

GOPHER PEAVEY



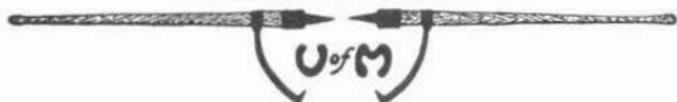
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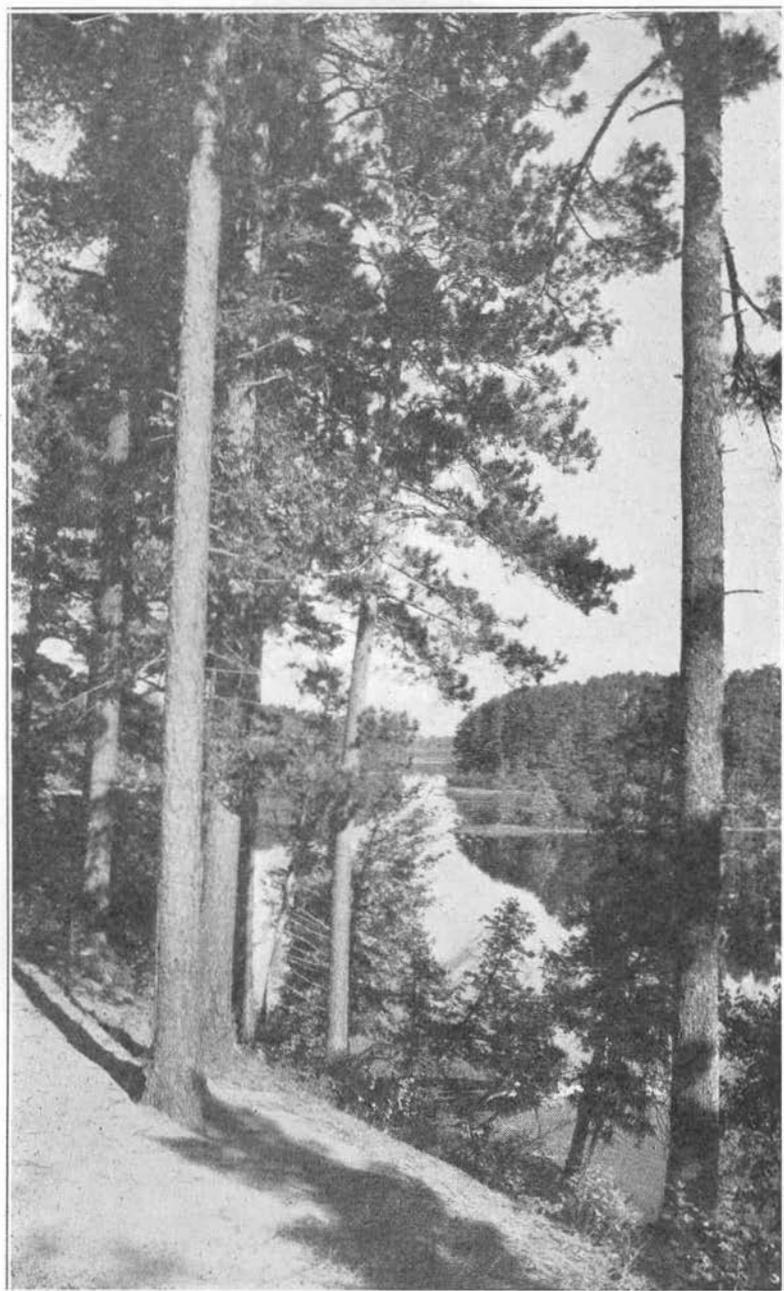
Forestry Club
UNIVERSITY
OF
MINNESOTA

THE
1935
Gopher Peavey

ANNUAL PUBLICATION OF
THE FORESTRY CLUB

FORESTRY CLUB





"The Forest Was God's First Temple"



Dedication

To E. W. Tinker, Regional Forester, North Central Region, whose ability, energy, vision, determination, and faith in his profession have placed the Lake States in the forefront in technical forestry, this issue of the Gopher Peavey is dedicated in profound admiration.

You have served well forests, forestry and the public, and having done so you have achieved the goal we all seek. May we express the hope that you may long remain among us to guide the forest destinies of our region.

Foreword

Each year the Peavey has its troubles and 1935 is no exception. The staff was worried, as usual, about the money but our foresters came thru. In return we of the staff have put forth our efforts, and out of it all comes the 1935 GOPHER PEAVEY.

Let's not allow the Peavey to fall by the wayside, boys. It is an expression of the Foresters of the University of Minnesota and of the forestry movement in our country. Each year we fight for existence and ask for your support. The Peavey is your publication, yours to plan and build. How you do it and the support you give determines the success of the Peavey.

Good luck to those who carry on.

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PROGRESS OF FORESTRY IN THE
TENNESSEE VALLEY

BY LYALL E. PETERSON

WHILE in school many of us were shocked into an "indignant pink" by stories of selfish exploitation,—and such. Lumber barons, bloated industrialists, and other unspeakable passe figures, through mismanagement of property, caused thriving communities to rise and fall with frightful frequency and results. Certainly, I have always felt a great sorrow for exploited people, but now, in roaming over the Valley, my sorrow includes the exploiters who have left only a few crumbs from the proverbial "cake." The Tennessee Valley embodies some 26,000,000 acres, over two-thirds of which is forest land—but (to use an expression with which the Southern Highlander refers to a sick person) much of the forest land looks "right puny."

The exploitation of forests, however, was only one in a series of illogical chapters in the history of this section's development,—or is it lack of development? People settle throughout the Tennessee Valley seeking whatever livelihood is possible. Too many of them allow the love of mountains, mountain solitude, and a tantalizing Dame Nature to lure them into settling in the wrong places. As a result, we see the rampant evidences of indigence: pellagra, tuberculosis, and other cruel poverty-caused ailments. The reader should ponder over the fact that a large majority of these highlanders have cash incomes of less than \$100 per year, with which they support pretty good-sized families. Paradoxically enough, amid all this social degradation, there is plenty of wealth in natural resources. Power development possibilities are great, mineral resources abound, as well as sites which are extremely favorable for timber, game, fish, and recreational development.

Now, since the Tennessee Valley provides a convenient working unit, since it allows an excellent cross section of geographic conditions throughout the United States, and since its natural beauties and untried resources lie in frightful proximity to butchered landscapes and wasted resources—because of these truths—the Tennessee Valley Authority was created.

Within the Authority there are now over 13,000 employees, all of them enthusiastic, and all of them working towards this one elusive goal—"a life more abundant." A goal in this instance being exemplified by a huge power development program in which the secret of success calls for a unified system of dams which shall completely and efficiently utilize the water power. It strikes me that three C's might summarize the whole set-up. Out of the present Chaos, we seek changes by means of intelligent Coordination, in order to attain a true Culture. Toward that end the Forestry Division of the TVA makes its modest contributions in divers manners and forms.



"Hey! Izzy, I'm here, working in the foist gully."

Our division was created a year and a half ago, with the appointment of Mr. E. C. M. Richards as Chief Forester. Since then we have grown in strength and affluence until we now boast a roster of nearly fifty employees, and a program with no end of promise.

By and large, our job may be defined as an attempt to correct both the cause and effect of land Misuse in the Tennessee Valley. In order to correct the cause, we insert the so-called Land or Regional Planning, in which our division takes a big part. Attacking the effect, we have erosion control work, reforestation, rural rehabilitation, and so on through the entire coordinated scheme. Land Planning, we know, is merely the collection of any and all pertinent facts; weighed and balanced in order to determine the highest form of use of a given area. That "given area", in our case, is not Mr. T. B. Pellagra's farm, nor is it Hancock County—but the Tennessee Valley as a Region embodying a multitude of related units. Such an attempt—subject as it is to inspection and criticism from multifarious interests, calls for a large measure of Coordination. For this reason the Forestry Division must needs cooperate (in a true give and take manner) with other Divisions of the TVA, and with all other organizations whose activities are likely to be related to ours. Some day, we hope, this planning business will have reached such a stage that the land owner will consider his farm in this manner:

"Now here, brother, I have 1000 acres of land, representing several different conditions—and suggesting several related uses. 100 acres can be cultivated—and that will be a cinch if I practice terracing, use cheap TVA fertilizer, etc. The same fertilizer, and regulations on grazing, will allow me to use 250 acres for pasture. This leaves me 650 acres of woodland—and a really valuable part of my farm. The things I've learned about woodland management and woodland cooperatives make me realize how foolish I used to be in not considering my woodland just like another crop on my farm."

At the present writing about 5% of the Tennessee Valley area is in some form of public ownership. Present proposals and trends indicate the possibility of a future increase in Federal, State, and Municipal ownerships. The study conducted by the Forest Service in this Region, for the National Resources Board, indicates that close to 10,000,000 acres should be placed in National Forests.

This is by no means a radical proposal; neither is it a fantastic dream. A surprising percentage of the Valley is sub-marginal in any man's language. Such areas show their greatest productivity as Pasture or Forest. To continue the present butchering practices would be ruinous, and foolhardy, in view of the extensive areas where cropping might be practiced with greater ease and profit. A minimum requirement for these areas is erosion control for reservoir protection and flood prevention. In this colossal picture our Planting Section plays a stellar role.

The drama on Erosion Control is being directed by Mr. Gus Lentz, with an all star cast, including over 4000 CCC boys, engineers,

and foresters. Scenes vary from the hustle and bustle around the two nurseries producing many millions of seedlings, to the thrilling set where John Farmer's happy home is saved by checking the insidious gnawings of that viper, Erosion. Humor is supplied by the Yiddish boy from the Bronx who keeps yelling,

"Hey! Izzy, I'm here, woiking in the foist gully."

Such language!—to which one of our Southern Highlanders would retort—

"Humph! Another derved furiner."

Gus says that his gigantic production is shaping up fine and shows promise of being a great box office attraction. His figures on the thousands of Rock, Log, Brush, and Bag Dams, on the million or so yards of matting, acres planted, acres treated by T. S. I.—all this I shall spare you—lest you other dramatizers grow envious.



Reverting to Public ownership, we find the bulk of such proposed areas occurring as forest land which should be retained for Watershed protection primarily. The host of secondary uses to which these areas might be put, dependent on the qualifications of each part, is common knowledge—I am sure. Now the questions arise. Who shall own all of this area? How shall it be purchased? How managed? Who? How? Why? Very bothersome, these questions.

From the standpoint of area involved, the U. S. F. S. takes the limelight in the Authority's program. From the angle of precedence, areas are singled out only by chance or opportunity. This insert, because the Authority realizes that its ultimate success hinges upon intelligent land use throughout the entire Watershed. Without such planning, the very foundations of human economy are unstable. And so to the Forest Service—that august body—it proposes the additional

purchase of over 7,000,000 acres in the Valley. Naturally, our Division cooperates with the Forest Service in every way possible by checking and adding to their information regarding proposed purchase areas. Land is now being acquired by the U. S. F. S. on one new unit in Virginia, and on extensions to existing National Forests.

Another great potential owner is the National Park Service. Besides three Military Parks, it manages one of the most beautiful areas in the world, namely; The Great Smoky Mountain National Park. This park marks the center of origin for most Eastern and Northern tree species, and it now harbors enough variety to keep the best of you botanists and dendrologists from being too complacent over your knowledge. Now these "beauty guardians" are beginning to expand. In order to satisfy the recreational needs of many scattered peoples, their present set-up calls for divers-sized parks, strewn hither and yon. This program shall, undoubtedly, retire many of the sub-marginal areas, and convert them into camping grounds, etc.

State Forestry holds such an enviable position in (good old) Minnesota that I blush to mention the subject in the Valley. At present their holdings are practically nil, but this new era is encouraging that along with all else, so things are looking up. Starvation budgets cause the State Foresters to confine themselves largely to fire and erosion control, but if present plans materialize, the State Foresters may move up out of the "grumble" seat, and nab onto some of this sub-marginal land and sadly exploited forest land.

It follows that the TVA shall likewise be an owner of certain areas in the Valley. Where the problem area exists, the practice should be to seek the logical owner and encourage his acquisition or better management of the land. In certain well-defined cases, the TVA must buy land in order to insure success of the power project. For example, protective strips are deemed necessary around some reservoirs in order to prevent exploitation by private individuals whose motives may be selfish. Also, townsites, such as Norris, and town forests and parks, such as those near Norris, may spring into demand.

On the Norris Reservoir area, the TVA encountered a peculiar problem which is being met by purchase of the so-called Peninsula. Norris Lake will form in two arms along the Clinch and Powell Rivers, and when flooded, it will practically isolate this Peninsula of about 80,000 acres. Flooding of the reservoir shall destroy the best farms, schools, churches, and roads, thus leaving the cost of reclamation higher than the cost of acquisition. A study of this area is being made by one part of our Forest Management Section. This group has made a rather detailed field examination of the peninsula with the (now almost indispensable) aid of aerial photos. The area has been completely mapped according to major cover types, and each cover type described by means of a seven or eight digit code. Tabulations from the coded information provide a rather exhaustive basis

for giving an inventory of forest areas by types, agricultural areas broken down into cropland (good and poor) and pasture land, different classes of erosion on various slopes, etc. A study of roads has also been made. From this data information is being submitted on the number of man days work (classified) necessary to bring the area into its fullest use, as well as the number of men (and their permanent location) necessary to sustain the area by their part time labors. In essence, this land classification corresponds to the Land Economic Survey in the Lake States.

A great deal of Lentz' work during the past year was concentrated on the peninsula area. Here is where we point with pride and exclaim,—

"There is the beginning!"

Here are the check dams, the plantings, and such. Also, this area should prove an excellent experimental and demonstration ground for tree crop plantings.

Tree crops is fast becoming a byword in these "hyar" parts. Mr. Hershey, the tree crop specialist, seems peculiarly gifted in being able to imbibe the people with fervent interest in his Japanese persimmons, walnuts, hicans, pecans, paw-paws, honey locust, and whatnot. President Roosevelt, on his recent visit (to this brain child of his) expressed a real interest in Hershey's nursery, and for his interest received a right handsome spray of luscious Japanese persimmons.

The use of tree crops gives much promise in adding a multiple use to reclaimed sub-marginal areas. Besides planting species to encourage wild life, the farmer can select a variety of species to supply year round diet fillers for hogs, cattle, and sheep. For example—the improved walnut, hickory, hardy northern pecan, hazel, and sweet acorns provide good winter hog food, wild life food, as well as high grade market commodities. Improved varieties of Mulberry, Japanese and American persimmons, and Paw-paw give the hogs and cattle something to munch on in the summer—not to mention the game which can thrive on it, and also, the farmers through sale of the commodity on the market. Honey Locust with its munificent supply of huge pods seems the most enticing to both the domestic and wild animals. Mr. Hershey especially recommends for your erudition (if you please) the book entitled "Tree Crops" by Russell Smith.

Still regarding TVA ownership, the division shall soon be faced with the problem of selecting and training local inhabitants for permanent part time employment on improvement, maintenance, and fire control work. Such a problem falls to our Education Unit. This Unit, which now occupies itself largely with Forestry education of the CCC and school children, is growing fast. At present, courses in Forestry are being planned in line with the regular curriculum at Norris Town. Such course work will dovetail very nicely with other educational endeavors of the TVA's Training Section. Our division (and no doubt many of you readers) chooses to regard Forestry education of the public as a lusty infant worthy of careful consideration.



*A man with a trade is a man indeed,
If the man and the trade are one,
And the trade of a man is an honest creed
When a full day's work is done.*

*If the trade of a man is the forestry art
And his standards are high and dear,
A craftsman he'll be and worthy the part,
In the trade he will rank as peer.*

—AUTHOR UNKNOWN

So much can be done in the way of carefully arranged movies, wisely worded talks before groups, clever radio skits, non-stereotyped posters, and what not else in the way of publicity technic. It is a case of learning how, more than what, to present. Publicity, bally-hoo, and propaganda now lure John Public into believing and doing many dubious things, so why not apply the same basic principles to make him Forestry-minded?

The TVA Forestry Division is singularly blessed with the services of three Minnesota men—George Olson, William Jolly, and the demure author. We all work in the Forest Management Section, but on three separate projects. Just learned that "Red" Alexander is due here today.

Olson, who came here recently, is working on a geographical study of Jefferson County, Tennessee, in cooperation with other divisions of the TVA. Aerial photos are being used for base maps, upon which information concerning land use and condition is presented by means of a complex coding system. The data being collected by Olson shall not only form a part of the complete Land Use picture, but will be invaluable as a study of farm woodlands. This phase of forestry—farm woodland management—is destined for an important spot in the Valley development; especially so with the prospectus of rural electrification and decentralization of industry.

Jolly and myself are slaving away as Assistants on two closely related projects having to do with a reconnaissance of the Valley, and collection of all pertinent forestry data. Jolly's group confines itself to the Clinch-Powell watershed, (about 2,000,000 acres) whereas the group I am with is trying to construct a comprehensible picture of the remainder of the Valley. Naturally, the latter project is on a rather extensive scale.

Six months ago, at the outset of these projects, we were aware that the Valley was about two-thirds in forest land, rather non-descript in character, and that erosion and sub-marginal land was prevalent. Beyond those truths, our information on forest lands was sadly incomplete. It seemed highly advisable to build up a set of maps showing forest cover, (by types) condition of forest, (saw-timber, cordwood, etc.) areas of critical erosion, present ownership, present and potential use, etc.

Casting about for suitable base maps on which to begin, showed us that the only available composite maps of the Valley were more or less fantastic. The map problem was finally met by the TVA's letting a contract to aerial photograph the entire Valley with multi-lens cameras. From these photographs, the General Engineering Division is providing mosaics and planimetric maps as rapidly as possible.

In the interim we have been gathering the data described above, by means of contacting well informed people, and by cruising up and down a myriad of muddy back roads. Occasionally pleasant diversion is afforded by an airplane trip over certain areas. This form of speedy reconnaissance is excellent for checking our existing information.

This job of Forest Land Classification is set up in a most flexible manner. Information is gathered, correlated, tabulated, and submitted as opportunity presents itself. As changes take place throughout the Valley, they can be incorporated in our maps and other records. That which is now being mapped as sub-marginal area, in a low-down brown color, we hope to see time erase as we change the color to a handsome green, denoting forest. Forest land ownership, condition, and use should likewise change, many of which transmutations are being recommended by the National Resources Board. Perhaps the most important recommendation was that concerning U. S. F. S. acquisition. There are many others already made or in the offing, all of which provides a splendid means of expression for the incommunicable mess of data gathered in the field.

One example of this expression was the recent proposal made on a 40,000 acre tract near Chattanooga. The tract is situated in the mountains, close to Chattanooga; and is mostly covered by a fair growth of second growth mixed pine-hardwood forest. Although proposed to the TVA at a reasonable purchase price, examination of the area showed that it has excellent possibilities for a municipal forest. To handle the difficult problem of financing such a proposition, a long time, low interest Federal loan was one suggestion, to be discharged as profits accrued from the property. Such a proposition, if consummated, would serve as a precedent in the Valley, which many other towns should be wise to follow. We hope, in the improvement and management of Norris Town Forest, to provide a suitable demonstration on how this form of land use can be made most beneficial.

The subject of wood using industries is receiving much attention, with emphasis being put upon the possibilities for reviving, stimulating, or introducing the smaller units,—small industries to supply an increasing local demand, or to supply novelty products for the tourist market. Just now a project of canvassing all forest industries in the Valley is being pushed to completion. Having this information, together with that on forest resources, we can designate where both present and potential industries show the greatest possibilities of success.

The job of outlining a program for Game and Fish development in the Valley has recently been delegated as an added function for our Division. At present, Mr. Richards, is especially interested in seeing the establishment of fish hatcheries and nurseries in the upper area of Norris reservoir. He proposes to stock Norris Lake with 200,000 lbs. of fish annually, and then, encourage fishing both as a sport and commercial enterprise. Fees collected for this privilege should be ample to amortize the cost and operating expenses of this set-up. Similar projects shall be proposed, later, for other reservoirs. One of the most interesting dreams in our game policy is that of stocking certain "wilderness" islands with wild boar and other ferocious beasts for the regalement of the more intrepid hunters. The

major proposal at present, however, is for a comprehensive wild life survey over the entire Valley area.

One man in our division has earned the monicker of "Sub-marginal" Ike, through his magnanimous efforts to bring to light all pertinent data relating to problem areas above the Norris reservoir. These areas, largely eroded and overflowing with destitute families, are classic examples in land misuse. At present the Land Policy Group of the A. A. A. is evincing its interest in such areas.

In like manner, other areas are being considered in the light of regional land use planning. The problem areas adjacent to Wheeler Reservoir are being considered by a working committee of six members, representing six Divisions. Due to the fact that I spent three months last spring in the Wheeler area, I am representing the Forestry Division on this committee. Pickwick Dam site, on the Tennessee below Muscle Shoals, has recently been approved as the next step in the power program. A survey of over a million acres in that area is being contemplated by our Division. This survey, as well as those of other Divisions, shall likewise be coordinated by a working committee. Wherever other agencies, other than the TVA are doing work which fits into the regional plan, they are given a maximum of encouragement and aid by the TVA.

In such manner we take our place in the TVA picture. All of the varied movements and results—such as cheap power, low cost fertilizer, changes in land use, etc.,—are but a means to an end. Quoting Dr. A. E. Morgan,

"The real purpose of the TVA is to provide a practical testing ground for planning in its larger sense—we can show how the rest of the country may profit from our experience."

Someday—when the Peavey is a profit bearing publication—as my tiny grandson climbs upon my withered knee—I shall dust off a map of these United States, show him the Tennessee Valley, and, pointing to some spot in the highest mountains, shall say,

"Here, my lad, is where we live, so peacefully, in the heart of this Utopia, otherwise known as the Tennessee Valley. The Tennessee Valley Authority started way back in '33, made this Valley what it is today." (Talking to one's grandson—one can stretch a point, I guess). "In those dark days many of these beautiful green hillsides were barren and full of ugly ditches"—and so forth, well into the night—all leading to the inevitable stream of questions from the youngster—during the course of which he would be pleased to discover that his old grandfather was a "big shot" in the TVA. You know how grandfathers are.

THE PINE

(a wish)

*May I grow like the pine on the crest of the hill
With plumed head to the sky.
Straight and strong as a rapier blade
May I be as gallant and unafraid
As I watch the clouds go by.*

—BESSIE RAINER FORD

FURNITURE, ANCIENT AND MODERN

BY L. W. REES

EVER since man discontinued his nomadic habits and settled down to the quietness and peacefulness of an established home, he has been in need of furniture. The beginnings were naturally crude. Furniture was made from the material at hand, consisting of wood, stone, and metal. Wood, being the easiest to work and at the same time possessing a beauty and warmth which is found in no other material, has been the prime favorite throughout the centuries.

