Fiftieth Anniversary
1904-1954
A TRIBUTE . . . .

This 1954 Edition is
"FOR AND BY THE AMES FORESTERS"
and Salutes
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Cover Photo*

This photograph was taken by Jay Higgins on the San Juan National Forest in Colorado.
The financial success of this publication is due largely to the generosity of the above persons. We thank them for their patronage.
Fifty Years of Professional Forestry Training at I.S.C.

EVOLUTION OF THE

AMES

By Prof. G. B. MacDonalD
Professor of Forestry
Iowa State College

The head of an outstanding engineering school remarked—"How does it come that you have an accredited school of forestry in a prairie state like Iowa, a state which has such limited timber lands?" This query came from the Dean of an engineering school. It has been a perennial question. A partial answer predates, by many years, the initiation of technical forestry training at Iowa State College. It reflects the thought of a number of persons, who saw the place which forestry would ultimately occupy in the economy of the State and Nation. The beginning of technical training in forestry at Iowa State College was the result of many influences and the impact of numerous personalities which eventually crystallized into a program of training professional foresters.

As a backdrop for later developments of forestry in Iowa, state publications have played an important part. Ninety-six years ago, the Secretary's Report, for the Iowa State Agricultural Society, stated, "It is a lamented fact that so little attention has been bestowed upon the cultivation of timber—it is of such vital importance in the prosperity of the State, that the Board of Directors will not fail to urge its necessity." The Society sent reports and suggestions on forestry subjects to all counties in the state at this early date. The unusual activity in tree planting in Iowa was a big influence in the establishment of Arbor Day in 1873, sponsored by Senator J. Sterling Morton of Nebraska. At this time (1874) Congress established a Division of Forestry in the U.S. Department of Agriculture. Dr. Franklin Hough was appointed Agent in charge the following year. The early work of this Division consisted largely in the preparation of a "Report Upon Forestry," much of which related directly or indirectly to forestry activities in Iowa involving the Iowa Agricultural College, the State Horticultural Society, and many examples of tree planting.

The Pre-Technical Period

Because of this early interest in forestry recognition of this field was made in the first catalogs or bulletins of the "Agricultural College." In 1874 two lines of work were recognized in the general field of Agriculture, (1) Agriculture and (2) Horticulture and Forestry. At that time agriculture was not highly specialized and in somewhat the same way the field of horticulture was rather all inclusive,—comprising work in fruits, vegetables, soils, landscape gardening, and forestry. For a period of about 25 years forestry, as an entity, was quite submerged in this general field of horticulture. It was during this period (1874-1900) that forestry was beginning to emerge in the country as an important factor in conservation.

One would be remiss not to mention the important part played by a number of staff members of the Col-
College in keeping forestry and conservation in the picture long before the need for technical training had arrived. In fact that a course in Horticulture and Forestry has persisted almost from the time the college was established is fair evidence of the presence of some strong personalities and men of vision. Professor H. H. McAfee was in charge of the department of Horticulture and Forestry from 1873 to 1878. During that period he offered work relating to evergreens, forest trees, forest plantations, nursery work and woods. He made use of "Bryants' Forest Trees" as a text. Following Prof. McAfee came J. L. Budd who headed the Department from 1878 to 1897. He played a prominent part in forestry and tree planting activities over the State as well as serving the College in this field. Indeed, his work extended far beyond the confines of Iowa,—for Professor Budd was a member of a mission sent to Europe and Asia which resulted in a number of tree species being introduced into the United States.

Other persons who had an influence on forestry during this early period were Dr. C. E. Bessey, who headed the Botany work at the College between 1873 and 1884; Dr. L. H. Pammel, who became head of the Botany work in 1889 and for a period of nearly fifty years was vitally interested in forestry as well as other conservation work both in Iowa and the entire country.

Between 1897 and 1903 the Department of Horticulture and Forestry was in charge of Professors John Craig and Homer Price respectively. It was during this period that a one credit course was offered to the students in Agriculture and was the beginning of a definite differentiation between the subject material of forestry and horticulture. The subject was arranged "to give the students a proper understanding of the meaning of forestry for farmers . . . ; that the forest should be considered as a crop . . . , which by judicious management, will increase returns from year to year." This initial effort indicated the beginning of a course later designated as "Farm Forestry."

In 1902, through the initiative of Assistant Professor Arthur T. Erwin the course in Farm Forestry was increased in importance to a three credit course which, -"embraced a study of forest influences on climate, rainfall and erosion; and a systematic study of the native and introduced forest trees of economic importance."

During the interim between the resignation of Homer Price, as Head of Horticulture and Forestry, and the appointment, in 1905, of Professor S. A. Beach as Head, Professor A. T. Erwin was in charge of the Department. This was the time when professional forestry was born at Iowa State College. Two important decisions were made at that time: (1) that the training of professional foresters be recognized, and (2) that the needed course of study be set up at Iowa State College rather than at the State University at Iowa City. The State University had stimulated both forestry and general conservation work largely through the efforts of Dr. B. Shimek and Dr. McBride.
Since its beginning, the Forestry Department has experienced the support of three different Deans of the Agriculture Division.

both of the Botany Department of the University. At that time it was considered that in the establishment of a course of training for professional foresters the State University might be a logical location. The alternative was to offer this work at the Iowa State College and possibly have Dr. Shimek transferred to Ames to direct the new work. Both Professor Erwin and Charles F. Curtiss, Dean of the Agricultural Division, were concerned that whatever move was made should be on a sound basis. Gifford Pinchot, who at that time, was considered the outstanding leader in conservation in the Country was consulted. He suggested that a trained forester be employed for the new position. The result was the employment of Professor Hugh P. Baker, a Yale graduate, to organize the first technical training at Iowa State College.

With the employment of Professor Baker the College recognized the need for more adequate protection and conservative use of natural resources. For many years “forestry” spearheaded the conservation movement in the country, and it is significant that Iowa State College was one of the early educational institutions to recognize this new field.

Development of the Curriculum

In 1904, Professor Baker’s first year, four technical forestry courses were offered. These were:
- Elementary forestry, 3 semester credits
- Silviculture, 3 credits
- Forest Management and Policy, 3 credits
- Wood Technology, 3 credits

During the following year (1905) these courses were incorporated in the four year course in Horticulture and Forestry,—with wood technology available as an elective.

The technical courses remained with little change during Prof. Baker’s tenure (to 1907) except that a two credit course in Forest Utilization was added in 1907 which corresponded to the present courses in logging and milling.

In 1908 Professor C. A. Scott succeeded Professor Baker as head of the forestry work. In addition to the technical courses offered at that time, one subject, farm forestry, 3 credit hours, was required of all students in the Division of Agriculture.

By 1909 the technical work under Professor Scott included the following seven courses, involving 15 semester credit hours:
- Farm Forestry, 3 credits
- Silviculture, 1 credit
- Advanced Silviculture, 2 credits
- Wood Technology, 2 credits
- Forest Utilization, 2 credits
- Forest Development and Policy, 3 credits
- Timber Physics, 2 credits

Professor Scott left the Iowa State College in 1910 to become State Forester of Kansas. The writer supplied for Professor Scott during February of that year and returned to head the forestry work at the College in August.

The technical work offered for prospective foresters during this year involved the same subject material as previously. However, it was apparent that the training of men for professional forestry work must be stepped up and become both more specialized and more inclusive.

During the winter of 1910 a Conference of Forest Schools was held in Washington, D.C., which was attended by representatives of sixteen forestry schools. Iowa State College was represented at this meeting. This conference had a large influence in setting up standards of instruction as a guide for the rapidly developing forest schools. Iowa State College benefited materially from the Conference, both as to the need for good basic training in fundamental subjects and the technical requirements essential for professional foresters. The brevity of this article does not permit discussion in detail of the basic educational requirements for a satisfactory training in forestry. However it has always been the policy at Iowa State College to prevent too much encroachment on the fundamental training of the students by the pressure of more technical subjects in the rapidly developing field of forestry and conservation work.

In 1911 the Board of Education approved a separate “Forestry Group” for the Junior and Senior years. This appeared for the first time in the 1911-12 catalog. The move was recognized as setting up an entirely separate course of instruction for professional foresters. The Freshman year was common to all departments in the Agricultural Division and included Farm Forestry, 2 credits. The second or sophomore year was the same for both forestry and horticultural students. The forestry subjects required were: Dendrology, (Botany); Silviculture (2 courses); Forest Development

The Ames Forester
In the Junior year (during the winter vacation period (1911-12) a field study was offered in "Applied Lumbering." His study was made in northern Minnesota and was the first "off campus" field study offered by the Department. It was the forerunner of the required "Summer Camps" to follow shortly.

**Early Adjustments to Meet Trends**

It is not the purpose of this article to indicate the many minor changes which came from year to year in making adjustments between courses, time of offering, etc. Suffice to say that by the school year 1913-14 the general basic requirements for a satisfactory four-year standard course in forestry had been quite well established. From time to time adjustments were made in the curriculum in an effort to keep pace with the rapidly developing field on conservation. When the professional work in forestry was first undertaken the field for employment for technical foresters was almost 100 per cent in Federal work—with minor opportunities in teaching and state work. As the years passed emphasis on employment has greatly changed to cover a wide field of positions as indicated by the greatly diversified employment of foresters during the past two decades. Those in charge at Iowa have endeavored to make, in the forestry curriculum, the adjustments which best met the widening field of opportunity.

Before we leave the formative period in the forestry curriculum mention should be made of the initiation of the summer training camps for foresters. Iowa State College was one of the first forest schools, if not the first, to recognize the importance of such practical field work in the training program. The first summer camp covered a full three months period and included four subjects—Silviculture, Lumbering, Forest Mensuration and Forest Utilization. The program was outlined in the 1913-14 catalog and the first camp (1914) was held on Star Island on the Minnesota (now the Chippewa) National Forest, at Cass Lake, Minnesota. The summer camps have been an important feature of the training of foresters at Iowa State College. For the past 40 years this yearly camp program, has been interrupted for a brief period only during World War Two. As shown later in this article the camps have been held in the Southeast, South, Rocky Mountains, the North, West and Northwest.

As early as 1914 the necessity for expanding and multiplying technical courses became apparent. To meet the situation some schools had increased the technical subjects by excluding some of the vital fundamental work in science and other branches. In order to try to meet this difficult situation Iowa State College undertook a Five Year Curriculum as well as continuing the Four Year Course, as indicated in the 1914-1915 catalog. Both the four and five year curricula led to the same degree—Bachelor of Science. By the following year (1915-1916) four rather distinct groups were recognized in the Five Year Course.

These provided for some specialization in Forest Management, Forest Protection, Forest Products and Lumbering. The Bachelor of Science degree was awarded after completion of four years of satisfactory work and the degree Master of Science in Forestry on completion of the post-senior, or fifth year.

The limited number of students who elected to take the several post-senior groups did not justify their continuance in an outlined five year course. In the year 1918-19 the four year curriculum was continued but with provision for a year of advanced work in either one of two groups,—(1) Forest Management and Protection and, (2) Lumber Marketing and Forest Products. The degree of Master of Forestry was awarded at the completion of the advanced year's work.

Two years later the degree for advanced work in residence was changed to Master of Science in order to try to meet the situation some schools had increased the technical subjects by excluding some of the vital fundamental work in science and other branches. In order to try to meet this difficult situation Iowa State College undertook a Five Year Curriculum as well as continuing the Four Year Course, as indicated in the 1914-1915 catalog. Both the four and five year curricula led to the same degree—Bachelor of Science. By the following year (1915-1916) four rather distinct groups were recognized in the Five Year Course.

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to conform to institutional policy. The degree of Master of Forestry was recognized as a professional degree to be awarded occasionally for outstanding records in professional work following five or more years after graduation. This Professional Degree was continued until 1936.

For a period of about twenty years—from 1918 to 1938—only minor adjustments in the forestry curriculum were made. The changing of the College year from the two semesters to the three quarter plan during the year 1919-20 required many adjustments in course credit hours but resulted in much the same weighting of technical subjects as well as foundation courses.

In the year 1938-39 three important changes were made and a fourth was given consideration:

1. The six weeks Junior Summer Camp was provided which was optional for students with junior or senior classification. The first camp was held in Oregon. A total of only five have been held due to the interruption of the Second World War.

2. In 1938-39 the Department arranged four groups for the junior and senior years, each group to be supported by 40 credit hours of elective work. These groups were: Forestry and Conservation; Forestry and Economics; Forestry and National Forest Range Management; and Forestry and Wildlife Management.

3. Another attempt was made towards a five year course by making provision for additional training in the four groups indicated under (2) above.

4. During this same year (1938-39) some forest schools were considering changing to five-year undergraduate curricula with the complete abandonment of four-year courses of training. The need for more time for adequate training had been recognized for many years as indicated by the several attempts to interest students in five year courses. Fortunately the Department did not “burn the four-year bridge” as some departments did with more or less disastrous results in enrollment.

On July 1, 1948 the writer relinquished his duties as Administrative Head of the Department of Forestry. At this time Professor George B. Hartman was appointed to this position and has very ably directed the work of the Department.

Due to importance of farm forestry in the Central States, a fifth group Farm Forestry was added to the Forestry Curriculum.

In 1952-53 two new groups for some specialization, General Forestry, and Timber Industries were added. This brought the fields for some specialization up to seven, as follows: Wildlife; Grazing Management; Timber Industries; Forest Management; Conservation; Farm Forestry; and General Forestry. During the present school year, 1953-54, some adjustments have been made both in the contents of the forestry courses as well as in supporting subjects given by other departments. Also attention has been given to a more logical sequence of courses in the Curriculum. In addition an eighth group, Retail Lumbering, has been added to guide students interested in this field, by offering a list of supporting subjects for election.

Importance of Summer Camps Recognized Today

Early in the technical forestry program at Iowa State College the value of organized field instruction to supplement residence work, was recognized. For the past 40 years the so-called camp or field work has been a requirement for graduation for all students. The camp program has been arranged to come during the summer season the freshman and sophomore years. The purpose being to have the new students get “the smell of the woods”—meet some of the activities involved in actual forestry work and secure some limited experience early in the training program. It also was felt that a preliminary training of this kind took off some of the “rough edges” and was a distinct aid in securing future temporary summer positions in private, state or federal work. In addition it made it possible for some students to quickly find out that the forestry profession might be able to struggle along without their services.

It should also be noted that the summer camps, held in many different forest regions have been of great value to the instructional staff, few of whom have had previous opportunity for field experience in many parts of the country.

The fact that Iowa State College has forestry graduates in all states, except one, may have resulted in part from the cosmopolitan plan in locating the camps under vastly different conditions in many regions of the country.

Although space will not permit a detailed discussion of the summer camps it may be of interest to observe where the camps have been held and the staff members who were in charge. The respective camp directors are indicated by *

1914—The camp was held on Star Island at Cass Lake on what is now the Chippewa National Forest. This first camp included 35 students of the sophomore and senior classes. Instructors in charge were Professor G. B. MacDonald,* George C. Morbeck and T. R. Truax.

1915—Cloquet, Minnesota and the Superior National Forest.
Instructors were Professors G. B. MacDonald,* George C. Morbeck and T. R. Truax.

1916—For a period of twelve weeks a 7,500 mile trip was taken and short camps established in Colorado, Utah, Nevada, California, Oregon, Washington, Idaho, Montana, South Dakota and Minnesota. The transportation was by railroad. The camp program was in charge of Professors G. B. MacDonald,* and T. R. Truax.

1917—The field period was divided between camps in Allamakee County in northeast Iowa and Star Island on the Chippewa National Forest in northern Minnesota. The staff members in charge were Professors G. B. MacDonald,* and George C. Morbeck.

