

MISSOURI

LOG

1949

**THE
MISSOURI LOG**

1949



VOLUME II

PUBLISHED ANNUALLY BY THE FORESTRY CLUB

of

UNIVERSITY OF MISSOURI

COLUMBIA, MISSOURI

Foreword

The printer has pulled the switch, the presses have roared and you are holding in your hand the 1949 and second edition of *The Missouri Log*. It contains a variety of features and articles. The articles follow no particular theme but rather it is hoped that between the covers you, the reader, will find something of interest.

We are especially proud to present the pictures of the men in the class of graduating seniors, the first class to be graduated in a great number of years. We believe this to be an important landmark in the story of forestry in Missouri.

We wish to express our deep appreciation to the contributing authors, our advertisers, the faculty, the alumni, the students, and all others who have helped to make this publication possible. Sincere thanks go to Mrs. Stanley R. McLane for her help on the stenographic part of the work. We wish to thank Milton E. Howard whose time and talents produced the photographs of the seniors and faculty.

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

The Staff

The Staff

Editor-in-Chief	Lee K. Paulsell
Associate Editor	William J. Todd
Business Manager	John R. Kullman
Assistant Business Manager	Harry B. Moran
Photographic Editor	Armin T. Dressel
Circulation Manager	Lester E. Tschannen
Faculty Advisor	Dr. R. H. Westveld

Cover by Robert D. Raisch



WILLIAM L. HALL

DEDICATION

To William L. Hall, pioneer in forestry, who for fifty years in both private and public work, has contributed much to the profession and to our nation.

1899 Entered Division of Forestry, U. S. Department of Agriculture, in charge of forest planting.

1905-1919 U. S. Forest Service, in charge of Branch of Products (1905-11); organization of forest land acquisition under Weeks Law (1911-17); development of plans that led to Clarke-McNary Act (1917-19).

1919 to present—Consulting forester and manager of own forest land.

1900 Charter member, Society of American Foresters

1913 President, Society of American Foresters

1940 Elected Fellow, Society of American Foresters.

Table Of Contents

Foreword	2
Dedication	3
What Foresters Are Doing In Arkansas	6
Northern Ozark Forest Research Center	11
Opportunities In Farm Forestry	16
In Memoriam	19
Forest Fire Control In Missouri	20
In Memoriam	26
Bad Fire Day	27
Better Land Resource Management Is Coming To The Missouri Ozarks..	32
W. E. B. Sawbill Company	36
Notes From The Past	39
Department And Faculty	41
The Class Of 1949	49
Summer Camp	61
The Forestry Club	69
Alumni	79
Advertising Section	83

Dr. John H. Longwell
Dean and Director
College of Agriculture



These Men Guide the College of Agriculture



Mr. Sam B. Shirky
Associate Dean and Director
College of Agriculture

WHAT FORESTERS ARE DOING IN ARKANSAS

WILLIAM L. HALL

Fellow, Society of American Foresters

As of December 31, 1948, it appears that as many as one hundred three technical foresters are at work in Arkansas. Some eighty-five of them work wholly, or mainly, south of the Arkansas River and twenty work north of that waterway. A loose classification of these men might group them somewhat as follows:

Executives and supervisors	6
Administrators, including technical assistants	76
Research	8
Consultants or members of service organizations	8
Educational work	5
Classified on the basis of public or private employment the showing would be:	
Federal Government	
National Forests	26
Research	8
State in cooperation with Federal Government	15
State alone	4
Private employ	50

A Supporting Group of Great Importance

This picture of the forestry working force would be incomplete without mention of another group which is doing a work of almost equal importance. This is made up of locally trained men, sometimes called practical foresters, or sub-professional men who aid in and often direct the work planned and started by the foresters. These men show up wherever forestry programs are under way, whether on National Forests, in State fire protection, or in private forestry programs. Some of these men advance to a high level of understanding of forestry, its objectives and its essential practices. Some men with this sort of training have reached positions of high responsibility in private employ. There is something about forestry that gives a boost to the imagination and objectives of many a man, whether he is highly educated or not. Perhaps one of the most useful services professional foresters are rendering is in the training of this sub-professional group.

What Is Being Accomplished?

The two National Forests in Arkansas include almost 2,500,000 acres. They embrace much of the most mountainous areas of the state. But they have within their boundaries a high percentage of productive forest land. An almost unbelievable change has taken place on these lands since they were first brought under fire protection. Dense stands of young pine and oak have covered the old fire scars, have filled in the old fields. Good cutting practices have paralleled fire protection. From areas of extremely uncertain future value they have, in forty years, become areas of enormous forest wealth, are supplying to industry a great volume of valuable forest products, and for the nation are producing large income. These benefits are assured for the future so long as the lands are treated right.

This is an accomplishment of foresters.



Group of South Arkansas foresters in front of a loblolly pine stand of unusual beauty

The State Division of Forestry and Parks now has under organized fire protection some 10,688,000 acres of forest land, not including the National Forests. Nearly all upland forest in the south part of the state is protected. The protection system now includes a large part of upland forest in the central and northern sections. Plans have been perfected for extending the protection system to all upland portions of the state. It seems reasonable to hope that this may be accomplished in the next two years.

Such development involves much equipment of modern type: adequate and fully-manned fire towers, telephone and radio com-

munication, area and ranger headquarters properly equipped, modern fire-fighting equipment, and personnel carefully selected and trained for their work. Public understanding, public interest and favorable attitude are essential, too.

As organized protection goes into effect for any district it soon makes a difference in the area burned. The longer protection continues, the less the burned area becomes. Of course there are sometimes local flareups that become troublesome. These generally have definite causes that have to be looked into and investigation sometimes reveal conditions that must be corrected. But forest fire protection has paid big dividends in Arkansas as all forest landowners know who have seen its results.

With fire protection established in North Arkansas, other forest practices will soon get underway. Selective cutting, stand improvement measures and planting open land will not be long delayed. Already beginnings are being made under direction and leadership of foresters of the Division of Forestry, and Soil Conservation Service and Extension Service. The development of the system of fire protection has been mainly the work of foresters.

One large division of Arkansas' forest area is as yet without fire protection or any definite plans for maintaining the forest in the future. This is the delta of the Mississippi River and lower portion of its tributaries in Arkansas. This forest area is estimated to include more than 4,000,000 acres. It is wet land, much of it subject to overflow in winter and spring. It requires drainage for agricultural development. With drainage it becomes excellent farm land, producing high value crops such as cotton, rice, lespedeza and soy beans.

Except where cleared the area is all timbered. The better timber has been cut. Remaining stands consist of old trees culled in the first logging, with young growth which has come in since. Some of the young growth is of merchantable size. The stand suffers from late summer and autumn fires in some years.

It appears that fire protection and forestry in this part of the state will most likely depend on future requirements as to farm and forest products. It cannot now be stated with certainty what part of the area will be devoted to growing forests.

Forestry in South Arkansas

It remains to briefly recount the activities and results of foresters in the pine area of South Arkansas. Included is an area of pine or pine-hardwood lands in some thirty counties. It probably totals as

much as 10,000,000 acres of highly productive forest land. In this area are now located something like eighty-five foresters. More than forty of them are privately employed. Eight or nine are forest consultants or members of a service organization. Four are engaged in research, three in teaching. The others are executives or in State and Federal cooperative work. It would be possible to group together several private holdings which in area would be about equal to the area of the Ouachita National Forest. This group of private holdings today employs more than twice the number of technical foresters employed on the Ouachita. There are several reasons for this but space permits mention of only one. The growth potentialities of the South Arkansas forest are so great that intensive management practices are strongly indicated as desirable. Most of these foresters are busy in the woods. Not many are in the offices.

What is the business of the forestry force? It is to formulate management plans, direct cutting operations, designate the timber to be removed as sawtimber, poles, pulpwood, or other products. On a number of operations foresters are directing measures of stand improvement such as deadening undesirable trees. In many cases they are directing planting operations where pine restocking is not coming about naturally.

The state forestry nursery has produced in 1948 some 8,000,000 trees, all of which were absorbed by the demand before the planting season began. The nursery force is not made up of foresters. It is headed by a technician trained in nursery practice. He is not included as a forester in this article, although he holds a degree in agriculture.

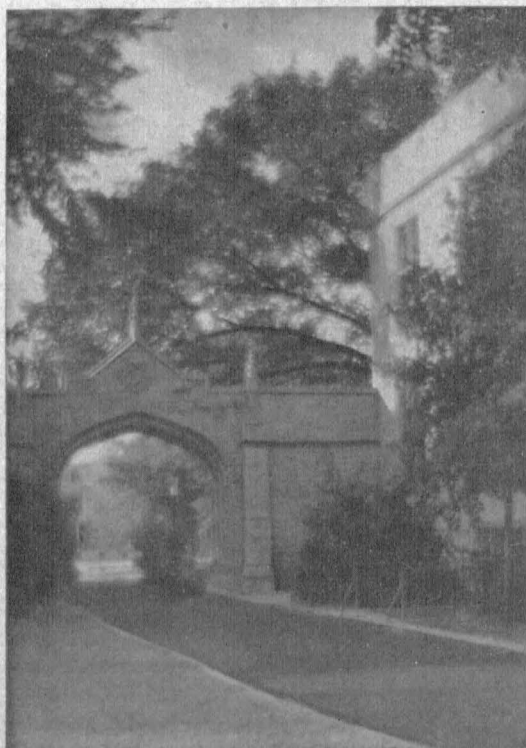
The Crossett Branch of the Southern Forest Experiment Station is constantly bringing out information that aids in forest practice and intensifies interest of timber-land owners. Only recently R. R. Reynolds who directs the station's work has brought forward the idea that pine stands developed to adequate volume of growing stock may, on the best sites, be expected to produce annual growth of as much as 600 board feet per acre. What forester or forward-looking timber-land owner would not be inspired by such an idea?

Monticello A. and M. College, with its two-year sub-professional course in forestry, is preparing men for various sorts of work that are necessary in the rather complicated procedures of good forestry in this region.

Technically trained foresters have been coming into South Arkansas in increasing numbers recently to find employment. For two

years or more the group of South Arkansas foresters has been holding bi-monthly meetings. Usually they meet with some company, look over its timberlands and woods practice in the afternoon, have dinner together in the evening, often as guests of the company, and in the evening have a program, with discussion of practices and problems noted in the afternoon's inspection.

One cannot be with this group in a meeting without sensing an attitude of enthusiasm and fervor of high accomplishment.



NORTHERN OZARK FOREST RESEARCH CENTER

FRANKLIN G. LIMING

Northern Ozark Branch

Central States Forest Experiment Station

A Forest Research Center was established in Missouri during the latter part of 1948 by the U. S. Forest Service. In the development and conduction of its research program, the Center is under the general supervision of and is responsible to the Central States Forest Experiment Station at Columbus, Ohio. The Center itself is a local organization staffed with specially trained men who will conduct a comprehensive research program to solve forest, range and watershed problems in the Missouri Ozarks and similar surrounding country. The Center will also serve as a focal point or headquarters for all federal forest and range research in the area.

The establishment of the Forest Research Center was made possible by a federal appropriation of \$30,000, which was earmarked for research in "forest," "range" and "water." The inclusion of all three phases of work is desirable in that all three are important in the Ozark section. It is undesirable in that the present appropriation will have to be spread very thin to cover all three phases of work. In order to minimize this dispersion of funds and efforts, research in water will be limited to those phases that can be carried on in connection with forest and range studies. Consequently, most of the \$30,000 will be used for forest and range research.

The establishment of this Center fills a long-felt need. It is another important forward step for forestry in Missouri, where forest and range research has not kept pace with other agricultural research nor with the recent increased interest in and desire to improve management practices. Owners and managers of forests and forest ranges must have more technical information if they are to successfully manage their lands for continuous high yield. Foresters and technicians in allied fields are confronted with an ever-increasing number of requests for information and assistance. Although many of these requests can be fulfilled, too often the needed information is not available. Unfortunately, reluctance to admit lack of proper infor-

mation sometimes causes technicians to give advice based on guesses or unsupported opinions. As long as definite and sincere efforts are being made to solve the problems, "no information" replies will be tolerated by most people. One wrong "guess" may result in an economic loss and may dispell any interest in or desire to improve management practices. The Forest Research Center was set up primarily to provide correct answers to the important questions in forest and range management. A second very important function is to provide on-the-ground demonstrations where owners, managers and users can see and discuss the results of good management practices under conditions similar to their own.

The urgency of getting the Center established and a research program underway required prompt action in: (1) selecting qualified technical personnel, (2) selecting a representative technical advisory committee, (3) setting up a headquarters office, (4) selecting at least one experimental forest, and (5) formulating the general framework of a research program. This year's appropriation is less than one-third the amount needed to finance an efficient and comprehensive research program. Consequently, any action taken on the above items must provide not only for efficient use of existing funds, but also must provide the basis or framework for an expanded program when expansion becomes possible.

The technical staff in the Center now consists of three men. Dr. Franklin G. Liming is in charge of the Center. Liming has had many years of experience in practical forest research in Missouri and other central and eastern states. Another forester, Nelson F. Rogers, has charge of forest management research and is responsible for the development and supervision of the experimental forests. Rogers comes to the Center with a wide range of experience in forest administration and research in the central and eastern states. S. Clark Martin, who has spent several years in forest range research in the southwest, has charge of the forest range research work. One other position in forest soils and planting will be filled as soon as a suitable candidate can be found. This last position is financed from other funds which have been allotted to the Center.

The above are key positions in that the men who fill them are responsible for planning and executing the research program. By careful planning and by making full use of facilities, equipment and assistance offered by other agencies and individuals, it will be possible to carry these staff men and still provide equipment and supplies, non-technical help, travel costs and other essential expenses for a modest research program. These men were chosen because they are

capable of planning and supervising a full research program. Subsequent increases in personnel will consist largely of lower salaried technical and semi-technical men and local laborers.

A practical technical advisory committee consisting of representatives from all major forest and range interests is also being chosen. The function of this committee is to meet periodically with the technical staff and advise them of the nature and importance of the problems in the various fields and to assist them in setting up priorities and in planning the research program. This assures consideration of all pertinent problems and should result in an unbiased research program which will provide practical information that will be put to use. Because of the great diversification of problems and of the many agencies, organizations, industries and individuals interested in the development and use of the forest and range resources, this committee will consist of about 15 members. Most of them have been selected and have indicated their willingness to serve. The remaining members will be chosen as soon as possible.

Headquarters for the Forest Research Center is in Room 102, Building T-7, on the University of Missouri campus at Columbia, Missouri. Under the present arrangement, rent free offices, a technical library, laboratories and other scientific equipment and facilities at the University are available to the research staff. With the funds now available to the Center, it would have been impossible to secure comparable facilities elsewhere and still employ qualified technical personnel. Besides the physical equipment available at the University, a host of specialists in forestry, soils, field crops, animal husbandry, nutrition, botany and other related subjects are available for consultation. Also most of the agencies with which cooperative work will be done are headquartered at Columbia or nearby Jefferson City. The location of the Center near the heads of these agencies will facilitate coordination of the efforts of all agencies into a well integrated overall research program wherein each phase of the work will be done by those who are best qualified for the work. Cooperative agreements with the University of Missouri and the Missouri Conservation Commission are already in effect. Similar agreements will be made with other public agencies and private concerns as soon as feasible.

The selection of experimental forests and ranges and of the type of research program that should be undertaken are important and difficult tasks. They are interdependent in that the type of work to be done dictates the type of experimental forests and ranges needed. Perhaps more important in this area, the types of experimental areas

and facilities available definitely limit the type of research work that can be done. The first experimental forest consists of approximately 4,000 acres located in the Clark National Forest in Dent and Reynolds Counties. The area supports a second growth oak-pine stand ranging in composition from pure stands of oak through various combinations of oak and pine to pure stands of pine.

Forest management work at first will be confined largely to this one experimental forest in the oak-pine type. This decision is in line with the principle that more efficient use of limited funds can be made by concentrating on a few jobs and doing them well than by tackling too many jobs and doing none of them thoroughly. The oak-pine type is one of the most important types in the area, has the greatest production potential and is now in greatest need of intensive management. The decision to concentrate the work on one experimental forest in the oak-pine type does not limit the work to that area. Neither does it minimize the importance of the other forest types or mean that they will be ignored. As soon as feasible, the research program will be expanded to include pertinent problems in other areas and forest types.

Final decisions as to what should be included in the over-all long-time research program and in studies to be initiated soon must be postponed until a problem analysis has been prepared and considered by the advisory committee. There are so many problems which warrant a high priority rating that work on all of them cannot be started immediately. Hence, the difficult job which now confronts the staff is not to decide what the problems are, but to decide which problems to tackle first in order to obtain the greatest early benefits consistent with a sound longtime program.