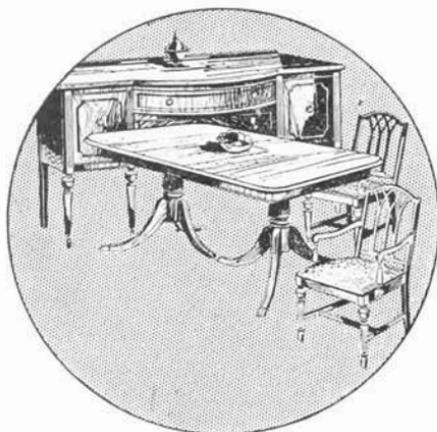
As early as the 15th century B. C. experience had taught that wood had the greatest adaptability for graceful and luxurious furniture. The artists of Egypt understood painting, turning, inlaying, veneering and canework. Many Egyptian pieces of wooden furniture including chairs, tables, folding seats, brackets, cabinets, and beds have recently been found, through the excavation of their tombs. The dry climate of Egypt was also a factor in the preservation of this material through a period of 3000 to 4000 years.

The art of furniture making spread from Egypt to Babylonia and Assyria. These countries also favored woods such as cedar of Lebanon, ebony, teak and Indian walnut. Due to the humid nature of the climate of these countries, samples of Babylonian and Assyrian furniture are not preserved. Evidence of their art is found only in alabaster bas-reliefs, statuary, paintings and seals, all of which have been recovered from ruins of their ancient cities.

Greek houses were probably comparatively bare when compared to present day standards. Most of their furniture was wrought in wood and was decorated with characteristic beauty and taste. Many of their pieces were highly carved and inlaid or encrusted with metals, ivory, and probably other precious substances. In the *Odyssey*, Ulysses describes his bridal bed to Penelope as follows: "Beginning from this headpost I wrought at the bedstead till I had finished it, and made it fair with inlaid work of gold and of silver and of ivory."

Roman dwellings were more luxurious than those of the Greeks. The ornamental woodwork in Roman houses was extremely rich. The table was the most important article of furniture and the most costly of these were made of citrus wood from Africa. The value of this wood was found in its beautiful markings and its color. The color is described as that of a wine mixed with honey. It is reported by the Elder Pliny that Cicero paid one million sesterces (about \$20,000) for a single table, veneered with citrus wood. Other articles of furniture were also made of wood. The woods commonly used were cedar, pine, elm, olive, ash, ilex, birch and maple. It probably should be mentioned that the art of veneering was very highly developed during Roman times.

After the fall of Rome in 476 A. D. there ensued a period of violence and instability that lasted approximately one thousand years. The gorgeousness of Roman furniture, however, was continued by the Byzantine Empire and was transmitted by them to the rising nations of the west. New developments during the middle ages were primarily in architecture. This art was designated as "Gothic," and dominated western Europe from the 13th to the 15th centuries. When the Gothic style was applied to furniture the product was crude and unwieldy in the extreme. It in no way approached the standard of Gothic architecture which has been admired by all subsequent ages.



Toward the latter part of the Middle Ages conditions in Europe gradually improved. The 15th century B. C. marked the beginning of a period of learning and general emergence from the conditions of the Dark Ages. This new period of learning known as the "Renaissance" had its beginning, and reached its highest development, in Italy, but was European in scope. In Italy peace following long wars, made it possible for the wealthier people to become patrons of the arts. The period was marked by originality and spontaneity, guided but untrammled by the traditions of antiquity. The creative impulse became supreme; it has been designated the golden age of achievement.

With growth of the taste for beauty and ornamentation there came a corresponding increase in the luxuriousness of home furnishings. The result was that the Gothic furniture, to which it was not possible to concede much to comfort or beauty, was replaced by more elaborately designed furniture. New pieces were originated and older styles were remodelled to meet the demands of the more sumptuous mode of living. Walnut wood became the prime favorite. In addition pear, maple, pine and cypress also were used. Cabinet making became a much respected craft.

The early years of the Renaissance in France was marked by a distinct Italian influence. This was probably due largely to the fact that Italian artists were encouraged to come over to France in considerable numbers. As a result of this much of this early French furniture, so resembled that of Italy, that it is often difficult to determine whether some of the pieces are of Italian or French origin. Toward the end of the Renaissance in France there was a tendency to break away from this Italian influence and to create a national art which would be more suitable to the French taste. This new era was introduced in 1643 at the beginning of the reign of Louis XIV and ended with the execution of Louis XVI during the French Revolution, or with the beginning of the Empire in 1795. During the latter part of this period the great Salon was replaced by the drawing room; bedrooms became smaller. This created a need for smaller furniture. The furniture which came into vogue was made of walnut, mahogany and rosewood, inset with lacquered or porcelain panels. The individual pieces were light and graceful and during the period of Louis XV were characterized by the excessive use of curves and what is known as Rococo ornament. The latter was suggested by the curves of shells and stalactite forms. Hardware played an important part in ornamentation. Much of the furniture was covered with gilt-bronze ormolu in several different designs which were used as drawer pulls, hinges, key plates, protective feet and corner mounts, and often as purely ornamental features.

By the time the Renaissance reached England, it had lost much of its classic purity. Much was introduced from Spain that was Moorish, especially strapwork and interlacings, which were features of the Tudor style. Tudor furniture was made of oak; it was large, massive and architectural, but was well suited to the lofty paneled rooms of the Elizabethan mansions. Metal hardware was less ornamental. Small wooden knobs were more generally used.

Early Jacobean furniture was made of oak and retained many of the characteristics of the preceding Tudor style. However, forms were gradually becoming lighter through the use of turning. The early Jacobean period ended with the execution of Charles I in 1649 and the rise of the commonwealth under Oliver Cromwell. Cromwell hated the aristocracy and ordered the dismantling of many of their castles and most of their furnishings were sold abroad. The furniture that replaced it was severe and uncompromising. Tables, beds, chairs and other pieces were made of oak and in the simplest possible style. They were rectangular, without carving or ornament except in the turned spindle supports. There was some tendency toward greater lightness. This was caused by the greater use of cane and to a change from oak to walnut. This marks the end of the so-called age of oak in English furniture and the beginning of the age of walnut.

With the restoration of Charles II in 1660, English life blossomed forth into greater luxury of living with more artistic furnishings than ever before. The early Jacobean and the severe

Cromwellian styles went out of fashion or were discarded. Walnut became the chosen wood. This wood was more suitable for carving and fine spindling, especially the barley-twist which became characteristic during this period. Chairs were made with tall narrow backs, turned posts and carved front stretchers. The love seat or double chair, the grandfather chair, the gate-leg table, the highboy, tall wardrobes, chest of drawers, and long low buffets, open below and with cupboards above, were introduced. The fronts of these latter pieces were marked with paneling, patchwork or marquetry. This furniture was substantial, comfortable, and beautiful, and is still being reproduced.

The reign of William and Mary (1689-1702) marked a transitional period between the previous Jacobean and the Queen Anne Period. A few new features were introduced such as the cabriole leg, lacquer and glazing. It also represents an intermediate step between the previous rectangular furniture and the curvilinear furniture which was to follow. Most of this furniture was made of walnut.

The Queen Anne period was characterized by the development of a style which was peculiar to England. A style which has ever remained a favorite. The furniture became lighter in form, graceful in line, and, probably for the first time, it was really comfortable. Angular lines gave way to curved lines and the great ornamentation of the previous periods was displaced by simplicity. Walnut was now at its zenith but mahogany was gradually coming into fashion. Beauty was obtained by bringing out the grain of the wood, rather than by carving, gilding or ormolu.

The Queen Anne chair had a high back spooned and rounded at the shoulders; a fiddle or vase shaped splat; and a cabriole leg, which at its best had no stretchers, sometimes all four legs were curved and had club or ball-and-claw feet. The scallop shell was frequently carved on the knees or on the crest. The roomy upholstered wing-chair made at this time has never yet been surpassed for beauty and comfort. There were three types of provincial chairs, the windsor, the slat back, and the bannister back, with reed or wooden seats. These are of importance because of their later development in Colonial America.

Heavy tables had gone out of fashion. The tilt-top table supported by a single pedestal, resting on three short curved legs was introduced. Secretaries, highboys, and cabinets showed arches, either single or in pairs. These were sometimes broken with urns, busts, torches, and finials. Beds were of a tall four poster type. Queen Anne furniture is often used in the homes of today, as it combines well with many other styles.

The Georgian Period beginning with the death of Queen Anne in 1714, and lasting a little over a hundred years, was probably the greatest period in furniture development that the world has ever known. During this time there was a succession of skilled cabinet makers and designers, several of whom stand out with such prom-

inence that their names have ever since been used to designate the styles they created. The most famous of these styles are called Chippendale, Hepplewhite, Adam and Sheraton.

The Georgian period marked the end of the Age of Walnut and ushered in the age of mahogany. Mahogany, a comparatively light wood with a fine grain, rich color and capacity to take a beautiful polish, has to this day remained a favorite for furniture manufacture.

Early Chippendale furniture showed much of the influence of the Queen Anne period. His furniture, however, was lighter in design, but improved methods of joinery made it strong and durable. Typical Chippendale chairs possessed square shoulders, with the top curved into a graceful bow-shape. The general outline of the splat remained, but it was elaborately pierced and carved in scrolls and ribbons. Another development was the slat or ladder-back chair, with four or five horizontal slats, a saddle seat and straight legs and stretchers. Still later he developed a type of furniture suggestive of the orient. It was light, rectangular, with open fretwork and lattice ornament on the chair backs, stretchers and legs. He introduced the Cumulative table, made in four parts that could be combined in various ways. Bedroom pieces were with straight or serpentine fronts and bracket feet.

The next important cabinet maker was George Hepplewhite. His furniture was light and graceful and showed a restrained use of painting, inlay and carving. The legs of his pieces were straight and tapered. They were square or round; plain, reeded, or fluted and generally ended in the spade or thimble foot. Chair backs were designed in a variety of forms which included the shield, camel-back, interlaced hearts, the oval and the wheel. Settees and sofas were made to match the various types of chairs. The sideboard was made in good line with straight tapering legs and sparingly ornamented with carving or inlay of satinwood. Hepplewhite also made roll-top writing desks, beds with finely carved slender posts, wardrobes, dressers, cabinets, secretaries and cases for grandfather clocks.

The Adam brothers were designers rather than makers of furniture and the work of Hepplewhite and Sheraton often was influenced by them. The Adam designs were characterized by lightness, by simplicity of form, and by classic ornament. The chairs were small and delicate, with low open backs. The legs were tapered, straight or slightly curved outward, fluted or ornamented with painting and ending in a simple turned foot. They also designed delicate occasional tables, sideboards in three parts, cabinets, four-poster beds, clothes presses and many other articles.

Sheraton was the last of the great English cabinet makers of this period. His furniture was slender, constructed on vertical lines and without excessive ornamentation. He preferred to rely on the grain of the wood, relieved by bands of inlay and simple lines. It was without underbracing, but was very durable. In general the legs were

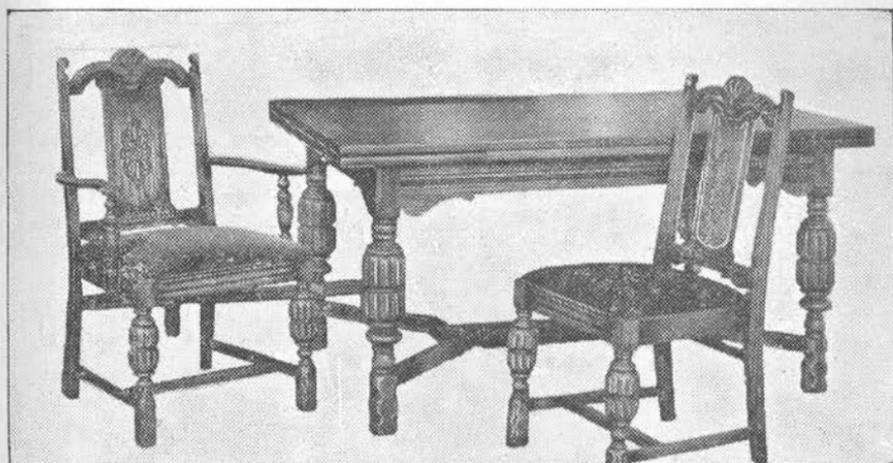
straight and slim either rounded or square, tapered, sometimes slightly carved or inlaid and terminating in the spade or thimble foot. Chair backs were usually rectangular and the top rail was either slightly curved, straight or with an extension in the central portion. The back was in the form of the urn, the lyre, or of several narrow splats all delicately carved. The seats were wider at the front and were upholstered. His tables included the cumulative dining table, the extension table and many small tables for various purposes. The sideboards were made in one piece instead of three as previously. They were models of simplicity and grace. The list of Sheraton furniture also includes four-poster beds, desks, chests of drawers, book-cases, commodes, cabinets and highboys.

Toward the end of the 18th century the golden age of English cabinet making was drawing to a close. Sheraton, himself, fell to copying the Empire style of France and the quality of his work declined rapidly. High prices generally prevailed so that much was sacrificed to cheapness of materials and construction. This decline in good taste continued throughout the Victorian period which followed. Nothing of note was created in England after the Georgian period which ended about 1830.

Colonial history in the United States dates from the landing of the Pilgrims in 1620 to the revolution in 1776. The history of furniture during this period follows closely that of the respective countries from which the new immigrants came, except that the styles were always a few years behind those of Europe. The pieces for the most part were made of local woods such as oak, maple, cherry, American walnut, beech, ash and pine instead of the materials used abroad.

After the revolution there was a tendency to break away from the English influence. There was, however, a return of interest in English styles about 1790 and for the next twenty years Sheraton styles prevailed. Duncan Phyfe, the most noted of American cabinet-makers, did most of his finest work during this time. Duncan Phyfe chairs had concave, grooved or laureled metal-tipped legs. The backs were low and open and often with an ornamental slat, half loop or lyre of Sheraton or Adam design. The seats were broad and the arms were scrolled. Phyfe also built sideboards, tables, sofas, and settees, all with dignified proportions and charming lines. The best of his work ranks well with that of the Georgian master cabinet makers.

After about 1830 furniture forms underwent a decided change. The furniture produced during this period is designated as Jeffersonian, after President Jefferson who was a designer and maker of fine furniture. This furniture was large and heavy with broad flat scrolls or consoles. The piece, whether table, bed, sideboard, or sofa, showed large plain veneered surfaces of crotch mahogany, polished to show the grain. Round topped tables, side boards and other pieces were supported by three or four scrolled feet. This furniture is interesting mainly because it is American.



After 1830, very little furniture of note was produced in America. The only creation that might be mentioned is a simple type spindled in the manner known as nulling. This is called the fore-father style. The name Jenny Lind is more commonly given to beds of this type.

As previously indicated there was almost a complete lack of artistic expression during the last quarter of the 19th century. The furniture produced consisted mainly of copies of the old period styles. By the beginning of the present century, however, there was a general reawakening; a breaking away from the fetters of convention. Furniture designers began to realize that they were only imitating and strove to produce something new which would more nearly harmonize with the changed economic, political and social conditions of life. As a result of this effort to become more original many of the new pieces of furniture were startling in their abstraction and distraction. Not all of the styles were displeasing yet many of the pieces were squat and ponderous. Many of these innovations have been discarded by the designers themselves, which proves that they were nothing more than passing fads. It is very probable that much of the modern style that is accepted today will become obsolete tomorrow. This is to be expected since it usually requires years, maybe several generations, for a great period style to arrive, develop and become generally accepted.

It has always been the present day need which has inspired the creation of totally new pieces. Proof that new developments in furniture design are being consummated is found in the statement that "Modern Furniture and its accessories aim to be accepted as a period." In order to accomplish this it must fit amicably and acceptably in our modern scheme of living as well as solve the economic problems of mass production. If it is to meet the same favor that we accord to the great period styles, it must develop delicate harmony,

subtleties of form, new and daring textures and colors that are both elusive and compelling. For considerable time it was thought that this would be impossible. Modern decoration was considered as best suited to public buildings, to studios, and to bachelor apartments. In spite of this feeling modern houses and apartments are being furnished in a modern spirit of beauty that is new and different, but with a radiance and richness of material which it is claimed are on a par with the most popular decorative periods of France, Venice, and England.

There is no quarrel at the present time with period styles if they are genuine. Authority in this field is still considered the *sine qua non*. The possibility, however, of acquiring honest pieces of period furniture is rapidly diminishing. The markets are flooded with fakes and bastard reproductions, therefore, lovers of honest craftsmanship are compelled into modern decoration.

The modern movement in furniture design had its beginning with the Exposition Des Arts Decoratifs et Industriels Modernes, held in Paris in 1925. The United States was invited to take part in this exposition. Herbert Hoover, then Secretary of State declined the invitation stating that there was no decorative art movement in this country at that time. Ten years have elapsed since this exposition and we now stand at the threshold of a new era. An era independent of the antiquated styles of older nations. The Machine Age is imposing a new mode of life. This usually means a break with old conventions and the establishment of new values.

It is claimed that modernism is a style of reason, an appeal to the intelligence. Modern forms are simple; the circle, the square, the horizontal line are skillfully blended and represent a return to the Greek ideal. The new horizontalism is not an arbitrary convention. It is a symbol of our desire for unity and consistency. It emphasizes simplicity and expresses vigor and energy. Moreover, it is a type of construction that lends itself to the principal of mass production of this—the machine age.

Metal! This is also claimed to be the age of metal; that modern civilization is built upon metal and that it is the material of the future. Steel framework, at the present time, is enjoying the attention of the most advanced designers of chairs. They are made of piping with loose cushioning that gives itself over to the job of depth and laziness and bounce. (A catchy description indeed.) Designers can convince the public that metal is of this age, that it is interesting and beautiful. They say that many things of inherent beauty frequently meet with disapproval at first, but that later they are accepted with much enthusiasm. They very deftly point out that wood was not chosen for its beauty but because it could be moulded into forms which were suitable for certain purposes. They choose to forget, however, that metal furniture can never hope to match or even approach the warm rich walnut brown of an authentic "Queen Anne" chair or desk or equal in ornamental value a Sheraton mahogany

bookcase. They can point out that metal is unbreakable, that it is fire resistant, that it is not subject to warping and checking and that new processes of manufacture make it light and graceful. Mr. Paul T. Frankl in his latest book on Form and Reform says: "Metal furniture has been condemned as cold, impersonal and inhuman. If this criticism were just I would join with them in banishing it forever from the American home. As a matter of fact metal is among the most malleable of media." The fact that it is malleable, however, makes it none the less cold, impersonal and inhuman. Touch any exposed portion of a piece of metal furniture and it will speak for itself.

There can be no doubt but that wood is the most humanly intimate of all materials. However, it has not always been used to the best advantage. It has been cut, curved, twisted, bent, gilded, painted and varnished until it could not be recognized. In spite of this, it still survives and to the fastidious its appeal is as great as ever. Its intrinsic beauty has enabled it to maintain its time honored prestige. Wood appeals to our senses, it is attractive to the eye and pleasing to the touch. The aim in the modern treatment of wood is to respect its inherent qualities. Veneering, although it was used in ancient times, is a widely used modern process to which it is claimed a new epoch in the appreciation of wood is due. This is probably because many of our most expensive and beautiful woods are available only or very largely in the form of veneer. The list of these woods includes rosewood, Mocassar ebony, black walnut, circassian walnut and mahogany. These along with many other woods are used to produce wooden pieces of furniture in the modern style.

Modern style has already become definite, but is not fixed. There is, however, a common regard for basic principals. It is only natural that there should be variations which express the personal interpretation of the artist, for the requirements of each individual. Comfort, livability, soundness of construction, moderate prices—these are the earmarks of the new era. Prognostications as to future trends in furniture styles are difficult to make. It seems probable, however, that when wood and metal are weighed in the balance of enlightened public opinion, that metal will be found wanting. If any great period furniture is contemporaneously developed it will probably be made of wood. Moreover, wood is our only renewable resource, and it is very probable that wooden furniture will be made, long after steel has been relegated to the limbo of a forgotten age.



HERE IS NO DISCORD

*Here no harsh, crude sights or sounds,
 Save as they harmonize and blend
 Into the rare perfection of the whole.
 The gale-tossed mighty cedar and its kind,
 So gently bend to shield the fragrant pine
 That, in turn sustains
 The slim, young, silver birch whose leaves*

*Play bell notes to the fury of the storm.
 And in the calm of summer, mosses grow
 Where violets and sweet arbutus grace—
 A trysting spot for lovers—
 Stag and star-eyed doe
 And bird-song makes a heaven of the place.*

By GABRIELLE CORTEAU from *American Forests*

GAME MANAGEMENT

RALPH T. KING

WILD animal life is as truly a product of the soil as is plant life; the chief difference between the two is that plant life is only one step removed from the soil, while animal life, in the case of the herbivores is two steps removed, and in the case of the carnivores three. Any soil product can be treated in one or more of three ways. It may be mined, farmed or managed. Mining implies the removal and utilization of a soil product with no regard for its continuance and no effort to replenish the original source; it means eventual complete exhaustion of the resource. Farming involves usually a highly elaborate technique and results in a very much artificialized set of conditions; it attempts to remove or reduce to a minimum every factor which competes with the product it seeks to produce. Management relies largely on natural methods and seeks simply to slightly modify or influence factors or trends in a manner that will favor the product with which it is concerned; it seeks to insure the continuance of certain products and, at the same time, avoid a highly artificial and expensive method of control.

Forestry as it is now practiced is our best example of management. There is abundant evidence that in times past such forestry as was practiced partook more of the nature of mining, and there is increasing evidence that forestry in some places, under some systems is very apt to become out and out tree farming. Our treatment of game species has also for generations past been little more than mining. Within the last generation or two there has been increasing alarm over the possibility of the complete exhaustion of this resource, and as a consequence an increased demand that something be done to maintain and, if possible, increase our game supply. Interested and well-intentioned individuals have tried to do something; much effort, time and money has been expended and the results are, to say the least, very disappointing. No one can deny that game has continued to decrease. Even the most optimistic game conservationist is compelled to admit that, except for rare exceptions, there is less game each year. Game conservation principles of the past then can hardly be said to have accomplished their purpose, and adherence to these same principles for another two or three generations is very apt to result in more of the same thing.

This point is stressed because many people, including many foresters, seem to be laboring under the delusion that game management consists of nothing more than increasing expenditures along the same lines and for the same purposes laid down in years past by the self-styled wild life conservation experts. It will hardly be sufficient to simply spend ten dollars where one was spent before even though the process is dignified with the name game management and cloaked

with the semblance of science. A new set of principles is demanded, and it is of course true in this case, as in all other cases, that these principles, if they are to result in sound management, must be based upon facts scientifically ascertained and experimentally proven. A set of principles embodying less than this is not deserving of the name game management. The facts, and the research necessary to unearth them, constitute the science of game management. The principles derived from these accumulated facts, and their application, constitute the art of game management. This is exactly the same relationship that exists between the science of silvics and the art of silviculture.