1918—This was a war year and instead of holding a regular summer camp the men who were scoured for this work were given jobs on war production work in the woods with the Crossett-Western Lumber Company at Wauna, Oregon. Certification of twelve weeks of war production work in this case was accepted in lieu of the regular summer camp program.

1919—Arapahoe National Forest in Colorado. The camp was established on St. Louis Creek about eight miles from Hot Springs Springs. Professors G. B. MacDonald and George C. Morbeck were in charge.

1920—Cataloochee National Forest west of Yellowstone National Park in Montana. Two staff members, G. B. MacDonald* and George C. Morbeck were again in charge.

1921—Pelican Lake in northern Minnesota. The camp work was supervised by Professors George C. Morbeck* and Irwin T. Bode.

1922—Pgah National Forest at Asheville, North Carolina. This camp was organized and directed by Professors Dwight S. Jeffers* and H. J. Andrews.

1923—Arapahoe National Forest near Fraser, Colorado. Professors Dwight S. Jeffers* and G. B. MacDonald in charge.

1924—Haggard Lake near Stambaugh, Michigan. Professor D. S. Jeffers* directed the camp with the assistance of Professor Perkins Coville.

1925—Pike Bay on the Minnesota National Forest near the town of Cass Lake. The twenty men attending this camp were directed by Professors Perkins Coville* and J. A. Larsen.

1926—Camp at Otanagon, Michigan under the charge of Professors D. S. Jeffers* and J. A. Larsen.

1927—Lake Audrain near Munising, Michigan. The camp directors were Professors D. S. Jeffers* and Perkins Coville.


1929—Camp was located near Quincy, California on the Plumas National Forest. Professors J. A. Larsen* and D. S. Jeffers supervised the camp.

1930—Camp on Bitterroot Lake in the Flathead National Forest near Kalspella, Montana. Professors Walter H. Horning* and J. A. Larsen were in charge.

1931—Paulina Lake on the Deschutes National Forest in Oregon. The staff members in charge were Professors D. S. Jeffers* and W. H. Horning.

1932—Camp at Burney on the Shasta National Forest in California. Professor J. A. Larsen* and D. B. Deemer handled the camp.

1933—Lake Wenatchee on the Chelan National Forest in Washington. The camp program was directed by Professors W. H. Horning* and J. A. Larsen.

1934—Lake Crescent on the Olympic National Forest in the northwest corner of Washington State. The site was near the town of Port Angeles. Professor W. H. Horning* was in charge with Professor Dwight B. Demeritt having his first introduction to the I.S.C. camps.

1935—Two Lakes on the Deschutes National Forest near the city of Bend, Oregon. The large number of students required the services of four staff members—Professors J. A. Larsen*, Roy Thomson, George B. Hartman and Charles H. Genaux.

1936—Mormon Lake on the Coconino National Forest in Arizona. This camp was staffed by Professors J. A. Larsen,* George B. Hartman, Andrew L. McComb and Charles H. Genaux of regular department personnel. Dr. Gwymne of the Geography Department gave some instructional work and Dr. Edwards of the College hospital kept tab on the health of the students.

1937—During this summer 78 students spent five weeks in camp at Kirbyville, Texas and then set up a second camp at Mormon Lake on the Coconino National Forest in Arizona. The camp included Professors George B. Hartman*, Roy Thomson, A. L. McComb and Odell Julander.

1938—This camp was located at Walhalla on the Sumter National Forest in South Carolina. The camp program was carried out under the direction of Professors J. A. Larsen*, George B. Hartman, Allen W. Goodspeed* and Odell Julander.

1939—Camp on Pollock Lake, near Rapid River on the Hiawatha National Forest in Michigan. The camp was under the direction of Professor Allen W. Goodspeed*, J. A. Larsen, George B. Hartman and A. L. McComb.

1940—Jemez Springs on the Santa Fe National Forest in New Mexico. The camp directing personnel was Professors J. A. Larsen*, George B. Hartman, Allen W. Goodspeed and Odell Julander.

1941—This year’s camp was held on the Lincoln National Forest near the town of Alamagordo, N. M. The instructional program was under the direction of Professors George B. Hartman*, Odell Julander, J. A. Larsen and Charles H. Genaux.

1942—The camp location was near the town of Custer on the Harney National Forest in the southern part of the Black Hills in South Dakota. The work in this camp was handled by Professors Allen W. Goodspeed* and G. B. MacDonald.

1943, 1944, 1945—Due to the demands of the World War and the limited enrollment of technical foresters at the college the summer camps were not held during this three year period.

1946—This year saw the beginning of a series of four camps on the Kaniksu National Forest, near the town of Priest Lake, Idaho. Because of the large enrollment the camp made use of old Civilian Conservation Corps barracks and equipment. The camp program was under the direction of five staff members—Professors G. B. MacDonald,* George B. Hartman, J. A. Larsen, Allen W. Goodspeed and Charles H. Genaux.


1949—Priests River, Kaniksu National Forest in northern Idaho. This camp was directed by Professors Dwight W. Bensend*, Leonard F. Kellogg, George Thomson, David Herrick and G. B. MacDonald.

The first I.S.C Forestry Camp was held in 1914 near Cass Lake, Minnesota.
The Forestry Club

The Forestry Club has been an important factor at Iowa State College. It had its beginning in 1900 when the Club included students interested in either forestry or horticulture. At this early period it was somewhat dominated by faculty members. In 1911 there had developed sufficient interest in the forestry field to justify a Forestry Club entirely separated from the horticultural group. During this year nine forestry students were candidates for graduation. The Club which is now almost entirely a student function, has been, and is now, a real asset to the Forestry Department in stimulating initiative, originality and leadership among the students. It has functioned in many ways—a few only will be mentioned here. The Club was one of the first among the forest schools to finance, edit and publish an annual technical student's publication. Except for some interruption during the first and second World Wars the “Ames Forester” has had a continuous and outstanding record of publication for a period of 41 years—from 1912 until the present time. It has made an excellent contribution to technical forestry literature with its several hundred articles on many phases of forestry, and allied subjects. Contributors have been students, faculty members and leaders in conservation from many parts of the country. The publication also has served as a continuous record of student activities, class functions and a pictorial record of the senior students and faculty.

Another feature of the Club’s activity is in connection with the all college “Veishea” celebration which is held each spring. The Club has been awarded its quota of prizes for “open house” and floats used in the Veishea parade. Before the Spring celebration was known as “Veishea” the Club members “stole the show,” on one of the earlier occasions, with a string of packed burros in the annual parade—depicting the pioneering forester with his packs of camp equipment, calipers, scale sticks, etc. The pack train was led by J. C. Whitham (1911) who later became Forest Supervisor respectively on several national forests. The highlight of the parade came when the burros broke ranks—when the band blared forth—scattering tents, tarps, calipers and scale sticks over the central campus. In recent years the “Paul Bunyan” exploits have become one of the highlights of student activities on the campus.

The Club is now engaged in the management of the Holst Forest Tract, a timbered area of 333 acres along the Des Moines River northwest of Ames. The project is carried on in cooperation with members of the forestry faculty and the Iowa Conservation Commission. It has provided an activity which has developed student initiative in the management of a woodland area in Central Iowa. The project has included timberstand improvement cuttings, reforestation, preparation of a working plan, road building and other activities.

For many years the Club has put on the annual...
foresters “hoe-down” which has become a unique attraction for the foresters as well as students in general. Two other Club functions have become well established. The first is the annual game banquet which is featured by serving elk, antelope, buffalo, bear, or venison steaks, or, when such are not available, occasionally pheasants or even lowly rabbits make up the main part of the banquet menu. The other function is the Spring Campfire where the foresters and their guests make merry in a nearby woodland with a camp repast, songs and occasionally top off with some short speeches. The first foresters camp fire was held in the Spring of 1911 and similar events have recurred annually.

**The Charles Lathrop Pack Prize Fund**

Through the interest of the late Charles Lathrop Pack, former President of the American Tree Association, a fund of $2,000 was awarded to Iowa State College for the specific purpose of encouraging technical forestry students to develop ability in writing and speaking. This fund was set up as an endowment and the proceeds were to be used for prizes in annual contests between forestry students.

The Pack fund has been quite a factor in impressing the importance of good writing and efficient speaking among the technical foresters of Iowa State College.

Since acquiring the fund in 1925 a total of 66 students have received cash prizes ranging in amounts from $5.00 to $75.00 with an average of $29.00. The principle of the prize fund has been increased to $2,470. It should continue indefinitely to stimulate attention to the need for more proficiency in writing and speaking among technical forestry students.

**Enrollment of Students**

The number of technical forestry students enrolled has, in general, kept pace with the growth of the forestry movement. In 1904—the beginning of technical training—six students were enrolled. From that time until 1931 the increase in numbers was relatively uniform, reaching a total of 140 students. From 1931 to the present time the enrollment curve has been rather erratic due to major economic influences. The first

of these came during the depression of the thirties which caused a rapid influx of technical students due largely to two factors: (1) opportunity for college training during a period of general unemployment and, (2) the initiation of emergency conservation work programs for which foresters were in demand. This period lasted until 1937 when an enrollment of 325 students had been reached. For the next seven years, (1938-1944) the enrollment trend was downward due to the growing scarcity of positions for technically trained men and to the military demands in World War II. The lowest enrollment in recent years came during 1944 and 1945 when the totals for those years were respectively 31 and 36 students. Immediately following this low enrollment period, at the conclusion of the war, the Department, as well as the College in general, was confronted with a major problem. In about one years time inquiries and requests for admission for forestry training totalled nearly 700. With the faculty carrying a heavy overload, with limited class and laboratory facilities and with a fixed appropriation, it was necessary to deny admission to a large number of “out of state” applicants. Even with this drastic restriction—in two years time, (1945-1947) the technical enrollment of forestry students soared to an all-time high of 394. Since this peak the enrollment has been levelling off and during the current year, 1953-1954, it has more or less stabilized at about 200 students. (See chart).

**Degrees Awarded**

Prior to 1904 two degrees Bachelor of Science were given to prospective foresters. Both of these graduates (E. A. Sherman and Wm. H. Mast) entered federal forestry work on graduation. The following is a summary of the number of Bachelor of Science degrees awarded since 1904:

<table>
<thead>
<tr>
<th>Year</th>
<th>Bachelor of Science</th>
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<tbody>
<tr>
<td>1904-1</td>
<td>1904-11</td>
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<tr>
<td>1907-2</td>
<td>1908-15</td>
</tr>
<tr>
<td>1909-3</td>
<td>1911-17</td>
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<tr>
<td>1912-4</td>
<td>1914-29</td>
</tr>
<tr>
<td>1913-5</td>
<td>1916-45</td>
</tr>
<tr>
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<td>1917-45</td>
</tr>
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<td>1918-45</td>
</tr>
<tr>
<td>1918-8</td>
<td>1919-45</td>
</tr>
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</table>

Twelve Master of Forestry (Professional) degrees were conferred from 1918 to 1932: The awarding of the Professional degree was discontinued in 1935.

<table>
<thead>
<tr>
<th>Year</th>
<th>Master of Forestry</th>
</tr>
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<tbody>
<tr>
<td>1918-1</td>
<td>1923-2</td>
</tr>
<tr>
<td>1920-1</td>
<td>1925-1</td>
</tr>
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</table>

Fifty-seven Master of Science degrees conferred from 1917 to 1952:

<table>
<thead>
<tr>
<th>Year</th>
<th>Master of Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>1917-1</td>
<td>1922-2</td>
</tr>
<tr>
<td>1919-2</td>
<td>1924-2</td>
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<td>1925-2</td>
</tr>
<tr>
<td>1923-4</td>
<td>1926-2</td>
</tr>
</tbody>
</table>

**Charles Lathrop Pack**
During the ten year period from 1909 to 1919 the forestry extension work was handled by men who represented both fields of horticulture and forestry. During this period the work was in direct charge of G. R. Bliss, R. S. Herrick and R. J. Pearse respectively. The first Winter Short Course in forestry was given at Ames during the winter of 1912-13. This was handled by the Extension Service in cooperation with the resident forestry teaching staff. The work offered the attending farmers comprised woodlots, plantations, shelterbelts, and treatment of fence posts.

By 1920 the need for a more intensive forestry extension program was met by transferring Professor I. T. Bode from the resident teaching staff to the Extension Division as full time Extension Specialist. The program included Boy's and Girl's Club work, establishment of demonstration shelterbelts, woodlot management, preservation of farm timbers and other activities important to the farmers.

The Extension Service has published a large number of circulars and bulletins from time to time. Among these are a pocket size Handbook of Native Trees of Iowa; Evergreen Windbreaks for Iowa Homesteads; Iowa Timbers and Uses; Marketing the Iowa Walnut Timber Crop; Trees for Planting on the Farm and, in addition, many small circulars and mimeographed leaflets.

Experimental and Research Work

What might be classed as experimental work in forestry pre-dated the organization of training for professional foresters. Much of the tree planting during the period from 1863 to 1900 was, in fact, of an experimental nature and influenced by the College.

About the time professional training was started some College sponsored experimental work was undertaken. A project of creosoting fence posts and other farm timbers was undertaken in cooperation with the U. S. Forest Service. Test lines of treated posts were set out in a number of locations in the State. Similar work was continued during 1910 to 1912 and later (1923) an experiment in treating fence posts was carried out in cooperation with the U. S. Indian Service at Tama, Iowa. The results of the early work were presented in an Experiment Station Bulletin 158 in 1915 entitled "Preservative Treatment of Fence Posts."

In 1908 a plantation of hardy catalpa of several acres was set out on the College grounds by the Experiment Station and Bulletin 120, "The Hardy Catalpa in Iowa," was published by the Forestry Section of the Station in 1910.

Another research project was completed in 1913 as a cooperative project between the Forestry Section and the U. S. Forest Service. This research data was published by the Experiment Station as Bulletin 142 entitled, "The Wood Using Industries of Iowa."

In 1916 the Forestry Section of the Experiment Station cooperated with the Highway Commission in the preparation of a survey of Iowa lake beds and outlined recommendations for the reforestation of several areas. Other research projects of the Forestry Section include Circular 27, "Renewing the Shelterbelt" (1916); Bulletin 170, "Evergreen Trees for Iowa." 1917; and Bulletin 223, "The Growth, Returns and Uses of Planted Cottonwood in Iowa." (1924).

Between the years 1917 and 1925 the Forestry Section established a number of experimental plantations—mostly coniferous trees—on State College land. Other experimental plantings were made on the Sac and Fox Indian Reservation in Tama County; on private land in Allamakee County; on highway rights-of-way and on sandy waste lands along the Missouri river. The tracts are now demonstrating the value of tree plantings for timber production and erosion control on lands of little or no value for other uses.

A number of research projects have been carried out by graduate students under the direction of staff members of the Department. Up to and including the year 1951 sixty-six investigative or research projects have been completed by graduate students and submitted as partial requirements for either the Master of Forestry or Master of Science degree. The investigative work included a wide scope of subject and the results were submitted as theses.

In more recent years the Experiment Station staff

The same plantation in 1945

Pictured above is a white pine plantation in Northeast Iowa planted in 1917 as an early extension project.
has undertaken research work in the management of native timber lands. This has been especially important on the “Brayton Area” of 300 acres of timber land in northeastern Iowa which was given to the State for experimental purposes; also on lands of the Amana Colony in Iowa County, and on State Forest lands in the Northeast and Southern parts of the State. This work is carried on in cooperation with the Iowa Branch of the Central States Experiment station (Forest Service), the Iowa Conservation Commission and the Amana Colony.

For the past 6 years the Federal Experiment Station Branch, with headquarters at Ames, has made possible a greatly increased forestry research program in the State. Its investigative program includes many projects some of which involve forest management, stocking control, planting, thinning, pruning and harvesting and marketing low grade products. These investigations have a direct bearing on the farm forestry or woodlot problems of Iowa and adjoining states. Since its inception in 1947 this Federal research work has been under the direction of E. Garth Champagne.

