

1940

## The Utah Juniper, Volume 11

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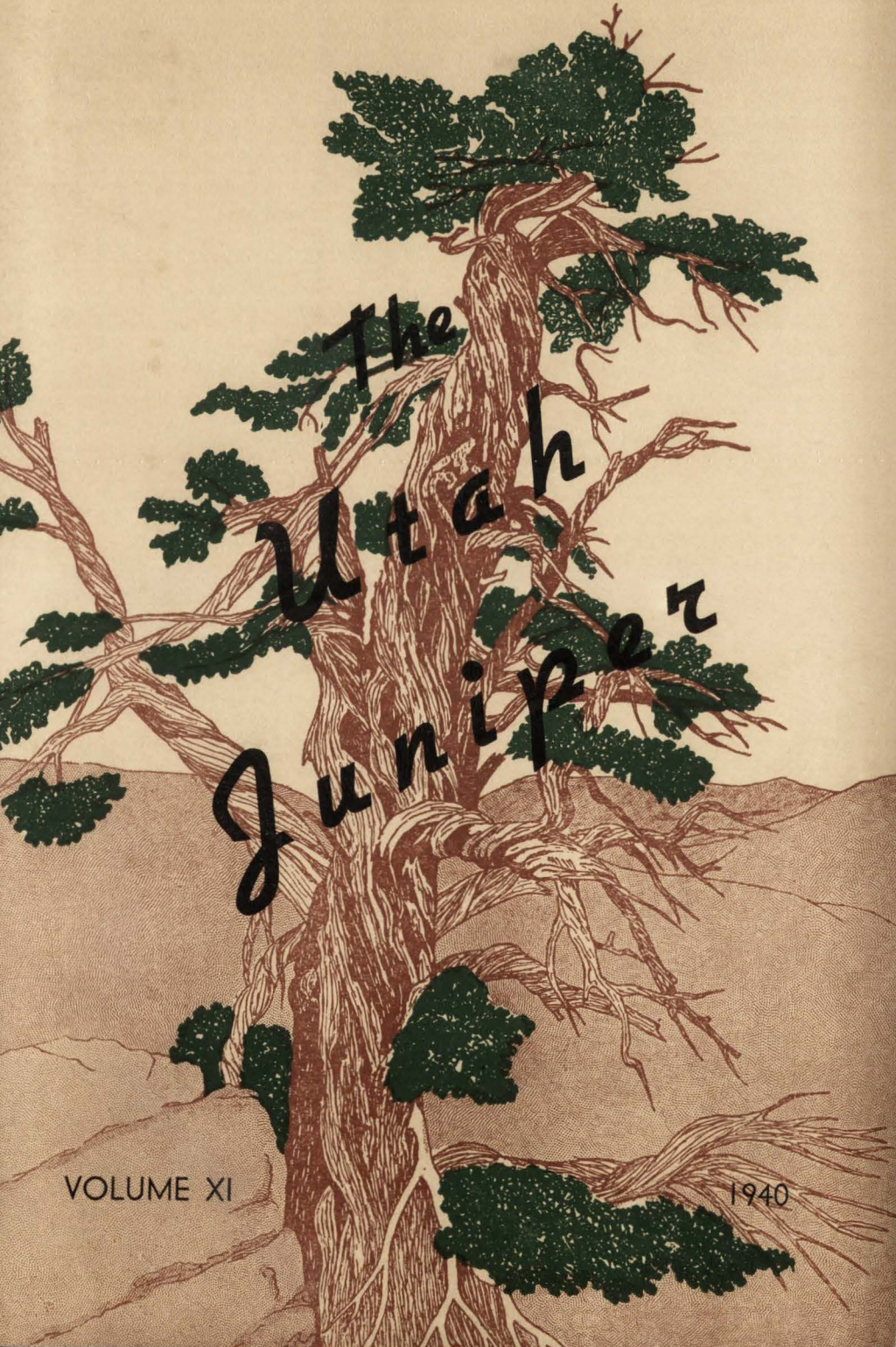
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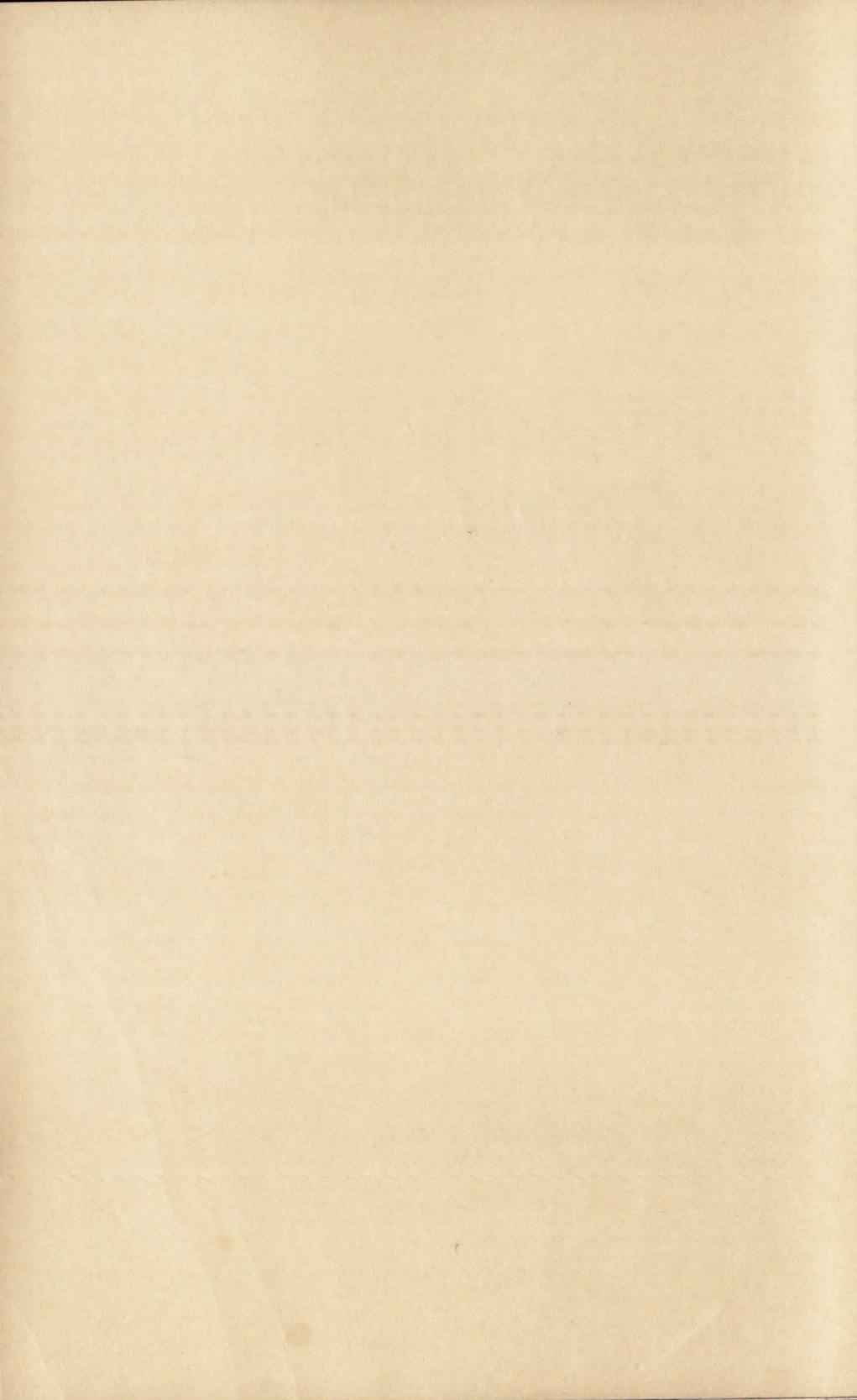
Utah For Alumni



The  
Utah  
Juniper

VOLUME XI

1940





# The Utah Juniper



*(U. S. Forest Service)*

Annual Publication of

THE UTAH FORESTERS

UTAH STATE AGRICULTURAL COLLEGE

LOGAN, UTAH

Volume XI

1940



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## Introducing Our Authors

Victor H. Cahalane—Chief, Section on National Park Wildlife in the Bureau of Biological Survey, Washington, D. C.—received his Master of Forestry degree at Yale University in 1927. His writings include wildlife surveys, conservation, age of deer, and mamalian distribution and correlation with life zones of the southwestern United States.

E. R. Kalmbach—Biologist, U. S. Bureau of Biological Survey, 562 Custom House, Denver, Colorado—is an authority on economic ornithology. One of his best known investigations is the isolation of the causative agent of western duck sickness.

Lee Kay—State Fish and Game Department, Salt Lake City, Utah—is well known throughout the Intermountain region for his excellent photography of animals in their natural environments. Mr. Kay has filmed a masterpiece in depicting the story of soil formation, its loss by destructive land use, and corrective practices applied under land restoration and proper use.

D. I. Rasmussen—Leader, Wildlife Research Unit, Bureau of Biological Survey, Utah State Agricultural College, Logan, Utah—received his Ph.D. in Biology from the University of Illinois in 1932, under Dr. Shelford. Because of his field experience and training, Dr. Rasmussen is especially qualified in wildlife ecology and management.

H. L. Shantz—Chief, Wildlife Management in U. S. Forest Service, Washington, D. C.—received his Ph.D. from Nebraska in 1905. He is an authority on ecology of vegetation on the Great Plains and in the Great Basin, as well as plant geography and plant industry.

Stillman Wright—U. S. Bureau of Fisheries, Utah State Agricultural College, Logan, Utah—received his Ph.D. in 1928 from the University of Wisconsin. Dr. Wright is an authority on taxonomy, ecology, and geographical distribution of fresh water invertebrates.

# Dedication



To Newell B. Cook, Utah's State Fish and Game Commissioner, we, the Forestry Club, dedicate this eleventh edition of the Utah Juniper.

Newell B. Cook has always been an enthusiastic sportsman, influenced, no doubt, by the wealth and variety of fish and game in northeastern Utah, where he lived as a boy. He was appointed State game warden in 1927, promoted to chief deputy in 1928, and in 1931 became Utah's Fish and Game Commissioner.

During his 13 years with this program, Mr. Cook has worked with an enthusiasm that marvels all his associates. He has improved fish and game conditions in Utah, and also received regional and national recognition.

In 1933 the Utah Board of Elk Control was reorganized into a Board of Big Game Control. This is nationally recognized as an outstanding example of a cooperative big game program.

Since 1932, Utah has received \$297,854 of federal funds, by matching with \$134,973 of state monies (exclusive of Pittman-Robertson funds) for building and improving fish hatcheries and waterfowl marshes. Besides doubling the capacity of the four old hatcheries, six new ones have been built. Five new waterfowl refuges have been strategically located, embracing a total of 51,750 acres.

In 1935 one of the nine original wildlife research units sponsored by the U. S. Biological Survey, in cooperation with state departments and land grant colleges, was established at Logan.

A National Park Service CCC camp has developed the waterfowl refuge at Farmington Bay, being unique as it is the only camp of this agency so engaged.

The first two Federal Aid-to-Wildlife projects in the United States, made possible by the Pittman-Robertson act, were inaugurated in Utah during 1933. Number one was the Ogden Bay Waterfowl Refuge project and number two, the Utah Beaver Survey.



## Necessary Concepts in Big Game Management

L. H. SHANTZ

Game management is a complex subject. Like range management, it is concerned first with the land problem. Suitable land, in the proper stage of vegetation development, determines what can be produced, be it game or domestic livestock. Overuse is like drawing on the capital whereas only the interest should be utilized if the capital is to be maintained. An increment of growth is available each year and to exceed this amount year after year will destroy the resource.

Grazing and wildlife men often forget the essential fact that plants do not push out of the soil fully nourished, but that they manufacture their own food in the above-ground parts, and that when these are cut or eaten away the food production is reduced a proportionate amount. Compare the food-producing possibilities of a growing meadow in which grass is knee-high with those of a closely mown or closely clipped area in the same location. By cutting away the top the food-manufacturing part of the plant is destroyed. Deferred grazing is a practical application of this principle. Still, it is often difficult to convince a person that a range is damaged as long as there are plants still there to push up new shoots and new leaves. Under proper management one may determine how much can be taken without causing a year-to-year deterioration of the range.

The maintenance of a varied and luxuriant vegetation is probably the best means of insuring a rich soil. It is most important to maintain as fertile a soil as is possible under utilization so that the plant cover may be luxuriant and varied, and that a diverse yet adequate animal population be supported upon it. This will insure that the soil is well permeated with plant roots, that this plant material and that falling on the soil is being worked over by fungi, bacteria, insects, worms, protozoa, and other animals—in short, that the general productive level of the land is as high as prevailing weather conditions will permit. With this as a basic objective, man must intervene to manage the area for his benefit. This management should include all those activities and controls which man uses to modify or reduce production along lines less desirable to him and to accentuate or favor production along lines desirable from his point of view. As an example, practices which favor grass production as opposed to juniper or sagebrush growth would be advantageous in cattle range management, whereas, reduction of grass and an increase of juniper would be desirable on mule deer range.

If wild animals could take care of themselves there would be no need of management. But if man is to utilize the resource and avoid abuse he must work out management plans.

Big game does not take care of itself under our system of husbandry. The first great essential in big game management is to see that food is available throughout the whole year. This contrasts sharply with the management of domestic livestock which can utilize forage available at any particular period and any place. Big game is relatively fixed as to the areas it occupies, and cannot be removed from range to range at will or

artificially fed. If the natural range is insufficient to maintain the herd, four or possibly five courses of action are generally proposed. These are:

First, to do nothing—a course suggested generally by those who cannot evaluate the available feed on the range, and assume, therefore, that there is plenty available. The result of this course is the destruction of the more desirable browse species and the ultimate reduction of the herd by starvation and disease. The damage to the range, in many cases, will be measureable for a period of ten to fifty years.

Second, to control deer herds by predators—a plan probably supported by those more biologically minded. Its decided advantage is that it may save the forage, but unless carefully watched, it may decimate the herd. Moreover, as predators are seldom hunted in place of deer, there is a recreational and economic loss by this method.

Third, to feed artificially. This is easily done with elk, but nearly impossible with mule deer. Where excessively large herds of elk are fed, the adjacent spring and fall ranges are gradually destroyed, eventually encroaching on the summer range. It is difficult to conceive of a condition more likely to destroy the great elk ranges. In fact, it is probable that the best method of destroying a natural range is to supplement it by artificial feeding when animals become too abundant to find sufficient feed on the range.

Fourth, removal of surplus by heavy hunting of bucks only. To take only males cannot reduce over-population unless it is carried to the point where females remain unproductive due to lack of males. This leaves on the range, animals of no value for hunting or breeding purposes, but which still destroy forage. It is very doubtful if this method is often carried far enough to actually reduce the herd. Rather, it eliminates the fully matured males, leaving immature males for the responsibility of breeding, and supplying the hunting take.

Fifth, hunting kill of all age classes and sexes. This is probably the most effective method, yields the greatest crop to the hunter, and is least selective. It is, therefore, the best method if the quality of the breeding herd is considered. Even hunting may not reduce the herds on certain winter concentration areas. The solution of this problem involves a study of areas and migration routes.

