

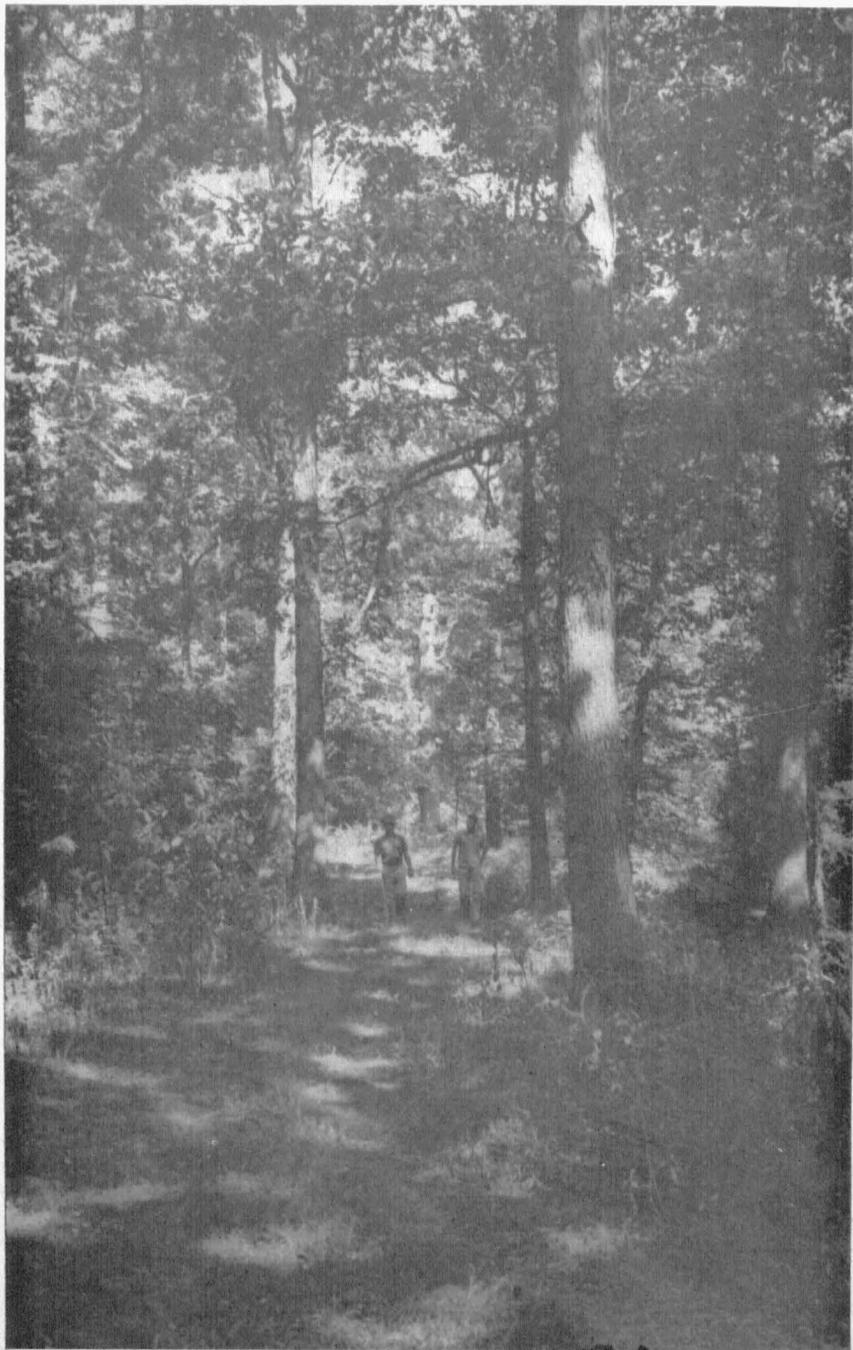
The

MISSOURI

LOG



1948



Scene in a white oak forest, Warren Co., Missouri. This type of good hardwood timber can be grown, under proper management, in Missouri. (Photograph by Missouri Conservation Commission.)

THE
MISSOURI LOG

1948



Yearbook of the Forestry Club, Missouri University

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Missouri University

Department of Forestry
Columbia, Missouri

FOREWORD

This 1948 and 1st edition of The Missouri Log presents the progress of Missouri forestry during the past 15 years along with brief sketches of the year's activities of the Forestry Club.

The Staff wishes to express its deep appreciation to the authors of the articles contained herein, the advertisers, the faculty, and the cooperation shown by the students to make the publication of this Yearbook possible.

It is with great pleasure that we present this 1st edition of The Missouri Log for your approval.

The Staff

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DEDICATION

To Paul Delmar Kelleter, Missouri's first professional forester, who for more than forty years has contributed much to the advancement of forestry and community betterment in Missouri and the Nation through an active professional and civic life.

- 1904-1925 U. S. Forest Service in various capacities in California, South Dakota, Montana and Washington, D. C.
- 1925-1929 Director of Forestry Extension, New York State College of Forestry.
- 1929 Administrative Assistant, Federal Farm Board, Washington, D. C.
- 1930-1934 Director, Wisconsin Conservation Commission
- 1934 Forest Supervisor, Huron National Forest, Michigan
- 1935-1945 Forest Supervisor, Clark National Forest, Missouri
- 1945-1946 Senior Cooperating Forester for Missouri, Division of State and Private Forestry, Region 9, U. S. Forest Service.

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NATIONAL FORESTS IN MISSOURI

by
PAUL D. KELLETER

The protection, administration, and management of forest lands in federal ownership in the state of Missouri is the responsibility of the United States Forest Service. Two administrative units have been established. The Clark National Forest comprising 851,920 acres has its headquarters at Rolla, and the Mark Twain National Forest with 419,492 acres has its headquarters at Springfield. Each unit is in charge of a forest supervisor, who is assisted by a full complement of assistants trained in the various phases of the diversified demands that add up to the overall land management problems arising in these forest areas, located in the Ozark section of the state.

The Act of March 3, 1891 authorizes the President of the United States to withdraw and designate suitable areas in the states in which unappropriated public lands are located for national forests purposes. No lands suitable for forest purposes had remained in public ownership in Missouri by the time interest of the general public had been crystallized into action on the need for the protection and wise use of the local timber resources in Missouri.

A similar situation had arisen previously in many other eastern states and to meet these needs the act of March 1, 1911 authorized the purchase by the federal government of forest lands. Such purchases are however not made until the necessary statutory provision is made by the respective states, whereby the federal government may acquire through purchase suitable wild forest lands.

In Missouri the first steps to authorize such purchases were not taken until 1933. Even then there was much delay and hesitancy. The initial statutory authorization limited the federal government in the amount of land purchases per county to such small areas as to make economic administration out of the question. It required considerable action by the proponents of an adequate and practicable purchase program to bring about the removal of such limitations and finally in 1935 the state of Missouri enacted the necessary laws for a broad purchase program for wild forest lands for national forest administration by the United States Forest Service.

In Missouri the purchase program is carried on in 28 counties in the timbered section of the Ozarks, and the progress is contingent on the availability of federal funds. During the recent war period there were no funds available nor purchases made. There has now been a resumption of purchases on a very limited scale.

In 1905 the Secretary of Agriculture laid down some broad fundamentals for the guidance of the United States Forest Service in its administration of national forest areas. He stated that all conflicting questions must be solved from the standpoint of "the greatest good of the greatest number in the long run." Accordingly, the various problems arising in the use of forage, timber, recreation, agricultural, water and wildlife resources have been settled in line with the Secretary's order. The United States Forest Service has not in its administration of the national forests

in Missouri experienced any insurmountable situations in the multiple use of the land resources. There has been a general improvement in the social and economic welfare of the many residents dependent on the natural resources within the national forest areas.

Protection against fire receives first consideration. Without adequate protection there can be no rehabilitation of the potential timber areas. Destructive fires in the forest areas have in the past been very common. Within the past twelve years, progress has been made in decreasing the number of wild fires. An effective fire protection organization is in operation. Prompt discovery of a fire and experienced fire fighters lessen the extent and damage. In many instances the heavy hand of the federal courts has been felt by inveterate fire setters caught in the act. The deterrent effect on other potential woods burners is far reaching when information of a neighbors run-in with the federal law becomes known.

During the war years there was a heavy drain on the timber resources. On the national forest areas, the demand was met without detriment to the remaining timber. The existing exigency made possible the utilization of low quality forest products ordinarily not saleable or used in normal times because of the higher cost of processing for market. The removal of this class of material has resulted in a general stand improvement of the young and thrifty trees remaining on the cutover areas. Through bettered growing conditions there will be an acceleration in growth and increase in value at a later harvesting.

Most of the wartime timber operations were on small or family group scale. Such small scale timber operations serve readily as a supplement to the farming and mining activities carried on at other times. The numerous small agricultural areas acquired by the federal government in the purchase of larger wild timber land tracts are made available for use locally either as an independent unit or in conjunction with other similar lands remaining in private ownership.

The acquisition of this land by the federal government does not withdraw it from legitimate use. As custodians of these areas, the United States Forest Service regulates its proper use and the development of the valuable natural resources. It provides for use and participation by all citizens as against individuals who do not have the general welfare in mind, but are primarily interested in their own selfish gain.

The extensive natural resources of the Ozarks in the Clark and Mark Twain national forests are protected, administered and maintained for the general benefit of the citizens of Missouri.

So much for the current federal efforts. It might not be amiss to consider further some of the factors that contribute to the critical rural problem in the timbered section of the State. The evidence of the sad state of affairs was apparent to all, but unfortunately there were no determined measures nor effective steps taken by the local communities nor the State to do something about it. This complacency and inaction brought the need of federal assistance and action. A partial answer is found in the establishment of the national forest areas.

In the early years of the present century several federal foresters

indicated the need for careful use of the forest resources as against the then destructive exploitation under way. These admonitions were brushed aside. The timber resources were removed without any thought for the future social and economic needs of the various counties, communities and areas that were being ruined one after another. With the timber gone, most of the local population was left stranded without means of support. Farmers lost their local markets and most of the woods workers were left stranded. Decrease in tax income curtailed essential functions of the various counties. Everybody was broke. Little or no thought was given to wise and systematic cropping so as to produce a continued supply of forest products. Forest protection stabilizes the soil and creates a stable forest community.

By 1920 the major portion of the timbered areas of the Ozarks had been cut over and the large timber operators had moved out. Unprotected timber land made it easy for the stranded residents to remove currently the better trees of the more desirable species before a real value had come through sufficient growth in size. The consistent removal of this type of material opened the way for a timber growth of "weed" or less valuable species to take over.

Supplemental to the federal efforts are the activities of the State Conservation Commission through its forestry division. These federal and state agencies are, by proper land management on larger timber land areas and the smaller woodland areas, forming an integral part of any well organized and operating farm unit.