The Faculty

A brief statement of the faculty from the beginning of the technical forestry work at Iowa State College should recognize the support of the administrative officers whose cooperation and insight into the new field of forestry played a large part in the early recognition in the early organization and later development of the school of forestry.

The unstinted support of the Presidents of the College during this era was the controlling factor, under the Board of Education, in the half-century since the beginning of the technical program. These included:

Dr. A. B. Storms, President from 1903 to 1910.
Dr. E. W. Stanton, Acting President from Sept. 1, 1910 to Aug. 31, 1912; April 20, 1917 to Nov. 21, 1918.
Dr. R. A. Pearson, President from 1912 to 1926.
Dr. Herman Knapp, Acting President for two short periods in 1926 and 1927.
Dr. R. M. Hughes, President from 1927 to 1936.
Dr. Charles E. Foiley, President from 1936 to 1953.
Dr. James H. Hilton, President since July 1, 1953.

The foresters and conservationists have been fortunate in having as administrators in the Agricultural Division three Deans who have recognized the place which forestry plays in the broad field of Agriculture and the need for a substantial training for men in this field. Without full support of the Deans of the Agricultural Division the development of a technical forestry course at Iowa State College would not have been possible. Those responsible for guidance and support during this period are:

Dr. Charles F. Curtis who directed the Division of Agriculture from 1902 to 1932.
Dr. H. H. Kildee from 1933 to 1949.
Dr. Floyd Andre from 1949 to the present time.

The forestry curriculum at Iowa State has evolved over the years from the administrative unit, the Department of Horticulture and Forestry. The administrative heads for the Department of Horticulture and Forestry have been:

Prof. A. T. Erwin, Acting Head 1903-1904.
Prof. S. A. Bach from 1905 to November, 1922.
Prof. B. S. Pickett from 1923 to 1946 at which time Forestry was made a separate department.

All three of these Department Heads recognized the rather separate field of opportunity in forestry and gave all possible support to the development of a separate curriculum for the intensive training of foresters.

For the past 50 years the Professors in charge of forestry in the department were given almost full autonomy in proposing curriculum changes needed and also rather full responsibility in the matter of budgets and staff recommendations. This fine spirit which has existed for the many years has played no small part in what has been accomplished in training hundreds of foresters for a wide field of service in Iowa and the entire country.

During the period from 1904 until 1946 when forestry was officially a part of the Department of Horticulture and Forestry, the Forestry work was in charge of the following men:

Dr. H. P. Baker from 1904 to 1908.
Professor Charles A. Scott from 1908 to February, 1910.
Professor G. B. MacDonald from February, 1910 to July 1, 1948.

On July 1, 1946 forestry was made a separate department with Department Heads as follows:

Professor G. B. MacDonald from July 1, 1946 to July 1, 1948 when he retired from the administrative work.
Professor George B. Hartman from July 1, 1948 to the present time.

Many faculty members have made real contributions to the technical training program. A brief chronological statement of periods of service of the different instructors since 1903 is recorded in the following.

Professor A. T. Erwin of the Horticulture and Forestry Department was giving some instruction in forestry prior to the arrival of the first technically trained forester. In a letter dated April 3, 1903 Professor Erwin addressed a note to Dr. L. H. Pammel, head of the Botany Department, as follows: “Would you kindly send me a written memorandum regarding the prizes in forestry for college students, as I should like
to announce the same to my forestry class, and wish
to have the announcement correct." At this time sev-
eral students were expecting to enter the new for-
ery field.

In 1904 Professor Hugh P. Baker took up his duties
in charge of the technical instructional work. With
the assistance of Professor Erwin, Dean Curtiss and
President Storms the ground work was laid for the
beginning of the forestry curriculum. Dr. Baker left
his work at Iowa State College in 1908 to head the
forestry work at Pennsylvania State College.

In 1908 Professor Charles A. Scott took up the work
in charge of the forestry instructional program and
continued until 1910 when he resigned to become
State Forester of Kansas.

In February 1910 G. B. MacDonald, who was on
leave from the Forest Service (to get married), was
asked to pinch-hit for Professor Scott for a month
or two while he (Scott) looked over the forestry possi-
bilities in Kansas. In March, MacDonald returned to
his job on the Helena National Forest in Montana
where he was engaged in establishing a forest nur-
sery at Boulder, Montana. Later the same spring he
was offered the position of Assistant Professor, in
charge of forestry. He continued as Assistant, Asso-
ciate, Professor and Department Head, respectively
until July 1, 1948 when he retired as Head but con-
tinued as Professor on a part-time basis.

**Staff Enlarged**

In 1911 the teaching load in forestry became en-
tirely too heavy for one instructor and it was at this
time that Professor Nelson C. Brown was added to
the staff. In 1912 he accepted a position with an easter-
n institution.

Associate Professor, George C. Morbeck, a graduate
of Michigan State College, joined the staff in 1912
and continued until 1921 when he accepted a position
at the Forest Products Laboratory at Madison, Wis-
consin.

By 1913 the increasing instructional load required
the addition of another staff member. At this time
Thomas R. Truax, a graduate of the college in 1912,
was appointed as Instructor and continued with the
Department until 1918 when he was "loaned" to the
U.S. Forest Products Laboratory for a research as-
ignment. Needless to say the "loan" turned into a
"gift" to the laboratory.

In 1914 Irwin T. Bode joined the instructional staff
—first as student assistant, later as Instructor and
Assistant Professor. He continued on the instructional
staff until 1920 when he was transferred to take
charge of the forestry extension work as Extension
Associate Professor. He was engaged in the exten-
sion position until 1933 and was largely responsible
for the forestry work in rural Iowa being recognized
as one of the important land use programs.

In 1920 D. C. Poshusta, served for one year as In-
structor in the Department.

During the college summer camp in 1919 the staff
and students had numerous contacts with Supervisor
D. S. Jeens of the Arapahoe National Forest in
Colorado. He gave unmistakable evidence of having
the technical as well as the other qualities which are
a big asset in college work. As a result of these sum-
mer camp contacts, he joined the forestry staff in 1921
and continued as a major influence in the depart-
ment until 1930 when he was granted a leave of abscence for
graduate work at his alma mater—Yale University.
Again the Department lost a top-notch member—since
on termination of his leave he was prevailed upon to
accept the position as head of the Forestry Depart-
ment at the University of Washington at Seattle.

In 1921 H. J. Andrews took up the instructional
work which had been carried by Professor Morbeck.
Mr. Andrews was a graduate of the school of Forestry
at the University of Michigan, at Ann Arbor. At the
time he was being considered for the position at Iowa
State College, his noted Department Head, Dr. Fil-
bert Roth remarked—"he will be well worth it—even if
you should be able to hold him for only one year." 
Anyway we held him for three years, until 1924, when
he left to take an important post with the State of
Michigan. Professor Andrews efficiency was demon-
strated in many ways—the last evidence being the quiet
way in which he took with him our very "efficient Department Secretary as his wife." (Willien
Fish). Dr. Roth's opinion has been verified by Mr.
Andrew's rapid rise to the responsible position as Re-
geonal Forester in the northwest.

In 1922 Perkins Coville was added to the staff as
instructor. He continued until 1928 when he resigned
to accept a position in the Washington office of the
Forest Service.

Assistant Professor J. A. Larsen began his long
period of service in the Department in 1924 and has
continued in instructional work—largely in the field
of silviculture—until the present time. Dr. Larsen's
background of research work and experience in the
west before coming to Iowa State, has been a real
asset to the Department. He is now on a partial re-
tirement basis.

At about the time Perkins Coville left the Depart-
ment Walter H. Horning, in 1928, joined the staff to
handle the work in forest utilization. He continued
until 1934 when he accepted a position with the National Park Service and later became Director of the O and C program in the Department of Interior and finally Chief Forester of the Bureau of Land Management, also in the Department of Interior.

Associate Professor Dwight B. Demeritt was acquired as a staff member in 1931 from the Forestry Department of the University of Maine. He inherited most of the work which had been formerly handled by Professor Jeffers.

Iowa State Loses "Handy Man"

Professor Demeritt, in addition to his proficiency as an instructor in mensuration, management and other courses was recognized as the "handy man" in the department. He arrived about the time the Civilian Conservation Corps program was precipitated into the lap of the then head of the Forestry work at the College. With from 16 to 48 C.C.C. camps being located, staffed and directed from the Department, the third floor of Agricultural Hall (now Curtiss Hall) was a "mad-house," to put it mildly. It was at this time that Professor Demeritt took over a part of the emergency conservation work load, in addition to his instructional duties, and probably kept several persons out of a real "mad house." After Professor Demeritt had been in Iowa for several years, the University of Maine decided they wanted him back to head their Forestry Department. After stalling the Maine authorities off for over a year, he was almost told to write his own ticket. He rather reluctantly, left Iowa State for the main position in 1934.

Associate Professor Roy Thomson followed Professor Demeritt in 1934. His specialty was forest economics. He remained as a valuable member of the Department until 1937 when he accepted a position in the Graduate School of Forestry at Duke University. In this case Iowa corn and hogs were unable to compete financially with the tobacco fields of North Carolina.

In 1935 Associate Professor Charles M. Genaux, who had been teaching in the University of Idaho, Southern Branch, became a member of the staff at Iowa State College. He continued with the department until the end of the summer camp in 1936 when he accepted a position in Washington, D.C. He was on leave from the college for about a year in 1945-46 engaged in instructional work with the American Army in France.

George B. Hartman of the class of 1917 became Assistant Professor in 1935 at the time he had completed a number of years of service with the Longbell Lumber Company in the South. By 1947 he had advanced to a full professorship. He again accepted a position with his old company in the South, but returned to Iowa State College in the Spring of 1948 and became Head of the Forestry Department on July 1, of that year.

In 1933 Andrew L. McComb became a Fellow in the Department and in 1935 was appointed Instructor. He was advanced successively to the ranks of Assistant, Associate and full Professor. He has continued with the Department except for a leave of fifteen months on Cinchona production work with the Government in 1944-45 and a second leave during 1953-54 on a Fulbright Fellowship in Austria.

In 1936 Odell Julander took over the work of Range Management for the Department. He continued as Instructor until 1942 when he was transferred to forestry extension work in the State. He left the college in 1944 for a position in Oklahoma.

In 1938 Associate Professor Allen W. Goodspeed relinquished his work at the University of Maine and joined the staff of Iowa State College—replacing Associate Professor Roy Thomson. He became full Professor in 1945 and continued with the Department until 1948 when he accepted a position on the forestry staff of the University of West Virginia at Morgantown.

In 1946 John E. Granson joined the staff as Assistant Professor and continued until 1951 when he left for private business and later accepted the position of Director, Alumni Achievement Fund with headquarters on the Campus.

William W. Chilcote became an instructor in Range Management in 1947. In 1950 he resigned to accept a position in the Botany Department at Oregon State College in Corvallis.

In 1947 George W. Thomson was appointed Instructor—became Assistant Professor in 1952 and has continued with the Department to the present time.

During the college year 1947-48 Jimmie Sims assisted in the Department as Instructor.

In 1947 Dr. Dwight W. Bensend left the School of Forestry at Logan, Utah, to cast his lot with the Iowa State College. He has continued to the present time.

During the same year, 1947, Russell E. Getty, a graduate of Iowa State College, left the Indian Service in South Dakota to take an Associate position in research work with the Experiment Station. In 1951 he was transferred to the instructional staff as Assist-
tant Professor to handle the range management work. In 1953 he accepted a position with the Bureau of Land Management of the Department of the Interior in Oregon.

During 1948 David Herrick became an Instructor in the Department and continued in this capacity until 1951 when he accepted a position with the U.S. Forest Products Laboratory.

Professor Leonard F. Kellogg accepted a staff position in 1948. His long experience with the research program of the U.S. Forest Service has made him a valuable acquisition to the Department.

Raymond Sarles served as Instructor for one school year 1950-51.

James G. Yoho became Assistant Professor in 1953. Also during this year, 1953, Gordon E. Gathrum joined the forestry staff as Assistant Professor.

Other who have assisted in the research or teaching in the Department as fellows, graduate assistants or associates are the following:

**Fellows**

1923-1924—Paul M. Dunn
1924-1925—Chester W. Martin
1925-1926—C. L. Harrison
1926—J. A. Gibbs
1927-1928—Walter F. Sullivan
1928-1929—Harold C. Meginnis
1929-1930—Mr. Walker
1930-1931—Clarence D. Chase
1931-1932—James McGlade
1932-1933—Clarence E. Andersen
1933-1934—Bryant A. Bateman
1936-1937—Ralph Felker
1937-1938—Archie Patterson
1938-1939—Hartley K. Pinney
1939-1940—L. Wayne Ackerman
1940-1941—Theodore Silker
1941-1942—Robert Rummel
1942-1943—Martin Dale
1943-1944—Marlowe E. Burgess
1944-1945—George Doresett
1945-1946—Dean Einspahr
1946-1947—Martin Dale
1947-1948—Dean Einspahr
1948-1949—Martin Dale
1949-1950—Dean Einspahr
1950-1951—Arthur Eschner

**Assistants and Associates**

1950-1951—Howard Lovestead, Graduate Assistant
1951-1952—Arthur Eschner, Graduate Assistant
1952-1953—Arthur Eschner, Graduate Assistant (research)
1953-1954—Martin Dale, Graduate Assistant (research)

Norman Hansen, Graduate Assistant
Thomas Rosenow, Graduate Assistant
Dean Einspahr, Associate

Norman Hansen, Graduate Assistant (research)
Jim Dale, Graduate Assistant (teaching)
Raymond Brendemuhle, Associate
J. Reid Parker, Associate

1953-1954—Martin Dale, Graduate Assistant (research)
Norman Hansen, Graduate Assistant (research)
Robert P. Ford, Graduate Assistant (teaching)
Raymond Brendemuhle, Associate
Dean W. Einspahr, Associate
J. Reid Parker, Associate

In the development of a technical college curriculum from "scratch," or perhaps better in this case, as a gradual outgrowth from another curriculum, many problems are encountered over the years. Probably the most important one is to try to keep in step with rapid development of a new profession. In a generation or two the relatively simple and more or less prescribed field of forestry has blossomed out into a complex structure which has its roots in all the important branches of conservation. To try to meet this broadening field the four-year curricula have been bulging at the seams—being confronted with a three-horned dilemma of (1) meeting the current demand for adequate training in four years: (2) providing the necessary technical instruction for practicing foresters, and (3) keeping a basic foundation of cultural subjects. On different occasions the Department has tried to ease the situation by providing a fifth year for the training period. Also by arranging specialized groups for both four and five year students. The present arrangement now permits the junior students to make a selection between the Forest Management and Forest Utilization groups.

**Other Problems**

Another problem closely allied with the above relates to the need and justification of establishing rather complete four year curricula in such fields as forest management, forest utilization, range management and wildlife management. Although the Department has placed many graduates in these lines of activity no move, as yet, has been made to undertake specialization to this extent in these closely allied fields.

A problem of importance which dates back to the first forestry training efforts in the State, relates to instruction for agricultural students in forestry as it affects farm operations. Over the years limited instruction to different groups of agricultural students has been given from time to time. But this instruction has not consistently reached the trained agriculturists, who, in their various capacities, deal with the farmers. It has failed to reach a large number of students who are to be engaged in actual farming operations. Were the future farmers exposed to some limited forestry training it would make the job for the Extension Foresters and State Farm Foresters easier and more productive of results. The present administration of the Department is endeavoring to solve this problem and with indications of success.