In most cases a solution of over-population is not attempted until much of the damage has been done. In fact, a range properly used shows almost no signs of damage, or, in other words, no deer line. Once this deer line is apparent, it is almost too late to control the case. Only trained observers can detect this danger signal in time. But where it is necessary first to convince the public, serious damage often is done before proofs can be presented. Therefore, the only safe method is to rely on a trained technical man to determine when the danger point has been reached. Of the methods of control, hunting seems to have several advantages. It contributes to sport, and is therefore of value socially and economically. It is probably more humane than either of the other four methods, but it is usually held up in exactly the opposite light by those opposed to killing.

One of the most important and as yet unsolved problems of big game management is that of so conducting hunts that the best animals



are not continually being removed. What we need is a system which will improve the breeding herd and not selectively remove the most desirable animals. It would seem that less damage to the herd would result from a take of all classes rather than of age or sex classes.

Animal husbandry is an old husbandry, as shown by Biblical references. With this long history it would be well if game technicians, especially those dealing with large herbivorous animals and game birds, could utilize the knowledge and experience of Animal Husbandry and Poultry Departments which are established in practically every university. Even agronomy leads to a constant consideration of the relation of productivity of land under certain weather conditions. Therefore a broad approach, featuring animal and plant industries as well as soils and climate, is essential for training a student in game management work.

If one is to work with foresters or range men, the contact should be a real one and a degree in forestry or range management will be a most valuable asset. These assume basic training in the sciences, especially biology. Since animals are dependent directly or indirectly on plants, this relationship must be known and a fair knowledge of the ecology and physiology of the important plant species is essential. The same should be said with regard to animals of all groups. Insects probably build up more food material in the soil than even rodents or birds, and it is important to see the whole picture in order to work out the best management practices.

At the present time, one of the most important phases of the whole wildlife management program, is that of the general education of the public to its needs and objectives. Public opinion built up on the protection and sanctuary ideas, is slow to recognize the need of management. It is confused by the differences of opinion expressed by the various agencies interested in wildlife, is slow to act and requires proofs so definite that the problem is generally beyond the stage where an adequate solution can be developed. As a result, game technicians are continually restoring the wrecks of bad management practices. Psychology should directly or indirectly have a prominent place in the education of men who intend to work in the wildlife management field.

Utah is fortunate in having a State Game Department, with power to adjust populations to available food. Their program is flexible enough to be adjusted to local problems, and game management is always a local problem. The elk management there is one of the outstanding examples of what should be done in a similar or equally effective way in many other places.

The Forest Service recognizes the important social, aesthetic, and economic values of wild animals. People come to the forests to hunt and fish, or to merely enjoy the sight of animals in their native haunts, or to study wild animals in their natural environment. In the national forests materials that would otherwise be wasted are converted by wildlife into useful products. Like timber and grass, wildlife is considered a crop, to be used and enjoyed. To accomplish this result, wildlife must be properly managed by men trained to see the many inter-relations of plants, animals, soil, and human uses.



## Some Relationships of Wildlife to the Field of Recreation

VICTOR H. CAHALANE

During the past century Americans have had to learn many conservation facts by the extravagant trial and error method. This knowledge was acquired early enough to save certain resources; for example, the large areas of most forest types that were reserved to ensure continuous timber supplies. Wildlife, however, was squandered so recklessly as to become dangerously thinned throughout the country and in many areas various species were extirpated. Fortunately, before it was altogether too late, the public came to a realization of the economic and recreational importance of wildlife.

In 1864 the Congress of the United States authorized establishment of the country's first natural recreational area—Yosemite Park. During the seven decades that have since elapsed, national and State parks, monuments, demonstration projects, forests and many other lands have been set aside for the people. Public enjoyment, education, and physical and mental relaxation have been among the basic products of these areas.

Even in the presence of the greatest natural spectacles, however, no one is too absorbed to be interested in animal life. This was strikingly brought to my attention on my first visit to Crater Lake, Oregon. Every feature of this marvelous gem—its size, color, and setting—complemented each other to produce perfection of its kind. When I had recovered from the first shock of overwhelming beauty, I found that many other visitors to the rim were enjoying the lake's additional attraction. A troupe of rock squirrels and golden-mantled ground squirrels, bent on satisfying their voracious appetites and storing propensities, were insistently begging with every trick in their repertoire. While the sapphire lake was magnificent and awe-inspiring, it was evident that the squirrels filled another distinct need. They amused and crept into the hearts of their human donors. They even drew a response from those for whom the sublime had been too great to comprehend.

In less spectacular areas, wildlife is even more important as a recreational factor. Human interest is not long sustained where wildlife is lacking. To my mind, few landscapes are as impressive as the Great Plains—the limitless distances, the rolling swells of land, and the quiet and peacefulness are soothing and satisfying. Yet most newcomers are repelled by the empty vastness, and very few, after a brief period of contemplation, have any wish to remain. The deserted plains are too inanimate. They now chiefly lack the impressive spectacle of the countless bison and antelopes, lightened by the comic relief of prairie dog and burrowing owl, that was once enacted on these lands. It is hoped that a sample of the original Plains may soon be preserved as a much needed educational exhibit. I believe that reproduction of the original fauna would enliven and make it attractive to every visitor.

Not only an interesting background for recreational activities, wildlife may also take a direct part in recreation. Fishing is a sport that delights many types of people. Some seven and a half millions of them last year enjoyed using either a rod and reel or just an old fashioned

hand-line. Not all of them profited materially, but each obtained rest, relaxation, and replenishment of mind and body.

Where the natural resources permit, fishing is allowed on practically all kinds of recreational areas. Variations in the sport are effected by administrative control. In one place the tourist may find a high, "sporting" type of fishing, with a large size-limit and only barbless hooks permitted. In another, regulations may be relaxed to guarantee a measure of material success for even the least skillful. Stocking standards also may determine the quality of this recreation. In the immediate neighborhood of some eastern metropolitan centers, where the fishing pressure is extremely heavy, fish of legal size are placed in the waters with the practical certainty that the majority will be hooked out within a week. Of course the flabby-muscled tame fish, products of hand feeding in the confinement of rearing pools, are not to be compared with those that have spent their lives fighting for existence under natural conditions.

Because these animals that are drained away can be replaced with facility and at comparatively slight expense, fishing is a feature of even the most rigidly protected of our recreational areas. Game birds and mammals are not so readily replaced so their hunting is much more sharply limited.

Over seven million persons purchased hunting licenses last year in the United States. An additional number—landowners, for instance—not required to register also took to the fields and woods with firearms. Hunting is allowed in many places but is prohibited on all national parks and monuments, on most State parks, on many refuges, and on at least part of other recreational territory. In parks and similar areas, an approximation of the natural fauna in a normal environment is restored and maintained, and disturbance is kept to a minimum.

Wildlife on these completely protected reservations is "used" many times by visitors, although the "uses" allowed do not result in destruction of the animals. Wildlife that is comparatively fearless of man is a source of great pleasure to all. Photographers, whether passionate hobbyists or occasional "snap-shooters," find the park wildlife an exciting source of material. Camera fans need all the skill required of hunters with rifles, and must employ various techniques and artifices to get good pictures. Although the result of successful work with a camera may give as much or more satisfaction than the end of a hunt with a lethal weapon, the animal is still available for succeeding photographers. Taken with a gun, the quarry has but one hide and one head.

Nature study has gained in popularity and is a source of enjoyment and mental enrichment to all ages and all classes of people. Many summer camps and schools, partly educational in purpose, are located in recreational areas. The natural representation of wildlife there offers excellent opportunities for original research and for judging the value of game management methods employed on hunting areas. Increasingly popular study of wildlife has resulted in wider appreciation of, and interest in, animals and plants and their needs.

Stocking and managing wildlife on recreational areas involves many problems. The biologists working under each land use system must foresee essential requirements such as adequate, properly distributed food, water, and cover. Boundaries must be drawn so as to protect seasonal ranges



and provide animals with adequate year-long habitats. Surplus mammal populations may develop on both kinds of areas, and where hunting can be permitted, this remedy is relatively simpler than that disposal or other adjustment methods employed in parks.

Difficulties arise as large numbers of people come to these recreation grounds; living accommodations and transportation routes must be provided. Since wildlife is drastically affected by clearing and trail building, the location of bridges and roads should be carefully studied. The technician's problem is to plan in advance so that only the minimum damage is done to wildlife interests. In areas where numbers of saddle horses are maintained, use of forage to a serious local extent may deprive wildlife of its natural range. Retiring species—those that cannot survive contact with civilization—should be regarded as special wards. The ivory-billed woodpecker is an outstanding example of a bird that must be given the privacy of deep forest—nothing less will suffice. Disturbances on wildlife breeding or nesting grounds must be prevented by arrangements so subtle that neither the public's fatal curiosity nor resentment will be aroused. Bathing beaches, for instance, can be located so that nesting tern colonies are still isolated by roadless sands or mud banks.

Unnatural situations are created by bringing people who are not wilderness-wise into contact with wild animals. The national parks bear problem is a pronounced example. Being adaptable, the black bear learns that panhandling from friendly tourists is an easier way of making a living than digging it out of gopher holes or gathering it from bushes a few berries at a time. Eventually the bear loses even a minimum of respect for humans, and with his superior strength, trouble starts. Tendencies toward human intimacy with other animals may in time cause serious difficulty with those species.

In the field of fish culture, the technician should make further adjustments in management practices, which must be correlated with the recreational uses of lakes and other waters. Fish shelters and other underwater structures are excluded from bathing areas lest they trap or entangle the divers. Visible structures intended to improve fish habitats must present the least possible disruption of the natural landscape. Problems of elimination or adjustment of introduced species of fishes, as well as of birds, mammals and plants, occur wherever it is intended to restore wilderness conditions.

If wildlife and human use are to be combined successfully on recreational areas, the major essential is cooperation of all the technical men concerned. Through the planning and development stages of park or forest administration, it is necessary that specialists and custodians take the broadest point of view. The recreational planner must have appreciation for the perishable values of the fauna and flora. He needs to keep in mind that certain areas may be essential for desirable species, and that alteration of the environment to produce a good picnic ground may result in eliminating a rare animal or spectacular plant from the park. The Biologist on the other hand, must remember that recreational areas, within broad limits, are for the use of mankind; they are not for the sole use and protection of wildlife. Only this mutual understanding will make possible the integration of wildlife management practices with the operation of public recreation areas.



# Plans for the Improvement of Fishing in Bear Lake

STILLMAN WRIGHT

Bear Lake, Idaho and Utah, is a great recreational resource of the intermountain region, but its potentialities have been developed to only a minor degree. This is especially true of fishing. In recent years, few fishermen have made a determined effort to catch trout and still fewer have been rewarded for their effort.

According to reports, the lake formerly had a large population of native trout, and some of them attained great size. Marked depletion of the stock was noted as early as 1884, and presumably the decline has continued to the present. An investigation into the conditions in the lake at present, and in the past as judged by earlier studies, reveals the existence of a number of factors unfavorable to the maintenance or increase of the trout population. Some of the unfavorable factors are natural in origin, while others have been imposed by man. Those of natural origin seem to be only slightly amenable to change; some of those of man-made origin can be removed, or modified in such a way that they become harmless.

A fact of great importance in the formulation of a plan of management of the fishery is that Bear Lake belongs to the *oligotrophic* type of lake, which means that it is low in fundamental productivity. The microscopic organisms and those of slightly larger size, living in the water and in the mud at the bottom, are not abundant, and so can not furnish food for a large production of fish. This fact is regrettable but it can not be altered. Scientists have devised ways of increasing the productivity of ponds and small lakes by fertilizing them, but it is not feasible to attempt it in a lake 101 square miles in area and 200 feet in depth. Reasons for the low productivity are probably numerous. One which may be of considerable importance is that the water contains zinc carbonate in solution, and zinc is known to be harmful to microscopic organisms.

Water weeds have never been abundant in Bear Lake, and there seems to be no practicable way of increasing their number. Most of the shore is composed of sand or stones, or both, which are not favorable to the growth of plants. Moreover, the shore line is everywhere regular in outline; there are no protecting bays, so that plants attempting to establish themselves are subjected to the destructive action of waves and shifting sands. Lowering of water level in summer is also unfavorable for the growth of plants. Scarcity of plants makes the shallow areas of little value to young trout as places of refuge and feeding. For the same reason the more desirable shore fishes, which depend upon plants for food and protection, probably never will be numerous in the lake.

Another factor limiting the abundance of trout is the small amount of spawning area available to them. The tributary streams are small in number and in size. At present only St. Charles Creek and Swan Creek are available to the trout, and their value has been reduced greatly by diversions for irrigation.

There seems to be no question that unwise fishing has been a potent force in the decline of the trout. In former times, the lake was open to commercial fishing, and gill nets, traps, and set lines took their tolls. Probably the most destructive fishing took place on the spawning grounds

of the tributaries, where the trout were concentrated in a small area of little depth, an easy mark for fishermen. Doubtless many were able to escape the fishermen, and were successful in spawning, but too often the resulting young were unsuccessful in evading the irrigation ditches on their way back to the lake.

It is claimed by some that diversion of Bear River into the lake at time of high water is a cause of great loss of trout; that many fish leave the lake at that time and never return to it. This claim may be justified, but it should be remembered that such a loss is not complete, for the trout are still available to fishermen in the river. Large fluctuations in level, owing to excessive diversion for irrigation in time of drouth, are unfavorable for fishing, for they disturb the normal stability of physical and biological conditions. Maintenance of a reasonably uniform level is of prime importance for the future of Bear Lake.

A number of attempts have been made by various individuals and agencies to improve fishing in Bear Lake. Some of these attempts have been ill-advised and harmful, and many of those which seemed to give promise of betterment have proved to be fruitless. As a result of planting operations, the lake now contains a number of species not native to it, including the carp, perch, green-eared sunfish, and landlocked sockeye salmon. Plantings of brook trout and mackinaw trout have been unsuccessful.

The most recent attempt to do something about Bear Lake is that of a cooperative project supported by funds from the Utah and Idaho departments of fish and game, the Chamber of Commerce and Rainbow Rod and Gun Club of Montpelier, Idaho, and the U. S. Bureau of Fisheries. At a meeting in March 1939, representatives of these organizations and others decided that a thorough biological study should be made of the lake, to determine a plan of management. Also, it was decided that certain measures should be taken at once to increase the population of fish, namely, to trap the native trout in the principal tributaries for artificial propagation, and to obtain eggs of the mackinaw trout for a concerted attempt to establish that species.

Trapping of the native trout in May and June 1939, yielded more than a million eggs, and from these were obtained about 600,000 fish of fingerling size for planting in October. It is believed that under natural conditions, with all of the hazards to the spawning fish, eggs, and fry, a much smaller number of fingerlings would have returned to the lake. An additional advantage of the artificial method is that the adults are replaced in the lake and may return to spawn another year. The success of these operations in 1939 give a hopeful outlook for the future of the native trout in Bear Lake.

The federal hatchery at Laketown, Utah, has several thousand mackinaw trout of nearly legal size for planting in the summer of 1940. In addition, it has several hundred thousand of smaller size (from eggs supplied by the two states concerned) which may be planted at the same time, or retained for further growth and planting in the summer of 1941.

