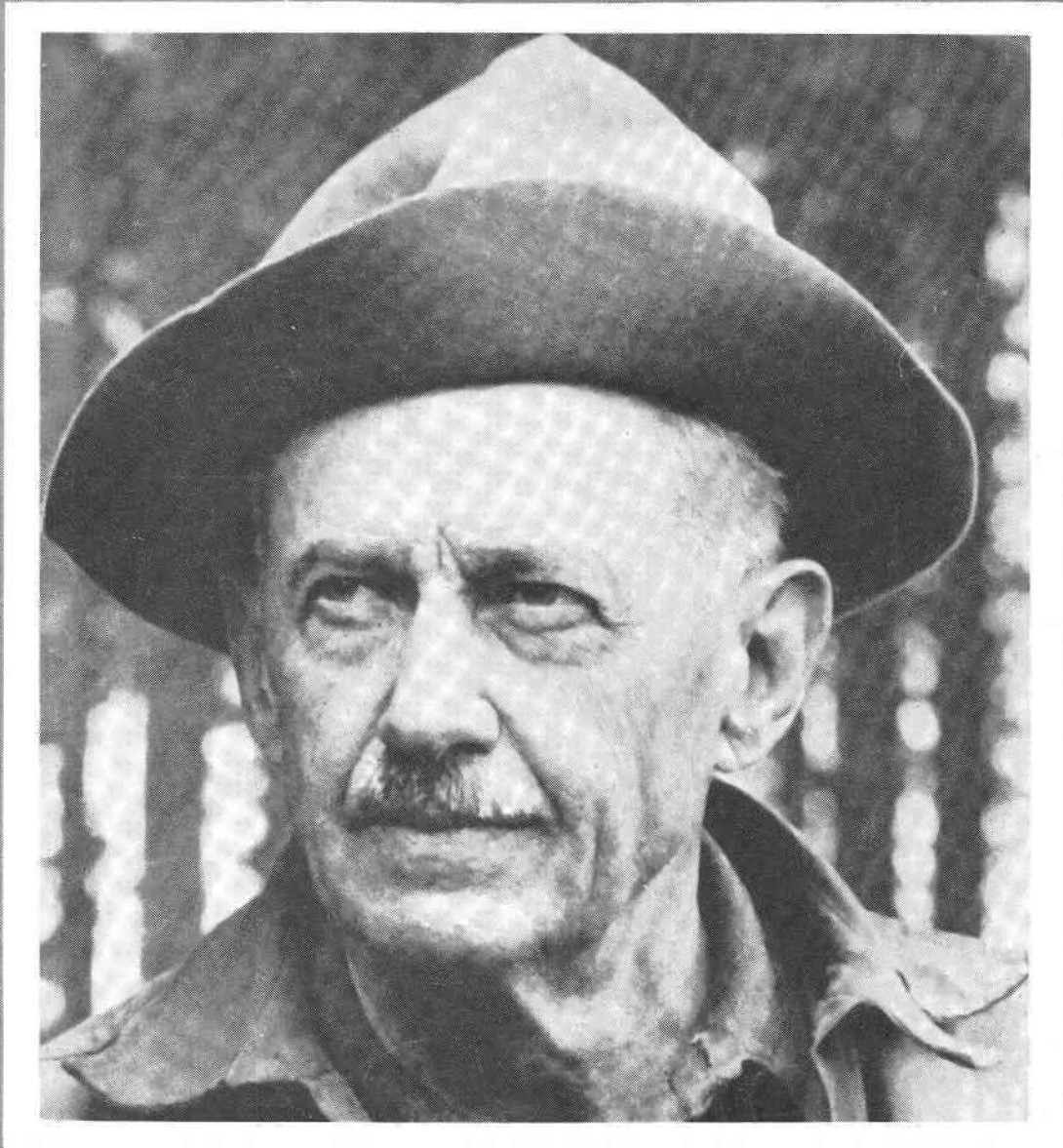


# 50 YEARS OF FORESTRY

*W. Fox Culloch*



George Wilcox Peavy

AT OREGON STATE COLLEGE

## *From the President . . .*

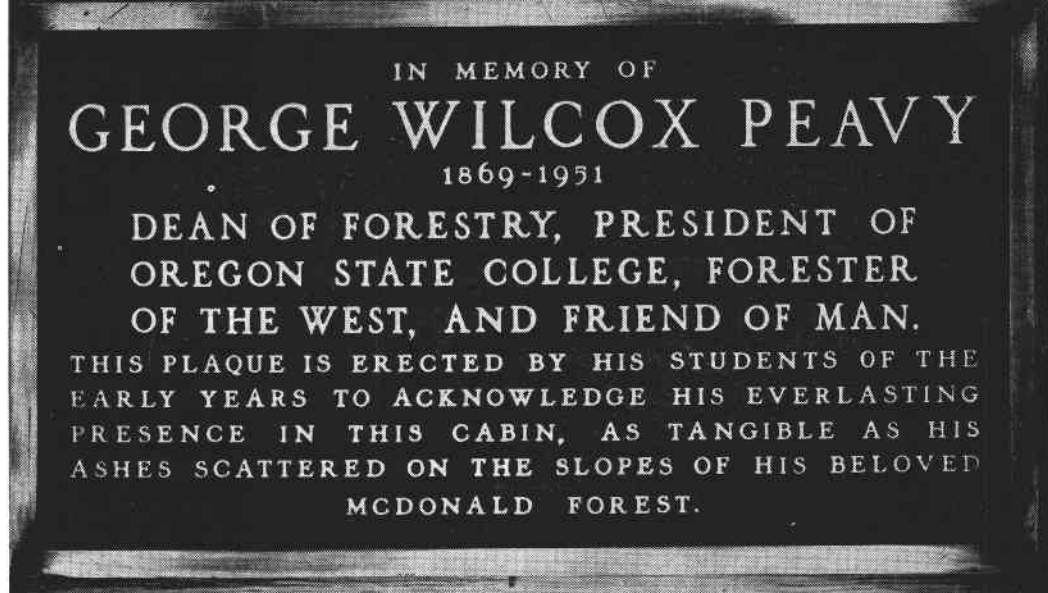
The dominant characteristic of the School of Forestry throughout the 50 years of its existence has been its ability to impart a lasting morale in its students—a zeal for work, a spirit for service, a hope for a broad acceptance of sound conservation ideas, and a confidence in their own ability. To accomplish this through the years has required great strength of leadership and the example of a devoted staff.

It may be that such is easier of attainment in the field of professional forestry than in other lines of work. There is something about trees that is poetic and to which man's better nature readily responds. At least a strong case for that idea can be made from even a brief survey of the profession in America and Western Europe. However, it wasn't always so and the history of man's wanton disregard of one of nature's greatest gifts is a sad one indeed. It's only in modern times, almost limited to the span of life of our School of Forestry, that vision has replaced perversion and intelligent use has overcome profligate waste.

One of the miracles of our time is the acceleration that has taken place in the conservation and utilization of our forest resources. This has come about through persistent application of the scientific approach to forest problems. The School of Forestry has played an important part in this notable development. My sincere congratulations are extended to the students, alumni, and staff of the School of Forestry of Oregon State College.

 , President.  
OREGON STATE COLLEGE

# There Was a Man



There was a man.

Some men give abundantly of themselves, without thought of personal gain or prestige, and their memory long endures. This was George Wilcox Peavy. His person has been gone now these several years, but the spirit of the hearty man with the big voice is still a potent presence in the School of Forestry.

"Men first," said George, and established the idea so strongly that men first is still the aim of fernhoppers. The business of the School is not diplomas but the development of men.

In a day when fewer students were enrolled, George Peavy had opportunity for close personal association with every forester. He made the most of this chance to better forestry by personally developing better foresters. The outstanding success of "my boys," as he called them, attests his success. His vigorous leadership made the School widely known and its graduates widely accepted. He developed a welcome for Oregon Staters that still persists.

That George was highly regarded by "his boys" is well documented: the Peavy Cabin built for him as a refuge from affairs of state; the brand new Dodge parked one morning outside his mayor's office; the trip to the Rose Bowl to see Michigan play; the Peavy loan

fund for foresters; the Peavy memorial section of the Oregon State Stadium; and the plaques honoring his name in the Peavy and Forestry Club cabins.

George Peavy was ever valiant on the side of right as he saw it. He would tackle anything or anybody, and quite frequently was embroiled with some scurvy knave whom he had detected in wrongdoing. This belligerent allegiance to truth and right not only founded the School on a rock but advanced forestry in Oregon. His long service on the State Board of Forestry spanned the period from its ineffective, halting beginnings to a highly respected and competent arm of State government. He helped mightily in this transition.

Those who did not know him well were perhaps most impressed by his resonant voice and great vigor even in his later years. There was nothing weak about George W. But those who knew him best will always remember as his greatest strength his tremendous friendship and fierce loyalty. In these he was a giant among men.

The principles on which he founded the home of the fernhoppers remain the basic purposes of his School today. Probably they always will, for George Peavy's restless spirit doubtless has a quizzical and affectionate eye cocked on the School of Forestry at Oregon State College.

## George Wilcox Peavy

- |   |  |
|---|--|
| <p><b>1869</b> Born November 12, Howell, Michigan.</p> <p><b>1895</b> Received bachelor's degree, University of Michigan.</p> <p><b>1905</b> Received master of forestry degree, University of Michigan.</p> <p><b>1905</b> Joined U. S. Forest Service, California.</p> <p><b>1910</b> Became head of Forestry Department, Oregon Agricultural College.</p> <p><b>1911</b> Became member of Oregon State Board of Forestry.</p> <p><b>1913</b> Made dean of forestry, OAC.</p> | <p><b>1934</b> Appointed president Oregon State College.</p> <p><b>1936</b> Awarded Sc.D. degree, University of Michigan.</p> <p><b>1937</b> Awarded LL.D. degree, Willamette University.</p> <p><b>1941</b> Retired as president of Oregon State College; became president emeritus and dean emeritus, School of Forestry.</p> <p><b>1942</b> Appointed civil defense coordinator, Benton County.</p> <p><b>1947</b> Elected mayor of Corvallis.</p> <p><b>1951</b> Died June 24, in Corvallis, Oregon.</p> |
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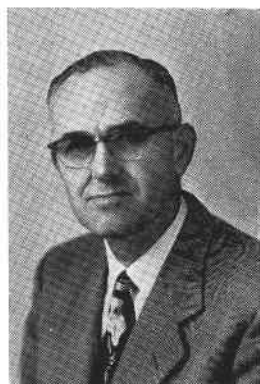


# History of Forestry at Oregon State College

- 1892 First forestry taught in a botany course by Moses Craig.
- 1894 *Hough's Elements of Forestry* used as a text.
- 1896 First forestry course taught in botany department by Edward R. Lake.
- 1904 Department of Botany and Forestry established.
- 1906 Four-year undergraduate and one-year graduate program in forestry established.
- 1908 Department of Forestry established.
- 1910 George W. Peavy appointed as professor and head of the Department of Forestry.



**George W.  
Peavy**



**W. F. McCulloch**



- 1913 School of Forestry established with Peavy as Dean. Department of Logging Engineering established in the school.
- 1917 Forestry Building constructed.
- 1920 *Annual Cruise* founded.
- 1921 Graduate work in forestry authorized; Master of Science, Master of Forestry, and Forest Engineer degrees.
- Forest land acquisition program inaugurated. Peavy Aboretum and Spaulding Tract acquired.
- 1925 First Forestry Club Cabin built on McDonald Forest.
- 1927 Third major field of study, Lumber Manufacture, introduced; later changed to Wood Products.
- 1934 Dean Peavy appointed president of Oregon State College.
- 1935 Dean's Cabin presented to G. W. Peavy by old graduates.
- 1936 Minor fields of study in Forestry introduced: Forest Recreation, Fish and Game Management, Grazing Management, Soil Conservation, Forest Pathology,

- Forest Entomology, Science, Pulp and Paper, and Business Administration.
- 1940 Dr. G. W. Peavy appointed dean emeritus and president emeritus. Professor E. G. Mason appointed acting dean.
- 1941 Oregon Forest Products Laboratory created in cooperation with the School of Forestry.
- 1942 Paul M. Dunn appointed dean.
- 1946 Student personnel program adopted with staff man as head counselor.
- 1947 Three major curricula revised and names changed: Logging Engineering to Forest Engineering; Technical Forestry to Forest Management; Wood Products to Forest Products.
- 1948 Forest manager for the School's forest properties appointed. Short courses in cooperation with industry and public agencies introduced.
- 1950 Present Forestry Club Cabin constructed.
- 1954 Forest Experiment Station established.
- 1955 W. F. McCulloch appointed dean.
- 1956 Fiftieth anniversary of four-year program.