The final answer is not to be found in the current efforts of the representatives of the federal government. Continuous effective measures to accomplish the social and economic rehabilitation of the forest areas are maintained only by the ever clamant insistence by the citizens of the State that adequate financial support be furnished the agencies to which has been assigned the responsibility of administration. The responsibilities of good citizens everywhere are heavy. Success in proper and adequate land use of public and private areas is the challenge. This challenge is particularly directed to the younger group that has had the opportunity to study and become familiar with the true objectives and needs. With opportunity for this understanding comes the challenge for action by the individual as he reaches the stage of responsibility.

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COLUMBIA, MISSOURI

PROGRESS IN STATE FORESTRY

by

GEORGE O. WHITE, State Forester

The establishment of National Forest Purchase Units in Missouri in 1933 and the Civilian Conservation Corps Program, which began at the same time, provided the impetus for establishment of a State Forestry Program. Although several CCC camps were located in state parks, refuges and forests, these camps worked mainly on recreational and fish and game improvements with only limited forestry aspects.

Interest in wildlife conservation resulted in the passage in 1936 of a state constitutional amendment creating a Conservation Commission with responsibility for the restoration and management of fish and game. In addition to this broad responsibility, the amendment charged the commission with responsibility for the control, management, conservation and regulation of forestry resources. When the state constitution was revised in 1945 the conservation amendment was continued on essentially the same basis. This fine legislation has permitted the development of a sound forestry program.

In April 1938 the Conservation Commission employed a State Forester to initiate an action program of work in the field of forestry. In planning the initial work it was recognized that each year approximately one third of the woodland was being burned. The early emphasis was therefore placed on forest fire control.

FOREST FIRE CONTROL

During the latter half of 1938, four fire protection districts comprising about two million acres of woodland were established. Five young foresters were employed, four as district foresters and one as a motion picture operator. For the next few years these men with a few other foresters, towermen and volunteer fire fighters worked hard to provide adequate protection for part of the Missouri forests. It was an uphill fight and at times very disheartening. The war years made progress difficult but nevertheless a great deal has been accomplished.

The Division of Forestry has grown from the small group of pioneers in 1938 until at present it includes 95 full-time employees. These consist of a state forester, two assistant state foresters, a construction assistant, a forest crop land assistant, three stenographers, five district foresters, seven farm foresters, a nurseryman, an assistant nurseryman, two nursery helpers, nursery labor (not included in the total), twelve forest assistants, two mechanics, two construction foremen, a radio technician, sign painter, machine operator, fifty-one towermen and one area foreman. About three hundred men are employed on an hourly basis for the duration of fires from time to time on going fires.

During the calendar year 1947, personnel of the Division of Forestry fought 1,880 fires which were held to a burned acreage of 39,408 acres of forest land. These fires occurred within the seven fire protection districts which have a total of 4.2 million acres of forest land. Seven million acres of forest land are still without any organized fire protection though badly in need of it. The acreage burned represents a reduction from 33 percent

in 1938 to less than 1 percent of the area under protection in 1947. During the past year the protection districts were increased by one million acres to the present total.

Ten new lookout towers were completed during 1947 bringing the present total to 42. Six additional towers are under construction and three more are scheduled for this year.

One standard four-room dwelling was completed last year, bringing a total of 27 towermen's residences provided at the towersites. Seven standard two-car garages were completed, making a total of 25 such structures. Other construction during the year included towersite facilities, such as 2 chicken houses, 1 barn, 8 toilets, 3 cisterns, a 175-foot low water crossing, a 20-foot bridge and additions to a number of buildings. Approximately 25 miles of telephone line were completed for a total of 120 miles of state-owned lines. Six miles of roads were built, making a total of 23 miles constructed by the Forestry Division outside of state refuges. One hundred twenty-five miles of roads are being maintained by the Forestry Division.

Motorized fire fighting equipment now includes 27 standard civilian jeeps, 1 jeep truck, 10 Dodge power-wagons, 36 pickups, 8 stake trucks, 5 dump trucks, 7 weapons carriers and 2 motor patrol graders, together with a substantial amount of road building equipment.

New FM radios were installed on all fire protection districts. Each district headquarters has been equipped with a 60-watt fixed station. Forty-five General Electric 30-watt sets were installed in fire trucks and administrative vehicles. All lookout towers and other vehicles are equipped with army surplus SCR 610 two-way radios. A central radio repair shop has been set up at Jefferson City and a central automotive repair shop at Sullivan.

TREE PRODUCTION AND DISTRIBUTION

In 1937, the Extension Forester had started the distribution of trees to farmers with trees grown in the federal nursery at Licking, a year before the beginning of the Commission's program, but the next year tree production and distribution was coordinated as a cooperative program between the Extension Service, the Conservation Commission and the U. S. Forest Service. This work has been expanded and during the period from 1938-1948, 10 million trees have been distributed to 7,920 farmers. These trees have gone to every county in the state.

At the present time two nurseries are in operation: the Meramec Nursery at Sullivan, which is state-owned, and the Licking Nursery, which is leased from the United States Forest Service.

FARM FORESTRY

In 1942 two farm forestry projects were started in cooperation with the Soil Conservation Service, valuable aid and assistance being given by the Extension Forester and the U. S. Forest Service. The number of these projects has been increased to seven, operating in thirty counties. The objective of this work is to bring about the adoption of sound forestry practices on individual farms. During the past fiscal year 518 farmers and landowners were assisted, as were 260 operators and representatives



TOP—Photograph taken in January 1934. Shows country 2 miles north of Eminence, Mo. Overcutting and annual fires have depleted the forest resource.

BOTTOM—Photograph taken in January 1948 of same area as in top picture. Area has been protected from fire since 1934. This shows the great regenerative power of the Ozark woods.

of the timber industries. There is great need for the further expansion of these projects to serve the woodland needs of the balance of the state.

STATE FORESTRY ACT

In 1946 the state legislature passed a constructive piece of forestry legislation known as the State Forestry Act. The Act is designed to extend the activities of the Conservation Commission in the protection of private woodlands from fire and theft. It also provides for the deferment of part of the taxes, on land classified by the Commission as Forest Crop Land. The landowner must agree to abide by good forest practices. Classification continues for a period of 25 years during which time Forest Crop Land is assessed on a valuation of \$1.00 per acre. The state returns 2 cents per acre per year to the counties for each acre of private land so classified and 4 cents for each acre of Conservation Commission land so classified. When timber products are cut from Forest Crop Lands, a yield tax graduated from 4 to 6 cents must be paid on the stumpage value of the trees cut on Forest Crop Land.

Since the passage of this legislation, the Conservation Commission has classified for 75 owners a total of 71,000 acres as Forest Crop Land. This land is located in 28 counties. In addition to the privately owned land 118,000 acres of state-owned land has been classified. A total of \$6,149.71 has just been paid to the counties from the state as partial payment for tax relief on the Forest Crop Lands for the year 1948.

STATE FORESTS

Many areas in the Ozarks have been repeatedly stripped of merchantable timber and burned continually. Private owners have not been interested in managing these areas for a timber crop and as a result they have been sold and resold by the counties for non-payment of taxes. Under such conditions public ownership has appeared desirable.

Therefore, the Conservation Commission has acquired 120,000 acres of land designated as State Forests, which are in addition to the 20,000 acres of land cooperatively managed in the state parks for forest and wildlife purposes. Acquisition of this acreage has been gradual and, because the land so acquired was badly run down, timber sales by the state have amounted to an average for the entire acreage of only about 2 cents per acre per year. The areas which have received protection are restocking and in time will be a valuable asset to the state and the nearby communities. These areas serve multiple-use requirements, as demonstrations and for timber production; some are used as wildlife refuges and others as public hunting areas. All are available for forest recreational use.

FINANCES

The interest of the Conservation Commission and the effectiveness of the program is emphasized by the fact that, from a first budget of about \$30,000 in 1939, the present budget for forestry has risen to \$446,000. These funds are derived from three principal sources: \$226,000 of the Conservation Commission funds, mainly derived from the sale of hunting and fishing permits; \$100,000 from the general revenue of the state; and \$120,000 from the federal government. Request has been made to the

state legislature for additional funds from general revenue and indications are that we may be able to continue forging forward with forestry work.

FOREST RESEARCH

In cooperation with the University of Missouri, the Conservation Commission has carried on a small program of forestry research. Absence of personnel during the war years curtailed much of the work that had been started. The Forestry Division looks to the University and the U. S. Forest Service as the principal agencies for forest research but is anxious to assist insofar as funds and personnel will permit in order that only sound and proven practices will be undertaken.

CONCLUSION

The first decade of the State Forestry Program, now drawing to a close, has been one of steady progress against great difficulties. If progress in the next ten years is continued at a corresponding rate, Missouri's timber resource again will become a major factor in the economy of the state and nation. The Conservation Commission recognizes that several state and federal agencies have been very helpful to the state program and among these are the University of Missouri, the Extension Service, the U. S. Forest Service and the Soil Conservation Service to mention a few. Many public spirited citizens have aided the work. With such cooperation, we can carry forward to our goal.

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- The City that Timber Industries Built.
- Center of Two Million Acres of Federal, State, University and otherwise Supervised Lands in the Hardwood Belt of the Mid-West.
- Recreational Headquarters of Southeast Missouri's Beautiful Lakes and Rivers.
- Greetings to the University of Missouri Forestry Camp & Field Studies.

Poplar Bluff Chamber of Commerce

PAST, PRESENT, AND FUTURE OF FORESTRY AT THE UNIVERSITY OF MISSOURI

By R. H. WESTVELD

The University of Missouri, through its expanding forestry program which includes professional training, research, and extension, has an opportunity to make a large vital contribution to the State's economy. The foundation is now being laid for a program which should pay substantial dividends through the rehabilitation of an industry which once produced large payrolls and large volumes of wood products which were fed into the commerce of the State.

