training in fundamental natural sciences, social sciences, and humanities. Our best students are those who come to us with a B.A. degree or its equivalent, plus training in the technical fields of forestry.

UNIVERSITY OF CALIFORNIA
COLLEGE OF AGRICULTURE
AGRICULTURAL EXPERIMENT STATION

SCHOOL OF FORESTRY
BERKELEY 4, CALIFORNIA

February 20, 1950

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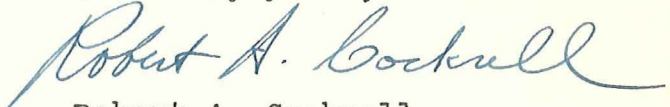
Dr. Hugh M. Roup
Harvard Forest
Petersham, Massachusetts

Dear Dr. Roup:

Early last fall I sent you a questionnaire to be filled out in connection with our survey of graduate instruction in forestry. We are compiling the data from the questionnaires and in order to have the compilation complete need one from your institution.

I would appreciate it very much if you would answer the questionnaire and send it to me soon. In case the original questionnaires have been lost I am enclosing an extra copy with this letter.

Sincerely yours,



Robert A. Cockrell
Associate Professor of Forestry

RAC:jb

Encl.

March 14, 1950

Professor Robert A. Cockrell
School of Forestry
University of California
Berkeley 4, Calif.

Dear Professor Cockrell:

Enclosed herewith is the questionnaire that you sent early last fall. I can only apologize for the long delay.

The Harvard Forest maintains only a small school, as it always has. It is devoted very largely to advanced study in silviculture, with its instruction entirely informal and personal. I am enclosing a folder which states briefly the facilities of the institution and its graduate offerings. Both in research and instruction it is closely related to the Department of Biology at Harvard in Cambridge. In case you do not have it, I enclose also a bulletin recently prepared by the Department of Biology, which will give you an idea of how the Forest is related to the institution as a whole. You will find pertinent material on pages 14, 16, 17, 24, 25, and 31.

If any further information is desired, please request it. I shall try not to delay so long the next time.

Sincerely yours,

Hugh M. Raup
Director

Society of American Foresters
825 Mills Building
17th Street at Pennsylvania Avenue, N. W.
Washington 6, D. C.

BASES FOR ACCREDITING SCHOOLS OF FORESTRY

(Prepared by the Committee on Accrediting and approved by the Council April 15, 1950)

Officers and Council of the Society of American Foresters:

President	Vice President	Executive Secretary
Charles F. Evans Atlanta, Georgia	Clarence S. Herr Berlin, New Hampshire	Henry Clepper Washington, D.C.
Council members:		
Frederick H. Brundage Portland, Oregon	Dwight B. Demeritt Bangor, Maine	Stanley G. Fontana Lansing, Michigan
Frank H. Kaufert St. Paul, Minnesota	C. Otto Lindh Albuquerque, New Mexico	Gordon D. Marckworth Seattle, Washington
Richard E. McArdle Washington, D. C.	DeWitt Nelson Sacramento, California	Earl Porter Mobile, Alabama

SOCIETY OF AMERICAN FORESTERS
COMMITTEE ON ACCREDITING SCHOOLS OF FORESTRY

To University and College Administrative Officers Concerned with
Accrediting Schools of Forestry:

The attached plan for accrediting schools of forestry represents more than a year of concentrated study by the Committee on Accrediting of the Society of American Foresters. It is further based upon fifteen years of study and experience with accrediting on the part of previous committees. Finally, it represents a plan that has been thoroughly reviewed by the heads of forestry schools throughout the United States, and approved by the Council of the Society of American Foresters.

The present committee, and we feel sure that this has been the viewpoint of previous committees, has no intention that the system of accrediting shall be a straight-jacket placed upon forestry education. Accrediting of forestry curricula grows out of a desire on the part of the Society of American Foresters to assure the American public that graduates in forestry throughout the United States shall be adequately trained for the practice of forestry.

As concrete manifestation of its interest in accrediting as a public service, the Society of American Foresters has, in the past, assumed and will continue to assume the full burden of the costs of accrediting.

While the nature of the plan is such that its application will result in a numerical answer, it is the intent of the Committee that this numerical answer shall not be the sole criterion for accrediting. It is merely a tangible guide to the Committee to determine those institutions which require extra care in the assessment of qualitative values. Incidentally, it should be pointed out, many of the quantitative measures used are, in essence, measures of qualitative factors. However, the assessment of qualitative factors will be performed mainly by a visiting committee. The final recommendation by the Committee on Accrediting will be based upon careful analysis of the questionnaire and the report of the visiting committee. In turn the Council of the Society of American Foresters, representing several different fields of professional activity, will study each recommendation and vote as to whether the institution shall be accredited. An institution which fails by a small amount of the passing grade may be recommended for accreditation if, in the opinion of the Committee, there are strengths in intangible, qualitative factors which outweigh the deficiency represented by the numerical standard. Conversely, it is possible an institution which rates slightly above the passing grade may not be recommended if the Committee considers it to be seriously deficient in these intangible, qualitative factors.

It is the hope of the Committee that the complete plan, in pointing up the strengths and weaknesses of the several forestry curricula throughout the United States, will serve as a guide to adequacy of professional training in forestry.

The Committee approaches its task in a spirit of being helpful to all institutions. It will welcome criticisms of and comments upon the accrediting system here proposed at any time. The Committee hopes that the plan will be accepted by the faculties of forestry schools throughout the country in the spirit here stated.

Respectfully yours,

Committee on Accrediting

Dean J. Lee Deen - Colorado A & M College
Professor Paul Herbert - Michigan State College
Professor Walter Meyer - Yale University
Professor Roy Thompson - Duke University
Professor Myron Krueger, Chairman
University of California.

April 15, 1950

Society of American Foresters
825 Mills Bldg.
Washington 6, D. C.

BASES FOR ACCREDITING SCHOOLS OF FORESTRY

As Approved by the Council - April 15, 1950

SUMMARY OF BASES AND WEIGHTS

<u>Base</u>	<u>Weight</u>
I. Institutional status of forestry	8
II. Faculty - opportunities for development	16
III. Faculty - qualifications	20
IV. Faculty - qualifications of those teaching required courses, other than forestry	10
V. Financial support for forestry	18
VI. Equipment	10
VII. Field instruction	13
VIII. History of school	5

DETAILS OF GRADING SYSTEM

I. INSTITUTIONAL STATUS OF FORESTRY

It is the belief of a majority of the Committee on Accrediting that to reach its highest development, professional forestry education requires such an atmosphere as is provided by an institution of true university caliber. An institution of this type provides strong departments in the basic sciences and in the broad cultural subjects as well as professional training in several fields. In such an institution forestry is not likely to be entered into lightly. The Committee considers that even though a forestry school bears an affiliated relationship to a university-type institution, the advantages still apply, if the two are located on the same campus.

Status of forestry

	<u>Weight</u>				<u>Total</u>
	<u>Class</u>				
	# Number of colleges, schools or equivalent in the institution in addition to forestry				8
	<u>4 or more</u>	<u>3</u>	<u>2</u>	<u>1</u>	
A. Forestry has "school" status or head of forestry reports to same administrative level as other professional curricula.	8	6	3	0	
B. Head of forestry reports to next lower level of administration.	7	5	2	0	
C. Head of forestry reports to third rank of administration	4	2	0	0	
D. Forestry a part of another curriculum, e.g. horticulture	0	0	0	0	

II. FORESTRY FACULTY - size, teaching load and opportunities for development 16

A faculty member, for the purposes of this accrediting plan, is one who has been professionally trained in forestry and who teaches professional courses in the forestry "school."

The fields referred to below are: silviculture, forest management, forest protection, forest utilization and forest economics. To be considered as "represented," each field must be the specialty of one or more faculty members. No faculty member will be considered as a specialist in two of the foregoing fields, even though he may teach several subjects.