The ratings of the problems vary considerably, depending on who does the rating and on the basis of priority used. However, after careful and thorough consideration of these ratings and of other factors such as work in progress at other places, available facilities, the time before results would be available, and the use that can and probably will be made of information obtained, three problems stand out. These three closely related and independent general problems are: (1) What types of stands should be grown on the various sites? (2) What is the most practical and economical method of developing such stands? (3) Once these stands have been built up to full production, how should they be managed to make the best use of the wood produced and at the same time maintain them at a high level of productivity. These three major problems can be broken down into any number of subdivisions such as: The most favorable combina-

tion of species and size classes; the most desirable stocking; means of securing desirable natural reproduction; value of trees in the present stands; economical methods of removing low-value trees; rotation age; relative merits of managing the stands for such end products as pulpwood, posts, props, ties, telephone poles, piling, sawlogs and veneer or some combination of these products; intensity and frequency of cut; systems of harvesting, and technique and equipment for handling wood products. The forest stands on the experimental forest are ideal for studies designed to determine: (1) the relative value of pure stands of pine, various mixtures of pine and oak and pure stands of oak, (2) the number of trees of different sizes that should be grown on each acre, and (3) the results of different methods of thinning to obtain the desired composition and stocking.

In addition to new projects on the experimental forest, records are also to be maintained on a number of studies which were started prior to the establishment of the Forest Research Center. Several of these studies dealing with the conversion of low-value oak stands by planting and overhead release have progressed to a point where they will now yield valuable new information on the management of such stands. Necessary remeasurements are already underway. A high priority job for this year is to summarize and publish the results of these studies.

Forest range research in the Ozarks is new. Since the range position was not filled until February 1, the range research program for the Center is not as well developed as the program for forest research. Even so, it is apparent that forest range management problems in the Ozarks can logically be placed in two groups. One group deals primarily with the evaluation of the forage in forest stands managed primarily for timber and the feasibility of using this forage without interfering materially with the production of timber. The second group deals primarily with the methods of improving, using and maintaining the range resource on areas managed primarily for forage production. Then, of course, there is a possible third group which overlaps these two and deals with the advisability of managing an area for a continuous crop of both forage and timber.

Naturally, there are hosts of lesser problems in each of the above general groups. Thus far, however, the detailed problems have not been sufficiently analyzed to justify the selection of specific problems and experimental areas on which to work. The principal bases used in deciding which studies should be initiated and for establishing their priority are: Immediate benefit to the people; contributions to

permanent good land use; total areas or number of people served and the prospective return per research dollar.

Most grazing in the Ozarks occurs either on or in conjunction with forested lands. Consequently, forage and timber problems are complexly inter-related. Because of this overlapping of forest and range interests, research in the two fields should and will be carefully coordinated to prevent duplication of effort, and to provide for common approaches to common problems.

OPPORTUNITIES IN FARM FORESTRY

G. DAVID BAUCH

Farm Forester, Farmington, Missouri

Forestry students will, no doubt, be surprised to learn, as many older foresters were, that one of our biggest opportunities for forest conservation is to be found in our own back yard, so to speak.

This back yard consists of the 260-odd million acres—57% of the entire commercial timberland left in this country—of farm woodlots and other small forest holdings. They are very important from the production standpoint because they are more accessible than larger forests, and since they are held in small blocks (5 to 5,000 acres) the owners are in a position to carry on a more intensive form of management.

Forest Service figures show that the timber industry in Missouri alone brought in \$35 million or more in 1947, and this harvest could be increased permanently from three to five times over through proper timber management practices. Of this \$35 million harvest, 60%, or \$21 million, was from farm woodlands.

If production on this acreage were increased from three to five times over, it would afford a tremendous amount of work, variously estimated at full time employment for 75,000 to 100,000 people in Missouri alone. This, of course, would furnish an added incentive to the State to increase the number of farm foresters operating here. At the present time there are seven projects covering 30 counties in the State which served, during the fiscal year 1948, 554 timber owners on more than 80,000 acres.

This assistance included all the phases of timber management from making plans and estimating timber to marketing it under sound forestry practices, and in most cases actually marking the timber not only for sale but for stand improvement purposes as well, and locating buyers for it. In addition, incidental activities varied from surveying boundary lines in connection with timber sales to drawing up barn plans and advising owners on planting for both timber production and the control of erosion in both fields and in stream beds.

It requires more than an education in the principles of practicing forestry to be successful as a farm forester. In the first place, the owners of these small forests, for the most part, have to be *sold* on the value of managing their forest lands for a timber crop, though the idea is catching on three or four times faster than the available farm foresters can handle the job. In addition, there is the task of educating these small forest holders to the job of continuing the management of their holdings under good forestry practices. This educational process is necessary, of course, because it is physically impossible for a farm forester to do the work of cruising and marking that would be required in this management, due to the large volume of work involved. Since timber is one means of erosion control, a practicing farm forester will go further if he is familiar with the problem of soil and water conservation.

It is hoped to extend timber management education to mill operators and small forest industries as quickly as possible by demonstrating that they will benefit through improved forest practices in reduced costs of handling the larger timber that will be obtained through selective logging.

In some of the New England states, timber operators are being trained by the farm foresters to harvest the timber from these small holdings, and other states are going ahead, particularly the southern states, through the encouragement of The American Forest Products Industries, Incorporated, and their program, popularly known as "Trees for Tomorrow," or "Keep America Green!" Under this program some farmers in Alabama, for example, have found that their timber returns greater yields than any of the other farm crops. Also in the New England states it was found that owners of small blocks of timber took kindly to the idea of paying the cost of technical forestry assistance, so a group in Massachusetts formed a non-profit corporation to provide forestry services so as to relieve the owner of the details necessary to the management of his property.

Most forestry students wonder where they can get a job when they finish their schooling, so here is something for the prospective graduate to keep in the back of his noggin. At the present time it is estimated that there is a need for 2,000 farm foresters over the country on the 260 million acres that are held by 4,250,000 owners, and less than 200 are operating at the present time. It is generally agreed that, since this acreage is in so many small ownerships, it will be a tremendous job to reach these people and sell them on the potential value of their own holdings, and to educate them in management methods.

The Forest Resource Appraisal of the American Forestry Association showed that not more than 10% of the above mentioned small holdings are being operated on a sound forestry basis, so let's get to work.



A neighbor, passing the cabin of a mountaineer, had the bad fortune to run over and kill the mountaineer's favorite dog. He went into the house and told the man's wife what had happened and how sorry he was. The owner of the dog was out in the fields, and the motorist decided he had better get out and tell him of the accident, too.

"Better break it to him easy like," said the wife. "First tell him it was one of the kids."—Power House.



What is the origin of the term "by hook or by crook"?

In feudal times all forests belonged to the Lord of the Manor. The peasants were not permitted to cut trees, but had permission to secure for heating and cooking what underbrush, limbs, twigs, etc., they could reach "by hook or by crook"; i. e., what they could cut down with a pruning hook or pull down with a shepherd's crook. This served the useful purpose of keeping tree stands clear of underbrush, dangerous in a fire, and of superfluous and dead limbs.

In Memoriam



EDWIN A. TROWBRIDGE

April 27, 1885-June 7, 1948

Chairman, Department of Animal Husbandry 1910-1945

Dean, Missouri College of Agriculture 1945-1948

His position as Dean of the College of Agriculture climaxed a full, energetic life dedicated to agriculture and to the betterment of his fellow men.

FOREST FIRE CONTROL IN MISSOURI

By WILLIAM E. TOWELL

Assistant State Forester

Any discussion of the forest fire control program in Missouri should begin with an analysis of fire problems in the state. Only after a full understanding of the difficulties can a successful fire control program be built and Missouri has a big forest fire problem.

Of a total area of 44,333,000 acres, one-third, or more than 15,000,000 acres, is forest land—land that is growing trees at the present time. Very little of this 15 million acres could be profitably cleared for agricultural purposes, so it is probable that the forest area of the state will remain about the same. Forest fires constitute a very serious problem on about 13 million acres of this land, chiefly in the South and East Central Ozark and Ozark border country. The remaining two million acres occur largely as isolated farm woodlots in other portions of the state.

In order to be successfully managed for timber production, these 13 million acres, above everything else, *must* have protection from fire. Soil fertility cannot be maintained, forest stands cannot reproduce, and neither maximum quantity nor best quality wood products can be grown when the woods are burned. Any comprehensive program for forestry must include reasonable assurance of fire protection.

Before any organized efforts in fire control were started, conservative estimates showed that about $\frac{1}{3}$ of the 13 million acres burned each year. Some areas might escape burning for many years, others often burned every year, but on a statewide average the total burned area every three years was 13 million acres. Once started, fires usually ran unchecked until stopped by rain or natural barriers. Common practice throughout the Ozarks was for each farmer to backfire around his fences and buildings when he saw the fire coming, adding more fire to the advancing flames.

Underneath the fire problem was an inbred belief held by most people living in the Ozarks that the woods should be burned. In spite of the fact that most of their income was derived from the woods and the products they cut from the trees, most of these people thought of themselves as farmers. They were much more interested in their two or three lean cows that roamed the hills than the hun-



Red streaks of fire on the Ozark hills at night. This is one of the 6,000 wildfires which occur in Missouri each year.

dreds of ties and logs they cut each year for their cash income. It was felt that the woods had to be burned each year to make more grass; to kill the ticks, chiggers, and other "varmint"; to drive out the wolves; to get rid of the "bresh" or just because Daddy and Granddaddy said it was the right thing to do.

These beliefs are still directly responsible for the 6,000 or more wild fires that occur in the state each year. There are more fires in Missouri than the combined annual total in Michigan, Wisconsin, and Minnesota.

Most of the land being burned was not owned by those doing the burning. It was timber company or mining company land still in large blocks of non-resident ownership. When the virgin timber was finally cut and no valuable mineral deposits found, vast areas were abandoned—left, as worthless, to the will of the hill people. These were the lands from which the local resident hacked his ties; which he burned to get more grass for his cows. Little value was attached to the land itself and few realized that trees would grow again. Millions of acres were tax delinquent, completely neglected by the owners and constantly abused by local residents.

This is a brief picture of the situation in the early 1930's. The

only possible solution was a public forestry program administered by some agency of the state or federal government. The action program centered itself as one of fire prevention, with public ownership or a vast education program or both as the logical approach. For chronic tax-delinquent lands where the owners themselves professed no interest in the property, state or federal ownership emerged as one of the best solutions. As long as people remained in or near this forest area, a vast education program was essential. The belief in woods burning had to be supplanted by a desire for protection, either through willingness or through force of law. But an organization for fire detection and actual fire suppression is basic to the prevention efforts. Accidental fires can be just as destructive as deliberate burning. It is also hard to convince any farmer that he should keep fire out of his woods for a few years if there is no reasonable assurance that fire will not come in later and cause much more destruction than frequent burning had.

Fire control in Missouri is a year-round job. Blazes occur in every month of the year, but there are definite peak fire seasons, and it is during these most hazardous periods that the problem becomes acute. It is necessary to maintain a fire fighting force throughout the whole year and to be ready to man the lookout towers any day. At the same time, the fire control organization must be able to expand to several times its normal size to combat the larger number of fires and greater resistance to control during the fall and spring fire seasons. Without the necessary forces to successfully cope with peak conditions, the other work through the year is largely lost.

Statistics show that the "blow-up" conditions can come anytime between October 15 and May 1. Fall conditions are seldom as severe, however, as the spring fire season. March and April consistently bring the most fires and the largest burned acreage. Light hardwood fuels predominate in Ozark forest stands. The leaves dry out rapidly and rate of fire spread is fast. Spring winds are largely responsible for destructive fires during this period.

In the 1920's the first attempt was made to establish forest fire protection in the heart of the Ozarks, but after a few years, the effort was abandoned in the belief that the job was impossible. The U. S. Forest Service took the first concrete steps toward a successful forestry program in the state when the Clark National Forest and Mark Twain National Forest were established in Southern Missouri as purchase units in 1933. During a period of 15 years, the federal government has bought about 1¼ million acres of land. Fire protection and woodland management programs have been built up for



Courtesy Missouri Coconservation Commission

*Missouri's latest fire fighting weapon—a heavy-duty
fire line plow and tractor in operation*

these federal lands and protection extended to some adjoining private lands.

Rapid progress was made on the national forests during the early days with the help of the Civilian Conservation Corps. Towers, roads, telephone lines, headquarters, and other improvements were constructed by the C.C.C. In about 15 years, it has been demonstrated on the national forests that woods burning can be reduced from 33% annually to a fraction of one percent. At present, 2 million acres of federal and private lands within the forest boundaries are receiving adequate fire protection. The success of the National Forest Program, unfortunately, does not extend to the other 11 million acres of forests.

In 1938 the Missouri Conservation Commission, under a constitutional reorganization, recognized the importance of Missouri's forestry resources. A forestry program as started and has grown steadily since that time. Realizing that forest fires were enemies of the soil, timber, wildlife, and of man himself, greatest emphasis was immediately placed upon a fire control program. In 1938 four protection districts comprising 1½ million acres were organized. Trained foresters were assigned the task of establishing fire control facilities and carrying on fire prevention campaigns on state and privately owned lands.

Progress has been slow, much slower than on the National Forests. Very little help was received from the C.C.C. program during its last few years of existence. Funds were not available for intensive development of manpower and equipment. Practically all of the land included within the state fire districts was privately-owned—state-owned forest land today constitutes only 2 percent of that protected. In spite of these difficulties, considerable progress has been made.

State protection has now been extended to 6 million acres of woodland. Annual burning in these districts has been reduced to 1 or 2 percent of the land under protection. Thousands of landowners have signed cooperative agreements placing their land under fire control. More than 50 lookout towers, many miles of road, buildings, telephone lines and other improvements have been built. More than 100 full time employees with a staff of 17 trained foresters have been employed. Hundreds of extra employees are hired for construction work and fire fighting.

The most modern methods available are employed in combatting wildfires. Airplanes are used to help detect fires soon after they start and to direct fire fighting operations on the ground. Lookout towers, fire trucks, and district headquarters have all been equipped with modern FM radio communication. Trained fire crews have been supplemented by the best type of fire fighting equipment available. Four wheel drive powerwagons and jeeps are used as woods pumper trucks, carrying their own water supply, pumps, and fire hoses. Bulldozers have been successfully used for fire line construction. A heavy-duty fire plow and tractor unit has been secured and placed in service for controlling the larger hotter fires. Scientific weather instruments are employed to forecast dangerous fire conditions and to put the fire fighters on the alert.

Every means available is used to carry forest education to residents in the forested areas. A generator-equipped "Showboat" takes motion pictures to rural schools which are without electricity. Personal contacts, meetings, posters, letters, radio programs, and signs are all used to sell the need of forest protection. Fire law enforcement will be pushed as fast as local courts will permit.

On the six million acres within the state protection districts, the degree of protection achieved is still not adequate. Of perhaps more importance, however, are the 5 million acres which as yet have no organized fire control work at all. District boundaries will be extended and new districts established just as fast as available money will permit. Inflated present-day costs of labor and equipment, plus

the intensification of activities on the older districts, prevent a rapid expansion of area.

There has been much progress in forest protection during the past 15 years. Nothing must stop this progress until all of the 15 million acres of woodland are contributing their full share to the welfare of all the people of the state.



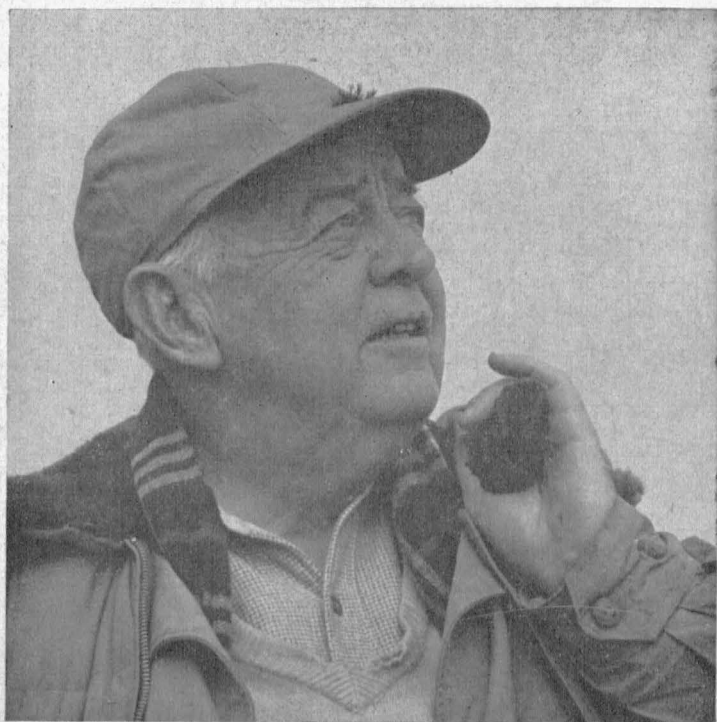
Attention! FARMERS
LUMBERMEN
ESTATE OWNERS
PASTUREMEN, WOOD
DEALERS, PULPWOOD
OPERATORS

ONE MAN CAN FELL AND CUT UP TO 12 CORDS DAILY
with the **KUT-KWICK** POWER SAW

This one man portable saw is used to fell timber—then with a simple adjustment, the blade is turned to cut up fallen logs. Easy and economical to operate! Increases production!
Ideal for clearing weeds and underbrush. Used everywhere for poles, fence posts, firewood, stumps, etc.