## FIRST Graduating Class, 1910.

**Standing,  
from left:  
Sinclair A.  
Wilson,  
J. F. Pernot.  
Front,  
from left:  
T. J. Starker,  
H. D. Gill.**

**Paul M. Dunn**



**Earl G. Mason**



# The Curriculum Has Changed

## 1906 CURRICULUM

### Freshman Year

Forestry, algebra, geometry, English composition, woodwork, freehand drawing, declamation, bookkeeping, composition and rhetoric, plant mycology and ecology, breeds of stock, military drill.

### Sophomore Year

Forestry, silviculture, surveying, rhetoric, trigonometry, chemistry, plant histology, woodwork, plant physiology, plant classification and phyto-geography, invertebrate anatomy, military drill.

### Junior Year

Forestry, the forest, forest entomology, dendrology, surveying, mechanical drawing, German or French, typewriting, vertebrate anatomy, physics, physiography, climatology, soils and waters, military drill, military science.

### Senior Year

Forestry, forest finance, forest industries, forest by-products, forest economics, German or French, economics, cryptogramic botany, geology, plant pathology, psychology, American politics, physiology, stock breeding, enginery and quarrying, military drill, military science.

### Prescribed Course

Timber technology, lumbering, forest policy and protection, technical reading, road construction, original investigation, commercial law, highway construction, industries and commerce, civic actions, veterinary, land records, fish and game.

## 1956 CURRICULUM

Orientation, general forestry, tree identification, forest engineering, English composition, engineering drawing, algebra, botany, trigonometry, speech, geology, military science, physical education, analytic geometry (FE and FP).

Dendrology, mensuration, forest engineering, forest protection, wood technology, political science, forest soils, economics, technical report writing, chemistry, literature, physics, military science, physical education, calculus (FE), accounting (FE and FP).

Aerial photo interpretation, wood utilization, timber growth (FM), logging methods, forest ecology (FM), forestation (FM), forest practices, forest valuation, forest engineering, seminar, literature, logging roads (FE), timber mechanics (FE and FP), heat engines (FE and FP), wood properties (FP), finance.

Industrial forestry, forest economics, forest administration, forest engineering, forest management, timber management, fire control, seminar, range management (FM), public administration (FM), literature, logging engineering (FE), business law (FE), lumber plant (FP), lumber manufacturing (FP), lumber merchandising (FP), ply and laminated products (FP), lumber seasoning (FP), wood preservation (FP).

### Fifth Year

### Major Courses Available

Forest engineering, logging methods, logging engineering, timber bridge design, forest management, forest economics, forest administration, aerial photo, mensuration, fire control, silviculture, wood anatomy, physical properties of wood, wood preservation, lumber seasoning, lumber industry problems, ply and laminated products, seminar, research, thesis.

## SUMMER CAMP 1906

"All students in the regular course in forestry will be required to spend two sessions of eight weeks each during July and August of the junior and senior years in the forest. One session is required at Camp Reserve; a part of the other, at the option of the forester, may be spent in lumber camps, mills, or factories. The objects of these summer sessions are two-fold; to give the student a practical working knowledge of the subject in hand, and to advance his technical training. In view of these ends the work

of the summer session is diverse and is presented in two ways, lectures and field-work.

### Junior Year

**LECTURES.** These are presented as a series of campfire talks and discussions covering the following topics:

Methods of field-work; forest transportation, trail and road construction; pack animals, selection, care and management; forest-service, duties of fire and game wardens, rangers, and other officers.

Forest physiography including field-

geography, geology and plant distribution; timber cruising, mensuration; forest fires, prevention, fighting, remedies; grazing in forest areas; fish and game, hunting, trapping, fishing, breeding, etc.

**WOODCRAFT.** This is a series of daily practical exercises in field forestry. The subjects with which the student will be required to have an actual working knowledge are: packs and packing, trail and road making; camp equipage; camp making, camp fires; water supplies; camp cooking; woodmen's tools; their use and

*(Continued on page 21)*

# Early Foresters Studied Botany



**Harold D. Gill**

By  
**Harold D. Gill, 1910**  
Manager School Book Dept.  
J. K. Gill and Co.  
Portland, Oregon

When I arrived on the Campus in 1908 the three principal College Class Room Buildings centered about the old Administration Building, looking over the lower Campus. Besides the Agricultural Hall to the South and the Mechanical Hall to the North there was a little Old House called

The Mines Building. The old wooden Armory was over close to Waldo Hall. The Armory served also as Gym and for "Convocation." Convocation was a Student Assembly with quite often a prayer or a Blessing thrown in for good measure, and some message by President Kerr or some visiting Dignitary.

I lived in Cauthorn Hall, then The Men's Dorm. It was separated from the rest of the Campus by a plowed field. A soggy sawdust path running along what is now the street in front of the Forestry Building connected it with the Main Buildings. Back of Cauthorn was the Big College Barn.

We Foresters occupied corner rooms on The Upper floor of Agriculture Hall. Professor Lake was our Boss and the tops of the Book shelves in his office, which was our principal gathering room, were crowded with Glass jars containing Tufts of Dried Grasses, Grains, and specimens of other Herbage, Plants, and Shrubs. These specimens combined with others drying in Herbariums in the adjoining Botany Lab. gave the place a dusty stuffy odor that I will always associate with Forestry. Botany played a large part in early Day Forestry.

**AS FOR ACTUAL FORESTRY** I have vague memories of "Diameter Breast High" of trees illustrated in Text Books describing Eastern Forest Trees. The pictures in these books showed the Foresters measuring the trees with a strange wooden device designed to take nothing over 24 inches in Diameter. I am sure our Classes were not equipped with these sliding wooden measuring sticks.

We also studied a Book of the Laws under which the U. S. Forest Service was set up and operated. There were not many Laws pertaining to Forestry then, and there seemed to be frequent Reference to a Law about How Land in the Forest could be taken for Camp Sites, Summer Homes, and other purposes. My unfail-

ing answer to any question put to me on the Text of this Book was, "It is Provided for Under the Act of June 11th." That was the Stock answer.

Professor Lake was a bit on the portly side, and when he became tired of us, he sent us on Field Trips. Usually we went to Marys Peak. If we could work it, for a couple of Days' Holiday. Short trips took us along the River Bank to study White Fir and Cottonwood. Once we took one of those unchaperoned Field Trips to Monroe, aboard an S.P. Freight. The entire Forestry class insisted on riding on top of the Caboose. The nearest we came to Forestry was to duck under low branches of wide-spreading Oaks or Maples overhanging the track on the run up to Bellfountain or Alpine.

In the Fall of 1909 I think Professor Lake moved to some other College, and we Foresters were left without any Guiding Hand. We got to talking about leaving Corvallis and going to the University of Washington where we heard they also had a Forestry course. Somehow Prexy Kerr heard of this insurrection and promptly we were all hauled over the coals.

In my case it was found that I had no work in what the Catalog called "Range Management." This course existed only in the Catalog at that time. I was a City kid and pretty simple about Farms and Herds of cattle, so after a few questions about my background they popped me in a Class of Elementary Animal Husbandry and I never knew the difference. In Midwinter George Peavy arrived and took over Professor Lake's desk and we boys in Forestry knew we had a Real Boss.

**STARKER HAS MENTIONED** we four horsemen in the First Forestry Class. There was another Group in the next Class that was very close to us, A. A. Nilsson ("Scondi") whose whole career was in the U.S.F.S. Harold Eberly and Hal Barbur were also close friends and then there were others, Totten, Oscar John Olson, and Fritz Rathiel, and a number of others

As Starker said in his Paper I felt a strong call of the Sea in my blood, and I spent many hours reading lumber trade journals which reported what ships had loaded lumber at Grays Harbor, Coos Bay, and Astoria. I had already made one voyage in a little 900-ton square Rigger and I always contemplated my Forestry from a sort of close-to-the-Sea Point of View. When I first went into the Service it was in the Olympic Forest with Salt water on three sides. If I had known that the Forest Service had Islands in Alaska with Gas Boats and all that I'd probably have gone there at once, and might still be in the Service or retired to a nice little Island in Sitka Sound.

*(Continued on page 5)*

# Four Men Comprised First Class



**T. J. Starker**

By  
**T. J. Starker, 1910**

Consulting Forester  
Corvallis, Oregon

According to the College Catalog 1906-07, nine courses of instruction leading to the B.S. degree were offered including: Agriculture, FORESTRY, Household Science, Mechanical, Electrical, Mining and Civil Engineering, Pharmacy, and Literary Commerce.

Although there had been a department of botany and forestry since 1904, it was in 1906 that the four-year course of instruction was inaugurated. Thus, we have the basis for celebrating our 50th anniversary this year.

In the fall of 1908, when the writer arrived on the campus of Oregon Agricultural College there were some 20 students enrolled in the Forestry Club. The records show that the following subjects were discussed at the meetings of this club during the year: "New Uses of Waste Products," "Pulp Wood Industry," "Railroad Ties," "Sea Going Rafts," and "Forests of Oregon." The same subjects would still be appropriate in 1956.

During the early period, the school occupied the "Heaventh" floor of the Chem Shack—later Education Hall. Professor E. R. Lake was our boss until February 1910 when George Peavy arrived on the campus, direct from California, with a wide-brimmed hat and experience in the California National Forests.

Prof. Lake, a botanist, was a kindly gentleman and put up with a lot of horse play from us young bucks. Peavy started to crack the whip and when Harold Gill drew pictures of three-masted schooners instead of the leaves of Big-Leaf Maple he advised the young man that he had had experience teaching school back in Michigan, etc. etc.

There were just four men in the first class to graduate in forestry, in 1910. Gill, whom I have mentioned,

did not go to sea as he wished but became vice president of the J. K. Gill Company in Portland, and an authority on river boats and their whistles.

Jack Pernot, was the scientist of the class and specialized in entomology. In 1914 he was killed by a runaway horse while working for the U. S. Forest Service in eastern Oregon.

Sinclair Wilson, whose forebears were lumbermen in Michigan and on the lower Columbia, was the literary man of the class and was editor of the *Barometer* for awhile. The first field trip of the School of Forestry was down the Columbia at Goble on the holdings of the Clark, Wilson Lumber Co., Wilson later in life became senior forest economist for the Experiment Station. One of his outstanding studies covered the Forest Land Tax Delinquency of the 1929-31 period. He, along with the writer, mapped out a petition to the Board of Regents to change the name Oregon Agricultural College to Oregon State College. At a general Forestry meeting this petition was presented to President Kerr and it is believed that this was the first formal attempt to have the name changed to be more inclusive than just "agricultural."

The fourth member of the class of 1910 was T. J. and most of you know too much about him already.



**MEMBERS of 1910 graduating class at a 1930 reunion. Standing, Sinclair A. Wilson. Seated, from left, T. J. Starker, author of accompanying article. Harold D. Gill.**

## Gill

*(Continued from page 4)*

Well, the College has grown and changed: New Buildings, New Faculty, new students, but one thing will always be the same to me. The Sea wind that comes up in late afternoons and Evenings in the Spring and blows fresh and strong in from the Ocean over the Coast Range down the Valleys and across the Campus.