What, then, are these facts so necessary in game management? This question can perhaps be best answered by drawing again on silvics for an illustration. The knowledge necessary for sound forestry practice includes facts relative to the properties of the tree species involved and the site qualities essential for the growth of these species. Expressed in the most elementary terms this simply means that each tree species has certain fixed properties of growth and reproduction usually stated in terms of increment, tolerance and seeding, and each available site for tree growth has certain qualities usually stated in terms of light, moisture, temperature and soil constituents. Unless the properties of any given species are such as to enable it to survive and reproduce under the conditions imposed upon it by the qualities of a given site it must either cease to exist on that site or the site qualities must be changed to fit in with its properties. The species properties are not readily changed except in the course of ages through the process of evolution. Furthermore, a tree, being nonmobile, must be able to obtain all of the necessary environmental constituents necessary for its growth and reproduction within the radius of its root and branch systems.

Game species are no less exacting in their demands in the environment and no less difficult to understand than are tree species. Each wild animal species is as definitely characterized by species properties and as fully dependent upon site qualities as is any tree species. It is true that animals are mobile, not definitely rooted in one spot, but this freedom of movement is more apparent than real. Their range of activity is, although larger, just as definitely limited as that of a tree. This range of activity, spoken of as cruising radius, just as definitely fixes the size of the area on which an animal can draw for its needs as do the root and branch systems of a tree determine the distance to which it can go to supply its needs. Unless this area, not larger in size than twice the cruising radius of the species, contains all of the environmental constituents necessary for the growth and reproduction of the species, in other words, all of the site qualities demanded by the species, it must remain nonproductive. Productivity can not be effected by changing the species properties, but it may often be accomplished by adding to or modifying the site

qualities—the environmental constituents. These manipulations of the environment in order to favor game animals make up the art of game management.

Game management then is predicted upon a knowledge of species properties and site qualities of game animals just as silviculture is dependent upon a knowledge of the species characteristics and site qualities of trees. Because species properties are constant and not controllable the game manager's efforts must be directed almost wholly toward the environment. He must know the various properties of the innumerable species he is called upon to deal with, without this knowledge he can have little hope of success, but he must also know the site qualities; that is, the environmental constituents upon which these species are dependent for subsistence, survival and continuance. His control measures are almost invariably environmental controls. It is, therefore, obvious that sound principles of game management entail about equal amounts of knowledge of wild animals—their habits, properties and adaptations, and wild animal environments—their constituents, composition and condition.

This knowledge of wild animals, their properties and responses, makes up the science of vertebrate zoology, and this knowledge of environments is embodied in the sciences of botany, forestry, soils, and certain phases of applied agriculture. Each phase is an essential part of management, and ignorance of either phase results in incomplete and, therefore, unsuccessful management. No matter how profound one's knowledge of environments, he can not apply this knowledge in a manner that will be productive of the most good unless he keeps constantly in mind the needs and properties of the animals. Similarly, the most detailed information relative to the needs and properties of animals cannot be properly utilized for their production without a thorough understanding of environments. Game management is neither forestry nor zoology, but to a very marked degree a combination of both plus a considerable amount of botany, soils and animal pathology.

It should require no great amount of mental effort to enable one to appreciate that the management of wild animal populations in the wild is not to any extent less simple than the management of any other land product. Neither is it more difficult except for the fact that at present our knowledge of animals and their needs is more limited because so much less work has been done along these lines.

An appreciation of these facts should enable one to see why our previous efforts at wild animal conservation have not been productive of greater good. These efforts have for the most part been outlined and directed by interested and conscientious individuals who were, nevertheless, totally uninformed as to the fundamental nature of the mechanism they were attempting to control. These individuals were in most instances busy business and professional men with their time fully taken up with the affairs of their businesses and professions.



Conservation with them was, at best, simply a hobby, and a part-time hobby at that. They were confronted with the problem of continuing and rapid depletion of game and they sought an answer. As usual they accepted the most obvious explanation as the cause, and, as usual, the most obvious explanation was not the true explanation. In those instances when they did hit upon a really important factor this single factor was usually dealt with exclusively and exhaustively while equally important or even more important factors were either ignored or went unrecognized; witness for example, the religious adherence to predator control, winter feeding, and refuge establishment.

This school of conservationists makes much in its writings and conversation of the so-called "balance of nature," and is constantly recommending the re-establishment of this balance. Examination into this contention demonstrates quite clearly their inability to appreciate the true

nature of the problem with which they purport to deal. The fallacies of their arguments may be pointed out as follows: First, no balance of nature as they picture it ever existed. This term is a name glibly assigned to an assumed tendency on the part of undisturbed nature to keep all plant and animal life in a state of delicate balance and functioning for the best good of all concerned. A knowledge of natural succession, climax associations, maximum population densities and the cyclic behavior of many wild animal species show clearly that no such balance exists today in even undisturbed areas, and it is extremely doubtful if such a balance ever did exist on any area. Second, if a balance of nature did exist in the past on undisturbed areas there is no hope of re-establishing that balance at the present time or in the future on areas now vastly changed and occupied by man. The very presence of man and the effects of his occupancy render this accomplishment impossible. Third, there is no reason to believe that the re-establishment under present conditions of this supposed previously existing balance would result in the production of more wild life even if it were possible to accomplish it. The changes brought about by man have resulted in the total extermination of some species and the serious depletion of others, but they have also brought about an increase of numbers in many species and a great increase in the occupied range as well. While man's occupancy of a wild life range may and often does spell finis for some

species, it usually at the same time spells success for other forms in that it makes possible an increase in numbers and an expanded species range.

Whether or not a balance of nature existed in the past is of little practical moment now. Certainly no such supposed or real former balance can be re-established under present conditions. There is, therefore, little to be gained by attempting it. Again we are brought face to face with the need for a new set of principles which will enable us to assist wild life to adjust itself to present conditions and current practices.

The new wild life management must take care to avoid over-emphasis of any single factor. It must recognize the multiplicity of environmental factors affecting wild animal populations and recognize also the limitations placed on management by the biological properties of the animals. As for the environment, there are not only the physical, chemical and biological qualities to be kept in mind, but certain important economic and social relations that also have a very direct bearing on the nature and success of management. In the case of the animals, the thing the game manager must keep uppermost in his mind is that their behavior and responses are fore-ordained, their adaptations, morphological, physiological and psychological, determine their needs and dictate their responses. It isn't for the game manager to say what their needs are or what their choice shall be, but rather for him to find out these needs and preferences and see that they are provided.

Nearly eighty years ago Darwin and Wallace pointed out that most wild animals reproduce at a rate in excess of the environment's ability to provide for them, as a result there is a struggle for existence and a loss of many animals from various causes. This condition still holds true today. If we want an increased supply of wild life we must make the wild life environments productive of a larger number of mature wild individuals. When the environments have been improved the response on the part of the animals will be immediate and effective.

Game management is, therefore, the manipulation of environments in a manner that will enable wild animals to realize more fully their ability to reproduce and survive. In order to so manipulate environments it is necessary to know and keep in mind the properties of the various species and the environmental constituents upon which they are dependent.



WHAT FORESTS MEAN TO US

A PACK PRIZE ESSAY, 1934

A. J. DOCKENDORFF

FORESTS are a means of health, wealth, recreation and prosperity. They have to do with soil and climate, man and beast. They effect hill and valley, mountain and plain. They influence the life of cities, states and nations. They deal, not only with the manifold problems of growing timber and forest by-products, such as forage, naval stores, tanbark, and maple sugar, but are intimately related to the navigability of rivers and harbors, the flow of streams, the erosion of hillsides, the destruction of fertile farm lands, the devastation wrought by floods, the game and birds of the forest, the public health, and the national prosperity.

The maintenance of forests has, therefore, become an important part in the household economy of civilized nations. All mankind has learned, through the misuse of forest resources, that forest destruction is followed by timber famines, floods, and erosion. Mills and factories depending upon a regular stream must close down, or use other means for securing their power, which is usually more expensive. Floods, besides doing enormous damage, cover fertile bottom lands with gravel, boulders and debris, which ruins these lands beyond redemption. The birds, fish and game, which dwell in the forests, disappear with them. Springs dry up and a luxurious, well-watered country becomes a veritable desert. In short, the disappearance of the forests means the disappearance of everything in civilization that is worth while.

It is often said that wood enters into our daily life from the time that we are born until we die; from the cradle to the coffin. It is difficult to imagine a country without wood. In a single year our country uses 90,000,000 cords of firewood, nearly 40,000,000,000 feet of lumber, 150,000,000 railroad ties, nearly 1,700,000,000 barrel staves, 445,000,000 board feet of veneer, over 135,000,000 sets of barrel headings, over 3,300,000 cords of pulpwood in the manufacture of paper, 170,000,000 cubic feet of mine timbers, 1,500,000 cords of wood for distillation, nearly 3,500,000 telephone and telegraph poles, and over 140,000 cords of wood for excelsior. In short, we take from our forests, yearly, including the waste in logging and manufacture, more than twenty-two billion cubic feet of wood valued at about \$1,375,000,000.

Lumbering is the country's largest manufacturing industry. In its 48,000 saw mills it employs more than 600,000 men. Its investment in these plants is over \$1,000,000,000 and the investment in standing timber is \$1,500,000,000 more. This industry furnishes the railroads a traffic income of over \$200,000,000 annually. If we in-

clude in these statistics also the derived wood products, we find that over 1,000,000 wage earners are employed, and that the products are valued at over \$2,000,000,000, annually. Most certainly this industry influences our National prosperity.

The forests in the mountains control our streams, vitally affect the industries dependent upon water power, reduce the severity of floods and erosion, and in this way are intimately wrapped up with our great agricultural interests. In agriculture and horticulture the influence of the farm or fruit crop rarely extends beyond the owner's fence. What I plant in my field does not affect my neighbors; they share neither in my success nor my failure. If by the use of poor methods I ruin the fertility of my farm, this fact does not influence the fertility of my neighbor's fields. But with forests it is different. Unfortunately, just as the sins of the father are visited upon their children, so the sins of the mountains are visited upon the valleys.

The mountainous slopes of the Appalachian ranges and the steep, broken, granite ridges of the Rockies, the Sierras, and the Cascades are the sites most suited in our country for forestry purposes. These ranges have been effected most by the reckless cutting of timber and by forest fires. When these mountains were clothed with forests, the rivers ran bank-full, ships came to the harbors at low tide with ease, and factories and cotton-mills ran steadily all the year long. Since the destruction of these forests the surrounding country has suffered from alternate floods and droughts; great manufacturing centers have lost their steady supply of water; harbors are filled with silt from the mountain-side; and fields once fertile, are now covered with sand, gravel and debris from the mountainside, which has been deposited there by ungovernable streams. Forest fires and reckless cutting were the primary reasons for the disappearance of the luxuriant growth of forests on these ranges. Thank heaven that the National Government has partly solved the problem of reckless cutting. It is up to the public to solve the problem of saving our remaining forest from destruction by fire.

Erosion is one of the most serious dangers that threaten our farms both by transporting fertile soil and by covering the bottomlands with sand, gravel and debris. Since we are largely an agricultural people, the importance of this problem will be readily appreciated. Over 50 per cent of our population is rural, and the annual production of farm crops has a value of over \$5,500,000,000. Farm uplands are washed away or eroded by high water, and high water is largely caused by the destruction of the forests on the mountain slopes. With the forest cover removed, there is nothing to obstruct the flow of water down the mountain sides. Raindrops beating on the bare soil make it so hard and compact that most of the water runs off instead of being absorbed by the sub-soil, with the result that a heavy rain storm rushes down through a valley in a few days instead of a few weeks, tears out the river banks, floods the lowlands,

and deposits upon them the rocks and gravel carried down from the mountain-side.

Every great movement, which has for its object the betterment of mankind, lags far behind the times. There must be an actual economic need before a new movement can be expected to take root and flourish. Forest conservation had no place in the household economy of nations that had forests in superabundance. Their forests were used with prodigality. It seems to be a great human failing to use natural resources lavishly when the supply is apparently unlimited, and to practice frugality only when the end of a resource is in sight. Thus we find in the pages of forestry that all nations have begun to husband their forest resources only after having felt the pinch of want. In our country history repeats itself and our federal policy of forest conservation properly begins at the time that the national conscience was awakened to the realization that if we did not practice economy with our forest resources we would some day be without an adequate supply of timber and forage, and be confronted with other dangers and calamities that follow the destruction of forests.

When the London Company settled at Jamestown, Virginia, in 1607, it found that unlimited pine and hardwood forests confronted it on every side. Nor did these early settlers ever find a way out of this forested wilderness except by clearings made with the ax. When the Pilgrim Fathers landed at Cape Cod in 1620 they found similar forests stretching in all directions from their town-site. After the Atlantic seaboard became pretty well settled the home-builders began moving westward through New York, Pennsylvania, and what is now Ohio. Still nothing but unbroken, virgin forests were encountered. Westward to the Mississippi advanced civilization and still forests reigned supreme. Then the Middle West, the Rocky Mountain region, and finally the Pacific Coast regions were settled. During the 140 years, civilization has spread from coast to coast and of that vast wilderness of forest there is left only a remnant here and there. The giant pines that sheltered De Soto and his thousand followers on their ill-fated expedition in 1541 to the Mississippi River have long since disappeared. Along the Allegheny and Appalachian ranges the vast forests that once harbored the hostile Narragansetts and Iroquois are now but a memory. The giant oak, ash, and cypress forests of the Mississippi Valley are rapidly being decimated by the big sawmills that work day and night to outdo each other. In the north the dense and magnificent forests of white pine that greeted Father Marquette, when he planted his missionary station at Sault Ste. Marie in 1668, have been laid low. Unproductive wastes, sandy barrens, and useless underbrush now greet the eye. In fact the pine forests which covered the greater part of Michigan, Wisconsin, and Minnesota have been leveled by the woodman's ax. The army of lumbermen have moved now to the Coast region to again turn virgin timberland into unproductive wastes.

In our prodigal use of our forest resources we have become the most lavish users of wood in the world. While the annual consumption per capita for France is about 25 cubic feet, and that of Germany about 40 cubic feet, our per capita consumption is in the neighborhood of 250 cubic feet. And the most terrible thing about our reckless methods has been that we have wasted by crude lumbering methods and we have let great forest fires consume many times as much lumber as we have used. There have been vast public and private losses through unnecessary forest fires which not only consumed millions of dollars worth of timber every year, but which also cost the lives of thousands of settlers. Then, as every one knows, by being grossly negligent with our forests, our rivers have visited their wrath upon the unfortunate people in the valleys. Many streams have become raging torrents in the spring and only chains of stagnant pools in the summer, thus destroying their value for water power and irrigation. Cotton mills, which formerly used water power all year around, now must depend upon more expensive steam power generated by coal to keep their mills running in the times of water shortage, while during the high water there is the great danger that the entire factory may be swept away.

So far we have only dwelt on the economic importance of forests. Let us see just what other benefits we may derive from them.

Many hundreds of thousands of people travel through the forests every year by automobile or by other conveyances. These people camp in the forests, fish, hunt, and enjoy the cool climate and beautiful scenery. Now, without forests we would have no game to hunt, no fish to fish for, and no cool climate to enjoy, for the forest is the refuge for wild animals, and without the forests there would be no lakes, consequently no fish to fish for, and with the absence of trees there would be no shade. Just imagine a person trying to keep cool on the Sahara Desert.

In conclusion let me quote:

*"A forest is more than a collection of trees
For its lumber industry of wealth;
It is a refuge for game, a flower preserve,
A place for recreation and health."*

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TREES OF GOD

Side by side in numbers lying,
 Where the lone bald eagle's flying,
 There they lie
 Stretching prostrate in their prison,
 Where in greatness they had risen
 Mighty monarchs of the forest,
 Reaching branches to the sky.

Where the storm-king howls and rages,
 Scions of the vanished ages,
 Towering high,
 Shrouded in their crystal whiteness,
 Verdant in their summer brightness,
 Trees of God in hoary grandeur,
 All the elements defy.

Came the white man, did not falter,
 Progress' price on Mammon's altar
 Laid he then.

Stripped the forests of their glory,
 Left gaunt trunks to tell the story
 Of the majesty and beauty,
 Sacrificed to ways of men.

—ISOBEL LIKENS GATES



1935
GRADUATING CLASS

JOHN J. AHERN
Tauton, Minnesota
General Forestry
Forestry Club
Summer Work
Angeles National Forest, '31
Superior National Forest, '33, '34



VERNE N. ALGREN
Hutchinson, Minnesota
General Forestry
Forestry Club



CLAUDE S. ASP
Floodwood, Minnesota
General Forestry
Forestry Club
Phalanx
Cadet Officers Club
Rifle Team, '32, '33, '34, '35



THOR BERGH
Minneapolis, Minnesota
General Forestry
Forestry Club
Foresters' Day Committee Chairman, '35
Summer Work
Chequamegon National Forest, '33
Clark Unit, Missouri, '34

ROY M. CARTER

Mauston, Wisconsin

General Forestry

Xi Sigma Pi

Alpha Zeta

Forestry Club

Foresters' Day Association

Y. M. C. A.

Marching Band

Summer Work

U. S. Timber Survey,

Lake States Forest Experiment Station, '34



ROBERT H. CLARK

St. Peter, Minnesota

General Forestry

Tau Phi Delta

Forestry Club

Gobblers

Y. M. C. A. Cabinet, '33

Foresters' Day Association

Gopher Peavey Board

Summer Work

Blister Rust Control, '33

Couer d'Alene National Forest, '34



ROBERT A. DELLBERG

General Forestry

Forestry Club

Summer Work

U. S. F. S., Minnesota Forest Service



JACK DENSMORE

Edgewood, Iowa

General Forestry

Tau Phi Delta

Forestry Club

Xi Sigma Pi

Silver Spur

Grey Friars

Gobblers

Ag. Student Council, '34

All-University Council, '34

Summer Work

Nicollet National Forest, '33

Lake States Forest Experiment Station, '34





ROY H. DINGLE
 St. Paul, Minnesota
General Forestry
 Tau Phi Delta
 Forestry Club
 Xi Sigma Pi
 Gobblers
 Gopher Peavey Board, '33
 Associate Editor Gopher Peavey, '34
 Ag. Students Council, '34
 Senior Class President
 Vice President Senior Commission
 Gobbers
 Y. M. C. A. Cabinet—Vice President, '35
 Summer Work



JOHN DOBIE
 Minneapolis, Minnesota
General Forestry
 Forestry Club
 Xi Sigma Pi
 Secretary Junior Corporation, '33
 Summer Work
 Chippewa National Forest
 Construction Foreman, C. C. C. Camp 1610,
 Wisconsin



JACK P. DUNDAS
 Baudette, Minnesota
General Forestry
 Eveleth Junior College, '31, '32
 Tau Phi Delta
General Forestry
 Gobblers
 Summer Work
 Indian Service, '34



BIRGER ELLERTSEN
 Minneapolis, Minnesota
General Forestry
 Forestry Club
 Summer Work
 Lake States Forest Experiment Station
 C. C. C. Co. 708, Bena, Minnesota

ROY J. ERSON

Minneapolis, Minnesota
General Forestry
 Forestry Club
 Intermural Basketball and Football



ARTHUR E. FERBER

Milbank, South Dakota
General Forestry
 Tau Phi Delta
 Xi Sigma Pi
 Gopher Peavey Board, '34
 Junior Corporation Steward
 Forestry Club
 Gobblers
 Y. M. C. A.
 Freshman Football
 Summer Work
 St. Joe National Forest, '29, '30, '31, '32, '33
 Bureau Plant Industry, '34



RALPH L. GRAVES

Morton, Minnesota
General Forestry
 Xi Sigma Pi
 Alpha Gamma Rho
 Wrestling, '33, '35
 Summer Work
 Chippewa National Forest, '33, '34
 Lake States Forest Experiment Station in
 Superior National Forest, '34



DEWEY HAHN

Onamia, Minnesota
General Forestry
 Forestry Club
 Treasurer Freshman Corporation, '31
 Chairman Gopher Peavey Sales, '35
 All-University Wrestling, '31
 Summer Work
 Superior National Forest, '33
 Timber Survey, '33, '34





WILSON HALL
 St. Paul, Minnesota
General Forestry
 Forestry Club
 University Singers, '33
 Chorus, '34



HENRY L. HANSEN
 St. Cloud, Minnesota
General Forestry
 Xi Sigma Pi
 Gamma Sigma Delta
 Forestry Club
 Minnesota Daily, '31
 Wrestling
 Associate Editor Gopher Peavey, '35
 Foresters' Day Association
 Summer Work
 Superior National Forest, '33
 Clark Unit and Wappapello Unit,
 Missouri, '33, '34



ARTHUR HAWKINSON
 Onamia, Minnesota
General Forestry
 Tau Phi Delta
 Xi Sigma Pi
 Forestry Club
 Forestry Club Secretary
 Summer Work
 Soil Division



EDWARD HOLBROOK
 Minneapolis, Minnesota
General Forestry
 Lamda Chi Alpha
 Xi Sigma Pi
 Forestry Club
 Summer Work
 Lake States Forest Experiment Station

WALTER R. JACOBSON
 Minneapolis, Minnesota
General Forestry
 Forestry Club
 Y. M. C. A.
 Fencing, '32, '33



RUSSEL W. JOHNSON
 St. Paul, Minnesota
General Forestry
 Forestry Club
 Xi Sigma Pi
 Summer Work
 Superior National Forest



OSWALD K. KROGFOSS
 Detroit Lakes, Minnesota
Forest Economics
 Tau Phi Delta
 Xi Sigma Pi
 Forestry Club
 Gobblers
 Foresters' Day Association
 Gopher Peavey, Business Manager, '34
 Gopher Peavey, Editor, '35
 Y. M. C. A.
 Y. M. C. A. Cabinet
 Senior Announcements Committee
 Summer Work
 Superior National Forest, '34
 U. S. Biological Survey, '34



WILFRED H. LAUER
 Minneapolis, Minnesota
General Forestry
 Forestry Club
 Minnesota Daily—Staff, '30, '31
 Hockey—Assistant Manager, '31, '32
 Band, '33, '34
 Summer Work
 Selway National Forest, '31
 Hiawatha, Marquette, and
 Huron National Forests, '34





PEDER N. LUND
Clarkfield, Minnesota
General Forestry
Tau Phi Delta
Forestry Club
Technical Foreman E. C. W. Camp S-56,
Beltrami State Forest, Minnesota
Technical Foreman E. C. W. Camp F-28,
Chippewa National Forest



DONALD B. LYNCH
Minneapolis, Minnesota
General Forestry
Tau Phi Delta
Forestry Club
Summer Work
Coeur d'Alene National Forest



ROBERT W. MERZ
Minneapolis, Minnesota
General Forestry
Forestry Club



WALDEMAR MOHL
Minneapolis, Minnesota
General Forestry
Forestry Club

MARIUS MORSE

Robbinsdale, Minnesota

Game Management

Xi Sigma Pi

Forestry Club

Ag. Students' Council, '34

Sec.-Treas., Minnesota Bird Club, '33, '34

Sec.-Treas. Junior Corporation, '34

Summer Work

Itasca State Park



THOMAS P. MORTENSON

Askov, Minnesota

General Forestry

Xi Sigma Pi

Forestry Club

Summer Work

Wallowa National Forest,

'30, '31, '32, '33, '34



LINCOLN A. MUELLER

New Ulm, Minnesota

General Forestry

Forestry Club

Freshman Football (numerals)

