

HARVARD FOREST
HARVARD UNIVERSITY
Petersham, Massachusetts



May 1, 1947

TO THE ALUMNI OF THE HARVARD FOREST:

You, as alumni of the Harvard Forest, may be interested to know of present conditions and future plans for the Forest and the Forest School. I have had the pleasure of talking these things over with a number of alumni during the past few months, and wish that the same were possible with everyone; but such being out of the question, I must resort to a letter. In all probability you have heard news of changes in the organization of Botany at Harvard, and are wondering how these changes will affect the Harvard Forest -- what continuities there are from the past, and what changes will mean for the future.

The work of the Forest goes on much as in the past, although it was somewhat altered during the war. The Director, Mr. A. C. Cline, went into war work at Washington in 1942, and the following year Mr. Russell Lutz, who was at that time Assistant to the Director, joined the Marines and saw active duty in the Southwest Pacific. Dr. P. R. Gast left the Forest in 1943, moving his work on plant nutrition to the Biological Laboratories in Cambridge under the aegis of the Cabot Foundation. Mr. Stephen H. Spurr remained at the Forest throughout the war, except for one academic term when he taught forestry at West Virginia University. We have had also during most of the war years, Mr. C. Thornton Brown, Jr., a graduate forester, in residence at Petersham. Mr. Spurr and Mr. Brown, shorthanded though they were, have done an excellent job at maintaining and improving the records of our silvicultural experiments. They have also successfully maintained buildings and equipment in spite of many difficulties in getting labor and materials. With financial aid from the Cabot Foundation at Harvard, they undertook, in collaboration with others in the Department of Biology, a study of camouflage materials, and out of this came the development of the use of aerial photography in forest mapping and cruising. Equipment was devised for this study, and a series of short courses for foresters was offered. These courses, given at Petersham during 1945 and 1946, were attended by something over 150 foresters from all parts of this country and Canada. At the end of the war, another graduate forester, Mr. Richard C. Rose, became a temporary member of the staff, assisting with the courses in aerial photography and with the routine work of the Forest. Mr. Cline resigned his position as Director on June 30, 1946, and I assumed that responsibility immediately thereafter.

Woods operations are in the capable hands of Mr. Charles Upham, Bert's younger son. Miss Elizabeth Carpenter is indispensable as business secretary and librarian. Louise Anderson, as housekeeper, lives with her family in Shaler Hall.

THE REORGANIZATION OF HARVARD BOTANY

To explain the position of the Forest in the reorganization of Botany at Harvard, it will be necessary for me to outline the nature of this reorganization and to tell you something of the events that have led up to it. 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 is in process of being implemented. 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 we have set up two new institutes. 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.

THE RESEARCH PROGRAM

Turning to current problems at the Forest, we must concern ourselves very seriously in the next few years with experimental thinnings in our 20-year and 30-year hardwood stands. It has been the tradition of the Forest management to pursue these thinnings with great caution, and we shall continue to do so. Nevertheless, we feel the need of trying out a great variety of methods which must now be devised. A major problem also is the treatment of the various hardwood sprout stands that have followed the hurricane blow-down. We have large acreages of these for which we must work out experimental management plans. Most of the hurricane salvage, as many of you know, was completed in the years immediately following the damage, but there remains a large amount of improvement and miscellaneous salvage cutting to be done. This goes ahead as rapidly as is feasible.

Since July 1 we have begun the construction of new type maps for all the Forest. The last ones were finished in 1937, just prior to the hurricane. The new ones are being made by aerial photographic methods, and on them we are achieving a degree of accuracy which has not been possible heretofore. At the same time we are constructing a historical series of type maps beginning in the early years of the Forest and continuing approximately at 10-year intervals to the present. In addition, we are making new maps of our topography, soil, land use history, and hurricane damage. All of these maps are being brought into the same scale, so that they are readily comparable. Finally, we are attempting to draw up for each tract a map of what we consider to be the "ultimate types". These maps of ultimate types are based upon all the information we have about the sites, and upon our best judgment of trends in development. They are, of course, entirely provisional, but from them we hope to derive plans for management and experiment which can be somewhat more soundly conceived than was possible from the old type maps.

