# OREGON STATE BOME COMMISSION DULLETIN GAME COMMISSION MAY, 1958

USE OREGON'S NATURAL RESOURCES WISELY Conservation Week, May 11-18, 1958

# OREGON STATE GAME COMMISSION

May, 1958 Number 5, Volume 13

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# the cover

Anglers at Elk Lake have their catches checked by the district fishery agent.

# DEER KILL **EXCEEDS** 100,000

Deer hunters harvested 116,589 deer during the general and controlled hunts last year. Of these 114,515 were taken during the general season, with the buck kill totalling 80,111. This is the fifth year in a row that the kill has exceeded 100,-000 animals. A more complete story on the 1957 big game harvest will be published in the June Bulletin.

# **Conservation Week**

WILDLIFE is one of our natural resources to which attention is called during Conservation Week, May 11 to May 18. It is a resource of which the people of Oregon can be justly proud and thankful. Few other states can match the recreational opportunities and outdoor enjoyment afforded by the variety and abundance of our fish and game.

Each year finds more and more people enjoying the privileges of fishing and hunting. Last year more than 500,000 fishing and hunting licenses were issued. For the fifth year in succession, Oregon has either led the nation or been near the top in the number of deer harvested. Other kinds of big game, waterfowl, upland game, salmon, steelhead, trout, warm water and marine fish add to the pleasure of our citizens. Few other outdoor participation sports attract as many participants.

This growing human pressure, combined with greater demands on our land and water resources, points up the need for careful stewardship of our fish and game. Although renewable, the supply is not inexhaustible. The extinction and near extinction of many species through overexploitation and other abuses supports this observation.

Hand in hand with careful management of the wildlife resource, there must be wise use of the other natural resources. The abundance and well-being of wildlife is dependent primarily on the productivity of the land and water. Abuse of these basic resources dramatically and detrimentally affect fish and game.

We must learn that wildlife populations should be kept in balance with available food supplies and compatible with other land and water uses. At the same time we must not fail to recognize the tremendous social and economic values attached to our wildlife resource. Few outdoor recreational pursuits offer so much in the way of relaxation and peace of mind. The economic benefits are not to be underestimated. Oregon sportsmen spend at least \$75,000,000 annually just to enjoy the opportunity to fish and hunt. This is a major contribution to the economy of the state.

Can these opportunities to fish and hunt be preserved? Will your children and their children be able to enjoy the same privileges? The answer is, "Yes," only if the public recognizes the need for wise use of all natural resources. Conservation Week is one way of gaining public understanding of resource management. Hunting and fishing can be enjoyed for generations to come if all of us will practice conservation by using wisely the wildlife heritage and the other resources upon which wildlife depends.

# MARCH MEETING OF THE GAME COMMISSION

At its meeting on March 28 actions taken by the Game Commission included: Centennial Exposition: Approved preparation of exhibit for Centennial Exposi-

tion. Big Game Research: Approved cooperative blacktail deer study in Wilson River area with State Department of Forestry;

and mule deer study in Silver Lake area with Pacific Northwest Forest and Range Experiment Station.

Chemical Treatment: Approved treat-

ment this fall of Fish Lake in Jackson County and Miller Lake in Klamath County.

Bids: Accepted low bids for the following projects: Hood River garage, \$5,890; White River residence, pipeline, etc., \$23,-087; La Grande garage and warehouse, \$9,520; Depoe Bay parking area, \$4,562.-50. All bids for residences at Oak Springs were rejected.

Capital Outlay: Authorized construction of shop building at Summer Lake; perimeter fence on Hall tract in Rogue Management Area; and fence at Wenaha Management Area.

Central Region Headquarters: Decided to accept Ward tract in Bend as site for new headquarters building.

Fish Lake Management Area: Amended regulations to permit the use of motor boats on the lake this season.

Acquisition and Access: Approved: negotiations for purchase of Ralph Foster tract of 360 acres at Summer Lake; exercise of option for Al Ropp tract of 10 acres at Camas Swale for \$1,200; expenditure of \$4,500 for development of Coon Island boat access site; expenditure of \$2,500 for road improvement at Oak Island; and \$5,000 for development of Gordon Creek access site on Sandy River (road and parking area); and solicitation of BLM for special use permit for boat access at Loon Lake.



PISHERMEN are most inquisitive individuals. Field personnel of the Game Commission while interviewing anglers in the line of duty are in turn interviewed by the anglers. "What are they biting on today?" may be the most frequent question but the many other questions also asked evidence the genuine interest that anglers have in all phases of fish management.