Freshman Rifle Championship

Varsity Rifle Team (2 years)

Treasurer Junior Corporation, '33

Forestry Rifle Team



NORMAN O. NELSON

Park Falls, Wisconsin

General Forestry

Xi Sigma Pi

Forestry Club

Banquet Chairman, '34

Treasurer, '35

Summer Work

Flambeau Unit, Wisconsin, '32, '33

Intermountain Forest and Range

Experiment Station, '34





EDWARD PANEK
 St. Paul, Minnesota
General Forestry
 Forestry Club
 Summer Work
 Blister Rust Control,
 Minnesota Forest Service, '33
 Blister Rust Foreman, U. S. F. S.,
 Chippewa National Forest, '34



LANSING A. PARKER
 Minneapolis, Minnesota
Game Management
 Tau Phi Delta
 Forestry Club
 President, '34, '35
 Intramural Hockey



GERALD W. PUGSLEY
 Elmore, Minnesota
General Forestry
 Forestry Club
 Vice-President, '35
 Summer Work
 Chippewa National Forest, '34



RAGNER ROMNES
 Stoughton, Wisconsin
General Forestry
 University of Wisconsin, '32
 University of Montana, '33
 Forestry Club
 Tau Phi Delta
 Xi Sigma Pi

ARTHUR W. STURTEVANT

Minneapolis, Minnesota
General Forestry
 Tau Phi Delta
 Forestry Club
 Summer Work
 Black Hills National Forest



WILLIAM L. WEBB

St. Paul, Minnesota
Game Management
 Forestry Club
 Minnesota Bird Club
 Union Board of Governors, '33, '34, '35
 Secretary, '35
 Foresters' Day Association, '35
 Swimming, '31, '32
 Summer Work
 Black Hills National Forest, '35



RUSS E. WHEELER

St. Paul, Minnesota
General Forestry
 Tau Phi Delta
 Gobblers
 Forestry Club
 Ag. Students' Council, '31
 Y. M. C. A. Cabinet, '32, '34
 Freshman Hockey
 Freshman Golf
 Summer Work
 Marquette National Forest
 Soil Erosion Control and Blister Rust Control,
 Whitewater State Park, Minnesota



MILTON ZEFF

St. Paul, Minnesota
General Forestry
 Forestry Club
 Y. M. C. A.
 Menorah Society
 Pro-Halutz
 Summer Work
 Black Hills National Forest
 U. S. Biological Survey



HOWARD L. BROWN
 Minneapolis, Minnesota
General Forestry
 Tau Phi Delta
 Forestry Club
 Pershing Rifles, '30, '31
 Gobblers
 Summer Work
 U. S. F. S. Angeles National Forest, '31, '32
 Minnesota State Forest Service,
 White Earth State Forest, '33
 U. S. F. S. Chippewa National Forest, '33, '34

WILFRED ERICKSON
 Durand, Wisconsin
General Forestry
 Forestry Club

RAYMOND MATSON
 Eveleth, Minnesota
General Forestry
 Forestry Club
 Eveleth Junior College
 Xi Sigma Pi

ERVIN NERENBERG
 St. Paul, Minnesota
General Forestry
 Forestry Club

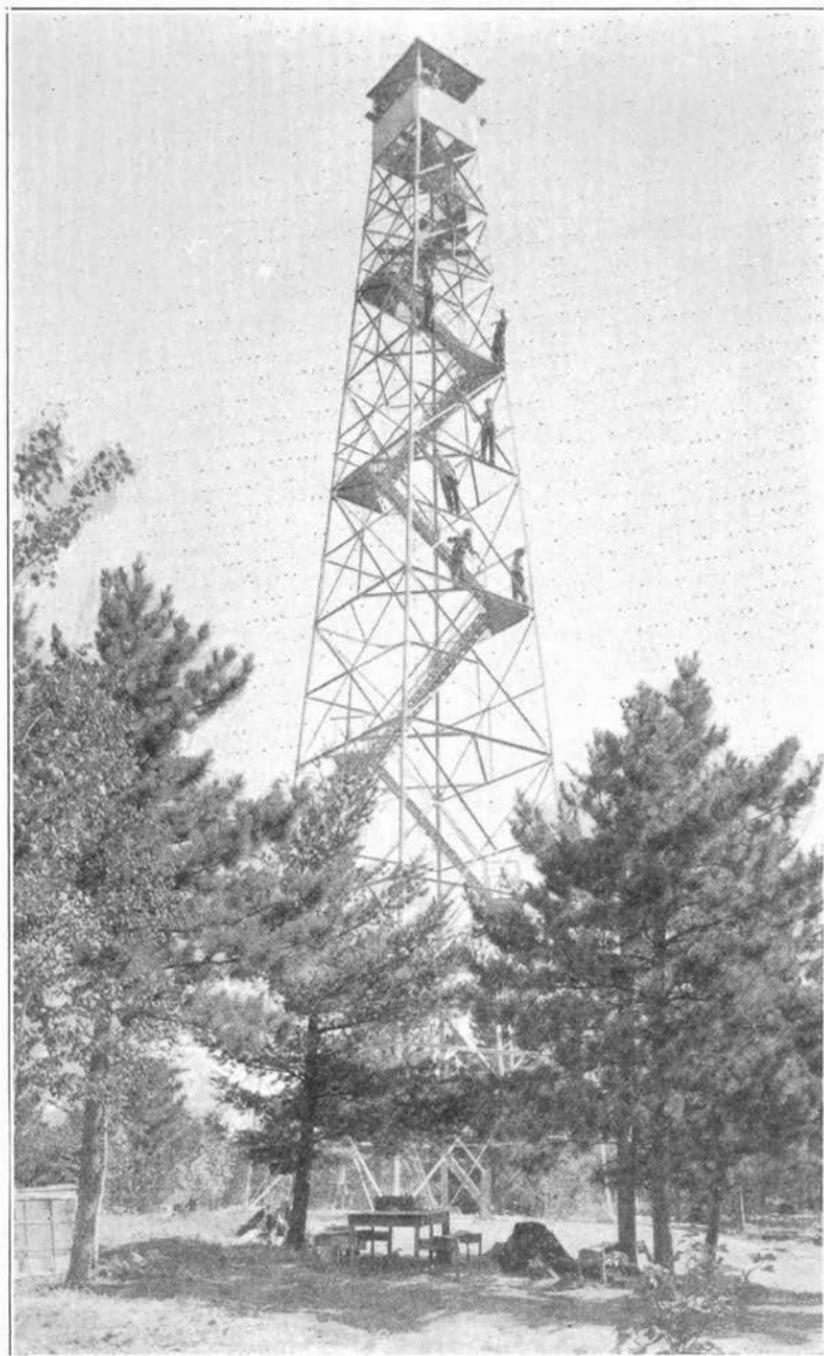
STEPHEN WHITE
 Hutchinson, Minnesota
General Forestry
 Forestry Club
 University College



A Main Campus Scene



Chemistry Building and Library on the Main Campus



Student Activities

FRESHMAN CORPORATION, '34

JOHN MILES, '38

When the stem of Spring brought forth the fragrant bloom of
 summer,
 The Jack Pine savages to the backwoods trekked
 For nights of revelry and days of study
 By order of Schmitz, the Bull of the Woods.
 Two-and-fifty, they encamped in the bunkhouse,
 Under the watchful and tolerant eye
 Of Cheyney, Wit of the Lecture Rostrum
 And Woodsman Extraordinary.
 Nights of strife and days of study; knowledge gained in blooms and
 bugs;
 Scaling practice, timber-cruising; Aspen stands, reports on same;
 Under the tutelage of Masters:
 Rosendahl, Dawson, Curvature Brown; men of learning, all-wise
 In fundamentals, characteristics, habitats and sweeping curves.
 In the bunkhouse, by election,
 Noble Bousquet, wise and tactful, ruled the roost
 As Prexy of the Corporation.
 Next, Pinky Schroeder, Keeper of Accounts and Lord of the
 Exchequer,
 Handled the dough effectively, withal he was misplaced of same.
 Under the surveillant eye of the Great Roussopoulos
 Labored the Cooks and Kitchen Cops,
 Preparing food in quantum for the gulping Jack Pine heathen.
 (Enter a \$9.25 refund, dressed in purple ink.)



In the First Week of encampment
 Remember, too the Zoubek; whose voice, our operatives report,
 Wooed for Omar's Bahram Gur the love of his Sassanian mistresses.
 And when the Satellites of Hibbing, in awed admiration,
 Sang the praises of the Alley,
 Even Cheyney's soul was stirred.

Came the 19th of July.
 The multitude assembled, and in robes of deepest mourning,
 To lay to rest in honour the quiz, the bugs, and the paper-clips.
 As in days gone by, the old affiliates of the dear departed
 Were recalled in mimicry. Sjoquist, as Diogenes;
 Dockendorff, the dripping baby; and even Remus, as a hussy dressed;
 Intoned a common grief at the parting of the parted,
 And were comforted in tones both deep and grave
 By His Reverence, Miles, Bishop of Itasca.
 Of sin and sorrow the Corporation was purged
 By force, in the Doerr-infested waters of Itasca Lake.

But these events were but a prelude
 To weeks of toil on those God-forsake, bug-infested,
 Never-found and never-wanted; those misplaced, ivy-grown,
 Double-damned and doubly-damning, Forties.
 Full of mooing cowbirds and long-starved skeeters,
 Covered with impenetrable brush and heart-breaking bog,
 The Forties took their awful toll.
 Tales are told of Zoubek and Kissin, in delirium wandering,
 Looking hard on section 2 for the corner-stakes of Section 3.
 Tales are told, too of the lightning crew—Mueller, Doerr, and Schultz
 Overcoming Time itself to wrest from the Wilderness
 Their data scientific.

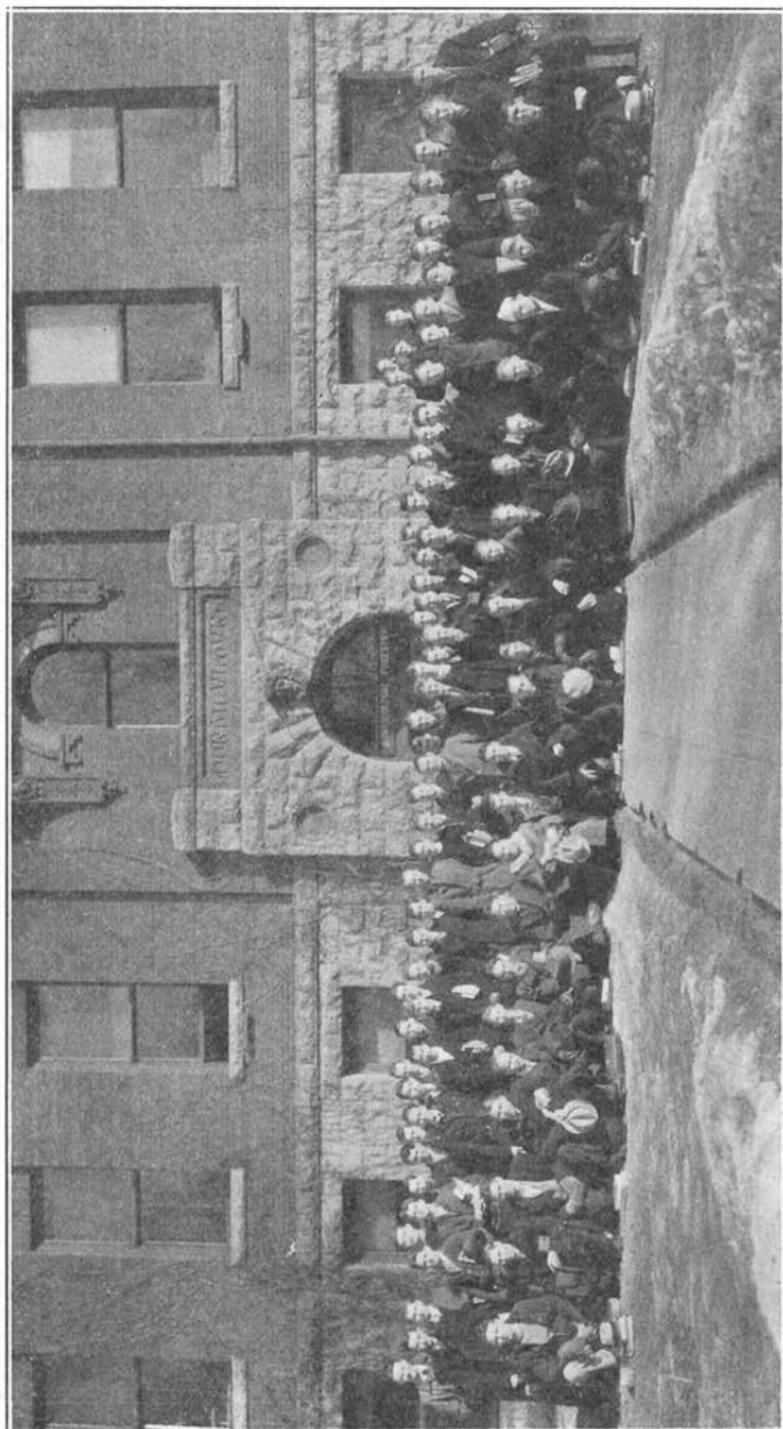
Came the day for final parting, for the Separation of the Ways.
 In the Bunkhouse, for the last farewells,
 The Corporation gathered round the festive board.
 It was the first Corporation Farewell Banquet; and may the custom
 prosper!
 Rosey spoke, and Brown, and Dawson, and the Corp. hung on their
 words.
 Bousquet called on Sterns and Schroeder,
 And Miles, too, for words more noise than wisdom.
 But fragrant cigars, and steak, and ice-cream,
 Made up and more for the speeches that had to be endured.
 The session broke up in song, and in a setting perfect
 For farewells, the final leave-taking was taken formally.
 Within a following day, the Corporation was but a memory.

A memory - - thoughts, recalled, of pleasant jaunts along the Bohall,
 And canoe trips down the winding lake.
 Thoughts of fights, without bitterness of spirit; of Bull-sessions,
 Held by the crackling fire; of friendly pipes smoked beneath the trees.
 Recall with a chuckle, Roussopoules' four blow-outs,
 And the Tire made of Rope and Rags;
 Recall, with laughter at their antics,
 The Logrunners: Koski, Sullwold, Bousquet, and Wentinck;
 Recall, with thoughts for tender heads and aching shins,
 The battles of the Alley;
 And let not Memory fail
 To keep fresh forever the Days of Itasca Park.
 Strife was rampant in the bunkhouse.
 Men of the Alley, bent on mischief,
 Raised Holy Hell with bunks in the upper region;
 And vexed sore the so-called men from up the stairs,
 Who on vengeance bent sallied in retaliation.
 Nine in the Alley, ten upstairs,
 Bunks were tipped, torn, and dampened;
 And the fireplace room saw carnage and damage unrestrained.
 Woolly Bill, hearing the uproar, called the Corp. in solemn conclave
 And, backed by Doc, he quoth:
 "Nevermore; or else——"

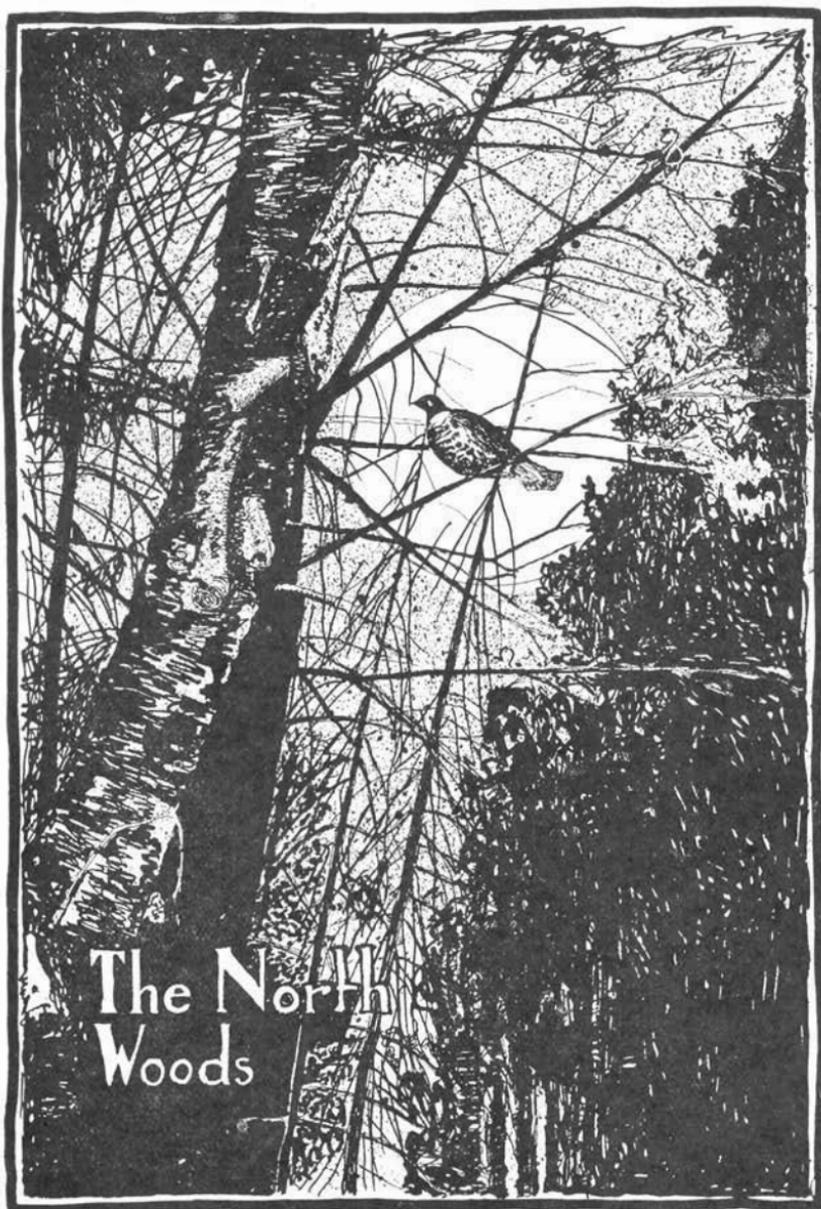
(enter the threat of a ten buck fine for such affairs thereafter)

Nor was society left unsampled. Combining business with pleasure,
 Sullwold, Dosen, Dolgard, Wentink:
 Ekstrom, and the ebullient Bush,
 Gathered DBH's at the Tourist Park,
 And in Bemidji reveled.
 The Jackpine savages, so-called,
 For culture longing, induced that genius Schultz (deceased)
 To render sleep-inducing lullabies. And Schultz, complying,
 Sought thereafter to bunk in the Bullpen.
 And how oft were those savage hairy breasts be-soothed
 With entrancing saxophony, rendered in discord
 By Bousquet and Gelbmann, real Men of Notes.
 And too, forsooth, what eye could long remain unwet
 Whose tears were wooed by Gregg, who burred pensive blues-tunes?

No words of mouth or look of eye can well express the spirit of
 the Corporation of '34. To their memory, instead is left a monument,
 on whose graceful lines, in etchings clear, is inscribed the roster of
 names whose greatness not even time can mar. This work of art,
 in solitary honor, hangs on the wall of the fireplace room. It will
 ever serve as an expression of the indomitable courage, keen resource-
 fulness, and infinite capacity of the Freshman Corporation of '34.



CLASS OF 1938



THE JUNIOR CORPORATION, 1934

BY ED HOLBROOK

THE spring of 1934 found the Juniors stepping out of the trials and worries of finals week into the expectant joys of the last and best of the field trips, the three months' sojourn at the Forestry Experiment Station at Cloquet.

It meant leaving behind the comforts and approaching spring of a large city to take up life in a spot where wood-burning stoves were still the vogue, where the snow still lay a good two feet deep in the woods, and where the mournful call of the barred owl in the dead of night replaced in our ears the humming drone of city traffic. Yet, rather than misgivings there was expectancy in our hearts and it seemed that we could not leave soon enough.

Joe Lorenz was elected as the man to hold the restraining hand over the bunk house, Morse was appointed to worry over financial matters, and Art Ferber landed the hard and thankless task of satisfying some forty odd lusty appetites. Art's was a difficult job where the compliments were few and the complaints many, yet he accomplished it in such a manner that the compliments far outnumbered the complaints, and we think that there is no time like the present to extend to him our congratulations for a job well done. Mrs. Stillwell applied her culinary art and all are ready to testify that it really is an art, and so Mrs. Stillwell, here's your orchid for the good brown gravy, mashed potatoes, and all the rest.

All manner of conveyances were utilized in reaching camp, cars, busses, and obliging truck drivers were among the more popular modes. "Algy" after much difficulty was finally bundled into Merz's car along with his steel trunk, fur coat, and flannel night cap. Chuck Savage started out in his own car but slippery roads and one or two other things delayed his arrival by a few days. If our memory has not failed us the first at camp were Ryberg, Carter, Romnes, and "Rosy" Nelson who came via Ryberg's car, their early arrival gave Milt a chance to display his culinary ability.

The first weeks were spent making one hundred per cent cruises, relocating corner posts, type and topography mapping, and an introduction to game management under the pedagogic scrutiny of Professors Allison and King. It would be amiss to pass this phase of our work without mentioning a few prize incidents which occurred as we struggled about with staff compass, Abney levels, and that ever dangerous weapon in the hands of an embryo forester—the double bitted ax.

Hawkinson and Rudser became a little too energetic one day while brushing out a line. The result was a very good logging road. It seems, also, that on this occasion it fell to Rudser's lot to be the main actor in a touching little woods drama. He was just dealing the last fatal blow with the ax to a perfectly good three inch Norway

pine which happened to fall in line with the compass sights, when Allison hove in sight. It would not be stretching the point too far to mention that Rudser was just a little bit embarrassed—at least that is the way "Hawk" tells it.

On a certain evening two persons were making their way back to camp through a tamarack swamp. One was carrying an ax, he looked fondly at its keen edges and then gazed hungrily at a dead tamarack that stood directly in front of him. Unable to withstand temptation any longer, he suddenly swung the ax. After some time had elapsed the tree finally fell and the awful truth revealed itself—it was not dead. We do not want to mention the ax man's name at this time, but if a stamped and self addressed envelope is sent to us, the name will be disclosed, T. S. Hansen, please note.

While making complete cruises of a "forty" it has generally been the custom to measure every tree, but according to "Bugs" Ellertson, Frank Walz was so proficient with the calipers that he could call the diameters off faster than the tally man could record them. Along this same line, we understand that Dundas was also a speed man with the aforementioned calipers.

It came at last, that day of days, the drawing of the hundred-sixty acre tracts. Many were the wails of despair when good old section thirty-six fell to the lot of the luckless crews. Just to be on the safe side it might be explained that section thirty-six happens to be the farthest from camp, and working on it means that lunch must be packed along. Among those drawing tracts in this shunned area were Joe Lorenz and "Dan Boone" Amidon—but then "Dan" did not mind so much as it was an excellent place to stalk grouse and although the snow shoe rabbits were a bit pugnacious, he felt quite safe with the trusty hunting knife strapped to his belt.