# Fifty Years of Forest Management



Lynn F. Cronemiller

By

**Lynn F. Cronemiller, 1917**

Assistant State Forester  
Oregon State Board of Forestry  
Salem, Oregon

Fifty years of forestry management in Oregon has seen a remarkable and complex change in the picture. Forestry management has progressed from timber liquidation to timber cropping.

Back in 1905 a peculiar situation existed. Ownership of timber rested entirely with private agencies on the one hand and the Department of the Interior as an agent of the Federal Government on the other. The private owner had a single motive and objective: *profit*. The Interior Department had been following the national policy of getting this western country settled. The way to do it was to encourage this through cheap land. The homestead laws and timber claim entries took care of that.

On the other side was the branch of the Forest Service in the Department of Agriculture. It had exceptionally progressive ideas in forestry matters. It was then that Gifford Pinchot was beginning his great work in forestry along national lines. But the Agricultural Department did not own or control a single acre of forest land.

**FEDERAL FOREST** land was being withdrawn through presidential proclamation and set aside as "Forest Reserves." The Department of the Interior was not too happy about this job of administration and recommended transfer of the forests to the Department of Agriculture. This finally came about in 1905 and the Forest Service became a real land owner. "Forest Reserves" became "National Forests" and the policy of forest conservation and multiple use became the guide of the department.

Just a year prior to this, some work had been done in fire control by a private company. Over in Linn County a crew of men went up on Canyon Creek to battle a forest fire.

Down in Klamath County a year or so later, Jackson F. Kimball took over as agent for the Weyerhaeuser interests. "Uncle" Al Powers was head logger in Coos County for C. A. Smith, later the Coos Bay Lumber Company. These two men, together with the Booth-Kelly Lumber Company of Eugene, set up the first forest fire patrol associations in the state.

The State of Oregon was not yet in the picture. But the timbermen wanted forest laws and officials to enforce them. This urging resulted in the creation of the State Board of Forestry, much along its present lines, in 1911. An excellent code was adopted.

**THIS WAS** the beginning of the triumvirate that has been so active in forestry in Oregon ever since—the state, the private timberland owners, and the federal government. While these three agencies have been in agreement as to final objectives, there has often been frank and vigorous disagreement as to methods of accomplishment. On the whole, it has been a healthy situation.

Logging was booming in Oregon. Production had jumped to 2 billion board feet annually. It was a high-grade show. The dollar sign was the symbol and profit the objective. When the last log hit the landing, the property went to the tax collector. Pleas to grow new forests on these lands had little effect.

Financially the private owner had a protection headache. The non-member of the association got a free ride. This was corrected in 1913 with the passage of the Forest Patrol Act. Briefly, it required the owner to protect his land from fire. If he failed to do so the state took over and collected costs through the medium of the tax rolls.

This law applied only to merchantable timber. It was not until 13 years later that it was amended to take in all forest land in the state. That probably can be marked as the first real step in forest management, with the timber cropping idea behind the law.

**THIS OFFERED** no inducement to the owner to retain title to the land. This inducement came later with the passage of the Oregon Forest Taxation Act which provided for the classification of such lands. Thereafter they paid a fixed nominal sum per year as a forest fee and a 12½% yield tax at the time of harvest.

While all this was going on, the beetle infestation of 1909 had been making headway and reached serious epidemic proportions 10 years later. With industry backing, the State Insect Control Act was passed. It was patterned after the Patrol Act—do the work or the state would take over. A lot of pine land was treated in the next few years.

During this formative period the Forest Service was the leading and dominant figure in progressive forestry. It was doing its best to encourage and assist the states and private owners in better forestry practices. It went further than advice. Assistance was expressed through financial aid.

First came the Weeks Law of 1911, giving financial aid in the protection of state and private timberland as

(Continued on page 10)



# Fifty Years of Forest Products



H. F. Thomas

By  
**H. F. Thomas, 1919**

General Manager  
Valsetz Lumber Company  
Portland, Oregon

A half century ago, Oregon's lumber industry produced 1,250,000,000 board feet of lumber and was just beginning to be a factor in the national lumber picture. Down on the Willamette River banks, a few far-sighted men were putting together by the crudest possible methods the first plywood panels which were soon to be displayed at the Columbia Exposition and World's Fair in Portland in 1905.

Those panels are still on display in the world's largest log cabin, last physical vestige of that far-off event.

Half a century ago, the forest products industry of Oregon had been operating for three quarters of a century, since that long-ago day in 1827 when Dr. John McLoughlin, famed Hudson's Bay factor, got a crude water-powered sawmill going on Mill Creek on the north bank of the Columbia River.

There have been mighty changes in our industry since that historic day in 1827. We are probably one of the most highly mechanized industries in the world today, a far cry from the days when we moved logs by jack screws, then horses and oxen, and when we turned our crude muley saws with the power from falling water.

**WE HAVE WITNESSED** in this industry the coming of steam, the advent of electric power and diesel power. We have seen the motor truck developed to a powerful mechanism for hauling our giant logs from the forest. We have seen the tractor with its movable tread set up a vast revolution in the woods as it bulldozed its way up and over mountains, building roads and yarding our logs.

Equally as spectacular as the technological changes and advances in our industry has been the rapid climb, and then emergence of Oregon, as the nation's leading lumber-producing state. After trailing neighboring Washington state for a decade, in 1938 Oregon took over leadership as the nation's top lumber producing state, soon doubled its output, and rapidly pulled away from Washington. For 18 years Oregon has led.

It is fitting that the state which gave plywood to the world should now become the leading producer of this fabulous sandwich board. In 1953, Oregon took over

from Washington the plywood production leadership and today is credited with manufacturing 54% of all the softwood plywood in the U. S.

There are forecasts today that plywood production will reach 7 billion square feet or more of output a year, and few would have dared predict 10 years ago that the volume of this amazing new wood product would top 5 billion in 1955.

**PLYWOOD GOT** a tremendous impetus during World War II but the thing that really put it on its feet as a new building and engineering material was the development of water-resistant and waterproof glues together with hot pressing. Then, too, the plywood industry has been in the hands of men of vision and daring. They have applied the latest and best industrial techniques to their industry, such as materials handling and cost analysis, and have pioneered in the application of quality control to insure standard products of high quality. They have been aggressive in their development of new faces, like raked, embossed and overlays. They have exploited new markets, developed pre-cut panels, so it is no wonder this booming industry has rolled ahead.

The growth and expansion of the plywood industry has created serious problems for lumber. Today, the average sawmill cannot compete with plywood for peelable logs, for the conversion factor is much higher for plywood. This creates a real problem when a sawmill thinks in terms of turning a peeler log with its deep clear wood into higher grade lumber products, for the log will bring more in the form of plywood than even the highest grade lumber item.

For much of the life of the industry here in the West, and especially in Oregon, the lumber industry has been an unprofitable business. It has been a business that thrived only on disaster. For instance, it had its best times in the first three-fourths of this century during periods like World War I, and after the Japanese and San Francisco earthquakes.

**FOR MOST** of the years prior to 1939, a sawmill operator considered himself lucky if he could sell his lumber at a break-even price, and let his profits come from the underweights. Believe me, baling wire was one of our most important pieces of equipment, and the man who couldn't use baling wire efficiently just didn't stay around long.

Most private timber landowners were liquidators. Taxes were eating big holes into their standing timber, so were bugs, disease, and fire. There was no incentive for owning timber when you couldn't convert it into lumber without using large quantities of red ink. Most sawmill ledgers looked like a photograph of a kid with measles and diphtheria, in full color.

When Hitler started marching across Europe, and England began frantically to undo the harm of Chamberlain, the first and great need of this gallant nation with its back to the Arctic Circle was lumber. In 1939, England demanded huge quantities of lumber and the Oregon lumber industry came to life as if it had been given a gigantic hotfoot. In 1938, Oregon produced only 2.6 billion feet of lumber. By 1941 this had jumped to 4.5 billion feet, and in the past few years this state has cut about 8 billion feet.

During the war years and through the Korean affair, this state maintained a high level of output of vitally needed lumber and forest products. For the first time since the California gold rush days of 1849, when Douglas fir lumber brought as much as \$500 a thousand feet, Oregon lumbermen were wonderfully in the black.

**FOR THE FIRST** time in their lifetimes they had the money to do some of the things they had always wanted to do. They had the money to practice forestry and witness the birth of the amazing tree-farm program which has now spread nationwide. They had the money to improve and modernize their plants and mills. They mechanized their sawmills with precision equipment, automatic carriages, preset edgers, electric-eye controlled trim and cutoff saws. They rebuilt and expanded their dry kiln capacity. They installed better saws which required less kerf. Throughout the industry the surge was to betterment and improvement of manufacturing facilities and the end product. It was a healthy sign. It is interesting to see what men of the rugged, inventive capacity of our industry do when given half a chance.

With money, these men expanded, went deep into research, introduced new techniques like edge and end gluing, improved packaging. The list is endless. They have come up with many new products of bark, fibre, and lignin.

The industry has become utilization minded. More than 200 sawmills and plywood plants have installed chippers to convert bark-free wood into pulp chips. In 1944 the pulp industry in Oregon used only 1350 tons of residues. Today this industry uses upwards of 600,000 tons of leftover wood from sawmills and plywood plants. This is one-eighth of the available leftovers created in the State in a year, after lumber and plywood manufacture. Fully one-third of the raw material needs of the pulp industry of the Northwest comes from this leftover pile.

**BUT, THE INDUSTRY** has not been idle nor satisfied to sit back and operate just sawmills and plywood plants. Newest wood-products industry to boom in Oregon is the hardboard, softboard, and particle-board industry. Oregon now has 11 of these plants which use another 20,000 tons annually of leftovers. The industry will expand.

What about the future of this forest products industry? First, we should consider its size and scope today. The forests of Oregon last year supplied the raw

material for an industry of gigantic size. It gave employment directly to 100,000 of our citizens, and indirect employment to another 30,000. It paid in direct wages \$400,000,000. It brought into this state in new money in 1954, for the wholesale price of its goods at mill level, the staggering sum of 1 billion dollars. This is no flash in the pan, for the forest products industry has been quietly plugging away at or above the billion-dollar level for the past several years and seems destined to remain above that figure for many years, with the expansion of the plywood and pulp industry in Oregon, which increases the product value and raises the per-man days required to process each thousand feet of logs.

**AN IDEA OF WHAT** this huge industry means to Oregon, which is worth each year in cold cash more than two and a half times all the output of agriculture, can best be had by a look at what it means to other industries. For instance, it supplies 80% of all outbound water tonnage. It supplies the freight shipments for 72% of all outbound railroad cars. It has the same impact on the petroleum industry, equipment, wire rope, tires, machines, saws and all the millions of dollars a year worth of supplies needed to keep it operating. It is indeed a far cry from the years prior to 1939 when a sawmill man's credit was not very good and when timber could be had for \$1 a thousand, with no takers.

I mentioned research, and I am a firm believer that the forest products industry of the future will support an intricate and highly refined chemical and remanufacturing industry. Experiments being carried on at Corvallis at the Oregon Forest Products Laboratory and by private firms, already have produced usable industrial wax from bark, a variety of chemicals, even wonder drugs, all types of cellulose and fibre products. We have two potential industries based on wood in the offing. One is an industry which will treat wood and bark with chemicals to extract a wide variety of products, and the other is an industry which will take wood and bark, tear it down mechanically and then build it up again into hardboards, wools, insulating materials, fertilizers, and land extenders. The list is long and wonderful. It is not inconceivable that the sawmill of the future actually may be a vast chemical plant which makes lumber by weird machines to rival Rube Goldberg.

**THERE IS A CHALLENGE** in our industry for every young man in Oregon. There is a future for you in an industry which is insuring its perpetual life by growing trees under scientific forest management. There is a future because this industry is as new as tomorrow. It controls the world's only renewable natural resources. It is vital, vibrant with ideas and enthusiasm and the vision and willingness to explore new horizons.