The average fisherman asks such questions as: what kind or kinds of fish are in this lake; how many trout does the Game Commission plant here each year; how large are they when planted; how do you decide the numbers of fish to plant; why do you count and measure my fish; what does the Game Commission do about trash fish in lakes; and why don't you plant more fish so we can catch more? Some of the questions are answered easily, but others demand a detailed explanation backed by a good deal of field work and experience.

Each body of water has its own peculiarities and is treated as an individual problem. A fund of knowledge and experience has been built up and continually improved to set up management practices for the more important central Oregon lakes and reservoirs.

# Why are my fish counted and measured?

Counting, measuring and sometimes weighing the catch of a representative

sample of fishermen place the fishery technicians in face to face contact with the fish and the fishermen. In no better way can the results be determined of the success or failure, perhaps, of several years' plans and practices.

# Over 100,000 trout caught in East Lake

At East Lake, for example, the fish catch of anglers is checked in a systematic method permitting technicians to obtain a reliable estimate for the complete season. Over 100,000 rainbow and eastern brook trout averaging more than one-half pound each were caught by fishermen in 1957.

Further evidence that East Lake anglers were quite successful in 1957 is apparent when we look back five and ten years. In 1952, 30,000 pounds of trout were removed by 28,000 anglers; while in 1947 fewer anglers landed 17,000 fish weighing close to 21,000 pounds.

Average size has decreased over the years, but the total numbers and pounds of trout have increased even more rapidly than the number of fishermen.

The above example serves to illustrate one of the reasons that your fish may have been counted and measured by Game Commission fishery agents or State Police game officers, but that is only part of the story.

In contrast to the detailed work at East and Paulina, many of the lakes and reservoirs can be visited less frequently. Even though the fishery technician may see and measure fewer fish, he nevertheless gets a year to year comparison of fish sizes and angler success.

# Opening weekend at South Twin Lake disappointing in 1957

The opening weekend of fishing at South Twin Lake in 1957 proved to be pretty much of a dud as far as the anglers were concerned. Commission personnel checked 75 anglers who had caught 375 rainbow trout, 98 per cent of which were between 6 and 8 inches (Continued on Page 6)

This 12 pound mackinaw was caught in Odell Lake.



GAME BULLETIN

# And Galantine

Probably no other group of animals is more beset by adversity than the hares and rabbits. All of the meat eaters from the weasel and blacksnake to the wolf and great-horned owl are constantly hunting them out. To top it off, "Br'er Cottontail" furnishes more meat for American tables than any other game animal, with the number taken annually running into the many millions.

Rabbits are short-lived, and have little more than one chance in twenty of reaching a first birthday. Yet, despite the many hazards, these creatures are probably our most common animal.

Strictly speaking, the term "rabbit" should be reserved for the cottontail family while the term "hares" should be used for the snowshoe and jacks. The ears and hind legs of the hares are considerably longer than the rabbits, and the digestive tracts of the two groups have structural differences. In addition, hares are born well-furred and have their eyes open, while rabbits are born hairless and blind.

# THE HARES

Three members of the hare family are found in Oregon, the varying hare or snowshoe rabbit, the black-tailed jack rabbit, and the white-tailed jack rabbit. The snowshoe is a resident of timbered country while the two jacks prefer the wide open desert or sagebrush plains of eastern Oregon. In recent years, the big jack rabbits have found their way across the mountains and have become quite numerous on the west side of the Cascades.

The snowshoe rabbit is a large hare with summer raiment of reddish brown. The color changes with the season and in winter it is white as the snow that covers the ground. The shift from brown to white is irregular and may occur in a patchwork fashion. Along the coast the color may remain in a patchwork all winter or it may not change at all. The varying color with the season has given this hare its name, the varying hare.

Its snowshoes have also given it the common name of snowshoe rabbit. Its long toes spread wide and the soles of

the feet are covered with coarse hair that is longer in winter than in summer. These "snowshoes" prevent slipping on icy crusts and hold the animal up in soft snow.

The long ears that stand out like twin antennae characterize the black-tailed jack rabbit as it bobs across the plains. The blackish upper surface of the tail can readily be observed. Over-all color is grayish with a tinge of brown on the back

The long hind legs can propel the animal ahead at speeds to 35 miles an hour. It can outspeed a coyote, fox or bobcat. These animals must use cunning to catch the fleet-running jack.

