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Ames Forestry Club

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FOREWORD

The forestry profession is dynamic and ever changing. In order to better understand the problems and changes within this profession, much education is needed. Education is a continual process but all continuums must begin at some point. For many of us, this point of start for our educational continuum was Iowa State University. In recent years many educational and institutional modifications have been initiated here at Iowa State. Many of these modifications have occurred within our own forestry department. The staff of the 1967 *Ames Forester* wishes to take you through a few of these departmental modifications.

ACKNOWLEDGMENTS

The *Ames Forester* is grateful to all those who have helped make this publication possible. We deeply appreciate the financial support of our patrons and advertisers. The help and advice of Dr. Dean Prestemon, our faculty advisor, and Mr. Robert Schwartz of the Iowa State University Press were invaluable. We are further indebted to the faculty members, students, and other individuals who offered help and suggestions.

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### THE COVER

By
Ames Forester Staff
This issue of the Ames Forester is dedicated to Dr. Carl H. Stoltenberg, for his leadership as Head of the Department of Forestry of Iowa State from 1960 through 1966.

Carl H. Stoltenberg was born on May 17, 1924 in Monterey, California. He received his elementary and high-school education at Paso Robles, California, and entered the University of California at Berkeley in 1941. However, he was there only a short time before the United States required his services in the war effort. During his tour of duty as an infantryman in the U.S. Army, he was in front-lines combat in Italy, Germany and France.

When World War II ended he returned to the University of California to continue his education in forestry. He received the B.S. in 1948 and the M.S. in 1949 from the University of California, and then was a teaching assistant at the University of California summer camp. From 1949–1951 he was an instructor in forestry at the University of Minnesota, where he received the Ph.D. in agricultural economics in 1952.

In 1952 he went to Duke University where he taught forest economics. Then from 1956 until 1960 he worked as a researcher and research administrator for the U.S. Forest Service. During most of this period he was Chief of the Division of Forest Economics Research for the Northeastern Forest Experiment Station at Upper Darby, Pennsylvania.

In 1960 Dr. Stoltenberg came to Iowa State to become Head of the Department of Forestry. During his six years here he brought to realization some dreams and plans first initiated almost 50 years ago! Next year we will be using our ultra-modern facilities in the new Plant Sciences Building. These facilities, including two new greenhouses, which will enhance the programs in undergraduate and graduate education, research, and extension. We also will have, as a result of the leadership of Dr. Stoltenberg, excellent new programs of study leading to M.F. and Ph.D. degrees in forestry. And we will have a re-evaluated, modernized, and more flexible undergraduate curriculum in forestry. The importance of these contributions of Dr. Stoltenberg is apparent from the articles about them in this issue of the Ames Forester. There you may read what they have done to maintain and improve the progress of the forestry program at Iowa State.

Dr. Stoltenberg was also very active in the affairs of Iowa State University, and in the civic life of the Ames community. He has also written several scientific and professional publications. And he is extremely active as a leader in the forestry profession. His major professional activities include: Member of the Council, Society of American Foresters; member, Secretary of Agriculture’s Cooperative Forestry Research Advisory Board; member, Forestry Research Committee, National Academy of Science, National Research Council; Iowa Governor’s Committee on Natural Resources; Harvard Board of Governors Visiting Committee on Biology.

In recognition of his outstanding leadership at Iowa State University and in the forestry profession generally, this Ames Forester is dedicated to Dr. Carl H. Stoltenberg.
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The financial success of this publication is due in a large part to the generosity of the above persons. We thank them for their patronage.
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When I joined the staff of the Forestry Department in 1947, one of my first assignments was to present some ideas concerning the needs for improved space and facilities for the department. Professor G. B. McDonald, then Head of the Forestry Department, was actively working toward a new forestry building. His able successor, Professor George B. Hartman, continued emphasizing our space needs and played a very important role in the initial plans of our new building. Finally, under the leadership of Dr. Carl H. Stoltenberg, the Forestry Department was allocated space in the proposed Plant Science Building.

For a period of three years plans were developed, changed and eventually finalized by the architects. Every member of the forestry staff was instrumental in developing the requirements for facilities in his particular area to best fulfill his needs for undergraduate and graduate teaching, research, and extension. The final plans provided essentially all of the space requested, thanks to a grant of over a million dollars from the National Science Foundation. The new Plant Science Building, Bessey Hall, is now completed and is the home of the Botany and Forestry Departments.

As you enter the main door of Bessey you will find the lobby paneled with the finest Iowa walnut. The forestry offices, on the second floor, are provided with new walnut furniture manufactured here in Iowa. The Department Head's office, the receptionist's office, and a large conference room are also paneled in native walnut and provided with fine Iowa walnut furniture. Some of the paneling and furniture was donated by Iowa forest product industries.

The building is completely air-conditioned and humidity controlled which will provide the optimum conditions for teaching, research and the conducting of short courses and conferences.

Facilities for Undergraduate Teaching

Several new teaching laboratories, fully equipped, are provided for the undergraduate program in forestry. The new mensuration-photogrammetry laboratory, spacious and well lighted, permits more effective work in this area and provides the much needed space for displays and laboratory projects. A system of book shelves in the photos lab permits access to special reading materials such as case histories, management plans and various incidental publications. Adjacent to the mensuration-photogrammetry laboratory is the computations room where adequate space is provided for calculators. Also adjacent to the mensuration-photogrammetry laboratory is the equip-
ment storage room providing easy access to much of the department’s equipment.

The economics-management laboratory is designed to make possible “round-table” discussions and improved exchange of ideas in various undergraduate classes and seminars.

A new laboratory for silviculture and forest influences with an adjacent specimen preparation room is also provided. This will make possible some expansion of our work in forest biology. The Forestry Department also has 1500 square feet of the greenhouse space, on the roof of the building, for undergraduate and graduate teaching purposes.

The new laboratory for wood science and technology is a tremendous improvement over the old laboratory in Curtiss Hall. It is spacious, well lighted and provided with a chemistry bench along one wall, a demonstration table, and display tables, as well as the laboratory teaching tables. It is also equipped with cabinets for storage of specimens and equipment used in the laboratory work. Adjacent to the wood science laboratory is a specimen and equipment room designed for storage of material used in the laboratory.

On the lower floor of the building we have laboratories running the full length of one side of the building. One of these laboratories is a mechanics, physics, and wood processing laboratory which will contain temperature-humidity controlled chambers, a universal testing machine, a hot press and other gluing equipment, as well as equipment for wood physics and various phases of wood classes. Adjacent to the wood processing laboratory is a large shop provided with a number of wood processing machines and a dry kiln. Connected to the shop is a small room for lumber and specimen storage.

Dr. Harold McNabb of the Botany Department, who teaches our courses in forest pathology and wood deterioration, has laboratory space and offices on our floor. This provides him with much needed facilities and an opportunity to work more closely with the Forestry Department.

Bessey Hall also contains a number of classrooms, two of which are located on the second floor. One of these classrooms seats 100 students and the other one 60 students.

Facilities for the Department’s Research Program

Bessey Hall provides the much needed improvement in space and facilities for the department’s research program. Dr. Gatherum has a silvics lab fully equipped with the necessary apparatus for improved work in tree physiology and related research. The lab is provided with a series of photosynthesis-respiration chambers and other equipment including infrared gas analyzers, kjeldahl digestion apparatus and various other pieces of soil and plant preparation and testing equipment. Adjacent to the silvics laboratory is the growth chamber room provided with a battery of growth chambers where plants can be grown under controlled conditions of relative humidity, temperature and light. Also adjacent to the laboratory is a weighing and delicate instrument room where balances and other equipment are available for all research in the forestry department. In the basement is a soil and plant preparation room with the facilities to process soil and plant materials so that the research laboratories may be kept as dust-free as possible.

Wood Science and Technology has also been provided with expanded research facilities. The new wood chemistry room, adjacent to the weighing and delicate instrument room, is provided with standard chemistry furnishings and equipment including a constant temperature-humidity chamber and other specialized equipment necessary for current research projects. Dr. Wellons, our wood chemist, is making studies of sorption and diffusion of organic liquids and vapors in wood. This will involve studies aimed at determining the location of sorbed materials in wood and hence the sources of property changes caused by these materials. He is also conducting studies of the modification of the physical and chemical properties of wood with synthetic plastics and resins. This deals with bulking and surface modification of the wood. Investigation of the morphology of the cell wall and the chemical changes that take place in cell development are also planned.

The work in wood anatomy and cell wall structure, in which I am involved, also has much improved facilities. Adjacent to the wood chemistry lab is a micro-techniques lab fully equipped with various microscopes and microtomes. Right next to the microtechniques lab is a dark room for processing photo-micrographs of wood materials. The laboratory is also equipped with one of the best polarizing microscopes available for continuing our work on the structure of the cell wall.

The wood mechanics, physics and processing laboratory provides the much needed facilities for wood testing and processing. Such studies as our current gluing project sponsored by Bath Packing Company will be provided with better facilities. Dr. Prestemon’s research in the residential building construction field will be facilitated by the new equipment.

Dr. Ware’s research in mensuration and statistics will be greatly facilitated by the computations room, seminar rooms, and facilities for storage of computer cards. Dr. Thomson’s work in forest management and photogrammetry research will be greatly stimulated by increased space for equipment used in these areas. Although Dr. Hopkins uses very little equipment in his forest economics research, he will be provided with more adequate facilities for counselling and conducting graduate classes.

One of the important improvements in space and facilities is that provided for the Ames Unit of the North Central Forest Experiment Station. The Ames (Continued on page 37)
Among the several major changes being effected in Forestry at Iowa State in 1967 is a significant revision of the undergraduate Forestry Curriculum. This article discusses the basis for and the process of curriculum planning. Changes being introduced are described in terms of adjustments in the pattern and shifts in emphasis which they reflect. For a more explicit description of the revised curriculum, the reader is referred to the current edition of the General Catalog of Iowa State University.