Write for Details and Name of Nearest Dealer
KUT-KWICK TOOL CORPORATION
PHONE L. D. 25 • 1927 NEWCASTLE ST. • BRUNSWICK, GA.

In Memoriam



Courtesy "Missouri Conservationist"

E. SIDNEY STEPHENS

September 4, 1881-October 17, 1948

President Conservation Confederation of Missouri 1935-1937

Chairman Missouri Conservation Commission 1937-1947

"The impress of his faith, integrity, and devotion to the public good is forever on the lands and waters of his country and the hearts of his fellow men".

Bad Fire Day

KENNETH C. COMPTON

Assistant Professor of Forestry

In my notebook for 1947 under Thursday, March 27, appear a couple of brief entries:

1—4:30 Bulldozer, 3½ hrs. at \$15.00

E. M. Persons, DeKalb, Miss.

Fire in Section 24-9-16, 19-9-17—108 acres

To anyone running across them in casual perusal they would mean practically nothing, but to me and a few others who were there, they would call up unpleasant memories.



The Author

It was not the largest fire to burn on company property; it did not burn the longest; it did not require the largest crew to handle it. The uniqueness of this forest fire was its almost uncontrollable fury—a result of a combination of the factors which constitute a “bad fire day”.

Veteran fire fighters from the western, northern, and northeastern regions would probably be amused by the description of a “bad fire” in the southern piney woods region. There, most of the forest fires are surface fires consuming mostly leaves and litter, destroying only hardwood brush and pine reproduction. There are no awe inspiring crown-fires, no burning embers carried for a mile or more by the draft of the fire and high winds, no “blow-ups”, no scorched bodies of fire fighters trapped by the blazes, no destruction of thousands of acres of virgin timber. No, none of these characteristic horrors occur in the piney woods of east central Mississippi. The devastation is insidious, sly, only occasionally bursting into brutal destruction. During the months of February and March, however, the direct and indirect losses from forest fires run into hundreds of thousands of dollars in this region alone. It shows in dead or feebly sprouting shortleaf pine saplings, in fire consumed longleaf and loblolly pine seedlings, in scorched butts of

pine and hardwood trees where fungi can enter to cause rot, sometimes in browned lower needles and leaves of the pole size and larger trees, and in blackened tree trunks to heights of twenty feet or more.

The indirect results are not so visible: loss of soil fertility, increased run-off and erosion, a set-back of a few to many years in establishment of another crop of seedlings, loss of revenue from planned management cycles. A conservative estimate of losses, direct and indirect would hardly be set at lower than twenty dollars per acre, not including the costs of presuppression and suppression.

On the particular day in question all indicators pointed toward trouble. A dry spell, high, gusty March winds, field-burning time for the farmers meant that fire fighting organizations, private and state, could look for difficulty in controlling any forest fires that day.

The moisture indicator sticks at Kemper Ranger Station were practically bone-dry, the wind indicator showed air speeds to sixteen miles per hour (airport indicators in the open showed gusts of over thirty miles per hour). The company chief forester, Art Nelson, alerted his crews over the short wave radio. McDaniels and his crew were standing by at Lauderdale Tower, Luther Boone was ready at Tillman Tower. At the Ranger Station the two power wagon tankers were ready to go, another crew was spotted at an emergency lookout in the northwestern section of the territory. As a special measure John Cross and I were assigned to patrol in the Ford pick-up the scattered lands of southern Kemper County.

We spotted the smoke almost as soon as we arrived within our assigned area and drove as fast as the road conditions would permit to where we thought the fire was. A quick turn off the graded country road and we were on a single track road through a cotton field, around a tenant house, and through a pasture right up to the fire line. Our truck was parked under a pine tree which was responsible for the fire jumping the road. A char of pine needles told the story. The fire had been set in the field to the left of the road, burned up to the road, and burned itself out except in that one place—a space twenty feet wide. From there, fanned by the high southwest wind it had struck fiercely into the mixed hardwood and pine stand and straight toward company land. At first, it had consumed the hardwood and pine leaf litter, traveling at a rapid pace over a slight rise and down a gentle slope toward a small hollow.

Cross took a fire rake, which he preferred to any fire tool, and started along the south side of the fire with hopes of pinching it off.

We had already called by radio for help, knowing that this fire was too large for the two of us to handle. We were assured that the Lauderdale crew would be there as soon as possible, and a state crew which overheard our conversation also started for us. Shouldering my back-pump I started along the north side of the fire, working as fast as I could but making little headway. Any coal not extinguished completely was fanned into a new blaze by the wind. I had traveled about two hundred yards when I came to the fence on which splotches of orange paint indicated the boundaries of company land.

Crossing the fence, I abandoned a portion of line behind me with hopes of stopping the fire before it raced too far into company forests. In this particular area a fire had burned in August four years previously, leaving a mineral soil seed bed for the fall seed crop. Now it had a dense stand of loblolly pine reproduction in the bottoms, and farther back on the slopes and ridge tops there were thousands of longleaf seedlings nestling in the grass. On my side of the fire the flames were racing through the head-high loblolly pine seedlings, destroying them as it burned in the almost solid mass of foliage. I pumped water frantically, emptied my tank, refilled it from a water pocket in the gully, and hurried back to find my fire line overrun by flames which had swept in from both sides.

By now I realized that my efforts were too puny to make any impression under the conditions which this fire was burning. Sick at heart at the sight of sheets of flame racing through that beautiful stand of seedlings, half blind from the smoke, heat, and sweat in my eyes, I started up the slope toward where I knew a woods road followed a ridge top. There I found the company's chief forester with his carryall and a state crew with their tanker.

The fire had shot a long tongue from the bottoms, where I had been jabbing at it so futilely with my pump, and headed straight for the state crew and their pumper on the graded road. Lutén Adams, county ranger, had parked his truck along the graded county road in the path of the fire with the intentions of stopping it by burning a strip along this road. Even before the two fires had met, the back-fire fired back, literally and figuratively. To quote Adams, "It swooshed up under my fire truck and almost burned it up before we could get it out of there".

A few minutes later the fire roared up the hillside toward the woods road where the state's pumper and the boss' carryall were now parked. In my haste to move the carryall to a spot of safety, I installed a permanent offset in the back bumper. I never will know how that pine tree happened to be in the way, but at the time I had

other matters on my mind. Fortunately, this was the only casualty, mechanical or human.

About this time we heard the clank and roar of a "cat", and in a few minutes a big yellow job with a bulldozer blade appeared on the scene. Art had found it within a short distance of the fire excavating a lake site and building a dam, and he had persuaded the operator to assist us. The morale of the fire fighters soared as they saw the "dozer" tear out an eight foot line down to mineral soil. A few small trees were sacrificed in the process, but the driver clanked away along the edge of the fire to catch the head and work around it. Three times in the next three hours he cut across the blowtorch-like head, followed by a crew setting back-fires and cleaning the line where the blade had failed. Twice the fire jumped the line, but gradually it was confined to a smaller and smaller area. Before the third line had been established it had jumped another graded road, but its vigor was spent. When it burned to the last line, it either burned out or was controlled by crewmen.

In the five hours spent on this fire, crews had arrived from all directions. One crew from the company ranger station, one state crew from a distant section of the county, and finally a crew of yard laborers from the company's plant had arrived after a twenty mile ride with the wood buyer, who had received an emergency call. All told, there must have been thirty men, tired, hot, and smoky, gathered around the trucks and cars as we checked in with the towers.

Everyone had some comment on the fire. Few fires burning in this section travel so fast that workers cannot build a narrow line and stop them. This one had roared across one thirty-foot graded right of way and a second smaller right of way. It had jumped ahead twenty to fifty feet at a time as the wind and draft carried burning leaves and embers through the air. After a thorough check of fire lines, all crews started for headquarters, hopeful that a dying wind would make any later fires more tractable.

Was it that day that we heard a towerman in an adjoining county tell his crew in a weary, resigned voice to take the fires as they came to them, because there were so many there was little point in his directing them to the next one? Perhaps it was another day. Sometimes forest fires produce humorous incidents in connection with their suppression—usually not. There is nothing funny about a forest fire or its aftermath. In the months afterwards, I often drove through the area—about a mile long and a quarter mile wide—and hopefully

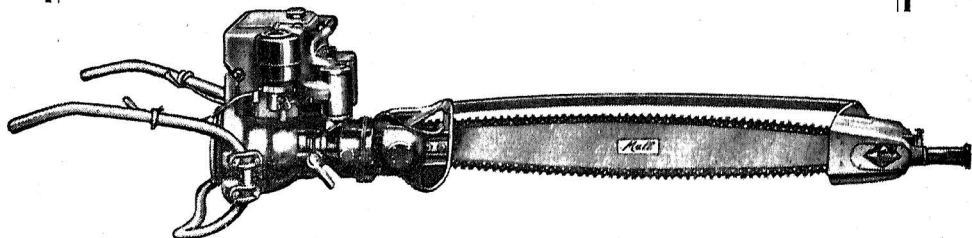
checked the scorched seedlings for signs of life. Many of them put forth weak, pale-green sprouts which gave up the struggle in the hot summer months. Some of the longleaf seedlings had survived, even though the needles were burned black to the bud. Those in the early grass stage were gone.

From a distance of a mile I could see the burned over area from the top of a hill. In the center was a brown patch, several acres in extent, which proved to be a stand of pine trees, forty to sixty feet tall. No underbrush grew here—just a heavy growth of coarse grasses which had burned so fiercely it browned the needles on these trees.

Tadpole Springs under one of the hills on the edge of a little valley would probably be unfit as a drinking water supply for a long time. Some day I expect to drive through this area again, and I hope to find another dense stand of loblolly and longleaf pine reproduction. It burned over in 1943 and 1947. I wonder if it will burn again in 1951.



For Faster Felling & Bucking
USE THE *Mall* CHAIN SAW
REG. U.S. PAT. OFF.



A lightweight, powerful timber saw for easy and efficient use in the woods. Use it for faster felling of timber, clearing land, bucking or limbing trees. Equipped with no-stall automatic clutch . . . removable idler . . . sturdy 2-cycle gasoline engine.

Models from 18 inches to 12 feet. Also available with air or electric power units. For smaller timber use the Mall Bow Saw or Circular Power Saw—attachments interchangeable with Mall 2-cycle gasoline engine. Write for further details.

MALL TOOL COMPANY

7740 South Chicago Avenue

CHICAGO, ILLINOIS

BETTER LAND RESOURCE MANAGEMENT IS COMING TO THE MISSOURI OZARKS

PETER W. FLETCHER

Instructor, Department of Forestry

It was a warm, bright, Sunday afternoon in early December, 1948. As I drove south from Springfield, Missouri, and then east on a gravel farm-to-market road, I reviewed events in my life which happened more than a decade previously in this locality. I had been a ranger with the U. S. Forest Service at that time. The task had been to start rebuilding a flagging forest economy in the Ozarks. I was re-visiting a woodland area in Christian County to see what changes had occurred in almost fourteen years of forest protection and management by employees of the Mark Twain National Forest.

I parked at the end of a ridge-top lane. A tower for detecting forest fires loomed high on the horizon. Here was a shortleaf pine plantation, set out in 1937 on an open, fenced field. The trees were about 12 feet tall, their crowns just beginning to touch. Best growth and survival occurred where the pines were coming up through sassafras, sumac, and briars. Here the soil was moist and loose, with a fresh odor. Microbes and earthworms were obviously decomposing the organic matter and incorporating it deep into the soil. Trees and soil contrasted favorably with the bare, trampled, stony, eroding goat pasture so well remembered from bygone days.

Farther down the ridge grew a saw-timber size pine-hardwood stand. The density of the undergrowth made an immediate impression. I recalled running a survey line across this ridge in the summer of 1934. Then it was so open that a 10-chain compass sight could easily be taken. Now, even with the hardwood leaves off the trees, I could hardly see 2 chains ahead. The mantle of angular chert rocks on the soil surface, so prominent in 1934, was now buried beneath the leaves. Young pines looked thrifty in the larger openings, but needed release where overtopped elsewhere. In 1936 this stand had been sweetened with pine planting in the openings. A good sized crop shortly thereafter accounted for the young pine understory. This stand seemed ripe for the removal of mature pines and much of the large, decadent oak over-story. I noticed several squirrel nests in the oaks.

A recently brushed-out woods road on the next ridge south led me into a timber sale area. It was moderately heavy cut, involving the removal of perhaps half of the merchantable timber, both oak and pine. Good utilization well up into the tops indicated that firewood had been removed after logging. Brush was largely scattered, and collecting a deep layer of leaves. Logs had been animal-skidded up the slopes, and trucked out along the ridges. Skid trails were already beginning to heal over, because brush had been laid in them after logging was completed. I reflected how in the past these skid trails would have been left to erode into rocky ditches. I wore out two pairs of boots in 1934 scuffing over sharp flint rocks such as these.

At the end of the timber sale ridge my path led down across a limestone glade on a south exposure. How well I remembered the ledge outcrops contouring a glade slope, the thin, black soil, slick when wet, hard and tough when dry. A profusion of red cedars had put in their appearance on this glade since I had last seen it, concentrated just below each ledge and beneath the shelter of persimmon trees. With cedar posts selling at about fifty cents apiece in neighboring states to the north, I wondered why more encouragement wasn't given this species. It grows naturally on a wide variety of sites, from swampy to dry and rocky, and on a wide range of soil acidity. If someone would figure out the nursery problem of cedar blight, surely we could learn to plant it successfully.

Below the glade I followed along a branch bottom where sycamore was growing well. Two rabbits jumped up before me. The ground beneath several black walnut trees was covered with black-hulled nuts which should have been drying in someone's basement. The small creek had entrenched itself to a bed-rock bottom. A tiny stream of clear water glided noiselessly along a rock crevice and splashed over a ledge. I could not recall having seen this creek flowing in former years except as a muddy torrent in flood stage. It appeared that protection from fire and grazing on the relatively small watershed above had begun to show up in prolonging and equalizing flows immediately downstream.

I turned south again with the main stream, noting its blue-green water, characteristic at low stages, the wide reaches of gravel bars, caving banks, and high-water marks well up on the trees. It would take time, I thought, a long time for the effects of upstream watershed protection to reach this far downstream.

For half an hour I trudged back up another ridge through a burned and grazed woodland in private ownership. It was like a page

out of my 1934 recollections, contrasting vividly with the scenes of but a few moments before. The soil was bare, exposed, eroding, littered with chert, dry, packed, and trampled. There was almost no young tree growth, very little palatable forage, and not much cover for game. The trees were scattered, fire-scarred, largely culls. It was a clear case of the disastrous effects of over-cutting, repeated burning, and over-grazing.

I passed through a steep, abandoned hillside field. It had been new-ground in 1934. I remember that the first crop yield, unfertilized, was 25 bushels of corn per acre. Judging by its appearance, the farmer had discontinued cropping some six years previously. Apparently yields had dropped as soil erosion removed the surface soil, exposing the rocks. In these six years nature had managed to cover most of the field with weeds and scrub brush, starting the long road back to productivity by successive plant communities. This hill should never have been cleared and cropped.

My spirits were lifted when I crawled through a fence into a fine, improved pasture. For one thing, I flushed a covey of quail. There was a ridge pond full of water, and fat Guernseys stood by the barn. The sod was unbroken, and hadn't been grazed too closely. The barn had been repaired and enlarged. A young orchard supported a dense ground cover of bur clover and lespedeza. White bee-hives stood in an orderly row. A modern chicken house and fenced yard overflowed with white Leghorns. A winter's supply of firewood was stacked neatly beside a well house which sheltered a throbbing electric pump.

The gray, weather-beaten farm house I remembered was covered in white asbestos shingles, and re-roofed. Two hound dogs sounded my approach, and an old acquaintance of long ago turned in his porch chair. Still keen eyed for his years, he peered at me sharply when I called his name.

"Oh, say! Aren't you that forestry feller that used to be in these parts some time back?"

Well, we had a lot of catching up to do. We went in by the fire and within an hour had picked up the loose ends. It was a story which could be happening in many Ozark families.

His youngest son had grown up, came back from the Army, married, had two children, and was living with him until he finished his own house just down the road. The boy had brought back a lot of new ideas about farming, and was putting them into practice. He attended night classes under the veterans' training program. He was concentrating on dairy farming and poultry. Cultivation was restricted

to a large garden and the bottom field. In the winter the boy worked at a sawmill cutting logs which came largely from National Forest timber sales. He had developed a good business in selling slab kindling and fireplace logs which he hauled to Springfield in an Army surplus truck.

The old gentlemen showed me the modern bathroom and kitchen which his son had built and equipped through the aid of a G. I. loan.

Back by the fire again, he told of the neighborhood activities in the intervening years. He came out strong against indiscriminate woods burning and woodland grazing. He was convinced that the best way to make a reasonable living in his corner of the Ozarks was to cultivate only the bottoms and upland flats, put in fenced improved pastures on the broad ridge-tops, and protect the forest on the slopes.