	<u>Weight</u>	
	<u>Class</u>	<u>Total</u>
A. Number of fields represented		
1. 4 or more	3	
2. 3	1	
3. Less than 3	0	
B. Average teaching load of faculty		

(A majority of the Committee would prefer to see the provisions of 1 and 2 lowered but believes

The colleges, schools or equivalent must represent broad fields such as engineering, letters and science, architecture, agriculture, etc. They cannot consist of more than one department within, for example, engineering or agriculture.

that those submitted are reasonable and represent some improvement over past practice.)

Class Total

1. Credit hours per semester

(Credit hours as stated in the school catalog will be used. Two-thirds credit will be given for repeated lectures or laboratory periods by the instructor. Thus a course listed as consisting of two lectures and one laboratory will be valued at three credit hours. If the same instructor repeats each lecture once and has four laboratory sections, the calculation is as follows:

$$\begin{array}{r}
 \text{Lectures} \qquad 3 + 2/3 \times 3 = 5 \\
 \text{Laboratories} \quad 1 + 2/3 \times 3 = 3 \\
 \hline
 \text{Total credit hours} \qquad \qquad \qquad = 8
 \end{array}$$

Credit hours for graduate course will carry $1\frac{1}{2}$ times the value of undergraduate courses. Therefore if an instructor, in addition to the foregoing has two, two-unit graduate seminars the total credit hours are:

$$8 + (1\frac{1}{2} \times 4) = 14 \text{ credit hours}$$

In calculating the average credit hours per semester, the total credit hours offered for an academic year as determined above will be divided by two to derive the average number of credit hours offered per semester. This, in turn, will be divided by the number of full-time faculty members engaged in teaching. With a staff of 11 full-time teachers offering 132 credit hours of work during the academic year, the calculation is as follows:

$$\frac{132}{2 \times 11} = 6 \text{ credit hours, average per semester)}$$

- | | |
|--------------------|---|
| a. 7 or less | 5 |
| b. 8 | 4 |
| c. 9 | 3 |
| d. 10 or 11 | 2 |
| e. 12 or 13 | 1 |
| f. Greater than 13 | 0 |

2. Student credit hours per semester

(To obtain student credit hours, the credit hours as listed in the catalog will be multiplied by the number of students registered for each course. For professional courses on the graduate level multiply student credit hours by two. Assuming an instructor with two, three-unit undergraduate courses, one with 35 students, the other with 28 students and two, two-unit graduate seminars, one with 10 students, the other with 8 students:

$$(3 \times 35) + (3 \times 28) + [(2 \times 10) + (2 \times 8)] \times 2 = 261 \text{ student credit hours)}$$

In determining the average number of student credit hours per semester, the total number of student credit hours offered during each semester will be divided by the number of instructors engaged in teaching for each of the two semesters. The averages for the two semesters will now be added and divided by two to obtain the average student credit hours per semester. Let us assume 5 instructors with a student credit hour load of 1489 during the fall semester, and 7 instructors with a student credit hour load of 1341 during the spring semester. The calculation is as follows:

$$\frac{\frac{1489}{5} + \frac{1341}{7}}{2} = 245 \text{ student credit hours, average per semester)}$$

- a. Less than 200 4
- b. 200 - 224 3
- c. 225 - 249 2
- d. 250 - 299 1
- e. 300 or more 0

C. Opportunity for professional development - e.g. research, study, travel, extra-curricular professional work, sabbatical leave.
(average for staff)

(The Committee believes that, in applying the standards below, if a faculty member is teaching three or more 3-unit courses he should be considered as having no time available for professional development during that term or semester. If employed on an 11 months' basis and with a teaching load, as indicated above, for two semesters, the time available would be 1/11 or 9%.)

Weight

<u>Base</u>	<u>Class</u>	<u>Total</u>
1. 35% or more of time available	4	
2. 30% to 34% of time available	3	
3. 20% to 29% of time available	2	
4. 10% to 19% of time available	1	
5. Less than 10% of time available	0	

III. QUALIFICATIONS OF FORESTRY FACULTY (average of staff) 20

A. Study beyond the baccalaureate degree

1. Doctor of philosophy, doctor of forestry, or other doctorate appropriate for teachers of forestry	5
2. Three or more years of study, no degree	4
3. Two years of study or master's degree	3
4. One year of study, no degree	1
5. No formal study	0

B. Professional practice (other than teaching), calendar years

1. 5 years or more	5
2. 4-5 years	4
3. 3-4 years	3
4. 2-3 years	2
5. 1-2 years	1
6. Less than 1	0

C. Teaching experience, academic years

1. 15 years or more	7
2. 10 - 14.9 years	6
3. 5 - 9.9 years	4
4. 3 - 4.9 years	1
5. Less than 3 years	0

(Note: Half credit will be given for general military experience. Full credit will be given for military experience of direct forestry value such as photogrammetry or educational work.)

<u>Base</u>	<u>Class</u>	<u>Weight</u>	<u>Total</u>
D. Activity as authors (average of staff) within the past fifteen years.			
<p>(The standards below are predicated upon the theory that faculty, in a professional field, all of whose members have done a modest amount of writing, is much stronger than a faculty with one or two prolific writers.)</p>			
1. One or more books	3		
2. Two or more bulletins	3		
3. One professional article per year	3		
4. One professional article every two years	2		
5. One semi-professional or popular article per year	1		
6. Less than above	0		

IV. QUALIFICATIONS OF FACULTY IN SUPPORTING DEPARTMENTS 10

(Faculty members in those departments offering courses, other than forestry, required in the forestry curriculum, exclusive of military science, physical education, mechanical drawing and surveying. Analysis will be made by departments represented rather than by individuals actually teaching courses in which forestry majors are registered.)

A. 35% or more of faculty have doctorate	10
B. 30% to 34% of faculty have doctorate	9
C. 25% to 29% of faculty have doctorate	8
D. 20% to 25% of faculty have doctorate	7
E. 10% to 19% of faculty have doctorate or 50% or more have master's degree	5
F. 40% to 49% have master's degree	3
G. 30% to 39% have master's degree	2
H. 20% to 29% have master's degree	1
I. Less than above	0

Base

Class

Total

V. FINANCIAL SUPPORT FOR FORESTRY

A. Budget for administration

18

(Excludes salaries for academic staff and "dean" Also excludes light, heat, janitor service, plant maintenance, and other items normally handled by the general administration of the parent institution. Includes salaries and/or wages of librarian and clerical staff, and appropriations for equipment, supplies, travel, research, etc. It is assumed that this part of the budget bears a direct relationship to the number of full-time, permanent staff members.)

Budget per staff member:

\$2700 and above	6
2500 to 2699	5
2300 to 2499	4
2100 to 2299	3
1900 to 2099	2
1800 to 1899	1
Less than \$1800	0

B. Salary scale for faculty

All salary rates stated below are actual salaries received on an 11 months' basis. For those institutions with salaries on a 9 months' basis, the salaries should be multiplied by 11/9 to convert to an 11 months' basis.