At the outset, it should be emphasized that a forestry curriculum and forestry education are not the same thing. The former is subordinate to the latter. A curriculum might be described as a carefully planned pattern of formal courses designed to facilitate the accomplishment of prescribed educational objectives. Forestry education, on the other hand, is the grand total of all knowledge, understanding and insight gained through experience, study and thought throughout the course of one’s professional life. In other words, the curriculum reflects only a part of the education one gains as an undergraduate and the undergraduate program itself is merely an initiation of forestry education. Each course might be thought of as a catapult which serves to get the student airborne. But beyond the initial impetus which the course hopefully provides, it is up to the individual to maintain flying speed in a particular subject matter area and to complete his mission successfully. One of the major objectives of a forestry curriculum, in fact, is to enable the student to continue his education effectively after the formal program has been completed.

Additional perspective on the Forestry Curriculum might be provided by considering it in the light of successive levels of concern. These might be ordered as follows:

- Professional and Personal Context
- The Forestry Profession
- Forestry Education
- Forestry Curriculum

As indicated, the curriculum serves primarily to enhance the effectiveness of formal education in forestry. Thus, the merit of the curriculum must be evaluated with reference to the objectives of forestry education. These, in turn, are to help provide the basic concepts, techniques and reasoning ability essential to competence in the profession of Forestry. Finally, it must be recognized that 1.) forestry does not exist in isolation from the rest of the world, and 2.) the practice of one’s profession in whatever capacity is only one aspect of the life he will lead.

While the foregoing suggests the scope of concern in planning and revising the Forestry Curriculum at Iowa State, it should not be inferred that the curriculum pretends to provide the basis for a “universal” education. An attempt should be made, however, to blend the scientific, the professional, the social and the cultural to best meet the needs of the student with respect to both his profession and the environment within which he will live. In his inaugural address, Dr. W. Robert Parks, President of Iowa State, dealt with the dichotomy of science on one hand and culture on the other. His thesis was that higher education must strive to bring these two aspects of the contemporary world more closely together. Many of the observations made in a much broader context are pertinent to forestry education. While Dr. Parks did not elaborate on a strategy for achieving such integration, it seems evident that curriculum manipulation will play only a minor role. Of much greater significance are the approaches and attitudes adopted by members of the faculty, whatever their area of specialization. The increment in education gained through a course in the most intensively scientific subject can be extremely liberal in its impact on the student.

Critics of the Forestry Curriculum (and every graduate automatically joins the ranks of critics) tend invariably to reflect their current status and responsibility. The administrator will often point to the need for a strengthened background in communications, public relations, personnel management and so forth. The scientist may claim that the curriculum is deficient in mathematics and basic sciences. The student, on the other hand, often feels that courses are too basic, too theoretical, and only vaguely related to the job he will have to do when he graduates. Rarely, however, is criticism leveled at the technical or professional component of the curriculum.

Two points are suggested here with regard to curriculum planning. The first is that comment from alumni and other professionals almost invariably propose the addition of something worthwhile to the curriculum. However, given the restraint of a four-year program and a corresponding limitation on the number of credits that can reasonably be earned, each course added means that another must be deleted. The relative merit of a proposed new course must be weighed against that of the one it would replace. Would a course in computer science contribute more to the education of all forestry students than a quarter of organic chemistry? The second point is that the curriculum must, insofar as possible, be designed to cover the whole spectrum of forestry. It is impossible to predict what responsibilities a graduate will have
or where he will be situated at each stage of his career. Thus, his specific educational requirements cannot be determined. Therefore, the curriculum is necessarily “general” with reference to the profession. As a student, one may recognize certain aspects of forestry which seem to be especially appealing. The curriculum can provide the opportunity to complement a more general forestry education with courses appropriate to particular interests aroused in the student.

To what stage or period in a man’s career is the Forestry Curriculum directed? Obviously, the target is not the position one will occupy upon entering the profession. If it were, much more emphasis on technical skills would be required. At this stage in his career, the four-year forestry graduate might even feel that he has been shortchanged. He may encounter graduates of one- or two-year technical programs who are more competent than he in the performance of many of his duties. This phase, however, is more properly regarded as a period of internship and is not the objective of professional education in forestry. The curriculum is appreciably more productive if it aims generally at a more advanced point in the forester’s career. The second decade is perhaps the best approximation of the period toward which the curriculum is directed. At this stage, the graduate is assuming major managerial or administrative responsibilities. His function lies primarily in planning and directing rather than in doing the tasks involved. At this stage, he needs the depth and perspective that his undergraduate education can provide plus all that experience and continued education can add.

Another question in curriculum planning occurs with respect to its structure. What are the areas of knowledge and understanding that would be essential to any person planning to enter the profession of Forestry? This is the basis upon which a core of courses required of all students is established. The core consists of both professional or applied subjects and more basic courses which serve as a foundation for more specialized studies and as part of one’s general education. The implication in this component of the curriculum is that one would not be qualified as a professional forester without the subject-matter represented by the courses included in this core. At a second level are elements in the curriculum within which the student has some degree of latitude in the selection of courses or groups of courses. Choice is generally tied to some more specific professional objective identified by the student. Provision is made for such selection by the establishment of group requirements, options, or minors within the structure of the curriculum. The third component consists of elective credit. Here the student has a great deal of latitude in the selection of courses. Elective courses are generally selected on the basis of a strong personal interest in the subject or to complement the student’s professional program in areas not otherwise provided for in the curriculum.

It should be evident that curriculum planning involves considerably more than simply juggling courses around like building blocks. It is very much concerned with the content of individual courses as well as with the interaction between courses. The arrangement and sequence of courses has a substantial bearing upon the effectiveness of a curriculum.

Why revise the curriculum? If a program serves its purposes well, why not leave it alone? Certainly, in the case of the Forestry Curriculum, the cost and effort entailed has been and will continue to be high. The answer lies in the fact that forestry and the whole context of forestry are dynamic. The technology of forestry, human needs and relative values are changing constantly. Education must continually adjust to such changes if it is to remain effective. Periodic revision of the Forestry Curriculum is imperative. The necessity is amplified by the fact that undergraduate education is geared to the second decade after the student graduates. It becomes necessary, not only to keep pace with the current development of the profession, but also, where possible, to anticipate changes or trends fifteen to twenty years in advance.

Mention should be made of the process whereby curriculum revision is accomplished. One of the standing faculty committees in the Forestry Department is the Curriculum Committee. This group functions continuously in an effort to identify problems related to the curriculum and to develop and propose measures which would increase the effectiveness of the curriculum. This is based not only on personal observation and judgement, but also on comments received from students and close contact and communication with the profession outside the University. Several critiques of forestry education, or certain aspects of forestry education, have been published recently. These have been especially provocative.

After much discussion and deliberation, recommendations are formulated and submitted to the Forestry faculty. Proposals are debated by the entire faculty, sometimes at considerable length and with great vigor. With a broader range of views brought to bear at this level, the recommendations of the curriculum committee may be modified appreciably. The Department’s proposal is then presented to the College of Agriculture Curriculum Committee in the form of proposed catalog changes. This includes, of course, not only adjustments in the structure and course content of the curriculum, but also changes within courses and recommendations for new courses or deletions. After review by the College Curriculum Committee, the proposal is submitted to the University Committee and finally to the Board of Regents for approval.

(Continued on page 39)
Changes in the Graduate Program at Iowa State University

By GORDON E. GATHERUM

The Department of Forestry at Iowa State University has offered a strong graduate program for many years. However, many recent developments in program, staff and facilities have occurred. The current forestry graduate program is closely coordinated with intensive research programs in social and economic sciences in forestry. Iowa State University has excellent supporting departments and research facilities in these subject areas. Moreover, U. S. Forest Service scientists, working on research projects in hardwood physiology, share facilities and cooperate closely with the faculty in research and supervision of graduate studies. These advantages enable Iowa State University to offer a stimulating educational environment for men and women with advanced professional, research or teaching interests in forestry.

History of Forestry Graduate Program

The Forestry Graduate Program was begun at Iowa State in 1915, 11 years after the initiation of a 4-year undergraduate curriculum in Horticulture and Forestry (MacDonald 1953). By 1915–16, four distinct groups (forest management, forest protection, forest economics and forest products and lumbering) were recognized in a 5-year curriculum, and upon completion of this curriculum, the degree, Master of Science in Forestry, was awarded. Because of the limited number of participants in this program, in 1918–19, the 5-year curriculum was dropped and the 4-year curriculum continued with provision for a year of advanced work in either forest management and protection or lumber marketing and forest products. The Master of Forestry degree was awarded at the completion of the advanced year’s work. However, to conform to institutional policy, the degree for advanced work in residence was changed to Master of Science in 1920–21. From 1920 to 1936, the Master of Forestry degree was recognized as a professional degree that was awarded occasionally for outstanding accomplishments in professional work following 5 or more years after graduation.

For many years the Master of Science degree was offered in forest management, forest range management, forest utilization, silviculture and wood technology. In 1953, in addition to the Master of Science degree offerings, a Doctor of Philosophy degree in silviculture or wood technology was offered as a divided major with other departments offering work in related fields. In 1961, forest economics and forest mensuration were included in the Master of Science degree offerings and in the Doctor of Philosophy split-major offerings. In 1963, work in the area of water resources was first offered under a cooperative, interdisciplinary arrangement between the Department of Forestry and nine other departments in the University.

Current Forestry Graduate Program

In 1965, in addition to the existing graduate offerings, the Department of Forestry was authorized to offer the Master of Forestry degree and the Doctor of Philosophy degree with a single major in Forestry. Therefore, the current graduate programs now include the Master of Forestry, emphasizing professional goals, and the Master of Science and Doctor of Philosophy, emphasizing scientific research. All programs are offered by the Department of Forestry through the Graduate College, and all programs are limited to areas of specialization with both a competent specialist on the staff of the Department of Forestry and with strong support throughout the University. These graduate programs have improved the opportunities for our undergraduate as well as our graduate students and made more efficient use of the University’s existing resources in serving society. Moreover, the well-balanced graduate program makes possible a sound forestry curriculum based on the excellent faculty needed to maintain the excellent reputation of our undergraduate program and its graduates.