The first indication of the white-tailed jack rabbit's presence is often a flash of white as he explodes in full flight from under the very feet of a would-be enemy. Such tactics are likely to fluster even a nerveless hunter like the coyote.

The white-tailed jack is similar in color to the black-tailed except the top of the tail is white. All animals of this species become much paler in winter and those at high elevations or in northern climes may be almost pure white.

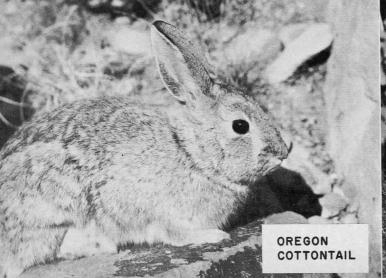
Food of the hares consists of succulent green vegetation. They have hearty appetites and nibble almost constantly from late afternoon until they return to their hiding places the following morning. In years of peak abundance landowners may be forced to take harsh measures to protect their crops.

The jack rabbits are not always destructive and in reasonable numbers are an asset. They serve as food for valuable furbearing animals, and act as a buffer between poultry, livestock and game birds and their predatory enemies.

Hares are born completely furred and have their eyes open. They can even take a few steps at birth. They hop around within a few hours and begin to nibble at greens within a few days.

# THE RABBITS

Four members of the cottontail family are residents of Oregon. The Rocky Mountain or Oregon cottontail, the brush





rabbit, and the pygmy rabbit are natives while the eastern cottontail has been introduced.

Every mature female does her best to fill the hedgerows, brushy draws and slopes with her youngsters. She may breed within a year of age and produce anywhere from four to six litters a year. Each family may number from one to eight.

The young are born blind, deaf and naked. Within a week the little fellows are fully clothed and their eyes open. At about twelve days they venture from the nest.

The cottontail often commits crop damage on truck gardens where lettuce, peas, beans and other vegetables are favorite foods. All the trouble it may cause fades into insignificance in view of its value as a game animal in the United States. With few exceptions, cottontails are typically brushland inhabitants.

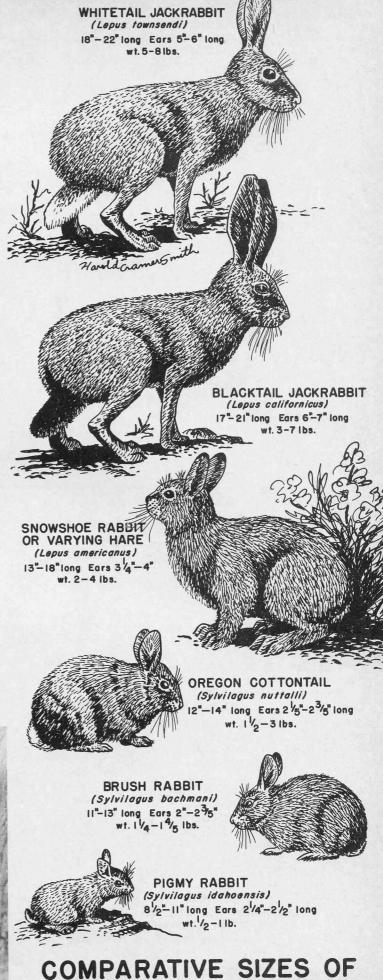
The eastern cottontail is the largest and in Oregon is found primarily in the Willamette Valley. The Oregon cottontail is more grayish in color washed with yellow. It is found throughout the mountains and sage lands of eastern Oregon. The brush rabbit is found primarily west of the scades in heavy brush cover. It has a brownish tail and over-all dark brownish body. The little pygmy is the smallest and is found in dense sage lands in southeast Oregon. The entire tail is buff. It seldom weighs more than one pound.

# THE PIKA

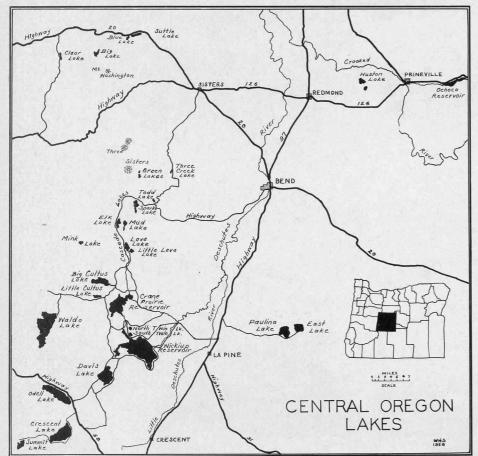
The Pika, known as the cony or rock rabbit, is one of the few animals rugged enough to spend its entire life in the high mountains. Its chosen home is among the great jumbles of rock that have sloughed from the cliff walls or mountain slopes. He has few enemies for he lives in an environment where refuge is seldom more than a yard away.