The survey has given a fund of information which will be of value in formulating a plan of management of the fishery. Chemical analysis show that there is an abundance of dissolved oxygen at all depths, even at the end of the summer period of stratification. This fact justifies

the attempt to establish the mackinaw trout, for this species spends the summer months in the deeper parts of lakes. Conditions in Bear Lake appear to be favorable to the mackinaw; at least there are no conditions obviously unfavorable. Studies of the physical, chemical, and biological conditions will be continued for at least another year to determine seasonal changes.

Of considerable importance is the hydrographic map, based on a large number of soundings made in 1939. The maximum depth recorded was 190 feet, but this would be nearly 200 feet if the lake returned to its original level. The trough of deepest water lies parallel to the east shore and close to it. For many years there have been stories of great depths in Bear Lake. Actually the lake is only moderately deep; indeed, compared with Crater Lake and Lake Pend Oreille it is shallow.

In our thinking with regard to the future of fishing in Bear Lake, we must not lose sight of the fact that the lake is low in fundamental productivity, and that some other conditions are unfavorable for the establishment and maintenance of a large population of trout. Yet, in spite of these difficulties, the prospect for improvement of fishing appears to be reasonably good. The lake should be kept under observation for a number of years to determine the success of the plan of management, and to permit modification of the plan as needed.





# Manpower in Wildlife Research

E. R. KALMBACH

One outstanding difference between field research in wildlife today and that done even a decade ago is the increased use being made of manpower. This is true for practically every branch of biological science that enters into the development and administration of land and water areas dedicated to wildlife either exclusively or in conjunction with the legitimate pursuits of agriculture, animal husbandry, or forestry.

By increased manpower is meant not only a greater number of competently trained technicians to plan, organize, and supervise research activities, but also (what is often even more important) an adequate personnel with which to conduct large-scale field operations. Within recent years enrollees in the Civilian Conservation Corps, the National Youth Administration, and men employed in one or another of the Federal Works Projects have furnished much of this needed manpower. An increased appreciation of the need of research in the administration of wildlife by many states has resulted in the establishment of research projects under the provisions of the act for Federal Aid to the States in Wildlife Restoration, in connection with which the personnel gathering data in the field also have appreciably increased. A more limited number are similarly engaged in those states where cooperative wildlife research projects are being pursued.

As a result of this application of increased manpower, notable changes have taken place in the conduct of wildlife studies, and results are now forthcoming that were not attainable a few years ago. In fact, with the greater facilities available, earlier single-handed methods of approach to many wildlife problems have become outmoded, perspectives have been materially broadened, and former concepts have been altered by mass accumulation of data as the result of increased manpower in field research.

With a multitude of factors involved, local variations in wildlife environment are the rule, so that results are based on studies limited as to time, area, or numbers are likely to be distorted. It is in the smoothing out of such irregularities and the filling in of deficiencies that modern research with its increased manpower has made a most worthy contribution. Data in large volume not only have extended extremes beyond formerly conceived limits, but averages computed from them are closer approximations to the truth.

In the field of mammalian research, particularly that pertaining to the welfare of the more common and extensively hunted big game, large-scale inquiry whereby data are obtained from large numbers of specimens examined or hunters interviewed is now standard procedure. Through the helpful cooperation of state game and fish departments, the Forest Service, and other Federal agencies, censusing of herds, determining the extent of hunting possible without detriment to the supply, appraising the condition of the range, and other pertinent matters related to sound management are being handled more and more with the assurance that characterizes the management of domestic livestock largely because of the increased, supervised manpower that has been available for the work.

## Nesting studies on the Lower Souris Refuge.

(Courtesy Biological Survey)

In the realm of ornithology, especially as it applies to game species subjected to heavy gun pressure, the application of manpower has yielded even more notable results. It was only a few years ago that information concerning important factors in the life history of game birds was restricted to the relatively limited data obtainable by one or a few observers often working independently and under conditions in no sense comparable.

Information on incubation periods, size of egg clutches and broods, cover type preferences, and the degree of nesting success usually was restricted to the careful but all too limited observations that could be made by favorably situated individuals. The results obtained at a score of nests often were looked upon as a satisfactory basis for drawing conclusions regarding reproduction. The fate of an equal number at time served to condemn some predator that happened to be unduly abundant locally.

As a pioneering endeavor in the field of quantitative ornithological research and as a pattern after which numerous other programs have been shaped, mention may be made of the work by Stoddard and Handley on the bobwhite in Southern Georgia and northern Florida. In the course of that work, which extended over a period of six breeding seasons, 602 nests of quail were critically studied and their fates appraised and conclusions drawn regarding the factors contributing to success or failure. Of even greater volume were the nesting data amassed a few years later by Gardiner Bump and associates relative to the ruffed grouse in New York. In the course of this study 1,030 nests were under observation. Still later Hamerstrom in Iowa recorded observations made at 445 nests of another up-land game bird, the ring-necked pheasant. Although these studies were carried out with limited personnel, the praiseworthy idea of gathering data in quantity was basic in each.

Quantitative acquisition of data on nesting birds, however, has reached even higher levels in studies conducted at Federal refuges, where in recent years available manpower has afforded the opportunity. In 1937, Williams and Marshall, through help rendered by C.C.C. enrollees, were able to take notes on 2,410 nests of ducks on the Bear River Migratory Bird Refuge, Utah, a task that would have been far beyond the physical ability of a few research workers, however energetic. Earlier in the same season the history of ninety-five Canada goose nests also was traced. In the years 1938 and 1939, nest studies on a more restricted scale likewise were facilitated by help rendered through C.C.C. personnel.





On other Federal refuges, notably the Lower Souris in North Dakota, Valentine and Crescent Lake in Nebraska, and Malheur in Oregon, habitat and nesting studies of sizable proportions have been carried out through careful organization and supervision of the manpower there available. At the Lower Souris Refuge nest history and habitat studies conducted in the four years 1936 to 1939 yielded data on more than 1,800 nests of eleven species of ducks. At Valentine and Crescent Lake Refuges the extent of depredations by bull snakes on nesting waterfowl has been disclosed and through the employment of supervised help the merits of control measures have been tested. At Malheur, a refuge that has been under management for a relatively short time, approved management practices are being developed through the findings of research men aided by ample manpower from local C.C.C. camps.

Although the immediate objective of these Federally conducted studies is the development of practical and efficient management practices for increasing waterfowl, these investigations are at the same time amassing fundamental ornithological knowledge in volume never previously equaled. Information on the nesting of waterfowl—their habitat preferences, choice of nesting sites, methods of nest construction, and the fate of their eggs—is now being gathered, not for a score or two nests in a single locality only, but for thousands in widely separated environments. Incubation, the development of the embryonic duckling and the hatching of the young are now being observed in tens of thousands of eggs representative of all our common species.

It must not be inferred that the manpower mentioned is to any appreciable extent trained. The average C.C.C. enrollee or employee under one or another of the Federal works projects has little of technical knowledge of or field experience with wildlife. Many of them, however, have keen eyesight, a natural inquisitiveness about things in the wild and once their interest has been aroused, develop an ability and willingness to learn. Instruction and organization, of course, are essential and guidance by experienced leaders is at all times necessary. Even with this supervision, it is the exceptional few who develop to the point that interpretation of findings can be wholly entrusted to their judgment. To a large extent their contribution consists of routine duties and observations, the finding and marking of nests, the herding of young waterfowl or big game in census drives, the counting of individuals or the locating of groups, and the building and upkeep of drift fences, corrals, traps, and other structures so essential in quantitative studies of wildlife yet so difficult for unaided research workers to operate or maintain. These are indeed vital contributions to the mass acquisition of wildlife data; without them many of our current problems could not be solved. To this group of workers, gathered from the C.C.C., the N.Y.A., and from older groups in other Federally sponsored work and conservation programs, wildlife research owes everlasting gratitude.



# Utah's Wildlife Research Unit, Its Program and Objectives

D. I. RASMUSSEN

## Historical

The importance of the wildlife resources of Utah and the intermountain region and the need of information concerning, and men trained in the game problems of the region was early recognized by college officials at Logan. Professor T. G. Taylor, as head of the Department of Forestry and Range, in the school year of 1930-31, inaugurated the first course in wildlife management under title of "Forestry 136—Related Resources." Also, Taylor and Lee Kay, of the Utah State Fish and Game Department, in 1932, undertook a survey and cooperative study of the sage grouse. This same year, under Taylor's guidance, a conference was held at Logan where workers of the state and federal agencies met and discussed "Game-Management Developments and Needs" of the intermountain area (1).

The school year 1934-35 saw further advance in this field with the perfecting of an agreement between the U. S. A. C. and Commissioner Newell B. Cook, of the Utah State Fish and Game Department, whereby D. I. Rasmussen taught special wildlife courses half-time at the college and did research work on fish and game problems and half-time for the game department. The major in wildlife management in the forestry school, made possible under this agreement, was one of the first such offered in the United States.

On November 8, 1934, J. N. Darling, Chief of the U. S. Biological Survey, was entertained at a luncheon at Logan by President Peterson and members of the college faculty. At this meeting, Taylor suggested that there be established an "Intermountain Wildlife Experiment Station," and followed up this suggestion with letters showing the need and desirability of Logan as the location for such work.

Within a year following his Logan visit, Darling was successful in developing and putting in operation a plan whereby the federal government, the land grant college, the State Conservation agency, and the American Wildlife Institute entered into a cooperative agreement to finance and direct a new program of research on wildlife management problems. Because of the work previously undertaken in this direction, Utah was in a position to secure one of these units, and on November 1, 1935, one of the nine original Wildlife Research Units was established at the Utah State Agricultural College.

Ten research units are in operation at the present time. The states in which the units are established were chosen as representative of the major ecological regions of the United States, and include Alabama, Iowa, Maine, Ohio, Oregon, Texas, Utah, Virginia, Pennsylvania, and Missouri.

Each of these states has a variety of problems with which it is concerned, but the work is planned so little or no duplication is taking place between states. Each is placing emphasis on the study of a species that is considered of primary importance, but not necessarily most important. to the game problems of the region where the state is located. It is believed that by this method, a fairly complete life history picture and contribution of value might be obtained for this species.

### The Research Program

The following is an outline of the investigations and a summary of certain findings of the Utah program.

#### *I.—Life history and management study of the Rocky Mountain Mule Deer.*

This study of Utah's most important big game animal has been conducted primarily by intensive year-long field observations on two Utah areas containing large deer populations. 1. The Cache National Forest near Logan, an area of public land having a deer population of nearly 7,500 animals and containing local winter range areas with an overpopulation of deer. 2. The Wasatch Game Preserve near Echo, Utah. An area of private grazing lands with a deer population of nearly 2,500 animals and where competition with domestic livestock is a definite problem. In addition, observations, counts, surveys, and studies have been made on other important deer areas of both public and private lands in various parts of the state.

Observations and records have been made on life history, feeding habits, winter losses, disease, migration, growth, competition with livestock, effect of hunting on numbers and sex ratios, and possible methods and foods for supplemental winter feeding.

Outstanding accomplishments have been the tagging of 286 deer on the Cache area, the recoveries of tagged animals over an area thirty miles in length and ten miles in width, including deer of three known age classes, and the careful examination, weighing, and measuring of approximately 4,000 deer removed by hunters from the two study areas.

Two articles have been published on results of these studies (2) (3).

#### *II.—Life history study of the Sage Grouse.*

The Strawberry Valley was the original location of this investigation, and the work is being continued in that locality. Following two years of study at Strawberry, it was deemed desirable to obtain a check on other areas, and for the past three years, a research assistant has been located at the United States Sheep Experiment Station, near Dubois, Idaho. The sheep station lands contain a large population of grouse and are one of the very few large sage brush tracts where carefully regulated range management is practiced.

This study has included the first detailed study of nesting activity of this species. Observations have been made and records kept on nesting success and causes of destruction and desertions on 567 nests. The first year-long study of the food habits of the bird has also been made.

A master's thesis (4) has been prepared and one article has been published (5).

#### *III.—State survey and life history study of Sharp-tailed Grouse.*

Under this study, all areas in northern Utah where sharp-tailed grouse were known to exist or had been reported for the past several years, were visited and a study made of their present distribution and numbers. This included locating dancing grounds, nesting, and wintering areas.

A definite correlation was shown between the presence of remnants of original grassland, areas that has escaped plowing or excessive grazing, and burning, and the present occurrence of this bird.



It is estimated only 1,000 to 1,500 birds exist in Utah at the present time.

A report of this general survey has been submitted as a master's thesis (6) and a second report of a phase of this study has been printed (7).

*IV.—Investigation of waterfowl food plants on Utah's waterfowl marshes.*

Throughout the State of Utah there are several areas that have been developed by large expenditures of federal, state, and private money to improve food and nesting habitats for waterfowl. It was felt desirable to determine the physical and chemical factors and the changes that have taken place on these refuges by the flooding and modification produced by man, and their effect on the soil, water chemistry and plant cover. Two master's theses have been prepared under direction of the Botany Department on portions of this field work (8) (9).

*V.—Utah beaver survey.*

In the unit's original program, a state beaver survey was inaugurated. It had for its purpose, the determination of present numbers, distribution, and possible areas for transplanting, and preparation of a plan for utilizing beaver from localities where they have become troublesome to irrigation and power operations and areas where they have attained maximum numbers. Included also, was an investigation of beaver-trout relationships and the effects of beaver activity on erosion and stream flow.

This study proved to be important enough to warrant its enlargement and it was submitted by the Utah Department and became the nation's number one research project of the Federal Aid to Wildlife (Pittman-Robertson) program. Since August, 1938, it has been conducted under this new program. A report on a portion of these investigations was made to the 5th Wildlife Conference, (10).

*VI.—Miscellaneous.*

A series of minor investigations have been conducted on various problems during the period of the Unit's existence; these include a study of pheasant food habits in relation to purported crop damage by this bird, investigations of fish losses in lakes, reservoirs, and hatching ponds; investigations of high mortality in game birds and animals on game farms and in the field.

### Personnel Training

The Unit as part of the Forestry School has given assistance to advanced students in research work. This has included field trips, supervision of field studies, and direction of five master's degree and twenty-six bachelor degree theses. This type of training may, perhaps, produce as lasting values in the wildlife field as any of the research findings.

Students who have worked for, or in cooperation with the Utah Research Unit since its establishment, are employed in federal positions in the Biological Survey, Forest Service, Soil Conservation Service, Grazing Service, and Park Service. At the present time (April 1940), former students are conducting or assisting in the carrying out of state wildlife research and management projects in Utah, Idaho, Wyoming, Colorado, Arizona, West Virginia, and North Carolina.



## Future Program

The program of the Wildlife Research Units has recently been approved to continue for a second five years, beginning July 1, 1940. This will call for a revision of the separate projects in line of the findings and the needs that have developed since the inception of the program. The Utah Unit's major objective will continue to be (1) to do research to assist in solution of important wildlife management problems of this state and the intermountain area; (2) to aid in training of young men in this field; (3) to conduct trial management areas putting into practice the facts learned from the research program; and (4) to aid spread of accurate information on wildlife and wildlife problems.