A general description of the current graduate opportunities in Forestry at Iowa State University was presented in last year’s Ames Forester (Forestry Graduate Committee 1966). For a general description of programs and areas of specialization, the reader is referred to this article. In the present paper, the author has included the following descriptions of each of the graduate degrees in terms of objectives and general requirements:

1 See Dr. Dwight Bensend’s article in this issue of the Ames Forester.

AMES FORESTER
MASTER OF FORESTRY DEGREE

Objectives

1. Advanced study to develop a professional level of competence in forestry.
2. Preparation for careers as professional foresters in or closely related to the administration of forest land areas or wood-products organizations. Primary emphasis will be on development on a broad plane for administrative careers, but with freedom for some concentration within this framework.
3. Permit broadening of educational program of MF and BS students in forestry.

Requirements

1. Accomplishment of a specified scope and level of professional competence in forestry or wood utilization, as defined by the following:

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Subject</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forestry 504</td>
<td>Advanced silviculture</td>
<td>3</td>
</tr>
<tr>
<td>Forestry 543</td>
<td>Forest mensuration</td>
<td>3</td>
</tr>
<tr>
<td>Forestry 570</td>
<td>Economics of forest production</td>
<td>3</td>
</tr>
<tr>
<td>Forestry 587</td>
<td>Advanced topics in wood science</td>
<td>3</td>
</tr>
<tr>
<td>Forestry 688</td>
<td>Formation of wood</td>
<td>3</td>
</tr>
<tr>
<td>Forestry 694</td>
<td>Advanced forest management</td>
<td>3</td>
</tr>
</tbody>
</table>

   Plus

   A course in forest protection (e.g., Forestry 577, Forest pathology). 3

   Two courses in Forestry 540 (Special topics). Courses must be in different areas of specialization (e.g., forest economics and forest mensuration). 8

   Twenty-six credits of acceptable graduate electives, at least 9 of which must be outside the Department. 26

   Total 52

2. Completion of electives to develop a modest amount of specialization within forestry or to strengthen the student's grasp of subject matter across the breadth of forestry.

3. Completion of 52 credits of acceptable graduate work, of which not less than 36 credits must be received from Iowa State University.

4. Modern language: None

5. Residence: Three quarters, or a minimum of 30 weeks of full-time graduate study, must be spent in residence at Iowa State University.

6. Ability, as demonstrated by the completion of a comprehensive oral examination, to synthesize information from various subject matter areas in forestry in the analysis and solution of professional forestry problems. A written examination may be required at the discretion of the student's committee.

MASTER OF SCIENCE DEGREE

Areas of Specialization

Forest Economics, Forest Management, Forest Mensuration, Silviculture and Wood Technology.

Objectives

1. Study to achieve special scientific competence in one of the above phases of forestry.
2. A step toward the Ph.D. for students interested in research and teaching careers. (Particularly valuable for those who will not take all graduate work at one time or at one university.)
3. A terminal degree for those interested in research, but who do not seek a Ph.D.

Requirements

1. Completion of a pre-determined core of course requirements, a separate core for each area of specialization.
2. Completion of elective courses to meet the needs and interests of an individual student.
3. Demonstrated ability to synthesize and utilize techniques and knowledge from various subject-matter areas in the solution of forestry problems in the student's area of specialization.
4. Demonstrated ability to design, conduct and report research on forestry problems of limited scope, depth and complexity.
5. Normally students admitted for graduate study toward the M.S. will have received a B.S. or equivalent in forestry.

Departments in Which Related Coursework is Concentrated

Areas of Specialization: Department:
1. Forest Economics Economics, Statistics, Government
2. Forest Management Economics, Industrial Engineering, Statistics
3. Forest Mensuration Mathematics, Statistics
4. Silviculture Agronomy, Botany, Genetics, Statistics
5. Wood Science Botany, Chemistry, Mathematics, Statistics

DOCTOR OF PHILOSOPHY DEGREE

Areas of Specialization

Forest Economics, Forest Mensuration, Silviculture and Wood Science

(Continued on page 40)
THE PROFESSIONAL CODE OF ETHICS

A. E. PATTERSON

Effects are the results of conduct. Such conduct may be good or bad, and codes of ethics are the outgrowth of practices, both good and bad. No society is perfect; therefore friction, which is frequently the sign of unethical conduct, exists in all society. From period to period, and from place to place, certain standards of conduct have been listed as acceptable, and others unacceptable. These standards have not necessarily been the same in different places at the same time, nor at different times in the same place. Seldom among society as a whole have these accepted standards of conduct been written in the form of law, or for that matter written at all. Most are impressed upon the individual before maturity by parents, or associates, or are learned, belatedly, while the results of nonadherence are being endured.

Many of these standards of conduct have preceded the legislative laws later developed to restrict the minority who refuse to abide by the concepts of the majority. Some supersede and are even more strict than the law; and some, as with most professional canons of ethics, set forth those practices which, although not illegal, do not further the well-being of the individual, his professional group, or society in general. Professional codes of ethics are not designed merely to protect the professional worker, or to promote the interest of the profession itself, although these two objectives are frequently found to a greater or lesser degree in practically all such codes. The foremost objective of the professional code of ethics is to further the interests of the public which it serves. It is based, therefore, largely on altruism and a sense of service, rather than egoism.

This attitude certainly does a profession no harm. When advertised in a dignified manner, before the public, it attracts respect for the profession and its individual members. When the general public realizes that the members of the profession are required, not by legislative law, but by their own group action to protect the public interest, a faith in the ability of the individuals and in the work which they perform is generated.

Such is the nature and purpose of most professional codes of ethics. The profession of forestry, however, has an even greater responsibility and opportunity than some other professions. Practitioners in most professions deal with the individual or with small groups of individuals, and their decisions or the results of their decisions are usually of interest only to the individual or a closely related group. Directly, this may also be true of the professional forester, but it is also true that the decisions of the forester will many times affect the well-being of generations yet to come. Thus, no profession has greater need for the guiding principles of altruism than forestry.

Members of several professions, including some members of the profession of forestry, contend that a written code of ethics is unnecessary; that an unwritten code, based on an intensive "esprit de corps" and the supposition that all members of the profession are gentlemen and will conduct themselves both in business and pleasure as such, is enough. In a numerically small, compact profession this line of reasoning is good and frequently workable. In a profession with thousands of members of varied employment and many interests, it is mere wishful thinking.

The written code has proved itself superior in other learned professions; the profession of forestry is no exception. A code reduced to the written form clarifies the thinking of the group, and in itself serves to bind the group more closely together. In all professions the ideal is service to mankind rather than monetary gain. Whenever a profession accepts a code of ethics it is a declaration to society of this ideal, and to a certain extent enlists the aid of society in the furthering of the ideal. Thus, good relations with the public are established, and public confidence in the profession is strengthened.

No individual member of a profession can live in a world alone. Just as his training and professional knowledge are based on the experience, research, and thinking of those who have preceded him in the profession, his present and future gains must come through a continuous exchange of information with his colleagues. Although he may make some progress without this exchange, it will be slow and halting. Those who have passed their knowledge on to him in the past have given to him not only a means of service and livelihood, but also a staggering responsibility. This knowledge must be put to its best use, and he must consider it his private responsibility that it is used fairly, and only for the purpose for which it was intended.

Thus, in accepting a code of ethics the individual agrees to discipline himself according to the dictates of the code; and in return he is favored with protection from the egotistic and selfish motives of fellow workers. In addition, he receives the confidence of the public, who may not know him personally, but who know the moral obligations of the profession. This public confidence can only be maintained by the individual, by a show of both technical and moral competence in all instances.

In many ways the forester is similar to other professional workers. In a few ways, especially in relation to his work, he is decidedly different. Most foresters, even at an early stage of their career, work alone under a heavy load of responsibility. Their every action may potentially involve large sums of money, or the safety and welfare of present or future populations. Instant decisions are often necessary both in times of stress and in everyday work. In such moments, the forester must rely upon his technical training, his former experience, and his moral judgment. The last of these is seldom the least. Foresters are not exempt from human weaknesses or temptation, and unless they are guided by a code of ethics they may unwittingly make the wrong decision. The code must always be foremost in the mind of the forester, and his every action and decision should be tested within its crucible.

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2 Professor of Forestry, School of Forestry, University of Georgia; Athens, Georgia.
GEORGE W. THOMSON, PH. D.
Professor of Forestry
Photogrammetry, Advanced Mensuration, Forest Management, Farm Forestry

Dr. Thomson became an undergraduate student at Iowa State in 1939 and has taught in the forestry department since 1948. He received his B.S., M.S., and Ph.D. degrees from I. S. U. Dr. Thomson has served as Vice-Chairman and as Secretary for the Mensuration Section of the S. A. F. He also directed a study of mensuration teaching in the U. S. and Canada and made a study of range instruction at non-range forestry schools in the U. S. Articles on mensuration, photogrammetry, and forestry instruction are among his more recent publications in the Journal of Forestry. Dr. Thomson directs the management research problems of graduate students who are working on a masters degree. Although these problems may have silvicultural, mensurational, or economic implications, they are aimed at management in a general sense rather than pure research in a specific field. Dr. Thomson is serving as the temporary Head of Forestry Department pending the naming of a permanent replacement for Dr. Stoltenberg.