Many and varied were the experiences on these student tracts. Zeff and "Algy" not satisfied with a mere one hundred-sixty acres carried on intensive cruises on lands outside the station. Our personal nomination for the fastest workers were Lynch and Clark. They thought nothing of knocking off a couple of "fortys" a day. Parker and Sharp were also men who covered the ground quite rapidly. This is rather hard to understand because Sharp takes such "small" strides that one wonders how he makes progress at all. Stephens and Ilg had quite a time getting started in the morning as the former could never find the latter. Two quiet spoken gentlemen were Matson and Wiljamma, who spent many annoying days in the woods. It seems that the technical foremen from the C. C. C. camp were forever taking Wiljamma for a C. C. C. worker and continually reprimanding him for "gold bricking." While on the subject of C. C. C. boys we can't help recounting the sad experience of Bob Merz, a lad who had no noticeable affection for the boys of the Conservation Corps. It seems that one day he was forced to run a compass course near a group of them at work in the woods. Right in the middle of the crew a protruding root became entangled with his not-too-small

shoe packs. The next moment found Mr. Merz reclining full length upon the ground—a very trying situation to say the least. He reached to left and right to collect his scattered dignity and then continued on his way. However, the tale is not yet told, a few rods farther on he suddenly found that he had lost his compass, so back among the C. C. C. lads he must make his way to retrieve the missing compass. A very nerve racking day we agree.



As the days passed into weeks, the time arrived for the annual trip to the Chippewa National Forest. The journey was made in the station truck with Asp behind the wheel. The actual ride was anything but pleasant. A severe dust storm blackened the sky and also our faces. The seats in Allison's and Cheyney's cars were very desirable and needless to say, hard to obtain. We were quartered in an abandoned N. R. A. camp at Cut Foot Sioux Narrows, the least said about this "rest haven" the better. Trips were made around to the various cultural operations and experimental plots on the forests. Ranger Horton of the Cut Foot Sioux Ranger Station was the principal guide on these inspection tours. One of the high lights of the trip was Lorenz's illuminating and instructive discussion of the mill-strip acre method of timber estimating.

Back at camp after the short field trip to the Chippewa Forest found most of us burning the midnight oil to finish the regulation reports and starting the field work in silviculture under Professor Cheyney. This consisted chiefly of nursery practice, thinnings, and proposed reproduction cuttings for the various types found on the

station. In regard to thinnings we were told to forget what we learned in school and apply common sense methods that would favor the young Norway pine wherever it was found.

Parker, Morse, and Bill Webb were the game management enthusiasts. They worked all hours prying into the private lives of perfectly respectable birds and mammals—even to the extent of building blinds so as to better investigate the domestic affairs of ruffled grouse. However, in spite of this gentle ribbing, a more absorbing and interesting subject than game management can hardly be imagined.

As this narrative draws to a close some mention must be made of social activities and accomplishments. We had been told that Cloquet abounded with members of the gentler sex who went for foresters in a large way. However, sad as it is we must report that the above statement came very near being positively fallacious. It was either that we lacked the appeal of former groups or that the C. C. C. boys had established priority rights. In order to maintain our vanity at its normal level, we hope the latter deduction was the true one. In speaking of our lack of success with the local products it must be remembered that it applies only to the camp as a whole. Certain individuals did well by themselves—notably among these were Clark and Walz. These boys had interests in town which kept them occupied the majority of the evenings. If reports are to be believed Stephens also made commendable progress.

As spring became well advanced a number of fellows became very regular Church goers. Now far be it from us to suggest that there was any ulterior motive involved, but there was a rumor floating around about one especially attractive choir girl.

While no dances were given by the corporation, many of the fellows were quite faithful attendants at the town dances. As we recall, Ferber, Dundas, Stephens, Matson, and occasionally Morse and Webb were the ones most interested in these aforementioned affairs.

Mr. and Mrs. Hansen sponsored a weiner roast in our honor which was held at the picnic grounds. All enjoyed it very much, so here is thanks to the Hansens for their extreme thoughtfulness. Professor Cheyney, who is an ardent patron of classical music, entertained us at the function with renditions of his favorite numbers from the opera Carmen. An attempt was also made to induce Amidon to sing for us. George really has a remarkable singing voice, but try as we might, we could not persuade him to favor us with his songs.

Like all good things the stay at Cloquet had to draw to an end. The final few days were characterized by the burning of the midnight oil in a frantic effort to get work finished that should have been done weeks previous. But that is always the way in spite of many good resolutions to the contrary. It was with a real feeling of regret and with the realization that we had closed a chapter on one of the best

times of our lives, that we finally took leave of the familiar scenes that had in three short months become such a part of us.

Even now it is impossible for us to end our narrative, so with apologies to Winchell and O. O. McIntyre, we will attempt to column a few random highlights as they come to mind. It might be suitable to entitle it, *Things We Cannot Forget*. . . .

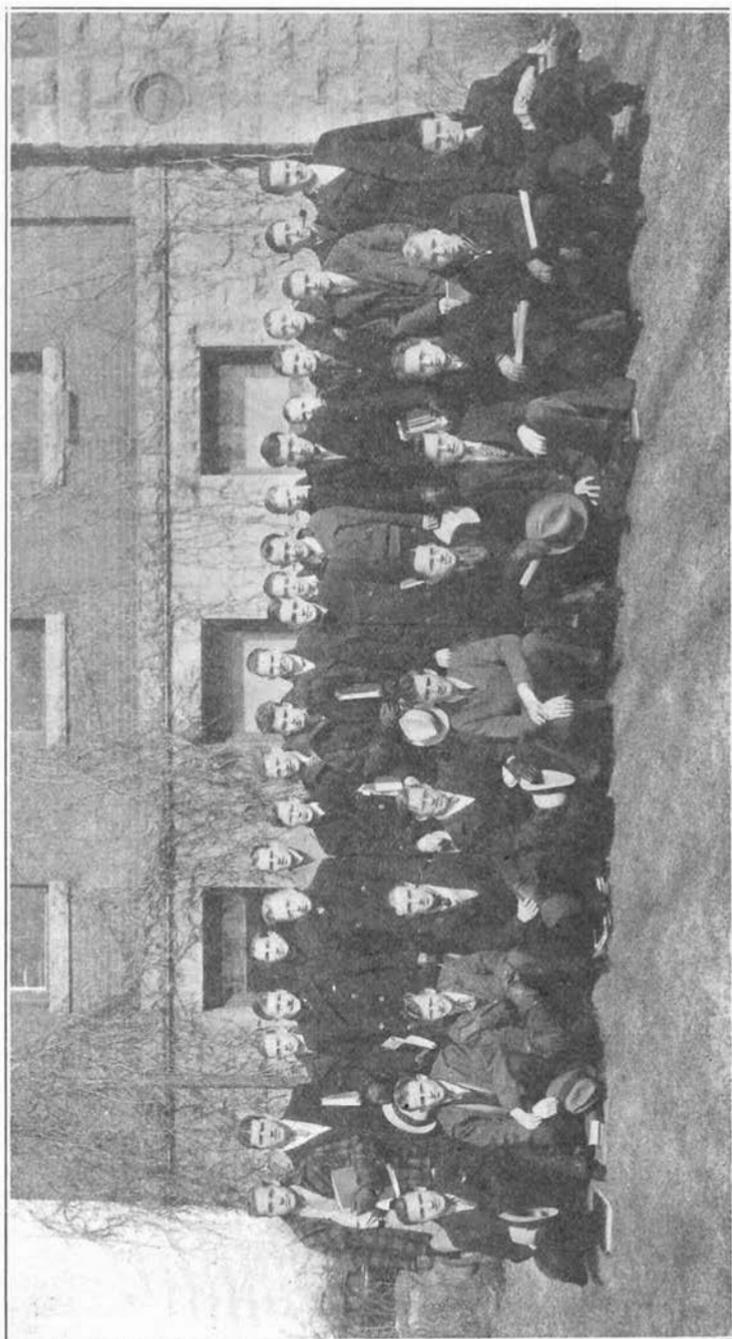
The kitten ball games in the evenings. . . Bob Sharp's lumber-jack undies. . . Savage's sweat suit. . . "Algy's" night gown and bed cap. . . Carter's manly beard. . . The look of complete happiness enveloping Merz's face on days the letter was due from that certain person. . . Stephen's after-breakfast shout of "Where's Ilge?". . . Asp calling "Pugsley" a dog gone —?— . . . Ellertson's ringing announcement that he had forgotten his —?— compass. . . The way Ferber caught fly balls in the outfield. . . A good combination for good work, Romnes and Nelson. . . Zeff pleading with "Algy" to settle down and try to get some work done. . . Ilg's shoe packs. . . Hawkinson's, "Now up in Mille Lacs". . . The attraction Minneapolis held for Feltman. . . Fritzell's and Erickson's hectic returns from Minneapolis. . . Clark's black hat. . . Lorenz's mill strip acre. . . Walz's pet names for Ellertson. . . Parker's pursuit of defenseless grouse . . . Morse and Webbs fanatical search for rare birds. . . A harmonious partnership, Mohl and Erson. . . Rudser's black sailor trousers. . . Wiljamma's trials with technical foremen. . . Matson's loyalty to some one in Eveleth. . . Art Sturtevant's consternation when he heard some had decided to wash their clothes about midnight—reason, Art's bunk was next to the wash room. . . Amidon's cornflake holding capacity. . . Dundas' belated case of measles. . . Pugsley's tales of feuds in Elimore. . . Our personal nomination for a hard worker, Herb Norman. . . Lynch's affection for the proprietor of the Tulip Chocolate Shop. . .

As we close, let us wish the best of luck to next year's Junior Corporation.

FAITH

*The trees forever as they grow,
Reach always toward the sunny sky
Undaunted, tho they seem to die
In winter. Can the wise trees know
That greening leaves shall follow snow?*

—WILLIAM B. ASHLEY



CLASS OF 1936

FORESTERS' DAY

THOR BERGH AND BERNIE PETERSON

A NEW tradition has come into being on the good old Farm Campus, a tradition which has been a long time coming, but which has at last arrived to find a warm spot in the hearts of all true Minnesota foresters. That tradition is Foresters' Day.

It was in the wilds of Minnesota, sometime during the summer of 1934, that the fertile minds of such young proteges of Bunyan as John Miles and William Major conceived of the idea of such a day, which was to be set aside, sans all duties of school, as synonymous to a "Roman Holiday." Upon the opening of school last fall, the burning desire of these instigators was slowly but surely instilled into the hearts and minds of their fellow foresters.

The ball which they had so laboriously begun to roll soon found plenty of willing pushers, and by the end of the fall quarter everything concerning the day had been discussed, debated, and decided upon, and a Foresters' Day Association had been formed.

In order that the perpetuation of Foresters' Day may be assured in years to come a Foresters' Day constitution was drawn up by Pete Brown and submitted to the Association for approval. Pete's experience in writing constitutions must have been very extensive, for his document was a masterpiece. It, in part, gave the definition and the purpose of the day, and we feel that these should be given word for word.

"Foresters' Day is a period set aside at the University of Minnesota for competition between students, faculty, and alumni of the Forestry College, in field events, use of field equipment, and good sportsmanship. It represents a special day of good fellowship at an old time woods lunch, a period of competition, and an evening of enjoyable recreation.

"The purpose of the day is to extend and strengthen the bonds of friendship between individuals and organizations within the college."

The gem of the Document declared Prof. Cheyney to be "father of the day."

With these impressive words in mind, the association began the actual work of making the day a roaring success, with Bill Major as boss of a group of talented and ambitious assistants.

John Miles, who was one of the originators, was made program chairman, and between him and Bill no one can say who was busier.

The publicity was taken care of by Roy Carter, and as a man after our own hearts, Roy was satisfied with nothing less than "front-page."

The decorating of the campus consisted mostly of Paul Bunyan himself, and a mighty man was Paul. Thor Bergh and his trusty

crew undertook the engineering feat of constructing him, and after much ado, he was at last placed square in front of the Foresters' stronghold, the old Horticulture Building. The tassel of his cap just tickled the window sill of Prof. Cheyney's window on the third floor, and it is said that Dad Cheyney often talked to Paul trying to get some assistance in the correcting of some 130 Freshman exam papers, but Paul always referred him to Johnny the ink slinger, and firmly stood his ground.

The decorating of the gym was an undertaking that only the stout heart of Howard "Pete" Brown could survive. And he survived it only too gloriously with the assistance of his co-chairman, Wally Jacobson.

The "Eats" were arranged for by that old connoisseur, Bill Webb, and the bean feed that he presented was something no one had ever seen or heard of before, except in pictures and story books.

The contests during the afternoon were in charge of Don Gregg. An ample cover of snow was needed for the events; such as log skidding and snow-shoe racing, and fortunately, snow was one thing there was plenty of. However the temperature roving down around minus 20° made things not too comfortable. The main event was a diamond-ball game on snow-shoes, and we have yet to find who won the game. The ball was lost umpty-da times and so were some of the boys. The rest of us laughed ourselves into hysterics. The high point man of the day was Koski, who teamed with Sulo Sihvonen to win the sawing contest, and who, together with Pete Brown and Jack Dundas, ran off with the log skidding honors.

The dance was the crowning event of the day. Urban Nelson was dance chairman, and the gym never before held such a gala crowd.

The "back-side wampus" is an animal here-to-fore unheard of, but Doug. Johnson, probably akin to Martin, found the creature somewhere in the depths of the "darkest," and had it on display at the dance. We doubt if the back-side wampus will ever be seen again. Its progress to the campus was reported and watched daily for weeks.

The exhibits, a departure into the "new", were of great interest to the crowd in the gym. They included displays ranging from shelterbelts to forest fires. Bob Clark and Earl Adams were responsible.

Art Hawkinson checked out mufflers and galoshes, and the big shekel man, Norman Nelson, played nurse to the finances, bills and tickets.

Bill Lauer hired the orchestra, and after all who could have done the job any better. Laura got the best for the least, says he.

As a result of this day of days, three plaques have been brought into existence:

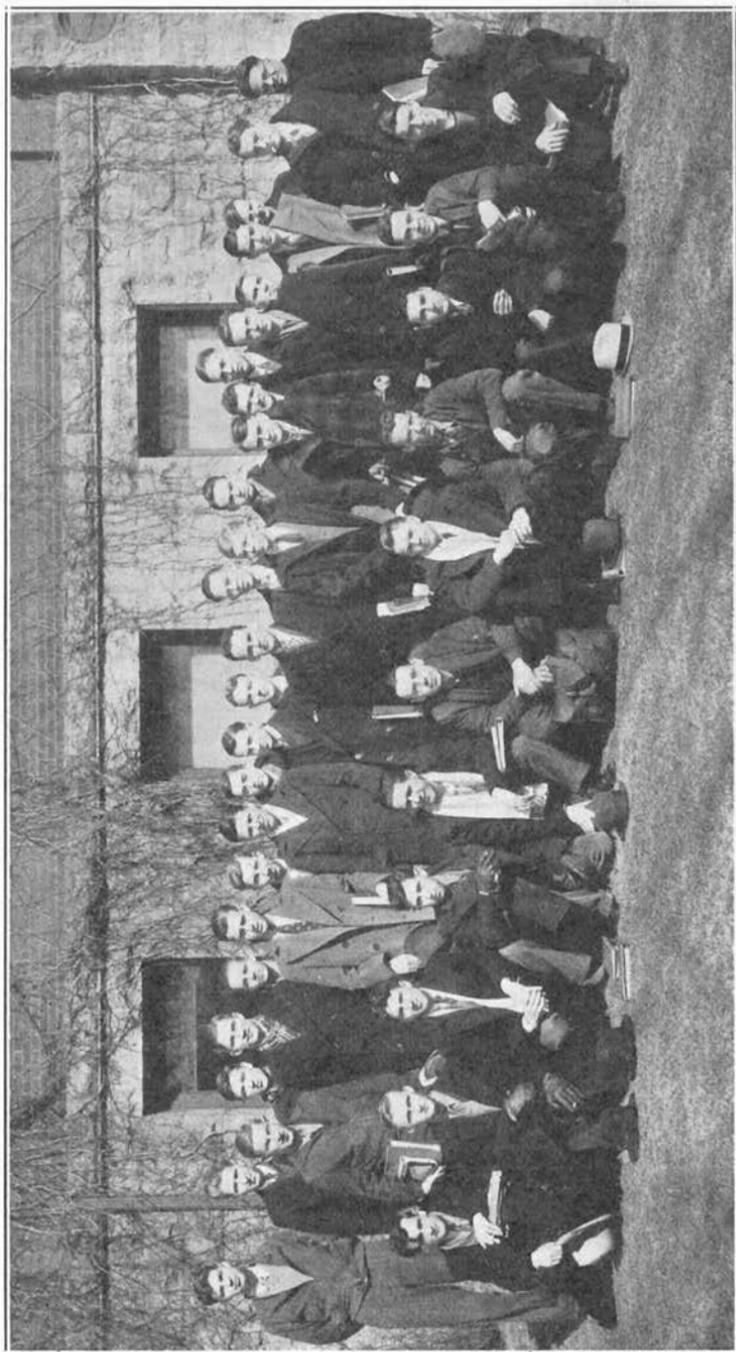
The "Son of Paul" plaque, which was donated by the Junior class of 1934, consists of a bronze cruiser book upon the pages of which shall be inscribed the name of the "Son of Paul." He is the man to whom the foresters shall extend the honor of being their choice of Minnesota's representative forester for that year. This year that honor went to William Major, and his name shall be the first upon the plaque.

The Union plaque, which was donated by the Union Board, shall have inscribed upon it the names of the committee chairman for Foresters' Day.

The "Great Log," a six foot log, slabbed and polished on the flat surface, shall display the name of the high point man in the field events of the afternoon of Foresters' Day. The man this year was Onni Koski.

We feel that Foresters' Day had a very auspicious beginning this year, and we, the Foresters of 1935, wish to express our confidence that the day will become an institution to be as firmly established as the school itself. May we take this opportunity to extend to all former students and alumni an invitation to attend our next Foresters' Day, and those in the years to come.

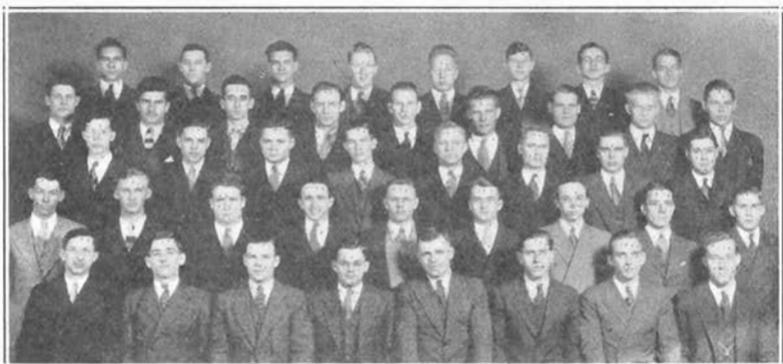




CLASS OF 1937



ORGANIZATIONS



TAU PHI DELTA

National Professional Forestry Fraternity

Founded at
UNIVERSITY OF WASHINGTON
1924

Local Chapter
BETA
1926

FACULTY MEMBERS

HENRY SCHMITZ
E. G. CHEYNEY
J. H. ALLISON
L. W. REES

M. E. DETERS
R. M. BROWN
FRANK KAUFERT
CLYDE CHRISTENSEN

RALPH LORENZ

ACTIVE MEMBERS

EARL ADAMS
WILHELM BECKERT
HOWARD BROWN
VINCENT BOUSQUET
DONALD CARSWELL
ROBERT CLARK
JACK DENSMORE
ROY DINGLE
JACK DUNDAS
KARL EKSTROM
HERBERT ERICKSON
ARTHUR FERBER
DONALD GREGG
ARTHUR HAWKINSON
JAMES HENDERSON
ONNI KOSKI
OSWALD KROGFOSS
B. FRANCIS KUKACHKA

DAN LAPPALA
PEDER LUND
DONALD LYNCH
WILLIAM MAJOR
CHESTER MCNELLY
JOHN MILES
HARRY MOSEBROOK
URBAN NELSON
LANSING PARKER
DUANE RAUENHORST
RAGNAR ROMNES
EVAN SANDERS
PETER SCHUFT
FRANK SHEARER
SULO SIHVONEN
ARTHUR STURTEVANT
RUSSEL WHEELER
LYMAN WILLIAMSON

PLEDGES

ADRIAN ALRICK
HERMAN ARLE
ROBERT DOSEN
ARNE ELO
JOHN GELBMAN
HILTON LEMKE
WARREN LIVENS

RAYMOND NERMAE
WALTER PAUL
ROBERT STEWART
RANDY STRATE
ARTHUR SWEET
DEL THORSEN
BEN TRAVERSE

ROBERT WAHLBERG



XI SIGMA PI

National Honorary Forestry Fraternity

Founded at

UNIVERSITY OF WASHINGTON
1908

Local Chapter

DELTA
1920

FACULTY MEMBERS

J. H. ALLISON
R. M. BROWN
E. G. CHEYNEY
FRANK KAUFERT
RALPH KING
RALPH LORENZ
T. S. HANSON

L. W. ORR
L. W. REES
HENRY SCHMITZ
RALPH DAWSON
CLYDE CHRISTENSEN
M. E. DETERS
C. O. ROSENDAHL

ASSOCIATE MEMBERS

G. GEVORKIANTZ

R. ZON

ACTIVE MEMBERS

ROY CARTER
JACK DENSMORE
ROY DINGLE
JOHN DOBIE
ARTHUR FERBER
RALPH GRAVES
HENRY HANSEN
ARTHUR HAWKINSON
ED HOLBROOK

RUSSELL JOHNSON
OSWALD KROGFOSS
RAYMOND MATSON
MARIUS MORSE
THOMAS MORTENSON
NORMAN NELSON
BERNIE PETERSON
RAGNAR ROMNES
RUSSEL ROSENDAHL

SULO SIHVONEN

"ALUMNOTES"

SOME of you are moving around rather fast and unless you write to the Peavy once in a while we have no record of where you are or what you are doing. To those who have given us advice, thanks. To those who have sent addresses and news, our appreciation. To those from whom we have not heard (nor received a buck), our reproaches and hopes that you will send some note out of the great beyond.

To those who don't like our alumni section, let us know about it. This section is especially for you, and your corrections and suggestions are welcomed, even demanded.