It was heart warming to hear him "selling" me on wise land use. As I drove back to Springfield in the chilling December evening, I felt sure that better management of forest, soil, and water resources in the Ozarks was making significant strides, although there is still a long road ahead.



POPLAR BLUFF—MISSOURI

- 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

The New

W. E. B. Sawmill Company

E. F. WEHKING

Sometime ago we decided that we did not want to work for someone else. When working for "the Boss" one's possibilities are limited—and then too, maybe the fish are biting on that very day you have so d— much work to do for the chief.

After deciding to be independent, we had quite a problem trying to find a suitable field in which to spread our wings—some field in which our initiative wouldn't be hampered, our ambition held in check, or our energy wasted, not to mention our ego: Yes, we must be careful of our ego and conceit.

How did we solve this problem? If I remember correctly, it was all due to a particularly vile cup of coffee we were inhaling one morning between forestry classes. Someone mentioned the coffee didn't taste so good. Someone else said, "Tastes like they've been soaking sawdust in this stuff for days." SAWDUST, that's it, our stepping stone to the future. Before you can get sawdust you need to saw lumber, and lumber sells for money. But before you can get lumber, you need a sawmill—so we decided to go into the sawmilling business. See how easy it is to select an occupation?

Actually, there was a little more to it than the above would lead one to believe. In a few words, it is our opinion that sawmilling is a good starting point, for it is a business to which any of a thousand related businesses can be added or included. A few closely related business are: fuelwood operations, post cutting (preservative treatment of same), dry kiln seasoning, planing mills, dimension mills, box factories, flooring mills, and so on. Most of these can be conducted on a small scale as well as on a large scale.

At present we are going into the business in somewhat of a small way—not that we aren't feeling the "bite" in our bank account getting started. Our reasons for starting small (yep, we've got 'em) are first of all, that in the event we aren't as shrewd as we think we are (and we're beginning to doubt if we are), we don't want to lose the fillings out of our teeth. Secondly, we want to see how we get along together in business. Thirdly, we are still in school trying to learn something.

We can't devote all of our time working on the mill, so it would hardly be economical to set up big. By operating the mill in conjunction with our class work, we expect to learn a darn sight more than we could by cracking books without experience—or on the contrary, by getting experience without the aid of books.

Since we are undertaking this project so that we may become acquainted with the problems connected with sawmilling, and not the problems of the sawmill itself, we decided to purchase a new mill which we knew would be in good shape. There were several used mills for sale in this community, all of which need some repair that even we could see. Several of the mills were lower in initial cost than our new one, but we expect that, for us, the new one will be cheaper in the long run.

Our equipment consists of: one Belsaw which is capable of sawing 24 inch logs, sixteen feet long. We are swinging a 48 inch I. P. (inserted tooth or point) saw, which we believe will be large enough for better than the average run of logs. This mill is not as complicated as most mills for setting up and adjusting. It can easily be made highly portable and quickly moved from position to position. It is capable of sawing very accurate lumber with less experience on our part than would be necessary on larger outfits. Although it cannot be termed a commercial size mill, it definitely cannot be called a playtoy, or one that each farmer should own. I suppose that it could be called a semi-commercial mill—one that a farmers' cooperative might use, or three college students who want to gain experience and at the same time attempt to pay for the extra work put into the enterprise.

For the power unit, we have a second-hand Allis-Chalmers 40 horsepower stationary motor. About all that can be said in regards to it is that we expect it to furnish all the power we will need on the head saw, but perhaps not enough for any extra accessories, other than the sawdust conveyor.

We also have a Belsaw edger to speed up production and increase our profits, we hope. Most of the mills in this region do their edging on the head saw, which we think, is a loss of time, labor, and profits.

Since we didn't want to rob the head saw of any power which might be needed, we have arranged to use a '31 Chevrolet motor on the edger. This motor we have picked up for \$35 which includes starter, generator, clutch, transmission, etc.—everything except the radiator and battery. Our sources of information have informed us

that a regular radiator will not be a sufficient cooling system, but that we will have to use a 50 gallon drum instead.

In order to be able to move our equipment, logs, and lumber, we have a 1941 International, 1½ ton, cab-over-engine truck. On the rear of the truck is a winch which has a regular type transmission—3 speeds one direction and one in the other. By using a system of two blocks (sheaves or pulleys) fastened to the frame of the truck, we will be able to use the winch for “cross-haul” loading of logs, power units and so on. We expect that the winch might come in handy in case we get stuck in the woods—’course I doubt if we ever will. We don’t talk about our spending an hour and a half trying to get the truck out of the mud in back of one of our houses here in town.

We’ve sure been using quite a few we’s, haven’t we? Well, if you’ve managed to stand it this far, a few more won’t hurt. Or will it?

To start with, we have the job of sawing some 10,000 feet of “down logs” about five miles north of town. All we need to start production is delivery of the mill, setting up of same—and we’re in business. After we get this warm-up job done we will be ready for more and bigger commitments.

After we get started and get the feel of things, we hope to be able to hire forestry students at slightly better than University wages. That, of course, applies mainly to those students who want to gain experience around the mill or in woods as logging crews. When we pay, we’ll probably expect work in return—or are those conditions still out of style? We’ve had offers from one or two students who *only* wanted us to guarantee them wages equal to or greater than those we *hope* to make, and all they were to furnish was their labor. Kindly of them, eh? We love to talk business with them.

If anyone has any good advice to offer, knows anyone that has any timber to saw or sell in this region, either standing or cut, how about letting us know. Also if you’d care to ask us about anything in regards to this project, and there is a darn sight more to it than written here, see either Wehking, Erwin or Barnhart. We’ll be glad to talk to you—unless we are busy shaking the legs off some pin-ball machine. We do need our exercise.

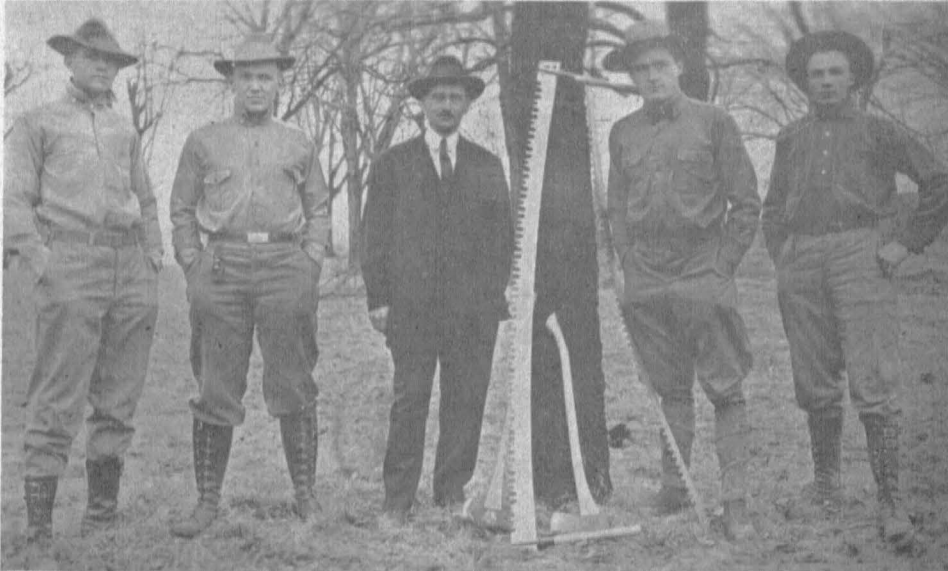
If you see a gray, ton and a half, cab-over-engine truck with “W. E. B. Sawmill Co.” written on the side—that’s us. What’s that old saying? *Watch us grow.* AH! yes.

Come out to see our set-up, and watch for the sequel to this project in next year’s issue of *The Missouri Log*.

Notes From The Past

Editor's Note:

Many interesting facts of the past are overlooked and gradually forgotten as time rolls by ever gaining in momentum. In the process of preparing this edition of *The Missouri Log* the following information appeared. It concerns the first Forestry Department at the University of Missouri. This brief account was prepared from a letter from Mr. John A. Ferguson to Professor R. H. Westveld. We include it here because it is of great interest and significance since it is evidence of the early recognition of the necessity for forestry study and practice in our state.



*First forestry class at The University of Missouri
Fallenius, Pixlee, Prof. Ferguson, Anderson, Talbot*

Mr. John Arden Ferguson can be credited with the starting of the Forestry Department in the School of Agriculture at the University of Missouri. He came to Missouri from Penn State in 1911, remaining here for three semesters.

Contrary to the University authorities' opinion that it would take a year to organize the work, Mr. Ferguson pitched in immediately

since there were four students anxious to study forestry. He was the only instructor and in addition to all of the junior courses, he offered both farm forestry and general forestry.

The following summer a field camp was held in the Ozarks on the White lumbering proposition. Seven junior students took part. As cook on the expedition, they hired a young man from Columbia. He became ill after the first week and Mr. Ferguson took on another position—that of cook. Either the men liked Mr. Ferguson's cooking or cooks were hard to find because he held the job until the end of camp in addition to his instruction work.

The following fall with two classes, it was necessary to have another instructor. E. C. Pegg, a graduate of Yale, joined the staff. Both men had all the teaching they could handle.

Mr. Ferguson went back to Penn State the second semester of that year. The four seniors studied hard for their civil service exams and two men passed. The exams were two days long in those days.

So we conclude that the Forestry Department had a good start. According to Mr. Ferguson it was the only department in the southern states and would have succeeded had it been given a little more support and advertising.

And even in this short span of years it is quite possible that it would have had a marked effect on the forest situation of the State of Missouri.



THE COMING OF THE TREES

“Let trees be made, for Earth is bare,”
Spake the voice of the Lord in thunder.
The roots ran deep and the trees were there
And Earth was full of wonder.
For the white birch leaned, the oak held straight.
The pines marched down the mountain;
The orchards bowed with their blossomed weight,
And the elm rose up like a fountain.
The palm stood proud as Aaron's rod,
The willow billowed slowly,
So came the trees at the call of God;
And all the trees are holy.

—Arthur Guiterman.



PROFESSOR R. H. WESTVELD
Chairman
Department of Forestry

Department And Faculty

A YEAR OF PROGRESS

A year has slipped past since the publishing of the 1948 edition of *The Missouri Log*. This year's edition would be most incomplete without a brief resume of the important progress made by the Department of Forestry here at the University of Missouri.

During the summer of 1948 the department was given a listed status by The Society of American Foresters. This step makes the department eligible for consideration for accrediting in 1950-1951.

The year saw the department enter into a cooperative research agreement with the Missouri Conservation Commission. The agreement provides for each agency to furnish a minimum of \$2500 each year for research purposes. The first project under this agreement is concerned with a survey of all previous plantings in the state. Plantations have been established in Missouri during the past fifteen years with no scientific basis for planting recommendations. This survey will help to determine under what conditions various planted species are either proving successful or unsuccessful.

Another broad agreement was made with the U. S. Forest Service. It makes possible cooperative work between the department and the Forest Service. Any specific project taken up is to be covered by a supplemental agreement. The first supplemental agreement provides \$500 from the Forest Service to be used in the above mentioned planting survey.

The year has also seen substantial progress on the University Forest near Poplar Bluff, Missouri. In May, Mr. J. M. Nichols was appointed resident forester. He lives on and administers the area. A broad research program has been inaugurated on the University Forest. It has been named "Rehabilitation of Missouri Forests" and is concerned with silvicultural problems. The research work on the area is partly financed by funds allocated by The Missouri Agricultural Experiment Station under the Hatch Act. During the fall of 1948 a study of acorn production and direct seeding of oak was made. The newly constructed summer camp was used by thirty-one sophomores during the summer of 1948. A sawmill has been acquired and will be in operation in the spring of 1949. Later in the year wood preservation equipment will be installed on the area. It is hoped that the products produced on the University Forest may be used by various departments of the University. Already the Animal Husbandry Department has shown interest in obtaining several thousand

fence posts and a large quantity of lumber for a cattle shed through this arrangement.

During the past year several additions were made to the teaching staff. Mr. Paul Y. Burns came to Missouri during the summer to take over the work of Mr. Richard C. Smith who was granted a leave of absence to go back to Duke University for his doctorate. Mr. Richard W. Dingle was engaged to handle the planting survey and to do part time teaching, including farm forestry and fire protection. Mr. Peter W. Fletcher came to the University of Missouri to do work on his doctorate in the Soils Department. He is teaching forest photogrametry and cartography.

A review of the past year must also include the establishment of the Northern Ozark Research Center. The Central States Forest Experiment Station, after studying the facilities throughout the state, chose Columbia as the location for the Center. Franklin G. Liming is in charge of the Center. Dr. Liming was also appointed to the staff as research associate.

In November the University of Missouri acquired the Weldon Springs Ordnance Tract from the War Assets Administration. This 7900 acre tract includes about 6000 acres of forest land. Plans provide for the appointment of a full time resident forester. Work on this area will include not only the management of the timber but also a research program.

Several thousand dollars have been spent during the past year for much needed equipment necessary to carry on the work of the department. This equipment came in the shape of new vehicles and laboratory equipment.

So, in general, it may be said that the Department of Forestry has made excellent progress in the past year. One problem which was not solved, however, was that of providing adequate laboratory and office space. No organization can operate with top efficiency when it is cramped for necessary space in which to work.

The people of the state may be justly proud of the rapid achievements made by the University in the forestry field. They may be proud of the fact that they have recognized the need of technical forestry training in our state.



**FORESTERS! OUR ADVERTISERS HAVE HELPED US, NOW
LET'S PATRONIZE THEM.**



MR. RICHARD C. SMITH

B. S. 1937, University of Minnesota
M. F. 1947, Duke University
Management, forest economics, forestry policy
At present is on leave of absence to complete
his doctorate at Duke.



MR. KENNETH C. COMPTON

B. S. 1936, Iowa State College
M. S. 1938, New York State College of
Forestry
Logging, lumbering, wood preservation, season-
ing, forest products, marketing and wood
technology.



MR. ROBERT E. McDERMOTT

B. S. 1943, Iowa State College
M. S. 1947, Iowa State College
Dendrology, range management, silvics, and
forest influences



MR. LEIGHTON E. McCORMICK, Extension As-
sociate Professor of Forestry

B. S. (Forestry) 1931, Iowa State College
Adult education in forestry throughout the
state under Agricultural Extension Service.
Cooperates with other agencies in all phases
of farm forestry and protection.

New Faces on the Faculty

PAUL Y. BURNS hailed originally from Tulsa, Oklahoma. In 1941 he received his B. S. in Botany from the University of Tulsa. Work on his master degree was interrupted by Uncle Sam. Mr. Burns saw duty in the U. S. Army Air Corps as a weather officer in the European theater. He received his M. F. from Yale University in June 1946 and then completed his resident requirements for his doctorate. Mr. Burns assumed the duties of Mr. Richard C. Smith and teaches mensuration, economics, and management.



* * *



RICHARD W. DINGLE was born in Bismarck, North Dakota. He received his B. S. in Forestry from the University of Minnesota in 1941. Following this he was employed by Union Bag and Paper Corp. and by Minnesota Mining and Manufacturing prior to his entrance into the Navy in 1943.

Mr. Dingle saw considerable service in the Pacific theater. Upon leaving the Navy he received his M. F. from Yale in 1947 and then completed his course work for his Ph. D. He has worked with both the Intermountain Forest Experiment Station and the Lake States Experiment Station. Missouri beckoned in August 1948. Here his interests are mainly in research along with silviculture and farm forestry.

New Faces on the Faculty

PETER W. FLETCHER came to Missouri to work on his Ph. D. in the Soils Department in addition to teaching courses in forestry. Those courses at present include forest photogrammetry and cartography. Mr. Fletcher was born in Blacksburg, Virginia and received a B. S. in Forestry from Penn State in 1933. He went to Yale to receive his M. F. in 1934. He has been employed constantly by the Forest Service but has worked with several agencies. Among these are the AAA, Central States Experiment Station, Appalachian Experiment Station and the Southeastern Station. Not to be omitted is the U. S. Navy where he served in the Pacific theater in photo intelligence and interpretation work. His interests lie in forest soils and influences.



* * *

J. MILFORD NICHOLS is seldom seen around the campus. "Nick" holds the title of field forester on the University Forest near Poplar Bluff, Missouri. He was born in Frankford, Missouri and after attending the University of Missouri for one year went to Michigan State College to receive his B. S. in Forestry in 1940. "Nick" served for several years as a district forester with the Missouri Conservation Commission. He saw over four years continental duty with the U. S. Army Air Corps.

New Faces on the Faculty

DOCTOR FRANKLIN G. LIMING came to Columbia, Missouri during the fall of 1948 as director of the Northern Ozark Branch of the Central States Forest Experiment Station. This is a local forest research center set up in Missouri by the U. S. Forest Service to help solve local forest and range problems under local conditions. He received B. A., M. S., and Ph. D. degrees from Ohio State University, where he majored in the fields of plant physiology and ecology. Doctor Liming has been with the Central States Forest Experiment Station since 1937. Prior to this he spent several years as research technician with the Bureau of Plant Industry and as an instructor at Ohio State University. He is appointed to the faculty here at Missouri as a research associate.