1. Head of forestry "department"

a. School of less than 200 students

i. \$7,500 or more	2
ii. \$6,000 to \$7,400	1
iii. Less than \$6,000	0

b. School of 200 - 299 students

i. \$8,000 or more	2
ii. \$6,500 to \$7,900	1
iii. Less than \$6,500	0

<u>Base</u>	<u>Weight</u>	
	<u>Class</u>	<u>Total</u>
c. School of 300 - 399 students		
i. \$8,500 or more	2	
ii. \$7,000 to \$8,400	1	
iii. Less than \$7,000	0	
d. School of 400 - 499 students		
i. \$9,000 or more	2	
ii. \$7,500 to \$8,900	1	
iii. Less than \$7,500	0	
e. School of 500 - 599 students		
i. \$9,500 or more	2	
ii. \$8,000 or more	1	
iii. Less than \$8,000	0	
f. School of 600 or more students		
i. \$10,000 or more	2	
ii. \$8,500 to \$9,900	1	
iii. Less than \$8,500	0	
g. Schools exclusively on graduate level, regardless of size		
i. \$10,000 or more	2	
ii. \$8,500 to \$9,900	1	
iii. Less than \$8,500	0	
2. Members of faculty (average of staff)		
a. Institution best fits (1) of scale below	10	
b. " " " (2) " " "	8	
c. " " " (3) " " "	6	
d. " " " (4) " " "	4	
e. " " " (5) " " "	3	
f. " " " (6) " " "	2	
g. " " " (7) " " "	1	
h. " " " (8) " " "	0	

Scale:

Class Total

	Professor	Assoc. Prof.	Asst. Prof.	Instructor
(1)	8500	7200	5400	4000
(2)	7850	6750	5100	3900
(3)	7200	6200	4800	3800
(4)	6550	5650	4500	3600
(5)	5900	5100	4200	3400
(6)	5200	4550	3900	3200
(7)	4500	4000	3600	3000

(8) Less than (7)

The above salary rates include contributions for retirement by the institution. For those institutions without retirement plans, reduce all salaries paid by 5%.

Where it is difficult to determine the fit because of wide variation in the pattern, arrange data as in following hypothetical case:

Base

(a) <u>Rank</u>	(b) <u>Average Salary</u>	(c) <u>No. in Rank</u>	(d) <u>Place in Scale</u>	(c) x (d)
Professor	7200	2	(3)	6
Assoc. Prof.	5000	3	(5)	15
Asst. Prof.	4100	2	(5)	10
Instructor	3200	2	(6)	12
Total		9		43

$$\frac{\text{Total } [(c) \times (d)]}{\text{Total } (c)} = \frac{43}{9} = 5.0$$

Thus the institution's score is 3.

VI. EQUIPMENT (To be determined by inspection and questionnaire)

10

A. Buildings

1. Adequate space for classes in professional subjects.

<u>Base</u>	<u>Weight</u>
	<u>Class</u> <u>Total</u>
2. Adequate office space for faculty. Suitable for both study and consultation.	
3. Adequate office space for clerical staff.	
4. Classroom and office space with a reasonable degree of concentration, so as to provide a desirable professional atmosphere.	
5. Classes in professional subjects can be held between the hours of 7 a.m. and 6 p.m., so as to offer the least possible interference with the many worth-while extra-curricular activities of the parent institution (e.g., the forestry club and the forestry honor societies).	
6. Adequate storage space and service rooms (e.g., rooms for preparation of class materials)	
All factors favorable	3
Lacking one item	2
Lacking two items	1
Lacking more than two items	0

B. Library

Inasmuch as this accrediting is intended primarily for undergraduate instruction in forestry it is felt that the Library does not warrant more than the weight assigned. For undergraduate instruction it is much more important that a library contain all items, books, bulletins and periodicals essential to good instruction and in sufficient number for the size of the class than that it contain thousands of volumes.

Factors to be considered:

Central location (accessibility)

Available to students throughout the day

Adequate reading room space

All essential items available (as determined from check list)

Sufficient copies of references available

Regular budget for annual accessions

Serviceable catalog of accessions available to students

Professional staff

<u>Base</u>	<u>Weight</u>	
	<u>Class</u>	<u>Total</u>
1. All factors favorable	3	
2. Lacks in one item	2	
3. Lacks in two or three items	1	
4. Lacks in four items	0	
C. Laboratories		

(In rating, take into account the specific field for which the laboratory is used and whether more than one class is scheduled for the same space.)

Factors:

1. Equipment and facilities adequate for subject matter.
2. Adequate space for number of students using laboratory at any session of class.
3. Light (natural and artificial) and ventilation adequate.
4. Laboratory sessions can be held between the hours of 7 a.m. and 6 p.m.
5. Adequate storage space and service rooms for laboratories.

All factors favorable	4
Lacks one item, other than #1.	3
Lacks two items, other than #1.	2
Lacks three items, other than #1.	1
Lacks #1 in part but other factors favorable.	2
Lacks #1 in part and one other item.	1
Lacks more than above combinations.	0

VII. FIELD INSTRUCTION

13

A. Field laboratory

This is deemed to be essential not only for adequate instruction of the students but also for the maintenance of professional competence of the faculty.

Factors:

1. Not less than 1,000 acres, owned or managed under agreement by the school of forestry.

<u>Base</u>	<u>Weight</u>	
	<u>Class</u>	<u>Total</u>
2. Field laboratory used in undergraduate instruction.		
3. Good representation of forest types.		
4. Good representation of age classes.		
5. Good representation of soil types.		
6. Good representation of sites.		
7. Adequate housing for students - both classroom and dwelling.		
8. Less than 15 students per instructor.		
First two factors plus any three other factors favorable.		5
First two factors plus any two other factors favorable.		4
First two factors plus any one other factor favorable.		3
First two factors alone favorable.		2
Less than above.		0
B. Field instruction - suitably distributed among silviculture, mensuration, forest engineering, dendrology, management, protection, and utilization		
20 or more credit hours		8
19 " "		7
17 - 18 " "		6
15 - 16 " "		5
13 - 14 " "		4
11 - 12 " "		3
9 - 10 " "		2
6 - 8 " "		1
Less than 6 credit hours		0

Note: One credit hour will be granted for each week of summer camp.

<u>Base</u>	<u>Weight</u>	
	<u>Class</u>	<u>Total</u>
VIII. HISTORY OF SCHOOL		5
A. Length of time with organized curriculum		
1. 15 years or more	3	
2. 10-14 years	2	
3. 5- 9 years	1	
4. Less than 5 years	0	
B. Alumni		
1. Percentage in forestry work (allied fields)		
a. 60 or more	2	
b. 30 to 59	1	
c. Less than 30	0	

SOCIETY OF AMERICAN FORESTERS
COMMITTEE ON ACCREDITING SCHOOLS OF FORESTRY

231 Giannini Hall
Berkeley 4, California
September 10, 1948

Dr. Hugh M. Roup, Director,
Harvard Forest,
Harvard University,
Petersham, Massachusetts

Dear Dr. Roup:

In Professor Chapman's report to the annual meeting of the Society at Minneapolis on December 17, 1947, it was indicated that a majority of the forestry schools prefer that reaccrediting take place during 1950-51. This was approved by the Council at the same meeting.

The Committee on Accrediting Schools of Forestry has, since its appointment in March 1948, given considerable thought to several phases of the reaccreditation in 1950-51. It has already decided, unanimously, that the standards used for accrediting should again be submitted to the heads of all schools for suggestions as to desirable changes in the standards used, the weighting to be given each of the several standards and the method of calculating the score or rating.

It is the earnest desire of the Committee that suggested changes should be backed up by solid, carefully considered arguments. In short, while the Committee feels that the whole question of standards should be thrown open for consideration, changes should be adopted only if a real improvement will ensue. The Committee has no desire to initiate changes just to have something different. Professor Chapman and his colleagues on previous committees have done a monumental piece of work in establishing procedures for accrediting; and Professor Chapman in his 1947 report to the Society is on solid ground in his statement that the system used has "stood the test of application." The burden rests upon those of us who propose modification to prove that the new scheme will work better.

The Committee solicits your comments and suggestions. May we have your viewpoints, even though they may be of a preliminary nature, by not later than November 1, 1948, so that they may be incorporated in the 1948 report to the Society at the annual meeting in Boston, and thus be subjected to vigorous discussion. Address your replies to the Chairman at 231 Giannini Hall, Berkeley 4, California.