To give you an idea of what awaits us down the path, let me throw out this challenge to you scientists,

*(Continued on page 15)*

# Fifty Years of Forest Engineering



L. L. Stewart

By  
**Loran L. Stewart, 1932**  
President  
Bohemia Lumber Company

The Pacific Logging Congress was responsible for establishment of the logging engineer program at Oregon State College and the University of Washington. The logging engineer at first was occupied strictly with logs, rigging, donkeys, and logging railroads. In later years, this territory extended to

include responsibilities in forest management, land appraisal, fire control, and so many other forestry jobs that the term forest engineer is becoming widely used today to describe this bigger field of activity.

I was graduated from Oregon State College in 1932 with a B.S. in Logging Engineering and have found the basic training received has been of real help in my activities both inside and outside the Engineering field.

Forest Engineering covers such a wide front that it is difficult to know where to start and once started where to stop. Some type of engineering is fundamental to all phases of forestry from protecting our forest resources to developing them for recreation, fish and wildlife, water supply, and utilization of the various crops which are produced on a forest acre.

**JUST TO NAME** some of the specialties that are or are becoming involved will give some idea of the complexity in this field. In order to do the job required today, the logging engineer or forest engineer must be partly a number of kinds of engineer, for instance: (1) a civil engineer, (2) a surveyor, (3) a bridge engineer, (4) a mechanical engineer, (5) an electrical engineer, (6) an hydraulic engineer, (7) an architectural engineer, (8) an electronics engineer, (9) a communications engineer, (10) a structural engineer, (11) an automotive engineer, and (12) a chemical engineer.

It helps too if he's a landscape and recreation expert. He also has to turn out Rube Goldberg contraptions that will do the job when everybody else says it won't work. The man who can do all this is the kingpin of engineers in the forest industry. He has to be all of the above rolled into one, plus being a labor relations expert, a psychologist, and the user of a little common sense. He must blend most of the above specialties in one form or another to make a workable, integrated operation.

Let us look a bit into the history of this logging engi-

neering character. But before we do this we should discuss in general terms the scope of the job. Basically the forest industry is one of transportation, transporting a material from the forest, through its many processing stages to the ultimate consumer. This means many modes of transportation and many items to be moved.

Now in this light, we'll look at the logging engineer. Fifty years ago his problem wasn't too complex measured by today's standard. He was felling trees close to water, using an old hand briar, and with a few oxen pulling the logs down skid roads to water. Then he either rafted and towed to the mill or built splash dams and drove his logs down the rivers. Not too much engineering was involved, some hydraulic engineering in the dams, little if any mechanical engineering. (Not too much mechanics involved in a hand-felling saw.)

**TAKE A LOOK** at *This was Logging* by R. W. Andrews, with pictures by Darius Kinsey, and you won't see much complex machinery or methods used 50 years ago.

As the timberline began to recede back from the waterways, we find railroads coming into the picture along with steam donkeys. First there was the ground lead, then the high lead, then slack lines and skidders. Now we see the logging engineer beginning to develop. He had a job to do as timber began to move longer distances. The industry began to use more complex machinery and to build railroad systems that took some topnotch engineering. Many outfits went broke in this transition stage because they lacked the services of a forward-looking, qualified logging engineer.

This was the period when logging engineers came into their own and special courses were beginning at schools of forestry.

The next stage in development was the advent of the rubber-mounted truck and the crawler tractor for moving dirt and logs. These added many complexities but also made much more timber available at a lower cost in the pond. The added cost in capital investment began to climb rapidly and managers had to rely more and more on the logging engineer. Also the logging engineer had to get more into the engineering field if he were to redeem his responsibilities. Then came the advent of the mobile loading machine, the two-way mobile radio, specialized logging equipment, and the beginning of automation through the use of electronics connected with air or hydraulic cylinders or other activating devices. Competition for the diminishing timber supply forced the bringing in of material previously left in the woods as worthless.

The logging engineer has so far taken all this in his stride and has not been found wanting. Because he developed into so many fields of engineering endeavor,

however, some jealousies were bound to arise. I think these differences of opinion can and should be resolved by a better understanding of problems and responsibilities in this field. The logging engineer stands with equal stature, now, at least by law in Oregon.

Machinery people like to take the credit for most of the innovations in logging machinery, but all they have done in the main is to take a logger's idea and build a machine. Very few if any of them have ever developed original ideas. Let us look at some of the innovations that have been developed by logging engineers: (1) geared locomotive—The old Shay, Climax, and Heisler; (2) double-flanged railroad wheels used on inclines—the switch problem here was something, but it was solved; (3) chain falling and bucking saw; (4) the bulldozer; (5) heavy duty logging trucks; (6) crawler and rubber-mounted shovels for log loading—with the gooseneck and Bohemia type loading boom; (7) mobile radio communications; and (8) using a power saw with an auger to shoot stumps.

The bulldozer was developed and adapted to the woods by Ed Stamm of Crown-Zellerbach, the late Ted Flynn of the Forest Service, and the late Bill Dyche of the Algoma Lumber Company. The equipment companies had so little understanding of logging needs that they mounted the first bulldozer blades on the *rear* of the cat.

I could list many ideas that have originated with the logging engineers. They will go on originating them so long as we maintain a free enterprise system where there is an incentive to get ahead.

**THE MOST** far-reaching change in forestry in the West has been the shift from railroads to trucks. This

has brought to market timber which was classed as forever inaccessible just a few years ago. Roads geared to the forest and geared to the logging have brought unheard-of flexibility to forest operations.

At one time the logging engineer was employed only by a logging company. Today, forest road development is basic not only to logging but to forest management, protection, and utilization. In addition to industrial organizations, every public timber-owning agency employs logging engineers or forest engineers, and would like to get more of them.

I wonder what lies ahead for the logging engineer. In all certainty, he is going to have to be more versatile and keep an open mind, because progress is with us and I hope it will stay.

The old skid-road man probably figured there would be no material improvement in log transportation and the railroad logger probably felt the same. I hope that now, even though we have log trucks, we are still not at the end of the rope.

Let me draw an analogy: I was a field artillery officer during the war. We used guns similar to those used in the Civil War. Perhaps they shot a little farther, faster and more accurately, but basically the same guns. They used powder, had a terrific recoil, and were hard to get around. It took a 2½-ton truck to move them. Now we see two doughboys running around with a piece of pipe that will shoot as far and as accurately as we did—and with no recoil. We have intercontinental missiles now where we had to send an airplane before.

This leads me to believe that we will be logging and manufacturing a great deal differently within a short time, and the logging engineer will be right there pushing and pulling the industry along.

## Forest Management

*(Continued from page 6)*

the headwaters of navigable streams. It was expanded in 1924 by the Clarke-McNary Law which also aided in the growing of forest tree seedlings. Later, the McNary-McSweeney Act was approved. It made provision for a nationwide timber resource survey and also endorsed a broad program of research. The information was essential in forest management. It helped a lot of timberland owners who were either toying with the idea of timber growing or actually practicing it.

**IN 1933** the Federal National Industrial Recovery Act was passed. It was designed to cure the economic ills of a distressed economy. Under Article X of the Code, industry set up rules of forest practice. When approved by the President of the United States, these became law. Later, the measure was declared unconstitutional but a large segment of industry continued to observe these rules on a voluntary basis.

After Article X was kicked out by the courts, some zealous individuals in Washington, D. C., charged that the states could not manage their forestry business properly and the rules of forest practice should be fed-

erally enforced. Numerous bills were introduced to this end. None passed.

Oregon citizens, being of rather an independent nature and firm believers in the doctrine of States rights, strongly opposed this proposed legislation and set out to work out their own salvation. The result was approval of the Oregon forest conservation act by the 1941 state legislature.

**INDUSTRY CARRIED** on by supporting a measure which created the Oregon Forest Products Laboratory. This new state unit was charged with the responsibility of seeking new uses for waste in the woods and mills. At the time it was entirely state supported, but today industry carries the entire load through a 4-cent severance tax. Research has been expanded into the fields of silviculture, weather studies, protection, and other problems.

A "Tree Farm" was established in Washington. The idea spread throughout the United States. Oregon itself has some 3,500,000 acres as certified "Tree Farms."

Throughout the years the Forest Service has been doing an outstanding job on its holdings. The policy of

*(Continued on page 14)*

# Forestry Education in America



Henry Clepper

By  
**Henry Clepper**  
Executive Secretary, Society  
of American Foresters  
Washington, D. C.

Technical training in forestry had been offered at certain European universities for more than a hundred years before the establishment of the first American school of forestry. Lectures on forestry and tree culture however were given in at least 22 land-grant colleges in the United States

during the last quarter of the 19th century. This instruction was not professional in character; it was mainly for students of agriculture.

Generally, the lectures were given by teachers of botany and horticulture, and emphasized tree planting, farm woodlot management, and the influence of forests on climate and stream flow. The availability of such lectures, however, indicated a growing interest in forestry education; still, no body of courses was offered anywhere in America to prepare workers for careers in forestry.

But the advent of professional training was not far distant. In 1898 forestry instruction began at Cornell University, the first institution of collegiate rank to develop a forestry curriculum, and at the Biltmore Forest School in North Carolina, which offered a one-year course in applied forestry. Both schools were subsequently discontinued.

**YALE UNIVERSITY** set up a full forestry curriculum in 1900, and now enjoys the distinction of having the oldest forestry school in continuous operation in the Western Hemisphere. Other colleges and universities followed rapidly.

In 1903 the University of Michigan and Michigan State College established forestry curriculums, as did the Pennsylvania State Forest Academy at Mont Alto, the University of Maine, and the University of Minnesota.

In 1904 three additional institutions set up courses: Iowa State College, Harvard University, and the University of Nebraska, which offered forestry instruction in connection with horticulture, then later dropped the work. In 1905 Colorado College started a course, but discontinued it in 1934.

In 1906 Oregon State College and the University of Georgia began training in forestry, but the latter institution was not very active during its first two decades.

In 1907 professional instruction began at Penn State, the University of Washington, and Washington State College. In 1909 the University of Idaho set up its forestry work.

**IN SHORT**, up to the period of the first World War, 24 schools had been established in the United States, and 20 were still in operation. Most were in land-grant colleges and offered a four-year undergraduate curriculum. Yale had the only wholly graduate school. Manifestly, increasing employment opportunities in Federal and State forestry work and the attraction to young men of forestry as a career, were creating demands for professional education that the colleges and universities were not reluctant to fulfill.

Although the first two American schools (Cornell and Biltmore) were headed by German foresters, professional forestry education in the United States was characterized from the start by a typically fresh and independent outlook. With the primary aim of training men for the practice of a profession just coming into existence, the early schools were quite different in certain aspects from their European prototypes. The entire conservation movement, including education, was influenced by the crusading zeal of Gifford Pinchot and Theodore Roosevelt. An essential purpose was to reverse the trend of forest destruction and bring about the management of many million acres of publicly owned woodland that had been acquired and was being acquired by the Federal Government and the States. Forestry educators entered into this program with fervor and serious intent.

Accordingly, during the early decades of professional education there was a marked shift in emphasis from subjects originally adapted from European training to those that better served American needs. A major influence on all schools was the character of the examinations given by the U. S. Civil Service Commission to recruit junior foresters for positions in the Federal Government. Forestry education, from a virile seed of indigenous origin, was growing into a lusty tree typically American in root, stem, and branch.

**WITH THE CREATION** of so many new schools so fast, some leaders in the profession became apprehensive about the maintenance of professional standards. During the 1920's several prominent educators proposed that a study be made of "the education of men preparing for the profession of forestry."

This study was made possible by a financial grant to the Society of American Foresters from the Carnegie Corporation of New York. It resulted in the book *Forest Education* by Graves and Guise, published in 1932 by the Yale University Press.

(Continued on page 15)





**FOREST CLUB, November 1909.** Top row, from left: Earl Riley, James Evenden, T. J. Starker, Adolph Nilsson, Oscar Olsen, Guy D. Sandborn. Middle row from left: J. F. Pernot (deceased), Lynn F. Cronemiller, W. L. Dutton, Prof. E. R. Lake (deceased), H. J. Eberly, Reginald G. Witte, Grover Vernon. Bottom row, from left: L. Earl Emery, Wm. Fritz Raithel, Alexander Dodge (deceased), H. D. Gill, H. H. Barbur, S. A. Wilson (deceased).