The Editors

- David A. Arrivee—1911
Transferred to Ottumwa, Iowa, from St. Anthony, Idaho, Feb. 11. "The Iowa Purchase Unit is one of seven approved by the National Forest Reservation Commission this spring. The most recent one is in North Dakota where I least expected to find another National Forest. The Iowa Unit is in the south-east corner of the state and extends west just north of the Missouri line to Ringold County. It is hardwood country, of course, rolling, and very much eroded. The plan is for the Forest Service to acquire as much as it can of the steeper land, timbered and cleared, and the worn out fields that should not have been cleared. The program will be erosion control, planting for products, recreation, and game management. So far no land has been purchased but we have crews in the field on examination work, classifying the land and estimating the timber so that appraisals may be made and options taken. I have been assigned to the Iowa P. U. as Supervisor."
- Parker O. Anderson—1921
Still Extension State Forester at the U.
- Waldemar R. Anderson—1929
Is on the Willamette National Forest near Signal, Oregon.
- Shirlee B. Andrews (Shirt)—1929
Shirt is with the Valentine Pole Company in St. Paul.
- Loren A. Aamot—1930
Forester with the Soil Erosion Service at LaCrosse, Wisconsin.
- Carl H. Anderson—1930
The Good Harbor Camp has him for its Technical Forester.
- Milton Anderson—1930
Technical Adviser, Day Lake Camp, Chippewa National Forest.
- Robert Anderson—1930
Is on a Forest Survey for the Lake States as Checker.
- Clarence E. Anderson—1931
Is with the U. S. Forest Service near Charleston, North Carolina.
- Frank H. Anderson—1931
Is a Technical Forester for the Gunflint Camp near Grand Marais, Minnesota.
- Harry Adams—1932
Has charge of Game Management for the U. S. Forest Service at Milwaukee, Wisconsin.
- Carl Roan Anderson—1932
Camp Superintendent of Camp Loretta on the Chequamegon National Forest.
- Frank Alexander—1933
Is working on erosion control and T. S. I. work for the Tennessee Valley Authority.
- William R. Ackernecht—1933
Technical Forester on the Chequamegon National Forest.
- Arnold O. Benson—1910
With the Forest Products Laboratory at Madison, Wisconsin.
- Donald R. Brewster—1910
Is now back in the Forest Service after 14 years in industrial work. He is Senior Code Examiner in charge of the Memphis Code Office, Region Eight, working on Southern Hardwoods with Hardwood Manufacturers.
- Harry Bartelt—1916
Assistant Scout Executive for St. Paul Region and one of the finest men we know.
- John D. Burnes—1917
With the Page Hill Company, Minneapolis.
- Paul Blatter—1928
Is with a lumber company on the West Coast.

Dan Bulfer—1930
Assistant Supervisor of the Ohio Purchase Unit, effective Feb. 11.

Paul Boettcher—1930
Is another forester who is roaming the Superior National Forest with that title of Technical Forester.

Stanley Buckman—1931
Is way down south in Louisville, Ky.

H. H. Chapman—1899
Is president of the Society of American Foresters and Professor at Yale University.

G. M. Conzet—1912
Minnesota State Forester, need we say more.

C. Homer Carlson—1927
Is Camp Superintendent of the Winnie Camp that is on the Chippewa National Forest.

Roy Chapman—1927
With the Southern Forest Experiment Station.

Ray Clement—1927
Is with the Minnesota State Forest Service.

Oliver Cook—1928
Minneapolis Flour City Paper Box Company has him on its payroll. Cook handles the printing of the Peavey.

Clyde Christensen—1929
Instructor in Forest Pathology and is held in deep regard by Embryo Foresters who say he has a tender heart when spring fever creeps up on him.

John Crew—1929
Is in a C. C. C. Camp up around Cass Lake according to the rumor which floated by this office. He is a Technical Foreman.

Dale Chapman—1929
Is Secretary-Manager of Chapman Chemical Treatments Company in New Orleans, Louisiana.

Robert Clough—1930
The army has him in one of its C. C. C. Camps at Superior National Forest as Camp Commander.

Clarence Chase—1930
Management plans of the U. S. Forest Service for Chippewa National Forest are in his charge.

Donald Campbell—1932
With the U. S. Forest Service and an E. C. W. Inspector, Cass Lake, Chippewa.

John Cann—1932
Wanders around on the Superior National Forest and answers to the title of Technical Foreman.

Conrad Carlson—1932
Assistant Ranger, Bena District, Chippewa.

H. Ray Cline—1932
With the Lake States Forest Experiment Station.

Harry Callinan—1933
Is with the U. S. Forest Service at Gunflint Camp near Grand Marais, Minnesota.

Gordon Carr—1933
Camp Superintendent, Sand Lake Camp, Chippewa National Forest.

Ralph H. Christopherson—1933
Is in the George Washington State Forest in Camp S-54 and is a technical Foreman.

Floyd Colburn—1934
Is with the Lake States Forest Experiment Station.

S. B. Detwiler—1906
In charge of foreign plant introduction, Bureau of Plant Industry.

Robert Deering—1910
Is with the U. S. Forest Service near San Francisco, California.

J. L. Deen—1927
Thanks for your worth while suggestions and corrections. He is the Assistant Professor of Silviculture at the Pennsylvania State College.

Merrill E. Deters—1928
"Ma" left his position as instructor at the U. to become Assistant Forester in the Department of Erosion Control at Washington, D. C.

We just heard of Deters engagement to Florence Bruce of Minneapolis.

Maurice Day—1931
Is with the Lake States Forest Experiment Station. Chief of Party.

Ernest Dahl—1931
District Blister Rust Control Agent, Duluth, Minn.

Frank Dolence—1931
Is another Technical Foreman on the Superior National Forest.

Weston Donehower—1931
Doing graduate work at Cornell U.

Thure Duvall—1933
Technical Foreman for the Sawhill Camp, Superior National Forest.

- Ambrose B. Everts—1926
Promoted to Associate Code Examiner with headquarters at the Regional Office in San Francisco, June 1. His work consists of inspecting the logging methods and cut over lands of 124 pine mill operators and in assisting in various Redwood and Pine studies that are to aid the lumbering industry in developing better logging and conservation practices.
- Clarence M. Evenson—1934
Technical Foreman at Camp Riley Creek, on the Chequamegon National Forest.
- Clement Flanagan—1925
Technical Forester on the Superior National Forest.
- George Freeman—1914
Sends his greetings to the gang. Good luck, George!
- W. H. Fischer—1928
"Am now in the Forest Service on the Sam Houston National Forest. Was transferred here from the Black Hills National Forest in South Dakota last July and am in charge of acquisition here. This Purchase Unit got under way last April and since that time approximately 750,000 acres have been examined and reported for purchase. Of this total almost 600,000 acres have been bought. A small sized forest purchased in less than a year. We feel that we are getting along right well. Will have another 150,000 purchased by July 1 if things work out the way we expect them to."
- Ellery Foster—1928
U. S. Forest Service at Washington Office. Becoming a writer for the "Journal of Forestry". If you don't believe it, see the January number for 1935.
- Milton H. Forder—1930
Camp Supervisor, Day Lake Camp, Chippewa National Forest.
- Victor Freeman—1930
Camp Supervisor, Schly Camp, Chippewa.
- Franklyn Frederickson—1931
Is on a forest survey for the Lake States. Chief of Party.
- Samuel Frisby—1931
Married last fall. Has been with the Indian Service since 1933.
- Donald Ferguson—1932
On the Chippewa National Forest. In charge of game management in the Supervisor's office.
- John Fry—1933
Working on soil erosion at LaCrosse Station, Wisconsin.
- Hyman Goldberg—1927
An assistant in the office of public relations in the Regional Office in Milwaukee.
- Joseph Grigg—1932
Technical Foreman for the Good Harbor Camp near Grand Marais, Minnesota.
- Albert Grant—1928
Is on the Kabetogama State Forest.
- David Gibney—1933
Is Camp Supervisor, Cut Foot Sioux, Chippewa. Married last summer. Already there are three in the family. Congrats, Dave!
- Carl Hamilton—1911
One of the higher-ups at Weyerhaeuser Lumber Company, St. Paul. Vice-President and Secretary.
- Julius V. Hofmann—1911
Is the head of the Forestry School at the University of North Carolina.
- S. G. Harris—1912
With Page and Hill Company, Minneapolis.
- Thorvald S. Hansen—1915
Still Supervisor Cloquet Station.
- Luther Hyde—1916
Forester in State Park Camp at Big Fork, Minnesota.
- George Hauser—1918
Still a football coach at the U.
- Gerald S. Horton—1927
Is the Forest Supervisor at Bedford, Indiana.
- Harry Harvey—1928
Montgomery Ward had his services.
- Bernard Huchenpahler—1931
The Appalachian Forest Experiment Station has him on its roster.
- Robley Hunt—1932
Technical Foreman in a C. C. C. Camp at Fairchild, Wisconsin.
- Ross W. Haven—1933
Is Technical Foreman in the Ghost Creek Camp located in the Chequamegon National Forest.
- Arthur Horn—1933
Technical Forester in an E. C. W. Camp in Minnesota.
- Ted M. Holt—1934
"Doing cultural work 'mongst the yellow pine stands of Southwestern Mississippi and liking it fine. Mississippi weather, when nice, is wonderful during the winter and when bad—it's H——!"

George Allan Herion—1934

Just married to Marion Hennely of Chicago. Congratulations. He is with the Wisconsin Conservation Department.

Leo A. Isaac—1920

Is with the Pacific Northwest Forest Experiment Station. Wrote an interesting article concerning Douglas Fir Trees in the "Journal of Forestry," January, 1935.

Edward Iverson—1933

Is an E. C. W. Inspector for the U. S. Forest Service in Michigan.

Lyle Jackson—1925

Employed by the Allegheny Forest Experiment Station in Pennsylvania.

Clayton Jackson—1932

Is one of the lucky few who are Technical Foresters in Minnesota.

J. Allan Jackson—1933

"Stub" is now married and earns the daily bread in the capacity of Assistant Ranger on the Flambeau District on the Chequamegon National Forest with headquarters at Park Falls, Wisconsin.

Irwin Johnson—1933

From Berkeley, Cal.

With the Range Experiment Station in California.

William W. Jolly—1933

Betty Anne Plunkett, '33, Ex., and Bill Jolly, '33 Ag., were married November 10 at St. Stephen's Church, Minneapolis. Tennessee Valley Authority has Bill working on forest land classification.

W. H. Kenety—1911

General Manager of the Northwest Paper Company in Cloquet.

John G. Kuenzel—1926

Left New Haven in 1931 and after spending some time on the Superior National Forest where he was engaged in acquisition. From there he was transferred to the staff of the Central States Forest Experiment Station on which was made possible by a Junior Forester rating.

"My assignment at this station has provided a varied and interesting experience. The Oak-Hickory, Beech-Maple, Oak-Pine, and Bottomland-Hardwood forests comprise 30 million acres of farm woodlands and an additional 10 million acres in more extensive holdings. A study of the growth and yield of planted stands provided a practical means of becoming

familiar with the glaciated portions of Ohio, Indiana, Illinois, Iowa, and Missouri, where most of the plantations are to be found on private land. A field study of the influence of live-stock on natural regeneration in the farmwoods was another field project that was followed up during the field season of 1931 and 1932.

The enlarged Forestry Program of 1933 provided funds for the development of Experimental Research areas, and these were chosen in representative sections of the Region. The Sylamore Branch Station embraces a 2800 acre tract in Stone County, Arkansas, on the Eastern Division of the Ozark National Forest was selected and developed by the writer during 1934, and is now maintained as a modern field laboratory for Forest Research. In addition to this tract of typical Ozark Forest the station has developed the Shawnee Forest on the Shawnee Purchase Unit in Southern Illinois, and has been provided with field station facilities by the State Forest Service in Ohio, and the Conservation Department in Indiana.

Since January it becomes possible to serve as Assistant Silviculturist assigned to problems in Silviculture and Upland Forest Management in the extensive forests of the unglaciated portion of the Central States."

Ernest Kolby—1927

Pacific Northwest Experiment Station, Portland, Oregon.

Carl G. Krueger—1927

On the Shoshone National Forest.

Clarence E. Knutson—1927

Promoted to Assistant Supervisor, and assigned to Illinois as Acting Supervisor.

Frank Kaufert—1928

Instructor in Forestry at U. of M.

Ray Knudson—1928

Principal Forest Ranger of Clark Unit, Missouri, was married to Miss Lillian Allers, at Pilot Knob, Missouri, on September 15, '34.

Henry Keehn—1931

Big butter and egg man, according to Lorenz.

C. J. Knoblaugh—1931

Assistant Ranger, Marcell District, Chippewa.

- Alexander Karkula—1932
Located in the Superior National Forest as Camp Superintendent for the Isabella Camp.
- Jack Kopitke—1932
Camp Supervisor, Mack Camp, Chippewa National Forest.
- Lauritz Krefting—1932
Technical Forester on Game Management in Gunflint District on the Superior National Forest.
- Sulo Koski—1933
Camp Supervisor, Cass Lake Camp, Chippewa National Forest.
- Charles Lewis—1910
We don't know what he's doing but he paid his buck.
- Ralph M. Lindgren—1926
In Division of Forest Pathology, Bureau of Plant Industry, Washington, D. C.
- Ralph Lorenz—1930
Instructor in Forestry, U. of M.
- Rolland Lorenz—1930
Uncle has him in Washington, D. C. in the Forest Pathology Department of the Bureau of Plant Industry as a consulting Forest Pathologist.
- Alan Laidlaw—1932
On soil erosion at LaCrosse, Wis.
- Charles Lazzaro—1932
On the Messaba Purchasing Unit.
- Ero Laitala—1933
Is on the Kabetogama State Forest.
- Lorenz Lindstrom—1933
Also a Technical Foreman, they seem to be rather rare.
- Joseph Lozinski—1933
Superior National Forest and is a Technical Forester.
- Walter Moore—1909
One of the old timers down in Ohio.
- John Moir—1913
Is Group Insurance Representative at the U. of M.
- Herbert Maturen—1924
With the Wisconsin State Conservation Department.
- Uno Martilla—1927
Is Camp Superintendent in the Mesaba Unit of the Superior National Forest.
- Elmer R. Marks—1929
Spends his time working on the National Timber Survey under the Northern Rocky Mountain Forest Experiment Station.
- Tenho Maki—1930
Down in New Orleans.
- Irving Moore—1932
The Chippewa National Forest knows him as Camp Superintendent.
- John McMillan—1933
With the Forest Products Laboratory at Madison, Wisconsin.
- Harry Miley—1933
Technical Adviser, Day Lake Camp, Chippewa.
- St. Elmo Nauman
Technical Foreman on the Tonto Rim National Forest, Arizona. Married and has a young son.
- Alfred Z. Nelson—1931
Transferred from Berkeley, California, to Washington, D. C.
- Edward Niles—1931
Technical Foreman, Cass Lake, Camp, Minnesota.
- Ted Neihaus—1933
Technical Foreman in a C. C. C. Camp in northern California.
- A. F. Oppel—1911
Is still with the Minnesota Forest Service and may be found at the State Office Building.
- Francis Ostrowski—1921
Is with the Waldorf Paper Company of St. Paul.
- Leslie W. Orr—1927
Has been transferred from the University Farm to Milwaukee. Is Forest Entomologist for Region Nine.
- George Olson—1930
Is working on management plan on the Norris Lake Forest Unit under the Tennessee Valley Authority.
- Raymond Osborne—1931
Is down at Marietta, Ohio, in the U. S. Forest Service as a Ranger.
- Stanley B. Olson—1932
Assistant Ranger on The Cut Foot Sioux, Chippewa National Forest.
- M. Y. Pillow—1924
Is in Madison, Wisconsin, working in the Forest Products Laboratory.
- Bill Peel—1925
"Dear Gang:
I have been located in Akron for only a few months having just returned from the West Indies where I have been doing experimental work with plantation rubber. It seems that forestry is coming into its own because rubber is now being cultivated according to the selection method we know so well in Silviculture. As you know when I left Minnesota I was employed

by the Firestone Co. and was sent to the West Coast of Africa where I remained for several years. Upon my return I was employed by another rubber company and sent to the West Indies where I did a tremendous amount of exploration work and later experimental work. I have been in South America where I studied *Hevea brasiliensis* growing in all its glory. I was recalled to the States and placed in sales work for a short time pending the passage of a definite policy by my employers. Now considering the possibilities of work with the Soil Erosion Service located at Urbana."

Is now married and has a son who will probably be a forester at that great and glorious institution, the U. of M.

Hugo Pawek—1930

Instructs the students at Duke University so that they may become members of that great profession of forestry.

Irwin Puphal—1930

Is working with the Northern Rocky Mountain Experiment Station on the economic survey in Region 1.

Lyall E. Peterson—1931

Is working under the Tennessee Valley Authority.

Thaddeus Parr—1929

Yale School of Forestry. Just married.

Donald Price—1933

Is up in the Chippewa National Forest. In the Supervisor's office in charge of camp ground beautification.

Ralph E. Rhoads—1916

Is with the Scott Paper Company of Chester, Pa.

Audray Roan—1929

Employed by the State Foresters.

Charley Randall—1931

Technical Foreman in Superior National Forest.

Milford Rigg—1931

Camp Superintendent in Arizona.

Clifford Risbrudt—1931

Yowsah! He is a Technical Foreman up in the Superior too.

Arthur Roe—1932

Is a Ranger on the Mesaba Unit of the Superior National Forest.

Russell Quick—1931

With the Lake States.

Paul St. Amandt—1931

May be found dashing hither and yon on the Superior National Forest and I am willing to bet bumping into

some of the countless technical foremen that inhabit that region according to reports received by the Peavey Office whose alumni staff occasionally hears from some alum who is kind enough to write.

Raymond Stevens—1923

Is an inspector for the U. S. Forest Service.

A. J. Streinz—1923

Associate Professor of Forestry at the University of Georgia. Teaches two courses in Forest Mensuration, one course in Forest Management, and the Senior Camp of twelve weeks in the spring term. This camp is held in the Osceola National Forest near Oluatee, Florida. The work at camp consists of field work in Naval Stores, Forest Administration, Forest Improvements, and the making of a Management Plan.

Nobel Shaddock—1926

Lawyer, Minneapolis.

Arthur Schneider—1931

Has been seen around the Superior National Forest.

Edgar Sheridan—1927

Is a forester engaged in work on the Rural Rehabilitation Program.

Bob St. Amandt—1932

In the Supervisor's office, Superior National Forest. An E. C. W. Cultural Inspector.

Paul St. Amandt—1932

In the Forest Supervisor's office, Chippewa National Forest.

George Seaberg—1932

Yes, he is at Minnesota's own Superior National Forest.

Howard B. Smith—1933

"Suddenly becoming active in the business of becoming engaged to be married."

Victor O. Sandberg—1933

"Still with Forest Pathology on this twig blight on *Pinus ponderosa*. This disease is still the problem it always has been since discovery.

Jerome Stoudt—1931

Technical Forester on the Superior National Forest.

George Seaberg—1932

Technical Forester too, near Grand Marais.

Orlo Soland—1932

Sent us his buck for the Peavey. Our pal!

Alice Stuart—1930

In Washington, D. C., helping Uncle.

Webster Sterba—1931
Practices forestry at Jay Cook Park.

Wayne Sword—1934
District Ranger, Marcell District, Chippewa.

Paul Seastrom—1934
Just married—He's in the Supervisor's office in Rhinelander, Wis.

Roy B. Thompson—1925
Is an Assistant Professor at the forest school in Iowa.

Ralph D. Thomas—1929
Is in Wisconsin.

Arvid Tesaker—1930
With the State E. C. W.

Albert Tofte—1932
Another Technical Forester.

Kenneth Unbehocker—1926
It was with regret that we were informed of the departure from this life of such a fine friend and fellow-forester.

J. Neil VanAlstine—1928
Transferred to the Allegheny National Forest to be District Ranger on the Southern District. The transfer is a promotion with an increase in salary. Yes, we got his buck.

Arthur F. Verrall—1927
Is in New Brunswick, N. J. with the Dutch Elm Disease Laboratory.

A. Wackerman—1921
Is Regional Lumber Code Inspector at New Orleans, La.

F. G. Whitney—1927
Has a position on the Supervisor's Staff (Assistant Forester) of the Whit-

man National Forest. Was transferred there from the Deschutes Forest in December.

David M. Williams—1929
With the U. S. Forest Service on the Superior National Forest.

Clarence Wiese—1930
Is on the Chequamegon National Forest in Wisconsin.

Richard Wittenkamp—1930
Employed by the State Forest Service of Madison, Wisconsin.

Ronald Woolery—1931
On a forest survey for the Lake States Experiment Station. Chief of Party on Forest Survey.

Fred Wangaard—1933
Syracuse U. Doing graduate work. Working for his Ph. D.

Leo E. Wiljamaa—1934
Technical Foreman of Gunflint Camp.

Phillip S. Watterberg—1934
Practicing forestry with the Lake States Forest Experiment Station.

R. A. Younggren—1934
Technical Foreman of Northern Light Camp S6. Doing liberation work and has charge of all the field work. Is in charge of five construction foreman, each having from thirty to forty men under them. Expecting a change when expansion takes place.

Karl Ziegler—1934
Also with the Lake States Forest Experiment Station.



ALUMNI DIRECTORY

The Alumni Directory is made up from the addresses that we have on hand. Any corrections or additions should be sent in to the PEAVEY. Addresses are left out in cases of graduates we know nothing of. If you can supply missing addresses do so.

The Editors

- David A. Arrivee, 1911, U. S. F. S., Ottumwa, Iowa.
 Donald Aldworth, 1914, 456 Fourth Ave., New York City.
 Parker O. Anderson, 1921, Extension State Forester, University Farm, St. Paul, Minn.
 Waldemar Anderson, 1929, Willamette National Forest, Signal, Ore.
 Alvin A. Anderson, 1922.
 Shirlee B. Andrews, 1929, 2231 Scudder Ave., St. Paul, Minn.
 Loren A. Aamot, 1930, Soil Erosion Service, La Crosse, Wisc.
 Carl H. Anderson, 1930, Technical Forester, Good Harbor Camp, Grand Marais, Minn.
 Milton Anderson, 1930, Day Lake Camp, Chippewa National Forest, Minnesota.
 Robert Anderson, 1930, U. S. Forest Survey, Lake States For. Exp't Sta., St. Paul, Minn.
 Clarence E. Anderson, 1931, U. S. F. S., Charleston, So. Carolina.
 Frank H. Anderson, 1931, Technical Forester, U. S. F. S., Gunflint Camp, Grand Marais, Minn.
 Harry Adams, 1932, U. S. F. S., Milwaukee, Wisc.
 Carl R. Anderson, 1932, Camp Superintendent, Camp Loretta, Chequamegon National Forest, Park Falls, Wisconsin.
 Frank Alexander, 1933, T. V. A., Forestry Dept., Arnstein Bldg., Knoxville, Tenn.
 Wm. R. Ackernacht, 1933.
 Norman M. Baker, 1910.
 Arnold O. Benson, 1910, Forest Products Laboratory, Madison, Wisc.
 James Bert Berry, 1910, Waverly Fertilizer Works, Waverly, Florida.
 Donald R. Brester, 1910, 349 Hawthorne St., Memphis, Tenn.
 Frank W. Beard, 1911.
 Clarence W. Bowen, 1911.
 Jas. R. Brownlie, 1911.
 Walter F. Beyer, 1912, Fire & Marine Insurance Co., New York City.
 Harvey D. Blodgett, 1912, Detroit Lakes, Minn.
 Ernest O. Buhler, 1913.
 Kenneth Braden, 1914.
 Harry Bartelt, 1916, 2091 Buford Ave., St. Paul, Minn.
 Ernest Bell, 1916, Deceased.
 Philip Blake, 1916.
 Martin Broderick, 1916.
 John D. Burnes, 1917, Page Hill Co., Minneapolis, Minn.
 Romaine Backus, 1919.
 Shirley C. Brayton, 1920, U. S. F. S., Chippewa Nat'l, Forest, Cass Lake, Minnesota.
 Sidney S. Burton, 1923.
 Harold Berggren, 1924.
 Harold J. Betzold, 1924.
 Philip H. Bryan, 1924, U. S. F. S., Russellville, Ark., Ozark Nat. For.
 Wilford Barrett, 1925.
 L. G. Baumhofer, 1925, Box 630, Couer d'Alene, Idaho.
 H. H. Blandin, 1925.
 Eugene G. Bjornstad, 1926.
 Rev. Arland C. Blage, 1926.
 Paul Blatter, 1928.
 Daniel Bulfer, 1930.
 Eynar Benson, 1930, 301 Fifth St. So., Virginia, Minn.
 Paul Boettcher, 1930, U. S. F. S., Superior Nat. For., Duluth, Minn.
 William Brener, 1930, Central State Nursery, Wisconsin Rapids, Wisc.
 Chas. Beardsley, 1931, Nevada City, California.
 Eldor Bjorgum, 1931.
 Stanley Buckman, 1931, 105 South Shawnee Terrace, Louisville, Ky.
 H. H. Chapman, 1899, Yale Forest School, New Haven, Conn.
 Harold Cuzner, 1905.
 William T. Cox, 1906, 2186 Doswell Ave., St. Paul, Minn.
 George deS. Canavarrro, 1907.
 Hugh B. Campbell, 1911.
 William R. Clymer, 1912.
 Grover M. Conzet, 1826 Berkeley Ave., St. Paul, Minn.; Minnesota State Forester, State Office Bldg., St. Paul, Minn.