Forestry is not a new activity of the University, but its present status and promise for the future is new. Thirty-six years ago when a forestry department was established in the College of Agriculture, Missouri became the twenty-first institution in the Nation to offer professional training in forestry. Frederick Dunlap directed this work with the assistance of Edward C. Pegg. After sixteen men had been graduated in forestry over a nine-year period, forestry was dropped from the activities of the University in 1921. Fifteen years later, on January 1, 1936, the University again undertook forestry instruction in the Department of Horticulture (later renamed the Department of Horticulture and Forestry) when it set up a pre-forestry curriculum. This made it possible for a student to take two years of training which would prepare him to transfer to a school where he could complete his work for a forestry degree. The author had the privilege of initiating this work. For the next eleven years the work had the guidance and sympathetic support of Professor Thomas J. Talbert, Chairman of the Department of Horticulture and Forestry, who always envisioned a separate Department of Forestry. During the next ten-year period, enrollment in this curriculum fluctuated and reached its peak of approximately fifty students in 1940. The inauguration of a series of annual two-day forestry short courses, sponsored by the College of Agriculture began in 1937. These meetings provided forest technicians and others interested in forestry an opportunity to discuss their mutual problems. Attendance at these courses was usually between 75 and 100 persons. The short courses were terminated during World War II. When the author resigned from the University in 1938, Ralph H. Peck took over the responsibility of the instruction and research program and developed it until his death in April of 1947. Forest research which had been a minor activity was given new stature with the appointment of William C. Sechrist in 1940 to undertake investigations in utilization and marketing of farm forest products. In 1943 the teaching staff was augmented by the appointment of C. Willard Leach as instructor in forestry.

Forestry extension began in 1936 with the appointment of Ralph H. Peck as extension forester in the Agricultural Extension Service. In 1939 Leighton E. McCormick succeeded Peck who transferred to the resident

teaching staff. During the same year the extension work was expanded with the appointment of Calvin M. Bowen as assistant extension forester.

One by one the forestry staff left during the war until finally all forestry ceased at the University.

The war emphasized the need for an enlarged forestry program at the University to take its place alongside the effective programs of the Missouri Conservation Commission and the U. S. Forest Service. In the summer of 1946 the enlarged program took shape when a four-year degree course in forestry was set up under the impetus of a special appropriation by the legislature to initiate the work. Calvin M. Bowen was transferred to the teaching staff at that time while Richard C. Smith joined the staff in February 1947. In the meantime C. Willard Leach resigned in 1946 to enter Yale School of Forestry for graduate work. The program suffered a setback with the death of Ralph H. Peck in April 1947. In June 1947 the Board of Curators of the University gave further recognition to the forestry work by establishing a separate Department of Forestry. At that time the author accepted appointment as chairman of the new department and reported in August. Calvin M. Bowen resigned on July 1. Since then the staff has been augmented by the appointment of Kenneth C. Compton and Robert E. McDermott. The present staff of four will be enlarged to six within the next few months by the addition of another resident member and a field forester to develop the University Forest.

The objectives of the Forestry Department are:

- (1) To provide a type of training which will, first of all, equip young men to cope with Missouri's forestry problems—a kind of training which likewise will equip them to meet the needs of the adjacent territory—and secondly will be broad enough to meet the needs of forestry anywhere in the Nation.
- (2) To develop standards which will make accrediting by the Society of American Foresters possible at the earliest possible date.
- (3) To provide leadership in forest research through a comprehensive research program in cooperation with the Missouri Conservation Commission and the U. S. Forest Service which will solve the problems of both the forest land owner and the multitude of wood-using industries.
- (4) To strengthen and expand our service courses for other departments, especially in the field of farm forestry.

Missouri's forests are unique in that they have the potentialities of multiple use to a greater degree than the forests of most other regions in the United States. Our forests and the type of climate and land which support them make our forests as important for watershed protection, recreation, wildlife, and grazing as they are for timber production. This situation provides an excellent opportunity for students to have intimate contact with the broad aspects of forest land use. The training provided by the fifty semester credit hours of forestry, sixty-eight credit hours in physical and biological sciences, the twenty-two credit hours of English,

economics, sociology, public speaking, and American government, and seventeen credit hours of electives is basically sound and liberal. It should equip the graduates to recognize the problems they encounter in the field and to adjust their thinking to the specific situations which they encounter. The Department of Forestry will look to the employees of its graduates for their suggestions and support in the development of the work.

To meet the needs of the expanded program of instruction, several thousand dollars worth of equipment for use in forest mensuration, wood technology, silvics, dendrology, silviculture, and fire protection have been added. Substantial additions to the equipment will be made during the next two years. Library materials in forestry are fairly comprehensive. Books and bulletins acquired prior to 1921 are fairly complete and the small but continuous acquisition since then forms a nucleus of materials which can easily be supplemented to bring the library to date. Through the cooperation of Dr. Ralph H. Parker, University Librarian, the subject classification for forestry is being revised to increase the ease of locating materials.

The University Forest of 9000 acres in Butler County which is the site of the forestry summer camp is a vital asset in the instruction and research program. A resident forester will be charged with the development of this area for student instruction, research, and the demonstration of the best in forest management. Students must spend twelve weeks at this camp following their sophomore year. Instruction is given in forest measurements, silvics, field silviculture, utilization, field dendrology, and forest improvements. The \$25,000 camp with its nucleus of student dormitory, kitchen and mess hall, faculty quarters, and bath house is to be enlarged by the addition of a classroom and laboratory building and additional faculty quarters. A four-room residence, garage, and pump house complete the physical plant at the University Forest. This property—surrounded by the Poplar Bluff District of the Clark National Forest—is readily accessible to the varied activities of the U. S. Forest Service, thus providing ideal facilities as a field laboratory. To make the University Forest more valuable for instruction and research, plans are underway to exchange some of the mixed oak forest for shortleaf pine forest on the national forest and to acquire a sawmill and accessory equipment. This property holds untold possibilities which the future will unfold.

Although many problems in management and utilization will be studied in the research program of the University Forest, much research work will have to be done elsewhere because the State's soil, climatic, and forest conditions are too varied to allow concentration of research at one point. Research is at present supported by state funds appropriated for the Agricultural Experiment Station, funds contributed by the Missouri Conservation Commission, and federal funds from the Hatch Act. It is expected that funds from the Flannagan-Hope Act will provide money for forest research especially in timber processing and marketing. Cooperation with the Central States Forest Experiment Station is contemplated in all phases of the research program. Work is underway on developing projects in two broad fields—timber production and processing and marketing. Within a year's time, when the teaching work will be adequately organized, each member of the teaching staff will participate

in the research program.

In addition to the six professional courses offered at the summer camp and the twenty-seven professional courses offered in Columbia, two non-professional courses—farm forestry and forest conservation—are offered for students outside of forestry. Increased interest in farm forestry is developing gradually. It is anticipated that additional offerings of this course will have to be provided in the immediate future. As an interest in and demand for other non-professional courses develop, new courses will be added to the offerings.

The main headquarters of the Department of Forestry is in Whitten Hall, which houses also the departments of horticulture and entomology. The space in Whitten Hall is supplemented by classrooms, laboratories, and offices in one of the temporary buildings—T-7—directly south of Waters Hall. Provision for adequate permanent facilities is being made in the permanent building program of the College of Agriculture.

Progress in the development of the enlarged forestry program during the past year and one-half has been substantial. Future progress can be as rapid and of as high caliber as the extent of the support that is given the program by Missouri forest land owners, industries, and others concerned with forestry in the State.

In Recognition of IMPORTANT PUBLIC SERVICE

We take this opportunity to compliment the University of Missouri for leadership in providing for the training of young people in the direction of sound forestry practices. The wealth of America lies in its natural resources. To you who are so deeply concerned with protecting and developing the resources of our forest lands, we offer our commendation.

The members of this Cooperative are keenly interested in the establishment of the Forestry Summer Camp at Lake Wappapello and are proud of the opportunity to serve you with electric power. Ozark Border is a business managed, tax paying electric cooperative incorporated under the laws of the State of Missouri. Its objectives is to bring to the rural areas, however remote, the advantages of central Station electric power.

OZARK BORDER ELECTRIC COOPERATIVE

POPLAR BLUFF, MISSOURI



In Memoriam

RALPH H. PECK

March 3, 1905-April 15, 1947

As extension forester and later as professor of forestry, Ralph H. Peck made significant contributions to the progress of forestry at the University of Missouri and in the State.

THE PLACE OF FOREST RESEARCH IN MISSOURI

By FRANKLIN G. LIMING, Silviculturist
Central States Forest Experiment Station, Columbus, Ohio

Forest research must have an important part in the rebuilding of the forest resource in Missouri. For many years it has been generally accepted that more information on forest management and utilization is essential to good forestry and that supplying this information is the function of forest research. However, the importance of planning and timing the research work so that problems can be anticipated, ferreted out, and solved before they become obstacles to the success of forestry is just now being fully recognized.

Past forestry activity in Missouri has stemmed largely from Federal and State agencies and has been aimed at: (1) building up sound forest administrative organizations, (2) combating uncontrolled burning and trespass, (3) putting public forests under best known management, (4) producing and distributing low-cost tree seedlings for reforestation, (5) assisting farmers and small woodland owners in the better management of their forests, (6) administering the forest-crop law providing for the deferment of taxes, and (7) establishing a full 4-year Forest School at the University of Missouri. The excellent progress made in this work is in general well known and for the most part is covered in detail elsewhere in this publication. During the last few years some forest industry leaders and private timber owners have come to realize the importance of providing for a continuous supply of timber and are taking steps to put their forests under management. This is very encouraging because most of the forests in Missouri are now, and will remain, in private ownership.

Forest research has been limited largely to piece-meal studies in stand conversion and timber production and marketing. Most of these studies were made by the Agricultural Experiment Station of the University of Missouri in cooperation with the Forestry Division of the Missouri Conservation Commission and by the Central States Forest Experiment Station of the U. S. Forest Service. Most of the work was financed by emergency funds during CCC days. Because of the uncertain tenure of this money and the restrictions placed on its use, a long-range, well-rounded research program was not possible. However, considerable worthwhile and needed information was obtained on: (1) the distribution of forests within the State, (2) range and distribution of shortleaf pine, (3) condition of trees in the existing forest, (4) growth characteristics of hardwood reproduction, (5) role of blackjack oak in the stands, (6) factors affecting sprouting of blackjack oak, (7) natural regeneration of pine, (8) direct seeding as a means of artificial regeneration of pine, (9) coordinating planting with harvest and improvement cuttings, and (10) the use and marketing of Missouri woods. Most of these results have been published and are available on request. Many of them are now in use on public and some private forests. The rest of the results will be published as time and available manpower make this possible.

Recently the field work of the Forest Survey was completed in Missouri. A report covering the Southeastern Ozark region has been released. Reports covering the other regions will be released as soon as the data have been analyzed, and eventually a report covering the whole State will be issued.

Although forestry in Missouri is off to a very good start, is on the upgrade and climbing fast, there is still a very long upward climb before the forests are restored to full productivity and put under sound management. Already one of the main obstacles in the path to success is lack of specific information on just how the forests should be managed and used.

Forestry work is relatively new in Missouri so there is little in the way of previous experience and examples of good forest management to serve as guides in present-day work. Since the Ozarks, where most of the forests are located, is an unique province, of distinctive geologic formation, and adjacent to prairie and plains country, experience and data obtained elsewhere are not always applicable. Therefore, insofar as forest research does not supply the necessary forest management and utilization information, "trial and error" methods must be resorted to. The present rate of progress cannot continue long under such methods.