CARL H. STOLTENBERG, PH. D.
Head of Department
Advanced Economics Research

Dr. Stoltenberg arrived at I. S. U. as Head of the Forestry Department in 1960. He received his B.S. and M.F. degrees from the University of California and his Ph.D. from the University of Minnesota. Dr. Stoltenberg’s services have extended beyond, as well as within, our school. He participated in two meetings of the Secretary of Agriculture’s Forestry Research Advisory Board in Washington, D.C., has served or is currently serving as a member of the Forestry Research Committee, Agricultural Board, National Research Council, National Academy of Science, and Chairman of the S. A. F. Division of Forestry Education. He also served as a member of the S. A. F. Committee for Advancement of Forestry Education and was Program Chairman for the 1965 National Meeting of the S. A. F. An example of his published articles is: “The 18–22 Segment of Continuous Education.” Two of his recent research projects deal with the evaluating of hardwood stumpage and the surveying of the forest recreation activities of Iowans. Dr. Carl Stoltenberg has recently resigned as Head of Forestry Department to become Dean of the School of Forestry at Oregon State University.
Dwight W. Bensend, Ph.D.
Professor of Forestry
Wood Technology, Forest Products, Special Topics in Wood Science and Technology

Dr. Bensend is now in his twentieth year of forestry instruction at Iowa State. He received his B.S. and Ph.D. degrees at the University of Minnesota. Dr. Bensend has been very active outside of our school and was recently cited by “Wood” magazine for his contributions to the forestry profession. He has been an active member of the F. P. R. S. since 1947. He has served as secretary, vice-chairman, chairman, and trustee of the Midwest Section and is currently serving on the national society’s seven-man Committee on Education. He is also a charter member of the S. W. S. T. and was elected its secretary-treasurer in 1963. Dr. Bensend has been a member of the S. A. F. since 1937 and has served on numerous committees in the Iowa Chapter in addition to serving as vice president of the Upper Mississippi Valley Section. Dr. Bensend’s major research activities have centered around wood properties, particularly the anatomy of reaction tissue in hardwoods. He is completing, and in the process of publishing, a study of blood as one of the ingredients in phenolic resin glues for hot press gluing of southern pine plywood. He assisted Floyd Manwiller in his Ph.D. thesis, “The Structure of the Cell Wall in Tension Wood in Silver Maple Using Polarizing and Electron Microscopes”, for which Mr. Manwiller received the Wood Award, given annually for the best graduate forestry thesis in the U.S. and Canada. Dr. Bensend is in charge of the specifications and the bids of the forestry equipment for the new Plant Science Building. He will also be in charge of Summer Camp this year.

De Witt Nelson
Visiting Professor of Forestry
Forest Conservation, Forest Recreation and Forest Policy

Professor Nelson is with us this year as a visiting Professor of Forestry. Professor Nelson graduated from Iowa State University in 1925 with a B.S. Degree in forestry. From 1953 to 1966 Professor Nelson was director of the California Department of Natural Resources and director of the California Department of Conservation. Here his responsibilities covered a wide range of renewable and nonrenewable resources as well as recreation. From 1944 to 1953 he was State Forester for California. During that period much major conservation legislation was enacted and implemented under his leadership. Nineteen of his 41 years of public service were spent with the U.S. Forest Service. During this time he was supervisor of four different national forests in California. He has held numerous top national professional positions and has served on several national advisory commissions. Here at Iowa State he, in addition to his teaching activities, has given numerous speeches concerning controversial issues of forestry.
GORDON E. GATHERUM, PH.D.
Professor of Forestry
Silvics, Silviculture, Forest Influences

Dr. Gatherum first taught at Iowa State in 1953. He obtained his B.S. at the University of Washington, his M.S. at Utah State University, and his Ph.D. while teaching here at Iowa State. Dr. Gatherum has served as an advisor on the Hartman Award Trip and attended several meetings, including U. M. U. section and Central States Tree Improvement Conference meetings. He is also an active contributor of technical publications. One of his numerous research projects concerned the collection of data relative to the revegetation with forest tree species of coal strip mine banks. The objectives of another research project are to determine the effects of seed source, light, temperature, water, and certain nutrients on the photosynthesis, respiration, and growth of Scotch pine and aspen-poplar hybrid species, and to determine the relationships between tree survival, growth, photosynthesis, and respiration of seedlings of these species as affected by some genetic and environmental factors.

FREDERICK S. HOPKINS, JR., PH.D.
Associate Professor of Forestry
Forestry Economics, Forest Recreation, Economics Research

Dr. Hopkins came to Iowa State in 1959. He obtained his B.S.F., B.B.A., and M.F. degrees at the University of Michigan and his Ph.D. at New York State University. He has served as Chairman of the Economics Committee in the Iowa Chapter of the S. A. F. Dr. Hopkins has completed a research project based upon the small woodlot owner in Iowa. The project concerned the small woodlot owner's basis for forest investment decisions, with the main emphasis being placed upon the opportunity cost of capital. Currently his research is confined to an advisory role in the preparation of graduate students' thesis research papers. He is now involved in three such projects: one has to do with the management of Black Walnut and the other two are concerned with various phases of outdoor recreation. Dr. Hopkins will be an instructor at the Forestry Camp this summer.

J. D. WELLONS III, PH. D.
Assistant Professor of Forestry
Wood Science, Chemistry and Rheology of Wood

Dr. Wellons is completing his second year of forestry instruction at Iowa State. His B.S., M.F., and Ph. D. degrees were obtained at Duke University. His research is primarily in the area of wood-moisture relationships. The objectives of his work are to obtain a better understanding of how wood and water interact and to devise methods of altering existing wood-moisture relationships.

Frederick S. Hopkins, Jr., Ph.D.
Associate Professor of Forestry
Forestry Economics, Forest Recreation, Economics Research

Dr. Hopkins came to Iowa State in 1959. He obtained his B.S.F., B.B.A., and M.F. degrees at the University of Michigan and his Ph.D. at New York State University. He has served as Chairman of the Economics Committee in the Iowa Chapter of the S. A. F. Dr. Hopkins has completed a research project based upon the small woodlot owner in Iowa. The project concerned the small woodlot owner's basis for forest investment decisions, with the main emphasis being placed upon the opportunity cost of capital. Currently his research is confined to an advisory role in the preparation of graduate students' thesis research papers. He is now involved in three such projects: one has to do with the management of Black Walnut and the other two are concerned with various phases of outdoor recreation. Dr. Hopkins will be an instructor at the Forestry Camp this summer.
HAROLD S. McNABB, JR., PH.D.
Professor of Plant Pathology, Professor of Forestry
Forest Pathology, Wood Deterioration.
Dr. McNabb has taught at Iowa State for thirteen years. He received his B.S. at the University of Nebraska and his M.S. and Ph.D. at Yale University. Dr. McNabb has traveled throughout Europe visiting with people in the profession, represented the U.S. as an official delegate at the FAO/JOFOR Symposium at Oxford, England, and served in a similar capacity at the International Botanical Congress at Edinburg, Scotland. Closer to home he has served on the Board of Governors, International Shade Tree Conference; Botany Section Editor, Iowa Academy of Science; and Co-Chairman at the Plant Disease Profile Committee, American Phytopathological Society. Two of his recent projects included research in these general areas: relationships between soil fungi and plant roots and host resistance reactions in woody-plant wilt diseases.

KENNETH D. WARE, PH. D.
Association Professor of Forestry
Forest Mensuration, Photogrammetry
Dr. Ware is completing his fifth year of forestry instruction at I.S.U. He obtained his B.S. from West Virginia University and his M.F. and Ph.D. from Yale University. In connection with his main field, Forest mensuration, Dr. Ware attended the National Meeting of the S.A.F. in Denver where he presented a paper before the Division of Forest Mensuration. Among his many publications are: “Continuous Forest Inventory with Partial Replacement of Samples,” “An Efficient Sampling Design for Forest Inventory,” and “Some Problems in the Quantification of Tree Quality.” Dr. Ware’s research deals with problems in forest measurements and forest inventory with particular reference to the management of Iowa hardwoods. The objectives of these studies are to derive and test several techniques for estimating the value of hardwood trees, to develop several sampling plans involving unequal probability sampling and test them for field application, and to test methods of growth estimation in mixed hardwood stands.

VICTOR G. SMITH, M. Sc. F.
Instructor in Forestry
Introduction to Forestry, Forest Protection, Forestry Operation’s Analysis
Mr. Smith is a new faculty member at Iowa State. He received his forestry education at the University of Toronto. Currently Mr. Smith is working on his Ph.D. here at Iowa State. His research projects center around forest operations, cost control analysis, and statistics of forest mensuration. He belongs to several forestry organizations in Canada. Before joining our forestry staff Mr. Smith worked in the pulp and paper industry in Toronto and taught logging and wood technology at Michigan Tech. Mr. Smith is married and is the father of three girls and one boy.
David W. Smith, B.S.
Assistant Professor of Forestry
Extension Forester

This is Mr. Smith's first year as extension forester. He obtained his B.S. from Iowa State University and is currently working on his M.F. Upon receiving his M.F. he intends to go on and study for his Ph.D. After completing his undergraduate work, Mr. Smith spent five years as an officer on a destroyer stationed in the Pacific. His M.F. thesis deals with the effects of moisture on growth of aspen-poplar hybrids.

Raymond F. Finn, Ph.D.
Associate Professor of Forestry
Project Leader of U.S.F.S. Ames Research Center

Dr. Finn came to I.S.U. in his present capacity in 1961. He received his B.S. from the University of Minnesota and his M.S. and Ph.D. degrees from Michigan State University. In connection with his job of directing the research carried out by the research center, Dr. Finn has visited many of the top forestry research and experimental stations throughout the country. Two of his articles include: "Relations of Foliar Potassium Content to Frost Mortality of Leaves" and "Interactions of N, P, K in Stimulating the Growth of Twenty Year Old Tulip Poplar Plantations". One of his research projects entails the inorganic mineral nutrition of black walnut, with the primary objective being to determine the levels of the essential elements which will maximize growth as determined by stand nutrient culture studies. The project also includes field studies in which the growth of black walnut is studied under varying nutrient and soil moisture levels.