A critical situation developed in 1925 which threatened the continuation of technical training for foresters at Iowa State College. The Board of Education at that time recommended the discontinuance of the training of technical foresters and technical journalists as an economy move. This proposed action, if carried out, would have meant that Iowa State College, as one of the recognized Schools of Forestry, would...
cease to exist. The college administrators, President R. A. Pearson and Dean of the Division of Agriculture, Charles F. Curtiss, seriously questioned the justification for such a move and advised strongly against it. This attitude was mentioned in the “History of Iowa State College” by Dr. E. D. Ross—“either by remarkable prescience or a lucky hunch, the President was firmly convinced that these particular fields had great future promise—and ought to build them up.” The action of the Board of Education, proposing the elimination of forestry training, was, in part due to the report and recommendation of the Brookings Institute which had been engaged to make a comprehensive study of the work of the several state educational institutions. However, there seemed to be a rather overwhelming sentiment, both nationally and in the State, that the technical work in forestry at the Iowa State College, had already become well recognized in educational circles and also among federal, state and private forestry agencies. This overwhelming sentiment along with the local action and efforts of J. M. (Ding) Darling, of the Des Moines Register; the late Addison Parker, Attorney; John Wallace, of Wallace’s Farmer; the late Harvey Ingham, Editor of the Des Moines Register, and Governor Hammill, convinced the Iowa Board of Education that it would not be in the best interest of the State and Nation to discontinue technical training in the rapidly developing and important field of forestry. So the School of Forestry at Iowa State College escaped the executioners block and now has more than a thousand alumni engaged in important activities in many federal departments and services; in practically all states of the Union, directing educational work in schools of forestry and many in the forest industries.

Employment of Iowa State Foresters

In the final analysis the evaluation of a college training in forestry, or any other line, rests to a large extent upon the type of citizen produced and his usefulness to Society. Faculties, courses of study, buildings and appropriations all have a part in the final product. But, above all of these, comes that intangible atmosphere or “something” which tends to point the student to an objective somewhat beyond the purely material. Over the years the Forestry Department has endeavored to keep before the students the idea that good citizenship goes far beyond brilliance of mind and high technical ability. Naturally the bread-and-butter aspect must get consideration.

For the past 40 years we have heard the perennial question, “what are you going to do with all of those foresters?”—a question which was more often in the minds of non-foresters than foresters themselves. This question has bounced along over the years but the trained foresters continued to find their nitches in forestry and its allied fields.

In the early days it is true that about the only outlet for most graduating foresters was in federal work with U.S. Forest Service. At that time few persons could visualize the greatly expanding needs for more intensive management and research work of the federal program.

Along with the expanding federal forestry work came the greatly enlarged state work and above all the almost phenomenal increase in forestry management of timber and lumber companies, paper pulp and many other industrial concerns. This rapid development in the field of forestry has been continuously reflected in forest school enrollments in anticipation of the demands of industry and public agencies for trained foresters.

The fact that Iowa has not been, and never will be, a heavily timbered state has little to do with national and state needs for trained men in this field. Forestry like other conservation fields is a national problem in which the states make their respective contributions. In the training of foresters the college has not neglected Iowa’s needs in this field—especially farm or woodlot forestry. For many years the Department, largely through the Extension Foresters and Farm Foresters, has endeavored to meet this need in cooperation with other agencies.

The fact that, with one or two exceptions, forestry graduates of Iowa State College, are employed in every state, Alaska and several foreign countries, would indicate that the foresters training at the Iowa State College has an important national aspect in the field of conservation.

A survey of employment of the forestry graduates made in 1950 shows the following break-down in broad classes of employment. The survey included 800 graduates from 1904 to 1950*

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Employment with federal agencies</td>
<td>30.7%</td>
</tr>
<tr>
<td>(2) Employment with forest industries, including timber, paper, plywood, veneer, wood preservation companies, etc.</td>
<td>25.9%</td>
</tr>
<tr>
<td>(3) State forestry employment</td>
<td>6.8%</td>
</tr>
<tr>
<td>(4) Educational employment</td>
<td>6.6%</td>
</tr>
<tr>
<td>(5) County and municipal forestry</td>
<td>2.2%</td>
</tr>
<tr>
<td>(6) Miscellaneous, including ranching, orcharding, engineering, military service, retired and others</td>
<td>27.8%</td>
</tr>
</tbody>
</table>

Total 100.0%

* A detailed survey has not been made for the graduates since 1950.

50th Anniversary Issue
The survey shows not only a large spread of employment geographically but includes a wide variety of activities in forestry and allied fields.

If it were possible to elaborate fully on the individual responsibilities of many of the graduates it would show a record of which the college should be proud. Here, a brief summary only will be attempted.

One of the earlier graduates of Iowa State College directed the destiny of the United States Forest Service, as Chief, for a period of about 10 years until his retirement. His national forest tree farm comprised about 185 million acres. His duties involved general supervision of timber management, research, range management, cooperation with the states, recreation and wildlife activities—only to mention a few.

Graduates have served in many capacities in the central Washington office of the Forest Service and in the Regional offices. A dozen or more, either now or in the past, have directed the work on national forests as Supervisors—assignments each with responsibility for one to two million acres of Uncle Sam’s forests.

The federal experiment stations, including the Forest Products Laboratory at Madison, Wisconsin, have had a sizeable quota of Iowa State graduates assisting in their respective research programs.

At the present time, or in recent years, four Iowa Staters have directed State Conservation or similar divisions in various states. Six men have served as State Foresters. Five as Extension Foresters for states, (and several as Assistant Extension Foresters). Seven graduates have been Deans or Heads of forest schools, and 21 are Professors or Instructors in these schools.

The forestry activities of several large lumber or timber companies are directed by Iowa State men. Some of these companies now employ thirty or more technical foresters. One man from Iowa State pioneered in the northwest in establishing conservative management practices with his large company. Another has played a similar role in the South and with one of the larger companies.

Other graduates have taken leading places with the so called “forest industries” such as pulp and paper production, lumber production, timber preservation, plywood and veneer manufacturing, specialized products such as “masonite” and many others. The fact that nearly a third of the Iowa State graduates now take positions with industry, indicates that this field has much promise for the future.

The above statement concerning our graduates is a very inadequate one in an attempt to give a picture of what Iowa State men are doing.

In federal employment the Forest Service work has been emphasized, but many graduates are employed in other branches such as the Soil Conservation Service, Bureau of Land Management, Office of Indian Affairs, Fish and Wildlife Service, National Park Services, Tennessee Valley Authority, the Army Engineers, and other agencies. Hundreds of graduates occupy ranger or similar positions in federal or state work and a comparable number are in a great variety of positions with the industries in beginning assignments in their professional careers.

Past Challenges the Future

The rapidly expanding importance of our natural resources and the better public understanding of conservation problems in our national economy speak well for a steady and increasing field of employment for trained foresters. With the continued cooperation of the people of Iowa, the College Administration and faculty, the School of Forestry at Iowa State College should continue as one of the agencies meeting an important economic need for the future. The next half century of professional forestry training at Iowa State College may have an even greater impact upon forestry and other conservation work in the State and Country than the first half of the twentieth century. The field is still a new one—with plenty of challenge for the resourceful and ambitious professional foresters.
The Northern Lakes Forest Research Center was established July 1, 1946 at Rhinelander, Wisconsin, for the specific purpose of studying forest management problems in northern Wisconsin. It is a part of the Lake States Forest Experiment Station, St. Paul, Minnesota, one of the nine regional forest experiment stations of the United States Forest Service. The work of this research center is correlated with that of three others in Minnesota and Michigan by the regional experiment station in a manner designed to bring about regional solutions of the problems of managing different forest types. The regional approach is necessary since forest type boundaries have no relation to state boundaries, but are largely determined by climate and soils, and modified by fire and cutting.

What Are the Forest Management Problems?

Probably the most important forest management problem in this area is the determination of cutting methods in the various forest types which will promote good growth and assure adequate natural regeneration if at all possible. A prime consideration in species used for veneer and sawlogs is the promotion of quality increment. Of specific interest in northern Wisconsin are the northern hardwood, pine, balsam fir, and mixed coniferous swamp types. An important facet of the work is the evaluation of site potential, particularly as it relates to rotation age.

The reforestation of idle or understocked acres presents problems of species adaptation, site selection, ground preparation, age class performance, plantation care, and evaluation of insect, disease, mammal and other pests.

Forest nurseries have very specific problems of fertility, sowing, density, watering, weed control, and soil crop adaptability.

Farm forestry is a whole field of research in itself because it involves not only purely technical silvicultural considerations, but also a problem of demonstrating such principles and selling them to owners of small forest tracts.

Guiding the general scope of the research undertaken at the center, and evaluating priorities, is an Advisory Council which meets annually. It is composed of about 10 members representing the pulp and paper, sawmill, and veneer industries, the state extension forester, conservation department, agricultural experiment station, state university, and the federal Indian Service and administrative branch of the Forest Service.

Forest Management Studies

At the Northern Lakes Forest Research Center the work is concentrated on management problems in second-growth northern hardwoods, in the balsam fir-spruce type, in aspen, in mixed coniferous swamps, and in jack pine.

In second-growth hardwoods, cutting methods, stocking levels, length of cutting cycles, and timber stand improvement measures, such as cull removal and thinning, are being studied. The cutting methods and stocking level study involves group selection, border strip cuttings 82-feet wide, clear cutting in 10-acre blocks, 8-inch stump diameter cuttings; it includes light, medium, and heavy selection cuts with residual basal areas after logging of 90, 75, and 60 square feet per acre, of trees of 5-inch diameter class and larger.

A separate study involves testing relative silvicultural and economic merits of 5-, 10-, and 15-year cutting cycles in second-growth hardwoods.

Removal of cull trees, especially hardwoods, by felling, axe girdling, power saw girdling, and by chemicals is under trial as are intensities of thinning.

Two-storied forests of aspen over balsam fir with occasional admixture of white or black spruce are rather common in the Lake States and there is a major test of cutting in such a stand where the overstory was about 37 years old at time of logging. The experiment includes (1) complete removal of the overstory, (2) partial removal by marking about half the volume including cankered trees (Hypoxylon), and (3) designation cutting, removing trees that would make three 100-inch sticks and two 100-inch stick of pulpwood respectively.

In a separate experiment the center, with the help of the Supervisor's staff of the Nicolet National Forest, is testing out partial cutting of rather pure aspen type with emphasis on cutting from below and removing about 50 percent or more of the cordwood volume. This shows promise of excellent growth response—the five-year remeasurement indicating around 0.1 cord
per acre per year increase for every cord left. This particular trial also involved a test of marking trees to leave, rather than those to be cut, with the idea of reducing marking costs and focusing maximum attention on the growing stock to be left and on the attributes of each individual residual for proper spacing, crown vigor, growth potential, and freedom from disease or insects.

Another test involves thinning of young aspen below commercial growth size with the purpose of increasing quantity and quality of growth.

A newly installed study involves the concept of trying to extend the life of an older balsam fir-white spruce stand by partial cutting in an attempt to obtain more complete stocking of pulpwood species and to increase the percentage of the highly desired spruce. This trial includes a light selection cut, a group selection cut, and a heavy selection cut.

In the mixed conifer swamp type there is one project on thinning in a 65-year-old white cedar-balsam fir-black spruce stand. This project is carried out in cooperation with the Wisconsin Conservation Department near Pembine, Wisconsin. The original stocking of about 1500 trees per acre was cut back to around 770, 950, 1120, and 1260 trees per acre respectively on plots replicated four times. The thinning space between trees expressed in percent of total height ranges from 20 to 25 percent of total height of average dominant. This trial showed that thinning guides based on percent of total height of average dominant trees are applicable only in very even-aged, even canopied forests. Number of trees or basal area of residual stand works out better as a field marking guide in many stands.

Thinning of dense young jack pine—especially by mechanical means—is being investigated in cooperation with the Nekoosa-Edwards Paper Company at Port Edwards, Wisconsin. Time studies with recently devised brush cutting power saws have revealed that it may be possible to reduce per acre costs by as much as 50 percent compared with hand methods. Such saws may, therefore, give great impetus to the large scale early treatment of young overdense stands in forest areas which are smooth to gently rolling in topography and where there is not an excessive amount of windfall and large surface boulders.

A trial thinning of dense 23-year-old white spruce plantings is under way on the Menominee Indian Reservation. The stand of 3800 trees per acre was reduced to 750, 1000, 1250, 1500, and 1750 trees per acre.

**Nursery Studies**

In past years there have been under way a considerable number of nursery experiments dealing with density of sowing, root and top pruning, fertilization, weed control by chemical means, and adaptations of leguminous soilings crops to sandy acid soils located in cool climates.

Results from our density-of-sowing studies have been directly instrumental in bringing about a reduction in sowing density of conifer seedbeds in the Lake State nurseries. Formerly the densities in conifer beds were often in the range of 100 to 150 trees per square foot. These have now been reduced to 50 to 75, as a

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**Peeled Aspen on the Argonne Experimental Forest.**
general rule, in practically all public nurseries in the Lake States.

Root pruning in place in the spring of the third year has shown promise of producing 3-0 white pine that gives field survival practically as good as 2-1 stock. Root pruning costs less than 10 cents per thousand trees, whereas transplanting costs several dollars per thousand.

A very comprehensive series of field survival tests proved that the chief benefit of good fertilization in the nursery is a marked increase in percent of plantable stock produced. The increase in percent of plantable stock is so great on some sandy soils that expenditures of 100 to 200 or more dollars per acre can be justified for fertilizers and their application every two to three years.

Considerable progress has been made in chemical control of weeds in coniferous forest nurseries. Application of research findings of the Northern Lakes Center is now saving midwest public nurseries about $65,000 per year through reduced weeding costs by use of chemicals, notably a petroleum product known as mineral spirits.

A current project involves testing of lupines and other legumes as nursery soilings crops for northern nurseries. Lupines have been used for hundreds of years in European forestry but until recently had never been given a thorough test in Lake States nurseries. Several of those tested to date, including bitter blue annual, white bitter annual, sweet yellow annual and perennial lupine, showed promise of producing as much as 2.7 to 3.4 tons of oven-dry bulk per acre, equivalent to 84 to 100 pounds of nitrogen per acre. More pilot scale plantings are under way on these legumes in this as well as other forest regions.

Reforestation and Regeneration Problems

The research center has some 500 acres of experimental plantations in the northern Wisconsin vicinity in which various tree species and age classes are under test on a wide variety of soil and cover conditions. The bulk of these tests were established in the late 30's by help of the Civilian Conservation Corps and have already yielded useful information on species and site adaptation, survival and early growth rate, and response to various intensities of removal of overstory aspen, paper birch, and scrub oak.

Tests are under way to determine the influence of seed source on development of spruces, and jack pine, and to discover the value of hybrids of several pine and aspen species developed by the Institute of Forest Genetics at Placerville, California and the Maria Moors Cabot Foundation at Harvard University, Petersham, Mass.

Another aspect of the problem of restocking forest lands is how to obtain natural regeneration. Several tests have been made which involve some aids such as exposing mineral soil by use of heavy disks drawn by a crawler tractor. There are now quite a number of instances in sod-bound and brush-covered understocked stands, on level to slightly undulating terrain, where as many as 30 to 185 thousand first-year seedlings per acre were obtained by disking shortly before seed fall.

Farm Forestry

Small forest tracts owned by farmers and others offer a special problem to the forestry profession—not only to the researcher but even more so to the extension foresters, state and conservation district foresters and any others who may on occasion be called on to give advice and guidance on management of small woodlands. In many instances, the landowner has only a hazy notion of the elements of forest management and marketing, and may live in an area where no private consulting forester is available for help.

In Wisconsin the problem of demonstration, extension, and research in farm forestry is being tackled by joint efforts of the state extension forester, district foresters of the Wisconsin Conservation Department, county agents, and personnel of the research center.