Very sincerely yours,

For the Committee on Accrediting


Chairman

Committee Membership:

J. Lee Deen (Colorado A & M College)
Paul A. Herbert (Michigan State College)
Walter Meyer (Yale)
Roy Thompson (Duke)
Myron Krueger, Chairman (California)

BASES FOR ACCREDITING PROFESSIONAL SCHOOLS OF FORESTRY

(As adopted by the Society of American Foresters 1935-1945)

By H. H. Chapman, Chairman
Committee on Accrediting

History, Status, and Graduates of Schools of Forestry Summarized

Forestry as a separate subject or course was introduced into the curricula of several institutions in the United States prior to 1900.

The first professional schools of forestry appeared during the period 1898-1910 with the establishment of 12 eastern, five western, and one southern school, totaling 18 schools. During the decade 1911-1920, two eastern and three western schools were established; and from 1921 to 1946, five eastern, two western, and five southern schools were added; to a total of 35 institutions.

Five schools were meanwhile discontinued; those of Biltmore, N. C., Cornell, University of Colorado, Mont Alto, Pa., and University of Nebraska.

Of the remaining 30 schools, those at the University of Connecticut, Massachusetts State College, University of Missouri, University of New Hampshire, and State College of Washington are not recognized as giving complete professional instruction in forestry. Four others, at Alabama Polytechnic Institute, Harvard University (previously accredited), Michigan College of Mining and Technology, and West Virginia University, are listed but not accredited, leaving a net of 22 institutions which are or have been accredited on a professional basis.

Of the 21 schools on the present accredited list, nine are in the northern forest region, eight are in the west, and four are in the south.

The stimulus of the Civilian Conservation Corps during the period 1933-1939 was reflected in a rapid, even an abnormal, increase in attendance at schools of forestry. Excluding two institutions whose training for forestry is incomplete, the total number of undergraduate degrees up to and including 1946 had risen to approximately 12,450. The number of postgraduate degrees not duplicated in this figure is about 900, giving a total of 13,350 graduate trained foresters.

To this number must be added several hundred graduates from the Biltmore Forest School in North Carolina and from the Pennsylvania State Forest School, both now discontinued; plus more than 750 graduates of the New York State Ranger School; and an unknown number of nongraduates of existing schools. What proportion of the present body of trained and partially trained men are now practicing forestry is not determinable.

The greatest number of undergraduate degrees given in any one year was 1,102 in 1939. The smallest number since 1909 was 51 in 1945.

The prewar highest total enrollment in 26 tabulated schools was 6,067 in 1937-1938.

For the fall term of 1946-1947, undergraduate and graduate enrollment exceeded 7,300 in 26 schools (one school not reporting), the highest in the history of American Forestry.

History of Accrediting by the Society of American Foresters

The attention of the faculties and heads of the schools of forestry was first directed towards the establishment of adequate curricula covering the professional field and including forest management, silviculture, forest economics, forest protection, and forest utilization. Conferences on curricula, held in 1910 and 1921, resulted in defining the fields to be covered in instruction.

During the decade 1921-1930 attention shifted to the standards and efficiency of instruction as influenced by financial support, physical equipment, teaching load, and resulting productiveness of the forestry faculties. It became evident that with an average total annual output of 300 to 400 graduates per year, many of the schools, especially certain departments connected with agricultural colleges, were not showing requisite progress, and that through overburdened staffs inadequately paid, poor equipment, deficient library facilities, and other defects, the quality of the graduates suffered. This was especially true of departments in agricultural colleges, in which an entrenched faculty and administration persisted in regarding forestry merely as one of the numerous departments of agriculture and entitled to no status of its own as a field of equal importance and corresponding diversity with agriculture itself.¹

In 1929 the Carnegie Corporation of New York granted \$30,000 to the Society of American Foresters to complete an inquiry into forestry education initiated by the Forestry Committee of the National Academy of Sciences in 1926. The results of the inquiry, conducted by Henry S. Graves of Yale and C. H. Guise of Cornell, were published in 1932 by the Yale University Press as "Forest Education." The book contained complete comparative data on existing schools, covering subjects taught, the teaching staff, student enrollment, finances, and educational facilities (equipment). From a study of this report institutions could draw their own conclusions as to their relative rank, but no attempt was made by the Committee to indicate minimum requirements or average standards as a basis for accrediting.

Article III, Section 4, of the Constitution of the Society of American Foresters provided that Junior Members should be graduates of schools of forestry approved by the Council of the Society, or, in lieu of this qualification, should

¹Forestry the Cinderella of the Agricultural Colleges. Journal of Forestry 34:16-21, 1936.

be able to show that they had acquired adequate understanding of the basic economic, business, and technical facts and principles sufficient for the foundations of a professional career in forestry and substantially equivalent to the training given in a school of forestry approved by the Council. In December 1933 the Council voted to comply with the requirements of the Constitution by instituting a study of existing schools for the purpose of setting up standards for accrediting.

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Standards for Grading, 1934-1935

In grading the qualifications for classification of schools, the following scale was obtained from averaging the grades given by 24 schools of forestry.

A. To total 100	Percent	Percent Rounded off	
1. Departmental status	6.21	6.0	
2. Faculty, or provisions for instruction	15.61	16.0	
3. Personnel of faculty	23.83	24.0	
4. Financial support	17.27	17.0	
5. Equipment	12.67	12.5	
6. Field instruction	12.35	12.5	
7. Historical and alumni	12.05	100	12.0 100
B. Distribution of weight under each of the seven divisions, each to total 100 separately and then be reduced to weight proportionally under A.			
	Percent	Weight in final grade	
1. Departmental status		100	6.0
			6.0
2. Faculty and teaching load			
a. Number of full-time teachers and equivalent	36.5		5.84
b. Average load of teaching	41.5		6.64
c. Provision for research	22.0	100	3.52
			16.0
3. a. Years of experience			
in study	16.5		3.96
in practice	20.0		4.80
in teaching	20.0		4.80
b. Activity as authors or producers	15.0		3.60
c. Reputation as teachers	28.5	100	6.84
			24.0
4. Financial support of the department			
a. Budget			
1'. Teaching budget	41.5		7.06
2'. Clerical and administrative budget, including library	18.0		3.06
Research budget	16.0		2.72
b. Salary scale	24.5	100	4.16
			17.0
5. Equipment			
a. Buildings: Floor space and character	30.0		3.75
b. Library	32.0		4.00
c. Laboratories	38.0	100	4.75
			12.5
6. Field instruction			
a. Forest land owned or controlled	42.0		5.25
b. Field instruction	58.0	100	7.25
			12.5
7. Historical and alumni			
a. Origin and record of school	31.5		3.78
b. Alumni, general efficiency in practice	68.5	100	8.22
			12.0
		Total	<u>100.0</u>

These same percentage weights have been applied to all subsequent reports and grading, including the general revision of 1942.

With the basis of evaluating by weight the data in the reports, the next problem was to determine for each of the 21 items a standard for assigning percentages to this item. This work was done by the committee on accrediting. Two principles of paramount importance were applied in this task. In the first place, the standard or gauge representing 100 was not set by the largest and best equipped institutions or schools, four of which would have considerably exceeded 100 both in individual items and in the general average grade for the school. As the grade of 100 was separately determined for each item, the standard for each in turn was set at what was considered satisfactory efficiency in that separate item.

The second principle was even more important. In several instances, the accrediting personnel of other professional societies had attempted to set up minimum requirements in each separate category, each of which must be met in order to secure accrediting for the curriculum. Our plan rejected the idea of accrediting separate curricula in favor of approving the institution, school, or department as a whole without defining any minimum requirement either in subjects taught or grades in each item classified. The curriculum covering the five branches of forestry, namely, forest management, silviculture, economics, protection, and utilization, had already been worked out by joint effort of the schools, and had been expanded in many schools by specialization and inclusion of related subjects such as grazing, wild-life, recreation, and arboriculture.