At present, forest research in Missouri is on a maintenance basis. Emergency funds have been discontinued. The field work of the Forest Survey was completed last year. Remeasurements are being made on a few studies now in progress but no new studies of any consequence can be started with present appropriations. The total time spent on forest research in Missouri this year by Federal, State and private interests is expected to be less than one-half of one man-year. The forest research job cannot be done on this basis. The people of Missouri recognize this and are doing what they can to correct the situation. Right now the chances of making some advances in forest research in the near future look fairly good. This is as it should be for there are few if any forest areas where money spent for forest research will buy more in terms of forest improvement and increased benefits to mankind than in Missouri.

Missouri needs a progressive forest research program that will be carried out with imagination, vigor, and accuracy. The program should not only provide for solving the problems that are now obstacles to progress in forestry but also for keeping abreast of developments, anticipating problems, and having the answers ready by the time the information is needed. The program should include all phases of forestry, among which are land use classification, reforestation abandoned bare land, rebuilding existing forest stands, harvesting methods and technique to assure continuous production at a high level, better and more complete utilization, new uses for low-grade materials, better markets, new industries, fire control, watershed protection, wildlife, and forest range. The program must not only be coordinated within itself but also with similar work in related fields.

The research program must provide for practical research of high priority. It must provide information that will enable the forest owner, manager, and user to determine which system of management and use will yield the greatest net returns when applied to their own forests. Since

all problems cannot be solved at once, highest priority must be given to the greatest obstacles to rehabilitation, good management, and wise use of the resource.

Last, but far from least, the program must provide for practical demonstration of the solutions to important problems in the territory. The forest owner, administrator, and user must have a place where they can go and observe good forestry in practice under conditions similar to their own; a place where they can talk with the men who did the work and get first-hand information on methods, equipment, costs and returns, and the encouragement, advice and general guidance so essential in handling their forests.

The forest research needs in Missouri can be best met by the combined efforts of all interested organizations and individuals. The research job is too big for any one group to handle alone. In fact, because of the wide diversity of problems, it will be more efficient and effective if all interested groups have a part in the program. The State and Federal agencies will have to take the lead in analyzing the problems and planning the overall research program. They, no doubt, will also have to carry the burden of the actual research work for some time. However, private individuals and organizations should be encouraged and expected to take an ever increasing part in the program.

The State's part in the program can be best handled by the University of Missouri, principally through the Agricultural Experiment Station. Technicians trained in forestry and research methods should be added to the Experiment Station staff as soon as possible. Their sphere of activity should be state-wide but with particular emphasis on those forestry problems they are best qualified to handle with available facilities and personnel.

The Federal Government's part in the program can be accomplished best through a local Forest Research Center under the supervision of the Central States Forest Experiment Station, U. S. Forest Service. Since such Centers are designed to serve a distinctive province or problem area, irrespective of state lines, the activities of this Center should be limited largely to the Missouri Ozarks and similar adjacent areas. However, in addition to helping solve local problems under local conditions a part of the Center's responsibility should be to supplement, facilitate, and help coordinate all forest and closely related research activities in the area served. The Center should be staffed with personnel specially trained to handle particular problems involved.

The research activities of private interests should be aimed at solving those problems which are directly involved in their specific lines of work. Private agencies should be encouraged to set up research organizations to handle such problems so that the public agencies can direct a greater part of their efforts to solving problems of wider application.

An advisory committee consisting of local representatives of all major forestry interests in the State should be formed. The function of the committee should be to meet with the technical forest research men periodically and advise them of the nature and importance of problems in the various fields and to assist them in setting up priorities and in planning the over-all research program. This should assure consideration of all

problems and result in an unbiased research program that will provide practical information that will be put to use.

The keynote of the research program should be cooperation and coordination. If all groups and individuals will assume their responsibilities for forest research in Missouri, if they will do their utmost to solve those problems in which they are most vitally concerned and best able to handle, if all will help integrate and coordinate their work into a sound over-all research program to prevent duplication and misdirection of effort, it will assure the success of the research program and hasten the time when the Missouri forests will contribute "the greatest good, to the greatest number, in the long run."



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WHAT MISSOURI FORESTRY MEANS TO ST. LOUIS

HUGH STEAVENSON, Director, Agricultural Bureau
St. Louis Chamber of Commerce

The St. Louis Chamber of Commerce, through its Agricultural Bureau, has taken an active role in the development of Missouri forestry.

Why? Because of some sentimental interest in the woods and in conservation? Not at all. The businessmen who support and operate the Chamber are not inclined to be sentimentalists. St. Louis depends upon the woods. The wheels of a host of our industries would cease to turn without forest products. St. Louis is, indeed, a hub of diversified and numerous wood-using plants.

At last count, there were 913 wood-using concerns in Missouri. Sixty-one per cent of this number—546—were in St. Louis. These companies included not only factories producing such obvious items as timber and furniture, poles and piling, ties and veneer, boxes and cabinets, cooperage and paper pulp. They also included manufacturers of everything from artificial limbs to zithers; suppliers of human wants from baby carriages to caskets are found in the list.

In 1940 (the last date for which census figures are available) they provided jobs in the St. Louis industrial area to 9,876 wage earners—more people than shoe manufacturing, which is the single industry providing the greatest number of jobs.

Our businessmen are beginning to consider the forests that support these industries.

About as much of our land is covered by woodland as by farmland. We used more tons of wood in the recent war than we did tons of iron and steel. Unlike wheat, corn or cotton, one can harvest his tree crop this year, or leave it on the stump till next year or next decade. Wood is becoming increasingly versatile. As a recent secretary of agriculture pointed out, "you can eat it, twist it, shape it or use it in the place of metal. Some day, even in this rich country, our iron deposits will begin to give out and our oil reserves run dry; then it will be time literally to take to the woods."

The secretary wasn't quite right. From the standpoint of scientific cropping, now is the time, we believe, to take to the woods. One of our shrewd business operators in St. Louis, whose concern is the largest private owner of Missouri timberlands, states that no investment opportunity offers such attractive return prospects as cut-over timberlands, assuming they are well selected and adequately managed. This company is demonstrating its conviction by rapidly increasing its holdings of cut-over lands. It wasn't many years ago that it was practicing the conventional cut-out and get-out system.

Aside from investment prospects, our timber resources **must** be managed to sustain our wood-using industries. The U. S. Forest Service, analyzing its current forest survey, says we'll be at the bottom of our national woodpile in 20 years. Last fall when I saw the stuff delivered

as No. 1 lumber for a barn on my place, it struck me that we must already be scraping the dregs off the bottom.

Foresters needn't be told that Missouri's timberlands are pretty thoroughly cut out and burned out. During our timbering hey-day, in the Gay Nineties, the state's timber production hit three-quarters of a billion board feet but by 1936 production had petered down to a trickle of less than 90 million feet valued at \$3,000,000. With war and post war demands for anything that will hold a nail, production is up considerably but we haven't yet turned the corner in growing more than we are cutting. If and when we do restore our Missouri timber stands, we can provide full or part-time employment for 100,000 persons in timber cutting and in the sawmills.

All of us are intimately aware of what good management can do to the productivity of the average farm. Perhaps in most farm areas the average productivity of the typical farm could be doubled by adopting the best practices of cropping, fertilization, conservation, livestock husbandry and general management. The returns from forest management are far greater in most cases.

Annual burning, over-grazing and improper cutting hold our Missouri woodlands down to a production rate of 20, 30, maybe 40 board feet per acre per year. In section after section of the Ozarks the story is the same: the growing stock of pines and better hardwoods has been eliminated or choked to a standstill by low-value species. In addition to fires and over-grazing, constant cutting of the better stems just when they are beginning to lay on lumber, keep the stands in a prostrate condition. With simple protection we can conservatively look to a production rate of 100 feet per year. Add sound management—mostly a matter of proper harvestings—and indications are that we can double this figure. Yes, by applying sound forestry we can double, triple and ultimately multiply by five or ten the productive rate of our Missouri timberlands. **Within a generation we can produce one billion two million feet of marketable timber per year with a cash value of \$30,000,000.**

We of the St. Louis Chamber of Commerce are proud of the part we have played in promoting Missouri forestry. I hasten to make clear that the St. Louis Chamber, represented by its agricultural committee and specifically by its forestry sub-committee, has accomplished little if anything in furthering Missouri forestry by its own efforts. But the Chamber has worked with many groups, and especially the State-Wide Forestry Committee of the Conservation Federation of Missouri headed by General Stayton, in stimulating action that will remain historic in Missouri forestry progress.

Headed by its hard-hitting chairman, D. B. Mabry, our forestry committee has been in the thick of recent crucial state forestry developments. Two years ago the University of Missouri called a "short-course" in recognition of the fact that "forestry in Missouri is fast passing from the dominantly public phase to a field in which private enterprise shares increasingly the problems of maintaining a basic resource." Our forestry committee provided the largest single delegation to this meeting. Here we called for the establishment of a forestry school in the College of Agriculture as the best means of pressing the forestry educational campaign.

We plugged for adequate funds for the State Conservation Commission forestry program so that fire protection could be extended to the eight or nine million acres presently lacking fire control. We stressed the need for rounding out the national forests in Missouri to their originally conceived size of two-and-one-quarter million acres. We pointed to the need for establishing a forest research center and completion of the forest survey so that our present somewhat fuzzy ideas about timber growth and volume in Missouri could be cleared up.

Obviously our Chamber of Commerce forestry committee is eager to promote and encourage private and commercial forestry in every possible way. Yet we find no conflict with this objective and the national forests in Missouri. Indeed, as a surety for the continued supply of raw materials to our wood using industries, we look on the national foresters as our "blue chips". Despite only about a decade of operation, the national forest lands are already providing stumpage to ease the present wood emergency. This stumpage would not be available now if the forests hadn't been established. There is no question but what the present interest in forestry on the part of private operators has been largely inspired by the fact that they have witnessed the "come back" of the national forest lands. When the scattered privately-owned holdings within the national forests are acquired, the forests will comprise 2,250,000 acres. The areas to be acquired are largely submarginal and it is doubtful if they will come into production until administered as part of the national forests.

I have already mentioned the need for an inventory of our timber resources and for comprehensive research which will tell our operators how best to handle their holdings. Our forestry committee was instrumental in seeing that available federal funds were allocated to Missouri for completion of our forest survey. Numerous federal forest research centers have been established over the country and we feel that Missouri has been overlooked. We do not propose to be overlooked in the future. We expect that Missouri will have the next research center that is established.

One fine omen for continued rapid forestry progress in our state is the excellent working relationship of the several forest agencies and the private operators with these agencies. We who have studied the situation feel that there is little if any duplication of effort and we are gratified to see that personnel of the several agencies pulling together as a team, rather than dissipating their energies in senseless feuding.