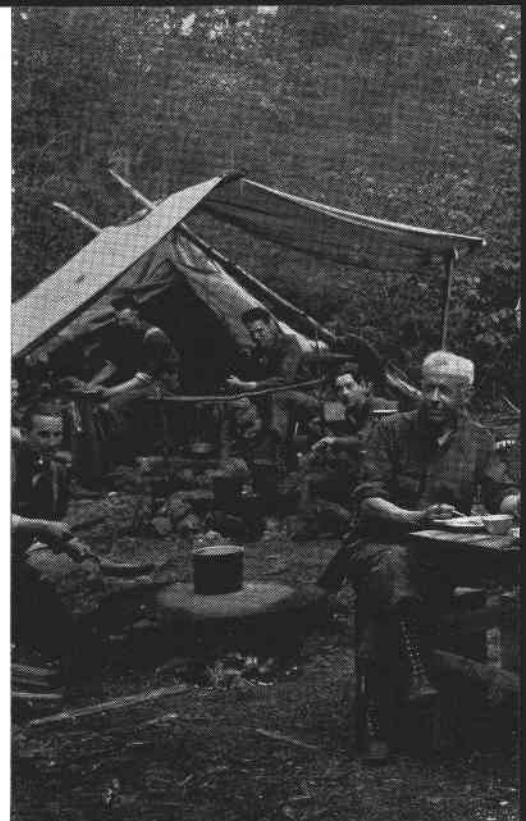


**FORESTRY GRADUATE students, forest nurseryman and faculty in 1932.** Seated, from left: Fred Schreiner (deceased), "Pat" Patterson, Dean G. W. Peavy (deceased), T. J. Starker, Richard S. Kearns. Standing, from left: Bill Baker (deceased), Harry Fowells, Merle S. Lowden and Vern H. McDaniels.



**AN EVENING** around the campfire when day's work was done hit the spot with fernhoppers.

**DEDICATION** of the first Forestry Cabin on the Arboretum in 1926 attracted forestry notables.



**SPRING TRIP** to Mary's Peak in 1923. Students in background: with fry pan, James L. Mielke; Kenneth Murdock; with pipe, Trevor Lewis(?); with stick, James D. Shaver. At

## Pictures Prove That The Dean

**LOGGERS AT WORK** in 1922. Back row (in Sampson truck, "six bits"): De Witt Jones, Lee Holmes, Delbert "Pop" Day, Floyd Willert. Standing, from left: Bill





table, Dean G. W. Peavy and H. I. Nettleton. Note circular saw used for stove top. Graduates of those early days still reminisce about the "rough and ready" treatment.



CLASS OF 1930 at graduation. Kneeling, from left: Nicholas Welter, Kenneth J. Lane, Davis Whitely, Owen L. Aydelott, Dean G. W. Peavy, Orelin F. deHegy, Fred B. Ramsey, Theodore H. Rainwater, Wm. B. Manlove, Sam L. Miller. Standing, from left: Frazer W. Schlegel, Axel G. Lindh, James C. Iler, Richard S. Kearns, Vondis E. Miller, Allen C. Smith, Glen Voorhies, Wm. Ruhmann, Alan A. McCready, Elmer E. Miller, Ralph M. Van Wagner.



THE DEAN was as tough as his boys and packed in with the rest of the fernhoppers.



SPRING TRIPS were the rage back in the 20's. Here's a tough looking group in 1925. Standing, from left: Jay Hann, Kelly McGuire, Bill Halsey, Walter Lund, unidentified. Kneeling, from left: Alvin L. Parker, unidentified, H. C. (Huck) Hiatt, John Wilkinson, Ed L. Joy. This type of training bred a rugged clan.

## Made Men and Field Tested Them

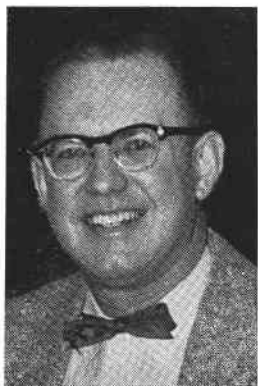
Owens, "Pat" Patterson, Lovegren, Elmer Balderee, "Chung" B. L. Nutting. In cab: Tom Owens. On fender: "Brad" Peavy. Today loggers use more modern vehicles.



SECOND FORESTRY CABIN was built in 1952, following first cabin's destruction by fire in 1949.



## From the Alumni President



**Albert Arnst**

By  
**Albert Arnst, 1931**  
THE LUMBERMAN  
Portland, Oregon

We contemplate our half-century of forestry education in Oregon with justifiable pride, because golden anniversaries are as memorable for institutions as they are for people. There is something to cherish in the thought that despite obstacles and adversities, we have made consistent progress in raising academic standards of our school and in making our graduates better men for their employers.

In the preceding pages we have looked back upon an era characterized by a sink-or-swim philosophy with respect to what the forestry graduate did. He made it or he didn't. But the personality of Dean George W. Peavy was such that 4 years of exposure to its "gamma" radiation kindled and instilled a radioactive spirit that made OSC fernhoppers a lusty clan who would battle any odds to make their dean proud of them. Certainly, the annual spring field trips, the daily campus chores, and the close comradeship fostered by the Forest Club, and other school doings bred a race of self-reliant individuals who asked for no odds.

The stress in those early years was upon training for a Federal Forest Service career. "Be a forest ranger

and hunt, trap, and fish" was the magic slogan that attracted men to this magnificent outdoor vocation. So forest rangers and loggers were the prime products of Peavy and his competent staff.

But things have changed tremendously during those 50 years. We have a host of new slogans in our forestry vocabulary—"industrial forestry," "chemurgy," "integrated utilization," "tree farms," "public relations," and many others. They have one thing in common—they mean more jobs for forestry graduates who are willing to assume responsibilities. We are doing so many wondrous things with that magic substance, cellulose, that even those of us who are rubbing shoulders with all phases of the industry sometimes are truly amazed at our progress.

It should be the pride of all of us that we have been privileged to play a part in the forestry revolution that is with us today. It holds a promise for the valiant and a challenge to the daring. Our forestry curriculum has been revamped to meet the changing times. Perhaps we have become more genteel and don't expose students to the former brimstone and fire treatment.

Instead, we have substituted mystic terms such as "student counseling," which aims to orient the future fernhopper to the world he will enter. More and more we stress getting along with people, for this new world is one dominated by greater consideration for our fellow man. Social philosophies have changed and the working man's lot is one of a 40-hour week and more leisure time, even among foresters.

It is our common responsibility, as Oregon State foresters, to "roll with the punch" as we face these changes and to be tolerant and yet humble. Dean George Peavy would want us to be men who would not shirk responsibilities. By being just that we can be good foresters, good citizens, and good Oregon Staters.

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### Alumni Association Officers and Directors

*President:* **Albert Arnst, 1931**, *The Lumberman* Miller-Freeman Publications, Portland.

*Vice Pres.:* **Sherman H. Feiss, 1936**, Bigley and Feiss, consulting foresters, Eugene.

*Directors:* **W. F. McCulloch**, dean, School of Forestry, Oregon State College, Corvallis; **Robert W. Appleby, 1940**, U. S. Forest Service, Eugene; **L. James Bagley, 1950**, Coos Bay Lumber Co., Powers. **Rudolph M. Kallander, 1940**, Forest Protection and Conservation Committee, Salem; **Gene D. Knudson, 1939**, Willamette Valley Lumber Company, Dallas; **Vondis E. Miller, 1930**, forest supervisor, U. S. Forest Service, Roseburg; **Bruce Starker, 1940**, Starker & Son, consulting foresters, Corvallis.

### Editorial Staff

*Editor:* **Albert Arnst**, managing editor, *The Lumberman*, Portland.

*Editorial Assistant:* **William A. Davies**, head, Forest Engineering Department, Oregon State College.

*Editorial Consultant:* **W. F. McCulloch**, Dean, School of Forestry, Oregon State College.

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### Forest Management

*(Continued from page 10)*

conservation and multiple use expressed 50 years ago, still controls. It has been a continual effort to carry on a real job of tree cropping. Modifications in practices have been made as research and experience dictated.

**THE DEPARTMENT** of the Interior did not really get into the modern forestry picture until 1937



with the passage of the O and C sustained-yield bill. Since then, the Bureau of Land Management, successor to the O and C Administration, has carried out its forestry program in accordance with the policy set up in the Act. It, too, is managing a crop of trees.

And finally, a multimillion dollar forest rehabilitation project is now under way by the state that surpasses anything that has ever been attempted by any agency in the nation—state or private. It will eventually make a green paradise of 300,000 acres of the triple-burned Tillamook "desert."

This is the picture of 50 years of forest management in Oregon. It has been a remarkable metamorphosis and most remarkable from the standpoint of industry. Yet it required the full support of industry to make statewide forestry a success in Oregon. The State and Federal Government could not do it alone. Today, it is directed toward the continued cropping of all forest land. It means protection, research, insect control, approved cutting practices, and forest rehabilitation. The cooperative triumvirate has really accomplished its objective.

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## Forest Education

*(Continued from page 11)*

Using this study as a foundation, the Council of the Society next authorized an examination of each school to determine the minimum standards of training essential to qualify graduates for membership in the Society in the junior professional grade. This examination, started in 1933, resulted in a list of 14 approved schools. Six additional schools were declared eligible for approval provided certain standards were met. Thus the principle of accrediting was first applied to professional forestry education in America.

**ACCREDITING** has continued as a permanent activity of the Society of American Foresters. The work is carried on by the Committee for the Advancement of Forestry Education. In order to simplify accrediting procedures and reduce the cost to and workload of the institutions evaluated, the Society, along with other professional organizations, now undertakes its accrediting activities cooperatively with several regional associations of colleges and universities.

As of December 1955, 36 colleges and universities in the United States offer instruction in forestry at the professional level. Two of these—Duke and Yale Universities—offer graduate degrees only. Of the 36 institutions, 26 are accredited by the Society of American Foresters. The remaining 10 have not yet met the standards for accrediting.

Since the first forestry degree was awarded in 1900, the schools have granted (through 1955) approximately 23,400 bachelor's degrees, and 4,300 master's degrees. Probably 90% of the degrees were in general forestry, the remaining 10% in such special fields as wood technology, range management, wildlife management, forest recreation, and general conservation. The exact number of doctor's degrees awarded during the past half-century is not known; such statistics as are available indicate a total of about 400.

Perhaps the most serious threat to the establishment and maintenance of high educational standards in forestry is the constant possibility of new schools inadequately financed and inadequately staffed. Since World War II certain college presidents, including presidents of teachers colleges, have proposed establish-

ing curriculums in forestry with little or no conception of what such curriculums on the professional level involve in cost, manpower, and facilities.

**BECAUSE OF THIS POSSIBILITY**, and in some cases actual proliferation of weak forestry curriculums, the Society of American Foresters flatly recommends against the establishment of new schools for professional training in forestry unless adequately financed, staffed, and housed from the start. In any case, the existing schools have sufficient capacity to supply the demand for professional foresters, which currently totals about a thousand each year.

In truth, the major problem in forestry education—a problem that appears to be general in education for the professions—is how to strengthen the weak institutions. Forestry cannot advance on a progressive educational front with one-quarter of the professional schools unable to meet the standards of accreditation, standards which in the opinion of many forestry educators are already too low.

Now, what of the future? Forestry education, like other aspects of the profession, is peculiarly influenced by nature, the outdoors, and living things. Because it is dynamic, it has been subject to continuous development and study. Expanding employment since the end of World War II constitutes a promise of continued educational growth. To be sure, changes in the character of forestry education are inevitable. But reviewing its history up to this point, we have every reason to assume that most of the schools will continue to meet the greater demands of technical practice and broadening employment in the years ahead.