Following this principle, the plan was adopted of depending chiefly on the final general average for the school as a whole, and not on meeting minimum standards for each item. Thus a school might show weakness in library, school forests, salaries, or any other item, but with sufficient strength in other items would attain a satisfactory general grade. The grades on the 21 items served chiefly to call attention to the factors which caused the school to fail as a whole to meet accrediting requirements, and to point the way to most effective efforts to improve its condition.

Nor was the grading confined in its effect to the merely physical factors such as budgets, forests, and plant. Although quality is the intangible sought, the teaching load, the time devoted to research, the published results, even if quantitatively evaluated on points, and the mere length of time or years of experience of the faculty, have been used by other agencies as a valuable aid to appraisals. The efficiency of teaching was subjected to a weighted test based on the opinion of the faculties of other schools of forestry. These two groups totaled 40 percent of the final grade of 100. Finally, our Society is acknowledged to have obtained more systematic records of the efficiency of the graduates than any other accrediting agency, basing these data on average salaries weighted by period since graduation, attainment of prominence in forestry, and the historical development of the school, which added another 12 points to the intangibles to a total of 52 percent, leaving 48 percent for money, brick and mortar, forests, machinery, instruments, and library books.

When the returns were in, and not before, the decision was made as to what might constitute an accrediting standard. It was found that 13 schools had final grades ranging from 70.92 to 97.37 (any item grading over 100 was credited only at the latter figure and not used to raise the general average grade).

The highest grade for the remaining seven schools was 55.89 and the lowest 49.37. These seven schools were denied accrediting and each knew exactly where their weaknesses lay, and set about correcting them with the result that before 1942 they had all received accredited status.

Because of this general picture the prima facie grade of 70 corresponded so effectively with conditions recognized and acknowledged by the schools or departments of forestry themselves that further investigation, in this initial survey, became unnecessary, as the result was accepted without protest by all but one individual in one institution.

It was not through choice, but necessity, that inspection was omitted in 1935 and the Council later voted that the system of assessing institutions a fee for inspection, which is pursued by the engineering and other societies, be not adopted by the Society of American Foresters, but that all costs be borne by the Society itself except that incidental to preparing the report.

In 1942 the Council, although still short of funds for accrediting processes because of this decision, voted to incorporate inspection as the final necessary step before submitting the case to the Committee on Accrediting and later to the Council. This inspection was carried out in person by the chairman of the Committee on Accrediting. The Council also voted that the prima facie general grade of the school for the 1942 accrediting be set at 80 out of a possible 100.

Although in 1935 the decision on the accredited and nonaccredited schools could clearly be made on grade alone due to the gap of 15 percent between the two groups, it was accepted by the Council that for subsequent decisions the grade itself would serve as prima facie evidence only, not conclusive but subject to the report based on inspection and study of the intangibles on the ground. Schools which graded over 80 might be disqualified, at least temporarily, while those grading below 80 might be accredited, if conditions warranted such action.

This course is in conformity with the most advanced plans of other accrediting agencies, and, as in their cases, immediately raises as many possible objections as are advanced against "purely mechanical" methods of percentage or statistical grouping. Its efficiency must continue to rest on the soundness of judgment, diligence, and fairness of the examiners who preferably should be more than one.

As applied to the question of accrediting new schools of forestry, the standards, compliance with which would give a prima facie grade of 80 or more, are fully discussed in "Professional Forestry Schools Report" now unfortunately out of print, and are briefly reproduced below. Obviously a new institution could not expect to receive 100 percent on the final or 7th group, with a weight of 12, dealing with school history and achievements of nonexistent alumni. Accrediting is based on proved adequacy of instruction, not on budget or buildings alone, and the natural desire of new schools to receive prompt accrediting runs counter to the very criticisms leveled at the Society for its "weight" on physical factors. But, as shown, it is not necessary for a school to grade 100 in order to be accredited. It could attain a grade of 88 without the 7th group. Nor is it necessary to attain a prima facie grade of 80 for accrediting. It is necessary that the Society be convinced that a school is possessed of a faculty which is competent to cover the field of forestry in an adequate professional manner and to turn out graduates equipped to enter the field of forestry and practice their profession creditably and to the safety of their employers. When

this result is assured, accrediting is in order, and not before.

Digest of Standards for Grades on 21 Items

1. Departmental Status

	<u>Scale</u>
Separate college with board of regents	100
Separate school	95
School coordinate with others in college	90
Department with separate head	75
Curriculum with professor as head	50
2a. 7 or more full time instructors in forestry	100
6 full time instructors in forestry	90
6, including equivalents in other departments	85
5 full time instructors in forestry	80
5, including equivalents in other departments	75
4 full time instructors in forestry	65
4, including equivalents in other departments	60
3 full time instructors in forestry	45
3, including equivalents in other departments	40
2 full time instructors in forestry	20
2, including equivalents in other departments	15
1 full time instructor in forestry	0
2b. Average load of teaching	
6 to 6.9 hours per semester	100 to 95
7 to 7.9 hours per semester	95 to 90
8 to 8.9 hours per semester	90 to 80
9 to 9.9 hours per semester	80 to 70
10 to 10.9 hours per semester	70 to 60
11 to 11.9 hours per semester	60 to 50
12 to 12.9 hours per semester	50 to 40
13 to 13.9 hours per semester	40 to 30
14 to 14.9 hours per semester	30 to 20
15 to 15.9 hours per semester	20 to 10
16 hours per semester	10 to 0
Student credit hours	
Below 100	100
100 to 150	100 to 75
150 to 200	75 to 50
200 to 250	50 to 25
250 to 300, and up	25 to 0
2c. Provisions for research	
Average total credit hours (3 hours per week)	
10	100
9	90
8	80
7	70
6	60

2c. Provisions for research (Cont'd)

Average total credit hours (3 hours per week) Cont'd

	<u>Scale</u>
5	50
4	40
3	30
2	20
1	10
0	0

3. Personnel of teaching force.

a. Experience (either teaching or practical, in forestry) 20 years, average for all including instructors; 5 points off for each year less than 20.

b. Activity as author or producer.

Average of 50 points for entire faculty except those in grazing, wild-life, recreations, etc.

Textbooks	40
Bulletins	15
Scientific articles	5
Other articles	1

c. Reputation of faculty as graded by other school faculties, on basis of 100, but weighted, for other faculties on

- A = 10, well acquainted
- B = 5, semi-adequate basis
- C = 1, inadequate basis

4. Financial support of department.

a. Budget

- 1'. For teaching, 59.3 percent of grade
- 2'. For administration and research, 40.7 percent of grade

Standard, 1'	\$25,900
2'	\$17,800
Total	<u>\$43,700</u>

b. Salary scale.

Standard	<u>10 months</u>	<u>2 months</u>	<u>year</u>
1 Head	\$ 5,000	\$ 500	\$ 5,500
2 Professors	8,500	350	9,350
1 Associate Professor	3,500	350	3,850
1 Assistant Professor	3,000	300	3,300
1 Instructor	2,200	220	2,420
6 Teachers	22,200	3,700	25,900
Average	3,700	370	4,070

Grade 1'. Divide each salary by the normal salary and average the percents.

Grade 2'. Divide the average salary by \$4,070. Average 1' and 2'.