Other states have made greater forestry progress than Missouri. But we have come a longway in the brief period following the war and I do think the pattern of progress demonstrates how a city Chamber can act with other organizations to protect its own forest interests and serve its wood-using industries.

**STUDENTS, THE ADVERTISERS HAVE HELPED YOU,
LET US IN RETURN PATRONIZE THEM.**

THE DEVELOPMENT OF THE EXTENSION FORESTRY PROGRAM IN MISSOURI

L. E. McCORMICK

The forestry project, under the Cooperative Extension Program of the University of Missouri and the United States Department of Agriculture, was initiated in July 1936. At that time a technically trained forester was added to the staff of subject matter specialists at the University and since then, with the exception of approximately two and one-half years during the war, one or two trained men have been available to promote farm forestry and to assist county agents and landowners on problems with woodland protection, management and utilization. Prior to the beginning of the Extension program, only a limited amount of work had been done in the field of forestry in the state. An earlier program, which included a four-year course in forestry at the University and part time work in forestry extension, was completely discontinued during the first months of World War I.

A planting program to encourage the use of forest trees for wind-breaks, erosion control and for woodlots or woodland improvement, was the natural starting point for the new project. This phase of forestry was readily accepted by landowners all over the state and the educational work in connection with tree planting has continued to be one of the important parts of extension forestry work. During the planting season of 1937 a total of 671,000 trees were planted by farmers in the state.

Shortly after the project was started, the extension forester worked out an agreement with the U. S. Forest Service to supply stock for farm planting from the federal nursery at Licking, Missouri. Later, after the Forestry Division of the Missouri Conservation Commission was in position to do so, this organization took over the procurement and distribution and finally the production of all planting stock under Section 4 of the Clark-McNary Law. Now the Extension Service is responsible only for the educational work necessary to assist landowners with problems on the selection of species, choice of sites and proper planting methods.

During the first eighteen months of forestry work the task of getting a complete planting program under way constituted a full time job. Particularly since very little planting had been done it was necessary to make further field studies on species, sites, planting methods and cultural treatments. However, by the end of 1936 the extension forester was beginning to receive more and more requests for assistance with problems on the management and utilization of farm timber. These requests led the inclusion of a new sub-project "woodland improvement" in the plan of work for the following year, and during 1937 a total of nine woodland improvement demonstrations were set up. On these areas, which had to be protected from fire and grazing, the timber was marked for improvement cutting, and other management recommendations were made. In one or two instances these areas included stands of young pine in need of thinning.

Now, after ten years, several of these areas which were protected and managed as originally planned show some very significant results.

From the two sub-projects of planting and stand improvement of 1937, the program was expanded and revised to include the sub-projects planting, woodland improvement, management, timber harvest, and marketing. In 1939 another trained forester was added to the staff. The state was then divided and each forester carried on all phases of work in his assigned area.

During the period from 1941 through the war years the Agricultural Extension program in Missouri was changed from a strictly project and sub-project basis to the closely integrated program of complete farm management which is termed "Balanced Farming". The methods and objectives in extension forestry were changed to fit into this new method of doing extension work.

Lack of appreciation of timber as a farm crop in Missouri has always been the principal reason why good woodland management is the exception rather than the rule. Therefore, there is no question about the fact that the change to Balanced Farming has strengthened and helped the extension forestry program because it ties forest land and good forest practices in with crop land and recommended practices in such a logical manner that it assumes a natural place in farm planning work.

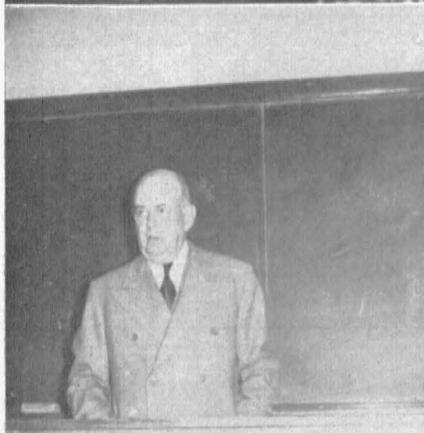
Using this approach, the first job in planning the management of any farm consists of deciding what each acre on the farm is best suited for. Any part which is to become permanent forest land is then definitely planned for that use. Such woodland planning may involve only a small plantation or, it may involve all of the phases of protection, management and utilization which are necessary for sustained yield in a large or small farm woodland.

As is true in all extension work, regardless of how well the overall program is planned, the success of the forestry program is dependent largely upon the efforts of the county extension agents through whom such teaching reaches the farmers of the state. These agents are thoroughly familiar with conditions in their various counties and each of them recognizes the forestry problems which are peculiar to his section of the state. Few people realize what an important part these men have had in the progress which has been made in farm woodland protection and management in Missouri during the past twelve years.

Cooperation with other forestry agencies, particularly the Forestry Division of the Missouri Conservation Commission and the United States Forest Service, has always been an important part of the extension forestry program. Through working with the personnel of these agencies as much help as possible has been given in carrying on their field work. In turn the extension program has profited greatly from assistance in the field and from information obtained through the experience and research work of these organizations.

Thus forestry extension has developed from a program aimed at establishing a large number of demonstrations of all phases of forestry work into a program of fitting an important type of land use into the

overall picture of good land use in the state. This development is reflected in comparing figures from the annual reports of 1937 and 1947. In the earlier report the total trees planted in the state amounted to 671,000 as compared to 1,113,435 which were planted in 109 counties in 1947. The initial nine woodland improvement demonstrations had grown to 276 woodland management plans prepared as parts of farm plans in 1947. There are weak points in the present program and it is spread far too thin over a large state, but the progress is obvious and encouraging.



RANDOM SHOTS

Our float could not be beat.
E. Sidney Stephens talks to the club.

All the woodchoppers and dates had a wonderful time at the first dance.

CAMP F-6, DORA ROUTE, POTTERSVILLE, MO.

To 20 Forestry students, the above mailing address meant eight weeks of hard work and study in the Mark Twain National Forest. The camp, which was located 17 miles west of West Plains, Mo., was established by the University as part of the four-year curriculum leading to a Bachelor of Science degree in Forestry.

Each student is required to attend camp for eight weeks during the summer between his sophomore and junior years. The four courses offered were FOREST SURVEYING, SILVICS, FIELD DENDROLOGY, and CAMP MANAGEMENT, for a total of eight hours credit. Everything that was studied was actually practised in the field. This meant being out in the woods all day many times in order to complete some of the work. Although the work was rough some of the time, and the weather hot all of the time, the fellows didn't seem to mind it much. In fact, several of them said that they wouldn't mind going to four years of school in the field to earn their degree in Forestry. There seemed to be more of an incentive to work because some results could be realized.

Arriving at the camp on Saturday and Sunday, June 7 and 8, the fellows all pitched in and cleaned up the seven buildings: three barracks, mess hall, recreation hall, bath house, and latrine. Cleaning up turned out to be quite a job, since the CCC had been the last occupants of the camp and the buildings had been vacant since their disbanding.

The living quarters were single-story Army barracks divided into three rooms, each housing four men. Each man was equipped with a desk, stool, clothes closet, and bed. The recreation hall was used as a class room and contained three large tables, a small desk, and a blackboard. The supply room was located in a small room on one end of the "rec" hall. The third barrack housed our instructors, Professors R. C. Smith, C. M. Bowen, and, during July, Mr. A. J. Anderson of the U. S. Forest Service. It contained a large office, two bedrooms, and a bath.

Classes began at 8 o'clock June 9 with an orientation on just what would be done during the summer. The work was outlined and we began immediately. As there were 20 of us, we were divided into two sections of ten men each. On Monday and Tuesday one section had Forest Surveying while the other section had Silvics. On Thursday and Friday the schedule was reversed. On Wednesday, both sections studied Field Dendrology together and on Saturday, Camp Management was the work of the morning. We were free on Wednesday and Saturday afternoons and all day Sunday.

In order to run things smoothly and with the least amount of trouble, we formed our own organization. A president, treasurer, and a steward were elected. The steward planned the meals. A cook was hired from West Plains and our food was bought wholesale from a grocer in town. Assessments were made as the money was needed. This money was also used in buying any other supplies needed to operate properly and to pay the cook's salary. The entire eight weeks cost each man about \$65.

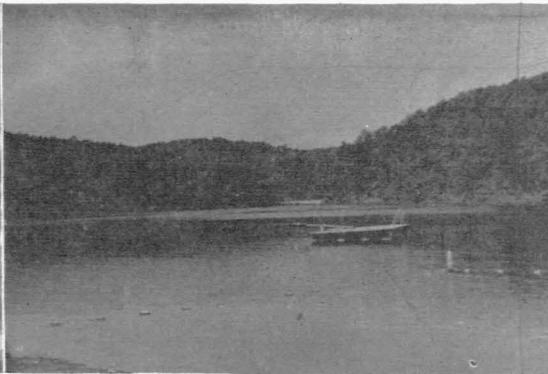
To do what little extra work had to be done, such as K. P., running the power plant, and latrine duty, a list was made up giving each man a



Ferry across Current River
"Anybody have a wrench?"

SUMMER CAMP SNAPS
Ozark "Peckerwood" Mill
Sunday "friendly game"

Fording the North Fork
"Brush-busters"



Swimming hole on North Fork
"What do we do now?"

SCENES AROUND CAMP F-6
Morning "bull session"
Haircuts were good, too

Noblett Lake recreation area
The horseshoe court was always busy

certain job to do for a period of one week. Each had to do two of the three jobs. Everyone was well satisfied with the plan and it worked with great success.

As we did most of our work several miles away from camp, we had to have some means of transportation. The Forestry Department had an official car, but of course, that would not suffice in getting 20 men to and from work each day. To ease this situation the University purchased two Army carryalls. When we got them, the trucks still were covered with olive-drab paint and to make them a little better looking, we painted them a bright forest green. Then, because one was a ½-ton and the other a ¾-ton, we named the smaller the "Green Hornet" and the larger the "Green Monster". The names "took" and thereafter, the trucks were called those names.

Although we were at camp to study Forestry, there were a couple of times when we had some diversion from our work. For the use of the camp at which we stayed, we agreed to help the Forest Service fight any forest fires and also to give them any help they might need in other ways. There was only one fire to be put out, and it was a small one. It was discovered by Prof. Smith, Dave Wilder, and Dick Piepenbring who were returning from the field one afternoon. They quickly got some equipment from camp and returning to the fire, put it out in a couple of hours. Because the fire season in that section of the country doesn't begin until the middle of August was probably the biggest factor in our not having to fight any other fires.