Unlike the rabbits, the hind legs are as short as the forelegs. The "Little Chief" hare is a small, tailless member of the rabbit family with rounded ears. Seldom does he reach more than one-half pound in weight.





OREGON RABBITS



Central Oregon Lakes

(Continued from Page 3)

long. Even worse, many under the sixinch minimum also had been caught and returned to the lake. 1956 fishermen had done much better.

Obviously, the annual plant of fingerling trout from two to five inches long had not made the usual growth from stocking time the previous summer to opening day in late May, 1957. By counting and measuring a small portion of the weekend catch, the district fishery agent had his final proof that there were too many fish for the available food.

Other evidence had already been obtained that all was not well at South Twin. Trash fish in the form of roach, or chubs, had been caught in experimental gill nets earlier in the spring of 1957 and in the fall of 1956. That leads us to the next common question put to Commission fishery men.

What does the Game Commission do about trash fish like roach in the lakes?

The story at South Twin is one good example. Once before, roach had secured a foothold in the lake. When the lake was treated in 1941, a handful of trout and several million roach were killed. With such a prospect in store again, the Game Commission early last summer decided to treat the lake chemically with

rotenone at the earliest opportunity, eliminate all fish and get South Twin back producing fine-sized rainbow trout.

# South Twin Lake ready again for fishermen

Accordingly, the lake was treated last September and restocked in November with five-inch rainbow trout as soon as the water was non-toxic. On opening weekend this year the lake will be back again producing some good trout catches.

# Roach removed from Big Lava Lake

After treatment in 1949, Big Lava Lake was restocked annually with eastern brook trout which have made wonderful growth and provided excellent catches each year. Roach reinfestation occurred soon after treatment but has not yet had a serious effect upon the growth rate of the eastern brook. Competition between the brook and roach has been relieved by removal of approximately six tons of the trash fish in the last two years. Chemical treatment of roach schools in shallow water and capture in trap nets were the most effective means of reduction.

How does the Game Commission decide the number and sizes of fish to plant in each lake?

Before the fishery agent can begin to recommend the stocking plan, a general objective must be established for each lake. Some are particularly suited to the never-tiring angler who will sit on the bank or in a boat for hours or days trying to catch that one big fish. The lake trout in Odell Lake and the big brown in Wickiup Reservoir attract these anglers.

Other lakes are fitted best for the production of many eating-sized fish for thousands of fishermen. With the objective in mind, the fishery biologists then consider the angling pressure and success, which are the number of fishermen visiting the lake and number of fish caught in a season, the size of the lake, and the productivity in terms of food supply and fish growth. Usually, it is necessary after planting to wait one year, or two, or even more in some instances to learn what the growth rate and fishing success on a particular group of fish might be.

# Results determine the stocking at Paulina Lake

Paulina Lake in 1957 produced over 70,000 trout for 22,000 anglers. The fish averaged over nine inches in length and weighed more than one-third of a pound. Most of them had been planted as two to five-inch fingerling in 1956.

Another measure of productivity and growth rate is obtained by capturing fish in experimental gill nets each year from the more important central Oregon lakes. Twenty-five fish per net set ranged from five to fourteen inches in length from Paulina Lake in 1957. Less than half that number of fish were taken in the 1955 and 1956 nets.

Approximately 300,000 rainbow fingerling weighing about 6,000 pounds have been planted each year since 1953. In general, stocking more fish than this will decrease the average size of the fish caught by fishermen, and planting fewer fish will tend to increase the growth rate.

Overstocking, however, creates greater competition for food and results in not only less growth, but usually in less survival as well. Planting more and more fish in a lake does not necessarily mean that more and more will be caught.

# More fish planted but fewer caught

In 1952 Paulina Lake received 53,000 trout of legal length and 350,000 fry and fingerlings weighing over 14,000 pounds. The fish catch that year by 17,000 anglers was 25,000 trout weighing 15,700 pounds. The Paulina catch has almost doubled in pounds per surface acre from 1952 to 1957. By permitting the lakes to put the size and poundage on the fish, the Commission saves thousands of dollars annually in hatchery production and stocking

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# Central Oregon Lakes

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costs, and additional legal-sized fish can be devoted to stream liberations.

What are the fishing prospects in central Oregon lakes this season?