- Thomas S. C. Cummings, 1914.
Jenner D. Chance, 1915.
Leo Crane, 1916.
Herbert S. Chesebrough, 1923.
Clifford Christopherson, 1924.
G. Proctor Cooper, 1925.
David A. Christianson, 1926.
John J. Coffey, 1926, 1731 Laurel Ave., St. Paul, Minn.
C. Homer Carlson, 1927, Camp Sup., Winnie Camp, Chippewa National Forest.
Roy A. Chapman, 1927, Southern Forest Exp. Sta., New Orleans, La.
Raymond Clement, 1927, 5244 39th Ave. So., Minneapolis, Minn.
Edgar Clark, 1928, Wood Conversion Co., Sioux Falls, So. Dak.
Oliver Cook, 1928, 3942 Queen Ave. No., Minneapolis, Minn.
Arthur Cooper, 1928.
Clyde Christiansen, 1929, University Farm, St. Paul, Minnesota.
John Crew, 1929, Technical Foreman, U. S. F. S., Cass Lake, Minnesota.
Dale Chapman, 1929, Chapman Chemical Treatment Co., Marquette Bldg., New Orleans, Louisiana.
Robert Clough, 1930, C. C. C. Camp 765, Superior National Forest, Schley, Minn.
Clarence Chase, 1930, U. S. F. S., Chippewa Nat'l For., Cass Lake, Minnesota.
Dorothea Cahill, 1932, Mrs. Harold Engstrom (see Engstrom).
Donald Campbell, 1932, U. S. F. S., Cass Lake, Minn.
John Cann, 1932, U. S. F. S., Cass Lake, Minn.
Conrad Carlson, 1932, Bena District, Chippewa Nat'l For., Minn.
H. Ray Cline, 1932, State Office Bldg., St. Paul, Minn.
Harry Callinan, 1933, U. S. F. S., Gunflint Camp, Grand Marias, Minn.
Gordon Carr, 1933, U. S. F. S., Sand Lake Camp, Chippewa National Forest, Minn.
Ralph Hane Christopherson, 1933, George Washington State Forest, Camp S-54, Coleraine, Minn.
Floyd Colburn, 1934, Lake States For. Exp. Sta., St. Paul, Minnesota.
S. B. Detwiler, 1906, Bureau of Plant Industry, Washington, D. C.
Robert Deering, 1910, U. S. F. S., Ferry Bldg., San Francisco, Calif.
Henry M. Dennis, 1915.
Frank M. Dunn, 1915, Rapid City, So. Dak., E. C. W. Camp., T. F.
Robert Danson, 1918.
Rev. Leland L. De Flon, 1918.
Daniel E. Dwyer, 1921.
Charles Dockstader, 1923.
J. Lee Deen, 1927, Dept. of Forestry, Penn. State College, State College, Pa.
E. P. Duclos, 1927, 2012 E. Newberry Blvd., Milwaukee, Wisconsin.
Merrill E. Deters, 1928, Asst. Forester, U. S. Soil Erosion Control, Washington, D. C.
Maurice Day, 1931, Lake States For. Exp. Sta., St. Paul, Minn.
Ernest Dahl, 1931, State Office Bldg., St. Paul, Minnesota.
Frank Dolence, 1931.
Weston Donehower, 1931, Cornell University, Ithaca, New York.
Thure Duvall, 1933, U. S. F. S., Sawbill Camp F-10, Tofte, Minn.
M. L. Erickson, 1903, Flandreau, So. Dak.
Walter Eisenach, 1911.
Andrew Erstad, 1913.
Leyden Erickson, 1921, National Lumber Mfg. Assoc., Washington, D. C.
Eugene T. Erickson, 1926.
Ambrose B. Everts, 1926, 2605 Haste St., Berkeley, Cal.
John J. Eaton, 1927, Bemis Bag Co., Cincinnati, Ohio.
Harold E. Engstrom, 1932, Black Hills National For., Nemo, S. Dak.
Clarence Mark Evenson, 1934, Camp Riley Creek, Chequamegon National Forest, Park Falls, Wisconsin.
George Freeman, 1914, 131 Hooper Ave., Toms River, New Jersey.
Carl Forsberg, 1917.
Clyde M. Frudden, 1920, Green, Iowa.
Thorbern Fegraeus, 1923, Deceased.
Gunnar Fenger, 1923, U. S. F. S., Milwaukee, Wisconsin.
Orcutt W. Frost, 1923, Northwest Paper Co., Cloquet, Minn.
Clement Flanagan, 1925.
William H. Fischer, 1928, U. S. F. S., Sam Houston Nat'l For., Lufkin, Texas.
Ellery Foster, 1928, U. S. F. S., Washington, D. C.
Milton H. Forder, 1930, Day Lake Camp F-34, Chippewa Nat'l For., Grand Rapids, Minn.
Victor Freeman, 1930, U. S. F. S., Camp Superintendent, Cass Lake, Minn.

- Franklyn Frederickson, 1931, Lake States For. Exp. Sta., St. Paul, Minn.
- Samuel Frisby, 1931, U. S. Indian Service, Redby, Minn.
- Donald Ferguson, 1932, Supervisor's Office, Chippewa National Forest, Cass Lake, Minn.
- John R. Fry, 1933, U. S. Soil Erosion Service, Coon Vally, Wis.
- George Forus, 1933, Camp S-63, C. C. C., Finland, Minn.
- James R. Gillis, 1911, State Office Building, St. Paul, Minn.
- Thos. A. Griffin, 1913.
- Samuel A. Graham, 1914, Ann Arbor, Michigan.
- Atle B. Gjerlow, 1916, C. C. Mengel Co., New Orleans, La.
- Rudolph H. Grabow, 1920, Nicollet Nat'l For., Rhinelander, Wis. (R9).
- Lloyd Grapp, 1921, Neenah, Wis.
- Chester Gay, 1924, Moose Lake, Minn.
- Joseph R. Gordon, 1924, Chippewa National Forest, Cass Lake, Minn.
- Hyman M. Goldberg, 1926, U. S. F. S., Milwaukee, Wis.
- Ernest George, 1928, Mandan, N. D.
- Albert Grant, 1928, Kabetogama State Forest, Camp S-52, Cusson, Minn.
- Donald Gray, 1928.
- Joseph Grigg, 1932, Good Harbor Camp, Grand Marais, Minn.
- David Gibney, 1933, Cut Foot Sioux Camp, Chippewa National Forest, Cass Lake, Minn.
- Carl L. Hamilton, 1911, Weyerhaeuser Lumber Co., St. Paul, Minn.
- Adolph G. Hauge, 1911.
- Julius V. Hofmann, 1911, University of N. C., Raleigh, N. C.
- S. G. Harris, 1912, Page and Hill Co., Minneapolis, Minn.
- Arthur W. Hodgman, 1912.
- Edwin Howard Hall, 1913.
- Robert Haworth, 1913.
- Norman Henchel, 1913.
- Thorvald S. Hansen, 1915, Cloquet For. Exp. Sta., Cloquet, Minn.
- Carl J. Hawkinson, 1915.
- Luther Hyde, 1916, T. F., C. C. C. Camp, Big Fork, Minn.
- George Hauser, 1916, Athletic Dept., University of Minn., Minneapolis, Minn.
- Hubert Hamilton, 1923.
- Walter G. Hoar, 1924, Beaverhead, Dillon, Montana.
- Leslie Henry, 1926, Cochetopa Nat'l For., Carnero Dist., La Carita, Col.
- Harry Henry Hyatt, 1926.
- Charles H. Hartupey, 1927.
- William K. Himebaugh, 1927, Fort Snelling, Minnesota.
- Ralph E. Holmberg, 1927.
- Gerald S. Horton, 1927, Forest Supervisor, Bedford, Indiana.
- George Halvorson, 1928.
- Harry Harvey, 1928.
- Jerome Homola, 1928, Chippewa Nat. Forest, Cass Lake, Minn.
- William Hallin, 1929, California Exp. Sta., Berkeley, Cal.
- Bernard Huckenpahler, 1931, App. For. Exp. Sta., Federal Bldg., Asheville, So. Car.
- Robley Hunt, 1931, T. F., C. C. C. Camp, Superior National Forest, Tofte, Minnesota.
- Ross Haven, 1933, T. F., Ghost Creek Camp, Chequamegon Nat. For., Park Falls, Wis.
- Leon Hill, 1933.
- Arthur Horn, 1933.
- Ted M. Holt, 1934, Camp F-14, Gloster, Miss.
- George Allan Herion, 1934, Box 555, Rhinelander, Wis.
- Leo A. Isaac, 1920, Pacific Northwest For. Exp. Sta., 514 Lewis Bldg., Portland, Oregon.
- Marshall Ilstrup, 1925, Deceased.
- Wilbur Isaacson, 1932.
- Edward Iverson, 1933, E. C. W. Inspector, U. S. F. S., Manistee, Mich.
- Barclay Infantino, 1934, U. S. F. S., Mio, Mich.
- Norman G. Jacobson, 1910.
- Oscar Johnson, 1916.
- Victor S. Jensen, 1925, Northeast Experiment Station, Amherst, Mass.
- Lyle Jackson, 1925, Allegheny For. Exp. Sta., Philadelphia, Penn.
- George R. Janssen, 1926.
- Harvey Janelle, 1931, U. S. F. S., Sawbill Camp, Tofte, Minn.
- Clayton Jackson, 1932, T. F., Dunning Lake Camp F-16, Superior Nat. For., Ely, Minn.
- Harlen Johnson, 1933.
- J. Allen Jackson, 1933, Chequamegon Nat. Forest, Park Falls, Wis.
- William Jolly, 1933, T. V. A., Arnstein Bldg., Knoxville, Tenn.
- Herman G. Krauch, 1910, U. S. F. S., Albuquerque, N. M.
- William H. Kenety, 1911, Northwest Paper Co., Cloquet, Minn.
- Arnold Kaner, 1926.
- David A. Kribs, 1924, Mont Alto, Pa.
- H. B. Kelsey, 1926.
- John Kuenzel, 1926, Central For. Exp. Sta., Columbus, Ohio.

- Clifford Knutson, 1927.
 Ernest Kolbe, 1927, Pacific Northwest For. Exp. Sta., U. S. F. S., Federal Bldg., Portland, Oregon.
 Carl G. Krueger, 1927, Shoshone Nat. For., Cody, Wyoming.
 Clarence E. Knutson, 1927, Shawnee Nat. For., Illinois.
 Dayton Kirkham, 1928, U. S. F. S., Big Horn, Wyo.
 Frank Kaufert, 1928, Division of Forestry, University Farm, St. Paul, Minn.
 Ray Knudson, 1928, U. S. F. S., Missouri Pur. Unit, Steelville, Mo.
 Henry Keehn, 1931, Lewisville, Minn.
 Charles J. Knoblauch, 1931, Marcell District, Chippewa Nat. For., Cass Lake, Minn.
 Alexander Karkula, 1932, Camp Sup., Isabella Camp, Superior Nat. For., Duluth, Minn.
 John Kopitke, 1932, Mack Lake Camp, Chippewa Nat. For., Cass Lake, Minn.
 Lauritz Krefting, 1932, T. F., Gunflint District, Grand Marais, Minnesota.
 Emil Kukachka, 1933, Cloquet Valley State Forest, Camp S-51, Brimson, Minnesota.
 Sulo Koski, 1933, Camp Sup., Cass Lake Camp, Chippewa Nat. For., Cass Lake, Minn.
 Charles L. Lewis, 1910, 1255 Oxford Street, St. Paul, Minn.
 George Lindeberg, 1914.
 L. J. Leffelman, 1924, Lexington, North Carolina.
 Victor A. Lynne, 1924.
 Wickliffe Litchfield, 1925, U. S. F. S., Portland, Oregon.
 Ralph M. Lindgren, 1926, Division of For. Path., Bureau of Plant Industry, Washington, D. C.
 Herbert Lystrup, 1926.
 Edward L. Lawson, 1927, 3211 E. 53rd St., Minneapolis, Minn., Lake States For. Exp. Sta., St. Paul, Minn.
 George Leaf, 1927.
 Thomas Lotti, 1927, U. S. F. S., Manistee, Mich.
 Gustaf Limstrom, 1928, Forest Ranger, U. S. F. S., Mio, Mich.
 James Light, 1929.
 Ralph Lorenz, 1930, Division of Forestry, University Farm, St. Paul, Minn.
 Rolland Lorenz, 1930, Office of For. Path., Bureau of Plant Industry, Washington, D. C.
 Carl L. Lidberg, 1931.
 Alan Laidlaw, 1932, U. S. Soil Erosion Service, La Crosse, Wis.
 Charles Lazzaro, 1932, Sand Lake Camp, U. S. F. S., Virginia, Minn.
 Ero Laitala, 1933, Kabetogama State Forest, Camp S-81, Ray, Minn.
 Lorenz Lindstrom, 1933, T. F., Superior National Forest, Isabella, Minn.
 Joseph Lozinski, 1933.
 Walter M. Moore, 1909, Box 234, Osborn, Ohio.
 Dean W. Martin, 1911.
 John Moir, 1913, Administration Bldg., University of Minn., Minneapolis, Minn.
 A. T. Mueller, 1914.
 Otis McCreery, 1923, Administration Bldg., University of Minnesota, Minneapolis, Minn.
 Herbert Maturen, 1924, Wisconsin State Conservation Dept., Madison, Wis.
 William Maughan, 1925, Duke University, Durham, N. C.
 Ronald Manuel, 1926.
 Uno Martilla, 1927, Camp Sup., Mesaba Unit, Superior Nat. For., Virginia, Minnesota.
 Elmer R. Marks, 1929, Rocky Mt. Exp. Sta., Missoula, Montana.
 Donald McQuoid, 1930, E. C. W. Camp Superintendent, Wooten, Ky.
 Tenho Maki, 1930, Room 600, Stern Bldg., 348 Baronne St., New Orleans, La.
 Harold Mitchell, 1930, Harvard Forest, Petersham, Mass.
 Lee K. Moore, 1931, Northern Light Camp, Grand Marais, Minn.
 Arthur Mayer, 1932.
 Irving Moore, 1932, Squaw Lake Camp F-36, Chippewa Nat. For., Cass Lake, Minn.
 Leonard Moore, Chippewa Nat. Forest, Cass Lake, Minn.
 John McMillan, 1933, Forest Products Laboratory, Madison, Wis.
 Harry Miley, 1933, Day Lake Camp, Chippewa National For., Cass Lake, Minn.
 Sigvald Norman, 1912, Page and Hill Co., Minneapolis, Minn.
 Harry D. Nuffer, 1915.
 Ralph M. Nelson, 1922, Appalachian For. Exp. Sta., Asheville, N. C.
 Arthur L. Nelson, 1923, U. S. F. S. Regional Office, Atlanta, Georgia.

- Albin C. Nelson, 1924, Blister Rust Control, Dept. of Conservation, 338 State Office Bldg., St. Paul, Minn.
- Stanley C. Nelson, 1927.
- Emil Norgarden, 1928, Mary's Creek C. C. Camp, Willamette Nat. For., Detroit, Oregon.
- John Neetzel, 1929, Lake States For. Exp. Sta., U. Farm, St. Paul, Minn.
- Henry Q. Nelson, 1929, 2225 4th St. West, Duluth, Minn., T. F. Temperance Camp, U. S. F. S., Tofte, Minn.
- Alfred Z. Nelson, 1931, U. S. F. S., Atlantic Bldg., Washington, D. C.
- Edward Niles, 1931, Cass Lake Camp, Chippewa National Forest, Cass Lake, Minn.
- Elmo Nauman, 1933.
- Theodore Niehaus, 1933, Sassen Nat. For., Halls Flat, Cal.
- Ralph William Nelson, 1934.
- George Raymond Orr, 1909, Deceased.
- A. F. Oppel, 1911, State Office Bldg., St. Paul, Minnesota.
- John Elliott Orr, 1912.
- Francis Ostrowski, 1921, Waldorf Paper Co., St. Paul, Minn.
- Harold Ostergaard, 1924, 1547 N. Pascal Ave., St. Paul, Minn.
- Leslie W. Orr, 1927, U. S. F. S., Milwaukee, Wis.
- George Olson, 1930, T. V. A., For Div., Arnstein Bldg., Knoxville, Tenn.
- Clarence Olson, 1931.
- Raymond Osborne, 1931, U. S. F. S., Marietta, Ohio. Ranger.
- Herman Olson, 1932, U. S. F. S., Superior Nat. For., Duluth, Minn.
- Stanley B. Olson, 1932, Chippewa Nat. Forest, Cass Lake, Minn.
- William R. Pearce, 1912, Faribault, Minn.
- Herman N. Pettibone, 1912.
- Earl Pendergast, 1918.
- Rev. Paul R. Palmer, 1920, Lake City, Minn.
- Hubert Person, 1921, Cal. Exp. Sta., Univ. of Cal., Berkeley, Calif.
- E. E. Probstfield, 1923.
- Maxon Y. Pillow, 1924, Forest Pro. Laboratory, Madison, Wisconsin.
- William Peel, 1925.
- Stanley Piras, 1928.
- Thaddeus Parr, 1929.
- Harry A. Peterson, 1929, Bell Telephone Co., Minneapolis, Minn.
- John Porisch, 1930, Chippewa National Forest.
- Hugo Pawek, 1930.
- Irwin Pupal, 1930, Rocky Mountain Forest and Range Experiment Station, Missoula, Mont.
- Lyall Peterson, 1931, Tennessee Valley Authority, Arnstein Bldg., Knoxville, Tenn.
- George Plant, 1933, 1477 Edmund St., St. Paul, Minn.
- Donald Price, 1933, Chippewa National Forest, U. S. F. S., Cass Lake, Minn.
- Russell Quick, 1931, Lake States Forest Experiment Station, St. Paul, Minn.
- F. I. Rockwell, 1906.
- David Renshaw, 1913, Deceased.
- Ernest Rogers, 1913, Deceased.
- Stanley Ringold, 1914, 32 E. 4th St., St. Paul, Minn.
- Logan Rose, 1914, Mankato, Minn.
- Ralph E. Rhoads, 1916, Scott Paper Co., Chester, Pa.
- Wm. A. Ritchie, 1924.
- Chas. Racey, 1925.
- Harold Rathbun, 1928, National Pole and Treating Co., Minneapolis, Minn.
- Winfield Robinson, 1928.
- Paul Rudolf, 1928, Lake States Forest Experiment Station.
- Lawrence Ritter, 1929, Minnesota State Forest Service, State Office Bldg., St. Paul, Minn. In charge of blister rust control in the state.
- Audray Roan, 1929, Gamble Store, Rochester, Minn.
- William Royer, 1930, Mt. Hood National Forest, Rhododendron, Ore.
- Charles Randall, 1931, U. S. F. S., Tofte, Minn.
- Milford Rigg, 1931, Camp Superintendent, Camp F-34 A, Cove Creek, Arizona.
- Clifford Risbrudt, 1931, T. F., Birch Lake Camp, Ely, Minn., Superior National Forest.
- Arthur Roe, 1932, Ranger, Mesaba Unit, Superior National Forest.
- Walter Ridlington, 1933, Red Lake Indian Reservation, Minn.
- John Rundgren, 1933, Camp S-51, Noble, Ky., Cumberland National Forest.
- Irving Hedlund Rutven, 1934.
- Frederick E. Spellerberg, 1912, Deceased.
- J. A. Stevenson, 1912.
- Oliver Savre, 1913.
- Charles Simpson, 1913, Couer d'Alene National Forest, Couer d'Alene, Idaho.