Our records, though in good order, are tending to become cumbersome as material accumulates. We have plans for a renovation of the system now in use which will eliminate much of the duplication we now have to make. These records have been the main source of information for our so-called "Thirty Year Progress Report", the first part of which is now in press. It consists of descriptions, profusely illustrated, of some 14 case histories dealing with the management of white pine and hardwood on our better soils. This report was finished by Mr. Cline and Mr. Lutz during the summer of 1946.

Mr. Spurr is engaged in research which grew out of his work with aerial photographs. It is concerned largely with sampling techniques for cruising. He has a grant from the Research Corporation and expects to carry on the project for two or three years. We have recently announced two research fellowships designed especially for graduate students who can assist in this work.

The Cabot Foundation at Harvard, which was set up with the express purpose of developing rapidly-growing trees in this region, is at present carrying on most of its work at the Arnold Arboretum in Jamaica Plain. It has produced a large number of hybrid and selected strains which now require to be put out in test plots. Most of this will be done at the Harvard Forest, probably beginning sometime during the coming summer. We plan to add to our staff in July a silviculturist who has been engaged in the Cabot Foundation breeding work. He will live at the Forest, and become part of its silvicultural research staff. We are much in need of a man to bear a share of the management of the Forest, and we welcome this collaboration with the Cabot Foundation, not only because it will strengthen our ties with the other agencies in the Institute for Research in Experimental and Applied Botany, but also because it will insert a desirable element into our research program, namely, that of tree breeding.

IMPROVEMENTS AND FINANCES

During this coming summer we expect to begin the renovation of our entire road system in the three main tracts of the Forest. This work is being sponsored and financed by a generous though anonymous friend. The development of good roads will be of inestimable value, not only in facilitating ordinary woods operations, but also in furthering the Institution's usefulness as a demonstration forest. We have a large and increasing number of visitors each year, many with special interests that can be served to far greater advantage if we have easy access to our many experimental areas.

The old Forest building is being renovated to house married graduate students or temporary staff. The entire third floor, with the old mansard roof, has been taken off and replaced with a peaked roof similar to that which was on the house in early days. The old ell has been entirely removed, and the inside of the house made into four housekeeping apartments, separate from each other and each with two floors, except for one small one in the ell which originally housed Dr. Gast's laboratory. You will hardly know the place when next you see it, but we believe that we are achieving a notable improvement. The cost of the renovation is being met by a gift from a friend of the Forest who prefers to remain anonymous.

Financially, the Forest is far from secure. At present the income from endowment funds covers only a little more than half of our annual budget. The remainder must be made up principally from annual gifts. A substantial increase in our endowment resources would be highly desirable. We have, however, been very fortunate during this past winter in receiving a gift of \$25,000 which is to be used for immediate needs. This gift will enable us to get on our feet following the difficult war years, and in the aftermath of the hurricane. As you probably know, the Forest has been dependent in no small measure throughout its existence upon the sale of wood products. This income was nearly eliminated by the hurricane.

INSTRUCTION

So far as our instruction in Forestry is concerned, 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.

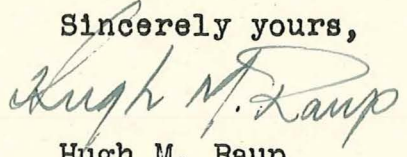
We believe rather that we should concentrate our attention and energies on the field in which we are best equipped to make a contribution, and that we should adjust our research and instruction to this end. Furthermore, we feel that our fundamental problems in applied silviculture are biological ones, 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.

During the summer of 1947, we are offering at the Forest three courses designed for students in biology. One will be on the elementary taxonomy of flowering plants, another on methods and problems in the study of vegetation, and the third an introduction to forestry. The courses will be a part of the regular summer term curriculum of the University, carrying the usual credits. They will be about 12 weeks in length. One of our aims in giving such courses is to acquaint people at the Forest with

students and instructors from Cambridge, and on the other hand, to bring the Cambridge people into contact with the facilities to be found at Petersham. If the plan proves successful in practice, we shall continue it in future years, but with some rotation in the nature of the courses offered. It would be desirable to alternate the above botanical offerings with others in forest entomology, pathology, plant physiology, or forest soils.

I shall end this letter with a frank appeal for discussion and suggestions with regard to future policies at the Harvard Forest. I shall be most happy to receive any comments you may wish to make.

Sincerely yours,



Hugh M. Raup
Director