Dean R. Prestemon, Ph.D.
Assistant Professor of Forestry
Forest Products Extension Forester

This is Dr. Prestemon's second year as extension forester of the products division. His B.S., M.S., and Ph.D. degrees were obtained at Iowa State University and the Universities of Minnesota and California, respectively. Approximately sixty percent of Dr. Prestemon's time is spent in wood products research. His two current research projects are concerned with the use of wood products in residential construction. The titles of these two project topics are: "Importance of Noise and Its Potential Affect on Wood Use in Garden Apartments" and "Causes and Severity of Wood-Use Problems in Residential Construction in Forestry."
Departmental Secretaries

Judy Jutting

Mrs. Louise Murphy

Mrs. Chloris Hubby
STUDENT AWARDS AND SCHOLARSHIPS

1966-67

F.P.R.S. AWARD
Kenneth Phipps
William Einspahr
Jerry Hoke
Jan Rousey

IOWA HOO-HOO CLUB AWARD
Richard Hall

ELI LILLY ADVANCED CURRICULUM SCHOLARSHIP
Kenneth Phipps
Thomas Eischeid
Richard Hall
Stephen Petersberg

RICE ESTATE ADVANCED CURRICULUM SCHOLARSHIP
Dennis Adams
Dennis Cline
Donald Hart
Paul Wray
Stephen Anderson
Aaron Campbell
William Einspahr
Mark Schultheiss

FEDERAL LAND BANK OF OMAHA SCHOLARSHIP
Leland Lubka

SEARS-ROEBUCK FOUNDATION SOPH. SCHOLARSHIP
Stephen Petersberg
It has been said that two things in life are inevitable—death and taxes. For forestry students there is a third inevitable—summer camp.

This fact of life brought together 54 Iowa State forestry students for two months this past summer on the Leubrecht Forest 30 miles northeast of Missoula, Montana.

Camp was to open on June 5th and miraculously enough, by late that afternoon the last of the summer students had arrived. The trek west was accomplished in a myriad of fashions; some came by train, others road either with their thumb as a ticket or in their own (or a friend’s) conveyance. For many it was a constant battle with rainy weather and faulty fuel pumps.

The first thing upon arrival was to set up “housekeeping” in our summer homes. With three to four men in each living unit it was, of course, a question of who got first claim on which drawers and what bed. That settled, it became a group project to coerce the small wood-burning stove in each cabin to function correctly.

Then came that first trip across the Camp grounds (a trip oft repeated on many a cold Montana morning while still half asleep) to the washroom. It suddenly became apparent that we all had one thing in common—the desire to take a shower, just when everyone else had decided to do so too. Rather than set a “shower stacking” record of 54 men under two showers, each one learned to adjust his shower schedule so as to outsmart his compatriots and be first to the available space and hot water.

Supper that first day turned out to be our first educational experience of the summer. We found our cook, Mrs. Caldwell, was determined to turn us into good husband bait during our service on KP while expecting us growing boys to sympathize with a budget that allowed us but two small glasses of milk and occasional seconds on the main dish at each meal.

Getting up for 7:00 a.m. breakfast the next morning proved to be no less of an education for many.

Classes, we found, were to be administered on a two section basis—both sections to be attired in their yellow hats “while working in the woods or visiting mills where they are required.” We also soon found there was a spy in the group—we were not all foresters. Would you believe one EE? There was one. We all accepted it though—sort of as a form of cultural exchange program for a member of an underdeveloped department.

Dean Bolle of the University of Montana was once again on hand to greet his midwest guests and to begin our formal studies with an orientation tour of the surrounding countryside.

Then began eight weeks of study in the four courses endemic to summer camp.

Dr. Bensend’s wood utilization course found us splitting our time between learning of the basic wood conversion processes in classroom lectures and viewing these processes in action at some of the area’s mills and plants.

Among the numerous places we visited was the Waldorf-Hoerner pulp and paper operations. This plant’s utilization of waste chips from the surrounding sawmills has been a significant step in forwarding the prosperity of the Montana timber industry. In addition to touring their conventional set-up we also observed under construction a new continuous digester which will turn sawdust into pulp, no doubt furthering the company’s contribution to the economy of the region. Whatever the case, W-H made a profound contribution to us students. They treated us to a cafeteria style dinner (all one could eat) at a restaurant well known for its fine food.

Del Conner’s sawmill south of Missoula held some intriguing sights, one of which was their rapid production of 2x4’s. This company utilizes small logs and veneer bolt cores in an operation which feeds logs in one end, passes them through a four-sided beaver and a dimension slicer, and spews out completed 2x4’s at the other end, all under guidance of a single operator.

Cruising timber on Leubrecht?!?
Probably the most interesting, and surely the longest utilization trip came near the end of camp when we ventured to Lewiston, Idaho the home of Potlatch Forests, Inc. Getting there and the camping out once we did was an experience in itself as fellows were always being "stuck" in the truck or being tossed in for a "swim." Under the able guidance of some young female employees we toured the large and diversified operations of the company. It was one visit when the guides had no trouble getting our attention.

Our forest mensuration course under Dr. Thomson led to many a lunch (one meat and one cheese) in the woods, some bewildered but never completely lost cruising crews, and many long hours compiling data.

Starting from a basic introduction to the tools of the trade (abney level, staff compass, raincoat, etc.) we worked our way into the subject.

First came some curve layouts that tested our skill with compass, chain, and computation of formulas. Then it was out to the woods for the real thing—boundary closures and reconnaissance from which we developed a control map and a pollen allergy.

About the middle of the summer a logger obliged us by upsetting his truck and spilling his load of logs near camp where they were available for some instruction and practice in scaling.

The big task was running a simulated inventory analysis on a nearby acreage of trees for Dr. Thomson and the Leubrecht Goldbrick Lumber Company. During the data collecting part of this problem two of the crews accomplished an astounding mathematical feat; they managed to have the parallel lines they were running cross over one another.

Dr. Gathrum attended the first four weeks of camp to teach the forest biology course which introduced us to some of the environmental manipulations practiced in forestry, taught us the process of keying out unknown vegetation, and demonstrated how not to try to turn a bus around on a muddy mountain road; it was a good thing there was a caterpillar tractor handy to pull out the wrecker when it got stuck, too.

A typical afternoon in this class might have found us tramping over a clear cut area identifying animal droppings and checking out tree regeneration or it might just of well have found us out chopping away in a soil pit and picking flowers to place on the resulting grave-like mound of dirt.

Dr. Hopkins arrived for the second four weeks to teach the Forest operations course. He acquainted us with the workings of the several governmental agencies that administer forest lands.

The Forest Service was presented to us at several levels. At the district level we were instructed on the managerial chains of command, looked at problems in forest recreation planning, and found that rangers' dogs are not to be trusted especially if you're a red haired person sitting on the ground and slightly resembling a fire plug. At the regional level we learned about several other aspects, among them being publicity and education work being carried on by the Forest Service. We also met with some of their protection (Smoke Jumper headquarters) and research work.

The workings of the Park Service were presented to us as a part of a scenic tour of Glacier National Park, a place that was often toured on weekends by many of the boys who were wildlife enthusiasts.

The new Bureau of Outdoor Recreation showed us some plans they have for interdepartmental development of recreation facilities. A part of our visit with the BOR took us to a high pass in the Lolo trail which Lewis and Clark had once followed. There, at what is called the Indian post-office, we left a note so that all those who would later visit there might know the intrepid Iowa State foresters had preceded them.

Of course, not all our time was spent in class. Nearly every evening the troops would assemble for a game of volleyball (played under jungle rules until the net was raised), football, or softball. We even had some outside competition from a nearby Forest Service district.

Another source of interest was a horseshoe tournament held near the end of camp. This even saw the champion of previous years, Dr. Thomson, yield his title to a new challenger, Norv Baker.

The area's rivers held an attraction for the fishermen and "skinsy" floaters among us. They also, thanks to our industrious trout enthusiasts, provided camp with a couple of fish dinners.

Once a week there were movies shown with refreshments available from Seth's pop machine. And there were always those certain nights when some of the fellows went to get their tanks filled at Hap's gas station.

All in all, it was an interesting, educational summer that will be long remembered by those of us who were there. Of the three inevitables it comes out on top; cheaper than taxes and easier to survive than death.

"Now, when you see the rangers dog approaching . . ."
Seniors

AARON R. CAMPBELL
Management. Aaron comes from Dubuque, Iowa. He spent summer camp days at Franklin, North Carolina in 1964. Aaron has served as Agriculture Council representative from Forestry Club for two years and work as Sales and Circulation Chairman of 1966 Ames Forester. His summer experience includes one summer with Weyerhaeuser in Washington and one summer with Container Corporation in Florida. Aaron is a member of Xi Sigma Pi and enjoys all kinds of music. After graduation Aaron plans to enter Flight School in the Navy.

DEWAIN W. CLAUSEN
Management. Dewain comes from Denison, Iowa. Besides the 1964 summer camp, Dewain has spent his summers in TSI work, timber inventory and mistletoe control. After graduating, Dewain will either enter the Service or work for the Forest Service with an emphasis on forest soils. Dewain is the Feature Editor of the Ames Forester and enjoys guns and hunting.

P. DENNIS CLINE
Products. Dennis is from Winterset, Iowa. Besides attending the 1965 summer camp in Montana, Dennis has spent summers with Simpson Timber Company and Timber Protection Association in Idaho. Dennis has been the photographer for the Ames Forester for the last two years and lists archery, hunting, and basketball as his favorite pastimes. Dennis will enter graduate school after graduation and pursue his studies in Wood Technology.
RICHARD D. DENNY
Management. Dick comes to Iowa State from Mays Landing, New Jersey. He attended the 1962 summer camp in Winter Park, Colorado. His practical experience includes work on fire crews in California and Smoke Jumping School in Missoula, Montana. He enjoys hunting, fishing and sky diving and after graduation Dick plans to work for the Forest Service in Northern California in Fire Control.

WILLIAM E. EINSPAHR
Products. Bill hails from Odebolt, Iowa. He has spent one summer with Masonite Corp. in St. Charles, Ill. and attended the 1964 summer camp in Franklin, N.C. Bill has served as the treasurer of Forestry Club, Business Manager of Ames Forester, and this year as Editor of the Ames Forester. After graduation, Bill plans to return to school and continue study in cell wall anatomy. Hunting, fishing, other outdoor sports, and traveling take up most of Bill's free time.

MAHLON C. HAMMETTER
Management. Mahlon is from Sumner, Iowa. He attended the 1965 summer camp in Montana. After graduation this spring, Mahlon plans to enter graduate school at ISU. He has spent a summer in timber sale layout work with BLM. Mahlon enjoys hunting and sports and is a member of Xi Sigma Pi.