We have already mentioned East, Paulina, South Twin, Big Lava, but what about some of the other lakes and reservoirs?

### Crane Prairie Reservoir

Crane Prairie Reservoir provided a spectacular fishery for kokanee, or land-locked sockeye salmon, in 1956 and 1957. The fish were originally planted in Big Cultus Lake and migrated downstream to Crane Prairie and Wickiup Reservoirs. Dandy rainbow, as well as quite a few eastern brook trout, will also reward the myriad of Crane Prairie fishermen in 1958.

An ominous note has been added to the Crane Prairie picture, however. A few roach were caught in experimental gill nets in 1953. The percentage increased from six in 1954 to eighty-four last year. The future of the trout and kokanee fishery is uncertain. Elimination of the roach represents a costly and complicated venture.

## Wickiup Reservoir

Wickiup Reservoir's main attraction is, of course, the large brown trout, but the rainbow and kokanee also grow to big sizes. Full storage in the spring makes angling a bit difficult for those who are not familiar with the channel and shoal areas.

### Crescent and Odell Lakes

Phenomenal is the only word for the kokanee fishing at Crescent Lake in 1956 and 1957. Limit after limit of eleven-inch kokanee was caught last summer. The 1956 and 1957 kokanee catches originated from a planting of 513,000 fry made in 1954. Additional plantings have been made each year and fishermen and Commission personnel alike hope that these salmon make a remarkable showing again this season.

Odell Lake has the record for producing the largest trout taken in inland waters of Oregon with a thirty-four pound lake, or mackinaw, trout. Annual plantings of rainbow trout, kokanee and yearling lake trout have been made in Odell. Fifty-one per cent of the lake trout caught in 1957 were marked fish planted in 1951.

### Davis Lake

Davis Lake is another of the group for those patient anglers after a big trout. Rainbows up to ten pounds and kokanee from twelve to twenty inches long and more roam the waters of this shallow, 4,-000-acre lake.

Here, again, the life of the trout and salmon is made miserable by the abundance of roach which compose ninetyeight per cent of the population.

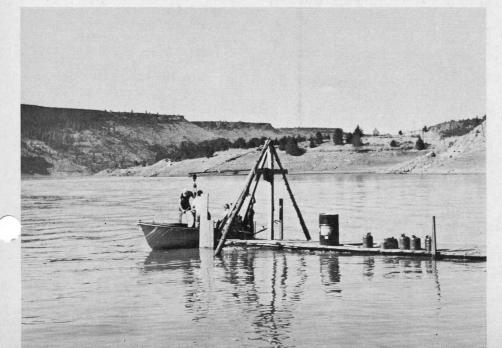
### Elk and Mud Lakes

Elk Lake has a relatively untouched population of beautiful eastern brook trout and an up and coming group of rainbow trout, resulting from a planting of 100,000 fingerling in 1956. The rainbow showed up in the 1957 experimental gill net samples as six to eight-inch fish and should be crowding the foot mark by the end of the 1958 season.

Eastern brook trout and carp were eliminated from Mud Lake by chemical treatment in 1957. Atlantic salmon fingerling raised at Wizard Falls Hatchery will be stocked in the lake this summer, but the salmon are being given a chance to put on some growth for a year or more before angling will be permitted.

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Ochoco Reservoir at time of chemical treatment last fall. Control of trash fish in many of the lakes and reservoirs is necessary at intervals in order to maintain the sport fishery.





Saturday, May 24, is the opening day for angling in most of the lakes within the national forests in the Cascades, in cluding the lakes in Paulina Mountains. This regulation, however, does not apply to national forest lakes in Zone 6 which opened on April 26. Some Cascade lakes also have special seasons and these exceptions are found listed by zone in the current synopsis of angling regulations.

Again, over half a million persons hunted and fished in Oregon. Compilation of the 1957 license sales indicates that 528,872 individual licenses were issued to persons over 14 years of age. This was an increase over the 520,492 licenses issued in 1956: Ten years ago, in 1947, the total number of licenses issued was only 372,814.

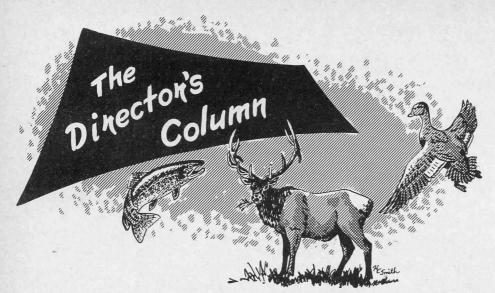
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The 1957 licenses included 80,006 resident combination; 178,416 resident angling; 161,703 resident hunting; and 28,016 juvenile angling; 4,420 juvenile hunting; 21,815 vacation angling; 22,991 daily salmon angling; 7,278 non-resident angling; 1,448 nonresident hunting; plus miscellaneous special licenses.