But the Forest Service did need our help in another instance. We were called out to help hunt for an 80-year old man who had wandered off into the woods and had gotten lost. The local people, along with the Forest Service personnel, had been searching two days before they called us. We were given a large area to cover and began our search. There were 18 of us in a line, each man about three chains (198 feet) apart. We covered about ten acres in one afternoon. It was slow work as the area was quite brushy. We had no luck in finding the old man and we were a dejected-looking bunch when we got back to camp. The authorities didn't know whether or not we would have to help again the next day. When it rained that night we hoped we wouldn't be needed. But as luck would have it, we were called out the next morning to again help search. We took our lunch with us and tramped the woods all day with still no signs of the old fellow. When we returned to camp that evening, after wading creeks and getting thoroughly soaked through from the very wet underbrush, we looked almost like a group of refugees just out of prison camp. That was the last we searched for the old man. A week later the ranger came over and told us he had been found and was still alive after having lived on berries and bugs for seven days. Everyone is still trying to figure out how he did it.

Of course our main reason for having a camp was to study a few fundamentals of field work in Forestry. I shall attempt to outline very briefly just what we did in our four courses.

FOREST SURVEYING is not exactly what the name implies. Although we did some surveying, that was not all the course consisted of. It was actually a course in Forest Mensuration. This means a study of the growth

of trees and is also concerned with their height and diameter, in relation to volume. We learned the various methods of cruising timber and computing volume, how to run a transit line, how to make a topographic map, and how to do differential leveling to find elevation. We also made a mill study at a local sawmill. At the mill we scaled the logs as they brought in to determine the board-foot volume in them before they were cut into lumber. After they were cut, the actual volume was figured to check the accuracy of the scalers.

Undoubtedly the most interesting and educational trip of the summer was made on the last two days when the group went to Eminence, Mo. There we were met by Ed Woods, manager of the Pioneer Cooperage Division of National Distillers Products Corp. The company, which manufactures white oak barrel staves, owns 85,000 acres of timber land in Southeast Missouri.

Arrangements had been made for us to make a tour of the operations in making barrel staves. We were shown everything from the system used in marking trees to be cut to the actual cutting of the trees, loading them on the trucks, and cutting them into unfinished staves at the mill where they are shipped to a finishing mill. One tree was 46 inches in diameter and over 100 feet tall. It was said to be worth \$300. Most of the trees of this size are clear lumber all the way to the crown. Everyone got a lot out of the trip and enjoyed it very much.

FARMERS' FAIR FLOAT

As a rule a good parade float requires time and preparation. Being no ordinary organization, the club set out in the spring of '47 to prove that this rule had its exceptions.

The big Farmers' Fair parade was not more than ten days away when the decision was made to enter a float. An efficient committee collected ideas and went to work. Decorations were just being completed as the procession began to move. The float drew a great amount of attention. Its success could have been attributed to its attractive covering of pine boughs, or the fire tower which was manned by a big-hatted ranger, or the surveyor using the transit with the unique plumb-bob. Perhaps it was the rustic lettering, or the attractive M. U. coed, clad in shorts and holding a baby fox, that led to its success.

The club won the contest for the best float. It was a walk away. The best prize of all, however, was the recognition and publicity which the club and department received.

OUR FORESTERS

Freshman—That is a tree.
Sophomore—That is a maple tree.
Junior—That is a silver maple tree.
Senior—Cut th' damn thing down.
(The Cruiser)



FORESTRY CLUB

Left to right. Top row: G. Ball, K. Hafner, J. Schildknecht, N. Mobley, J. Church, D. Wilder, R. Creasy, R. Deed, W. Metcalf, K. Edscorn, V. Faulkenberry. Third row: J. Vogler, W. Todd, J. Hartman, H. Gallaher, N. McDonald, H. Erwin, A. Shields, Dr. Westveld, E. Wehking, W. Liechti, A. Dressel, R. Chandler, R. Hein. Second row: C. Barnhart, D. Pittenger, L. Paulsell, R. Piepenbring, G. Hamilton, J. Kullman, R. Williams, Prof. Compton, G. Thomasson, W. John. Bottom row: B. Evans, R. Stevenson, R. Raisch, W. Purcell, H. Moran, N. Edington, F. Schweitzer, F. Mertel. Not shown: E. Glaser, L. Adams, W. Bradley, O. Lashley, W. Pierce, J. Hembree, H. Sendt, W. Sendt, L. Tschannen, F. Pallo, Prof. Smith, R. Kerr, L. Matt, E. Hunt, E. Canter.

CLUB SOCIAL FUNCTIONS

Since all popular reading and moving pictures depict foresters as big lonely men either fighting fires or sitting on a peak, the members of the club have decided that they must absorb a bit of social life before embarking into such a droll career.

Being no historian I cannot accurately say, but I imagine that social gatherings are almost as old as man himself. In the case of the Forestry Club they have been found to be an excellent method of getting better acquainted. They provide diversion from the normal routine of books, quizzes and reports. And last of all they provide a little gossip for between classes for weeks to follow.

Back in the spring of 1947 someone visualized a gathering around a bonfire, fox hounds baying in the distance, and barbecue sizzling over a fire. This idea became a reality on the 12th of April at the farm of Sam Moss, a friend of the club. Of course much preparation (or perhaps confusion) went into the evening. Firewood was hauled by a team of world famous Missouri mules whose opinions differed on which sides of trees to pass. It couldn't have been the driver! Barbecued lamb was prepared by Ralph Monta, a Columbia chef, and even the boys that had had their fill of mutton in the army declared it to be the finest barbecue they had ever eaten.

The evening swiftly passed. The huge fire crackled and danced and the old white oaks (*Quercus alba*, for the benefit of scientific circles) swayed against the mighty harmony which rang out into the night. Doubtless not since Daniel Boone frequented these parts had they seen a group of such rough, rugged men. But finally the food ran out, the fire burned down and everyone went home, except the dogs. They ran until morning.

Starting out the semester in the fall of '47 there was found to be a great number of new recruits in the forestry field so an outdoor meeting was held. A council ring was improvised and dead trees were felled for firewood. (They fell the wrong way due to "hastily done field work".) A great horde of men appeared from the darkness and again mighty voices rang out in what might be called song. Hot dogs and ice-cold sweet apple cider topped off the evening. Everyone met everyone else and, leaving a few at a time, the men rushed home to their books and graph paper.

In the fall of 1947 "party talk" popped up again. The American Legion cabin was rented for the evening of November 21 and once more committees swung into action. It was a dreary night but the atmosphere inside was anything but dreary. At eight o'clock, foresters, their dates and wives began to arrive. The crackling fire in the fireplace spread cheer and seemed to accentuate the pleasant aroma of pine boughs which bedecked the hall. Candles on the tables emphasized the sparkling white tablecloths and bright faces around them. The floor was excellent and usually filled with dancers. The party was chaperoned by the forestry faculty members and their wives. But midnight came too soon and the

M. U. cinderellas rushed to their carriages and home in order to avoid demerits. Thus the curtain fell on another outstanding social event. It has since been rumored that certain die-hard elements continued the party on into the night.

Since the treasury is always in a rather depleted state, one enterprising young man suggested in the fall of '47 that the club gather black walnuts, hull them, and market them in Kansas City. So expeditions sallied forth; the two gruesome green carry-alls roared and rolled and thirty-five "gunny sacks" of walnuts accumulated in no time. The operation bogged down in the hulling stage however, and became stalemated. The bottom dropped out of the market (as well as out of the sacks) and orders were received to remove the walnuts from old Whitten Hall. So—to make a long story short, the club has a few walnuts. They are somewhat weathered due to outdoor exposure but they're free to all desiring them.

And so, dear readers, we bring to a close this brief resume of what is being done here by M. U. foresters in the field of society. Dry reading—perhaps, but to the men of the club and of the staff of this publication it may serve to help them recollect some of the characters they were once so unfortunate to be associated with.



CLUB DOINGS

On October 14, a weiner roast was held at Rollins Spring. Group singing along with plenty of cider was enjoyed by everyone who attended.

October 28 saw Professor Jesse Wrench at the club meeting giving everyone a chuckle at his wit and humor during an interesting talk about his archeological work in the Middle East.

The Missouri Conservation Commission showed us two very interesting movies entitled, "Where There's Smoke There's Fire" and "The Strength of The Hills," on November 11.

A couple of the boys, Bill John and Jim Gladden told us of their experiences as summer workers for the U. S. Forest Service, and some slides of the University Forestry Camp were shown on November 25.

Dr. Westveld and Mr. Smith told us some of the highlights of the Meeting of the Society of American Foresters that they had recently attended, on January 6.

A very interesting movie entitled "Trees In Our Homes" was shown on January 20.

Dr. Rudolf Bennitt gave us a very interesting talk on "Quail as They Affect Forestry," on February 17.

On March 2, Mr. George White, State Forester, showed us a film on Missouri Forestry.

On March 17, our guest was Mr. Leonard Hall, who gave us a very interesting talk concerning Wildlife and Forestry.

BASKETBALL HIGHLIGHTS

The Missouri University Forestry Club basketball team ended the season with 4 wins and 4 losses. This is the first year the club had entered a team in the intramural basketball tournament and they deserve a "well done" from all the club members.

When the team first started practicing and playing together none of the players knew each other, but it wasn't long before they were calling each other by their first names. Each man had his own method of playing, but this was soon overcome with each practice session, and with the coming of the next school tournament, the Forestry Club will have a fast, smooth working team.

The team would like to take this opportunity to thank the club members for the excellent support which was shown at the games.



FOR MEN ONLY

I saw her swimming in the brook,
A moment swift and fleeting,
And from the shock of that brief look,
My heart almost stopped beating.

I worked my way around the trees,
To where the view was clearer,
And then on trembling hands and knees
I edged a little nearer.

I never saw such perfect lines,
As she was there displaying
Beneath the shade of spreading pines
In languid splendor playing.

Her twists and turns were full of grace,
Her body smoothly molded;
I know the joy showed on my face,
As each new charm unfolded.

And when she floated with the stream,
The sight was most entrancing;
Her wondrous body seemed to gleam
From sunbeams, softly glancing.

I yearned for her with heart and soul,
And then I fell to wishing,
For I had neither hook nor pole,
And trout are caught by fishing.

—South Dakota Conservation Digest.



JUNIOR CLASS

L. to R. Bottom row: D. Wilder, R. Creasy. Second row: N. Mobley, A. Shields, K. Edscorn, E. Wehking, J. Church. Third row: E. Canter, H. Erwin, W. Metcalf, C. Barnhart. Top row: E. Glaser, J. Kullman, R. Piepenbring, H. Gallaher, L. Paulsell. Not shown: R. Berkeley, G. Hamilton, D. Pittenger, L. Tschannen.