* * *

S. CLARK MARTIN joined the staff early in 1949 as research associate. He is employed by the U. S. Forest Service and is assigned to the Northern Ozark Forest Research Center. Mr. Martin received his education in his home state at the University of Arizona. His B. S. and M. S. are in botany and range ecology. Upon completion of his M. S. he was employed for seven years at the Southwestern Forest and Range Experiment Station working in range research and grazing management. At the station here in Columbia, he will be studying grazing problems in the forests of the Ozark Region.

Meet The Department Secretary



Mrs. Stanley R. McLane

A visitor cannot enter the offices of the Department of Forestry without sensing the extreme efficiency with which the secretarial work is carried on. Credit for this may be attributed to Mrs. Stanley R. McLane who has been with the department since the fall of 1946.

Mrs. McLane comes from Bloomfield, Indiana, where she attended high school. She holds a B. S. from Purdue University. Mr. McLane is working toward the completion of a Ph. D. in Horticulture here at Missouri.

In addition to her departmental duties, each year Mrs. McLane finds time to help in the publishing of *The Missouri Log*. For this help the staff is extremely grateful.



The Class Of 1949



CHARLES E. BARNHART

Columbia, Missouri

Camp: Mark Twain National Forest, West Plains, Mo., '47

Forestry Club: Treasurer '47-'48

Intramural sports '48: Softball, Football

Military Service: Army, Paratroops, European Theater.

* * *



EDWARD H. CANTER

St. Louis, Missouri

Experience: Logging, Ozark Region

Camp: Mark Twain National Forest, West Plains, Mo., '47

Forestry Club

Ag Club: Chaplain; Barnwarmin', Senior Chairman, '48

Alpha Zeta

Alpha Gamma Rho: Social Chairman

Military Service: U. S. Merchant Marine

* * *



JOSEPH B. CHURCH

Columbia, Missouri

Experience: Marquette National Forest, Moran, Mich.

Cruising, '48.

Camp: Mark Twain National Forest, West Plains, Mo., '47.

Forestry Club: Asst. Forester, '48.

Engineer Club, '42-'43.

Intramural Sports

Military Service: U. S. Navy Air Corps, Aircrew.

* * *



HARRY K. ERWIN, JR.

Pine Bluff, Arkansas

Experience: Nickey Brothers Plywood Co., Memphis, Tenn., '48

Camp: Mark Twain National Forest, West Plains, Mo., '47.

Forestry Club

Ag Club

Intramural Sports, '48

Missouri Log, '48

Military Service: U. S. Navy, Pacific Theater



HAROLD G. GALLAHER

Van Buren, Missouri

Bachelor of Science (Forestry), February, 1949.

Camp: Mark Twain National Forest, West Plains, Mo., '47

Forestry Club: President, '47.

Military Service: Army, European Theater.

* * *



EDWIN H. GLASER

Sullivan, Missouri

Experience: Missouri Conservation Commission, Fire Crewman, '44; Boise National Forest, Smokechaser, '48.

Camp: Mark Twain National Forest, West Plains, Mo., '47.

Forestry Club

Ag Club

Intramural Sports

Military Service: U. S. Marine Corps

* * *



GEORGE W. HAMILTON

Lyndon, Illinois

Camp: Mark Twain National Forest, West Plains, Mo., '47

Forestry Club

Missouri Log: Asst. Editor '48.

Military Service: U. S. Marine Corps, 9th Marines, Pacific Theater.

* * *



JOHN R. KULLMAN

Lincoln, Missouri

Camp: Mark Twain National Forest, West Plains, Mo., '47.

Forestry Club

Alpha Zeta

Missouri Log: Business Manager, '49.

Military Service: Army Air Corps, European Theater



WALTER B. METCALF

Omaha, Nebraska

Experience: Wenatchee National Forest, Washington. Look-out, '43; Olympic National Forest, Washington. Smoke-chaser, '48.

Camp: Mark Twain National Forest, West Plains, Mo., '47.
Forestry Club

Alpha Zeta

Intramural Softball

Missouri Log: Photography Editor, '48.

Military Service: Navy, Pacific Theater

* * *



LEE K. PAUSELL

Rolla, Missouri

Camp: Mark Twain National Forest, West Plains, Mo., '47
Forestry Club: Vice-president, '47; President, '48.

Missouri Log: Editor, '49.

Alpha Zeta

Military Service: Army, 84th Infantry Division, European Theatre.

* * *



RICHARD L. PIEPENBRING

Kansas City, Missouri

Bachelor of Science (Forestry), February, 1949.

Camp: Mark Twain National Forest, West Plains, Mo., '47.
Forestry Club: Ranger, '46.

Missouri Log: Business Manager, '48.

Military Service: Army Air Corps.

* * *



DONALD E. PITTENGER

Columbia, Missouri

Camp: Mark Twain National Forest, West Plains, Mo., '47.
Forestry Club: Ranger '47.

Military Service: U. S. Navy.



ALBERT J. SHIELDS

Harrisonville, Missouri

Bachelor of Science (Forestry), February, 1949.

Camp: University Forest, Poplar Bluff, Mo., '48.

Forestry Club

Military Service: Army, European Theater.

* * *



ERHARDT F. WEHKING

Columbia, Missouri

Experience: Cabinet National Forest, Montana, Fire Control, '42; Crossett Lumber Co., Crossett, Arkansas, '47.

Camp: Mark Twain National Forest, West Plains, Mo., '47.

Forestry Club: President, '46.

University Pistol Club: President.

Alpha Zeta

Military Service: Army, Field Artillery, European Theater.

* * *



DAVID L. WILDER, JR.

Experience: O. & C. Revested Lands Administration, Oregon. Senior fire crewman, '42; U. S. Forest Service, St. Maries, Idaho. Lookout, fireman, '43; U. S. Forest Service, St. Maries, Idaho. Lookout, smokechaser, '46; U. S.

Forest Service, St. Maries, Idaho. District dispatcher, '48.

Camp: Mark Twain National Forest, West Plains, Mo., '47.

Forestry Club: Secretary and Treasurer.

Newman Club

Alpha Gamma Rho

Military Service: U. S. Navy, Radio operator, Pacific Theater and Japan.

KEY TO YE GRATUATUS

- A. Woods experience limited to Hinkson cruising
1. Successfully completed 140 hours pin-ball
 2. Viewpoint—confused but practical, small packages
 3. Believes goats are the hope of the Ozarks and a silvicultural tool; endowed with ecological conscience:
G. shieldensis
 3. Doesn't know anything about goats except as an odor; saw-mill tycoon:
G. wehkingana
 2. Viewpoint—confused, larger packages
 3. Dainty, fastidious, lilies in a fish market, handle pin-ball machines as precision instruments
 4. Given to Madonna-like, knowing smirks: G. paulsellii
 4. Smirks with no special significance:
G. piepenbringensis
 3. Gum-shoed, near crumb, handle pin-ball machines with contempt
 4. Employs shadow boxing technique on machines—tilt:
G. erwinicola
 4. Stoic, vicious nickel plunger, don't-give-a-dam attitude:
G. gallaheraria
 1. Struggling to complete pin-ball requisite
 2. Fumbling, born with boxing gloves on
 3. Strictly a Navy cruiser, promoting Douglas-fir afforestation on Key West: G. pittingerkota
 3. Ashland cruiser, promoting nothing except a cigarette loan; thinks Douglas-fir is a pelt: G. metcalferes
 2. Usually out-fumbled
 3. Cruises with a side-saddle, knee bounce walk; can't see the tree for the bugs: G. hamiltoniana
 3. Cruises in the better circles, usually of wrong diameter:
G. barnharteri
- A. Woods experience: barroom floors, the underside of tables and/or a broken axe handle
1. Face commonly open
 2. Feet tractor-like
 3. The discretion of a broken beer bottle; Professor Smith's boy, never worries: G. canterata
 3. Virtuous, doesn't know what a beer bottle is; chaplain tendencies, conscientious: G. glaserpogon
 2. A veritable gazelle; a better cook than barber, secret admirer of Key West: G. wildererona

1. Face usually closed

Paper shuffling forester; strictly a white shoes and dark glasses man: *G. kullmaneris*

2. Swamp and deer fly refugee, motorized dog herder:

G. churchenxi

A Forester

The Forester is an amateur woodsman with a college education. There are two classes of foresters. One class believes in keeping abreast of those broad dynamic movements of the present day that challenge the best efforts of the nation's thinkers. The other class fights fire, builds truck trails, plants trees, and wears old clothes.

Some foresters have offices, some live in cities, and some work in the woods. Lots of the foresters spend practically their entire lives in God's great out-of-doors. They love to hunt and fish. They would too if they only had time.

It used to be said that a forester's best friends were his horse and his axe. Today a forester has no need for a horse and he might cut himself with an axe. Years ago most every forester wore a big Stetson hat and carried a gun on his hip and a flask in his pocket. Nowadays big Stetson hats are worn only in movies, and you hardly ever see a forester carrying a gun.

An interesting thing about a forester's life is that he meets all kinds of people from hobos to multimillionaires. It is not uncommon for a forester to have the privilege of personally doing a millionaire tourist favors. However, there is no record of a millionaire ever doing a favor for a forester. But even if they don't make much money, it's nice, steady work, and they have lots of fun.

Another satisfactory thing about a forester's career is that he is his own master, absolutely independent and answerable to no one for his professional conduct. That is, except to his wife, ladies' garden clubs, sportsmen's associations, nature lovers, newspaper editors, and local politicians.

Forestry is a very pleasant profession because it is so easy to get ahead. Many foresters graduate from college with only a few debts and immediately get a job and a wife. In about ten years time, in addition to the same job and the same wife, they have more debts and five kids. That's why foresters are so happy.

—*Park Service Bulletin*

U. S. Department of Interior



Juniors

Seniors

- Barnhart, Charles E., *Columbia, Mo.*
Canter, Edward H., *St. Louis, Mo.*
Church, Joseph B., *Columbia, Mo.*
Creasy, Randolph C., *Columbia, Mo.*
Edscorn, Kenneth C., *Overland, Mo.*
Erwin, Harry K., *Pine Bluff, Ark.*
Gallaher, Harold G., *Van Buren, Mo.*
Glaser, Edwin H., *Sullivan, Mo.*
Hamilton, George W., *Lyndon, Ill.*
Hunt, Ellis, *Columbia, Mo.*
Kullman, John R., *Lincoln, Mo.*
Lodge, Geo. W., *Bolivar, Mo.*
Metcalf, Walter B., *Omaha, Neb.*
Musbach, Ralph A., *Fulton, Mo.*
Paulsell, Lee K., *Rolla, Mo.*
Piepenbring, Richard L., *Kansas City, Mo.*
Pittenger, Donald E., *Columbia, Mo.*
Purcell, William W., *St. Louis, Mo.*
Shields, Albert J., *Harrisonville, Mo.*
Wehking, Erhardt F., *Columbia, Mo.*
Wilder, David L., *Lebanon, Mo.*
Wood, Edison B., *Bolckow, Mo.*

Juniors

- Ball, Gilmore, *Salem, Mo.*
Berkley, Raymond L., *Columbia, Mo.*
Deed, Richard N., *Quincy, Mass.*
Dressel, Armin T., *Sappington, Mo.*
Duncan, Dan W., *St. Joseph, Mo.*
Eckles, George W., *Springfield, Mo.*
Faulkenberry, Virgil, *Ellington, Mo.*
Francis, Buel E., *Columbia, Mo.*
John, William E., *Rolla, Mo.*
Kerr, Russell, *Ferguson, Mo.*
Kunze, Ernest W., *Villa Park, Ill.*
Liechti, Wallace M., *Jamestown, Mo.*
Matt, Lester E., *Webster Groves, Mo.*
Mertel, Frederick C., *Sedalia, Mo.*
Metcalf, Woodford P., *Rolla, Mo.*
Mobley, Noah F., *Kennett, Mo.*
Moeller, Carl A., *Kansas City, Mo.*
Moran, Harry B., *Cape Girardeau, Mo.*
Pallo, Frank B., *Sugar Creek, Mo.*
Raisch, Robert D., *St. Louis, Mo.*
Robine, Carl L., *St. Charles, Mo.*
Schweitzer, Francis J., *Poplar Bluff, Mo.*
Sendt, Harold H., *Belleville, Ill.*
Sendt, William B., *Belleville, Ill.*
Smith, Donald W., *Rolla, Mo.*
Smith, James C., *Webster Groves, Mo.*
Stevenin, Howard L., *Kansas City, Mo.*
Todd, William J., *Webster Groves, Mo.*
Tschannen, Lester E., *St. Louis, Mo.*
Vogler, James E., *St. Louis, Mo.*
Walker, James W., *Bradleyville, Mo.*
Wallace, Joseph P., *Columbia, Mo.*
Wilson, Orville E., *Brazil, Ind.*
Wolfel, Geo. A., *Sedalia, Mo.*



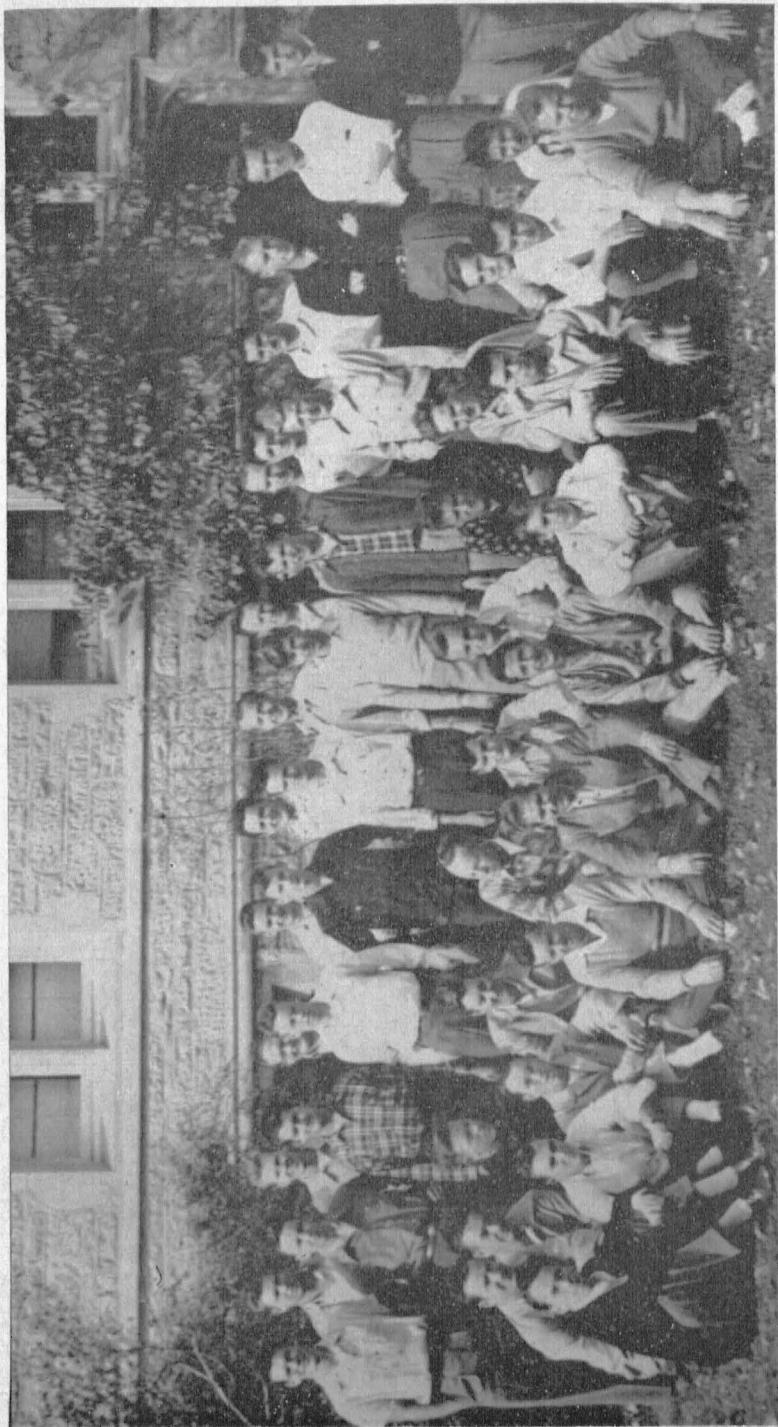
Sophomores

Sophomores

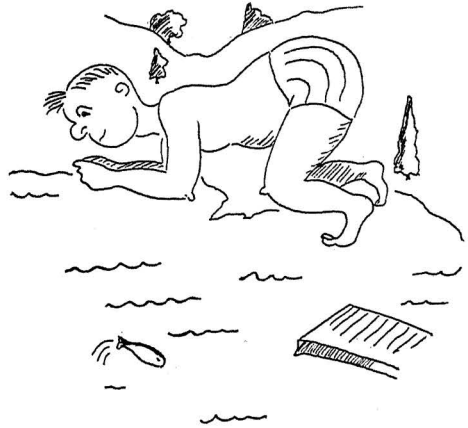
- Bammert, Robert F., *St. Louis, Mo.*
Bayer, Robert S., *St. Louis, Mo.*
Bragg, Frank B., *Kirksville, Mo.*
Brodhage, Jack A., *House Springs, Mo.*
Bruns, Raymond R., *St. Louis, Mo.*
Campbell, Lester E., *Lowry City, Mo.*
Carrere, James M., *Goldsboro, N. C.*
Chandler, Rolla E., *Sullivan, Mo.*
Clark, Benneville H., *Newtonville, Mass.*
Cochrane, James R., *St. Louis, Mo.*
Duesing, Richard C., *St. Louis, Mo.*
Edington, Thomas N., *Poplar Bluff, Mo.*
Ferris, Earl F., *Overland, Mo.*
Hafner, Kerwin F., *Vandalia, Mo.*
Hawkins, Wharton Z., *Memphis, Tenn.*
Lashley, Owen L., *Ironton, Mo.*
Mabry, James D., *Montgomery City, Mo.*
McGlasson, Bruce E., *Davisville, Mo.*
Ottomeyer, Donald J., *St. Louis, Mo.*
Plummer, John L., *Columbia, Mo.*
Reid, James D., *Overland, Mo.*
Schildknecht, John R., *Cassville, Mo.*
Shaw, Dale L., *Yukon, Mo.*
Stevenson, Robert L., *Tarkio, Mo.*
Taylor, Llewellyn M., *Weldon Springs, Mo.*
Todd, William G., *Columbia, Mo.*
Turner, Robert W., *Ironton, Mo.*
Vandeven, James A., *Cape Girardeau, Mo.*
Ward, John T., *Rocky Comfort, Mo.*
Welch, Hugh D., *Cameron, Mo.*
Williams, Ralph J., *Aurora, Mo.*