ANDREW M. HARJULA
Management. Andy comes to us from Toronto, Canada. After graduation, Andy plans to return to the Homeland and work for one of the Provincial Governments. He has spent six summers working for the Ontario Department of Lands and Forests. Andy attended the 1966 summer camp in Montana. Hunting and camping are listed by Andy as favorite hobbies.
ROBERT H. HIBBS  
Management. Bob is from Marengo, Iowa and attended the 1966 summer camp in Montana. His summer experience includes TSI work, and Forest Defoliation Research with the Forest Service. Bob served as a member of the Student-Faculty Relations Committee. After graduation he plans on serving in the Air Force and working for the Forest Service.

CHARLES A. KIEWEG  
Management. Chuck's home is West Terre Haute, Indiana. After graduation he plans three years in the Naval Reserve. His summer experience included working as a Recreation Aid for the Forest Service in Asheville, North Carolina after summer camp in Franklin, N.C. He also spent one summer in Chehalis, Washington with Weyerhaeuser Co. Canoeing, hiking, tennis and other outdoor sports are favorite forms of recreation for Chuck.

ROBERT W. MEYER  
Management. Bob is from Sumner, Iowa and also attended the 1964 summer camp. He has practical experience on the Wasatch National Forest in Utah as a timber aid. After graduation, Bob plans to head for Maine with his wife Gay, and enter graduate school there. He is a member and Forester of Xi Sigma Pi and has been on the Forester staff for two years. He enjoys hunting, fishing and trapping.

DICK L. PARCHER  
KENNETH PHIPPS

Products. Ken's home is in Runnells, Iowa. Ken spent summer camp in Franklin, N.C. in 1964. He has worked at the Forest Products Laboratory in Madison and with Pollock Forest Research Lab in Lewiston, Idaho. Ken is a past president and secretary of the Forestry Club. He also was on the staff of the 1966 Ames Forester. Ken is a member of Xi Sigma Phi and Phi Kappa Phi. After graduation, he plans to enter the Marine Corps and then return to school for graduate work.

MARVIN L. SCHMEISER

Management. Marvin plans to be with the Government after graduation. He is married and his wife, Connie, will also graduate this spring. Marvin attended the 1964 summer camp. His work experience includes one summer with an experiment station in the Northwest and one summer working for the Polk County Conservation Commission. Marvin is originally from Burlington, Iowa and enjoys many outdoor activities.

MARK E. SCHULTHEISS

Products. Mark's home town is Plymouth, Michigan. He plans to attend graduate school in the area of chemical-anatomical relations. He has been vice president of the Forestry Club and is this year's Managing Editor of the Ames Forester. Mark spent his summer camp days in Franklin, N.C. in 1964. He has worked for Simpson Timber Co. in Washington and Oregon and lists driving back to Michigan and other traveling as his hobby.

ROBERT R. SMITH

Products. Bob is from Lorimor, Iowa. He attended the 1964 summer camp in Franklin, N.C. Bob has spent two summers with Weyerhaeuser working on a logging operation and seed tree selection program. After the service, Bob plans to return to Weyerhaeuser for permanent work. Hunting and fishing are the favorite outdoor pastimes for Bob.
RAY H. VAN WYNGARDEN
Management. Ray is from Norwalk, Iowa and plans to fulfill his military obligation before he goes to work for the Forest Service. Ray attended the 1964 summer camp in Franklin, N.C. and has summer experience including Forest Inventory, Fire-Recreation Control and work as a surveyor’s aid. Being president of the Forestry Club and working on the Ames Forester Staff have taken a good share of Ray’s extra time this year.

JOSEPH P. SULLIVAN
Management. Joe now lives in Ames with his wife Paula and their daughter Laura Suzanne. His summer camp days were spent in Montana in 1966. Joe spent the summer of 1964 as a recreational specialist for the Forest Service. Besides the Forestry Club, Joe also is a member of the Botany and Archery Clubs. He enjoys hunting, fishing and reading and plans to work for the Forest Service after graduation.

BENJAMIN C. WIESE
Management. Ben comes from Hartley, Iowa and attended the 1965 summer camp in Montana. He spent the summer of 1966 as a lookout on the Olympic National Forest. After graduation, Ben plans to continue school with graduate work in silviculture. He is a member of Xi Sigma Pi and enjoys coin collecting.

STEPHEN A. PARSONS
Management. Steve comes from Kellogg, Idaho and is this years Activities Editor of the Ames Forester. He attended the 1964 summer camp in North Carolina and spent additional summers as a recreation guard and as a forestry aid with Weyerhaeuser in North Bend, Oregon. Steve is a member of Xi Sigma Pi and enjoys sports activities as well as traveling and hunting. He plans on Military Service and work with the Forest Service after graduation.
Fall Foresters’ Day

Fall Foresters’ Day last year was held on Sunday, October 2. This marked the first time that a foresters’ day was held in the fall as well as in the spring. This was done to encourage more participation among freshmen foresters. Because of the fine turnout this year the Forestry Club will continue to sponsor two foresters’ days each year.

We were once again fortunate enough to obtain the use of the fine facilities found on the Izaac Walton League Grounds. The day was sunny and warm with a very strong wind which only served to inflate the spirits of all those participating. All of the planning was done by John Matthiessen with help from several other foresters.

The canoe race was the first event of the day. The gusty wind made for some exciting moments during the event. All of the teams successfully completed the course, except for one which managed to swamp their canoe near the finish line. They were wet but otherwise unscathed. Marv Schmeiser and Chuck Kieweg finally emerged as the winners of the canoe race.

The highlight of the day came when the juniors and seniors were matched against the freshmen and sophomores in a tug-o-war. At first the underclassmen seemed to have the better team. They came within a few feet of pulling the entire upperclassmen team across the line. But they couldn’t quite do it as the upperclassmen gathered their strength and walked off with the victory.

After the events had been completed everybody went to the shelter for a delicious meal of barbecued hot dogs, potato chips, baked beans and pop. Contest winners were announced after the meal. The first place winners were:

- Canoe Race: Marv Schmeiser and Chuck Kieweg
- Trap Shoot: Bob Hibbs
- Log Throw: Mark Schultheiss
- 2-man Bucking: Marv Schmeiser and Ray Van Wyngarden
- Log Chopping: Chuck Kieweg
- Traverse: Steve Jungst
- Grand Prize: Marv Schmeiser
Forestry Club Wives

Forestry Wives’ Club is the same organization which was previously known as the Lumber Jills. Membership is open to the wives of all Iowa State University foresters who are married. The club has been very active this year. They started out this fall with a pot-luck dinner at the home of Dr. and Mrs. Stoltenberg. Each fall they hold a candy sale in Curtiss Hall to raise money for the treasury.

Every month Forestry Wives’ Club holds a regularly scheduled meeting and a program given by a guest speaker followed by refreshments. The speakers have included a program given by Mr. and Mrs. Dewitt Nelson, Dr. Birdsell speaking on cancer, and Dr. Thomson speaking on “The Role of Forester’s Wives”.

Featured speakers coming up this spring will include Dr. Landers of the Botany Department and Dr. Rust giving a program on meat selection for the home. Plans are being made for a picnic to be held this spring and also for the annual diploma dinner at which PHT (Putting Hubby Through) diplomas are presented to wives of graduating seniors.

The current officers are:

- Bobbi Countryman .......... Corresponding Secretary
- Ann Hazard ................. Vice President
- Paula Sullivan ............... President
- Bev Smith .................. Secretary-Treasurer
- Mary Smith .................. Historian

Christmas Tree Sales

In the three weeks between fall quarter break and Christmas vacation the Forestry Club was very busy selling Christmas trees. This year’s sales were under the direction of Jerry Garvey and Joe Hartman. Again this year the trees were sold near Lincoln Way, south of the Memorial Union.

No trees were taken from the Holst tract this year, however, an excellent selection of trees was obtained from growers around the State. About a dozen trees from eight to fifteen feet tall were obtained in Des Moines. A grower in Decorah, Iowa, provided 127 trees ranging in height from five to seven feet. These trees included Scotch, red and Austrian pine. An additional 150 trees were obtained from a grower in Ottumwa, Iowa. These were mainly Scotch pine approximately three feet tall. The smaller trees proved to be very popular, especially among dormitory residents. In addition to the Christmas trees a variety of pine cones obtained from the West Coast were offered for sale.
Veishea Open House

The theme of the 1966 Veishea was "Journey Through ISU". The forestry display was located on the second floor of Curtiss Hall. The purpose of the display was to try to depict a student's journey through the forestry curriculum at Iowa State University. Each forestry course was displayed and a description of the course work involved was given. Veishea visitors and prospective students were given a journey through summer camp, logging and milling, mensuration, silviculture, economics, management and wood products courses. Attendants were on hand to answer questions about demonstrations and to explain the career opportunities in forestry and the forestry program at ISU. This display did a good job of explaining what forestry is and what forestry does at Iowa State.

Holst Tract

Once again this year Forestry Club was in charge of managing the Holst State Forest. Located northwest of Boone this forest provides a variety of uses. It provides excellent wildlife cover and some good hunting for the people in the area. The Holst Forest is also used as a teaching tool in many forestry courses.

Under the direction of Ken Phipps a great deal of improvement work has been done on the Holst Tract. Several acres of red and white pine were pruned during the past year. They are now in the process of cutting brush and preparing an area for the planting of young seedlings in the spring.

Overnight work sessions proved to be a great success this year. The students would work on the Holst Tract Saturday afternoons and then hold a song-fest in the evening. After staying overnight, they would return to Ames the next day.
Forestry Club

Forestry Club was kept very busy this year with many activities. Fall quarter began with the “Big Brother” program which is designed to help incoming freshmen adjust to college life and get them interested in Forestry Club. This year marked the first time a Foresters’ Day was held in the fall and it proved to be a success. Many members of Forestry Club participated in the Woodchopper’s Ball held at Lynn Fuhrer Lodge. After chopping a supply of wood for the winter the workers were treated to a hot “Paul Bunyan” meal by members of the YWCA. Also during fall quarter Mr. Dewitt Nelson, a visiting professor in forestry, spoke to Forestry Club about “Forestry Today, Tomorrow and in the Future.”