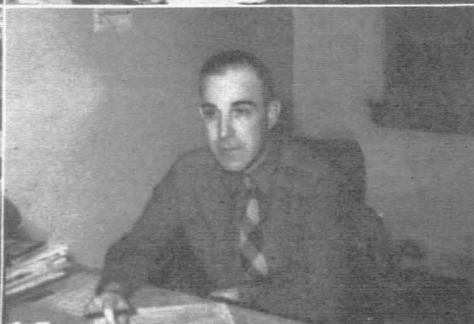
SOPHOMORE CLASS

L. to R. Bottom row: H. Moran, N. McDonald, J. Smith, F. Schweitzer, J. Shadrach, W. Todd. Second row: F. Mertel, W. Purcell, A. Dressel, E. Kunze, F. Pallo, B. McGlasson. Third row: H. Sendt, R. Stevenson, W. Sendt, R. Deed, J. Long. Top row: K. Hafner, G. Lodge, R. Raisch, R. Dauma, L. Matt. Not shown: L. Adams, O. Allen, E. Bacon, G. Ball, H. Beezeley, W. Bradley, C. Bridgett, J. Brown, P. DeHaven, D. Duncan, V. Faulkenberry, B. Francis, J. Hartman, A. Hume, W. John, H. Kaaz, W. Liechti, J. Mattson, W. Metcalfe, R. Musbach, F. Peyton, M. Ritter, C. Stevens, J. Vogler, J. Walker, J. Wallace, J. Watkins, H. Welch, O. Wilson, W. Wolfe, G. Ioffel, J. Hummel.



FRESHMAN CLASS

L. to R. Bottom row: R. Chandler, J. Hembree, D. Summa, B. Kerr. Second row: R. Williams, O. Lashley, T. Edington. Not shown: W. Aksamit, E. Boelk, R. Bruns, J. Carrere, A. Castiglione, B. Clark, J. Cochrane, R. Dickinson, B. Evans, J. Fitzmaurice, J. Fleetwood, R. Harris, R. Hein, J. Kenney, L. LeMasters, J. Mabry, N. Pierce, J. Reid, J. Roberts, C. Robinson, J. Schildknecht, G. Schwent, B. Snider, I. Sander, L. Taylor, W. Todd, C. Walker, R. Bammert, P. Browning, A. Carlin, W. Hawkins, O. Hubbs, A. Ruehmann, R. Ward, W. Wincatt.



FACULTY AND STAFF

R. C. Smith
R. E. McDermott

R. H. Westveld
Mrs. S. R. McLane

K. C. Compton
L. E. McCormick

DR. R. H. WESTVELD

The Forestry Department may well be proud of its new chairman Dr. R. H. Westveld, who has returned to the department on what might be called his silver anniversary, that is, twenty-five years in the field of forestry. His work in building and securing a greater future for the department and his earnestness in advising students both on scholastic work and summer jobs has gained the respect and appreciation of the entire student body.

Supposing careers a hereditary factor, woodcraft would be classified a dominant gene in Dr. Westveld's family tree. Back in the days when the Lake States were the heart of the timber industry, his grandfather was a large scale timber operator in Northern Michigan. Later his father excelled as a cabinet maker and foreman of a large furniture Company when Grand Rapids, Michigan made history as the furniture center of the world. Little wonder that he and his brother, Marinus Westveld, a practicing forester in the east, turned to forestry in its early age.

Dr. Westveld's career has varied widely but has always been in the field of forestry. He received a B. S. degree at Michigan State College in 1922. He then worked on the Carson National Forest in New Mexico in timber sales and administration duties until 1924. In 1925 he received his Master of Forestry Degree at Yale University. Upon receiving his degree he entered research work in silviculture at the Pacific Northwest Experiment Station at Portland, Oregon. In 1928 he returned to Michigan State College to start work on his Ph. D.

Up until this time Dr. Westveld's primary interest had been in research. Many times fate changes men's lives. Perhaps it intruded upon Dr. Westveld. At least his career was changed while teaching silviculture at Michigan State College. He found no suitable textbook and thus started preparation of the manuscript for "**Applied Silviculture in The United States.**" This book was first published in 1935 by Edwards Brothers at Ann Arbor, Michigan. It was revised in 1939 and published by John Wiley and Son. During his stay at Michigan he also carried on research of the relationship of forest soils to northern hardwood forests which resulted in the first research bulletin in forestry ever published at Michigan State College.

In 1936 Dr. Westveld came to the U. of Missouri to teach Farm Forestry among other duties. Again finding the need of a suitable text for the course he started work on a book in collaboration with the late Professor Ralph H. Peck which resulted in the publication of "**Forestry in Farm Management**" in 1941 by Wiley and Son. This book was chosen by the Armed Forces Institute as the textbook for their course in farm forestry. His new role as educator and writer were to his liking and he has successfully followed them to this time. In addition to his two books, Dr. Westveld has written nine bulletins and twenty-five articles which have appeared in periodicals. His two most recent articles were presented at annual meetings of the Society of American Foresters. He presented "**Silviculture in Practice**" at the 1946 meeting in Salt Lake City, Utah and "**Future Trends in the Employment of Foresters in Private Forest Land Management.**" Dr. Westveld left the University of Missouri in 1938

to accept a position on the faculty at the University of Florida and in 1946 transferred to Alabama Polytechnic Institute as head of the Forestry Department.

In 1940 Dr. Westveld again resumed work on his doctorate and received his Ph. D. at Michigan State College. His thesis was "Response of Slash Pine (*Pinus carabeae* Morelet) to Various Nutrients in Norfolk Soils in Florida."

Dr. Westveld is a senior member of the Society of American Foresters and has served actively on numerous committees and as chairman of the program committee at the national meeting in 1941 and chairman of the committee on Farm Forestry Education.

He has been active in the Forestry Section of the Southern Agricultural Workers, the Florida Soil Science Society, the Academy of Sciences in Michigan, Florida, Alabama, and Missouri; the Forest Farmers Association Cooperative and the Alabama Forestry Council. He also holds membership in a number of Honorary Scientific Fraternities, among them Sigma Xi, Xi Sigma Pi, and Phi Sigma.

August 1, 1947 Dr. Westveld returned to the University of Missouri as Chairman of the Department of Forestry, and with his wife is at home to his many friends at 53 East Drive, University Court.



RICHARD C. SMITH

Assistant Professor R. C. Smith arrived on the Missouri Campus February 1, 1947. His winning personality and his drive as acting head of the Division of Forestry both on the campus and during the summer camp session won the respect and friendship of the entire division.

After graduation from high school in St. Paul, Minnesota, Professor Smith alternately attended the University of Minnesota and held positions with the United States Forest Service. His work with the Forest Service included timber estimating and surveying, land acquisition work throughout Minnesota and Michigan, and work on the national forest survey under the Lake States Experiment Station. He graduated from the University of Minnesota in 1937 with a B. S. degree.

Upon graduation, Professor Smith returned to the Forest Service at the Northern Rocky Mountain Forest Experiment Station and later at the Southern Forest Experiment Station. In 1940 he left the Forest Service for private employment as forester for the American Creosoting Company at Louisville, Kentucky. Early in 1942 he substituted the title "Naval Lieutenant" for "Forester" as adviser and research man on the preservation of Wooden Ships.

Leaving the Armed Forces in January 1946 he went to Duke University to obtain his Masters degree in Forestry, and then on to the University of Missouri. His duties here include supervisor of summer camp, instruction in Forest Management, and Forest History and Policy.

Professor Smith is a senior member of the Society of American Foresters. He is also a member of Xi Sigma Pi, National Forestry Honor

Fraternity, and Tau Phi Delta, professional forestry fraternity. He is the junior author of USE OF SAVANNA LANDS for GROWING TIMBER in SOUTHERN MISSISSIPPI. For his Master of Forestry degree thesis he wrote on ANALYSIS of SOME FACTORS AFFECTING PRICE of PINE STUMPAGE in the VICINITY of DURHAM, NORTH CAROLINA.

He is married and residing for the present at 77 East Drive, University Court. Rumors over the whittle-stick have it that he will be on leave of absence in the fall to finish his Doctorate.



KENNETH C. COMPTON

Red—"Mister Red"—to the colored employees of the Gulf States Creosoting Company, was born in Seattle, Washington on February 5, 1914. He graduated from Webster Groves High School at Webster Groves, Missouri in 1931. His high school career included membership in the band, playing the piccolo. He was the tallest man with the smallest musical instrument.

Professor Compton entered forestry work with two years pre-forestry at Washington University and three years at Iowa State College with a B. A. degree, majoring in forestry. While at Iowa State his summers were spent working with the Iowa Forest and Wasteland Survey. He was also active in extra curricular activities with the Forestry basketball and rifle teams, and as circulation manager of the year book.

Upon graduation Professor Compton held positions with the Gulf States Creosoting Company at Hattiesburg, Mississippi as successively, junior buyer, treating engineer, and retort foreman.

He accepted a Fellowship to New York State College in the fall of 1937 where a year later he received his masters degree. His thesis was CREOSOTE and TAR TREATMENT of BEECH. He holds membership in Alpha Zeta, Honorary Agricultural Fraternity, Phi Kappa Phi, Honorary Scholastic Fraternity, and Jr. membership in Sigma Xi. His work since then has been as inspector and Forester of the A. W. Williams Inspection Company; with the Flintkote Company as personnel and safety director (which included among other duties, acting as plant nurse to 500 employees), and as field forester of 100,000 acres of what was then the only timberland in industrial ownership with a written management plan in Mississippi. Before coming to Columbia, he was Assistant Forester for the company which manufactured fiberboard construction and insulating materials.

Assistant Professor Compton came to the University of Missouri in September 1947. He specializes in the Wood Technology and Utilization field; instructing Logging, Lumbering, Wood Preservation, Forest Products, and Forest Marketing, and Wood Technology classes.

Professor Compton approaches the typical absent minded professor at times in his dress. He is married to the girl he met on a blind date in 1939. With their son, Bruce Allen, age two, they reside at 13 West Drive, University Court. Athletic and energetic, we welcome him to the department.

R. E. McDERMOTT

Mr. McDermott is the newest member of the department coming to Missouri as instructor in February, 1948 from Iowa State College.

After graduating from Proviso High School in Maywood, Illinois in 1938, he attended Wright Junior College for two years, obtaining an Associate Degree in Arts in 1940. He continued his education at Iowa State College and graduated in 1943 with a B. S. degree in Forestry.

At this time he joined the navy and served with the USN amphibious for three years in both theatres.

Upon receiving his discharge as a Lt. (J. G.) Mr. McDermott returned home and accepted a position as the Cook County Forester for three months and then returned to Iowa State to work on his Masters degree.