Freshman

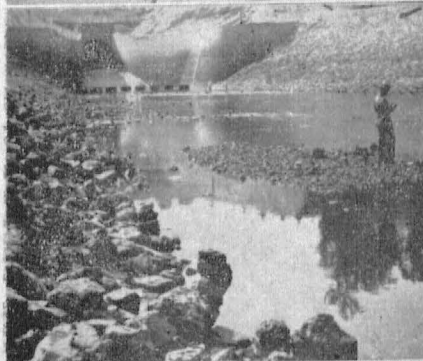
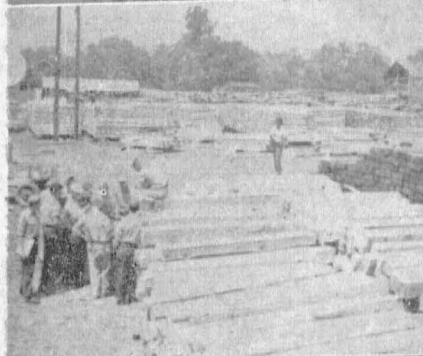
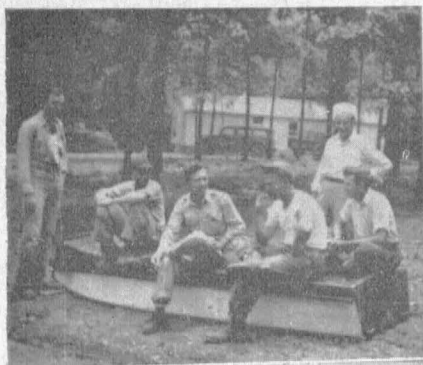
- Bushie, Gordon J., *St. James, Mo.*
Conrad, James D., *St. Louis, Mo.*
Davis, Jerry T., *Bevier, Mo.*
Edwards, Richard H., *Independence, Mo.*
Eggers, Kenneth W., *Jefferson City, Mo.*
Forbes, James G., *Kirkwood, Mo.*
Fortner, Norman L., *Dexter, Mo.*
Gardner, Francis R., *St. Louis, Mo.*
Grate, Donald A., *Webster Groves, Mo.*
Groepfer, Richard C., *St. Louis, Mo.*
Hayward, Jack T., *St. Louis, Mo.*
Herzwurm, Ernest J., *St. Louis, Mo.*
Holtz, Jean K., *Owensville, Mo.*
Hubbs, Oliver W., *Poplar Bluff, Mo.*
Illinik, Richard H., *St. Louis, Mo.*
Jackson, Charles W., *St. Louis, Mo.*
Jones, Milton D., *St. Louis, Mo.*
Kunz, Ralph, *St. Louis, Mo.*
Laffoon, Louis M., *Irwin, Penn.*
Lutz, Joseph A., *Jefferson City, Mo.*
McCray, Edwin V., *Columbia, Mo.*
McCray, William L., *Columbia, Mo.*
Murphy, Robert A., *Columbia, Mo.*
Pulliam, James M., *Hannibal, Mo.*
Ramsey, Ralph, *Mountain Grove, Mo.*
Robinson, John H., *St. Louis, Mo.*
Ross, Roy D., *Overland, Mo.*
Sinnard, Warren J., *St. Louis, Mo.*
Smith, Robert L., *Webster Groves, Mo.*
Steger, Peter P., *Overland, Mo.*
Steingraber, Fred W., *University City, Mo.*
Stoffel, Alfred C., *Sedalia, Mo.*
Stuart, Howard M., *St. Louis, Mo.*
Taylor, Richard F., *Weldon Springs, Mo.*
Tumbleson, Geo., *West Plains, Mo.*
Wetzel, Stuart A., *University City, Mo.*



Freshmen



Summer Camp



Summer Camp -- 1948

BILL TODD

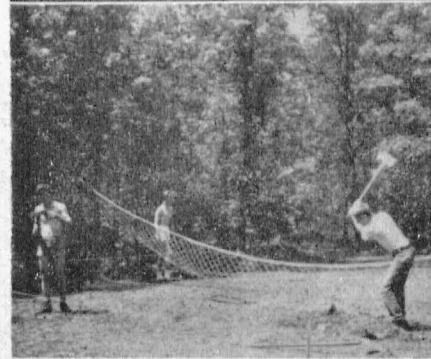
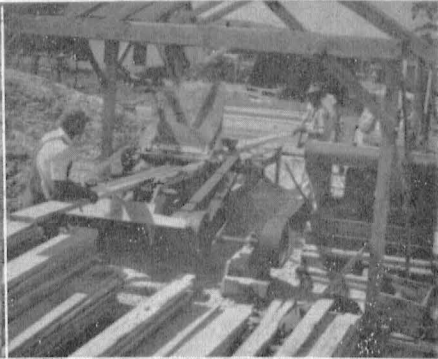
It was one o'clock on a Sunday afternoon and according to the road map we were still some 40 miles from the camp. A few minutes later we pulled into the town of Puxico, Missouri. After taking on gas and asking a few questions, we decided to take a short-cut. Little did we know what the short-cut had to offer. Some 17 miles later, after scraping the oil pan seven or eight times and making three or four wrong turns, we saw a sign proclaiming the University of Missouri Forestry Camp. Ah! at last we would see what our home for the next 12 weeks was like.

The first building to greet our eyes, upon entering the camp area, was a modern white bungalow. This building was the resident forester's home. As we proceeded around the circular drive; the next building was the mess-hall, third came the instructors quarters, then the shower-house, and last the barracks. One other building, the pump house and tool shed, was located in the center of the circle.

After looking the camp over, we proceeded to pick out our bunks and stow our gear. The rest of the afternoon was spent in getting acquainted with our bunks, talking, and greeting the new-comers. All retired early that night, for work officially started the next morning.

At eight o'clock the next morning all 31 students and the instructors had a meeting. Mr. Richard C. Smith explained that the day's work was to begin at eight and end at five with an hour for lunch, and that classes were to be carried on six days a week with Wednesday and Saturday afternoons and Sunday off. This was later changed to five days straight with all of Saturday and Sunday off. The students were split into two sections. Each section was then broken down into two-man crews. Each two men worked as partners for the 12 weeks.

We set up an organization to carry on the various camp activities and hired a cook from town. A steward was elected whose duties were to plan the meals and buy the food wholesale from a grocer in Poplar Bluff. We were assessed \$90 for food during the summer. The money

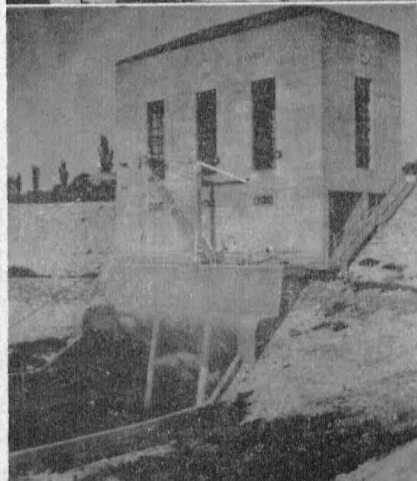
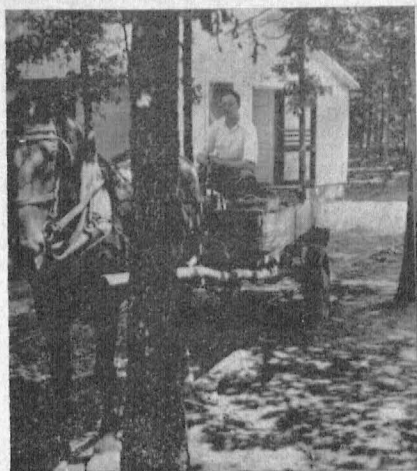


was turned over to the treasurer who kept the records and paid the bills. The president held the most unpopular job, for it was his duty to make up the K. P. roster and assign us to the work details.

Each man worked 12 days of K. P. during the summer. Wednesday mornings were spent on camp work, such as: clearing off trees for a parking area, raking fire lanes, cleaning the mess-hall, and removing numerous stumps. Those going to camp in the future need not worry about a lack of work, for we left them all of the big stumps.

The summer's curriculum consisted of six courses for a total of 12 hours credit. *Forest Mensuration* gave practice in cruising timber by the strip and plot methods and the use of volume tables. We visited a sawmill, located at Puxico, Mo., where we scaled logs before they were sawn. We made a mill tally and afterward computed the per cent of over-run. Other phases of mensuration in which we obtained practice were: differential leveling, use of the transit, pacing, and topographic mapping. In silvics studies were made of the different forest soils, sites, and types. Each two-man crew was assigned 20 acres of which was made a type and stand map. These small maps were combined to make up a master map of the entire area. A large amount of study was directed toward ecological aspects of various sites. The silviculture course covered the identification of crown classes and the application of intermediate and regeneration cutting methods to different stands. In forest utilization, trips were made to near-by wood utilization industries where we studied their operations. The camp is of an ideal location for the study of field dendrology. Within a few miles, upland, bottomland, and swamp species can be found. In forest improvements we visited the near-by Clark National Forest where we saw some of the improvements that are necessary for good management. The construction of high and low water bridges were studied; fire towers were visited, and communication lines were inspected.

We were lucky in that we had only two fires to fight during the summer. The first was found about two miles from camp by a wood-cutting crew. It took eight men about an hour and a half to bring it under control. The second was discovered by one of the sections on the next to last day of camp. The men had been on a trip to the Clark National Forest and were on their way back when they spotted the fire. Upon their arrival at Poplar Bluff they reported it to the Forest Service. P. M. Kihlmire, District Ranger, suggested that this would be a good time for them to get a little actual fire-fighting ex-



perience. After picking up equipment (back pumps, rakes, flappers, and shovels), they went back to the burning area. Within a short time the fire was extinguished. We still do not know whether the fire or the crew got the wettest, for after mopping up had been completed, the men proceeded to have a water fight with the back pumps.

The required work kept us busy, but we still found plenty of time for recreation. The horseshoe courts were built the first day and many cokes were lost on the outcome of the matches. We built a volley ball court shortly after arriving at camp and every evening there were always 10 to 20 men ready for a game. Volley ball accounted for the only two casualties (sprained ankles) we had all summer. Many of the boys spent the early evening hours down at Lake Wappapello fishing. They usually came back with good stories, but no fish. Some of the fellows went squirrel hunting, but had little luck. Many an enjoyable evening was spent at Ate's General Store playing the pin-ball machines and listening to the Juke box. Other popular recreation consisted of cards (Bridge and Pinochle), reading, and night boating.

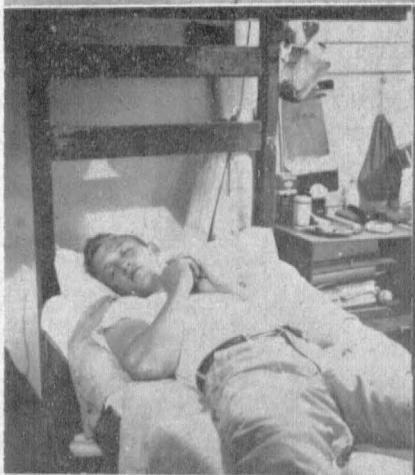
We spent Saturdays and Sundays in a leisurely fashion. Many of the married men went home for the week-end, but those of us that stayed in camp did our washing or went to town with the Saturday morning supply truck. Every Friday and Saturday nights, those who had cars took the rest of us into town for the evening. We always managed to have a good time while in town.

Three days before camp was over, the proprietor of Ate's Store threw a fish fry for the entire camp. He furnished the fish and we supplied the potato-salad, tomatoes, bread, and other necessities. Ate's and our cook did all of the frying, and the rest of us did all of the eating. After eating two of the fellows entertained with some hot music. The entire evening was very enjoyable.

The summer gave many of us our first practical experience in forestry. We were able to apply the knowledge we had acquired in previous semesters to the field studies. All in all the camp helped to round out our forestry training. Another important function of the camp was to help us really get to know each other. This in itself was worth the 12 weeks time.



Dogs in Siberia are the fastest in the world because the trees are so far apart.—Power House.





The Forestry Club

Officers

Forester	Lester E. Matt
Assistant Forester	Francis J. Schweitzer
Secretary	Richard N. Deed
Treasurer	Frederick C. Mertel
Ranger	Richard F. Taylor



Tuesday Night is Club Night

Prominent among the memories of college life which the departing seniors will take with them will be the Forestry Club. The club is probably the first campus organization that the entering freshman becomes interested in and throughout his four years here at Mizzou, it is the organization to which he is most loyal.

Every other Tuesday night books are placed on the shelves and their owners dash off to the meeting. In short, the meetings are quite informal. They serve as excellent "get acquainted" sessions. Programs are geared to the tastes and desires of the members.

Looking back over the minutes of the meetings of the last year, one must conclude that the club serves its members well in the dissemination of information and ideas not included in classroom work.

A great number of new films are appearing concerning forestry and utilization. The club has indeed been fortunate in being able to see a number of these. Dierks Lumber Company furnished the club with an excellent film which covered certain phases of their operations. "American Delivers the Goods" told the story of the wooden barrel including its construction, tests, uses, etc. The Western Pine Association furnished the club with their excellent film "Harvesting the Western Pines."

The club turned out April 13, 1948 to hear Mr. Paul D. Kelleter trace the history of forestry from its beginning. The 1948 edition of *The Missouri Log* was dedicated to Mr. Kelleter and that evening in a brief ceremony the first copy was presented to him.

Mr. Charles Schwartz of the Missouri Conservation Commission

was guest on October 12, 1948. Mr. Schwartz has done extensive work in Hawaii in wildlife study. His slides and comments captured the strictest attention of all present.

Mr. Ralph Crowell, supervisor of the Mark Twain National Forest held top seat on the program for November 23, 1948. Mr. Crowell furnished slides to better explain the problems in the Ozarks and to illustrate the advances and progress made since the Mark Twain Forest has been established.

On February 22, 1949, the club had as its guest Mr. Dan E. Bulfer, U. S. Forest Service. Mr. Bulfer explained the Forest Service with emphasis on its employment and answered the questions of the members.

These have been the highlights of this year's meetings. Throw in some refreshments and a campfire now and then and you have a pretty lively bunch of guys. So if you happen to be in Columbia on a Tuesday evening, the Forestry Club extends a most cordial invitation. Come around and meet the noisiest bunch on the campus.