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## Notes on Photography

LEE KAY

The various phases of out-of-door photography that one might take up makes it necessary to decide on the particular work in which to specialize before selecting the proper equipment. If one is going to do only scenic work, the equipment would be somewhat different than if wildlife subjects are chosen for study. Another thing for consideration is whether motion picture photography or still pictures is to be done. Whichever the case may be, one still faces the problem of selecting the type of equipment best suited to his needs.

In recent months great advancement has been made in the production of equipment and films. Even the old box-like Brownie Cameras of a few years ago have undergone the changes of at least being streamlined. The newer, more expensive cameras have been equipped with faster lenses, more rapid shutter speeds, built-in range finders, critical focusing devices, and other changes. These have indeed made them splendid pieces of equipment to use. The films and printing papers have also gone through interesting and important changes that makes it possible to do much better work under more extreme conditions than has ever been done before. The photographic work of the writer has been mainly that of securing motion pictures, although it has been necessary to do a great deal of still photography to accomplish this work. A great deal might be written about the hundreds of different phases connected with this work, but the remainder of this paper will deal primarily with general points to be remembered in taking either still or motion pictures.

Everyone constantly wishes that he may be able to make pictures that are outstanding and there is no reason, with a little care and even modest camera equipment, that he cannot take pictures of an outstanding quality. With the great amount of authentic material that is published each month in our many magazines by experts of photography, and with the fine selection of cameras and films available, one need not feel that there were no "vitamins" in the sunshine while making his pictures. There is no reason why, insofar as exposure and focusing are concerned, a hit should not be scored nearly every time. For example, if a good picture is shot at stop f. 11 with an aperture opening of 22 using a film of a certain speed, there is no reason why under similar lighting conditions, good pictures cannot be repeated. I find that if I am trying to make either all motion pictures or all stills, I do better work if I take only the one camera. One hesitates to do this for fear something will come up that he does not want to miss.

I find it easier to get good motion pictures than to get good still pictures, especially under unusual circumstances, because there is only one shutter speed to deal with. This largely alleviates the possibility of making one type of mistake. Then, too, the motion picture camera is usually equipped with a series of lens that enables the cameraman to obtain pictures that he would be unable to get with a still camera. In order to make good motion pictures one must remember that the camera should not be picked up and put down, for I would say as a basic rule in cinematography, the camera should be kept stationary. This principle is equally important in taking still pictures and is one of the hardest things for an amateur to do. Therefore one should use a tripod to hold the camera in a firm position.



## THE UTAH JUNIPER

This makes it possible to use a smaller aperture opening and a slower shutter speed. If the camera is to be held in the hand, it is not advisable to shoot slower than 1/50 of a second.

If one is going to do any panoramic shots, he should make sure that his tripod has a panoramic head, and even then it will require some experience to get shots that are not jerky. A very good rule to remember in making panoramic shots is to move the camera as slowly as possible even though it seems to much footage is being used. Under some conditions it is even desirable to make a panoramic view using the slower motion adjustment. One must compensate, of course, with a larger aperture opening when this is done. A mistake often made in filming moving objects is to move the camera with the object, thus giving a rather disturbing effect as one tries to watch the object, and sees the background slipping away from him. Under some conditions it is better to focus the camera so that the moving object will come through the sight and move across the field of vision; then change the position of the camera and repeat until the desired footage is obtained. The jerkiness may be eliminated by resorting to the slow motion mentioned above. However, with some subjects this is not a desirable thing to do for it fails to give the right idea of their movements. When shooting at close range, it is not a correct procedure to make a picture of the subject as it passes directly in front of the camera, for the shutter speed will tend to make jerky movements. If it is possible, shoot this from an oblique position, otherwise it would be necessary to use a slower motion and then under some conditions that would not give the desired effect. On the other hand in making a picture from a moving position, such as from an automobile, train, or airplane, a much steadier picture is obtained by shooting it in slow motion. It is amazing what a smooth effect is obtained when the picture is projected.

More people are using still cameras today than ever before. Great advances have been made not only by the professional photographer but also by the amateur. I find that many amateur photographers come back from taking pictures feeling that they did not get the best results because of meager equipment, but some of our best pictures are made with simple cameras. Many think that the light meter is a very necessary part of their equipment, but for one who has any sense of light values at all, the light meter is not absolutely necessary and particularly if the photographer is limiting himself to a certain small selection of films. Where the photographer uses many varieties of films a light meter would be desirable; otherwise, a small card obtainable at any photo store will give the information needed.

It is surprising what the 35 mm. film will do. Excellent "bring-ups" as large as 8" x 10" can be made. It is often found that the amateur photographer will immediately accept the faster films for his use and very often experience

*Continued on page 47*



Flying Snow Geese shot at 1/500,  
f. 8 with a four-inch telephoto lens.  
(Photo by Lee Kay)





FACULTY

CLASS

ORGANIZATIONS

# Faculty



## DEAN PAUL M. DUNN

Paul, the most popular member of the forestry faculty, directs the school with clock-like precision. He plays a prominent role in "dishing" out jobs to foresters.

## DR. ROBERT P. McLAUGHLIN

"Doc" teaches by remote control at summer camp. He delights in catching dendrologists with fake specimens in tests.

## DR. D. I. RASMUSSEN

"Doc Rass" is seldom seen around the campus. His saltatorial travels for the Utah Cooperative Wildlife Research Unit and the Biological Survey take up most of his time.

## DR. LAURENCE A. STODDART

"Doc" sits in his office during spare time with his feet on the desk absorbed in reading range tales. He is always willing to meet his students half way.

## DR. STILLMAN WRIGHT

Dr. Wright conducts research on Bear Lake for the U. S. Bureau of Fisheries to occupy most of his time. He has spent four years in Brazil and can tell tales of the Amazon.

## PROFESSOR GEORGE H. BARNES

He's the man they see when there's work to be done. He works diligently for the interest of each and every forestry student.

## PROFESSOR J. WHITNEY FLOYD

Besides being Extension Forester, "Whit" keeps up the spirit of both the faculty and students by constantly sharing his radiating good humor with his associates.

## PROFESSOR GEORGE H. KELKER

He expounds the theories of Wildlife Management to the "wildlifers." A wizard at mathematics, he delights in giving involved formulas to explain (?) his points.

## PROFESSOR ARTHUR D. SMITH

"Art" assists "Doc" Stoddart in directing Range Management and delivers lectures well seasoned with lists of figures that "may or may not be significant."

# Master Degrees

## CANDIDATES FOR A MASTER OF SCIENCE DEGREE FROM THE UTAH STATE AGRICULTURAL COLLEGE, SCHOOL OF FORESTRY

### Wilmur Bartels (1941)

B.S. Michigan State College (1938). "Correlation of data collected at checking stations relative to weights, measurements, and age determination of the Mule Deer."

### Thomas Evans (1940)

B.S. University of Maine (1937). "Life history study of the Mule Deer in Northern Utah."

### Phillip Haas (1940)

B.S. South Dakota State College (1937). "Ecology of the Beaver in Northern Utah, with special reference to water relationships."

### Richard Harris (1940)

B.S. Utah State Agricultural College (1938). "A statistical analysis of the plot method of range reconnaissance."

### Clayton Lehmer (1941)

B.S. Pennsylvania State College (1939). "Life history investigations of the Sage Grouse in Utah, with special reference to mortality phases."

### John E. McDonald (1941)

B.S. Utah State Agricultural College (1938). "Factors influencing value of range lands in Utah."

### Marcus Nelson (1941)

B.S. Utah State Agricultural College (1938). "Study of waterfowl nesting habits in the Bear River delta."

### Francis Oberhansley (1941)

B.S. Utah State Agricultural College (1924). "Food predilection of the Coyote in Sequoia National Park."

Two students have been awarded their Master of Science degree in June 1939. They were:

### A. Lynn Griner

B. S. Utah State Agricultural College (1938). "A study of the Sage Grouse (*Centrocercus urophasianus*), with special reference to life history, habitat requirements, numbers, and distribution."

### Wallace R. Hanson

B.S. University of Alberta, Canada (1938). "The ecology of *Agropyron inerme* on protected and heavily grazed range land in Cache Valley, Utah."



# Graduating Seniors

From little Frosh these mighty Seniors grew. . . . Set the example for Juniors and underclassmen. . . . Close books to take gals to Paul's Party. . . . Furnish initiative for committees, act accordingly. . . . Form backbone of Utah Foresters. . . . Loudly discuss Forest Management, Advanced Range, Limnology, and Theses. . . . Converse congenially with graduate students. . . . Apply for summer employment. . . . Set their goal for a Civil Service appointment—some attain. . . . Happy. . . .

Herewith presenting the men of the hour, the Utah Foresters of 1940.

**RAY W. ANDERSON**, Heber  
Range Management  
Xi Sigma Pi, Summer '33-'39 U.S.F.S.

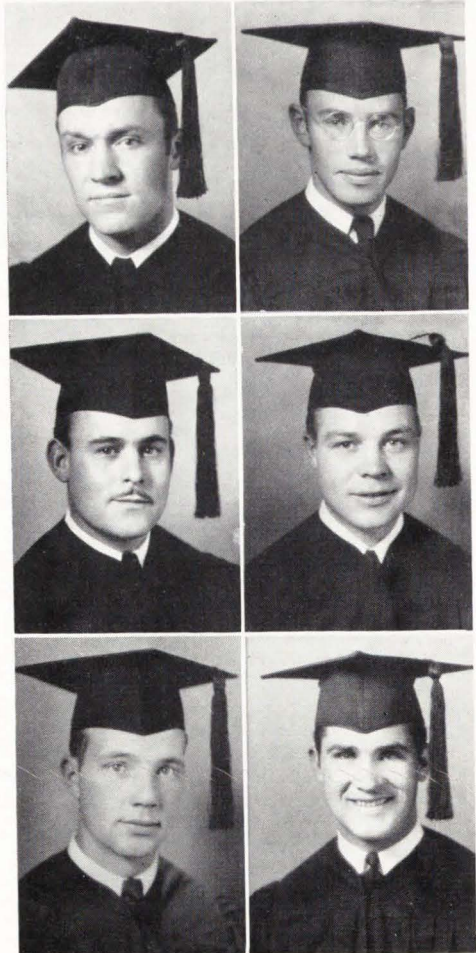
**H. WAYNE ASHCRAFT**, Moccasin,  
Montana  
Wildlife Management  
'34-'35 Montana State College

**LAWRENCE AUSTIN**, Salt Lake City  
Wildlife Management

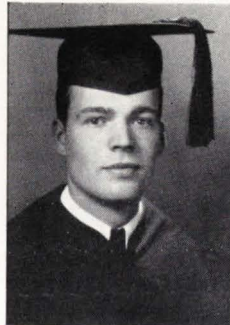
**MERLIN BISHOP**, Delta  
Range Management  
Pi Kappa Alpha

**KENNETH BOWER**, Chesterfield,  
Idaho  
Forest Management  
Xi Sigma Pi, Vice President '40; Phi  
Kappa Phi, Alpha Zeta, Summer '37  
Field Asst. I.F. and R.E.S., Summer  
'39 Fire and Rec. Guard, U.S.F.S.

**JOHN FRANK BRINGHURST**,  
Springville  
Wildlife Management  
Sigma Nu, President '38



# SENIORS



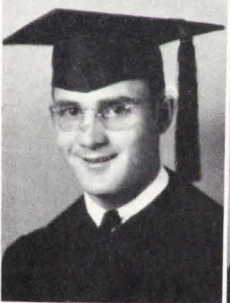
**GARLAND CALL**, Rigby, Idaho  
**Forest Management**  
Summer '38-'39, Stoddard Lbr. Co.

**ED CHATELAIN**, Ogden  
**Wildlife Management**  
Xi Sigma Pi, Phi Kappa Phi, Scabbard and Blade, Bus. Mgr. Utah Juniper '38-'39-'40, Summer '37 Student Asst. G.B.B.E.S., Utah State Deer Check '38-'39



**MAX B. CLINKINBEARD**, Alemena, Kansas  
**Forest Management**  
Xi Sigma Pi, Ranger '40; Phi Kappa Phi, Scabbard and Blade, Summer '37 Blister Rust U.S.F.S.

**TALMAGE D. COOPER JR.**, Salt Lake City  
**Forest Management**  
Mt. Logan Ski Club, Summer '39 Fire Guard, U.S.N.P.S.



**CLYDE A. CURTIS**, Logan  
**Forest Management**

**LAWRENCE C. DAVIS**, Venice  
**Range Management**  
Summer '39 Rec. Guard U.S.F.S.



**LORIN DEDRICKSON**, Salt Lake City  
**Wildlife Management**  
Xi Sigma Pi, Phi Kappa Phi, Rifle Team, Captain; Summers '38-'39 U.S.A.C. Tree Nursery, Winter '39 Part Time Asst. Wildlife Research Unit

**H. KEITH ERICKSON**, Lehi  
**Range Management**  
Men's Glee Club, Summer '37 A.A.A. Farm Program, Summer '39 Summer Camp Employee



**JOHN HAMPTON**, Morton Grove, Illinois  
**Forest Management**  
Xi Sigma Pi, Alpha Zeta, Fencing Club, All Campus Fencing Championship '39

**REUEL JANSON**, Cedar City  
**Wildlife Management**  
Xi Sigma Pi, Summer '39 Forest Guard, U.S.F.S.



# SENIORS

**NED L. JENSEN**, Fairview

**Forest Management**

Summer '37, Student Asst. C.C.C.,

Summer '39 Summer Camp Employee

**C. MAURICE JOHNSON**, Salt Lake City

**Forest Management**

Juniper Staff '40, Summer '39 Student Asst. U.S.S.C.S.

**ELLIOTT R. KILLPACK**, Huntington

**Range Management**

Xi Sigma Pi, Secretary '40; Alpha

Zeta, Summer '38 Blister Rust Control

U.S.F.S., Summer '39 U.S.A.C.

Range Exp. Sta.

**VAUGHN D. MADSEN**, Fairview

**Wildlife Management**

Summer '39 Summer Camp Employee

**RICHARD MARSTON**, Layton

**Range Management**

Xi Sigma Pi, Alpha Zeta, Juniper

Staff '40, Summer '36-'40 Research,

I.F. and R.E.S.

**YALE MITCHELL**, Boise, Idaho

**Forest Management**

Xi Sigma Pi, Society of American

Foresters, Summer '28-'29-'30 Fire

Warden, U.S.F.S.; Summer '34-'35

Fire Guard, U.S.F.S.

**NOLAND F. NELSON**, Brigham

**Wildlife Management**

**KENNETH OKESON**, Holladay

**Forest Management**

Summer '39 Fire Guard, U.S.F.S.

**REID OLSEN**, Logan

**Forest Management**

Student Council '40, Mt. Logan Ski

Club, President; Summer '37 Boise

Basin Exp. Sta., Summer '38, Brush

Disposal U.S.F.S., Summer '39 Rec.

Guard, U.S.F.S.