While doing research for his degree he also worked as Project Research Cooperator from June of 1946 to June of 1947 with the Soil Conservation Service at Floris, Iowa. From June of 1947 until transferring here in February, 1948 Mr. McDermott coordinated his work with the Iowa State Agriculture Experiment Station and teaching Botany and Dendrology at Iowa State.

Mr. McDermott obtained his Masters Degree in Plant Ecology in 1947. His thesis was on "Root Relationships In the Competition Between Some Tree and Plant Species." He is a member of both the American Society of Foresters and the Ecological Society of America.

Mr. McDermott's duties with the Forestry Department include instructing Dendrology, Range Management, Silvics and Forest Influences. At the time of this writing he and his wife are confronted with the housing shortage in Columbia and have no permanent address.

LEIGHTON E. McCORMICK

Professor McCormick is the oldest member of our staff in point of service. He has been with the department since coming to Missouri in February of 1939 as Extension Assistant Professor of Forestry.

Professor McCormick graduated from high school at Bedford, Iowa and went to Iowa State College in 1927. Between his junior and senior years he spent seven months attached to the U. S. Forest Service in Colorado on planting, nursery and timber survey work. He graduated with a B. S. degree in Forestry from Iowa State College in 1931. Incidentally, 1931 was a historic year for all graduates. He can tell one and all who might be interested of the trials and tribulations of graduating into a depression.

In June of 1933, Professor McCormick moved to Tennessee as Superintendent of a CCC camp. After serving in this capacity for six months he was transferred to the Tennessee State Forestry Department as a District Forester of Western Tennessee. In 1937 he was promoted to Assistant State Forester in charge of all state nurseries and the development, management, and utilization programs on the ten state forests of Tennessee. In 1939 he left Tennessee to become a member of the Extension staff here.

In his present position he serves as the extension specialist in forestry to assist county extension agents and woodland owners with the problems connected with establishing, protecting, managing and utilizing farm forests.

In February of 1942, on leave of absence, Professor McCormick entered the army as a 1st Lieutenant. He served as assignment officer for two and one half years at Jefferson Barracks, was later promoted to Major and transferred to the Separation Center as Operations Officer. He was relieved from active duty in February 1946.

Professor McCormick has prepared four extension bulletins on farm forestry for the Agricultural Extension Service. The latest one titled, "The Processing and Use of Native Lumber on Missouri Farms" was printed in June 1946. He is a senior member of the Society of American Foresters and served as Vice Chairman of the Ozark Section in 1946.

Professor and Mrs. McCormick reside with their three children at 301 South Garth Street.



Forestry Prof.: "Can you give me an answer?"

Student: "Sir, not knowing, I hesitate to respond for fear of falling headlong into the uttermost depths of inaccuracy."

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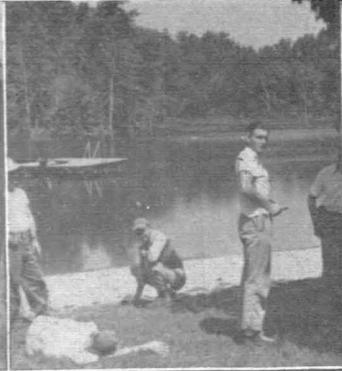
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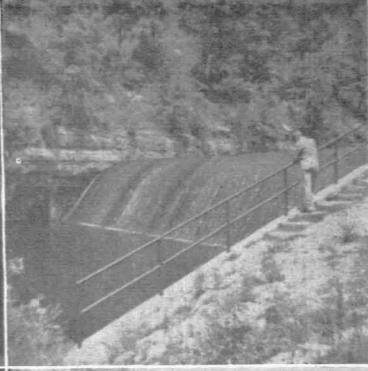
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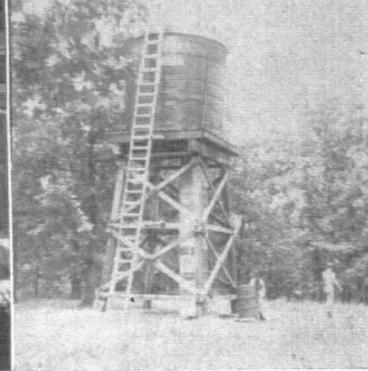
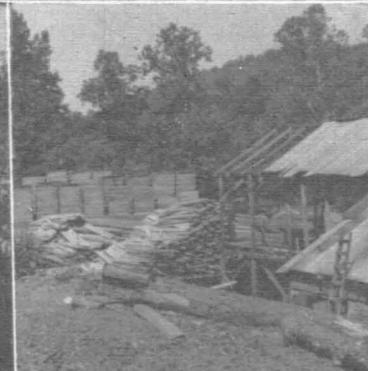
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- BROADBENT, SAM R.—1921 (in absentia)
 3133 Connecticut Ave. N. W., Washington, D. C.
 Investigator, U. S. Budget Bureau, Washington, D. C.
- BRUTO, FRED RAY—1919, M. S. 1920
 State Highway Building, Jefferson City, Mo.
 Forester, Mo. State Highway Dept.
- CLAY, ROBERT BUCHANON—1914Pleasant Hill, Mo.
- FALLENIUS, VICTOR CHARLES—1913
- FRITSCHLE, CHARLES RUSSELL—1920
 7700 Country Club Court, St. Louis, Mo.
- GIBSON, MAURICE SALEY—1914.....3204 Windsor, Kansas City, Mo.
 Real Estate and Rentals, 425 Ridge Bldg., Kansas City, Mo.
- GREEN, CHARLES BURDETT—1921 (in absentia)
 666 Lake Shore Drive, Chicago, Ill.
 Secy. Manager, American Walnut Manufacturers Association
- HATZE, EARL BENT—1918, M. S. 1920.....Formerly St. Louis, Mo.
- HERALD, CHARLES WILLIAM, JR.—1917.....6 Hartus Court, St. Louis, Mo.
 Real Estate
- KRAFT, FELIX GUSTAV—1916.....107 S. Maple Ave., Webster Groves, Mo.
 Public Accountant, 1596 Arcade Bldg., St. Louis, Mo.
- LODENSOHN, SAMUAL HAMILTON—1917.....122 E. Ridgewood, Texas
- MILLER, MAX EMMIT—1915P. O. Box 55, Paducah, Ky.
 Manufacturer, Paducah Box and Basket Co.
- SIMMONS, CHARLES WADE—1921 (in absentia).....Formerly Cabool, Mo.
- TALBOT, MURRELL W.—19132590 Cedar St., Berkely, Cal.
 Range Research Worker, Cal. Forest and Range Experiment Station
- YOUMANN, JOHN POWER—1915Pateau, Okla.
 Manager, Okla. and Ark. Telephone Co.

DIRECTORY OF FORMER PRE-FORESTRY STUDENTS WITH FORESTRY DEGREES FROM OTHER SOURCES

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DeWolf, Howard	1214 S. Osage, Sedalia, Missouri
Fine, Lee C.	Eminence, Missouri
Godman, Richard M	University of Michigan, Ann Arbor, Michigan
Pogue, Ralph	Mansfield, Missouri
Hoskins, Robert N.	Seaboard Airline Railroad, Norfolk, Virginia
Leach, C. Willard	Forestry Department, Alabama Polytechnic Institute, Auburn, Alabama
Meyer, Arthur	Piedmont, Missouri
Nichols, J. M.	Missouri Conservation Commission, Jefferson City, Missouri
Seay, Edward J.	Salem, Missouri
Towell, William E	Forestry Division, Missouri Conservation Commis- sion, Jefferson City, Missouri
Walter, R. F.	
Whitt, Fred B.	Ellington, Missouri

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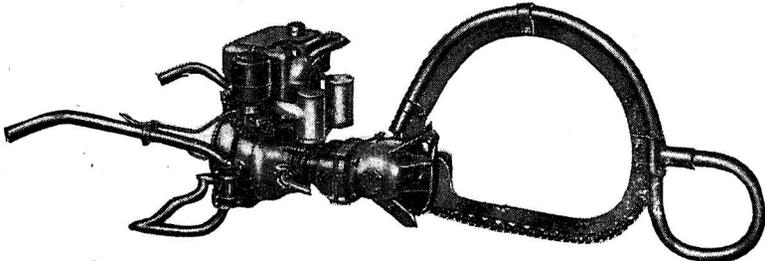
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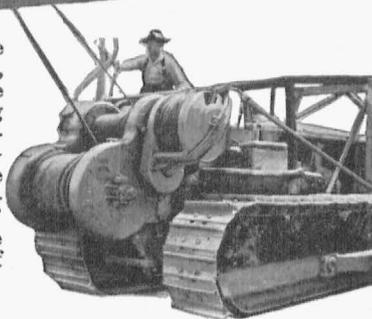
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50^{*} YEARS OF FRIENDSHIPS

Material things, such as timber, ties, treating plants and what not are our possessions—but not our treasures—because the greater things in life, such as friendships are intangible and abstract.

Contacts between men in business develop friendships as real and as lasting as can grow out of any other background, and each passing year surrounds these friendships with a finer and deeper sense of appreciation and understanding.

Time is the test of the genuine, as only through years of trial comes the knowledge of what is true and what is false—and the good stands out more boldly as the bad falls by the wayside.

Signs and symbols have ever been used to signify man's allegiance to an organization or a principle.

THE STAMP OF CHARACTER is such a symbol. It represents an organization of timbermen that has been developed by fifty years of character building.

Fifty years of steady progress are a measure of financial success, but 50 years of friendship are something more than mere figures can reflect.

J. W. Fritsch

Chairman Board of Directors.
T. J. Moss Tie Company, St. Louis.

★ 1948 marks the 69th anniversary of the company. The above message was written 19 years ago.

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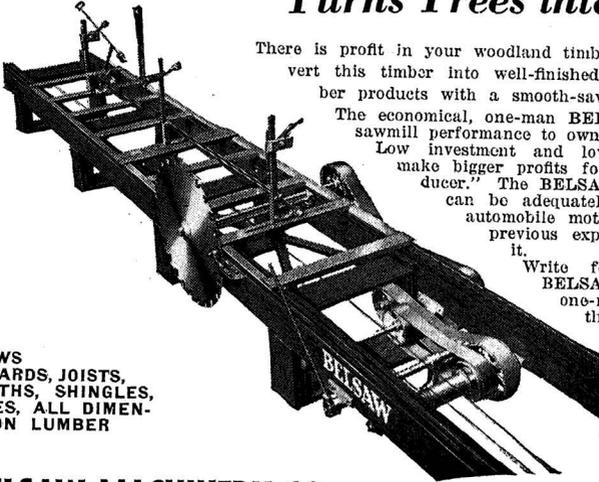
Phone 5951

Employer: "For this job we want a responsible man."

Applicant: "Then, that's me. Everywhere I've worked, when something went wrong they told me that I was responsible."

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