Reduce the result by factor .9. The remaining 10 percent is based on

Sabbatical years	5
Travel allowance \$150	2
Clerical help .5 person	
for each faculty member	<u>3</u>
	10

5. Equipment (educational facilities).
- a. Buildings, floor space,
- 1'. Minimum 20,000 square feet.
 - 2'. Average per student, counting the first 2 classes at $\frac{1}{3}$ and the last 2 full, 200 square feet per student. Average 1' and 2' for grade.
Poor, antiquated buildings reduce grade by .8 to .5.
- b. Library equipment.
- 1'. Separate for forestry 30 percent
 - 2'. Size and contents 60 percent
 - 3'. Auxiliary libraries 10 percent
- Scale for 2'.
- | | |
|----------------------------|----|
| Books | 10 |
| Pamphlets | 1 |
| Periodicals, bound volumes | 12 |
| Periodicals, single | 1 |
- c. Laboratory equipment.
- 1'. Floor space, 100 square feet per student in upper 2 classes.
 - 2'. \$300 per student in upper 2 classes.
6. Field instruction.
- a. School forests.
- 1'. Area weight, 2000 acres owned, or 4000 acres under lease or agreement or publicly owned, or a combination of both, giving half weight to lands not owned; to total 2000 acres.
 - 2'. Accessibility for instruction 25 points
 - Diversity of types 25 points
 - Accessibility for markets 25 points
 - Development under management 25 points
 - 100 points
- Average 1' and 2'.
- b. Field instruction.
20 credit hours (3 hours per week each for 1 semester, 10 credits for semester, or for summer terms of equivalent weight).
7. Historical and Alumni.
- a. School history.
- 1'. Date of origin 25 points
 - 2'. Continuity, with 15 or more students 25 points
 - 3'. Stability in tenure of heads and faculty 25 points
 - 4'. General study of institution 25 points
- b. Alumni.
- 1'. Average salaries, compared to a standard of \$2000 increasing by \$150 per year to \$5000 at 20 years, and by \$50 thereafter.
 - 2'. Prominence.
Persons attaining classified positions such as supervisor, state forester and assistants, professional grades, manager, in private employ, etc.
Standard, $\frac{1}{2}$ of 1 per cent of total graduates for each year of school's existence, cumulative.
 - 3'. Record in public examination. No longer a dependable source of data.

Various minor adaptations have been made in these over-all standards, and applied equally to all institutions, such as reduction in weight for floor space for camps to 1/10th that of the central plant. These are of minor importance, since the general grade is but slightly affected and is not in itself determinative.

The principal change to be noted in the standards set in "Professional Forestry Schools Report 1935" was adopted in 1937 as the result of the increase in instruction in allied subjects, such as grazing, wildlife, and recreation, which in themselves can be and are made the basis of complete separate professional curricula, represented in the case of wildlife by a separate professional society.

The objectives of the Society of American Foresters, as stated, are to secure efficient professional instruction in the five groups of forestry subjects which underlie the production and use of forest crops obtained from trees. The Society has always fully recognized the necessity of including in basic forestry education a sufficient knowledge of grazing, wildlife, recreation, engineering, and other collateral subjects to enable the forester to be successful in managing wild forest lands, but does not concede that a curriculum fitting a person professionally for specialization exclusively in any of these related fields constitutes adequate training for professional foresters, or vice versa. While bearing in mind the relatively minor significance of the average grade for a school as a measure for accrediting, compared with the determination of efficiency of instruction in the five fields of forestry plus managerial or practical knowledge of related wild land resources, the Council decided in 1935 that full allowance in grading for faculty members devoting their full or part time to these related subjects and to those portions of the budget so used would tend to distort the picture presented by the statistical report. As a concession to the obvious importance of these related resources and subjects it was therefore voted to give all items falling in this group one-half weight in the grades. Thus a school giving considerable weight to these subjects, amounting to special professional training, could not thereby attain accrediting on the sole basis of attaining a prima facie average of 80 or more, when if judged by its resources devoted to the five forestry groups it would fall below required standards of instruction.

BASES FOR ACCREDITING PROFESSIONAL SCHOOLS OF FORESTRY

(As adopted by the Society of American Foresters 1935-1945)

By H. H. Chapman, Chairman
Committee on Accrediting

History, Status, and Graduates of Schools of Forestry Summarized

Forestry as a separate subject or course was introduced into the curricula of several institutions in the United States prior to 1900.

The first professional schools of forestry appeared during the period 1898-1910 with the establishment of 12 eastern, five western, and one southern school, totalling 18 schools. During the decade 1911-1920, two eastern and three western schools were established; and from 1921 to 1946, five eastern, two western, and five southern schools were added; to a total of 35 institutions.

Five schools were meanwhile discontinued; those of Biltmore, N. C., Cornell, University of Colorado, Mont Alto, Pa., and University of Nebraska.

Of the remaining 30 schools, those at the University of Connecticut, Massachusetts State College, University of Missouri, University of New Hampshire, and State College of Washington are not recognized as giving complete professional instruction in forestry. Four others, at Alabama Polytechnic Institute, Harvard University (previously accredited), Michigan College of Mining and Technology, and West Virginia University, are listed but not accredited, leaving a net of 22 institutions which are or have been accredited on a professional basis.

Of the 21 schools on the present accredited list, nine are in the northern forest region, eight are in the west, and four are in the south.

The stimulus of the Civilian Conservation Corps during the period 1933-1939 was reflected in a rapid, even an abnormal, increase in attendance at schools of forestry. Excluding two institutions whose training for forestry is incomplete, the total number of undergraduate degrees up to and including 1946 had risen to approximately 12,450. The number of postgraduate degrees not duplicated in this figure is about 900, giving a total of 13,350 graduate trained foresters.

To this number must be added several hundred graduates from the Biltmore Forest School in North Carolina and from the Pennsylvania State Forest School, both now discontinued; plus more than 750 graduates of the New York State Ranger School; and an unknown number of nongraduates of existing schools. What proportion of the present body of trained and partially trained men are now practicing forestry is not determinable.

The greatest number of undergraduate degrees given in any one year was 1,102 in 1939. The smallest number since 1909 was 51 in 1945.

The prewar highest total enrollment in 26 tabulated schools was 6,067 in 1937-1938.

For the fall term of 1946-1947, undergraduate and graduate enrollment exceeded 7,300 in 26 schools (one school not reporting), the highest in the history of American Forestry.

History of Accrediting by the Society of American Foresters

The attention of the faculties and heads of the schools of forestry was first directed towards the establishment of adequate curricula covering the professional field and including forest management, silviculture, forest economics, forest protection, and forest utilization. Conferences on curricula, held in 1910 and 1921, resulted in defining the fields to be covered in instruction,

During the decade 1921-1930 attention shifted to the standards and efficiency of instruction as influenced by financial support, physical equipment, teaching load, and resulting productiveness of the forestry faculties. It became evident that with an average total annual output of 300 to 400 graduates per year, many of the schools, especially certain departments connected with agricultural colleges, were not showing requisite progress, and that through overburdened staffs inadequately paid, poor equipment, deficient library facilities, and other defects, the quality of the graduates suffered. This was especially true of departments in agricultural colleges, in which an entrenched faculty and administration persisted in regarding forestry merely as one of the numerous departments of agriculture and entitled to no status of its own as a field of equal importance and corresponding diversity with agriculture itself.¹

In 1929 the Carnegie Corporation of New York granted \$30,000 to the Society of American Foresters to complete an inquiry into forestry education initiated by the Forestry Committee of the National Academy of Sciences in 1926. The results of the inquiry, conducted by Henry S. Graves of Yale and C. H. Guise of Cornell, were published in 1932 by the Yale University Press as "Forest Education." The book contained complete comparative data on existing schools, covering subjects taught, the teaching staff, student enrollment, finances, and educational facilities (equipment). From a study of this report institutions could draw their own conclusions as to their relative rank, but no attempt was made by the Committee to indicate minimum requirements or average standards as a basis for accrediting.

Article III, Section 4, of the Constitution of the Society of American Foresters provided that Junior Members should be graduates of schools of forestry approved by the Council of the Society, or, in lieu of this qualification, should be

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able to show that they had acquired adequate understanding of the basic economic, business, and technical facts and principles sufficient for the foundations of a professional career in forestry and substantially equivalent to the training given in a school of forestry approved by the Council. In December 1933 the Council voted to comply with the requirements of the Constitution by instituting a study of existing schools for the purpose of setting up standards for accrediting.