As an attempted solution of the problem, the state extension forester, and the research center have selected some 10 different tracts, generally state owned, and ranging from 20 to 75 acres in size which are dedicated as Timber Harvest Forests. They are sometimes referred to as "Farm Forestry Demonstration Forests." The tracts average about 40 acres in size, "...ice that happens to be about the average of farmer-owned woods in this area. The timber types selected generally are mixed hardwoods, oak, red pine, or white pine, because they are amenable to repeated cuts at rather short intervals.

Each tract is subdivided into 5 to 8 compartments. Annually one compartment on each tract is marked to
remove a volume equivalent to slightly less than the average computed growth on the tract as a whole. The marked timber is logged and decked up by a local farmer or logger within the compartment where it was cut. Records are kept of logging costs including man-hours, machine-hours, and horse-hours. Detailed records of growth and mortality are kept on some 10 to 25 1/5-acre growth plots sampling the area.

Simultaneously publicity regarding the date, place, and purpose of a "field day" is activated by means of posters, newspaper releases, radio, and mimeographed announcements, sent out by the several cooperating county agents. These "field days" are staged for the benefit of farmers and other owners of small forest tracts. The proceedings last about two hours, during which foresters and county agents explain, in everyday language of the layman, the purpose of the compartmentation, the improvement basis of the cutting, the need for leaving an adequate amount of good growing stock, and the dollar earnings made per man-hour of labor; on occasion information may be given on how to cut the trees for best log grade, and where to market the material.

The timber tract is likened to a small "lumber and cellulose producing factory" where the farmer, in his off season, can very profitably employ himself as a logger for some 60 to 140 man-hours per annum, without impairing the capital value. In other words, he is harvesting only about 80 or 90 percent of the annual growth in the early cuts and the forest property is actually gaining in value meanwhile.

Demonstration Value of Research Center

The Northern Lakes Research Center operates the 6500-acre Argonne Experimental Forest, on which many of the test cuttings are conducted. Such experimental forests have a unique value as demonstrations of various concepts of silviculture and forest management where professional forest managers for industry, and government, may participate in "show me" tours and weigh the relative merits of various methods and forest treatment for their particular forests. As time goes on the value of the experimental forest should increase. Only after the cuttings and plantings are 20 to 30 years old will they yield information of maximum value to the forest manager.

Some of Wisconsin's potential forest land.

ABOUT THE AUTHOR . . .

Joseph H. Stoeckeler, following graduation from Dubuque (Iowa) High School, entered Iowa State College where he received his B.S. degree in 1930 and his M.S. degree in 1931. In addition to his forestry degrees from Iowa State, Mr. Stoeckeler has done graduate work in soils and plant physiology at the University of Minnesota.

He has been employed at the Lake States Forest Experiment Station since 1931. He is currently Forester-in-Charge of the Northern Lakes Forest Research Center at Rhinelander, Wisconsin.

Research in forest nurseries and planting, shelterbelts, forest influences, forest soils and silviculture has led to publication of over 100 articles on these subjects by Mr. Stoeckeler. In addition, forestry travel and study in Canada, Sweden, Norway, Finland, Austria, France, Switzerland, Germany, Denmark and Italy have served to give the author a broad and varied background in his field.

Professional and honor societies to which Mr. Stoeckeler belongs include: Sigma Xi, Society of American Foresters, Soil Science Society of America, Ecological Society, American Association for Advancement of Science and the American Forestry Association.
FORESTRY IN THE SOUTHEAST

By Robert N. Hoskins
Industrial Forester
Seaboard Air Line Railroad Company

No section of the nation has made greater strides economically in recent years than the Southeast—Virginia, North Carolina, South Carolina, Georgia, Florida, and Alabama. In 1909 the total value of manufactures for these states was placed at $971,400,417.00. Compared to 1952 there was an increase of more than 2,000 per cent with the total value placed on all manufactures at $21,547,000,000.00 of which $3,030,000,000.00 was from forest products.

During the past two decades the pulp and paper industry, through well planned programs of continuing research, has kept this particular phase of manufacturing flourishing in this area and bids high to contribute substantially to its future growth. Since the end of World War II a majority of the forty-one pulp-mills have either doubled or tripled their programs of production and four new mills are now under construction. Of the sixty-three pulpmills now drawing wood from the South, forty-five are located in the Southeast.

The pulp and paper industry today ranks sixth in value of goods produced with an annual output worth $6 billion. The annual consumption of paper and paperboard in the United States is about 31 million tons—more than 14 times as much as in 1900. While sales of some paper products are closely related to population growth and business conditions, new developments from research promise a steady increase in the per capita consumption of many others. During the past year the consumption of paper and paper products was placed at 396 pounds per person.

With the greatly accelerated programs, particularly in the field of the pulp and paper industry expansions, it is not surprising that the South reached a new high in the production of pulpwod in 1952. The total harvest was 14,534,900 cords—an increase of 3.6 per cent over 1951 and 17.1 per cent over 1950. Pine production as 2.7 per cent greater than in 1951, hardwood 16.5 per cent greater, and dead chestnut 45.7 per cent less. The total domestic pulpwod at all mills in the nation was placed at 25,045,000 cords—the South accounting for 58 per cent of the pulpwod cut nationwide.

Georgia was the largest southern producer accounting for 17 per cent of the South's harvest and 10 per cent of the nation's. The eastern seaboard states of Virginia through Alabama accounted for approximately 64 per cent of the South's production and 36 per cent of all pulpwod produced in the nation.

Progress in forestry development in the Southeast continues at a rapid pace. Less than one decade ago, not one of these states had statewide fire protection. In 1945 Virginia and South Carolina established statewide protection programs and one year later Alabama followed suit. North Carolina, Georgia, and Florida have added new acreages to their protection programs...
annually. Georgia assumed national leadership in the protection of state and private forest lands on July 1, 1955 with the establishment of 11 new County Forestry Units, which brought a record high total of 21,730,560 acres of woodlands in the state under forestry protection. The 11 counties with newly organized Forestry Units comprise 1,236,744 acres. Tree planting is also being spurred. Georgia’s production is being stepped up to 100 million trees a year and the other Southeastern states are expanding their planting programs. North Carolina’s current legislature approved funds to establish a new nursery which will double their capacity to about 25 million trees annually. Industries are also establishing nurseries to replant understocked lands. A few of those industries who now operate their own nurseries are: St. Mary’s Kraft, St. Mary’s, Georgia; National Container Corporation, Jacksonville, Florida; St. Regis, Eastport, Florida; St. Joe Paper Company, Port St. Joe, Florida; and, Union Bag and Paper Company, Savannah, Georgia. The 1952-53 planting season resulted in the planting of more than 170 million trees from state, federal and industry nurseries. An early forecast for 1953-54 is even greater.

**Importance of Woodlot**

A key factor in the overall timber supply of the Southeast is the small farm woodlot as 60 per cent of the land ownership lies in the hands of the farmer. North Carolina’s small woodlot owners furnish lumber to the small sawmills, which represent approximately 93 per cent of all the sawmills in the state and they account for 56 per cent of the lumber produced. Georgia has over 16 million acres under small ownerships, North Carolina 12 million acres, and Virginia 10 million acres. Since such large numbers of owners control a major portion of the forest land, it has become increasingly important to assist not only the small farmer owning woodlots but also the absentee owner—doctors, lawyers, and businessmen—if the needs of industry are to be met today and tomorrow.

The wood-using industries have accepted the challenge and are doing their part to further aid and advise the small woodland owner in the proper management of his property. Approximately 100 conservation foresters are employed on a full-time basis by the pulp and paper industry from Virginia to Texas for this purpose. Foresters are now being employed by the sawmill industry to do similar conservation work. The Southern Pulpwood Conservation Association and the Southern Pine Association are making real contributions toward forestry betterment in their work with the owners of small farm woodlots. The American Forest Products Industries, Inc., who sponsor the Keep Green Campaigns and Cash Crops Program, point out the importance of trees to the individual woodlot owners’ economic well-being from the profit incentive of growing tree crops. The Southern Pine Association’s Tree Farm Program, in cooperation with the state and extension services and state forestry associations, recognizes the application of good forestry measures by the farmer to his woodlands.

The Seaboard Air Line Railroad Company stresses the importance of forestry to the economy of each state served by its line. “Because of forestry depletion in the North the possibility of the pulp and paper industry moving to the South is growing stronger.” Writing in the *Manufacturers Record*, January, 1931 issue, on “Paper Manufacturing in the South,” Warren T. White, Assistant Vice President, concluded that “very recent developments in construction of new mills and expansion of existing facilities indicate that growth of the paper industry in the South will assume greater proportions in the near future than it has in the past.” His success in locating many of the South’s larger mills on the Seaboard Railroad impelled him to sell his management on employing a forester to further aid the railroad in forestry development region-wide. The Seaboard established a forestry division within the industrial department and became the first railroad in the nation to enter the forestry development field.

In 1937 A. E. Wackerman, a forester with the Southern Pine Association, was employed as the Seaboard Railroad’s first industrial forester. When he returned to the field of education as Professor of Forest Utilization at Duke University, the railroad retained his services as consulting forester. Charles A. Gillett, former state forester of Arkansas was named to succeed Wackerman in 1938 and remained in the employ of the Seaboard as industrial forester until 1944 when he resigned to join the American Forest Products Industries, Inc., in Washington, D. C. The writer succeeded Mr. Gillett in 1945.

The Seaboard set up the FIRST farm youth forestry program on a regional basis which recognized achievement by the individual farm boy on his own woodlot. In working out the overall plans with agri-
culture education departments in the Southeast, conferences were held on a state, district, and local basis to back forestry in practical education. By working through the state supervisors of vocational agriculture more than 70,000 Southeastern farm boys are reached annually. Today these Future Farmers are integrating forestry into their total farming program. Some of the young farmers are carrying on forestry as an enterprise and others take forestry as a supplemental project. Many school forests have been established to serve as laboratories for training farm boys to do a better job on their home farm woodlots. The actual success of the program can be measured annually through the tangible accomplishments in gum farming, pruning, thinning, fire-line plowing, selective cutting, and planting. All phases of forestry are assuming greater importance each year to the economy of the Southeast. Working through the agricultural education program has also provided an effective means of working with veterans enrolled in the institutional on-the-farm training program and adult farmers in night classes—all programs coming under the direct supervision of the local agricultural teacher. Much support has been given to this program by other industry foresters as well as the state and federal foresters.

For many years the Seaboard Railroad has held forestry demonstrations to sell farmers, businessmen and local citizenry on the need for better management and protection of farm woods. An example of the results from such demonstrations is indicated by the

*Bark chipping.*

Robert N. Hoskins was graduated from Iowa State College with a Bachelor of Science Degree in Forestry in 1939. Upon graduation he was employed as a tower-man and later became a senior forester in charge of visual education for the Missouri Conservation Commission. He resigned in December of 1941 to accept employment as extension forester with the Florida Forest and Park Service, a position he held through 1944. In 1945 he was named industrial forester for the Seaboard Air Line Railroad Company.

Hoskins holds the Honorary State Farmer Degree for contributions to the vocational agriculture program in Virginia, North Carolina, South Carolina, Georgia, Florida and Alabama. He is the only forester to hold the Honorary American Farmer Degree given by the national organization of Future Farmers of America. He was named Norfolk, Virginia’s, outstanding young man in 1951. He was also honored by the United States Junior Chamber of Commerce after having served two years as conservation chairman. He was the recent recipient of the Distinguished Service Award for having contributed greatly in furthering forestry in the vocational agriculture program in South Carolina—the fourth award to be given to an individual in the history of the South Carolina Association of Future Farmers. He is a past director of the Florida Forest and Park Association and has held many statewide and region-wide committee assignments. He has served on the Governor’s Advisory Committee on Virginia’s Economy as related to forestry. Currently he is serving as chairman of the Awards Committee of the American Forestry Association.

Robert Hoskins was born at Keota, Iowa in 1917 and his wife is the former Julia L. Jones, of Kankakee, Illinois. They have three daughters.

Mullins, S. C., program. More than 600 farmers attended this Seaboard forestry demonstration. Although this community had shown steady increases in the production of its pulpwood prior to this demonstration (1949—4,790 cords; 1950—6,039 cords; 1951—7,982 cords), following the Seaboard’s program in January 1952 the production of pulpwood nearly doubled—13,674 cords. Management requests and demands for seedlings also showed sharp increase.

In the classification of the Seaboard Railroad’s tonnage, forestry accounted for 19.89 per cent in 1952. This railroad now has in use 2,088 woodrack cars specifically designed to handle pulpwood and an additional 300 woodracks now under construction to augment its woodrack fleet.

Since the Seaboard initiated forestry into railroading circles, many other railroads have followed suit—not only in the South but in other parts of the nation, and their contributions to forestry development are annually strengthening America’s economic security.
The 1954 campaign of the Alumni Achievement Fund is now underway. And foresters are asked to be aboard for a giant conservation project.

You foresters know how important conservation is. And that's why a special call is going out to you.

You know how national action stopped much of the needless waste of our forest and soil resources. Yet there is another resource—a human one—that is being wasted when persons of college ability fail to continue their education because of lack of money. And the effects of this waste is just as telling as the wastage of our forest and soil resources.

More than half of the scholarship applicants at Iowa State College are turned down because there just isn’t enough scholarships available to take care of the need. You share this loss of trained scientists, farm leaders, engineers, home economists, teachers—and foresters.

National studies show that low parental income is the chief reason why seven out of ten persons having college abilities never finish an undergraduate course of studies. Gifts to the Iowa State College Alumni Achievement Fund offers a means for everyone to share in the conservation of this vital human resource.

About 48 cents out of every dollar contributed to the 1953 campaign was earmarked for scholarships. And 15 cents of every dollar went into student loans and fellowships. This means that we’re saving a considerable part of the skill and ability of able young people—but still not enough.

Your participation in the 1954 Alumni Achievement Fund will help in this conservation task. There’s a special place for you foresters on the Victory Special.

ALUMNI ACHIEVEMENT FUND
IOWA STATE COLLEGE
AMES, IOWA

The Ames Forester
## In Memoriam

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(Known deceased alumni)
Let’s Do More in ’54
for our College

Iowa State cannot become great nor long remain great without interested, working alumni. Let’s all resolve to make 1954 the best year yet for “our college.”

Whether you ever completed your course at Iowa State or not, whether you have three degrees or no degrees from “our college,” you are an alumnus, a member of the College family.

Members of the Iowa State family make their influence felt through:

2. Membership in Memorial Union which provides a campus home for all Iowa State men and women and their alumni affairs.
3. Annual support of the Alumni Fund which provides the extras currently needed to keep the good name of Iowa State high in all sorts of intercollegiate competition, livestock judging, forensics, music, drama, athletics, to attract and support outstanding scholars both graduate and undergraduate, to keep Memorial Union growing with the College.

Let’s do more in ’54
for Iowa State College

MEMORIAL UNION
Your College Club
A Message to the 1954 Seniors

Those of you who are completing undergraduate study for the B.S. degree in forestry this year hold a distinctive position. You constitute the Fiftieth Anniversary class for it was fifty years ago that Iowa State College set up a curriculum for the training of professional foresters.

Since 1904 when forestry became a major curriculum at Iowa State over a thousand young men have completed forestry training here and have gone into the various fields served by foresters. These men have made enviable records and we have cause to be very proud of them and of their achievements. Each graduating class bears a greater responsibility than the one before in making certain that the members measure up to the high standards which have been set by members of earlier classes. You of the Fiftieth Anniversary class have an especial obligation in this respect. You are, as it were, a sign post pointing to another fifty years of outstanding forestry accomplishments on the part of graduates from this school.