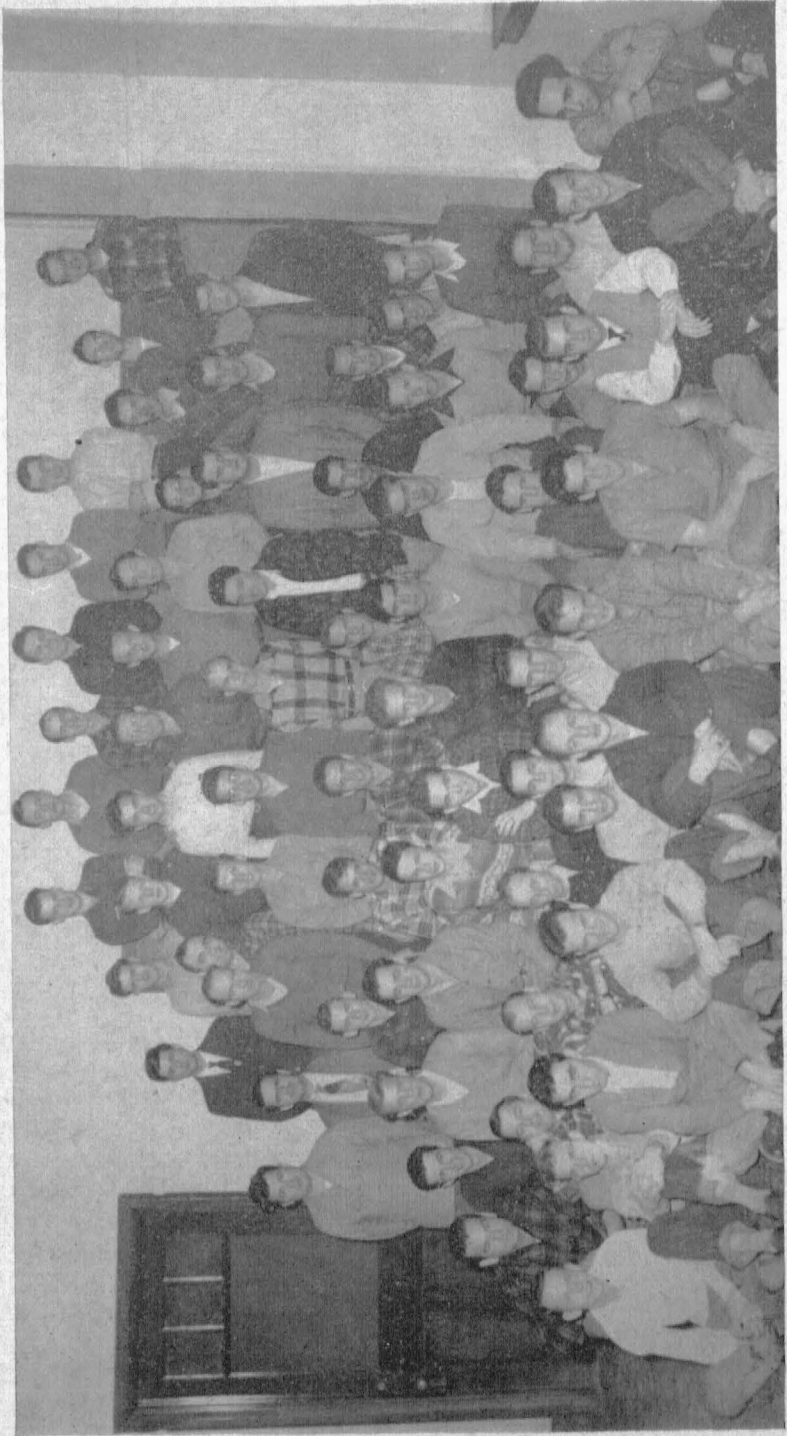
Spring Barbeque

Foresters watched the dripping sky with eager eyes, hoping the rain would cease. Plans had carefully been made and must be carried out. Lambs were sizzling on the barbecue spit. Steaming pans of baked beans were waiting. Mountains of delicious potato salad had been prepared.

The spring rain stopped late in the afternoon and about dark, hordes of hungry foresters stormed the farm of Sam Moss south of Columbia.

The food had been prepared in Columbia by a chef but due to circumstances beyond control, it had not arrived. In desperation, Joe Church and jeep plus two men were dispatched in search of the missing barbecue. The valuable cargo was finally located and loaded into the jeep. It would be extremely difficult to describe that trip from Columbia back to the farm. Just imagine a foggy night, a rough road, red hot pots and pans bouncing in the darkness, and you have it.

Although the "chow" arrived slightly mixed up, the foresters, with fangs bared, fell upon it like a swarm of periodical cicadas. The great bonfire leaped high as if it sensed the spirit of the occasion, and then died down and faded away as the worn out foresters went home.



Forestry Club

Freshman Campfire

At the beginning of each fall term a campfire and weiner roast is held. Its purpose is to help the entering freshmen become acquainted with the customs and traditions here at old Mizzou. Of course a little advertising is done with the hopes of boosting the membership of the Forestry Club.

This year the campfire was held at Rollins spring. This may bear little significance to strangers at M. U. but to old grads, Rollins spring is a landmark. A brief business meeting was held and Lester Matt, the Forester elect, assumed the duties concerned with steering the club through the year ahead. Dr. R. H. Westveld, chairman of the department, introduced each member of the faculty and brought the club up to date on the many new developments.

All formality was dropped when hot dogs and "cokes" appeared. A hillbilly band, composed of foresters with musical talent, added to the festivities. New friends were made and the freshmen were initiated into the wonders of summer camp tales.

As the evening drew to a close, the old-timers felt that they had done something worthwhile in helping the newcomers to feel at home in a somewhat different situation—college life.

Foresters' Stomp

One night in October all forestry textbooks were neatly placed back on their shelves and their owners dashed off to pick up their best girls and head for the big foresters' dance.

It was held at the American Legion cabin east of Columbia. Despite the rainy evening, a large number of couples were present. Candles dotted the tables and the brightly lighted juke box poured forth music to suit everyone's taste. The hardwood floor did not stand idle for foresters like to dance and made good use of it.

Time passed quickly; the clock waved its hands goodnight and all departed for home. As the *Podunk Herald* might put it: "A good time was had by all."



There's something feminine about a tree. It does a strip tease in Fall, goes with bare limbs all Winter, gets a new outfit every Spring, and lives off the sap all Summer.—The Wooden Barrel.

Christmas Trees

A few weeks before Christmas the Forestry Club was offered the job of harvesting, hauling, and selling Christmas trees from the East Ashland Experimental Area twenty miles south of Columbia. Eager to add to its treasury, the club accepted the offer.

Mr. Richard W. Dingle, instructor in the department, was asked to supervise "Operation Christmas Tree". He organized the volunteer laborers and for several days expeditions sallied forth to Ashland.

The trees cut were Eastern red cedar, jack pine and Scotch pine. They were tagged and hauled to Columbia where they were stored in Whitten Hall until called for. Buyers were people connected with the University of Missouri.

The Christmas spirit descended upon the Forestry Club and a substantial amount was added to its depleted treasury.

Sports

Basketball Highlights

BILL PURCELL

The Foresters made a very good showing in the intramural basketball tournament this season. With a total of six victories and one defeat, the team captured second place in its division.

The most interesting game of the season was the one in which the Foresters were defeated by two points in an overtime period. In this game, we were leading at the half-time by a score of 16 to 11 and managed to hold this lead until the last few seconds when the Hard-Rocks came from behind and tied the ball game at 21 all. In a two point sudden death playoff, the Hard-Rocks scored the first two points and won the game by a score of 23 to 21.

With the valuable experience and practice gained this season and with the same support from the club members, the Foresters will come back next year with a championship basketball team.



Are you practicing forest conservation on your land? Are you protecting your timber from fire? Do you carefully choose the trees you cut so that future timber crops are assured? If you do, you're practicing forest conservation on YOUR land.—The Forest Farmer.

Softball Highlights

JOSEPH P. WALLACE

Their showing in other intramural sports proved to be no criteria for the Foresters softball team. On the diamond the men proved to be much more than just another team to be reckoned with.

With the accent on teamwork, the Foresters climbed easily to the top of Division E. After sweeping their division with no losses, the Foresters moved into the divisional play-offs. Once again their opponents left the field a sadder but a wiser team.

Yes, victory was sweet but good things can not continue forever. The Foresters battled grimly but were finally defeated. The team felt pretty low; however, considering the opposing team, the defeat was understandable. It was composed not only of several varsity members of various sports but its pitcher had held the title of "All State" and "All Service" softball pitching champ.

In the face of this powerful opposition, the Forestry Club can well be proud of its team. It allowed but three runs.

A run-down of the line-up shows the following:

Catcher—Mertel	Shortstop—Church
Pitcher—Moran	Short center field—Matt
First base—Wallace	Left field—Barnhart
Second base—Metcalf	Center field—Erwin
Third base—Purcell & McGlassen	Right field—Wilder

Football Highlights

BUD TAYLOR

This year marked the first time that the Foresters have fielded a football team. The team was not too successful, however, due to several reasons. Conflicting classes and bad weather affected both the practices and the games. Only two games were played. One resulted in a tie and the other, in a defeat. This pioneering team broke the ground and in the future the Forestry Club should be able to put a first rate team on the field.



How many different species of trees are there in the world?

No one knows, because new ones are being discovered in remote tropical regions constantly. However, over 20,000, with a definite economic value, have been described.

Foresters and Fraternities

WALTER B. METCALF

The College of Agriculture has on its campus, as do forty-five other agricultural schools, a chapter of Alpha Zeta, honorary agricultural fraternity. The Missouri chapter performs such services as orientation for freshman "Ag" students, providing speakers for the Ag. Club, and has recently instituted a job survey to assist seniors in the College of Agriculture who are on the threshold of starting their careers. These are only a few of the functions of the organization.

Candidates for Alpha Zeta are chosen on the basis of character, scholarship, leadership, and service, equal emphasis being placed on all four points. Junior and senior students, with the necessary qualifications, may be elected into the organization.

With the recent renewed emphasis on forestry at the university and the subsequent substantial enrollment of forestry students, it was not long until Alpha Zeta recognized the fact that none of these men were in the organization, and proceeded to remedy the situation.

Lee Paulsell and Edward Canter were the first to be initiated, in the fall of 1947. A year later, seven more foresters swelled the ranks. These men are: Erhardt Wehking, John Kullman, Walter Metcalf, William Todd, William Purcell, Robert Raisch, and Lester Tschannen. It is hoped that many more forestry students will find a place in this fraternity which, although it is primarily an honorary organization, has a dual function of service to agriculture.

In order to gain more recognition for forestry at the university, recently a number of senior students made plans for the organization of an honorary forestry fraternity. Though not patterned in complete imitation of similar groups, the fraternity was planned along lines similar to the organization of Alpha Zeta and Xi Sigma Pi, national forestry honorary. The fraternity would be an honorary group, but would perform service in coordinating student-faculty relations and in other ways.

After a constitution was drawn up and other formalities taken care of, the university gave preliminary recognition to Phi Theta Gamma. Final recognition will have been granted by the time this yearbook goes to press.

Charter members of Phi Theta Gamma are Edward Canter, John Kullman, Walter Metcalf, Lee Paulsell, and Erhardt Wehking. Faculty advisers are Dr. R. H. Westveld and Professor K. C. Compton. Several other seniors and second semester juniors are eligible and will be duly initiated soon.

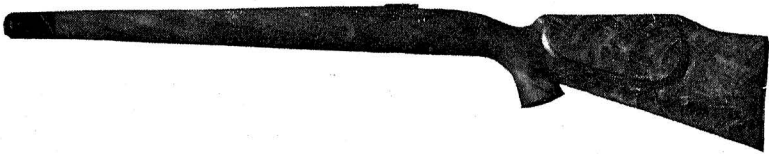
Phi Theta Gamma has not had the opportunity to show what it can do, but should, in the future, not only be of service to its members but also be a distinct credit to the University of Missouri.



REWARD

When we plant a tree, we are doing what we can to make our planet a more wholesome and happier dwelling-place for those who come after us, if not for ourselves. As you drop the seed, as you plant the sapling, your left hand hardly knows what your right hand is doing. But Nature knows, and in due time the Power that sees and works in secret will reward you openly.—Oliver Wendell Holmes.

Rifle Stocks of Ozark Black Walnut



Sporter, Target, Mannlicher type Stocks
of all popular makes and models

Visit our plant any time—you are always welcome

Write for Free Catalog.

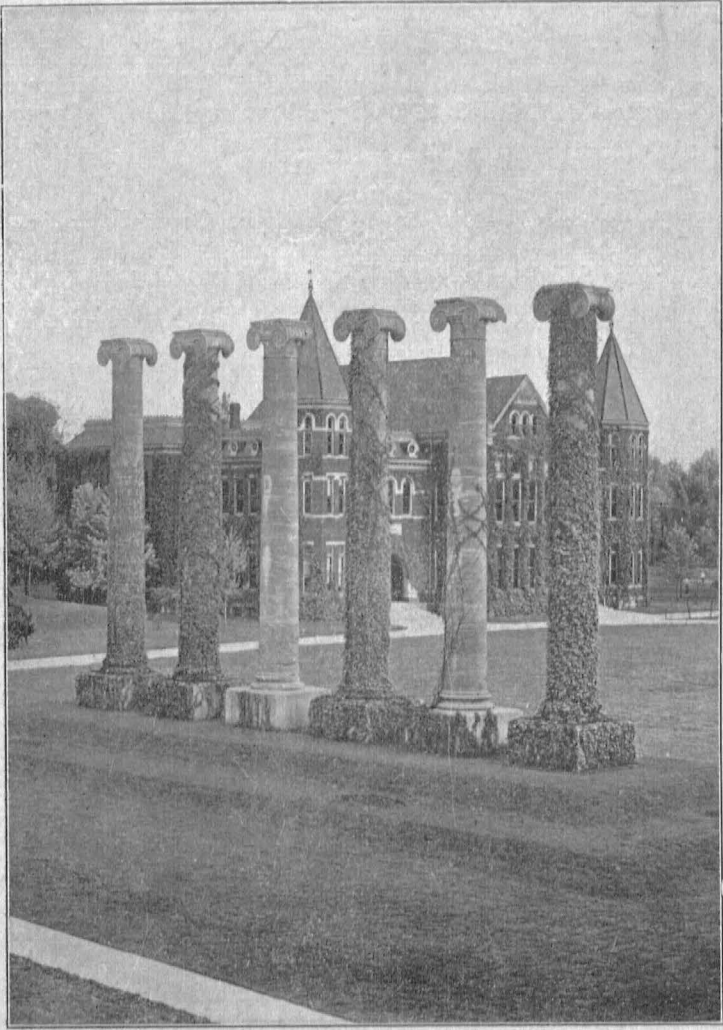
E. C. BISHOP & SON, Inc.

WARSAW, MISSOURI

Saw Mill For Sale

One hay-wire sawmill,
 Nice new location,
Ten mile haul
 To the shipping station.
Half mile of plank road,
 Rest of it mud
Six bridges, all condemned
 But otherwise good.
Timber yellow cypress,
 Very few knots,
Awfully sound
 Between rotten spots.
Fire box boiler,
 Flues leak some,
Injector patched
 With chewin' gum.
Darn good whistle
 And carriage track
Nine feet left
 Of old smoke stack.
Belts a little ragged,
 Rats ate the laces,
Head saw cracked
 In a couple of places.
The engine knocks
 And is loose on its base,
And the fly wheel's broke
 In just one place.
There's a pile of side lumber
 And a few cull ties,
But they've been attached
 By some creditor guys.
There's a mortgage on the land
 That's now past due,
And I still owe
 For the machinery too.
But if you want to get rich
 Here's the place to begin,
For it's a darn good layout
 For the shape it's in.

—Author unknown.



Alumni

ALUMNI DIRECTORY

- Bremicker, Joel Herman—1917, Spink Arms Hotel, Indianapolis, Ind.
Broadbent, Sam R.—1921, 3133 Connecticut Ave. N.W., Washington, D. C.
Bruto, Fred Ray—1919 M. S. 1920, State Highway Bldg., Jefferson City, Mo.
Clay, Robert Buchanon—1914, Pleasant Hill, Mo.
Fallenius, Victor Charles—1913, unknown.
Fritschle, Charles Russell—1920, 5603 Washington Court, St. Louis 12, Mo.
Gallaher, Harold G.—1949, Salem, Mo.
Gibson, Maurice Saley—1914, 3204 Windsor, Kansas City, Mo.
Green, Charles Burdett—1921, 666 Lake Shore Drive, Chicago, Ill.
Herald, Charles William, Jr.—1917, No. 6 Hartus Court, St. Louis 10, Mo.
Hotze, Earl Bent—1918 M. S. 1920, 506 N. 4th St., St. Louis 2, Mo.
Kraft, Felix Gustav—1916, 107 S. Maple Ave., Webster Groves, Mo.
Lodensohn, Samuel Hamilton—1917, 122 E. Ridgewood, San Antonio, Tex.
Miller, Max Emmit—1915, P. O. Box 55, Paducah, Ky.
Piepenbring, Richard L.—1949, Gen. Del., De Ridder, La.
Shields, Albert J.—1949, c/o School of Forestry Univ. of Calif., Berkeley, Calif.
Simmons, Charles Wade—1921, Texas A & M, College Station, Tex.
Talbot, Murrell W.—1913, 2590 Cedar St., Berkeley, Calif.
Youmanns, John Power—1915, Pateau, Okla.