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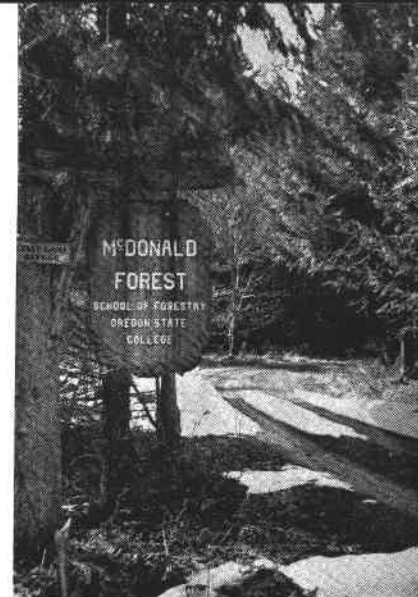
## Forest Products

*(Continued from page 8)*

to you researchers, to you lumbermen and forest products men. Find the secret of the lignin molecule and you will have opened up the gates, upturned the lid on a treasure chest of fabulous dimensions. Lignin could well supply the raw material for another petroleum industry. Today, although it makes up 40% of the wood by volume, it is a nuisance when we treat wood chemically. It is the quantity X. Solve it and you win the \$64,000.



THIS AREA on McDonald Forest was cut in 1929 and planted in 1936. Note vigorous growth.



ENTRANCE SIGN to The McDonald Forest.

# School Forest Provides Training

## • History of the Tract Is Traced Chronologically

By  
**H. I. Nettleton, 1921**  
Manager School Forests  
Oregon State College

### 1855

The main ridge and adjoining flats on which the forest stands today were largely grasslands, with hardwoods along the streams and occasional Oregon white oak and Douglas fir, from 100 to 150 years of age, scattered along the slopes and crests of the main and side ridges.

### 1922

Open to fairly dense stands of second-growth Douglas fir of various age classes intermingled with grassy flats and openings and with some 10- to 15-year-old cutover areas, all in private ownership.

Original source of seeds of current fir stands, aside from scattered fir, is unknown; possibly carried by thermal air currents from distant stands. Most original oaks are now overtopped by fir and rapidly dying out. Scattered throughout the forest, and also on the Adair Tract are felled oak, some still remarkably sound. These were cut by settlers during the frigid winter of 1881-2 in order to allow their starving livestock to feed on tender bark and buds of the upper branches.

### 1923

An Arboretum Committee sponsored by Dean George W. Peavy and consisting of one representative each from the faculty, alumni, Xi Sigma Pi, and the Forestry Club was appointed to raise funds and purchase a tract of land to be used as a School of Forestry Arboretum.

### 1925

First 80 acres ( $E\frac{1}{2}$  NE $\frac{1}{4}$  of Section 36, T 10S., R 5W.) were purchased from funds appropriated by the Board of Regents for arboretum purposes. (Site, in part, of present State Forest Nursery.)

To connect this tract with the highway, an additional 12.51 acres were purchased from the Arboretum Committee fund. (Includes present site of Polk-Benton Forest Patrol headquarters.)

August 22, 1925: Clearing was started for first Forestry Club Cabin on site of present cabin. (Faculty and student project.)

December 2, 1925: First Forest Club meeting was held in partially completed cabin.

Ground was broken for start of present Clarke-McNary Nursery within the original 80-acre Arboretum purchase.

### 1926

January 23, 1926: At the newly completed Forestry Club Cabin the original 80-acre tract was dedicated as the "George W. Peavy Arboretum" to be used as a classroom, research laboratory, and demonstration forest.

The State Board of Regents appropriated funds from which an additional 261.79 acres were purchased, also in Section 36, mostly the south half, including the area in which the pine race study is now located.

First experimental plots established were four thin-



ning plots, located along what is now known as the Loop Trail.

#### 1927

An additional 40 acres was acquired in S $\frac{1}{2}$  N $\frac{1}{2}$  NE $\frac{1}{4}$  of Section 35 from Aboretum Committee funds and additional thinning plots were established.

#### 1928

The T. J. Starker "post farm" was started and the first Ponderosa pine race study plantings were made.

#### 1929

The seed from 34 species of pine were planted in the nursery in cooperation with the Eddy Tree Breeding Station of Placerville, California. (Now changed to the Institute of Forest Genetics.)

#### 1930

Mrs. Mary J. L. McDonald, widow of a wealthy mining engineer and lumberman of San Francisco, donated \$3,000 for the purchase of additional forest land, the first of her many donations which account for a total of 5,075 acres, or 75% of the present McDonald Forest acreage.

The joint contributions of Mrs. McDonald and the Arboretum Committee added nearly 200 acres to the growing forest acreage.

Additional ponderosa pine race study plantings were made, including the Willamette Valley strain.

#### 1931

The first Oregon white-oak girdling plot was established. The Eddy Tree Breeding pine seedlings (raised in the local nursery) were transplanted to the Arboretum, then officially consisting of 92 acres definitely set aside for aboretum purposes. Fifty-five native and exotic tree species were then growing on the Arboretum.

The original arboretum idea was expanded to include both an Arboretum and a School forest.

The first management plan was drawn up for the forest, consisting of 1143.29 acres at this time.

#### 1932

The School forest was officially designated as the McDonald Forest by the Oregon State Board of Higher Education in honor of Mrs. Mary J. L. McDonald, the principal donor.

The Peavy Arboretum was increased to its present size of 180.99 acres.

An 80-foot wooden fire detection tower was built on the highest point of the forest in the SW $\frac{1}{4}$  NW $\frac{1}{4}$  of Section 36, near where the amplifying radio station is located.

The Dean's cabin, financed and built by alumni for the use of Dean Peavy, was completed in the southeastern portion of Section 3.

#### 1933

Additional land purchased from state appropriated funds and from funds donated by Mrs. McDonald, ex-

tended the forest area to 1751 acres.

A combined fire line and road was constructed along the north ridge and *Ribes* eradication work was started within the forest.

A summary of forest activities in that year showed the following field studies in progress:

- Ponderosa Pine Race Study
- Tolerance and Trench Plots
- Douglas fir Reproduction
- Douglas fir Liberation
- Douglas fir Thinning
- Plant Succession After Burns
- Pruning Plots
- Douglas fir Spacing Plots
- Control of Poison Oak
- Control of Oak Coppice
- Planting Methods
- Natural Snag Reduction

The number of tree species growing in the Arboretum had jumped from 55 to 117.

#### 1934

About forty Corvallis P.W.A. men carved by hand a road from the Forestry Cabin to the Powder House Saddle. F.E.R.A. student workers and forestry students connected this road with the ridge road.

#### 1935

A fifty-man CCC camp was established on the Arboretum and later replaced by a 200-man camp of enlisted men. Trail building, tree planting, fence construction, and stand-improvement work were the main projects.

The forest holdings totaled 2,307 acres.

Mrs. McDonald died, leaving to the School holdings in Jackson and Lake counties.

#### 1936

A CCC-caused fire destroyed half of the forest genetics study. Silviculture students poisoned rodents.

N.Y.A. student labor established the groundwork for a permanent forest inventory system for the Arboretum.

Heavy wet snow in October caused much top breakage in the second-growth fir stands.

#### 1937

Eighty additional acres were added to the Forest.

#### 1938

The Forest acreage jumped to 4,519, including an additional 120 acres near Sulphur Springs and 680 acres on the western edge, thanks to the generous provisions of Mrs. McDonald's will.

The CCC built a 3-acre reservoir (now Cronemiller Lake) to furnish the Clarke-McNary Nursery with a summer water supply. Two acres of Douglas fir seedlings were planted on lower Oak Creek for a Christmas

(Continued on page 22)

## *Scholarships Provide Grants to Students*

The School of Forestry is fortunate in having a substantial undergraduate scholarship program. Through gifts, grants, and endowments of public-spirited citizens and organizations, approximately \$6,500 is available yearly to aid worthy students in need of financial help.

Since 1952 the Max D. Tucker Foundation has provided annually three scholarships of \$1,000 each to be awarded to resident freshmen, sophomores, or juniors in the School of Forestry. There is also a provision that Oregon high school seniors who intend to enroll in forestry at Oregon State College can be considered as candidates. Recipients of the 1955-56 Tucker awards are Donald C. Hanson, Robert E. O'Leary, and Charles F. Switzer.

The St. Regis Paper Company in 1952 inaugurated a scholarship which grants \$800 per year for each of 2 years to a forestry student at either Oregon State College or the University of Washington. Neil Zimmerman of Oregon State College is completing his second year under this award.

For the past 3 years, Crown-Zellerbach Corporation has granted one \$500 scholarship per year to a junior or senior forester selected by the staff of the School of Forestry on the basis of scholarship and need. John G. Collins received this scholarship for the 1955-56 school year.

By  
**W. P. Wheeler**  
Personnel Director, School of Forestry  
Oregon State College

IN 1954 the Nutrilite Foundation of Buena Park, California, provided \$1,000 as a memorial to Sara Rehnborg Vaughan for junior and senior students in the School of Forestry and in the Department of Fish and Game Management of the School of Agriculture at Oregon State. Two \$250 awards are available to forestry students from this fund. This year the Foundation approved another grant of \$1,000 to be used jointly by the two schools. Harry M. Demaray and Robert E. Fehly are the awardees from the School of Forestry for 1955.

Available for the first time this year are the South Santiam Educational and Research Project Scholarships tendered by the Louis W. and Maud Hill Family Foundation. Three awards of approximately \$500 each are available to Oregon residents who are undergraduates in the School of Forestry. These went to Ronald E. Young, Louis A. Blaser, and Hans J. Wittwer.

A scholarship fund in memory of Floyd Hart, Medford lumberman, has been established recently. The income from this fund, which has been provided by contributions, will be used to aid deserving students in the Forestry School. No awards have been made as yet.

In addition to the above there are limited funds available to cover tuition or minor costs where a real need is evident.

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## *Graduate Fellowships Offer Opportunities*

The School of Forestry graduate fellowship program, although not as adequately financed as the programs of some other leading forestry schools, has assisted a number of very capable young foresters in carrying on graduate work. During the present academic year, the school has been able to grant three \$540 McDonald Fellowships plus one grant of \$75, two \$1,000 Weyerhaeuser Fellowships, and one \$1,200 Fellowship from the South Santiam Education and Research Project funds.

The first graduate fellowships were made possible by a grant of \$10,000 from Mrs. Mary J. L. McDonald on December 21, 1928. The Board of Regents, with the approval of Mrs. McDonald, established the Mary J. L. McDonald Fellowships on June 5, 1929. This initial grant was supplemented by an additional amount of \$34,206.06 in 1938. The annual income from the in-

By  
**J. R. Dilworth**  
Head, Department of Forest Management  
Oregon State College

terest on the principal sum has been used to provide fellowships to date varying in amounts from \$75 to \$720 each. Actual return on the principal sum has varied from \$1,280 to \$1,350 per year. Current recipients of the McDonald Fellowships are Elmer F. McDade, James E. Brewer, Dexter G. Heuschkel, and Walter W. Jeffrey.

The Weyerhaeuser Timber Foundation established a \$1,000 graduate fellowship in 1949. In 1954, the number of fellowships was increased to two. Nine graduate students have received this award to date. John Michael Finnis and Paul R. Natale have the Weyerhaeuser Fellowships this year.

**THE MOST RECENT** graduate fellowship to be included in the program is the \$1,200 South Santiam Education and Research Fellowship which also includes

an additional allowance of \$200 per year for expenses connected with the thesis research. The first award under this grant was made this year to Norman E. Johnson.

Fellowships and research assistantships, other than those listed above, have been awarded by outside agencies to graduate students in the School of Forestry.

The St. Regis Graduate Fellowship of \$1,000 was granted to Rex Resler in 1953. Elmer McDade received a \$450 graduate fellowship from the Portland Hoo-Hoo Club in 1954.

Research grants to graduate students have been made available by the Oregon Forest Products Laboratory and the Bureau of Land Management. Thomas J. Patterson and Dana H. Collins received such grants during the past calendar year.