On behalf of the department and staff I want to tell you how much we appreciate the part each of you has had in making forestry at Iowa State active and vital. You have provided student leadership in many areas. The Club and its many activities, the Ames Forester and the Holst Forest have all prospered under that leadership. We are glad that you came to us. It has been a pleasure to watch you grow and develop. We wish for each of you a special measure of success and a happy, fruitful life. And, don't forget to write to us and visit us. All of us will watch each of you with interest and pride.

SENIORS

FRED D. ALLMAN—Atlantic, Iowa—Summer camp, Hiles, Wisconsin, 1951—Married.
Fred was chairman of the Fall campfire and local ad manager for the AMES FORESTER. Other Forestry Club activities include Veishea Open House and concession stand, Hoedown and Game Banquet. He is interested in forest management and hopes to get into some phase of private industry. Fred is a member of the Arnold Air Society. He has one child, a boy. Member Society of American Foresters.

DEAN BUCHANAN—Wheatland, Iowa—Summer camp, Hiles, Wisconsin, 1951.
Dean's interest is in utilization, but the armed forces will claim him after graduation. He has worked on the Wenatchee National Forest. Dean was president of Kappa Sigma social fraternity, and a four-year member of the varsity and ROTC rifle teams. His hobbies are hunting and fishing.

Bill would like to work in the selling field in Florida. He has had experience along this line with the H. L. Munn Lumber Co. Bill was a four-year member of the football team, being co-captain in 1952. He is a member of the Newman Club. His hobbies are hunting and other outdoor sports.
BRUCE CHENEY—Spirit Lake, Iowa—Summer camp, Hiles, Wisconsin, 1951—Married.
Bruce is interested in teaching, and would like to teach high school or go into conservation work. He has worked for the Forest Service cruising timber in Idaho. Bruce was a local ad salesman for the '52 AMES FORESTER. His hobbies include reading and wood-working.

"Corky" is interested in industrial forestry work after a term in the Air Force. He has had experience in logging and lumbering as a tractor and truck driver on a logging operation, and as a mill employee. His hobbies are hunting and fishing, and sports. Member Society of American Foresters.

Charles was a sales manager for the AMES FORESTER and treasurer and president of the Forestry Club. He also has worked three summers for the Forest Service in the Superior National Forest in Minnesota. Management and selling are his interests and he plans to go into private industry. Charles is a member of the Society of American Foresters.

"Mike" was assistant editor and staff writer for the AMES FORESTER. His interests are in utilization and sales, but two years in the artillery come first. He has had experience on the Delta National Forest in Mississippi, and the Wasatch National Forest in Utah. Among his hobbies are bowling, water sports, and writing. He is a member of the Society of Advanced Artillery Cadets, Phi Gamma Delta, and has served on several Veishea committees.

CARL J. HAALAND—Des Moines, Iowa—Summer camp, Texas-Arizona, 1950—Married.
Carl is interested in timber management with private industry. His experience has been with the National Park Service. Carl is national ad manager for the '54 AMES FORESTER, and was assistant national ad manager of last year’s issue. His hobbies are reading, hunting, and photography. He is a member of the Society of Advanced Artillery Cadets, and is a past president and vice-president of Beta Sigma Psi social fraternity. Member Society of American Foresters.

Melvin has served as local ad assistant for the AMES FORESTER. His other activities in college were Veishea Float chairman, Knapp house social chairman, Knapp house president, intramural sports, and Freshman Days group leader. His hobbies are photography, hunting and fishing. Mel hopes to get into private industry after graduation.

KEITH HOMAN—Omaha, Nebraska—Summer camp, Priest River, Idaho, 1949.
Keith is interested in forest protection in private industry. He has had experience as lookout on the Wenatchee National Forest. Keith has been associate editor of the AMES FORESTER, and Forestry Club librarian. He was freshman and sophomore track manager, and a member of Freshman "Y" Club. He is a member of the Iowa State Players, and Alpha Phi Omega. Member Society of American Foresters.
JOHN C. KEESNEY—Keokuk, Iowa—Summer camp—Hiles, Wisconsin, 1951.
John's main interest is forest management. His hobbies are hunting, fishing and photography.

Paul's activities in college include secretary and vice-president of the Forestry club, local ad assistant for the AMES FORESTER, Hoe­down, and concession stand assistant. Four years with the U.S. For­est Service and one year as a scaler for the Ford Motor Company give him a great deal of experience. He is interested in reforestation and wildlife and wants to work in the Lake States. Member Society of American Foresters.

Bill's interests lie in forest management. His experience includes working on plantation release on the Nicolet National Forest, and blister rust control in Mt. Rainier National Park. Bill has been active in the department as chairman of Paul Bunyan Day '54, a member of the Open House committee '51 and '52, the '53 Hoe­down committee, and assistant circulation man­ager of the AMES FORESTER. He is a member of the Society of American Foresters and the Forest Products Research Society. He is a member of the Society of American Foresters and the Forest Products Research Society. He is affiliated with Sigma Phi Epsilon social fraternity.

Don's interest is in logging engineering, and he hopes to find a position in this field with a private concern. He has worked with the Bureau of Entomology in Yosemite National Park, and on the Tahoe National Forest. Don was circulation manager of the '52 AMES FORESTER, and a member of the '52 Open House committee. He is secretary of the M.R.A. social council, and Godfrey House social chairman. His hobbies include hunting, fishing, and skiing. Member Society of American Foresters.

Larry is associate editor of the '54 AMES FORESTER, and was art editor and assistant art editor in '53 and '52, respectively. Larry has worked for the Forest Service on the Nicolet National Forest in Wisconsin, and for the National Park Service in Mt. Rainier National Park. After his tour of duty with the U.S. Army he is interested in a position in the forest products field. He was on the Paul Bun­yan Day committee, and is a member of Beta Sigma Psi social fra­ternity. Member Society of American Foresters.

Frank has had forestry experience with the U.S. Forest Service at Laramie, Wyoming, and with the R.S. Bacon Veneer Co. in Chi­cago. His interests are in forest management in the Lake States. Frank's hobbies are hunting, fishing and boating. Member Society of American Foresters.

MALCOLM D. MACPEAK—Mason City, Iowa—Summer camp, Wy­oming-Colorado, 1953. "Mac's" interest is in forest products and utilization. He plans to work for a private concern after duty in the U.S. Army. He has had experience on the Superior National Forest in Minnesota. He was a member of the '53 Fall Campfire committee. His hobbies are hunting, fishing, and firearms.
Bob's interest is in the retail lumber business, and he has had experience with the Huss Lumber Co. of Chicago. Bob was a member of the varsity football team, and is a member of the Varsity "I" Club. His hobbies include hunting and fishing. Bob is a member of Kappa Sigma social fraternity.

DANA L. MELROY—Orange, New Jersey—Summer camp, Hiles, Wisconsin, 1951—Married.
Forestry Club, Veishea, Alpha Phi Omega and art editor of the AMES FORESTER are some of Dana's activities. He hopes to do forest management work in the Lake State's pulp and paper industry. Dana's hobbies are hunting, camping and photography.

Chuck has been very active in club and departmental circles as representative to Agriculture Council, publicity chairman for the '53 AMES FORESTER, a member of the Holst Tract committee, and a member of numerous Open House and Veishea committees. His interest is in private industry. He has had experience in plantation release on the Nicolet National Forest in Wisconsin, and has also done city forestry work with a park department crew in Peoria. Chuck's hobbies include photography, swimming, and poetry. He is head resident of Godfrey House of the M.R.A., and a member of Alpha Zeta and Festival Chorus.

While most foresters try to gain experience after graduation, "Dad" had quite a bit of practical experience behind him before starting college. Onnie was president and vice-president of Forestry Club and worked on Forestry Open House and Paul Bunyan Day. He hopes to work for private industry after graduation. Member Society of American Foresters.

Darrel is one whose interests lie in forest management, but military service is his first step after graduation. He is alumni editor of the '54 AMES FORESTER, was assistant alumni editor in '53, and was a member of the '53 Paul Bunyan Day committee. He has had Forest in Utah. Darrel's chief hobby is music. He is affiliated with experience in recreation administration on the Wasatch National Forest in Utah. Darrel's chief hobby is music. He is associated with Alpha Zeta. Member Society of American Foresters.

Bob's interest is in timber management. After a stint with the Army, he would like to work for the Forest Service or private industry. Bob spent a summer cruising timber on the Mt. Hood National Forest in Oregon. He was an ad salesman for the AMES FORESTER. Bob's hobbies are hunting, fishing, sports and wood-working.

Forest management is Bob's interest and he wants to get a job with the Forest Service. He worked one summer with the C.C.C.'s in 1941 and one summer with the Forest Service. Bob's hobbies are leather craft and model planes. Bob has one child, a girl.
Jim is interested in the forest products field, and would like to work in private industry in the Lake States after two years in the U. S. Marine Corps. He has had experience in Grand Teton National Park on insect control. Jim was on the varsity football team, and is a member of the Varsity "I" Club and Newman Club. Member Society of American Foresters.

RAY RENAUD—Hampton, Iowa—Summer camp, Hiles, Wisconsin—1951.
Ray has worked on the national advertising staff of the AMES FORESTER and served as Forestry Open House chairman for 1954 Veishea. Other activities include a term as vice-president of Sigma Alpha Epsilon social fraternity. In 1952 Ray worked as assistant timber manager on the Wenatchee National Forest. After a hitch in the army, Ray plans to work in industry. Member Society of American Foresters.

Merrill has spent two summers working for Southwest Mills, McNary, Arizona, in a logging camp and for Northwest Pacific Forest and Range Experiment Station at Roseburg, Oregon. He is a member of Lambda Chi Alpha social fraternity and the Iowa State Marching Band 1, 2, 3. Indian lore and stamp collecting are his hobbies. After a hitch in the service he plans to go into forest sales work.

ROBERT J. RUSSELL—Iowa City, Iowa—Summer camp, Hiles, Wisconsin, 1951—Married.
Bob's activities have included vice-president of the Forestry Club, Hoe-down and Campfire chairman. His option is forest products and he is interested in finding employment in Oregon or Washington. Forestry experience to Bob's credit includes two summers with the Ross-Olson Mills in Medford, Oregon. His hobbies are hunting, fishing, and gun collecting. Member Society of American Foresters.

CON SCHALLAU—Grinnell, Iowa—Summer camp, Hiles Wisconsin, 1951.
Con is editor of this year's AMES FORESTER, and was assistant editor of the '53 issue. After a two-year stretch in the Air Force, Con would like to work for the Forest Service or in the pulp and paper industry. He has had three summers experience working for the Botany Department on oak wilt research. Con is well known for his musical talent, and is a member of both band and orchestra. His hobbies include hunting, fishing and photography. He is a member of Alpha Zeta, Phi Mu Alpha, and Farmhouse social fraternity. Member Society of American Foresters.

Verner's activities have included Business Manager of the AMES FORESTER, concessions stand chairman, president and head resident of Knapp House. His interest is forest products and hopes to find employment in the plywood industry. Verner's hobbies are photography, music, and woodworking. Member Society of American Foresters.

Bruce has worked for a retail lumber yard and has had practical forestry experience in the Jackson Hole region of Wyoming. He is interested in all sports and outdoor life. After a tour of duty with the Air Force, Bruce intends to find some type of forestry employment. He is a member of the Forestry Club and served as president of Alumni Hall.
Source of Leadership and Guidance . . .

THE FORESTRY FACULTY

PROF. G. B. HARTMAN
Head of Department
lumbering
wood preservation
logging

PROF. L. F. KELLOGG
mensuration
finance
management
advisor, Ames Forester

PROF. G. B. MacDONALD
general forestry
conservation
(partial retirement)

PROF. D. W. BENSEND
logging
products
wood technician
Holst Tract committee

PROF. G. W. THOMSON
mensuration
photogrammetry
advisor, Forestry Club

PROF. J. A. LARSEN
(partial retirement)

PROF. R. B. CAMPBELL
extension forester

The Ames Forester
Professor A. L. McComb was awarded a Fulbright Fellowship for the purpose of carrying on research in forestry in Austria for the period of October 1, 1953, to July 1, 1954. Dr. McComb is especially interested in studying the environmental conditions under which some tree species grow in their native European range which have been used extensively in the U.S. for plantings.

Professor McComb Receives Fulbright Award . . .

Introducing New Faculty Members . . .

Full quarter, 1953, saw Mr. Gordon Gatherum an addition to the Forestry Department staff. Mr. Gatherum will be teaching Silviculture and Range Management, with emphasis on the latter. In addition to his teaching duties he will carry on research with the staff and experiment station.

A native of Salt Lake City Mr. Gatherum began his undergraduate career at the University of Utah majoring in Botany and transferred to the University of Washington where he received his B.S. in Forest Management in 1949. After leaving Washington he went on to Utah State Agriculture College, receiving an M.S. in Range Management in 1951. From 1951 to 1953 Mr. Gatherum worked for the Soil Conservation Service and taught at Texas Technological College and Colorado A. and M. before coming to Iowa State.

Mr. Gatherum is a family man having two children, a boy and a girl. In his leisure time he enjoys skiing and collecting modern jazz records.

Mr. James Yoho is now a member of the Forestry Department staff. Mr. Yoho came to Iowa State in December, 1953, as a full time instructor. He will be teaching Forest Economics and Policy and General Forestry. In addition to his teaching responsibilities Mr. Yoho is in charge of the summer employment program.

Beginning his collegiate career at the University of Georgia, Mr. Yoho received a B.S. in forestry there in 1947. After leaving Georgia he went to the New York State College of Forestry where he received a Master of Forestry degree in 1948. At the present time Mr. Yoho is working on his Ph.D. in Forest Economics from Michigan State College where he has completed the resident work and plans to write his thesis as time permits in the future. From 1948 to 1953 Mr. Yoho taught general forestry at the Steven F. Austin College in Texas. During this same period he worked as a consultant forester on his own.

After working hours when he isn't busy with his daughter, Mr. Yoho enjoys gardening or fishing.
FORESTRY CLUB ACTIVITIES...

1954 Forestry Club


EVERYBODY wants to get into the act!

CLUB OFFICERS

Spring
President ............... Glenn Cooper ............... Onnie Paakkonen
Vice-president ............ Onnie Paakkonen ............ Paul Kreger
Secretary .............. Paul Kreger .................. Lyle Jack
Treasurer ................ Charles Goff .................
Senior Ag-Council Representative .......... Charles Miller
Junior Ag-Council Representative .......... Lyle Jack
Faculty Advisor ............... Professor George Thomson

UNDER excellent leadership the Forestry Club again proved to be the most active departmental club on campus. The Game Banquet, Hoedown, Spring and Fall Campfires, and Veishea activities, are just a few of the undertakings of the Club during the past year.
AN ACTIVE program was continued on the Holst Tract during the last year. This work proceeded under the guidance of the Holst Committee headed by Stan Knutsen, and the advice, since September, of Prof. Gatherum, a new instructor in the department.

Last spring a discussion meeting was held at Frazer to get the public thinking about forest conservation and management and its relationship to them. The meeting was very successful and another demonstration for the spring of 1954 is planned.

Weed competition in the 2-year-old red pine plantation prompted a spraying at the time the weeds were a couple inches high. Varying success resulted, so the weeds were cut during the summer to protect the trees, which are doing quite nicely. Plans are being made to plant 5,000 trees on the Pilot Mound area that was accepted for management by the committee last spring. The planting will take place this spring on the western end of the 50 acre tract.

During the Fall Quarter the committee worked on a project to determine reproduction by species and survival under maple-basswood type. This is a continuation of the 440 project started last Spring by Martin Dale.

Another 440 project completed this summer was the retyping of the entire Holst Tract by Onnie Paakkonen and Charles Goff.