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

- Capps, Osal B., Vienna, Mo.
Croft, Archie D., Gen. Del., Libby, Mont.
DeWolf, Howard, 2013 Lyons Ave., Lansing 10, Mich.
Fine, Lee C., Eminence, Mo.
Godman, Richard M., Univ. of Mich., Ann Arbor, Mich.
Hoskins, Robert N., Seaboard Air Line Railroad, Norfolk, Va.
Leach, C. Willard, Assistant Professor of Forestry, Alabama Polytechnic Institute, Auburn, Ala.
Meyer, Arthur, Missouri Conservation Commission, Jefferson City, Mo.
Nichols, J. M., Forestry Camp, Star Rt. 2, Williamsville, Mo.
Pogue, Ralph, Missouri Conservation Commission, Jefferson City, Mo.
Seay, Edward J., Salem, Mo.
Towell, William E., 209 Boonville Rd., Jefferson City, Mo.
Walter, R. F., unknown.
Whitt, Fred B., Ellington, Mo.
Wylie, J. E., c/o Forestry Dept. Oregon State College, Corvallis, Ore.

ALUMNI NEWS NOTES

Bremicker, Joel Herman, Working for Pennsylvania Railroad Testing Dept.
Broadbent, Sam R., Investigator, U. S. Budget Bureau, Washington, D. C.
Bruto, Fred Ray, Forester, Missouri State Highway Dept.

Fritschle, Charles Russell, Since graduation in Railroad Tie and Lumber Business, married in 1944 to Mrs. Lila Canter, stepson Edward Canter Forestry student at Missouri University

Gallaher, Harold G., Present position is Assistant County Extension Agent, work consists of woodlot improvement on the farm and 4-H Club forestry projects.

Gibson, Maurice Saley, Engaged in Real Estate and Rentals

Green, Charles Burdett, Secy Manager, American Walnut Mfg. Association

Herald, Charles William, Jr., In the 20th Regt. of Engr. World War I, in 1923 formed own Real Estate Co. in St. Louis specializing in real estate appraisal since that date. Was married in 1921, have two daughters, both graduated from Stephens College, one graduated from Washington Univ. in 1946 and the other from Univ. of Missouri in 1948. In the U. S. Army Air Corps from March 1942 to Dec. 1945, retain a reserve standing in the U. S. Air Force.

Hotze, Earl Bent, Owns company that mfgs. Quality Golf Bags, Leather & Canvas Goods.

Kraft, Felix Gustav, Public Accountant.

Miller, Max Emmit, Mfgr. Paducah Box and Basket Co.

Piepenbring, Richard L., In the Wood Utilization Dept. of Longbell Lumber Co.

Simmons, Charles Wade, Extension Forester

Talbot, Murrell W., Range Research Worker, Calif. Forest and Range Exper. Station

Youmanns, John Power, Mgr. of the Okla. and Ark. Telephone Co.

Capps, Osal B., District Forester, Missouri Conservation Commission

DeWolf, Howard, Attended Univ. of Mo. 1939-1942, transferred to Michigan State College, was first graduate from Mich. State College, in new option of "Housing and Lumber Merchandising" 1945. Worked in retail lumber and prefab housing sales until April 1947, then joined Warren S. Holmes Co., as architectural draftsman, with some appraisal work thrown in. Married Mary J. Lake of East Lansing, Mich. in Sept. 1947, no children.

Hoskins, Robert , With Missouri Conservation Commission 1939-1942. Extension Forester with Florida Forest Service 1942 to 1945. With the Seaboard Air Line Railroad Co. as Industrial Forester since 1945. Married Julia Jones Husfeldt in 1946 and have one daughter.

Leach, C. Willard, B. S. in Agriculture, 1941, from Univ. of Missouri. Research Asst. in Forestry, Univ. of Mo. 1943-'43. U. S. Navy, Hospital Corps, 1943-'45. Instructor in Forestry, Univ. of Missouri 1945-'46. Graduate study at Yale School of Forestry, 1946-'47 leading to the degree of M. F. in 1947. Married Louise C. Peck, sister of the late Ralph H. Peck, in 1946. Accepted present position as Assistant Professor of Forestry, Alabama Polytechnic Institute, Auburn, Alabama in 1947.

Meyer, Arthur, On Feb. 15, 1949 went back with Missouri Conservation Commission as Asst. State Forester, in charge of Farm Forestry work.

Nichols, J. M., Resident Forester on Univ. of Missouri Forest.

Pogue, Ralph, Present position with Missouri Conservation Commission in Education-Information Dept.

Towell, William E., University of Mich. (1936-37, 1937-38) B. S. F. and M. F. 1938. Employed by Missouri Conservation Commission in July 1938. Served as District Forester, Sullivan, Mo. Farm Forester, Kirksville, Mo. In Jan. 1942 as Admin. Asst. to State Forester, Jefferson City, Mo. Present position Asst. State Forester in charge of Fire Control and Planting. Served 2½ years as Naval Photographic Interpreter in Pacific theater. Married in 1940 to Virginia R. Dotter. Have two daughters ages 2 and 7.



What is the origin of the word "ranger"?

Ranger is derived from the old French word, "renc", meaning row or rank. It was the official title of the keepers of the royal parks. The Rolls of Parliament for 1455 listed "Foresters and Rangers of Oure Forests".

Compliments of

Baumgart Motor Co.

Your DODGE-PLYMOUTH Dealer

COMPLETE AUTO SERVICE

Poplar Bluff, Mo.



The quality of *LEADERSHIP* is essential to success!

Hundreds of leading logging engineers, sawmill engineers, operating heads and engineers in the forest products industry formed the habit—while still in their university and college days—to depend month after month upon every issue of **THE TIMBERMAN** to bring them information and ideas on new methods, new practices and new procedures developed in all major departments of the industry.

THE TIMBERMAN editorial staff travels thousands of miles each month to bring you the latest in pictures and text directly from on-the-job observations and reports.

You will benefit greatly in your career by making every number of **THE TIMBERMAN** a “must” in your reading and studying. To be well informed is a requisite of *leadership*—make it your habit.



THE TIMBERMAN



An International Lumber Journal...Founded 1899
519 S. W. PARK AVENUE • PORTLAND 5, OREGON

Also publishers of **WESTERN BUILDING**, the light construction journal of the WEST

There's Always A Success Story Back of BELSAW SAWMILLS



Model
A-24

The World's Lowest Priced High-Efficiency One-Man Sawmill

ILLUSTRATED, a most popular BELSAW Sawmill for highest efficiency. Takes logs 24 ft. long and 24 in. in diameter. A heavy-duty BELSAW designed for high speed production. Includes main and extension carriages; 18 ft. long with 3 handblocks and 3 Top Dogs; heavy-duty Mandrel assembly; heavy-duty Power Feed; 48-in. Inserted Tooth Saw; with hardware and Tracks for 48-in. long base. In use in all regions both as a PORTABLE Sawmill, and in permanent installations.

Model A-24, shipping wt. 1099 lbs.
\$545.40

BELSAW MACHINERY CO.

1048 Field Building
315 Westport Road
KANSAS CITY 2, MISSOURI

MULTIFLORA ROSE

FORREST KEELING TYPE

Ideal Living Farm Fence

Horse High, Bull Strong
Goat Tight

Easily planted...fast growing...requires no clipping or pruning. Widely adapted ...does not spread or sap adjacent fields ...ideal for divider between fields farmed on contour. Low initial cost...no maintenance expense!

For complete information, write today to

Forrest Keeling Nursery

ELSBERRY, MISSOURI

FREE Literature

SHOWS YOU HOW TO
PROTECT YOUR
Home and
Farm from FIRE



Don't let FIRE catch you unprepared. Protect your property with INDIAN FIRE PUMPS! Only Clear Water used.

Ideal for home and farm buildings, forest, grass and grain field fires. Also excellent for spraying all crops, weed killers, disinfectants and whitewash. Low priced. Free literature, write

D. B. SMITH & COMPANY
0000 MAIN STREET, UTICA 2, NEW YORK

**INDIAN
FIRE PUMP**
The World's BEST
FIRE FIGHTER.

Miller
Superior Shoes

Here is the Place to Buy
**Bostonians, Florsheim, Jarman,
Roblee, & Fortune Shoes**
for Men

THE MISSOURI STORE

Efficient
Service

Headquarters
for
Books and Supplies

See Us
First

COLUMBIA DOWNTOWN MOTORS, Inc.

CHRYSLER — PLYMOUTH

7th and Walnut

Columbia, Missouri

Compliments of

THE SILVER DOLLAR STORE

"The big bright store on Broadway"

Columbia, Mo.

Fine Food

Reasonable Prices

Convenient

Courteous service

Sampson Grille
HITT & PAQUIN

Favorite

Eating Place

for

Students

Open 6:30 A. M. to 11:30 P. M.

ROBERTS & GREEN

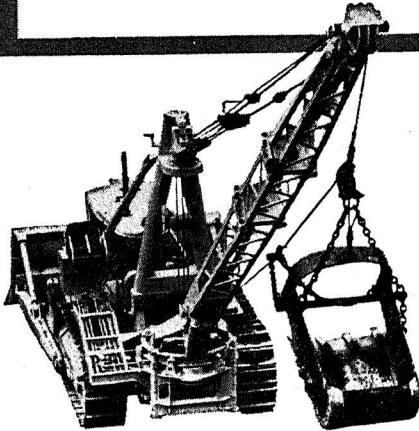
HARDWARE — PAINTS — STOVES

9th & Walnut

Columbia, Missouri

Dial 7233

Earthmover and Crane



HYSTAWAY FOR ACTION

Hystaway is 3 production tools combined in one machine — dragline, clamshell and crane.

This 3-way tool does everything that a dragline, clamshell or crane can do—plus bulldozing work—and costs less! Equally important, Hystaway can be mounted on the tractor by 2 men in 2 hours and taken off in 1 hour (after initial installation).

HYSTAWAY is made for "Caterpillar" D8, D7 and D6 tractors—new or old. **CURRENT DELIVERY.** Your "Caterpillar" distributor can arrange a demonstration. Write for literature.

HYSTER COMPANY

2985 N. E. CLACKAMAS ST. . . . PORTLAND 8, OREGON
1885 NORTH ADAMS STREET PEORIA 1, ILLINOIS

TIGER LAUNDRY & CLEANING CO.

"The Tiger Can't Be Beat"

1101 Broadway

Dial 4155

Columbia, Mo.

*Maytag
Tappan*

1013 E. Broadway

Edgar's

*Kelvinator
Stromberg-Carlson*

Columbia, Mo.

For LUMBER, HARDWARE, MILLWORK, PAINTS . . . It's

LA CROSSE LUMBER CO.

Phone 5422

Columbia, Mo.

MISSOURI UTILITIES COMPANY

Natural Gas Distributor

COLUMBIA, MISSOURI

110½ N. 8th St.

Dial 5324

BARNHART'S LAUNDRY & DRY CLEANING CO.

Across Street from Court House

Columbia, Mo.

Compliments of

RIBACK PIPE & STEEL CO.

(Mall Chain Saw Dealers)

Box 480

Columbia, Mo.

Use PANAMA PUMPS

In the Control and Suppression of Forest Fires

Write for Circular on Slip-on Unit with Independent Engine

PANAMA PUMP COMPANY

HATTIESBURG, MISSISSIPPI

EDDIE'S TOGGERY

Students' Style Center
225 S. 9th St.

Complete Men's Apparel
Columbia, Missouri

Compliments of

CHAS. R. FRITSCHLE

B. S. Forestry, U. Mo. '20

Railroad Ties — Hardwood Lumber

5603 Washington St.

St. Louis 12, Mo.



SAW MILLS EDGERS TRIMMERS

Accessory Equipment
Saws — Saw Teeth
Supplies

Free copies of "We Lumbermen" will be sent to you upon request. This is a monthly publication containing information about the lumber industry, reforestation news and other pertinent facts. Ask to be put on our mailing list without obligation.

CORLEY MANUFACTURING COMPANY

CHATTANOOGA, TENNESSEE

When in Columbia

Visit

GAY'S TOBACCO STORE

Highway 63—South



MC

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. M. Fritze

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.

WALNUT TREES

We pay high **CASH** price for

Walnut Trees or Logs

Call us Collect—Phone 2-1382, or

write us for FREE ESTIMATE

before you sell.

IOWA-MISSOURI WALNUT CO., Inc.

ST. JOSEPH, MISSOURI

L. D. JOHNSTON

PAINT — WALLPAPER — GLASS

704 Broadway

Columbia, Missouri

POWELL'S SUPER STANDARD SERVICE

"HEADQUARTERS FOR ALL MOTORING NEEDS"

9th and University

Phone 5910

Columbia, Mo.



This Emblem is Your Assurance
of
Satisfactory Materials and Service

HUTTIG SASH & DOOR CO.

ST. LOUIS, MO.

Compliments of

NU-WAY LUMBER CO.

6th and Walnut

Columbia, Mo.

JOHN N. TAYLOR

DODGE & PLYMOUTH

605-7 Broadway

Columbia, Mo.

Phone 3324

Daily American Republic

POPLAR BLUFF, MO.

"SOUTHEAST MISSOURI'S LEADING DAILY NEWSPAPER"

Circulation—10,412

in Eleven Counties and 52 Towns
in Southeast Missouri and N. Arkansas

**"Keeping In Step
with The Growth of Our Community"**

J. H. WOLPERS, Editor and Publisher

Compliments of

WALLIS-CASE DAIRY

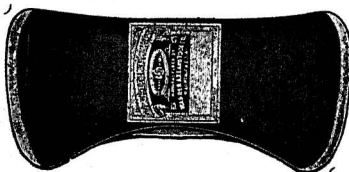
Dairy Products and Ice Cream

303 So. 5th Street

Poplar Bluff, Mo.

SAGER AXES and BULLDOG LOGGING TOOLS

Axes
Wedges
Swivels
Grabs
Tongs



Peavies
Cant Hooks
Timber Carriers
Load Binders
Chain Hooks

Used In The Leading Logging Camps

WARREN AXE & TOOL COMPANY, Warren, Pa.

THILMAN ELECTRIC COMPANY

ELECTRIC WIRING — SUPPLIES AND FIXTURES
11th at Highway 60 Poplar Bluff, Mo. Phone 2938

Eat and Enjoy

B A M B Y B R E A D

TOELLNER BAKING CO.

POPLAR BLUFF

MISSOURI

HENRY McWILLIAMS FURN. CO.

COMPLETE HOME FURNISHINGS
116 So. Main Street Poplar Bluff, Mo.

Compliments of

FORBRIDGE FEED & PRODUCE

Poplar Bluff

Missouri

Compliments of

BARNES GROCERY

POPLAR BLUFF

MISSOURI



Compliments of
Bottling Company
Poplar Bluff, Missouri



TIRES — BATTERIES — ACCESSORIES

DIXCEL SERVICE STATION

University and Hitt

DORN-CLONEY

For Quality Dry Cleaning and Laundry Service

107-109 S. 8th St.

Columbia, Missouri

Compliments of

Letts Box & Mfg. Co.

ST. JOSEPH 25, MISSOURI

See us when marketing Native

Soft Hardwoods

Peeler Logs — Lumber

COTTONWOOD — S. MAPLE — SYCAMORE — LINN

I. G. A. FINER FOODS

Fast Friendly Service
WYATT'S FOOD STORE

Low Prices Everyday
University at Hitt

HAYS HARDWARE CO.

“THE KEEN KUTTER STORE”

808 Broadway

Dial 4710

WIDE CHOICE OF POWER

... MOBILE OR STATIONARY



INCREASE LOGGING PRODUCTION

Modern methods and the right equipment for the job will increase logging output—and reduce operating costs. There are many models and sizes of Allis-Chalmers equipment from which to choose, with accessories to fit the application—and to meet your requirements.

CRAWLER TRACTORS

Powerful, smooth-operating, these A-C 2-cycle Diesel crawler tractors hang onto overloads with the tenacity of steam power. Operate on ordinary Diesel fuels, requires less gear shifting, start instantly. Positive seal truck wheels and idlers require lubrication only once in 1000 hours.

MOTOR GRADERS

Four sizes, ideal for constructing and maintaining haul roads—so vital to the logging industry. The BD and AD Series (H.P. from 50.5 to 104) have increased capacity to handle more dirt, enough power to move that full capacity—and enough traction to use all available engine power. The "Roll-away" moldboard rolls the dirt away, cutting down friction of dirt against board. High axle clearance; speeds from 2.08 M.P.H. to 16.64 M.P.H.

POWER UNITS

Designed for tough tractor service, high in torque. A-C heavy-duty power units provide rugged power for every type of job, steady or intermittent. Available in open or enclosed styles, with various accessories. Choice of fuels—gasoline, low-grade fuel, natural gas or butane.

ALLIS-CHALMERS
TRACTOR DIVISION · MILWAUKEE · U. S. A.

B. K. LEACH, Pres.

C. F. GAUEN, Vice-Pres. W. E. MASTERSON, Vice-Pres.

J. D. WEBSTER, Sec.-Treas.



Egyptian
**Tie & Timber
Company**

1803-07 Railway Exchange Bldg.
ST. LOUIS 1, MO.



Mine Timbers, Cross Ties and Lumber