Foreign graduate students have been assisted by various grants. Jean Pierre Vité and Peter C. Burschel are on the campus this year under Fulbright Awards. Walter W. Jeffrey is studying here this year as a King George VI Fellow sponsored by the English Speaking Union.

## *School Conducts Many Forest Research Projects*

**EARLY TIMES.** In the early years of the School of Forestry, little attention was given to research. The staff was small and instructional loads were heavy. Forestry training was concerned primarily with the extraction and utilization of the economically accessible timber resources. Most of our ideas on silviculture had originated in Europe and found little application under existing forest economy.

After experience with dwindling forest supplies in the East and South, some farsighted foresters foresaw a similar end even to the great resources of the West. They realized that intensive European practices would be impractical and perhaps unsuited for Western species, and that we had better start to accumulate some silvicultural knowledge for the future management of local species.

**DEVELOPMENT OF RESEARCH.** Because of other responsibilities, nothing of any consequence was started until late in the 1920's. Between 1923 and 1926, the Peavy Arboretum was acquired, and in 1927 purchases of blocks of forest land for McDonald Forest were started. These acquisitions at once presented numerous management problems to staff and students. At this time Professor T. J. Starker initiated several projects as part of the fieldwork training of his courses in silviculture, and with the aid of graduate assistants.

These efforts resulted in such projects as the Ponderosa pine-race study, Douglas fir spacing tests, the post farm, and many others. In 1937, W. F. McCulloch carried on a similar program and initiated studies in direct seeding, vegetative propagation, hybrid poplar plantations, and the role of bracken fern as a cover crop. Professors Mason and Willison worked on thinning practices.

Considerable progress was made until 1942 when the war reduced student enrollment and dispersed the staff to such an extent that research was limited to maintenance of major long-time projects. At the war's end, booming enrollments, heavy teaching loads, and

restricted funds necessitated continuance of the maintenance level in forest management research.

The need of war materials however accelerated research in the forest products field. A small program was initiated here in 1941 through partial support of the State Board of Forestry, culminating in establishment of the Oregon Forest Products Laboratory in 1947. This organization is now controlled and supported by the State Board of Forestry.

### **THE FOREST EXPERIMENT STATION.**

After the war, the inevitable conversion from an old-growth to a second-growth economy was apparent to all. Increasing stumpage values warranted more intensive management practices. This trend brought demands for expansion of research programs by both the State Forestry Department and the College. Demands on the College were mainly for work in the basic fields of science. A forest soils specialist was added to the staff in 1952, and pathological studies were initiated in 1953. Grants for specific research studies concerned with tree seeds, brush control, forest soils, and power saws were being offered by public and private supporters also about this time.

In 1954, establishment of the Oregon State College Forest Experiment Station was authorized by the State Board of Higher Education to permit better administration and coordination of the diverse forest research program on the campus. The Dean of the School of Forestry was named as its director.

At present the staff consists of certain College staff members assigned to specific, approved projects as leaders and to graduate students who have received appointments as assistants. The current program includes projects in the Departments of Forest Management, Forest Products, Soils, Botany and Pathology, and Entomology. A full-time forest entomologist was appointed in June 1955.

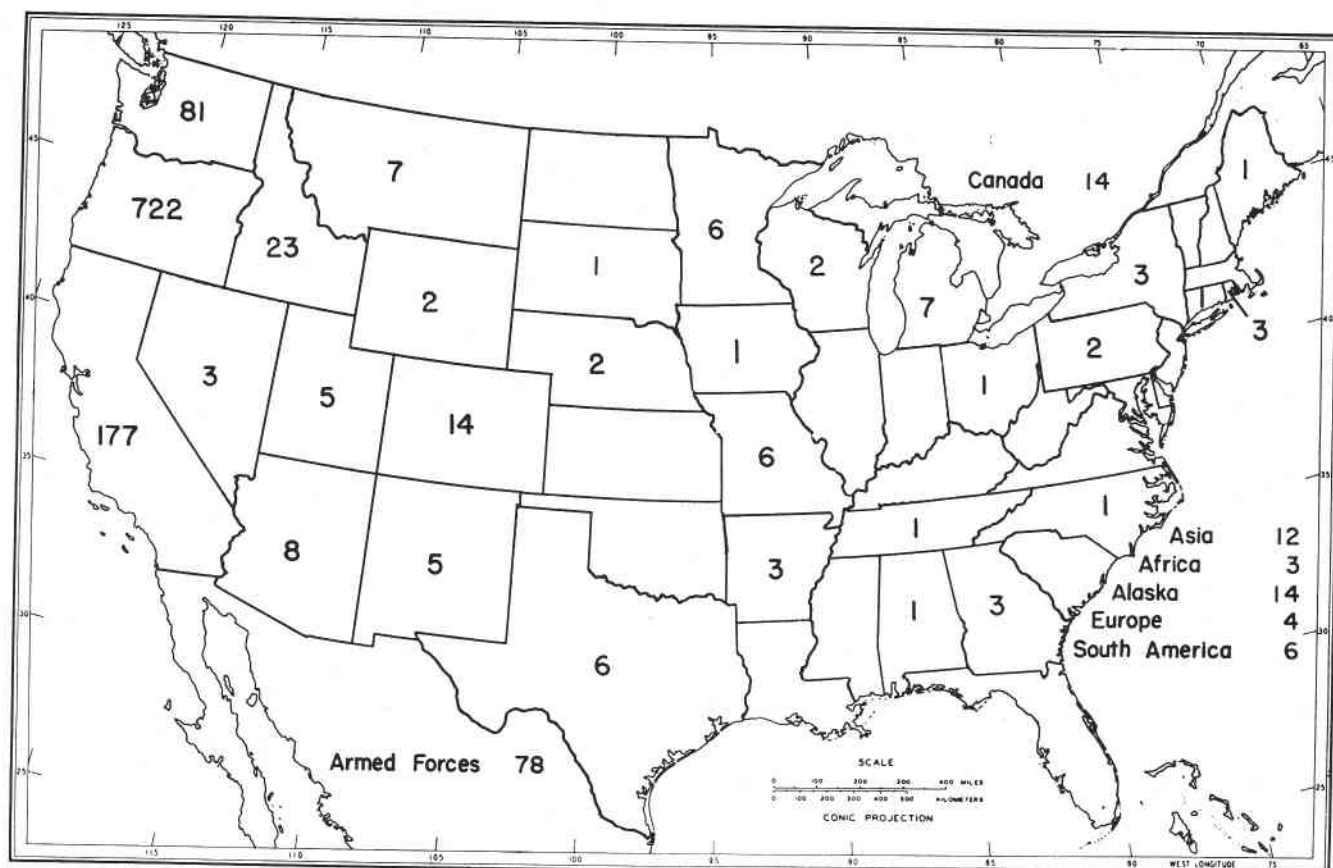
Financial support of the station comes from a num-

*(Continued on page 23)*

By  
**George H. Barnes**

Associate Director, Forest Experiment Station  
Oregon State College

# OSC Foresters Work Worldwide



## Enrollment and Graduates by Years

Year	Enrollment	Bachelor's Degrees	Advanced Degrees	Year	Enrollment	Bachelor's Degrees	Advanced Degrees	Year	Enrollment	Bachelor's Degrees	Advanced Degrees
1906-7	5			1922-23	122	15		1938-39	508	69	4
1907-8	10			1923-24	112	11		1939-40	441	90	5
1908-9	26			1924-25	154	15		1940-41	357	57	7
1909-10	22	4		1925-26	147	15		1941-42	266	61	3
1910-11	31	5		1926-27	162	18		1942-43	209	27	
1911-12	38			1927-28	172	17	2	1943-44	34	7	2
1912-13	70	2		1928-29	211	24	1	1944-45	48	7	2
1913-14	81	7		1929-30	175	21	2	1945-46	288	22	2
1914-15	83	8		1930-31	182	24	4	1946-47	517	38	4
1915-16	75	8		1931-32	199	33	2	1947-48	439	68	1
1916-17	85	16		1932-33	155	24	3	1948-49	456	85	1
1917-18	60	7		1933-34	128	24	4	1949-50	410	106	5
1918-19	36	1		1934-35	297	16		1950-51	340	86	5
1919-20	89	9		1935-36	442	18	5	1951-52	273	59	8
1920-21	101	10		1936-37	532	41	2	1952-53	284	52	4
1921-22	120	10		1937-38	555	63	1	1953-54	276	37	9
								1954-55	321	30	5
								1955-56	361		
								Total		1,367	93



THE FACULTY IN 1956. Seated left to right: H. I. Nettleton, J. R. Dilworth, W. F. McCulloch, George H. Barnes, William A. Davies, H. R. Patterson, William I. West. Standing left to right: R. F. Keniston, R. L.

Wilson, M. D. McKimmy, J. T. Krygier, T. C. Adams, Dan D. Robinson, C. W. Dane, R. M. Malcolm, Ray A. Yoder, William P. Wheeler, Antone C. Van Vliet, Warren R. Randall. J. E. O'Leary, not shown.

## These Men Taught OSC Fernhoppers

NAME	YEAR
*Lake, Edward R.	1906-1909
*Peavy, George W.	1910-1941
Siecke, E. O.	1910-1911
Ridenour, Ambrose E.	1911-1912
Newins, Harold S.	1912-1922
*VanOrsdel, John P.	1913-1918
Conover, Charles J.	1914-1918
Buol, Edward	1919-1920
*Mason, Earl G.	1920-1922; 1923-1947
Patterson, H. R.	1921-
Nettleton, Harry I.	1922-1923; 1936-1942; 1946-
Starker, T. J.	1922-1942
Mowat, Edwin L.	1924-1927
*Thompson, Paul	1926-1927; 1931-1932
*Schreiner, Fred	1927-1935
*Brandeberry, Jason	1930-1933
Cummings, Laurence J.	1928-1930
*Baker, William J.	1930-1935

NAME	YEAR
Kearns, Richard S.	1932-1933; 1936-1940
Compton, L. Miles	1934-1937
Budelier, Clarence	1935-1942
Fowells, Harry A.	1935-1936
Voorhies, Glenn	1936-1944
Schroeder, George H.	1936-1944
Evenden, Robert M.	1937-1943
McCulloch, W. F.	1937-
Richen, Clarence W.	1937-1942
Vaux, Henry J.	1937-1942
Willison, Charles H.	1940-1944
Janecek, Rudolph J.	1940-1942
Moe, Donald J.	1942-1943
Dunn, Paul M.	1942-1954
Fery, Carl S.	1942-1943
Barnes, George H.	1943-
Grantham, John B.	1945-1952
Proctor, Phimister B.	1945-1947
Robinson, Dan D.	1946-
Davies, William A.	1946-

NAME	YEAR
DeMoisy, Ralph G.	1946-1949
Dilworth, John R.	1946-
Keniston, Robert F.	1946-
Snodgrass, James D.	1946-1955
West, William I.	1946-
Hayes, G. Lloyd	1947-1949
Randall, Warren R.	1947-
Knorr, Philip N.	1948-1951
O'Leary, John E.	1949-
Wheeler, William P.	1949-
Yoder, Ray A.	1949-
Hostetter, Robert D.	1952-1953
Wilson, Robert L.	1952-
Mounteer, Robert W.	Fall 1952; Winter 1955
Berg, Alan B.	Spring 1951
Overholser, James L.	Spring 1953
Pierson, Edwin W.	Spring 1953
McKimmy, Milford D.	1953-
Krygier, James T.	1954-
Malcolm, R. M.	1955-
Adams, T. C.	1955-
Dane, Charles W.	1955-
Van Vliet, A. C.	1955-

\*Deceased

## Curriculum Has Changed

(Continued from page 3)

abuse; use and care of fire arms; dressing and preserving game; care of skins, furs, hides and pelts.

**FIELD WORK.** Observations, general and special; geology, meteorology, hydrography, biology, dendrology, daily or weekly assignments; silviculture, cruising, surveying, mensuration, records, charting, mapping, photographing.