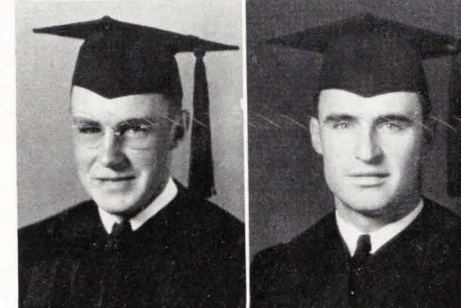
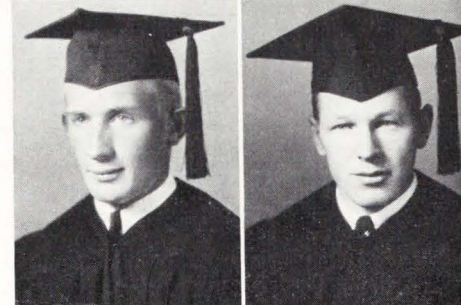
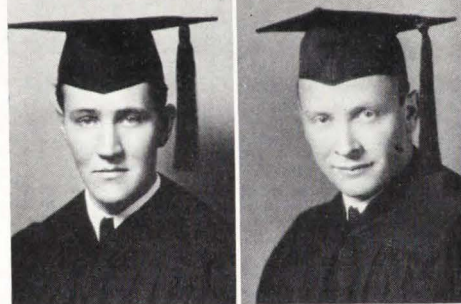
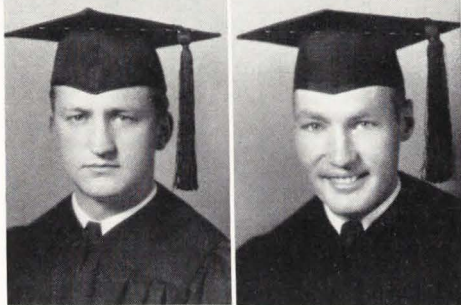
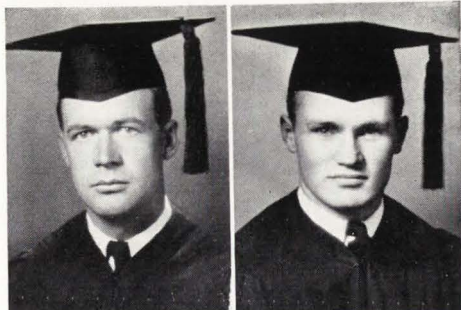
**MARCEL PALMER**, Logan

**Range Management**

Summer '38 U.S.A.C. Range Exp.

Sta., Summer '39 Range Examiner

A.A.A.



# SENIORS



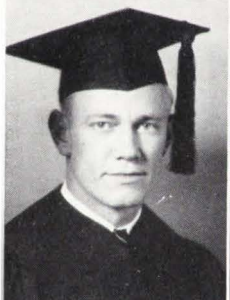
**MAX REES**, Inkom, Idaho  
**Range Management**  
 Summer '36-'37-'38 Forest Guard  
 U.S.F.S.

**FRANKLIN ROBINSON**, Bozeman,  
 Montana  
**Range Management**  
 Rifle Team, Summer '37 Guard  
 U.S.F.S.; Summer '38 Lookout,  
 U.S.F.S.; Summer '39 Asst. District  
 Fieldman, A.A.A.



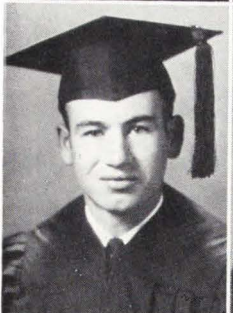
**MAX ROBINSON**, Torrey  
**Range Management**  
 Xi Sigma Pi, Phi Kappa Phi, Summer  
 '37 Western Range Survey, U.S.G.S.;  
 Summer '38 U.S.A.C. Range Exp.  
 Sta.; Summer '39 Forest Guard,  
 U.S.F.S.

**PAUL SCHERBEL**, Salt Lake City  
**Range Management**  
 Utah Foresters, Secretary '38-'39-  
 '40; A.W.F.C. Delegate '39, '40



**THOMAS H. SEVY**, Richfield  
**Range Management**

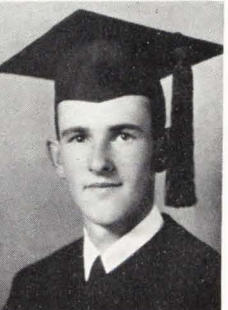
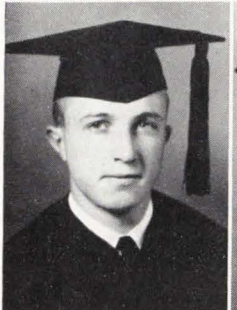
**ELDON H. SMITH**, LaPorte, Indiana  
**Wildlife Management**  
 Summer '36-'38, A.A.A.  
 Summer '39, U.S.S.C.S.



**NATHAN J. SNAPP**, Oakley  
**Wildlife Management**  
 Delta Phi, Glee Club

**HAROLD K. SPEIRS**, Vernal  
**Range Management**  
 Alpha Zeta, Censor '40; Editor, Utah  
 Juniper '40; Summer '37 Planetable  
 Operator A.A.A.; Summer '39 Fire  
 Guard, U.S.F.S.

**W. FRANTZEN TODD**, Ogden  
**Range Management**  
 Xi Sigma Pi, President; Alpha Sigma  
 Nu, Blue Key, Alpha Zeta, Associate  
 Editor, Student Life '40; Associate  
 Editor, Juniper '38-'39; Summer '38  
 Lookout, U.S.F.S.; Summer '39 Stu-  
 dent Asst. Range Mgt. U.S.S.C.S.



**JAY R. UDY**, Farmington  
**Wildlife Management**  
 Summer '39 Student Asst., U.S.B.B.S.





### UTAH FORESTERS

First Row: F. Phillips, J. Wikstrom, J. Bernhard, C. Meldrum, H. Skidmore, R. Anderson, M. Palmer, L. Green, L. Colton, P. Scherbel.

Second Row: T. Sevy, M. Johnson, B. Hermansen, N. Wilcox, G. Call, G. Tripp, W. Stevens, L. Cook, L. Crookston, O. Brown.

Third Row: E. Maw, L. Lermer, J. Burt, J. Schneider, J. Hampton, L. Dedrickson, J. Udy, L. Austin, V. Madsen, W. Murray.

Fourth Row: A. Truden, H. Hiner, D. Latimer, R. Liston, R. Hampton, S. Baker, H. Jensen, E. Chatelain, R. Carey.





### UTAH FORESTERS

First Row: H. Speirs, E. Killpack, R. Young, P. Jenkins, H. Perry, L. Grover, J. Quayle, R. Branges, J. Taylor, A. Sidorsky, J. Dubois, D. LoVerme.

Second Row: R. Corey, H. Grace, J. King, V. Speakman, P. Tucker, L. Bergen, C. Ott, C. Gabardi, N. Jensen, F. Todd, M. Clinkinbeard, R. Hansen.

Third Row: V. Rudolph, J. Patterson, J. Edwards, A. Mitchell, G. Kruse, B. Smith, L. Merrill, M. Hall, L. Davis, E. Boyle.

Fourth Row: R. Gooding, A. Ahlm, C. McConnell, R. Hanson, K. Bower, K. Okeson, G. Harline, C. Curtis, W. BOWENS, W. Giauque.



### XI SIGMA PI FRATERNITY

- First Row: E. Killpack, M. Clinkinbeard, R. Janson, K. Bowers, M. Robinson, R. Marston, F. Todd.
- Second Row: L. Dedrickson, E. Lofthouse, Dr. McLaughlin, P. Tucker, J. Hampton, Dean P. M. Dunn, Professor Kelker, V. Rudolph.
- Third Row: E. Chatelain, R. Anderson, H. Grace, Y. Mitchell, J. Bernhard.

### Phi Gamma Rho and Xi Sigma Pi

Since its organization, one of the aims of Phi Gamma Rho has been to become affiliated with Xi Sigma Pi, national forestry honor fraternity. This aim was finally realized when the Lambda chapter of Xi Sigma Pi was installed on the Utah State Campus April 27, 1940. The installation was made by Bror L. Grondal, Forester of the fraternity and member of Alpha Chapter at the University of Washington.

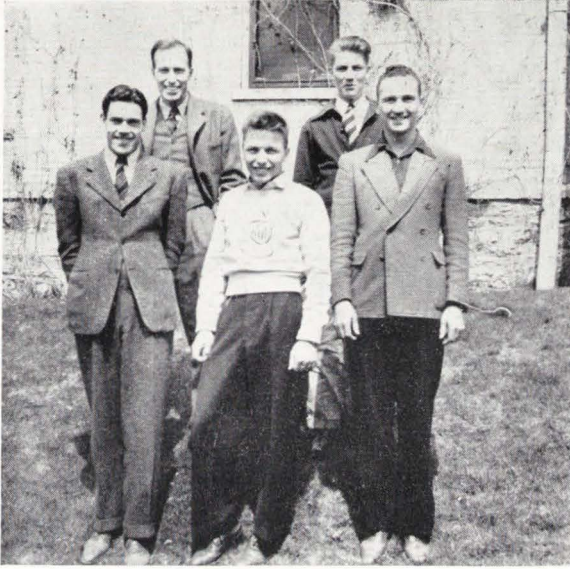
Phi Gamma Rho, forestry honor fraternity, was organized on the Utah State Campus March 26, 1936. The purposes of this organization were to stimulate high scholastic attainment by students of forestry, to create interest in forestry and related subjects, and to act as a nucleus for irradiating ideals of conservation to the general public. These purposes have been advanced through suitable projects and activities since its organization.

Some of these projects which have been completed by Phi Gamma Rho, include establishing an honor plaque on which is engraved each year the name of the student with the highest scholastic average of each class, construction of a trophy case for the forestry building, purchase of reference books for the forestry library, and planting of trees on the college campus. Two pin oaks were planted this year in observance of Arbor Day.

Xi Sigma Pi was founded at the University of Washington in 1908. Xi Sigma Pi stands for clean scholarship, and its members, both individually and collectively, encourage forestry activities at the institutions with which they are connected, by active participation in the projects of their respective forestry clubs, and by special chapter projects for encouraging the development of leadership in school activities. Thus the program and activities of the fraternity will be essentially the same as that pursued by the local chapter.

*Continued on page 52*





### CHIPS STAFF

First Row: H. Speirs, R. Corey, G. Kruse.  
Second Row: Dr. Stoddart, P. Scherbel.

## Chips

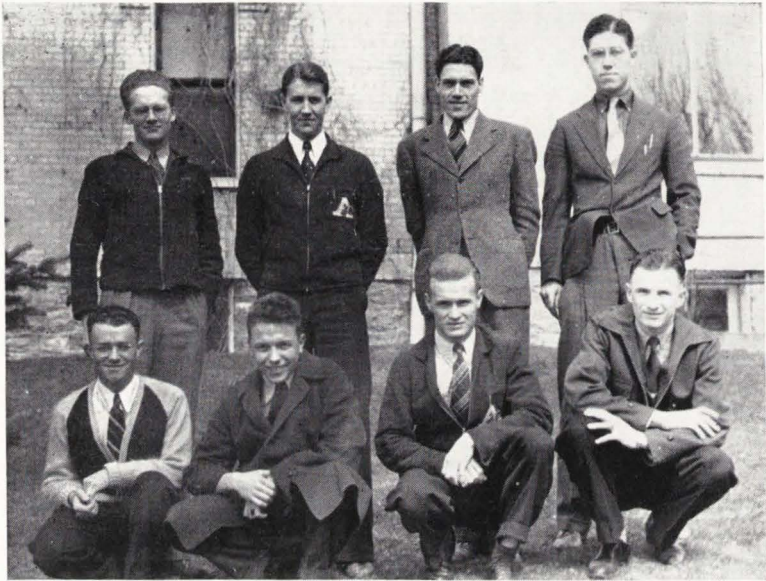
Surviving its initial year, CHIPS, the Utah Foresters' news letter, was this year invaluable in furnishing news of the forestry school, students, announcements, and supplying references to valuable current articles and publications. It provided an indispensable method of communication between club officers and members, which has been partially responsible for one of the most successful years in the annals of the Utah Foresters.

The first copy was edited early for the first day of the Fall Quarter by Robert E. Corey. It was a Freshman edition designed to convey club ideals, customs, and good fellowship to the Freshmen as an incipient drive for Freshmen membership in the club.

Although the editorship was ever changing, contributions of note were made by Frantzen Todd and Harry Grace in this capacity before Robert Corey finally took over the task permanently. Other staff members have been: Harold K. Speirs, Gleason Kruse, Paul Scherbel, Rex Hampton, and Elmer Cox. With the cooperation of the club and department funds, CHIPS has been successfully maintained another year. Secretarial aid was furnished by Dean Dunn with the services of Misses MaRee Clawson and Evelyn Peterson.

CHIPS has a circulation of two hundred copies per week within the School of Forestry. In addition, contact is maintained with various graduates and other forestry schools; forest, range, and wildlife agencies throughout the western United States are also included in its mailing list.





First Row: L. Ramelli, R. Corey, M. Johnson, V. Rudolph.  
 Second Row: C. Ott, R. Marston, H. Speirs, B. Smith.  
 Absent: Professor Kelker, E. Chatelain, G. Kruse.

### Utah Juniper Staff

HAROLD K. SPEIRS.....	<i>Editor</i>
PROFESSOR KELKER.....	<i>Faculty Advisor</i>
ROBERT E. COREY.....	<i>Assistant Editor</i>
VICTOR RUDOLPH.....	<i>Co-Business Manager</i>
EDWARD CHATELAIN.....	<i>Co-Business Manager</i>
GLEASON KRUSE.....	<i>Assistant Business Manager</i>
MAURICE JOHNSON.....	<i>Circulation Manager</i>
RICHARD MARSTON.....	<i>Staff Writer</i>
LLOYD RAMELLI.....	<i>Staff Writer</i>
B. C. SMITH.....	<i>Photographer</i>
CHARLES W. OTT.....	<i>Assistant Photographer</i>

### CONTRIBUTORS

J. Deloy Hansen  
 Duane Haacke  
 Rex Hampton

Harold Hiner  
 Marcel Palmer  
 Neil Wilcox

Lorin Dedrickson

FORESTER'S EDITION

FORESTER'S EDITION

# The Student Life.

# PAUL BUNYAN ARRIVES

### Phi Gamma Rho Goes National, Plans To Join Xi Sigma Pi Early In The Current Year



### Frustrating Frustration

### Famed Choir Comes Here In Concert

Local Organization Shows Interest From Features in Thirties Since It Began Four Years Ago

### Found! Famed Off-Spring Of Babe The Blue Ox

... ..

### Bunyan, Godfather Of Forestry Introduces New Tree To World In Great Conservation Move

### Paul's Assistant



Species Obtained By Crossbreeding Shows Great Fossiliferous, Pure Broom In Line For Nobel Prize

### Utah State's Militarists Await Ball

### Four Men Will Attend Conclave

### Foresters Prepare For Utah Jumper

### Groves Presents Play At Down Town Theater

### Club Gives Program Honoring Parent

### Team Check-Out Days At Norway

### Foresters Defend Paul From Vandalism

### Committee Begins Medical Investigation

### NEWS: Are You Covered?

### Franklin Announces Advisory Interviews

### Students Change Little Theatre Play

### French Club Bring 'Life of Bonaparte'

### THANKS

## Activities





### CLUB COUNCIL

D. Latimer, H. Hiner, B. Smith, P. Scherbel, L. Crookston

## Our Club

The past year has really been a banner year for the Utah Foresters. A club council was begun as a result of a changed constitution. It is composed of regular club officers and in addition, one representative from the three lower classes. Its function is to make all important decisions regarding club funds and to aid in better and more efficient administration of the club itself. The council members during the past year were Harold Hiner, president; Dave Latimer, vice-president; Paul Scherbel, secretary; B. C. Smith, Junior class representative; and Lynn Crookston, Sophomore class representative. The representative from the Freshman class discontinued school. J. Whitney Floyd again acted in the capacity of Faculty advisor.