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3.	Personnel of faculty	23.83	24.0	
4.	Financial support	17.27	17.0	
5.	Equipment	12.67	12.5	
6.	Field instruction	12.35	12.5	
7.	Historical and alumni	12.05	12.0	100
B. Distribution of weight under each of the seven divisions, each to total 100 separately and then be reduced to weight proportionally under A.				
		<u>Percent</u>	<u>Weight in final grade</u>	
1.	Departmental status	100	6.0	6.0
2.	Faculty and teaching load			16.0
a.	Number of full-time teachers and equivalent	36.5	5.84	
b.	Average load of teaching	41.5	6.64	
c.	Provision for research	22.0	3.52	
3.	a. Years of experience			16.0
	in study	16.5	3.96	
	in practice	20.0	4.80	
	in teaching	20.0	4.80	
	b. Activity as authors or producers	15.0	3.60	
	c. Reputation as teachers	28.5	6.84	
4.	Financial support of the department			24.0
a.	Budget			
	1'. Teaching budget	41.5	7.06	
	2'. Clerical and administrative budget, including library	18.0	3.06	
	Research budget	16.0	2.72	
b.	Salary scale	24.5	4.16	
5.	Equipment			17.0
a.	Buildings: Floor space and character	30.0	3.75	
b.	Library	32.0	4.00	
c.	Laboratories	38.0	4.75	
6.	Field instruction			12.5
a.	Forest land owned or controlled	42.0	5.25	
b.	Field instruction	58.0	7.25	
7.	Historical and alumni			12.5
a.	Origin and record of school	31.5	3.78	
b.	Alumni, general efficiency in practice	68.5	8.22	
			Total	<u>12.0</u> 100.0

These same percentage weights have been applied to all subsequent reports and grading, including the general revision of 1942.

With the basis of evaluating by weight the data in the reports, the next problem was to determine for each of the 21 items a standard for assigning percentages to this item. This work was done by the committee on accrediting. Two principles of paramount importance were applied in this task. In the first place, the standard or gauge representing 100 was not set by the largest and best equipped institutions or schools, four of which would have considerably exceeded 100 both in individual items and in the general average grade for the school. As the grade of 100 was separately determined for each item, the standard for each in turn was set at what was considered satisfactory efficiency in that separate item.

The second principle was even more important. In several instances, the accrediting personnel of other professional societies had attempted to set up minimum requirements in each separate category, each of which must be met in order to secure accrediting for the curriculum. Our plan rejected the idea of accrediting separate curricula in favor of approving the institution, school, or department as a whole without defining any minimum requirement either in subjects taught or grades in each item classified. The curriculum covering the five branches of forestry, namely, forest management, silviculture, economics, protection, and utilization, had already been worked out by joint effort of the schools, and had been expanded in many schools by specialization and inclusion of related subjects such as grazing, wildlife, recreation, and arboriculture.

Following this principle, the plan was adopted of depending chiefly on the final general average for the school as a whole, and not on meeting minimum standards for each item. Thus a school might show weakness in library, school forests, salaries, or any other item, but with sufficient strength in other items would attain a satisfactory general grade. The grades on the 21 items served chiefly to call attention to the factors which caused the school to fail as a whole to meet accrediting requirements, and to point the way to most effective efforts to improve its condition.

Nor was the grading confined in its effect to the merely physical factors such as budgets, forests, and plant. Although quality is the intangible sought, the teaching load, the time devoted to research, the published results, even if quantitatively evaluated on points, and the mere length of time or years of experience of the faculty, have been used by other agencies as a valuable aid to appraisals. The efficiency of teaching was subjected to a weighted test based on the opinion of the faculties of other schools of forestry. These two groups totalled 40 percent of the final grade of 100. Finally, our Society is acknowledged to have obtained more systematic records of the efficiency of the graduates than any other accrediting agency, basing these data on average salaries weighted by period since graduation, attainment of prominence in forestry, and the historical development of the school, which added another 12 points to the intangibles to a total of 52 percent, leaving 48 percent for money, brick and mortar, forests, machinery, instruments, and library books.

When the returns were in, and not before, the decision was made as to what might constitute an accrediting standard. It was found that 13 schools had final grades ranging from 70.92 to 97.37 (any item grading over 100 was credited only at the latter figure and not used to raise the general average grade).

The highest grade for the remaining seven schools was 55.89 and the lowest 49.37. These seven schools were denied accrediting and each knew exactly where their weaknesses lay, and set about correcting them with the result that before 1942 they had all received accredited status.

Because of this general picture the prima facie grade of 70 corresponded so effectively with conditions recognized and acknowledged by the schools or departments of forestry themselves that further investigation, in this initial survey, became unnecessary as the result was accepted without protest by all but one individual in one institution.

It was not through choice, but necessity, that inspection was omitted in 1935 and the Council later voted that the system of assessing institutions a fee for inspection, which is pursued by the engineering and other societies, be not adopted by the Society of American Foresters, but that all costs be borne by the Society itself except that incidental to preparing the report.

In 1942 the Council, although still short of funds for accrediting processes because of this decision, voted to incorporate inspection as the final necessary step before submitting the case to the Committee on Accrediting and later to the Council. This inspection was carried out in person by the chairman of the Committee on Accrediting. The Council also voted that the prima facie general grade of the school for the 1942 accrediting be set at 80 out of a possible 100.

Although in 1935 the decision on the accredited and nonaccredited schools could clearly be made on grade alone due to the gap of 15 percent between the two groups, it was accepted by the Council that for subsequent decisions the grade itself would serve as prima facie evidence only, not conclusive but subject to the report based on inspection and study of the intangibles on the ground. Schools which graded over 80 might be disqualified, at least temporarily, while those grading below 80 might be accredited, if conditions warranted such action.

This course is in conformity with the most advanced plans of other accrediting agencies, and, as in their cases, immediately raises as many possible objections as are advanced against "purely mechanical" methods of percentage or statistical grouping. Its efficiency must continue to rest on the soundness of judgment, diligence, and fairness of the examiners who preferably should be more than one.

As applied to the question of accrediting new schools of forestry, the standards, compliance with which would give a prima facie grade of 80 or more, are fully discussed in "Professional Forestry Schools Report" now unfortunately out of print, and are briefly reproduced below. Obviously a new institution could not expect to receive 100 percent on the final or 7th group, with a weight of 12, dealing with school history and achievements of nonexistent alumni. Accrediting is based on proved adequacy of instruction, not on budget or buildings alone, and the natural desire of new schools to receive prompt accrediting runs counter to the very criticisms leveled at the Society for its "weight" on physical factors. But, as shown, it is not necessary for a school to grade 100 in order to be accredited. It could attain a grade of 88 without the 7th group. Nor is it necessary to attain a prima facie grade of 80 for accrediting. It is necessary that the Society be convinced that a school is possessed of a faculty which is competent to cover the field of forestry in an adequate professional manner and to turn out graduates equipped to enter the field of forestry and practice their profession creditably

and to the safety of their employers. When this result is assured, accrediting is in order, and not before.

Digest of Standards for Grades on 21 Items

1. Departmental Status

	<u>Scale</u>
Separate college with board of regents	100
Separate school	95
School coordinate with others in college	90
Department with separate head	75
Curriculum with professor as head	50

2a. 7 or more full time instructors in forestry	100
6 full time instructors in forestry	90
6, including equivalents in other departments	85
5 full time instructors in forestry	80
5, including equivalents in other departments	75
4 full time instructors in forestry	65
4, including equivalents in other departments	60
3 full time instructors in forestry	45
3, including equivalents in other departments	40
2 full time instructors in forestry	20
2, including equivalents in other departments	15
1 full time instructor in forestry	0

2b. Average load of teaching	
6 to 6.9 hours per semester	100 to 95
7 to 7.9 hours per semester	95 to 90
8 to 8.9 hours per semester	90 to 80
9 to 9.9 hours per semester	80 to 70
10 to 10.9 hours per semester	70 to 60
11 to 11.9 hours per semester	60 to 50
12 to 12.9 hours per semester	50 to 40
13 to 13.9 hours per semester	40 to 30
14 to 14.9 hours per semester	30 to 20
15 to 15.9 hours per semester	20 to 10
16 hours per semester	10 to 0

Student credit hours

Below 100	100
100 to 150	100 to 75
150 to 200	75 to 50
200 to 250	50 to 25
250 to 300, and up	25 to 0

2c. Provisions for research.