### Senior Year

**LECTURES.** Influence of forests and trees upon national life; forest laws; forest policies; forest management; forest administration; forest reserves, national and state parks and their values; the forest as a health resort.

**FIELD WORK.** Logging; transportation of timber; camp management, milling, pulping, distilling, utilizing waste,

preserving timbers and lumber, working plans."

### FIELD WORK—1956

No summer camp is required. Due to the proximity of the school forests, laboratory work is carried on there or at the neighboring forest operations and manufacturing plants. Also, six months of satisfactory forestry experience is required of every student before he is granted a degree.



## School Forest

*(Continued from page 17)*

tree study. A staff man was assigned part time to forest research.

### 1939

Two hundred and two acres were added to the Forest, bringing the total, exclusive of the Arboretum, to 4,722 acres. The latest purchase was the Sulphur Springs tract of 80 acres.

The McDonald Forest N.Y.A. forest survey was completed, including a topographic map, a type map, a site map, and a timber inventory based on a 10 per cent cruise.

### 1940-1941

The first cost accounting system was devised and put into effect on forest projects.

The "Red Hat" program, involving training of special fire control crews, was initiated and a total of 113 men were given special instruction in summer camp located on the forest. Camp continued in 1941.

Eighty acres added to forest.

### 1942

McDonald Forest total acreage—4,802. Heavy sleet storm caused added top breakage on forest in second-growth Douglas fir stands and side and top breakage in hardwoods.

### 1943

The CCC program terminated. Oak Creek house completed.

### 1944

The 12-acre area at the Lewisburg Saddle was logged, using clear-cut method. Pine planted in several dry, low-site areas.

### 1946

Four hundred acres were added to the forest, 80 acres from E. H. Blake and 320 from Ben Ellis, bringing the total area to 5,202 acres.

### 1947

The old dwelling on the Jackson tract was rehabilitated into a residence. A portable sawmill was set up on Oak Creek.

### 1948

A forest manager was appointed with full responsibility for management and administration of the McDonald Forest and other School forest properties.

A selective logging pole and piling sale was made adjoining the Powder House Saddle. Acquisition of 1,120 cutover acres in Sections 5, 6, and 7 in exchange for timber from 80 acres of school land brought the forest total to 6,322 acres.

Management plan for the forest was approved.

Fire destroyed the old CCC crew house at Arboretum, but it was rebuilt by the State Forestry Department as a district fire headquarters.

### 1949

The Hospital Reservoir area of 89.43 acres was donated by the Federal Government. The J. B. Stuart tract of 150 acres in Section 26 raised the forest area to 6,561 acres.

The old Forest Club cabin was razed by fire.

The first summer crew of four forestry students was established on the forest.

### 1950

A sale of blowdown timber was made southwest of the Lewisburg Saddle. Students started building a new Forest Club cabin at site of old one. Four feet of snow fell on Ridge Road during winter of 1949-1950.

### 1951

Forty acres of land in Section 9, with a million board feet of timber, were obtained from Ben Ellis in exchange for a million feet of timber in Section 21 on the Adair Tract, bringing the forest area to 6,601 acres.

### 1952

The Blake house on the Reservoir Tract was obtained from the Federal Government. New Forest Club cabin was completed. The research program in the forest was expanded.

### 1953

The Blake "Eighty" was purchased adjoining the Hospital Reservoir Tract, bringing forest area to 6,681 acres.

### 1954

Oregon State College Forest Experiment Station was authorized to expand and correlate forest research projects, particularly forest management research on School forest lands.

The Bank "Eighty" in Section 7 was acquired by exchange for salvage timber in the Adair Tract, bringing the McDonald Forest to its present current area of 6,761 acres. It supports an estimated gross volume of 75 MM board feet of merchantable timber with an estimated annual allowable cut of 1½ MM board feet net on a technical rotation period of 100 years. Timber sales are made on auction bid basis.

### 1955

Thinning and pruning were started on the forest. A small salvage timber sale was processed and completed, totaling 154 M board feet of scattered residual trees, mostly broken-topped.

The Oak Creek mill was dismantled and sold, and student logging and milling practice discontinued for safety reasons.

## APPENDIX

Other forest property administered by the school.

**SPAULDING TRACT.** One hundred sixty acres of partially cutover land located 13 miles west of Corvallis on the northeast slope of Mary's Peak.

This was a gift to the School from C. K. Spaulding Logging Company in 1921. Fifty acres of this tract include second-growth Douglas fir in the 20- to 30-year age classes and 105 acres support a Douglas fir stand of pole and piling size ranging from 60-90 years of age.

**BLODGETT TRACT.** This tract consists of 2,400 acres of Site I and II cutover land in northwestern Columbia County, approximately 130 miles from Corvallis.

It was acquired in 1929 as a gift to the College from the Blodgett Lumber Company, Ltd., to serve as an experimental or instructional area.

Second-growth Douglas fir, Western red cedar, and Western hemlock on this area range from 20- to 40-year age classes, with several small residual stands of Douglas fir of large pole size retained as seed sources.

A management plan was prepared for this tract in 1953.

**ADAIR TRACT.** This area of 6,200 acres, formerly a part of Camp Adair Military Reservation, was accepted by the State Board of Higher Education in 1948 as a gift to the College from the Federal Government for instructional purposes and to be used in co-operation with the School of Agriculture.

Approximately 4,000 acres of this area, located across Soap Creek from the McDonald Forest, are primarily timber land and so administered by the School of Forestry. Much of the area has been cutover and present forest cover ranges from 20-year-old

advance reproduction to overmature stands of 250-year-old Douglas fir.

A management plan for this area was completed in 1953, showing a present merchantable stand of approximately 25 MM board feet. This will permit an annual allowable cut of approximately 1 million board feet until such time as the overmature timber type is removed and replaced by new stands.

In 1956 the forest lands administered by the School of Forestry may be summarized as follows:

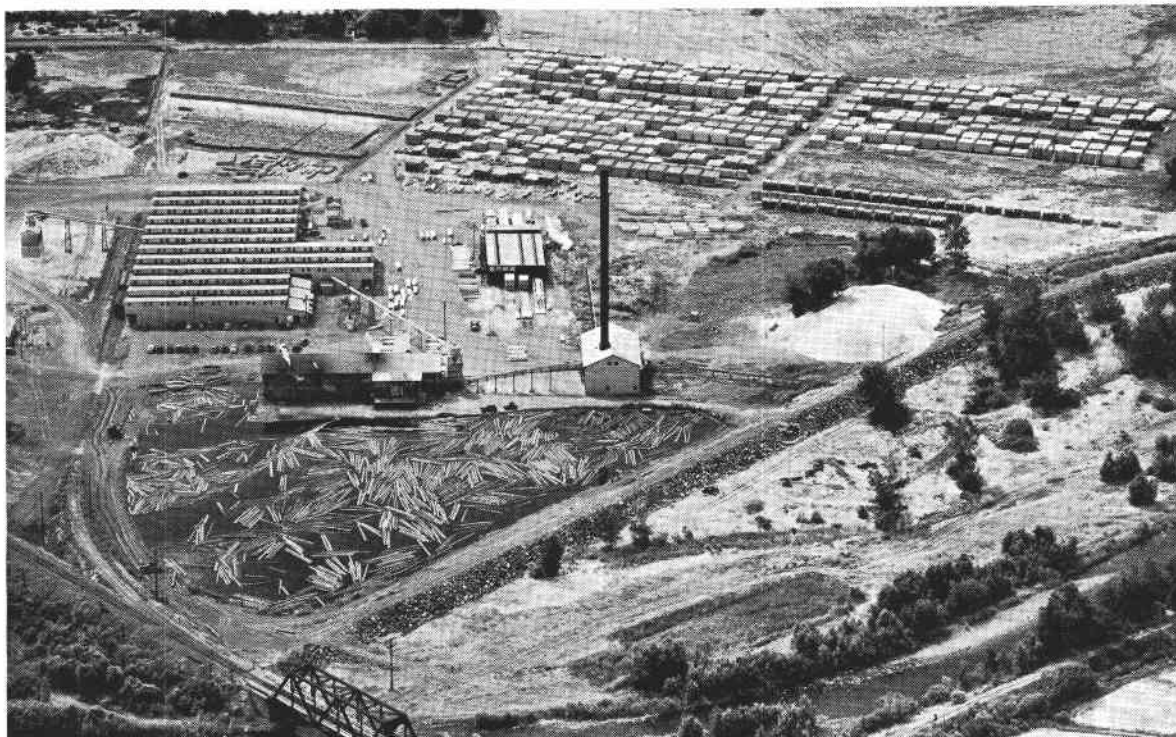
McDonald Forest	6,761 acres
Peavy Arboretum	181 acres
Spaulding Tract	160 acres
Blodgett Tract	2,400 acres
Within Adair Tract	4,000 acres
<b>TOTAL</b>	<b>13,502 acres</b>

## Forest Research

*(Continued from page 19)*

ber of sources. Certain funds which have accumulated from sales of timber on the School forests are available, and the College provides a small allotment from general funds. A number of substantial grants have been provided by the State Board of Forestry for projects requiring specialized personnel and facilities of the fundamental science departments.

Other supporters and cooperators include the Oregon Forest Products Laboratory, U. S. Forest Service, Pacific Northwest Forest and Range Experiment Station, Bureau of Land Management, Forestry Research Foundation, and several industrial firms and foundations.



A wood utilization plant in eastern Oregon's pine region.

# Oregon State College Forestry Publications



## Forestry Club Publications

**Annual Cruise.** Yearbook published since 1922.  
**The High-Lead.** School paper published monthly.

## Farm Forestry Publications

**Farm Forestry Committee Report,** 1952 Statewide Agricultural Conference. Oregon Agriculture Bulletin 13, 1952.  
**Measuring Trees and Logs.** P. N. Goodmonson. Extension Bulletin 716. 1951.  
**Men Who Grow Trees.** Extension Circular 546. 1951.  
**Oregon's Farm Forest Products, 1925-1951.** Extension Bulletin 730. 1951.  
**Raising Christmas Trees for Profit.** Pacific Northwest Cooperative Extension Bulletin 6. 1953.  
**Treated Pine Posts Will Last.** Extension Circular 541. 1951.  
**Trees to Know in Oregon.** Extension Bulletin 697. 1956.  
**Trees Against The Wind.** Pacific Northwest Cooperative Extension Bulletin 5. 1953.  
**The Four-H Forester.** Extension Bulletin 1955 Club Series 1-1. 1955.  
**Windbreaks for Conservation.** Extension Circular 591. 1951.  
**Windbreaks for Western Oregon.** D. C. Purnell and C. R. Ross. Extension Bulletin 714. 1951.

## Oregon Forest Products Laboratory Publications

An extensive list of publications in the field of forest products is available from the Oregon Forest Products Laboratory, Corvallis.

## Staff Texts

Barnes, George H. **Timber Management.** (Mimeographed) 1950.  
DeMoisy, R. G. **Forest Surveying, Part I.** 1949.  
Dilworth, J. R. **Log Scaling and Timber Cruising.** Revised 1954.  
McCulloch, W. F. **The Forester on the Job.** Revised 1955.  
Randall, W. R. **Keys and Compiled Notes to Some Trees and Shrubs of Oregon.** (Mimeographed). 1954.  
Yoder, R. A. **Industrial Forestry.** (Mimeographed) 1955.

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Hughes, Katherine W., Ray A. Yoder, and William I. West. **Forestry Theses Accepted by Colleges and Universities in the United States 1900-1952.** Bibliographic series number 3. 1953.  
Mason, Earl G. **A Functional Curriculum in Professional Forestry.** Oregon State Monograph, Studies in Education and Guidance number 1. 1944.  
McCulloch, W. F. **Forest Management Education in Oregon.** Oregon State Monograph, Studies in Education number 2. 1949.  
Starker, T. J. and R. D. Graham. **Service Life of Treated and Untreated Fence Posts.** Annual Progress Reports now published by Oregon Forest Products Laboratory, Corvallis.  
West, W. I. **A Collection of Oregon Woods.** School of Forestry Circular number 1, 1949.