Winter quarter was highlighted by a special program honoring Dr. Stoltenberg and Dr. Ware. Dr. Stoltenberg was honored for his contributions to forestry at Iowa State University before resigning to become Dean of Forestry at Oregon State University. Dr. Ware was recognized for his contributions to Forestry Club as its past advisor. Programs were given winter quarter by Dr. Pohl of Botany on poisonous plants, Dr. Wellons on wood preservation and by Dr. Stoltenberg explaining why he had decided to go to Oregon State University. Christmas tree sales and several faculty firesides were also held during winter quarter.

Spring quarter was started off on a high note by the annual Game Banquet. Mr. Dewitt Nelson was this year’s featured speaker. Another highly successful Spring Foresters’ Day was held on the Izaac Walton League grounds. These activities have made Forestry Club one of the top clubs in the College of Agriculture.
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<td>Vice-President</td>
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<td>Rick Hall</td>
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<td>Jerry Garvey</td>
<td>Sr. Ag. Council Representative</td>
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<td>Aaron Campbell</td>
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Here is what we learned at summer camp.

### Tug-O-War

Engineer’s Day once again was marked by the annual Tug-o-war between the mighty foresters and their arch-rivals the C.E.’s. Prior to last year’s contest the foresters had reigned supreme for several years, but the victory axe no longer hung in the Forestry Club library. Last year’s tug-o-war had ended in confusion with the C.E.’s proclaiming themselves the winners.

This year the foresters were determined to avenge the disputed loss and return the axe to its rightful place. An added incentive to the two teams was the fact that the losers must treat the winners to an ice cream social. The C.E.’s won the first round, however, this was no cause for alarm because the rules called for two wins out of three tries. The second round started and the foresters pulled harder, but to no avail. The C.E.’s had won again. Next year’s foresters will be inspired by the thought of installing the victory axe in our new building.
The objectives of Xi Sigma Pi are to secure and maintain a high standard of scholarship in forestry education, to work for the upbuilding of forestry, and to promote fraternal relations among earnest workers engaged in forestry activities.

It is the intention of Xi Sigma Pi to honor the student who excels scholastically and who has a personality that would tend to make him successful in forestry work. The fraternity aims at stimulating scholarship in forestry and at bringing together in good fellowship those students who have shown exceptional ability. The establishment of chapters at various universities and colleges throughout the United States has resulted in linking together students from various parts of the country with a common interest.

The fraternity stands for high scholarship and its members, both individually and collectively, encourage forestry activities at the institutions with which they are connected by active participation in the projects of their respective forestry clubs and by special chapter projects for encouraging the development of leadership in school activities.

Alpha Gamma chapter has been in existence at Iowa State University for two years. There are presently 34 faculty, extension service, graduate school and undergraduate members. Through increased membership and maturity Alpha Gamma chapter is rapidly developing into a very productive organization.

Officers for the past year were:

- Forester: Steve Anderson
- Assistant Forester: Bob Meyer
- Secretary-Fiscal Agent: Ken Phipps
- Ranger: Aaron Campbell

Bulldmg  (Continued from page 10)

Unit was activated in 1948 and has occupied limited office space in Curtiss Hall. However, no laboratory space was provided in Curtiss Hall, and, therefore, only field investigations could be conducted. A recent reorganization of the Forest Service Research program has accentuated the need for laboratory facilities. Research is now oriented to probe in depths which emphasized the need for well equipped laboratories.

We are pleased that the Ames Unit, under the direction of Dr. Finn, has been provided adequate office space and a new tree physiology laboratory in Bessey Hall. These new facilities will permit an increase in the size of Ames Unit staff and permit the undertaking of new studies. The work at the Ames Unit at present is largely confined to nutrition of hardwood seedlings. The new facilities provides the opportunity to enlarge the scope of these studies. Some of the studies being planned are: (1) plant-soil-water relations, (2) plant-nutrition-water relations, (3) chemical analysis of plant tissues to determine the disposition of photosynthate, and (4) plant-hormone-nutrition relations.

Facilities for Graduate Students

More adequate space for graduate offices is provided. There are five rooms available and in addition, space is available in a number of the small laboratories in the building. A very fine reading and research study room is provided where current issues of the important journals and other research publications will be made available. Of course, all of the research laboratories are available to graduate students depending on their area of interest.

Facilities for Undergraduate Activities

An office for the Ames Forestry staff and for the Forestry Club is provided as well as a club reading room. There is also an interview office for the use of prospective employers.

New Greenhouse Space

The lack of greenhouse space has been a major drawback in the tree physiology research of both the Forestry Department and the Ames Unit of the North Central Forest Experiment Station. Make-shift plastic greenhouses have been constructed for several of the studies.

In 1965 the Congress of the United States appropriated $200,000 to construct a headhouse-greenhouse facility at Iowa State University. It is located about one block from Bessey Hall north of the Agronomy building and will be shared jointly by the Forestry Department and Forest Service. The facility contains offices, laboratories, work rooms, a cold storage room, soil storage bins, and general storage rooms in addition to the 9,600 square feet in the two greenhouses.

The interior of each greenhouse is subdivided by glass partitions into seven compartments of various sizes. In each compartment temperature, light, and humidity can be regulated independently which will provide flexibility in the utilization of the greenhouse.

Instead of being limited to the summer season, it is now possible to conduct various experiments the year around with environmental conditions for each experiment being individually controlled. We are no longer limited by length of growing season, consequently experiments requiring more than one growing season can be held as long as desired.

We cordially invite our alumni and friends to visit the Forestry Department when they are in Ames. We will be proud to show you the building for which some of us have waited 20 years.
CHAMPION slide pump makes
"a little spray go a long way"
on a fire-fighting job

HEAVY-DUTY PUMP
has Champion-designed handle which lowers to any convenient position for easy operation. When not in use, the sturdy handle locks pump in closed position and positive-locking device on cover holds pump securely. Pump is brass throughout with non-corrod-
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is form-fitting and providing air circulation between tank and operator's back, guards against discomfort. Wide, adjustable straps make it easy to carry as knapsack.

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Undergraduate

(Continued from page 12)

The committee which initiated the revision to go into effect this year consisted of Dr. Dwight Bensend, Dr. Raymond Finn, Dr. Kenneth Ware and the author.

Turning to the revised Forestry Curriculum, the major change introduced is the addition of a system of minors to the former curriculum—option structure. This change has the effect of increasing the proportion of the curriculum in which the student has some degree of latitude. To a lesser extent, the same effect is gained by the inclusion in the core of a group requirement providing 20 credits of courses to be selected from a specified list of courses primarily in the mathematics and physical science areas. As these changes imply, the number of credits in courses explicitly required is appreciably reduced—by approximately 20%. This reduction in explicit course requirements has been made largely in forestry or forestry-related subjects. At the same time, it has been necessary to reduce the number of credits available to the student as unrestricted electives. For the most part, however, the minors would be appropriately regarded as elective packages.

The revised curriculum will include a modest increase in the social science and humanities requirements. In the Forest Management Option, selection of at least two courses dealing with forest resources other than timber is required. Substantial changes in the organization and content of courses in the Forest Products area have been effected. Courses in the Forest Economics—Management—Policy area have been reorganized. Material formerly covered in five courses is now to be treated in three courses of five credits each. Part of the work in Forest Mensuration has been shifted from the sophomore to the senior year when it will be offered concurrently with Forest Management.

In addition to making a choice between the Forest Management and Forest Products Options in the last quarter of the sophomore year, the student will choose one minor to complement the option. The minor is not intended to qualify the student as a specialist in the area designated. Rather, it provides an opportunity for the student to develop, through an appropriate combination of courses, an area in which he is especially interested. It is hoped, too, that the minors will provoke thought with regard to the various aspects of forestry thus helping the student to identify long range objectives.

In the Forest Management Option, the student has a choice among ten minors consisting of 20 credits each. The list is as follows:

- Biological Science
- Managerial Science
- Resource Education
- Wildlife Biology
- Forest Recreation
- Forest Range Management
- Timber Products
- Multiple Purpose Forestry
- Forestry Business
- Urban Forestry

The first two of these are designed primarily for students planning to undertake graduate programs, and would serve to enhance the effectiveness of their undergraduate programs with this objective in view. The general character of the remaining minors is indicated by their titles.

Three minors of 35 credits each have been developed to complement the Forest Products Option:

- Wood Science and Technology
- Timber Products Conversion
- Timber Products Business

These minors will aid the Forest Products student in reaching his particular objectives within the Forest Products area.

While the revised curriculum will undoubtedly present some problems with respect to administration and counselling, it is anticipated that it will give the student somewhat greater flexibility and an opportunity to pursue special interests.

As a final word, it should be added that the Forestry Curriculum at Iowa State is continuously under scrutiny. It is impossible to strengthen the curriculum without close communication with alumni and other professional foresters. Comment and criticism concerning the curriculum is always welcomed and given serious consideration as periodic opportunities for review arise.

This island was formed over ages of geologic time by the action of rock-throwing students.
Graduate

(Continued from page 19)

Objectives
1. Advanced study to develop exceptional competence in one of the above phases of forestry.
2. Preparation for careers in research and teaching in forestry.

Requirements
1. Competence in the general area of specialization, level and scope defined by a core of required courses. The core includes many courses outside of forestry, some of which meet minor requirements listed on the student's Program of Study, but many go toward the forestry major. Required background courses are listed, indicating areas in which the student must have competence, even if the courses are not taken formally or are taken without graduate credit.
2. Completion of elective courses to meet individual student needs and interests (in addition to core requirements).
3. Demonstrated ability to synthesize and utilize techniques and knowledge from various basic subject matter areas in the solution of complex forestry problems in the student's area of specialization.
4. Demonstrated ability to design, conduct and report on original research on forestry problems.
5. Normally, students admitted for graduate study toward the Ph.D. will have received an M.S. or equivalent in forestry.