\* \* \*

Upland game inventories indicate that pheasant and quail breeding populations are approximately twice as great as last year.

Fourteen elk, out of a herd of 18 doing damage in the West Millicoma river area in Coos County, were trapped successfully on March 18. The trapped animals, 9 cows and 5 calves (4 males), were released up Little River on the North Umpqua. Elk trapping, however, is not as simple as it sounds. The first time 7 elk were caught in the trap. They broke a one-fourth inch cable holding the bottom of the rope nets and escaped. A week later another 11 elk were trapped but when a school bus stopped to investigate, the trap could not hold the excited elk.



NE OF the unique characteristics of fish and wildlife resources is its legal status under the law. Fish and wildlife are public resources held in trust by the state for all the people. All citizens have a common right of use within a regulatory framework established by responsible authority and modified from time to time to perpetuate the resource for public use and enjoyment. Its use is further controlled by the right of property owners to regulate trespass.

Although this principle has been a long established precept in North America, the fact that this resource must be produced on the land and in the water makes it readily obvious that its existence depends to a large extent upon the pattern of land and water use.

Any program whose objective is to enhance this resource must then concern itself in one way or another with numerous and related land and water uses. Under these circumstances and the rigid statutory framework within which this Commission has to work, cooperation must be received from private property owners, from industry, and from other land and water management agencies for effective programs to be pursued in the interest of fish and wildlife. This Commission has long recognized the important part land and water development for other uses plays in influencing either favorably or detrimentally the state's fish and wildlife resource.

One of the most encouraging aspects of the department's activities is associated with the increasing opportunities to work with other interests in assuring

consideration of fish and wildlife in development of the state. This working in concert in the interest of a public resource takes many forms. It may be represented by a joint effort between local county government and the game department in developing a stream access site or involve consultation with a construction agency on a major river development proposal in its earliest planning stages. The safeguards worked out between a logging operator and a representative of the department to avoid damaging a stream from a fish standpoint may not be noted by the general public but, nevertheless, represent an increasingly frequent united effort which means much to the future of that fish resource. The screen in a farmer's irrigation ditch to protect downstream migrants and the panels protecting his havstacks from big game in severe winters are manifestations of a common effort to preserve a public property.

Few days pass without exchange of information and liaison between representatives of this Commission and those of the major land management agencies, both federal and state. The many examples of voluntary assistance to the Commission's program by Oregon's outstanding citizens, conservation organizations, other government officials and by individuals attest to the important stature fish and wildlife have reached in resource affairs of Oregon. No public program can be successful without public support and participation. Such advances as we may be making in improving the status of Oregon's fish and game resource is in no small part a direct result of the cooperation and assistance we have received. Even in those rare exceptions, and there are some, where apparently serious conflicts prevail, we believe through cooperation there is the possibility of gaining consideration for fish and wildlife. At least that is the philosophy under which we operate.

These opportunities for cooperation are becoming more frequent and represent one of the gratifying phases of our work.

P. W. Schneider

# **Central Oregon Lakes**

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### Ochoco Reservoir

Treatment of Ochoco Reservoir and over 300 miles of its tributaries also took place in 1957. As soon as the reservoir water became non-toxic in November, rainbow trout running from three to six inches long were stocked in the expectation that they will make excellent growth before the reservoir reopens on May 24.

Many other central Oregon lakes are emerging from winter quarters and preparing for the thousands of visitors. We will see you at one of the above lakes or Suttle, Blue, Three Creek, Big and Little Cultus, Sparks, or perhaps North Twin.

# ABOUT THE AUTHOR



Len Mathisen has been supervisor of the Central Region since its establishment in 1950 along with four other regions in the G ame Commission's administrative set-up.

In the summer of 1940 he started to work for the department as a member of

the lake and stream survey crew. Army service interrupted this career in 1941 but upon his return in 1946, he continued working in the fishery field until appointed to his present position.

A native Oregonian, Len was born and raised in Portland. He graduated in 1939 from Oregon State College, where he took fish and game management.

Headquartered at Bend, Len's job is to administer in his region the field operations of the game department. In an area containing some of the state's most popular hunting and fishing territory, this means a full time job.

# Oregon State Game Commission Bulletin

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