Average total credit hours (3 hours per week)

10	100
9	90
8	80
7	70
6	60

2c. Provisions for research (Cont'd)

Average total credit hours (3 hours per week) Cont'd

	<u>Scale</u>
5	50
4	40
3	30
2	20
1	10
0	0

3. Personnel of teaching force.

a. Experience (either teaching or practical, in forestry) 20 years, average for all including instructors; 5 points off for each year less than 20.

b. Activity as author or producer.

Average of 50 points for entire faculty except those in grazing, wild-life, recreations, etc.

Textbooks	40
Bulletins	15
Scientific articles	5
Other articles	1

c. Reputation of faculty as graded by other school faculties, on basis of 100, but weighted, for other faculties on

A = 10, well acquainted

B = 5, semi-adequate basis

C = 1, inadequate basis

4. Financial support of department.

a. Budget

1'. For teaching, 59.3 percent of grade

2'. For administration and research, 40.7 percent of grade

Standard, 1' \$25,900

2' \$17,800

Total \$43,700

b. Salary scale.

Standard	<u>10 months</u>	<u>2 months</u>	<u>year</u>
1 Head	\$5,000	\$500	\$5,500
2 Professors	8,500	850	9,350
1 Associate Professor	3,500	350	3,850
1 Assistant Professor	3,000	300	3,300
1 Instructor	2,200	220	2,420
6 Teachers	22,200	3,700	25,900
Average	3,700	370	4,070

Grade 1'. Divide each salary by the normal salary and average the percents

Grade 2'. Divide the average salary by \$4,070. Average 1' and 2'.

Reduce the result by factor .9. The remaining 10 percent is based on

Sabbatical years	5
Travel allowance \$150	2
Clerical help .5 person for each faculty member	3
	<u>10</u>

5. Equipment (educational facilities).

a. Buildings, floor space.

1'. Minimum 20,000 square feet.

2'. Average per student, counting the first 2 classes at $1/3$ and the last 2 full, 200 square feet per student. Average 1' and 2' for grade.

Poor, antiquated buildings reduce grade by .8 to .5.

b. Library equipment.

1'. Separate for forestry 30 percent

2'. Size and contents 60 percent

3'. Auxiliary libraries 10 percent

Scale for 2'.

Books 10

Pamphlets 1

Periodicals, bound volumes 12

Periodicals, single 1

c. Laboratory equipment.

1'. Floor space, 100 square feet per student in upper 2 classes.

2'. \$300 per student in upper 2 classes.

6. Field instruction.

a. School forests.

1'. Area weight, 2000 acres owned, or 4000 acres under lease or agreement, or publicly owned, or a combination of both, giving half weight to lands not owned; to total 2000 acres.

2'. Accessibility for instruction 25 points

Diversity of types 25 points

Accessibility for markets 25 points

Development under management 25 points

100 points

Average 1' and 2'.

b. Field instruction.

20 credit hours (3 hours per week each for 1 semester, 10 credits for semester, or for summer terms of equivalent weight.)

7. Historical and Alumni.

a. School history.

1'. Date of origin 25 points

2'. Continuity, with 15 or more students 25 points

3'. Stability in tenure of heads and faculty 25 points

4'. General study of institution 25 points

b. Alumni.

1'. Average salaries, compared to a standard of \$2000 increasing by \$150 per year to \$5000 at 20 years, and by \$50 thereafter.

2'. Prominence.

Persons attaining classified positions such as supervisor, state forester and assistants, professional grades, manager, in private employ, etc.

Standard, $1/2$ of 1 per cent of total graduates for each year of school's existence, cumulative.

3'. Record in public examination. No longer a dependable source of data.

Various minor adaptations have been made in these over-all standards, and applied equally to all institutions, such as reduction in weight for floor space for camps to 1/10th that of the central plant. These are of minor importance since the general grade is but slightly affected and is not in itself determinative.

The principal change to be noted in the standards set in "Professional Forestry Schools Report 1935" was adopted in 1937 as the result of the increase in instruction in allied subjects, such as grazing, wildlife, and recreation, which in themselves can be and are made the basis of complete separate professional curricula, represented in the case of wildlife by a separate professional society.

The objectives of the Society of American Foresters, as stated, are to secure efficient professional instruction in the five groups of forestry subjects which underlie the production and use of forest crops obtained from trees. The Society has always fully recognized the necessity of including in basic forestry education a sufficient knowledge of grazing, wildlife, recreation, engineering, and other collateral subjects to enable the forester to be successful in managing wild forest lands, but does not concede that a curriculum fitting a person professionally for specialization exclusively in any of these related fields constitutes adequate training for professional foresters, or vice versa. While bearing in mind the relatively minor significance of the average grade for a school as a measure for accrediting, compared with the determination of efficiency of instruction in the five fields of forestry plus managerial or practical knowledge of related wild land resources, the Council decided in 1935 that full allowance in grading for faculty members devoting their full or part time to these related subjects and to those portions of the budget so used would tend to distort the picture presented by the statistical report. As a concession to the obvious importance of these related resources and subjects it was therefore voted to give all items falling in this group one-half weight in the grades. Thus a school giving considerable weight to these subjects, amounting to special professional training, could not thereby attain accrediting on the sole basis of attaining a prima facie average of 80 or more, when if judged by its resources devoted to the five forestry groups it would fall below required standards of instruction.

UNIVERSITIES AND COLLEGES

OFFERING PROFESSIONAL INSTRUCTION IN FORESTRY

(As of January 1, 1947)

- A. Institutions with approved schools which meet standards adopted by the Society of American Foresters.
- University of California, Berkeley.
 - Colorado A & M College, Fort Collins.
 - Duke University, Durham, North Carolina (Graduate).
 - University of Florida, Gainesville.
 - University of Georgia, Athens.
 - University of Idaho, Moscow.
 - Iowa State College of Agriculture and Mechanic Arts, Ames.
 - Louisiana State University, Baton Rouge.
 - University of Maine, Orono.
 - University of Michigan, Ann Arbor.
 - Michigan State College, East Lansing.
 - University of Minnesota, St. Paul.
 - Montana State University, Missoula.
 - North Carolina State College of Agriculture and Engineering, Raleigh.
 - New York State College of Forestry, Syracuse.
 - Oregon State College, Corvallis.
 - Pennsylvania State College, State College.
 - Purdue University, Lafayette, Indiana.
 - Utah State Agricultural College, Logan.
 - University of Washington, Seattle.
 - Yale University, New Haven, Connecticut (Graduate).
- B. Institutions with schools listed by the Society of American Foresters but not meeting certain standards. These schools may apply for reconsideration and become accredited as standards are met.
- Alabama Polytechnic Institute, Auburn.
 - Harvard University, Harvard Forest, Petersham, Massachusetts (Graduate).
 - Michigan College of Mining and Technology, Houghton.
 - West Virginia University, Morgantown.
- C. Schools offering professional instruction but providing inadequate coverage for listing by the Society of American Foresters.
- University of Connecticut, Storrs.
 - Massachusetts State College, Amherst.
 - University of Missouri, Columbia.
 - University of New Hampshire, Durham.
 - State College of Washington, Pullman.