Departments in Which Related Coursework is Concentrated

Areas of Specialization: Department:
1. Forest Economics Economics, Statistics, Government
2. Forest Mensuration Mathematics, Statistics
3. Silviculture Agronomy, Biochemistry and Biophysics, Botany, Genetics, Statistics
4. Wood Science Biochemistry and Biophysics, Botany, Chemical Engineering, Chemistry, Physics, Statistics, Theoretical and Applied Mechanics

Graduate forestry education has developed at Iowa State University over the past half century and has always been an important part of the forestry program; to date, 150 degrees have been granted in forestry and related areas. Presently, 25 students are working on graduate degrees, with about half seeking the Ph.D. By 1970, at least 40 to 50 students should be enrolled in forestry graduate study at Iowa State University.

Literature Cited
<table>
<thead>
<tr>
<th>Name</th>
<th>Degree Year</th>
<th>Address Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALLEN, SHIBLEY W.</td>
<td>B.S. 1909, M.F. 1929</td>
<td>6970 Central Avenue, Lemon Grove, California 92045. Retired professor (University of Washington).</td>
</tr>
<tr>
<td>ALLISON, BYRON LEE</td>
<td>B.S. Fall 1965</td>
<td>6533 South Beulah Rd., P.O. Box 114, Fremont, Virginia.</td>
</tr>
<tr>
<td>ALLEN, THEO. R.</td>
<td>B.S. 1950</td>
<td>Box 18 Route 1, Vale, Oregon. Range Conservationist, B.L.M.—Oregon.</td>
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</tbody>
</table>

**Alumni Directory**

Don't ask me, I only work here.
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<tr>
<td>BAXTER, I. J.</td>
<td>B.S.</td>
<td>1913</td>
<td>Galva, Iowa</td>
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<tr>
<td>BAUER, KEITH ALLEN</td>
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<td>BATTELL, SAMUEL M.</td>
<td>B.S.</td>
<td>1928</td>
<td>General Delivery, Liberty</td>
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<tr>
<td>BATEMAN, BRYANT AURELIUS</td>
<td>B.S.</td>
<td>(LSU), M.S.</td>
<td>1934, Ph.D.</td>
<td></td>
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<tr>
<td>BEIL, CHESTER MARTIN</td>
<td>B.S.</td>
<td>1941</td>
<td>2227 Reclamation Avenue, Eugene, Oregon</td>
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<tr>
<td>BEGUELIN, HOWARD RUSSELL</td>
<td>B.S.</td>
<td>1942</td>
<td>Route 2-Box 55</td>
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<tr>
<td>BAUGHMAN, ROBERT WILLIAM</td>
<td>B.S.</td>
<td>1937</td>
<td>314</td>
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<td>BAUER, THEODORE JACOB</td>
<td>B.S.</td>
<td>1951</td>
<td>731 Winston, Winston</td>
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<tr>
<td>BATTEY, LAWRENCE</td>
<td>B.S.</td>
<td>1929</td>
<td>Box 248, Baldwin, Michigan</td>
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<td>BATTELL, FREDERICK CHAPMAN</td>
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<td>1934, B.S. (Iowa)</td>
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<td>BASSETT, RICHARD LEE</td>
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<td>1963</td>
<td>P.O. Box 275, Cloudcroft, New Mexico</td>
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<tr>
<td>BEIL, CHESTER MARTIN</td>
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<tr>
<td>BERGRUEN, THURE WARREN</td>
<td>B.S.</td>
<td>1950</td>
<td>Box 358-1336 W.</td>
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<tr>
<td>BERNATZ, JOEL ROBERT</td>
<td>B.S.</td>
<td>1962</td>
<td>Research Forester-Pacific Northwest Forest &amp; Range Experiment Station</td>
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<tr>
<td>BERG, MELVIN DEAN</td>
<td>B.S.</td>
<td>1962</td>
<td>B.L.M., Roseburg District Office, Oregon</td>
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<tr>
<td>BERNATZ, JOEL ROBERT</td>
<td>B.S.</td>
<td>1962</td>
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Seal Beach, California.

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BOGGS, RICHARD JOSEPH. B.S. 1957. 301 Inwood Road,
Tallahassee, Florida. Florida National Forest—Forester.


BORGLOM, DONALD WENDELL. B.S. 1942. Bergen Apt. #2, 3d
and Anderson, Coos Bay, Oregon. Reformation Forester—
Reformation, Oregon. 


BOSWELL, MARTIN McKAY. B.S. 1940. 2603 Bay Meadows Drive.
Roswell, New Mexico. Rancher—sheep & cattle.

BOUT, WM. H., JR. B.S. 1948. 415 First Street, Auburn, Iowa.

BRAEM, JOHN ADAMS. B.S. 1953. 470 Hemlock, Corvallis,

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BROWNFIELD, RUSSELL LYLE. B.S. 1935. P.O. Box 551,

BROWN, KENNEN DUDLEY. B.S. 1949. 2925 S.W. West View
Cottle Grove, Oregon. Forester and Engineer Weyerhaeuser Company.

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BOURCHEER, RICHARD ELTON. B.S. 1957. 9629 Redman Avenue,

BOZARTH, RICHARD ELTON. B.S. 1957. 9629 Redman Avenue,

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CHRISTOPHER, PETER A. B.S. 1960. 1030 Addison Street, Kilmarnoch Falls, Oregon. Forester, Ochoco National Forest Box 955.

CHURCH, ROBERT EUGENE. B.S. 1948. 829 Alverno Drive, Jackson, Mississippi. C.F.M. Forester, Mississippi Forestry Commission.

CLARK, EUGENE PAUL. B.S. 1948. Western Auto Supply Company.

CLARK, HALE B. 1913. 5001 Nicholas Road, Omaha, Nebraska. District Manager, A. E. Robinson Co., Irrigation Engineers.


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COCHRAN, PATRICK HOMLES. B.S. 1959. 6751 Kinke Road, Denver, Colorado. 13214.


COLBERT, FRANCIS THEODORE. B.S. 1948, M.S. (Utah St. A.C.). 8602 N. 6th Drive, Phoenix, Ariz. Farm Manager, Western Farm Management Company.

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CONNOR, RICHARD JENNINGS. B.S. 1956. 3223 West Willow Road, Brown Deer, Wisconsin 53223. District Sales Manager—Koppers Company, Inc. Unit Structures Department.


CONNOR, ROBERT CHARLES. B.S. 1952. Route 1, Omaha, Ga. 31221. Forest Manager—W. C. Bradley Company, Columbus, Georgia.


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COOK, HENRY CHARLES FREEMAN. B.S. 1939. 5017 Holiday Drive, Madison 11, Wisconsin. Wood Technologist—Forest Products Research Laboratory, Madison, Wisconsin.


COONS, HAROLD S. B.S. 1932. Assistant Regional Forester, U.S. Forest Service.

COOP, NEWTON KEITH. 313 South 7th Street, Mayfield, Kentucky. Service Forester.
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MILLER, JAMES WAYNE. B.S. 1950. 906 S. Lake Street, Lake Mills, Wisconsin. Sales Representative—Wendell Brown Lumber Company.
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ROBINSON, VERNON THOMAS. B.S. 1930. 507 West Washington Ave, Athens, Ohio. Research Forest, Southeastern Forest Experiment Station.

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ROCKETT, ROLAND W. B.S. 1928. 806 Fifteenth Street, Alexandria, Virginia. Self-employed, Rolling Acre Orchard.


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RUMMELL, RICHARD SUTHERLAND. B.S. 1941. 1414 14th Street, Perry, Iowa. Assistant District Forester, U.S. Forest Service.


RUSSELL, WILLIAM B. 1935. 127-3rd Street, Yucaipa, Calif. 92399.


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SPAIN, CHARLES FRANCIS. B.S. 1952. Norwalk, Iowa. Member, National Committee on Forestry Education.

SORENSEN, WAYNE MARIUS. B.S. 1951. Umpire Route, Dierks, Arkansas.

SOMBERG, SEYMOUR IRA B.S. 1941. Proyecto Forestal, UNF.

SMITH, WALTER ARTHUR, Jr. B.S. 1951. 311 Clearview Rd., E. Prairie City, Oregon. Assistant State Forester, Oregon Forest Service.

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SIVE, GARY L. B.S. 1950. 3501 Main National Forest, Corvallis, Ore. 97330.

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SWANSON, WILLIAM SANFRE. B.S. 1959. Pinehurst Ranger Station, Miramonte, Raymond, Michigan 93641. Timber Management Assistant Officer (Adm.).

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SWEETON, ROGERS. B.S. 1940. 4127 Watkins Trail, Annandale, Virginia. Assistant Director, Coop Activities N.P.S. National Park Service.


SZYMIECZ, FRANK O. B.S. 1953. c/o Harold Burst, 445 E. Creston, Fort Wayne, Indiana. Service Engineer, Rilo Lami


TEETERS, JAMES LEE. B.S. 1959. Deceased.

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THOMSEN, KENNETH DALE. B.S. 1959. Box 991, Libby, Montana. Forestier (Blister Rust Control Div.) Coeur d'Alene National Forest.

THOMSON, DONALD EDWARD. B.S. 1941. P.O. Box 86, Goodwell, Oklahoma 73939. "L." (Capt.) Office of Range Management, U.S. Forest Service.


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TRENK, FRED BENJAMIN. B.S. 1922. M.S. (Bot.). Box 98, Arena, Wisconsin. Retired (State Extension Forester), University of Wisconsin—Consulting.


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WICKS, WALLACE WAYNE, B.S. 1949. Box 175, 210-9th St., South Dakota 57745. Forester, U.S. Bureau of Indian Affairs, Yellowstone, WY.


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WINTER, ERNEST HICKL IN. B.S. 1950. 254 Citrus Road, New Orleans, Louisiana.

WISCH, JOHN CARL, B.S. 1959. 3615 Adams Ave., Toppenish, Washington. Forester, Charge of Management Section, Bureau Indian Affairs, Yakima Indian Agency.

WITMORE, ARTHUR VERNE, B.S. 1927. 305 Larson Street, Story, Iowa. Savings & Loan Assoc., Iowa State, Des Moines, Iowa. ""
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