Plans were submitted to the state for a new shelter building on the Tract. This is a long range project, but it has been started and we hope it won’t take very many years to complete.

Some car stakes were sold off the Tract in 1952 and 1953. This supply is about gone for the time being. Before Christmas the committee sold several hundred pounds of greens and turned the money over to the Forestry Club.
Paul Bunyan Day

As the morning of May 15 dawned, several people dressed in colorful plaid wool shirts and sporting several week's growth of chin foliage were seen scurrying around central campus. The foresters were again coming out in style for their Paul Bunyan Day celebration. This year the Veishea Central Committee, finally realizing the uniqueness and crowd pleasing attraction of Paul Bunyan Day, agreed to incorporate it as part of the regular Veishea program.

Professor Hartman, departmental head, opened the ceremonies with a short address after receiving the first issue of the 1953 AMES FORESTER from M.C. Jerry Smith.

The “Son of Paul” award was presented to Al Kuester by the Veishea Queen, Donna Schuster. Al was an excellent representation of the legendary woodsman with his bristling beard and broad shoulders.

As the program continued, various contests of skill among the foresters began. These events were capably judged by the members of the forestry staff. Bill Byrus won the log throwing contest with a heave of 33 feet. He also took top honors in the splitting contest. Charlie Miller made the chips fly so furiously in the tree felling contest that his competitors were kept busy dodging the flying pieces of wood. The bucking contest was won by Ted Setzer and Martin Dale. Professor Hartman and Donna Schuster judged the beard exhibited by Bill Byrus to be the best.

In order to include participation of other departments in the program, a fire fighting and snowshoeing relay was instigated. Teams of five, including boys and girls, from other divisions of the college competed. They combined the arts of snowshoeing and fire fighting by running on barrel staves while carrying a back pack pump. Their objective was to extinguish the cigar held in the mouth of their partner who was at the opposite end of the arena. The sight of cigar smoking coeds, stumbling along with their pack pumps, and then dousing their teammates, proved so hilarious that spectators and participants alike howled with laughter. The winning team was awarded a traveling trophy.

To conclude the festivities, the crowd moved to the edge of Lake LaVerne for the canoe-tilting and log-birling contests. Judging from the drop in the water level of the lake, the unfortunate foresters who ended up in the drink must have swallowed quite a bit of water. Pete Maurek came through with some fancy footwork to win the log-birling, while Dick Chance and Kathy Clar came out on top in the canoe-tilting.
VEISHEA OPEN HOUSE...

During the 1953 Veishea festivities the area to the north of Curtis Hall once again blossomed with the Forester’s Open House display. The forestry tent, probably the biggest attraction at Veishea, was the focal point for the displays which this year highlighted “Forestry in Iowa,” and the part I.S.C. is playing in its advancement.

The exhibit showing a miniature sawmill, such as those used throughout the state, proved to be the hit of the show, as people continually poured in to watch it in operation. In conjunction was a display showing the chemical treatment of wood products to preserve them from the ravages of time and destructive organisms.

Running a close second in interest was the identification of leaves from trees on campus brought in by puzzled visitors. Two expert forest dendrologists, Dave How and Wayne Geyer, did an excellent job of this, but kept an identification book handy in case of any uncertainty. In order to stimulate interest of the spectators, over 100 large signs were placed by trees around campus identifying them and adding that further information could be obtained at the forestry tent.

A description of the courses offered in forestry at I.S.C. and pictures of summer camp illustrated how the Forestry Department trains its men in the use and conservation of our timber resources.

To highlight the part forestry is playing in Iowa was a windbreak demonstration, showing the protection offered farm buildings and stock corrals from the force of wind and snow. A fan was used to provide the wind in this revealing exhibit. A further display illustrated the types of material used and the method of construction for farm buildings. Slides of forestry practices and advancement in Iowa were shown in the center of the tent.

All exhibits were explained by prominently displayed signs and attended by one or more foresters ready to answer any questions put forth by the spectators.

As usual, Smokey Bear was on hand to greet our visitors at the tent entrance and warn them against that scourge of all forests—FIRE.

As proof of the attraction of the Forestry Open House, 3,000 Jack Pine seedlings were given away. It was believed that another 2,000 could have been given away. Many people informed us that trees secured in previous years had been planted and were flourishing.

FORESTERS GAME BANQUET

King Bison himself was the main dish as tender buffalo steaks were served at the annual forester’s Game Banquet in the Collegiate Presbyterian Church, February 12.

Mr. S. P. Dykstra, General Manager of the lumber department, Weidler Lumber Co., Chicago, Illinois, gave an interesting talk on what private industry has to offer to the forestry graduate. Dykstra presented a challenge to the prospective industrialist to gain experience and get as much practical know-how as possible before attempting an advance in industry. Mr. Dykstra is a native of Pella, Iowa, and a forestry graduate of Iowa State 1938. His experience includes work with the U.S. Forest Service and with Southwest Lumber Mills of which he became sales manager. His present position in the Weidler Lumber Company is as sales manager and general manager of the lumber department.

Mr. Mans Ellerhof, Superintendent of Iowa Forests, was special guest. Other guests were Mr. and Mrs. Floyd Andre of the Division of Agriculture.

This year’s banquet chairman was chosen the summer before, so he would have ample time to begin collecting his thoughts and corresponding for wild game meat and a speaker. As a result all important details were taken care of in plenty of time.

Those assisting the General Chairman, Marion True, were Jerry Smith, publicity chairman; Ken Knutsen, ticket chairman, and Leo Mitchell, corresponding secretary.
THE 1953 I.S.C. Forestry Summer Camp was held on the Medicine Bow National Forest, about sixty miles west of Laramie, Wyoming. Here, amid the stands of lodgepole pine and Engelman spruce, fifty students applied their “book learning” to actual field problems and saw forestry in practice.

This camp was a tent camp. Four to five men occupied 12’x12’ wall tents. The camp site was a mountain meadow hemmed in by forest on three sides. A small spring-fed brook flowed through camp and was the source of water. A rough road ran from camp to a main logging road and this to Highway #180.

The usual courses were taught again this year. They were Wood Utilization under Roger Sutton and Dr. Bensend; National Forest Operations under Dr. Bensend; Forest Mensuration under Professor Kellogg, and Silviculture under Dr. (“ok you knockers”) Scholtes. Dr. Bensend was in charge of camp and, to say the least, was a very busy man. From arranging for side trips to taking care of thirty very sick foresters who drank contaminated water, “Doc’s” time was never his own.

The highlights of the 1953 camp were the week-long trips made to Black Hills and Central Colorado. It meant long hours riding on very hard truck seats, but the sights that were seen and the knowledge that was gained made the trips well worth while. To the “flatlanders” of the Midwest, the Rockies posed a sight never to be forgotten. While on these side-trips all the campers slept under the stars and ate meals prepared on Coleman stoves. The men quickly picked up camping procedures and learned to make themselves comfortable under almost any conditions.

On the Colorado trip rainy weather caught the trucks while trying to go over a mountain pass on a newly graded road. All of the men were forced to get out and push. When the camping site for the night was finally reached the campers had a tough time
recognizing each other through the layers of mud deposited on them by the truck’s tires. That night everyone slept soundly in a Forest Service stable and considered themselves lucky to be afforded such luxury.

In the Black Hills camp was pitched beside a very nice lake which gave the men a wonderful bathing place. After the dust of those South Dakota roads, it was well put to use.

Outside of the side trips, the future forester’s life settled down to the routine of camp life. After the classes were over for the day the men spent their leisure hours in a variety of ways. For the first few weeks most of the campers were busy making their tents more livable. This consisted of making wooden floors out of slabs left by logging operations, building shelves, clothes racks, beds, tables, and erecting fireplaces for heating water. The members of one tent went so far as to construct a complete table and chair set for studying. It also came in handy for a few poker games. Many matches, buttons, and toothpicks were exchanged across that table by the light of a gasoline lantern.

After becoming comfortable in the tents, more time was allotted for the pursuit of various hobbies, if they may be called such. Almost any night after chow a group of men could be seen putting sharp points on long sticks and testing homemade slingshots. They were going “porky” hunting, of course. After a Forest Ranger told the men that a dead porcupine saved the Forest Service fifteen dollars a year, all out war was declared against these animals. The members of one tent claimed a total of thirty kills for the summer. A few brave souls tried eating one of the “porkies”. They expressed doubt that it would ever replace beef steak.

Hiking was another pastime indulged in by the men. Packing back into a remote lake or climbing an interesting looking mountain was a common weekend activity.

Fishing in a nearby trout stream also proved to be popular. The trout were of rather small size, but very abundant. When fried over an open fire they proved to be food fit for a king.

Various recreational facilities were provided at camp. Football, kittenball and volleyball proved to be the most popular sports. A volleyball tournament was held with the members of each tent comprising the teams.

Two firesides were conducted during the summer. For the first one, the members of two tents provided the entertainment which consisted of skits and singing. Some campers may disagree with this use of the word singing. The last week of camp the faculty put on a fireside for the campers’ entertainment. Especially funny was the staff’s portrayal of a girl forester’s life at summer camp.

During the last week in July many of the campers journeyed to Cheyenne to take in the Frontier Day Rodeo. This rodeo is one of the largest in the world. Everyone wondered how cowboys can live so long after watching them ride broncs and bulldog steers.

In the nearby metropolis of Saratoga, population 900, is a spot which will become dear to the hearts of all future campers. For here is the public hot springs. Since the bathing facilities at camp were quite limited, these hot springs soon became the “bath tub” for camp. Almost any night a group of foresters could be seen piling into a car, waving towels and soap headed for the hot springs. After a dip in hot springs a movie at the local theater or a few games of pool usually followed.

Looking back on the 1953 Summer Camp most of the camper’s will agree it is an experience never to be forgotten. It’s not all a bed of roses, but the pleasant experiences far outweigh the unpleasant. The knowledge picked up will remain with the men for a long time to come. To the 1954 campers there is this advice: keep your sleeping bags dry and never drink from an irrigation ditch.
FORESTERS HOEDOWN

THE 1954 Forester's Hoedown was held at the Odd Fellows Hall on January 9th. Forty couples attended and danced to the music of Flo Gagnon. There was both ballroom and square dancing. Dr. Wayne Scholtes, Department of Agronomy, called the square dances.

Smokey Bear was the theme of the dance and during intermission a miniature Smokey Bear was given away during the drawing. Reed Parker was the lucky winner. Don Uker, Science Sophomore, furnished entertainment.

The Hall was decorated in keeping with the theme. Fire-Prevention posters decorated the walls, and a life size replica of Smokey Bear guarded one end of the Hall. A giant picture of Paul Bunyan served as the backdrop for the band. John Evenson was in charge of decorations.

To quench the dry throats and fill the empty stomachs, cider, pop and pop-corn were served. Jack Holland was in charge of refreshments.

Clarence Lutz served as ticket chairman and Darrel Parker, General Chairman.

1953 FORESTERS
SPRING CAMPFIRE

WHAT will it be, Beethoven, Bach, Dorsey or Jolson? These foresters sometimes think of more than whooping and yelling, as shown by their interest in the Spring Campfire. Al Rockwell, popular composer, arranger and disc jockey from station KRNT Des Moines led a discussion on music and the possible future of television and 3D movies.

Volleyball and softball occupied most of the time until Charlie Johnson rang out the dinner gong. His careful pinching of the dollar gave everybody a double helping of beans, potato salad, buns, wiener, pop and coffee.

The program moved along quickly with Glen Cooper as MC. Each graduating senior stood up, introduced himself, and told of his future plans. Prof. Thomson followed by announcing the new Forestry Club officers.

Foresters have always been a singing group when on a campfire. This year no guitar was available but a quartet composed of Al Keuster, Marion True, Al Barden and Charlie Miller filled in with that good old harmony.

Compliments go to Marion True campfire chairman, and his able staff, Charles Johnson, Bill Boyd, Harry Marshall, and Del Ploen, whose combined efforts provided the fun and enjoyment that are characteristic of all Iowa State Forestry activities.
Who should get the degree, the husband or wife? This is a subject often discussed at the bi-monthly meetings of the Forestry Student Wives Club. As they watch their husbands write reports, outline and prepare speeches, the wives wonder how or if the hubby will survive final week.

Being such a small group, the club meets in the homes of its members. An annual Christmas party and pot luck dinner help the married foresters' families get better acquainted, while the bi-yearly get together between the faculty wives club and the student wives enables the student wives to meet the "prof's" better half.

An election of officers is held at the beginning of each quarter and new members are always welcome.

1953 FALL CAMPFIRE

Rain, rain, rain. The three month absence of this product of nature changed the Fall Campfire into a backwoodsy electric light affair. Despite all handicaps, eighty-five foresters and guests spent an enjoyable evening at Brookside Park.

The evening started off with volleyball and horseshoes, but it wasn't long before most of the participants were ready to settle down to some serious eating. Chef Fred Allman and his fine staff of Kreger, Ploen, Lutz, Goff and MacPeak prepared the excellent cuisine. The menu consisted of tube steak, au for-ester, (a Chef Allman specialty), potato salad, chili, pop and coffee.

Noted after dinner speaker, Onnie Paakkonen, introduced Dr. J. A. Larson, the principal speaker for the evening, and other distinguished guests, Dr. Larson, well known for his sparkling witticisms, entertained the gathering with humorous anecdotes and highlights of his experiences with the Forest Service during the early 1900's.

Song artist, Charlie Miller, painted the finishing strokes on the picture of an enjoyable evening by leading the group singing.
RECOGNITION DAY CONVOCATION

At the annual Forestry Recognition Day convocation held June 25, in the Dairy Industry assembly special acclaim was given to outstanding foresters of the past school year.

Stanley Knutsen and Conard Schallau were taken into Alpha Zeta, the agriculture honorary for juniors and seniors from the upper two-fifths of their class selected on the basis of scholarship, leadership, and character.

Gamma Sigma Delta took in Paul Arrasmith, Martin Dale, Duane Green and Christopher Martin as representative of the upper one-fourth of the senior class who have shown research ability in agriculture and related fields.

Jim Dale, '52, was awarded a National Research Foundation Scholarship for the continuance of his graduate research.

The George W. Catt Memorial Scholarship was awarded to Verner Schmidt for outstanding scholastic achievement.

The Society of American Foresters Award, given to the outstanding senior on the basis of scholarship, attitude, and leadership, was awarded to Paul Arrasmith.

Virginia McIntyre was honored as an outstanding scholarship student in the Division of Agriculture, class of 1956.

Paul Arrasmith was cited as Honor Student for the class of 1953.

Winners of the Charles Lathrop Pack award for outstanding essays on forestry subjects were:

Jerome Smith ........................................... 1st
Marion True ............................................. 2nd
Alvin Barden ............................................. 3rd
Martin Dale ............................................. 4th

To climax the assembly, Mr. T. E. Holmberg of the Woodmen of the World made a special Conservation Award, in the form of a plaque, to Stanley Knutsen for outstanding leadership and character. This marks the first time this award has been given at Iowa State College.
Development of Forest Policy

Forestry's Oft-forgotten Milestones

By Shirley W. Allen
Professor of Forestry
University of Michigan

As forestry in the United States finds itself well on the march through its second fifty years, and wins increasing public acceptance, the days of earlier struggle with their battles for principles now well-established are likely to be discounted. And yet the past has its uses if only as records of courage and foresight.

The days of wooden warships are long gone, but they gave us our fundamental law against timber trespass on federal land. The first limping efforts to teach forestry in professional terms are forgotten and yet they gave birth to something more than the mere police force conceived by Carl Schurz when he was Secretary of the Interior. Federal and state agencies and industry, cooperating in forest fire control, is today taken for granted, but many foresters think of the Weeks Law of 1911 which first contained the policy, as a land acquisition act. The several million acres of “Tree Farms” are hardly thought to recall Article X of the Lumber Code under the NRA but the hook-up is a natural. And the list might well go on “far into the night” and end up in an unrecorded “bull session.” Let’s get some of it down.