With such a group to lead the Utah Foresters, the year started off with a bang, said "bang" being the Fall Barbecue where barbecued elk and beef were served along with good old cider. The Foresters had their first chance to show their mettle during the Ag Show when their exhibit took first place. The "high spot" of the whole year was reached during Forester's Week when the Foresters exhibited more spirit than is ordinarily found throughout the whole school.

An enviable record was set in intramurals, which is in marked contrast to our standing in the past. This year our intramural teams have received absolute cooperation and have been backed very enthusiastically by all the fellows.

It has been a pleasure, indeed, to see a well organized group of Foresters surge forward to cop first place honors in sports, lead in social activities, and demonstrate spirit for the whole Aggie student body of which they form so vital a part.

*Continued on page 48*



## The Autumn Barbecue

The annual autumn barbecue found the Utah Foresters deserting their beloved nursery and its well-bowed shovel handles for a day of revelry at Guinevah Park in the ever beautiful Logan Canyon.

Upon arrival they found themselves confronted by a friendly tribe from the north known as the Rangers. The base camp of the Rangers was up in the brushy vicinity of Tony Grove. Detecting the aroma of "Beef-steak" Cooley's barbecue they had come forth to plunder. Not only did these Rangers appear more hungry than the well-fed Foresters, but suspicions were aroused as to the capacities of those ponderosities noted about their midriffs.

Fully in accord with someone's philosophy that an "empty stomach holds more," everyone trooped off to better equip themselves for the barbecue by indulging in a series of games.

The sophomores trounced all comers in a fast softball series. They were trailed by the Juniors, Seniors, and Rangers respectively. The Juniors retaliated by taking first place in a game of volleyball. They were followed by the formidable group of Rangers who stepped in to claim second place by a good margin. The tugs-of-war found the various teams very well paired. The Seniors and Juniors tied for first place, the Sophomores and Rangers tied for third place, while the Freshmen and Faculty shared the consolation. Horseshoe singles found the Juniors to be superior through the personage of that dynamic horseshoe slinger, Neil Wilcox. In the doubles competition, Max Robinson and Ed Chatelain, Seniors, were victorious over their less experienced rivals. Woodchopping was won by Loyal Cook, a Junior, who proved his abilities by defeating all comers. Two-man bucking teams were unable to cope with the speed of Yale Mitchell and Ray Anderson.

Finally came the egg-throwing contest, with Vaughn Madsen in charge of the eggs. The Seniors had, as a result of superior knowledge and training, the most thorough understanding of the nature and limitations of eggs. They were sparked by Tom Sevy, who pitched his egg higher, caught it more neatly and presented it in the most approvable condition to the critical judges. Several less experienced lads awaited timidly and not too happily for a second bounce. Professor Barnes, representing the Faculty, threw his egg beautifully, caught it, and—there was a potential omelet right there.

The Juniors, when all activities were over, had triumphed over all rival teams. Close upon their heels came the subdued but undaunted Seniors, who were in turn followed by the Sophomores. Fourth place was shared on equal terms by the Rangers and Freshmen.

With laurels won and temptation just a little beyond endurance, winner, loser, and also-ran responded in true native style to the call to the barbecue. Team competition and rivalry were promptly put in the shadow. No sooner was the first line filled than "seconds" began to make their appearance. These "seconds" seemed to the Kitchen Police to come back indefinitely, but at last the shuffling of feet gave way to contented sighs and murmured thoughts of home.

No next year, same place, same time, with more eats, for a bigger and better time, we, the Utah Foresters, will meet again.

## In Memoriam



To Oscar W. Cooley, who passed away March 27, 1940, we offer this final tribute. He distinguished himself as a football athlete at Utah State in the early history of the school. He returned in 1912 to act as head of the Cafeteria and for 22 years he filled this position. From 1935 to 1938, when a cook was needed for extensive college field trips, Mr. Cooley was always glad to proffer his services.

Mr. Cooley, a cook par excellence, began his association with foresters in 1936, when he took over the cooking duties for the School of Forestry Summer Camp, in Logan Canyon. For the past three autumns he was employed by the U. S. Forest Service to cook at their annual Ranger School.

The professional and student foresters lament the passing of a conscientious and congenial acquaintance.

## Summer Camp of '39

By JACK EDWARDS

The harsh clanging of a bell suddenly penetrated the cool morning air. It was the "get up" bell rudely interrupting our state of sweet repose. A few of the hardier specimens took heed and donned their clothes as the camp slowly began to show signs of animation. A few bleary-eyed foresters staggered sleepily towards the wash house, emerging a few minutes later as new men. With a Comanche whoop the early birds violently rushed back into the barracks (God help the stragglers remaining in bed), and without warning, said stragglers were dashed in the face with cold water or unceremoniously rolled on the floor—bed and all. At this moment the breakfast bell rang and a mass of humanity gushed out of the barracks, down the hill, and into the mess hall, leaving the sleep snatchers to untangle themselves as best they could.

Once in the mess hall there was a rush for the tables as we eagerly sat down to a session of "grub grabbing." In the midst of the following pandemonium a pair of healthy lungs would shout "Shoot the spuds," or "Toss me a cackle-berry." Along with these phrases were many other expressive commands. During this very informal procedure, Tom Phillips and a few other fellows with puny appetites, would dispose of their china-ware and file out of the hall, leaving those remaining to gorge themselves to a degree of discomfort. "Beefsteak" Cooley and his kitchen aids, Ned and Vaughn, very efficiently kept food streaming onto the tables until even the hardest eaters were satisfied. Although eating numbered only one phase of our Summer Camp, it claimed the greatest and most whole-hearted participation.

The first night in camp "Doc" McLaughlin called a meeting for the purpose of electing officers. Elliot Killpack (Cyril P. Kilpatrickson, the Irish Swede) was elected to the office of Mayor. Big, bad Burl Hermanson was elected "Bull" of the south barracks, and Dave "Ducky" Latimer was made boss of the disorderly north barracks. Bob Carey was chosen athletic manager.

Soon after the beginning of camp the pride and joy of the School of Forestry was driven into camp, a GMC panel truck. After a few field trips the boys christened it "The Nauseator." Nevertheless it saved us many long hikes.

Meeting each morning at eight a. m. at the stock room to obtain the necessary equipment was the way it began. The first two weeks were spent in training under the expert instruction of Professors Floyd and Stock to become surveyors deluxe. During this period of apprenticeship, many of us became very proficient "Note Doctors," that is, we could arrange a set of notes so that the B.S. and F.S. would always balance. Bench-mark Hill seemed equal in elevation to Pikes Peak the day we ran differential levels from the new administration building to its summit. Discrepancies in elevation were numerous, but each party, exuberant with ego of their newly acquired skill, was certain that they knew the true altitude. As for laying out curves, that was very easy for "Kapooch" Howard because he said he had had previous experiences. Whisperings indicated he didn't mean the same kind of curves we did.



Assistant Supervisor Hansen, of the Cache National Forest, very expertly demonstrated to us (even Anderson) how to use a shovel. Inasmuch as one can never be a true Forester until he has exerted his efforts extinguishing a forest fire, and to apply our new "shovel knowledge," Mr. Hansen started a blaze for us to work on. When he shouted "FIRE" we ran up the slope to corral the flames. We arrived so out of breath that we could scarcely talk, not to mention work. By some miracle, however, the fire was controlled and the mop-up work followed.

Small scale milling and logging operations were explained to us by "Doc" McLaughlin. We studied the habits of the fishes, deer, and rodents under the direction of Professor Kelker, to further broaden our education.

Professor Barnes' class in scaling consisted of two phases: first, scaling the cliffs above camp, and then scaling the larger trees on the school forest. Timber cruising, also under Professor Barnes, was done in Franklin Basin. We'll always remember what happened to Kasler, Van Cott, and "Rosie" that last day up there.

Many existing range problems were proficiently drawn to our attention by Professor Smith. Range studies provided us with means and systems for making a range reconnaissance. This included quadrat studies and calculating F. A. F.'s to determine carrying capacities. We learned that a type map is not obtained on a typewriter and that the Greek hero, Achilles, is commonly known as Yarrow or somethin'.

Under the four P's, life at Summer Camp was not dull. Professors, programs, poker, and pranks were at different times offering an excellent channel in which we could direct our overflowing energies. It was not uncommon for one of us to come in from the field and have no bed, only to find it perched peacefully on top of the barracks. Do you remember the time Kasler spent half the night cruising aspen in search of his bed? the night that Hooper got a boot in his face while attempting to roll Albertson out of bed? short-sheeting and bed cocking, and many other pranks? —but it was all great sport.

Recreational activities, under the direction of Bob Carey, got off with a bang when a series of softball games were played with the CCC boys. Volleyball became a favorite sport after the purchase of a new ball. Excitement and enthusiasm reigned supreme when Group I played Group II for the candy. So along with this variety of recreation, it was easy to keep our minds from our studies.

Summer Camp was attended by 51 students, representing 18 states and Canada. It filled its purpose well by serving as a large-scale field laboratory to familiarize us with the practical side of Forestry. We were exposed to actual applications of our theories.

In retrospect, we had the time of our lives. Our associations were pleasant. Our experiences and memories will incessantly be a source of sweet reminiscences. A toast to the men attending the Summer Camp of '39: may it ever excite one of our most outstanding memories. How about it, FORESTERS?



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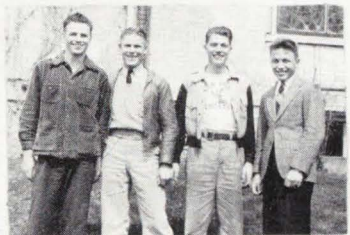
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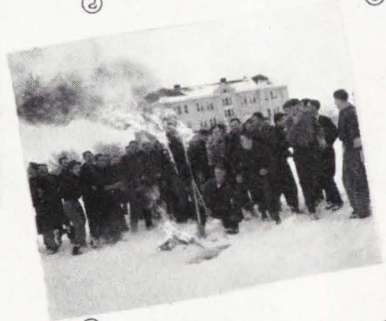
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9

1. Meet Mr. McConnell of the famous McConnells. 2. C'mon boys, peel dem spuds. 3. Contesting at the Fall Barbecue. 4. Where did you get that Rattler. 5. Utah State representatives at the A.F.W.C. conclave. 6. The engineers suffer. 7. P. B.'s pals. 8. The most difficult member of the faculty to keep track of, Dr. D. I. Rasmussen. 9. Summer Campers of '39.



## Foresters' Week

Foresters' Week, definitely established as one of the most anticipated annual affairs at Utah State, began its activities on Monday, February 16, when every Forester proudly donned his lumberjack garb to distinguish himself from ordinary students.

In partial payment for the gross insult of kidnapping and hanging of Paul Bunyan last year, an engineer was burned in effigy in front of the engineering building while the engineers stood helplessly by and watched, with tears in their eyes. This renewed the feud with our arch rivals. Several attempts were made during the week to again kidnap Paul, who stood tall and majestic atop the Forestry building. Each attempt was neatly curbed (but sometimes not so gently) by the ever alert and well organized Foresters.

*Student Life*, campus newspaper, was edited by Forester John Bernhard with Robert Corey as assistant. This was a special Foresters' edition. Needless to say, the engineers "got it in the . . . neck." As part of the publicity, handled by Ray Anderson and Paul Howard, a program was broadcast over KVNU, the local radio station.

On Friday, the Foresters' assembly was held with Elliott Killpack in charge. Again, the engineers were "ribbed," but everything was taken in a sporting manner and they somewhat retaliated by blowing some infernal whistles throughout the assembly. The engineers really aren't such bad fellows after all???

Following all the chaos and feuding of the week, the climax was reached as Foresters and the general student body attended the semi-formal dance at 9 p. m. in the evening. It is known as Paul's Party in honor of that superb mythical American woodsman and idol of every Utah Forester, Paul Bunyan. As a favor and program, each couple was given a statuette of Babe, the big, blue ox. Paul and Babe attend this dance every year in response to a special invitation sent by the Utah Foresters.

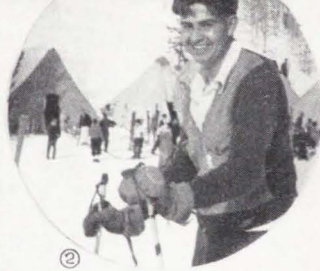
The hall was decorated with Douglas Fir trees and boughs which gave it a distinct atmosphere of a forest. Unlike the engineers and being the true conservators they are, the Utah Foresters seized the opportunity to get the trees from stores at the close of the Christmas season and stored them at the nursery. The committee in charge of decorations was Max Clinkinbeard, Albert Mitchell, and Victor Rudolph.

The week's activities were under the general chairmanship of "Big Push" Neil Wilcox, with Richard Marston and Willard Larson assisting. Thanks are also due to the many club members in aiding whenever they could, namely, decorating, *Student Life* staff, bodyguards for Paul Bunyan, and numerous other occasions when individuals were glad to "chip in" a little time and effort to help the cause along. Such willingness and cooperation made Foresters' Week the success it really was.

Next year, Foresters' Week will be the biggest and best yet because it will be held in conjunction with the annual conclave of the Associated Western Forestry Clubs, during which time the Utah Foresters will act as host. Foresters' Week is now regarded by the student body as the outstanding student activity sponsored by the alive and virile axe-men.



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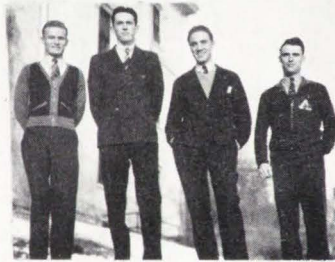
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Forty-three

THE UTAH JUNIPER

1. At Paul's Party—it was great. 2. He would move faster if . . . ? 3. "Artemesia" Art, we're all due for surprises. 4. Our Summer Camp songbirds. 5. The "push" behind the annual banquet. 6. Summer Camp volleyball champions. 7. My, my, Whit—and at your age, too. 8. President-elect of the student body.



## Associated Western Forestry Clubs

In the fall of 1937, a group of enterprising Montana Forestry Club members saw the need and believed the time had come for an organization of the western forestry clubs. Correspondence began and continued until the fall of 1938. Dreams materialized when the first annual conclave of the Associated Western Forestry Clubs was held February 2, 3, and 4, 1939. Our representatives to the Convention were President Hobsen, Paul Scherbel, Harold Hiner, Lamar Mason, and Tom Taylor.

At this time the association was formally founded as exemplified by the Constitution, "To benefit the Forestry Clubs of the various schools by an interchange of ideas and to stimulate good fellowship among the members; to establish and maintain (1) a closer relationship and cooperation between students and professional foresters, (2) a unity of purpose and action within and among western forestry clubs, (3) a high standard of professional ethics, and (4) a system for the location and exchange of opportunities for our colleagues."