- Adrian St. Marie, 1914.
 Harold W. Spink, 1914.
 Paul C. Sischo, 1915.
 E. R. Schwartz, 1916.
 Herbert Swanson, 1918, Appleton, Wisconsin.
 Walter W. Schmid, 1920, Page and Hill Co., New York.
 John A. Sheehan, 1922.
 Raymond Stevens, 1923, Inspector, U. S. F. S., Milwaukee, Wis.
 Augustine Streinz, 1923, Louisiana State U. Professor of Forestry.
 Clarence W. Sunday, 1923.
 Ernest F. Sheffield, 1924.
 Nobel Shadduck, 1926, 520 E. 31st St., Minneapolis, Minn.
 George Sargent, 1926, Sierra National Forest, Northfork, Cal.
 Edgar Sheridan, 1927, Forester, Rural Rehabilitation Program, University Farm, St. Paul, Minn.
 H. J. Swanbeck, 1927.
 Harry Strimling, 1928.
 Paul St. Amant, 1931, U. S. F. S., Cass Lake, Minn.
 Arthur Schneider, 1931, E. C. W. Cultural inspector, Superior National Forest, Ely, Minn.
 Webster Sterba, 1931, Jay Cook Park, Carleton, Minn.
 Donald M. Stewart, 1931, Blister rust control, Minn. State Forest Service, 338 State Office Bldg.
 Jerome Stoudt, 1931, U. S. F. S., Ely, Minn.
 Robert St. Amant, 1932, U. S. F. S., Federal Bldg., Duluth, Minn.
 George Seaberg, 1932, T. F. Poplar Lake Camp, Superior National Forest, Grand Marais, Minn.
 Orlo Soland, 1932, 1032 E. 1st. St., Duluth, Minn.
 Dale R. Sanders, 1932, Rhinelander, Wis.
 Harry Stritman, 1932.
 Victor Sandberg, 1933, 416 E. Carlton, Prescott, Arizona.
 Roland Schaar, 1933.
 Howard B. Smith, 1933, U. S. F. S., Flagstaff, Arizona.
 Henry Stoehr, 1933, Lake States Forest Experiment Station, St. Paul, Minn.
 Alice Stuart, 1933, U. S. F. S., Washington, D. C.
 Rueben G. Settergren, 1934, U. S. F. S., Duluth, Minn.
 Charles C. Savage, 1934.
 Clifford Wayne Sword, 1934, Marcell District, Chippewa National Forest, Cass Lake, Minn.
 Paul N. Seastrom, 1934, U. S. F. S., Rhinelander, Wis.
 Dillon P. Tierney, 1906, Castle Rock, Minn.
 Paul Tobin, 1913, Lewiston, Idaho.
 J. R. Torgim, 1914, Deceased.
 Lauren S. Tuttle, 1917, 5325 2nd Ave. So., Minneapolis, Minn.
 Burton Thayer, 1922, 2400 Bourne Ave., St. Paul, Minnesota.
 Floyd Tilden, 1923, Lake Itasca, Minn.
 Roy B. Thomson, 1925, Forest School, Ames, Iowa.
 Paul E. Trench, 1927.
 Ralph D. Thomas, 1929, Newald, Wisconsin.
 Ray Tilden, 1929, 253 Louis Street, St. Paul, Minn. (home address).
 Arvid Tesaker, 1930.
 Albert Tofte, 1932, T. F., Poplar Lake Camp, Grand Marais, Minn.
 Harold Tyak, 1932.
 Clarence L. Underwood, 1910.
 William Underwood, 1911, Deceased.
 Nelson Upton, 1924, Deschutes Nat. For., Bend, Oregon.
 Kenneth Umbehocker, 1926, Deceased.
 Arthur Verrall, 1927, Dutch Elm Disease Laboratory, New Brunswick, New Jersey.
 J. Neil Van Alstine, 1928, U. S. F. S., New Castle, Virginia.
 Henry Weber, 1911, State Office Bldg., St. Paul, Minn.
 Donald Williams, 1911.
 Robert Wilson, 1912.
 G. H. Wiggen, 1913, Quicksand, Ky.
 Hiram E. Wyman, 1915.
 A. E. Wackerman, 1921, Regional Lumber Code Inspector, New Orleans, La.
 Arthur L. Whiton, 1921, Chicago Wire and Lumber Co., Chicago, Ill.
 Carl Weswig, 1924, U. S. F. S., Chippewa Nat. Forest, Cass Lake, Minn.
 Walter Wilson, 1925.
 Paul Kenneth Watts, 1926.
 Gale M. Witchchurch, 1926.
 Fenton G. Whitney, 1927, Whitman Nat. For., Baker, Oregon.
 Earl G. Wilson, 1927, Chippewa Nat. Forest, Cass Lake, Minn.
 Benjamin Whitehill, 1928, Washakie Nat'l For., Dunior, Wyo.

- Adolph K. Wogenson, 1929.
 David M. Williams, 1929, U. S. F. S., Duluth, Minn., Superior Nat. For.
 Clarence Wiese, 1930, Chequamegon Nat. For., Wisconsin.
 Richard Wittenkamp, 1930, State Forest Service, Madison, Wis.
 Reinold Woodford, 1930.
 Ernest Wellberg, 1931, Cascade Camp, U. S. F. S., Grand Marais, Minn.
 Ronald Woolery, 1931, Lake States For. Exp. Sta., For. Survey, St. Paul, Minn.
 Roy Wagner, 1932.
 Fred Wangaard, 1933, 1519 Elliot Ave. So., Minneapolis, Minn.
 Leo Edwin Wiljamaa, 1934, Gunflint Camp F-5, Grand Marais, Minn.
 Philip Watterberg, 1934, Lake States For. Exp. Sta., U. Farm, St. Paul, Minn.
 Paul Young, 1911.
 P. W. Youngers, 1923.
 E. A. Zierke, 1926, 2074 Princeton Ave., St. Paul, Minn.
 Walter M. Zillgitt, 1932.
 Karl Ziegler, 1934, Lake States For. Exp. Sta., U. Farm, St. Paul, Minn.

LAST MINUTE NEWS

- J. B. Berry, 1910, writes "for the past two years I have been citriologist and soil specialist for the Waverly Citrus Growers Association, of which the Waverly Fertilizer Works is a department." He has 4000 acres of citrus to supervise, the association packing half a million boxes a year and the Fertilizer Works handling 12,000 tons a year. They are pioneers in the field of producing fruit to serve definite dietary needs. For example, they have doubled the Ca content of their fruit simply by changing the reaction of the soil from a ph of 4.5 to 5.5 or 6.0. "Whenever any of the fellows are in Florida be sure to stop-by; the latch string is out, and we'll show you some real pleasure in living." Thanks for the letter Berry.
- E. P. Duclos, 1927, "still with the National Park Service in charge of the Procurement Office, supervising six E. C. W. State Park Camps, located in Milwaukee and Kenosha counties, Wis. . . . doing some very fine work with C. C. C. labor on flood control, soil erosion, and park recreation facilities. These park facilities are providing recreational use to hundreds of thousands of people residing in southeastern Wisconsin." . . . from a letter we just received . . . good work Duclos.
- J. N. Van Alstine, 1928, writes that he has been transferred from the Southern District of the Allegheny Nat. Forest in Penn. to the new Mountain Lake National Forest of Virginia, as District Ranger.
- W. H. Brener, 1930, is the Nursery Superintendent of the Central State Nursery in Wisconsin Rapids, Wis.
- Danny Bulfer, 1930, has been made Assistant Supervisor of the Iowa Purchase Project with headquarters at Ottumwa, Iowa.
- Jack Englesby, 1932, Game Manager on the Ottawa National Forest. Address: U. S. F. S., Ironwood, Michigan.
- Arthur Hawkinson, 1935, Technical Foreman, Chippewa Nat. Forest, Cass Lake, Minnesota.
- Robert Clark, 1935, Technical Foreman, Side Lake Camp, Side Lake, Minn.
- Norman Nelson, 1935, Park Falls, Wisconsin.
- C. W. Corson, 1927. Drop a line—"Cook."

STUDENTS ENROLLED IN FORESTRY

SPRING QUARTER, 1935

FRESHMEN

Robert Adamek	Platte, S. D.	Charles Hutchinson	Minneapolis
Willard Alm	Minneapolis	William Ingenhutt	Minneapolis
J. Adrian Alrick	White Bear Lake	Bert Jahn	Norwood
Axel Andersen	Askov	William Jipson	Glen Flora, Wis.
Jack Andersen	Minneapolis	Charles Johnson	Minneapolis
Edward Anderson	Minneapolis	Harold Johnson	Cass Lake
Vincent Anderson	Minneapolis	Victor Johnson	St. Paul
Everett Bergstrom	Ashland, Wis.	Edward Kafka	
John Berkey	Minneapolis	Klayton Kidd	Minneapolis
George Biskey	St. Hilaire	Donald Kjeldsen	St. Paul
Bob Black	Minneapolis	T. Kant Kjelland	St. Paul
Burgess Blackburn	St. Paul	Rudolf Klebe	Minneapolis
Joe Blaisdell	Minneapolis	Gerald Kleven	Minneapolis
Thomas Boehrer	Durand, Wis.	George Klinger	Windom
Arthur Borchardt	St. Paul	William Kramer	Minneapolis
Rolland Bowler	Minneapolis	Lawrence Lamberty	
Donald Bowes		Forest Lane	Hopkins
Rudie Brauer	Rock Rapids, Iowa	A. Merle Larsen	Iron Mountain, Mich.
J. Robert Bruce, Jr.		Russel Larson	
Clarence Buckman	Little Falls	Allan Lee	Miles City, Mont.
Franklin Bussman	St. Paul	Edward Loomis	Minneapolis
R. Everett Byfield	Cass Lake	Edward Loula	Minneapolis
Edward Carlson	St. Paul	Henry Lovold	Beaver Bay
Marvin Carlson	Minneapolis	John Mead	St. Paul
Robert E. Clark	St. Louis, Mo.	Beirne McMullen	Minneapolis
Earl Dahl	Minneapolis	Frederick Miles	
Harry Davis	Minneapolis	Kenneth Miller	St. Paul
Keith Dech	Minneapolis	Anthony Musich	Soudan
Dale Denzer	Alamo, Tex.	Richard Myler	St. Paul
Edward Deppe	St. Paul	Alvin Nelson	Park Falls, Wis.
Martin Dicks	St. Paul	Kenneth Nelson	Bagley
Carl Dion	St. Paul	Stanley Ness	Glenwood
Ian Dods	Minneapolis	Wayne Nissen	Minneapolis
Robert Dosen	St. Paul	John Oase	St. Paul
Robert Duncan		Thomas Ohl	St. Paul
Robert Elmquist		John Olsen	St. Paul
Carl Emmel	St. Paul	Berns Olson	
Albert Engstrom	Rochert	Scott Pauley	Chippewa Falls, Wis.
Max Freedland	Minneapolis	Sidney Peterson	Oak Park, Ill.
Barton Galle		Robert Piercy	Minneapolis
Joe Gjertson	Sandstone	Robert Rittman	Holingford
Howard Hagen	Minneapolis	Willard Roberts	Henriette
Raymond Halverson	Porter	Vincent Schurr	
Philip Hamm	St. Paul	Gordon Schwabe	St. Paul
Arthur Hand	Deerfield, Ill.	Donald Seebach	Red Wing
Axel Hansen		Robert Selover	
Edward Henry	St. Paul	Orlando Severson	Minneapolis
Arnold Higdem	Bagley	Jerry Stevens	Cloquet
Donald Higgins	Sioux City, Ia.	Robert Stewart	St. Paul
Robert Hiller	Baraboo, Wis.	James Strain	Stewartville
James Hilton	Minneapolis	Charles Swanson	
Arthur Holland	Elmore	John Sweeney	St. Paul
Don Hotchkiss		Clifford Synnes	Minneapolis
Robert Hunner	Minneapolis	James Taplin	St. Paul

Robert Teitgen	Manitowac, Wis.	Peter Schuft	Hutchinson
Howard Tornes		Roman Schwartz	St. Paul
Ben Traverse	Park Rapids	Robert E. Shaw	
Marles Volden		Bernard Shema	Minneapolis
Robert Watts	Royal Oak, Mich.	Alvan Stearns	St. Paul
Orville Withee	Minneapolis	Arthur Sweet	St. Paul
Raymond Wood	Granada	Carl Thiry	St. Paul
William Wood	Granada	Del Thorsen	Minneapolis
Harold Wyman	Vesta	Richard Townsend	Duluth
Robert Zabel	Plainview	Clinton Turnquist	St. Paul
Richard Zietlow	St. Paul	Robert Wahlberg	St. Paul
		Dodd Walker	Utica
		Fred Wentink	St. Paul

SOPHOMORES

Roger Anderson	St. Paul	Malcolm Williamson	Hudson, Wis.
Theodore Appel		Lawrence Wilson	Minneapolis
Orville Bennewitz	Excelsior	Don Wyatt	St. Paul
Dwight Bensent	Turtle Lake, Wis.	Frank Zoubeck	St. Paul
Ross Boobar	Paynesville		
Norman Borlaug	Albert Lea		
Vincent Bousquet	Maddock, S. D.		
Robert Browne	Ely		
Linden Bush	St. Paul		
James Bussey	Minneapolis		
Philip Carlson	Lakeland		
Donald Carswell	St. Paul		
James Case	Minneapolis		
Julius Dinger	Eau Claire, Wis.		
Hugh Doerr	Minneapolis		
Karl Ekstrom	Manchester, N. H.		
Don Gregg	St. Paul		
Marvin Harmon	Marshall		
Lynn Hatch			
Eugene Hurley	St. Paul		
Karl Jacobson	Eagle Lake		
Douglas Johnson	Minneapolis		
Philip Joranson	Chicago, Ill.		
Charles Kirk	Slater, Mo.		
Milton Kral	St. Paul		
John Kretsch	St. Paul		
Frederick Kuck	St. Paul		
B. Francis Kukachka	Montgomery		
Daniel Leach	Minneapolis		
Harry Lear	Minneapolis		
Hilton Lemke	Minneapolis		
Joe Loomis	Moline, Ill.		
William Major	Eureka, Ill.		
Lawrence MacMaster	Sleepy Eye		
Edward McDevitt, Jr.	Minneapolis		
Chester McNelly	Anoka		
Fred Mueller	Minneapolis		
George Mueller	Hamburg		
Lloyd Murphy	Bismarck, N. D.		
Theodore Myren	Minneapolis		
Martin Peterka	Aurora		
William Potter	Minneapolis		
Duane Rauenhorst	Fulda		
Joseph Remus	Minneapolis		
Harold Roussopoulos	St. Paul		
Evan Sanders	Mahtomedi		
Jack Schneeweis	North St. Paul		
Philip Schroeder	St. Paul		

JUNIORS

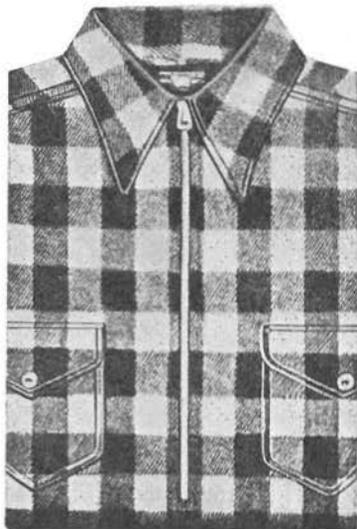
Earl Adams	Minneapolis
Donald Ambrosen	Winona
Herman Arle	Norwood
Wilhelm Beckert	Salem, Ohio
J. William Ceder	Minneapolis
Kenneth Danielson	St. Paul
Sigurd Dolgaard	St. Paul
Ralph Eisele	Minneapolis
Arne Elo	Chisholm
Herbert Erickson	Minneapolis
John Gelbmann	St. Paul
Robert Goudy	Seaforth
Howard Hass	Minneapolis
Guy Hawkins	Brainerd
James Henderson	St. Louis Park
James Hovind	La Crosse, Wis.
Robert Ilg	St. Paul
Raymond Jaskowiak	St. Paul
Onni Koski	International Falls
Warren Livens	Chisholm
Urban Nelson	Cokato
Raymond Nermae	Minneapolis
Myron Ostrander	Minneapolis
Walter Paul	Minneapolis
J. W. Stevenson	Minneapolis
Randolph Strate	St. Paul
Yale Weinstein	St. Paul
Roland Whiting	
Lyman Williamson	Hayward, Wis.
Waldemar Winkler	Duluth
Gordon Wyatt	St. Paul

UNCLASSIFIED

Calvin Bowen	
Wilfred Dugas	St. Paul
Ray Gillson	Minneapolis
Richard Kroll	
Jacob Licke	St. Paul
Charles Shearer	Minneapolis
Veldon Szussitsky	Park Rapids
Paul Vruwink	Arpin, Wis.
Leo Waukechon	Keshena, Wis.

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Made by the originators of woolen lumbermen's garments and backed by 104 years of service. These garments are made of 30 oz. waterproofed fabric, lined throughout, tailored to fit, made to withstand the most strenuous wear. Most popular hunting suit in America.

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WOOLRICH WOOLEN MILLS
John Rich & Bros., Woolrich, Pa.
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Name

Address

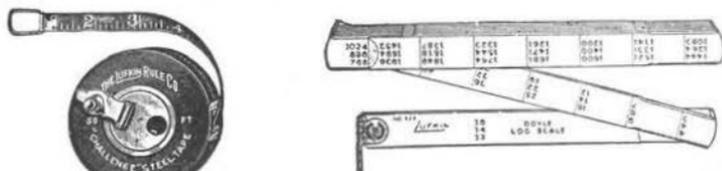
Name of Dealer

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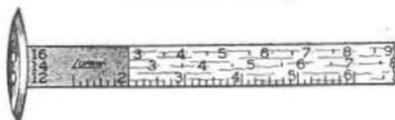
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COMBINATION BRASS HANDLE FOR CARRYING TANK AND FOR HOLDING PUMP

EXTRA HEAVY TANK HAS SOLID BRASS BOTTOM ALL JOINTS LOCKED AND SOLDERED BUILT STRONG

FORM-FITTING, VENTILATED TANK GIVES A CONSTANT CIRCULATION OF AIR BETWEEN TANK AND CARRIER'S BACK. IT PROTECTS THE BACK FROM THE COLD WATER AND MOISTURE IN THE TANK AND KEEPS THE BACK WARM AND DRY. THE FORM-FITTING SHAPE OF THIS TANK FITS THE BACK PERFECTLY. SNUG AND FIRM AND FEELS GOOD.

to the pump and cannot become lost. The pump has a solid brass valve — no troublesome leather valve to dry up or wear out. Holds 5 gallons of water. The ventilated tank feature is vitally necessary for personal safety of state and other employees.

Combines the ideas of the foremost authorities on forest, brush, and grass fire fighting. Used by states and Federal Government, including CCC Camps, lumbermen, and so on throughout the country.

The No. 90 INDIAN has many improvements as shown in this ad. It also has a solid brass bottom on the galvanized tank. The nozzles are chained

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2. Bag automatically deflates as water is pumped out—no slapping or swaying of water load.
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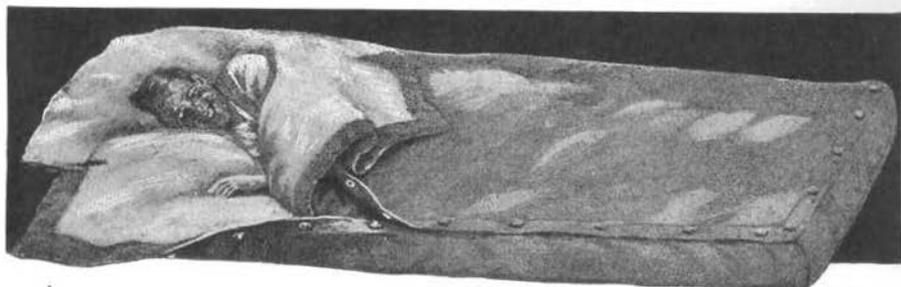
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COMO AND CARTER AVENUE

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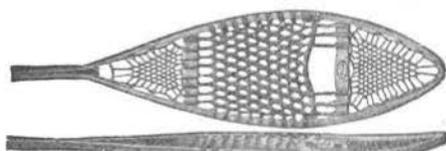
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**Northwestern
Paper Company**
Cloquet, Minnesota

Auspicious

ACARESS of Aladdin's magic lamp and the good genii (National Reforestation) has conjured up a bright future of ample opportunity.

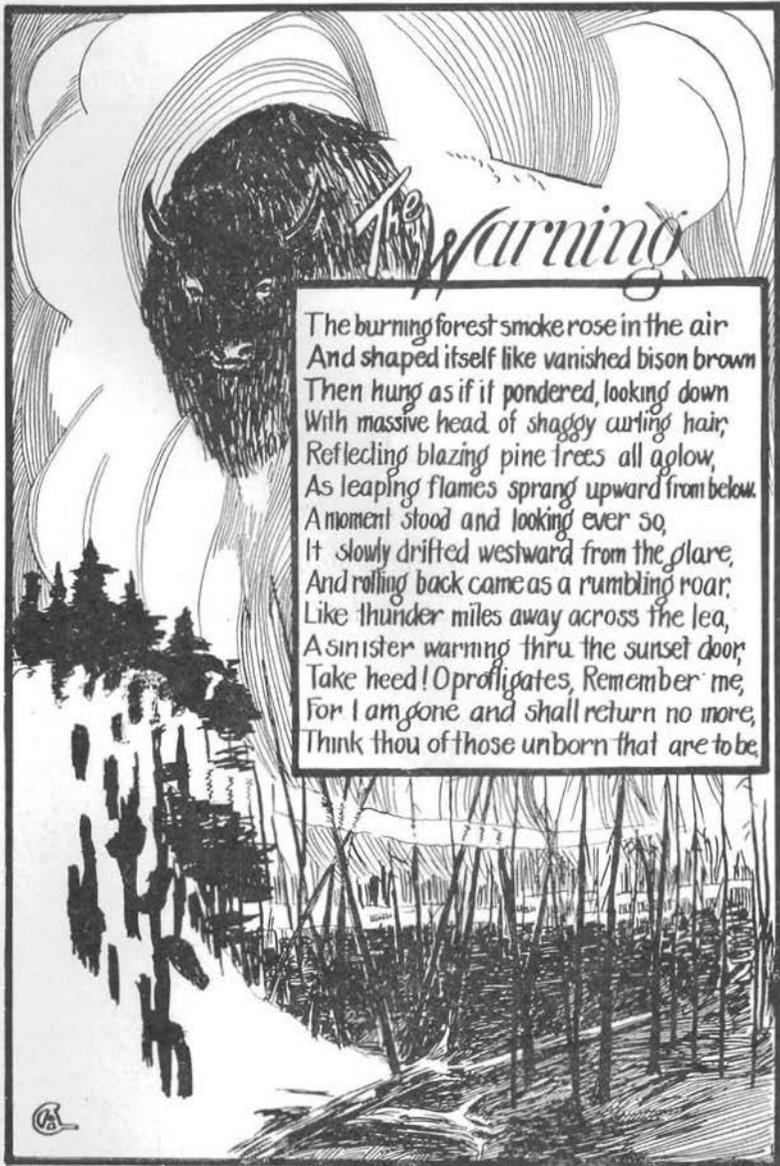
Years of development, years of research for rehabilitation shall give talents and education an opportunity for expansion. Energy and ambition will be recognized and rewarded.

We congratulate you foresters for your very auspicious future.

FLOUR CITY PRESS

APPRECIATION

We wish to thank the students, alumni, faculty, and others for their help in putting out the 1935 GOPHER PEAVEY. Cuts have been furnished thru the courtesy of The State Department of Conservation, The L. S. Donaldson Co., The Minnesota Alumni Weekly, and Mr. De Puy of the University Press. We also wish to thank our advertisers for the support they have given us this year; and Mr. Oliver Cook for the time he has put in and the help he has given.



The Warning

The burning forest smoke rose in the air
And shaped itself like vanished bison brown
Then hung as if it pondered, looking down
With massive head of shaggy curling hair,
Reflecting blazing pine trees all aglow,
As leaping flames sprang upward from below.
A moment stood and looking ever so,
It slowly drifted westward from the glare,
And rolling back came as a rumbling roar:
Like thunder miles away across the lea,
A sinister warning thru the sunset door,
Take heed! O profligates, Remember me,
For I am gone and shall return no more,
Think thou of those unborn that are to be.

CONCLUSION

*Thus the GOPHER PEAVEY of 1935 comes to an end.
It has served its purpose if it brings back to memory
the pleasant days spent at good old Minnesota.*