Before 1897 the way to get timber from federal forest reserves for use in building up the country locally, was, literally, to steal it. The organic act of that year, setting forth the purposes and administrative theory of a Forest Reserve (later National Forest) system, is well known. On the other hand, the importance of the one provision for disposal, on a legitimate basis, of mature timber, may easily be overlooked. A ship can’t be steered unless it is moving and a forest can’t be managed if crops are not removed and growth stimulated. Provision, therefore, for orderly sale and removal of timber through regulations promulgated by the Secretary of the Interior was one of the keys to forest management on the National Forests. It is there today that we have some of our very best examples.

The Beginning of Research

Youngsters in the United States Forest Service, as early as 1909, were encouraged to set up experimental areas on the national forests. There was then no McNary-McSweeney Act of 1928 authorizing a research program to which they might look for support and guidance. But the year previous, 1908, saw the beginnings of a vast system of regional forest experiment stations in the establishment at Flagstaff, Arizona, of the first one. Not until 1915 was there a Chief of the Branch of Research to coordinate and promote a sound service-wide research program which became policy, in terms of law, in the Act of 1928.

Self-interest properly enlightened is one of the strongest incentives to sound forest management. Forest fire danger and loss demonstrated this long before the Weeks Law of 1911 and the Clarke-McNary Law of 1924 had joined the hands of the federal government to those of the states and private forest industry. In two extremities of a vast nation in 1909 appeared the Western Forestry and Conservation
Association and the Maine Forest Fire District. The former originated definitely in the lumber industry and to this day furnishes leadership to the entire forest fire control effort of the Pacific Coast and Inland Empire states, whether this effort be industrial, state or federal. The latter group's holdings involved around ten million acres in northern Maine organized into a "district" with fire control financed through a special tax levied on all land owners and with control activities assigned to the state land agent and forest commissioner. It should be remembered that 1909 is two years before the year in which the Weeks Law recorded the principle of cooperative fire control.

Another provision of the Weeks Law of 1911, and the one for which it appears to be best known among younger foresters, had to do with the acquisition of land at the headwaters of navigable streams, and their organization into National Forests. In those days the Congress included in many such policy acts as this a definite appropriation to carry out the policy for a number of years. By 1924, when the Clarke-McNary Act came along, the policy acts carried authorizations under which appropriations had to be considered by the Bureau of Budget and the House Committee on Appropriations. Unless the friends of a policy, therefore, were on the ball, appropriations were likely to lag. This is exactly what happened between 1924 and 1928. Then along comes the McNary-Woodruff Act of 1928 representing now new policy except a policy of not shutting down the program of acquiring land for National Forests. This act only authorized further appropriations—$8,000,000 over a three-year stretch and only $5,000,000 in appropriations resulted—but it kept alive the program and the land acquisition organization of the Forest Service. This was immensely important when larger amounts became available from emergency funds in the 30's. Hearings on the McNary-Woodruff Bill had also a real educational effect not only on the public but on the Congress, and yet the bill after it became an act was seldom mentioned.

**Primitive Area Concept**

Americans who believe that scenic and inspirational outdoor resources are worth dedication for those uses exclusively are proud of our National Parks. (They may not be too proud of the entire "National Park System" which takes in city monuments, cemeteries and battlefields.) A Sequoia, a Grand Canyon, a Crater Lake is something that brings a thrill to almost any American. But it was the Forest Service that invented the concept of the Primitive Area, the Wilderness Area, the Wild Area, and by declaration and regulation kept them wilder and in less disturbed state than many of the National Parks. Here then are a set of events, under administrative rather than specific legal policy: In 1926 the first letter went to the field suggesting the selection of wilderness areas on the National Forests which were to be extensive, attractive, and kept free of roads and access by mechanized equipment. In 1929 this idea was formalized into Regulation L-20 and the name Primitive Area adopted. Then in 1939 Regulation U-1 authorized again "Wilderness Areas" to be 100,000 acres or greater in extent, and Regulation U-2 "Wild Areas" which are smaller than 100,000 acres. After public hearings these may be definitely dedicated to be permanently undeveloped and, barring limited grazing and improvements necessary for fire control, to be available only for wilderness travel and use.

In a country dedicated almost more to a headlong expanding economy rather than to making democracy work to its fullest sense, it is not easy for the Forest Service, or for any other agency, to defend wilderness areas. Lag in actual dedication of the many tentatively selected tracts and pressure to shrink boundaries in behalf of commercial use persists. But the historical fact remains that without the action in 1926 and 1929, we might have to hunt pretty hard to find a hundred thousand acres to convince ourselves and our children that nature has ever been left alone.

These five examples should give the student of forest policy a start on finding others. Some of them are mentioned in the first paragraph of this paper. New ones, which will be swiftly forgotten, are happening today.

**ABOUT THE AUTHOR**

Shirley Allen received his B.S.A. in forestry in 1909, and in 1929 his M.F. degree from Iowa State College. He has had considerable experience with federal, state and private agencies. He has served as consultant for the Park Service, and was a delegate from the U.S. Department of Interior and from the State of Michigan to the International Forestry Congress held in Budapest in 1936. He is a member of Alpha Zeta, Delta Sigma Rho, Phi Kappa Phi, and the Michigan Academy of Science. He is the author of *An Introduction to American Forestry* and *Handbook of Information on Entering Positions in Forestry*. He has also contributed to many popular and scientific forestry and conservation periodicals. He retired in February after serving as Professor of Forestry at the University of Michigan since 1929.
Public Forestry at the State Level

STATE FORESTRY

By DeWitt Nelson
Director
California Department of Natural Resources

Cut-over land. A good start for next crop.

The biggest thing in public forestry today is State Forestry. In discussing this subject one has the choice of two approaches, (1) from the strictly local point of view of a single state or (2) from the national point of view by combining all states that are actively engaged in a forestry program. I shall follow the second option.

It is important that the significance of this complete picture be recognized. The efficiency of the 44 state forestry organizations and the effectiveness of their protection, regulatory and administrative programs determines, in great measure, the economic security and stability of our timber industry. This, in no way depreciates the importance of the National Forest programs nor the part that the National Forest timber resources contribute to our timber economy.

In presenting this composite picture I will not discuss forestry of individual states or of specific regions. I will not segregate the dark green of the dripping fir forests of the northwest; the colorful, birch-accented North Woods; the vast potentialities of the cut-over Lake states; the great pulp wood shows of the Deep South or the inspiring beauty of a redwood forest. The State Forestry programs cover all the timbered regions of the nation. They enjoyed the advantages of local autonomy and the ability to develop objectives, programs and methods of operation to fit local philosophies and to meet local needs.

To strengthen this local independence and to broaden the perspective of the individual state organizations they have banded together in an Association of State Foresters. This gives the states a medium for exchange of ideas, programs and methods. In addition there are Federal-State cooperative programs such as: Clarke-McNary fire prevention and protection; Clarke-McNary forest Nursery production; Cooperative Forest Management—the “Service Forestry” program, carried on in cooperation with the U. S. Forest Service; insect and disease control programs in cooperation with the Bureau of Entomology and Plant Quarantine and the Forest Service; as well as soil conservation programs conducted in cooperation with the Soil Conservation Service and local Districts. In most of these Federal-State cooperative endeavors the State Foresters Association participates in developing the legislation and the policies under which the laws are administered. This participation assures the most equitable distribution of Federal funds based upon local needs and local support. It recognizes the importance of a local voice in the administration of Federal funds and programs.

Necessity of Legislation

Legislation at the state level is of primary importance. It is here that the basic laws governing the duties, responsibilities and programs of a State Forestry organization are established. Here too is the source of funds that determine the intensity and effectiveness of the organization to execute its assigned duties. Here the strength and weakness of local grassroot control is exemplified. The knowledge and interest of local people, organizations and industries plays an important role. Most states have a Board or Commission charged with policy and program development. The manner in which these Boards assume their public duty plays a large part in the success of a State Forestry organization. Participation by local user and industry groups in the development of legislation and policies is of vital importance. Legislative Interim Committees have been extremely helpful in studying and analyzing program needs and in the development of effective legislation. There is no substitute for complete knowledge and understanding of problems, programs and policies by the individuals,
groups and industries affected. No program will be satisfactorily effective until it has the majority support of those who are served and affected. This support must be built on a basis of cooperative participation in developing the basic principles and will exist only on a foundation of mutual respect and confidence as well as that priceless element of personal and organizational integrity.

To bring this national picture into sharper focus let us look at the overall job being done by the states. Of the 624 million acres of forest land in the United States the major public responsibility for 71% or 447 million acres rests with the individual states and their State Forestry organizations. Collectively the states are spending annually approximately $51,027,690* of state appropriations and in cooperation with the U.S. Forest Service an additional $9,635,000 of Federal appropriations in redeeming their public responsibility. This is an increase of 21.5%** in state money during the last two years. Of the $51,027,690 state expenditures, $23,733,998 was spent for fire prevention and suppression. To this item should be added some $3,000,000 of direct fire protection expenditures by industry.

Importance of Forestry Realized

It is gratifying to note that the State Foresters, the State Legislatures, the private industries and the general public throughout the nation are recognizing their responsibilities and the economic importance of our forest resources, both locally and nationally.

In early 1951 the American Forestry Association made an inventory of professional forestry employment as of 1949. Their report shows that in 1949 there was employed at the State level, 1,087 professional and 5,696 in the sub-professional group. In 1944 the corresponding figures were 483 and 4,227. The professional employment had more than doubled during the five-year period. This upward trend continues as more professionally trained men become available. According to CM-2 budget figures the States employ over 17,000 full and part-time employees for fire control work alone.

Another measurement of size and responsibility may be secured by a quick look at a few facility items for handling just the fire job—3,026 lookout stations, 34,309 miles of protective roads, 34,978 miles of telephone lines, 10,944 radios, 2,045 tanker trucks, 2,468 cars and transport trucks, 935 tractors, 1,093 plows, 1,678 power pumps, 275 grader bulldozers, trailers and similar equipment and 44 airplanes. (Latest available figures—1951).

The states have established organized fire control on 369 million acres. There are still 58 million acres to go before we have tackled the entire job. They take action on nearly 100,000 fires a year and there is another 100,000 fires on the unprotected lands—so there is still a big pioneer job ahead of us.

The State Foresters protect and manage 903 state forests, totaling 10,514,658 acres. In addition the State Park systems in some states are handled by the State Forestry organizations.

They operate 83 nurseries and this year will sell at low cost to private land owners about 400,000,000 trees for planting forest lands now non-productive. Comparatively this is about four times the production of all federal an private (including forest industries) forest nurseries combined.

The State Forestry organizations are contributing very substantially toward better management of private forest lands, independently and cooperatively, with the Federal Government; they employ nearly 400 foresters to advise and assist private forest owners. Through this program they recommend and direct many owners to the services of Consulting Foresters.

State forestry is materially different from the normal conception of public forestry programs. State forestry organizations primarily serve owners and operators of private lands rather than manage and operate properties of their own. The 10½ million acres of State Forests constitute but a fraction of 1% of the area served.

The average public land managing agency has "territorial and program jurisdiction" while the average State Forestry agency has only "territorial and program responsibility." As a consequence nearly every function performed by a state affects an individual or group of individuals either favorably or adversely. In administering the laws that have been enacted for the public good it is impossible to satisfy every one all the time. It is therefore essential that basic laws and policies be tempered in the forge of public hearings and that they be executed with a high degree of consistency and equity.

The first and major problem confronting a state is that of adequate basic protection. Fire, of course, is the first problem in forest protection but the importance of protection from insects and disease is being rapidly recognized. In all of these protection programs no single agency is self-sufficient. Team work and cooperation between private ownership, State and Federal agencies is the keystone to success. During the

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*The Conservation Year Book, 1953.
past decade twelve states have passed laws regulating, in varying degrees, the harvesting of privately owned timber. As indicated above the production of forest nursery stock for planting on both private and public land is assuming real importance. The “Service Forestry” program of helping small timber owners to secure maximum returns from their timber crops and to keep their lands productive is becoming more and more effective. The support of Industries “Tree Farm” movement is helping swell the acreage of forests dedicated to a continuous production and harvesting program. Cooperative fire prevention programs between all public and private organizations is paying large annual dividends in the reduction of man-caused fires. A few states conduct cooperative programs with the live-stock industry on range improvement. Some states have combined their forestry and park programs under one administrative head.

**Financing Operations**

The different states have various ways of financing their operations, such as special funds from land taxes or assessments, from yield or severance taxes, from general funds or a combination of these and other sources. In addition certain expenditures qualify a state for its percentage of Federal funds for fire protection, forest nursing operation, service forestry programs, insect and disease control.

Forestry has come a long way in the last fifty years. It has gone through many changes and today it is going through its greatest and most interesting period of evolution. We no longer look at the forest as only a source of boards for construction purposes. Today we are harvesting chemicals, paper, cloth, plastics and a multitude of other materials from the woods because of developments by science. In many aspects the techniques of utilization have outstripped the techniques of the forester and his ability to grow raw material. New interest and great possibilities are rapidly developing in the field of forest genetics. The development of tree strains that will produce more raw material in fewer years and trees that will be insect and disease resistant hold great promise for future production.

Methods of manufacture too have greatly improved. Each year less and less raw material is finding its way into the waste burners. Utilization of small pieces by end and edge gluing, chipping of scrape material for pulp and handboard purposes, use of bark, sawdust and shavings for insulation, soil conditioning and commercial litter to name a few.

In many areas we are already in a second growth economy, in others, the day of reliance on second growth is in the foreseeable future. In either case the opportunities and responsibilities of the forester, be he private or public, are great. Forestry is not an exact science because of the wide range of conditions under which forests grow. Therefore, a forester must always be a student, he must be alert to new ideas and concepts, and he must be able to adapt methods and techniques to local conditions.

Forestry today is more than growing and harvesting of trees. The impact of a growing population and its demands for more water, forage, wildlife and recreation, as well as wood products, means that the forester must integrate the use of these natural resources with his forest production program. Therefore one of the most important elements in forestry today is the willingness of the forest owners, operators, public users and public agencies to work together on a sound wild-land program. A program that recognizes the overall value of forest, watershed and ranges lands to the public good and yet does not deny the owner and operator the right to manage and market the crops from his land.

Great opportunities in public forestry today are to be found in the State Forestry organizations. The great challenges to assure an adequate future forest economy rests in large part with the states. The ability of the states to develop and establish sound and practical programs in cooperation with private owners, industries and the public will be the key to success. State Forestry organizations are growing organizations. Their continued growth and their contribution to the State and Nation’s timber, watershed and range economy will be determined by the type of service they render through their many programs which will rise or fall with the degree of cooperation that goes into the programs from the people and groups who are being served and who are most directly affected.

**ABOUT THE AUTHOR . . .**

DeWitt Nelson graduated from Iowa State College in 1925 with a B.S. degree in forestry. From 1925 to 1944 he was employed by the U. S. Forest Service in the California region. During this period he was Supervisor of the Trinity, Shasta, Tahoe and San Bernardino National Forests. During 1935-36 he was C.C.C. Liaison Officer for Ninth Corps Area, headquartered at Presidio, San Francisco. In 1944 he accepted an appointment as Deputy Director of the California Department of Natural Resources. In 1945 he became the State Forester for California. In September 1953 he accepted an appointment as Director of the California Department of Natural Resources. From 1948 to 1951 he served on the Council of the Society of American Foresters and was the president of the Association of State Foresters in 1951. He was elected vice-president of the Society of American Foresters in December of 1953.
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KOEPEKE, W. C., Address Unknown. 1912

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