The first conclave was a huge success. Our representatives obtained invaluable ideas that were both clever and original to this campus. During the past year club meetings have taken on a more social aspect, with refreshments and various recreational activities filling in the program. This and many other ideas which have been of material aid in promoting the club were received at this first annual conclave.

The second annual conclave was held at Oregon State, in Corvallis, after a successful initial year during which time close contact between member schools was effected by *Affairs*, the monthly publication of the association. Harold Hiner, Paul Scherbel, David Latimer, and Robert Corey were delegates from Utah State. At this conclave many new ideas and possibilities for the promotion of club activities and functions were again brought forth.

To the Utah Foresters the highlight of the convention came with the selection of Utah State as the host club for the 1941 conclave. This automatically elected Harold Hiner as President of the A.W.F.C. Under his capable direction, the Utah Foresters will stage the most successful of all the conclaves by displaying the scenic wonders of Northern Utah as well as the unquenchable spirit of the Utah Foresters during Foresters' Week.

### The Annual Banquet

The "Utah Foresters" and their guests met Thursday evening, March 7, 1940, to attend their thirteenth annual banquet. President Harold Hiner's welcome was followed by community singing of *The Rollicking Rangers* and *Down Under the Hill*, which was led by Lawrence Austin. John Bernhard, congenial and competent Junior and Toastmaster for the evening, successfully directed the banquet from his "spar tree."

President E. G. Peterson gave a brief resume of the rapid advancement the School of Forestry has made. He commented upon the feeling of insecurity he experienced during Foresters' week when the feud between the Foresters and engineers was raging, but stated he would have rather joined the Foresters' forces for protection (applause). The various Forest Service guests were presented by Dean Dunn. A few pertinent remarks

were made by Regional Forester C. N. Woods. Reports of the outstanding activities of each class were given by Lamar Mason, Graduates; Richard Marston, Seniors; Victor Rudolph, Juniors; Lynn Crookston, Sophomores; and Lee Baraclough, Freshmen.

As the last dinner course was being finished, Dr. F. P. Hoskyn, educational advisor of the Ninth Corps Area of the C. C. C., was introduced as the principal speaker of the evening. He commented upon the need of Forestry School graduates in administering the C. C. C. program. He spoke very highly of Utah State graduates that were serving under his supervision.

The tables were arranged in the form of a "U" with Douglas Fir boughs and Sugar Pine cones used for decorations. Roses formed the centerpiece of the tables.

Other highlights of the program were Miss Alice Larson's reading about "wood smelling," and baritone renditions by Lyle Shipley.

Arrangements for the banquet were made by Marcel Palmer, chairman, Maurice Johnson and William Murray.

## Sharpshooters

Last year the Utah Foresters challenged every Forestry School in North America to a rifle team match. Each forestry school accepting the challenge lost to the Utah State axe-men because of their superior marksmanship. Again this year, the Utah Foresters sponsored rifle team competition. Lorin Dedrickson, captain, sent challenges to twenty-nine forestry schools, some of which are located in Canada. And again, the Utah Foresters withstood the competition to emerge victorious over all those who competed. Many schools were forced to award the match to us by default because they were either unable to organize a rifle team or felt that they could not offer sufficient competition.

Final tabulations of the results of the Utah Foresters rifle team matches reveal the following formidable figures. The five schools garnering the highest team total composed of five high men are listed:

Utah Foresters .....	1854
Louisiana State University.....	1808
University of Michigan.....	1767
University of Montana.....	1754
University of Maine.....	1739

The Utah Foresters' Rifle Team was composed of five men. The scores which were selected for the record are (ten shots in each position, with four hundred points possible):

Lorin Dedrickson .....	390
Dearl Buckley .....	375
Harold Hiner .....	373
Franklin Robinson .....	358
James O'Toole .....	358

Doff a hat to the Rifle Team Champions of North American Schools of Forestry.



## Intramurals

Last fall saw the creation of a new league in intramural sports. This league was made up of teams representing the various departments of the college and was aptly termed the "Department League." Previous to this time, the Foresters had always been entered in the Fraternity league. Our arch rivals, the Engineers, who were also former members of the Fraternity league, became members of the newly organized Department league. This league should grow to be one of the largest in the school.

The Foresters have amassed a greater amount of intramural points than any other team in any league so far this year. At the time of this writing, our club team is far ahead of its nearest rival. With only two more events left for competition this spring, the boys in green are almost certain to garner the Department league trophy. During the year we have established the enviable record of losing only three events, "A" and "B" basketball and track. In all other competition, we have either taken or tied for first place.

Much of the success of the Foresters has been due to the unceasing efforts of Manager Bob Carey to always come through with a winning team. Bob certainly has produced some great results this year and he has been ably assisted by Rex Hampton. Notable is the fact that twelve gymnasium suits were purchased by the club to be worn by those taking part in intramural sports. The suits are green with white trimming; they indeed distinguish the wearer with "Utah Foresters" written across the front.

In the first event last fall, Touch Football, the Foresters got off to a good start by taking first place from a fighting Education club. This was followed up in the Softball competition by shutting out the Engineers in the first game, 8 - 0. Then we went on to win the Department league championship by subduing the Ag Club, 4 - 0 in the final game. Wrestling, the next event, found the Foresters tied for the blue ribbon honors with two other teams. It was after this that we suffered our first set-back in "A" basketball, taking only third place.

"B" basketball presented us with another insurmountable obstacle and we were forced to accept fourth place. The Foresters surprised everyone by taking second place among all the teams and first place in the Department league in the annual Open House. Very significant was the fact that the Foresters trailed the winning Sigma Alpha Epsilon team by only a few points. Following this, Volleyball was added to the long string



### WINTER CARNIVAL TEAM

T. Cooper  
R. Hampton  
K. Hampton  
H. Muller  
L. Crookston  
R. Olsen  
J. Major  
P. Blaisdell  
R. Carey

of victories. This was due in part to the Volleyball practice received by the fellows at Summer Camp. In the Winter Carnival, we again placed first in the Department league and second among all teams entered to a strong Sigma Nu team.

In Water Polo, the Foresters again succeeded in overcoming our capable rivals, the Engineers, in an overtime game to win that event. In track for the third time, the Foresters were forced to be satisfied with other than a first place. Fourth place was the best we could garner in this event. The events still remaining on the intramural calendar are Tennis and spring Softball.

This is undoubtedly one of the most successful intramural years in the Utah Foresters' history. All we need to crown the year's success is to take the remaining two events and win the trophy that will be awarded the winner. After that, the Foresters can look back with pride over the year's events and say "well done."



## Notes on Photography

*Continued from page 22*

will show that for outdoor work the faster film is neither necessary nor desirable, especially if the fast films are not to receive special attention in development. If one gets a good picture, he very often wants to enlarge it and the faster films, unless they are developed with the finest grain developer by someone who will take special care with them, will not enlarge without showing a great deal of grain. Therefore, I recommend a fine grained film of moderate speed unless there is a reason for using the faster film.

In making still pictures of moving objects, of course, it is necessary to get speed, otherwise, a blurred picture results. For a bird flying at close range, a speed not slower than a one 1/500 of a second should be used; 1/1000 is better. Of course with greater distances the shutter speed can be cut down if it is desirable. In using a fast shutter speed the aperture must necessarily be opened up; this cuts down the depth of focus, making it very necessary to get a critical focus, otherwise a good picture cannot be obtained. When using the better grade of camera such as Leica, Exacta, or Contax, it requires much more critical work and the photographer finds he must take just as much time and patience today to get a good picture as he did when he first started out.

One of the greatest aids to advancement is careful note-taking on all shots. For instance, make a note of the lighting conditions, the shutter speed, and the aperture opening used. Then when the film is developed the photographer can easily determine what was done wrong and profit by it on his next shot. Volumes might be written on the development and care of films, but, I would just mention the fact here that after the development, the film should be dried in a dust-proof room or special container and then be kept absolutely free from dust and finger print marks. A film cannot be picked up without leaving finger prints which lessens its value for enlargements. After the technique of making pictures has been learned, one still may not get good pictures if he lacks an artistic taste. He must have the power of seeing something back of the lens or the power of putting personality into his shots.



## Our Club

*Continued from page 36*

So, as matters stand at the present time of writing, there is but one major club function remaining. This function has been one of the highlights of previous years' programs and most certainly will be even more so this year. It is the Spring Party, which will be held at the Boy Scout Camp in Logan Canyon. There will be a full moon at the time, so surely, all red-blooded Foresters will be there.

In closing, I wish to express the gratitude of the retiring officers for the splendid cooperation and support we have received in everything we have undertaken. It is certainly gratifying to be backed by such a bunch of "live wires," and as long as you keep your spirit and enthusiasm, you are bound to be successful. Here's wishing the incoming officers all the success in the world and may their term of office be as pleasurable as ours has been.

## How to Identify Trees

First you gotta know the main classes of trees. They come wholesale and retail. They come wholesale in the woods and retail in yards.

Trees are all different from one another—but only in the summer when they got leaves. In the winter, when they are naked, they all look the same.

My father says some smart nature studiers can tell trees apart by their ears, that is, they tell them by their bark, but I don't believe it.

I think the easiest trees to tell is the oaks. All you have to do is look around on the ground until you find an acorn and then you know, like the poets say, "A mighty oak is she."

Books says that birches are the easiest to tell by sight because they got white bark. But that isn't so hot because where I live the bark of a lot of trees is white, 'cause they whitewash 'em. Why I think birches is easy to recognize is because Indians make birch bark canoes out of them.

I can tell maples easy because in the spring they have little tin spouts coming out of them, and then too, they are the trees that maple sugar grows on.

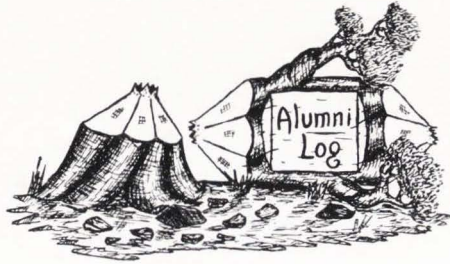
The nut trees are dead easy. There's the Hick, the Pig, the Wall, and Butter, and the Chest. The way you tell them apart is by tasting the nut. At the seasons when there ain't no nuts, who cares what they are?

We boys can tell the fruit tree from away off. They always grow behind fences with signs on "Keep Out." When they ain't got no signs we know the farmer's got a gun.

An ornamental tree that's easy to know is the catalpa. You can tell 'em by the way they are pruned. My father says the closer to the ground you prune them, the better.

Of all the evergreen trees, the hemlocks can be positively identified because they look nearly exactly like the pine and the spruce. To tell a pine from a spruce all you got to do is to sit down and lean your head back against it. If your hair is stuck tight when you try to get up, you guessed right, it's a hemlock.

After all, I think that when you get right down to it, it's a lot easier to identify trees than the books say.—ANON



## To the Alumni

By PAUL M. DUNN, *Dean*

Greetings. To you, the alumni of the Utah State Forestry School, we, the faculty and the students, doff our hats and offer salutations. 1940 means another year has passed and we shall comment briefly in retrospect and a glimpse into the future.

To those of you that read the Alumni Quarterly, I need only to refer to the March, 1940 issue, and the Article "A Decade of Forestry at Utah State." The class of 1939 included the tenth group of Foresters who have graduated from the old school. A total of 230 degrees have been offered in forestry, range management, or wildlife management; two of this group being master's, one in range and one in wildlife. This is quite a growth from the two granted in 1930. About forty-five men will be given their diplomas in June.

The school has had another rather successful year. The total registration has decreased again for the third year, but the figures show nearly three hundred men enrolled during the past three quarters. The out-of-state group numbers about 100, and they come from about twenty-five states of the Union. The graduate work in range and wildlife is a point in this regard and this past winter, twenty-seven men were taking advanced work. We are planning on further strengthening those phases, particularly in the range field, as we are certain that Utah State can offer perhaps the best possibilities in this work in the country.

The importance of the summer training program is becoming more apparent with the problems confronting temporary employment. The graduate must still have experience and we feel that many field angles can be taught at the camp. The building program is progressing and will be continued this summer. The death of Mr. Cooley, whom many of you know, will be a distinct loss, but we will try to replace him some way.

The faculty is still intact and is kept busy. Some new courses were started this year; Conservation and Utah Trees to the general college, and General Range Management to the Ag students. These service courses were quite well received and, I believe, have a place on the campus. The "part-time teachers and part-time travelers": Floyd, Rasmussen and Wright, are certainly on the go, but do maintain many fine contacts. Graham Quate, the state coordinator for the Soil Conservation Service, is officed with us and is handy for advice and comment.

The forestry nursery is still going strong and is expected to increase its size about fifty per cent this fall. The demand for the trees is steadily



## THE UTAH JUNIPER

increasing and justifies the expansion, as more than 125,000 will be shipped this spring.

There is no need to tell you about the formation of the Alumni group, but I do wish to express my appreciation for the response. The old Foresters' spirit is still alive and I am certain that the organization will help us all.

The employment situation is quite good. While the Civil Service is becoming more and more a factor, I believe that this is a good thing as long as the students and graduates can have a chance to become eligible. You have, perhaps, heard that our range majors took eleven places among the top thirty-four in the J.R.E. last year. Many of these men have positions and others will have soon. All of our eligibles took the exams this spring, and we are expecting a good report again, as I believe that most of the group were sort of braced for the "mental" part.

Well, time to close. Write in and let us hear from each one of you. We are always happy to receive a letter and are especially glad to see any of you, if it is possible for you to drop in at Logan. We hear good reports from the field often and that makes us all feel good. Best regards and sincere wishes to you all for a most successful year from all of the Forestry Faculty.

### The Utah Foresters Alumni

On October 7, 1939, thirty alumni of the Utah State School of Forestry and Dean Paul M. Dunn, met at the Bluebird Cafe in Logan for the Second Annual Alumni Breakfast. At this breakfast eight of the ten graduating classes were represented; the class of '37 by six and the class of '38 by ten. There were no representatives from the classes of '31 and '32.

At this breakfast the group organized the Utah Foresters Alumni Association, for the purpose of encouraging the same good fellowship among the graduates as existed during their undergraduate days and also to maintain "that link," not only between the graduates themselves, but between them and their Alma Mater.



#### ATTENDERS OF ANNUAL ALUMNI BANQUET

A. D. Smith, J. W. Floyd, J. Sevy, N. Owen, F. Baugh, G. H. Barnes, J. Mir, F. Fonesbeck, M. Bridge, D. Latimer, J. D. Hansen, T. Genaux, P. M. Dunn, R. P. McLaughlin, A. Spear, J. Kane, R. C. Anderson, L. Larson, W. Anderson, P. Scherbel, R. Christensen, O. Cliff, H. Handy, G. Jones, B. Gurr, G. Hawkes.

In too many cases we get so interested in making a livelihood for "her and ours" that we neglect to recall to our memory some of the happiest and enjoyable periods of our lives. As a result of this urge to keep the wolf from haunting our doorstep and at the same time get some place, we lose some of those fine contacts and acquaintances made while sweating on the hill with T. G. or Paul or one of their colleagues in the old "brain foundry"—or maybe for you it was a fountain of knowledge of which you supped before going forth to conquer one of those demon exams, the J.R.E. or J.F. In either case, I'm sure you had a depressed feeling the day you left the portals of Our School with a B.S. back of your name.

In some respects that occasion was like the New Year—the old is behind, the new before, and you have a lot of good resolutions you intend to keep. For instance, you intend to visit the Old School occasionally and you are "sure" going to keep in touch with the old gang. Somehow, for reasons mentioned, we all soon forget these good intentions, and first thing, we are wondering where Slim is now, what happened to Soapy, and if Joe got that appointment so he could enter "his blue heaven" with that little blonde we all liked to dance with.

So that we will all have a number of these questions answered with a minimum of effort, it is the aim of this organization to cooperate with the staff of the "Utah Juniper" each year in securing this information for you. It is also our aim to sponsor the Annual Alumni Breakfast each fall on Homecoming Day. Our slogan, "See you there in 1940."

### Alumni Comments

**Clyde T. Lowe:** "It gives me a great deal of pleasure to belong to the Utah Foresters Alumni Organization and to support the same. . . . I trust that I will hear more from you in the future."

**Ray F. Blair:** "Best of wishes."

**Paul S. Rattle:** "Count me as a 100% supporter of the alumni organization. I suggest that policy and objectives be worked out—perhaps with suggestions by correspondence—and copies mailed to members, so that action may be initiated."

**Charles B. Pierle:** "Glad to have this opportunity to support the "Juniper" through the alumni organization of the School of Forestry. You may depend on my support, and best wishes."

**Farris McDermaid:** "I think this is a very good start, keep up the good work. Give my regards to the faculty and the gang."

**Clifford W. Oviatt:** "I believe the alumni organization will be a fine thing and will be glad to aid in any way possible to make it a success. I will be glad to hear from some of you fellows once in a while."

**J. Graydon Robinson:** "I wish I were a little closer so I could give a little help or a little "raspberry." I will be glad to get the Annual and see what the rest of you mugs are doing."

**Fred Lavin:** "I think that the organization of a Utah State Forestry School Alumni is very commendable."

**Ervin M. Schmutz:** "Let's go places and do things!"

**C. LeGrand Olson:** "I would like to see meetings planned far enough in advance so that a man might plan his annual leave to take advantage of them."

**Max W. Bridge:** "How about another Alumni Directory similar to the one put out in 1937?" *Ed. Note:* This alumni section is similar. We hope that it will meet with favor among you field boys.



## Phi Gamma Rho and Xi Sigma Pi

*Continued from page 32*

Chapters of Xi Sigma Pi have been established at the University of Washington, Michigan State College, University of Maine, University of Minnesota, University of Idaho, Oregon State College, Pennsylvania State College, University of California, Purdue University, and the Pennsylvania State Forest School. The chapter at the Pennsylvania State Forest School was discontinued in 1929.

Members of Phi Gamma Rho who became charter members of the Lambda chapter of Xi Sigma Pi, are: Frantzen Todd, president; Kenneth Bower, vice-president; Elliot R. Killpack, secretary-treasurer; Professor Arthur D. Smith, faculty advisor; Professor George H. Barnes, Dr. Robert P. McLaughlin, Dr. L. A. Stoddart, Dr. D. I. Rasmussen, Professor George H. Kelker, Professor J. Whitney Floyd, Dean Paul M. Dunn, Everett R. Doman, Wilmur Bartels, Clayton B. Lehmer, Paul E. Packer, Donald E. Price, Lyle A. Baker, Lucas Dargan, Eugene A. Drown, Don M. Drummond, D. M. Gaufin, Clyde T. Lowe, Lamar Mason, John E. McDonald, Myrvin Noble, Neil W. Owen, Aaron G. Spear, Nolan West, Ray W. Anderson, Harold L. Baker, John T. Bernhard, J. Pershing Blaisdell, Edward F. Chatelain, Max B. Clinkinbeard, Lorin R. Dedrickson, Harry D. Grace, John W. Hampton, Harold L. Hiner, Reuel G. Janson, Edwin W. Loft-house, Richard B. Marston, Yale Mitchell, John W. Quayle, Max E. Robinson, Victor J. Rudolph, Ward E. Stevens, and Phil J. Tucker.

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# Alumni Directory

- ALLEN, FLOYD J., F 36—Deceased August 28, 1938.
- ALLEN, LELAND F., R 37—Junior Range Examiner, U.S.S.C.S., Farmington, N. Mex.
- ALLEN, WAYNE, F 37—District Forest Ranger, San Bernardino Nat'l Forest, U.S.F.S. 1219 Belle Ave., San Bernardino, Calif. Married, three children.
- ALLRED, GLADE, F 38—37 S. Second East, Manti, Utah. Married, one child.
- ALLRED, WARREN J., W 38—Wyoming Fish and Game Dept., Cheyenne, Wyoming. Married, one child.
- ANDERSON, WILLIAM, R 39—Area Range Examiner, U.S.S.C.S. Reg. 9, 760 N. Arthur St., Pocatello, Idaho. Married.
- ANDERSON, CLARK, R 34—District Forest Ranger, Cache National Forest, U.S.F.S., Ogden, Utah. Married.
- ANDREWS, HORACE M., R 38—Range Technician, Shasta National Forest, U.S.F.S., Calif. Married.
- ANHDER, THEO E., R 38—Bureau of Investigation, U.S.D.I. Albuquerque, New Mexico.
- ARMSTRONG, HERBERT C., R 38—U. S. Army—1610 Sutter St., San Francisco, Calif.
- ASTLE, LLOYD J., F 37—Forest Technician, N. E. Forest Emergency, West Romney, N. H. Married.
- ASTLE, WALTER, R 33—District Forest Ranger, Powell National Forest, U.S.F.S., Escalante, Utah. Married.
- BAKER, HAROLD L., F 39—2561 Monroe Ave., Ogden, Utah.
- BAKER, LYLE A., F 39—Graduate Asst. School of Forestry, Oregon State College, Corvallis, Oregon.
- BARNEY, MARVIN L., R 39—Ferron, Utah.
- BAUGH, FRED RAY, F 36—Assistant Forest Ranger, U.S.F.S., Kemmerer, Wyoming.
- BEAN, RUSSELL R., R 35—Las Vegas, Nevada. Married.
- BELL, SHELDON, R 38—Tech. Foreman, C.C.C., Panaca, Nevada. Married.
- BENTLEY, VALENTINE I., F 31—M.S. Forestry at U. of Calif., 33. Rec. Service, Provo, Utah. Married.
- BERG, JACOB, F 37—Missoula, Montana. Married, one child.
- BLAIR, RAY, W. 38—Engineer Technical Foreman. Mountain Home, Idaho. Married, four children.
- BLAISDELL, J. P., R 39—Holbrook, Idaho.
- BLASER, HERMAN, F 38—Junior Range Examiner, U.S.S.C.S., Gallup, New Mexico. Married, one child.
- BREWER, ALDEN N., R 36—District Forest Ranger, LaSal Nat'l Forest, U.S.F.S., Blanding, Utah. Married.
- BRIDGE, MAX W., W 37—Junior Range Examiner, U.S.G.S., Rawlins, Wyoming. Married.
- BROWN, SCOTT, F 39—U.S.S.C.S., Morgan, Utah. Married.
- BUNDERSON, VICTOR LEE, R 38—Junior Range Examiner, U.S.S.C.S., Balmorea, Texas.
- CARLSON, LELAND H., F 34—District Forest Ranger, Ashley Nat'l Forest, U.S.F.S., Manila, Utah. Married.
- CARLSON, MERRILL L., F 39—Field Ass't Timber Survey, U.S.F.S., Logan, Utah. Home address, 774-20th St., Ogden, Utah.
- CHRISTENSEN, RANGWELL N., R 39—92 W. 2nd South, Ephraim, Utah.
- CLARK, LEWIS, F 36—Junior Forester, Uinta Nat'l Forest, U.S.F.S., Provo, Utah. Married.
- CLIFF, EDWARD P., F 31—Forest Supervisor, Siskiyou National Forest, U.S.F.S., Grants Pass, Oregon. Married.
- CLIFF, OLIVER, F 38—Junior Range Examiner, U.S.F.S., Pocatello, Idaho.
- COOPER, HAROLD, R 39—Junior Range Examiner, U.S.S.C.S., Lincoln, Nebraska. Married, one child.
- COUCH, JOSEPH A., F 36—Educational Adviser, C.C.C., Riggins, Idaho.
- CRANE, BASIL, R 35—District Forest Ranger, Nevada Nat'l Forest, U.S.F.S., Potts, Nevada.
- CROWL, JOHN M., F 35—Sup't Forest Nursery, Gardiner National Forest, U.S.F.S., Licking, Missouri.
- DALE, STERLE E., R 38—Protection, Kansas.
- DARGAN, LUCAS M., W 38—Field Assistant, Colorado State Game Commission, Denver, Colorado.
- DAVIS, DON, F 39—Administrative Guard, Caribou Nat'l Forest, U.S.F.S., Pocatello, Idaho. Married.

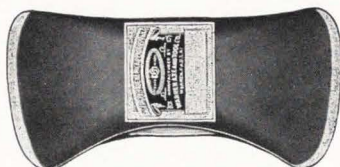


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- DAY, VANCE, R 37 — Junior Range Examiner, U.S.S.C.S., Warren, Ariz.
- DECKER, REX, F 39—451-32nd St., Ogden, Utah. Married.
- DeMOISY, RALPH, F 38—Educational Adviser, C.C.C. Camp F-83, Salmon, Idaho. Married.
- DESPAIN, OWEN, R 32—District Forest Ranger, LaSal National Forest, U.S.F.S., Moab, Utah. Married.
- DOMAN, EVERRETT R., W 38—Utah State Fish and Game Dept., Logan, Utah. Married.
- DORIUS, FLOYD W., R 37 — Junior Range Examiner, U.S.S.C.S., Weiser, Idaho. Married, one child.
- DOWNS, ELVIN, 38—Vocational Agriculture Instructor, Afton, Wyoming. Married.
- DROWN, EUGENE A., F 38 — Park Ranger, Yosemite N. P. Married.
- DRUMMOND, DON M., F 37—M.S. in F. at Louisiana State in 1939. Instructor in Forestry at Arkansas Polytechnic Inst., Russelville, Arkansas. Married.
- DRUMMOND, JOHN P., F 37—Southwest Field Training Program, Office of Indian Affairs, Albuquerque, New Mexico. Married.
- EARL, DEAN MARTIN, F 32—District Forest Ranger, Lincoln Nat'l Forest, Carlsbad, New Mexico. Married, one child.
- EGAN, GILBERT, F 38—966 Washington Blvd., Ogden, Utah.
- ELLIS, STEPHEN B., R 39—Range Inspector, A.A.A., Logan, Utah. Married.
- ELLISON, PHAY, W 38 — Hollydale, Calif.
- ELLISON, DON J., F 38 — Woodruff, Arizona.
- ENGLAND, EDWIN, F 36 — U.S.F.S., Las Vegas, Nevada.
- ERIKSSON, CARL G., R 36—Deceased, December 24, 1938.
- FARR, JEDD W., W 39—2852 Delevan Drive, Los Angeles, Calif. Married.
- FAUSETT, ADELBERT, F 30—Associate Range Examiner, U.S.F.S., 760 Market St., San Francisco, Calif. Married.
- FINLINSON, RICH L., F 36—Foreman C.C.C., Cache National Forest, Huntsville, Utah.
- FLOYD, J. WHITNEY, F 36—Assistant Professor and Extension Forester, U.S.A.C., Logan, Utah. Married, three children.
- FONNESBECK, FRANK O., F 33—Engineer, U.S.N.P.S., Box 527, Provo, Utah. Married, one child.
- FOULGER, HOWARD R., R 39—I.F. and R.E.S., Ogden, Utah. Married, one child.
- FULLER, REVILO, W 38—Timekeeper, Bechtel Construction Co., El Segundo, Calif. Married.
- GENAUX, THERON, F 37—Educational Adviser, C.C.C. Co. 3241, Moab, Utah.
- GESSEL, HOMER J., F 38—Providence, Utah.
- GESSEL, STANLEY P., R 39—Graduate Work, University of California, Berkeley, California.
- GIERISCH, RALPH K., R 37—Junior Range Examiner, Arapaho National Forest, Ida Springs, Colo. Married.
- GRANDY, DeWITT C., R 39—County Range Examiner A.A.A., Logan, Utah. Married.
- GRAY, ANDERSON M., W 37—Junior Project Biologist, U.S.S.C.S., New Albany, Mississippi.
- GRINER, LEE, W 37 — Junior Range Examiner, U.S.S.C.S., Lincoln, Neb.
- GRINER, LYNN A.—Zoology 36, M.S. 39, U.S.A.C., Arizona Fish and Game, Phoenix, Arizona.
- GROSSENBACH, PAUL A., F 36—Junior Forester, U.S.F.S., Payette National Forest, Cascade, Idaho. Married, one child.
- GUNDERSON, ARDEN B., F 35—District Forest Ranger, Gallatin Nat'l Forest, U.S.F.S., Bozeman, Montana. Married.
- GUNTHER, LLOYD, W 39 — L.D.S. Mission, June 1939.
- GURR, BOYD, F 39 — Administrative Guard, U.S.F.S., Hailey, Idaho.
- HALES, DOYLE C., R 38 — Junior Range Examiner, U.S.S.C.S., Moab, Utah.
- HANDY, HARLEY M., R 39—District Grazer, U.S.G.S., 445 South 1st West, Brigham City, Utah. Married.
- HANSEN, J. DELOY, F 30—Assistant Supervisor, Cache National Forest, U.S.F.S., Logan, Utah. Married.
- HANSEN, MARVIN O., F 37—Tremonton, Utah.
- HANSEN, SHERMAN, W 37—Instructor, Wilson School, Logan, Utah.
- HANSEN, ROBERT L., F 39—Providence, Utah.



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- PETERSON, VIRGIL, R 38—Grazing Survey Grant Mesa National Forest, U.S.F.S.
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- PLAYER, GARNETT C., F 39—Murav, Utah. Married.
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- RAMPTON, LEONARD, F 36—Junior Forester, U.S.F.S., Malheur National Forest, John Day, Oregon. Married, one child.
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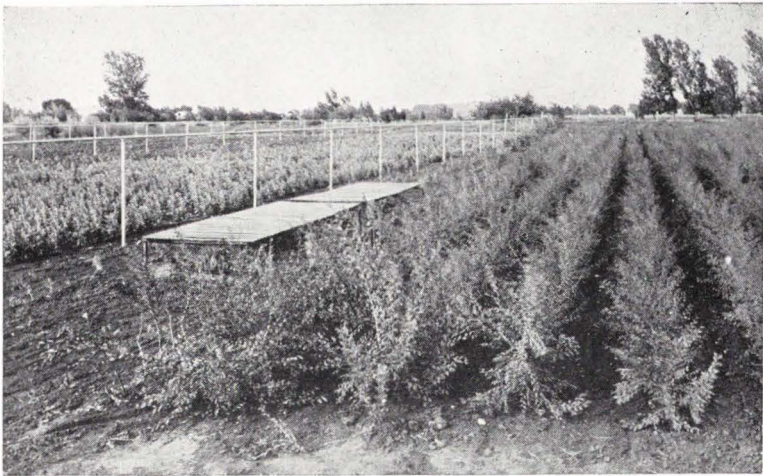
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