Oregon State
GAME COMMISSION BULLETIN

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Oregon's Cascade Lakes

By F. A. SMITH, JR., Field Agent

Hundreds of fine fishing lakes, ranging in size from tiny landlocked ponds to the 4,500 acre giants like Waldo, Crescent and Odell, are to be found all the way along the backbone of the Cascades from the forested slopes of Mount Hood in the north to Mount McLoughlin in the south. In the past this has been the land of fishing plenty, where great rainbows, eastern brook trout and cutthroats were common, and it still is a land of wonderful fishing though the fishery has suffered for a number of reasons.

The mounting interest in angling that has taken place in the past ten years has placed an added load on these lakes which are unable to triple their productivity to keep up with the fishing effort, resulting in less fish for everyone. More specifically, ten fishermen are now found on every popular Cascade Lake where three may have fished in pre-war years. Thus the distribution of yield is greatly increased so that a single fisherman may now catch five trout in a day compared to the fifteen that he took during a day in the mid-thirties. But it must be realized that an acre of lake, like an acre of agricultural land, year after year will produce only the same crop of food measured in pounds. True, drastic changes in aquatic conditions will alter the productivity of a lake by lessening or increasing the crop. Such changes, however, are rare in our Cascade Lakes and are thus unimportant. Therefore, a given lake will produce approximately the same poundage of fish this year as it did ten years ago and will produce in 1957 the same crop as was produced in 1947. This is the basic concept of practical fish management, and it cannot be over-emphasized. Once the average angler understands this concept, the cause of conservation will have been furthered immeasurably.

Our Cascade Mountain Lakes are producing now approximately the same crop that they produced years ago, yet the fishermen have increased threefold. What have we done, what can we do in the field of practical fish management to improve the fishing in these lakes in the face of such mounting fishing pressure?

First, and certainly most important, is the control of the trash fish that have been introduced into many of our better lakes. Second, we can trap and remove undesirable game fish species from lakes where they are causing damage to the sports fishery. Third, we can continue to practice a well balanced stocking program in those lakes that have insufficient natural propagation. Fourth, we can utilize our Cascade Lakes more advantageously by diverting fishing pressure from the large roadside lakes to the small, comparatively unfished pack lakes.

Trash Fish Control

Great damage has been done to the sports fishery of our Cascade Lakes by the introduction of trash or rough fish as they are sometimes called. Many of the better lakes such as East, Paulina,

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1947 Pheasant Liberations

A total of 48,074 pheasants have been released during the spring and summer months of 1947. The Game Commission had planned for a production of 60,000 pheasants this year but frequent rain storms during the rearing season combined with a shortage of labor in some areas prevented the attainment of that goal.

Production of the four game farms was supplemented by two experimental field rearing projects where 2,410 pheasants were reared on privately owned agricultural lands. The information available indicates that such field rearing projects are practical. However, all the birds reared have been wing banded and the Commission is hopeful of getting more information on the survival and distribution of these birds through the reports of cooperative sportsmen who may bag one of the wing banded birds.

The pheasants available for release have been allocated in proportion to the quantity and quality of habitat available in each district, giving due consideration to the present density and other factors.

Arrangements for the liberation of these birds were made by the district

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Seining trash fish at Diamond Lake.

Special Elk Seasons

Closure of the general elk season in western Oregon on November 2 and in eastern Oregon on November 16 leaves only two special seasons open for elk hunters.

Those individuals holding a general elk tag who did not kill an elk during the regular season may hunt for elk of either sex from November 22 to November 30 in the following described area in Baker county: Beginning at the city of Baker, thence south along State Highway 7 to junction of the Sumpter Valley road at Salisbury, thence west along the Sumpter Valley road to Sumpter, thence north along the Fruit Creek road to the summit of the Blue Mountains, thence north along the summit to posted junction with the Anthony Lake road, thence east along the Anthony Lake road to North Powder, thence south along U. S. Highway No. 30 to the city of Baker, the point of beginning. Hunters will be required to check in and out of the area at checking stations to be located at North Powder, Baker and Salisbury. All elk taken during the season must be tagged with metal seal before being removed from the area.

A special hunt for which 100 tags have been authorized by the Commission will be held from December 13 to 16 in the vicinity of Ukiah. Only the holders of special tags, issued after a drawing was held early in November to determine the successful applicants, may hunt during this season. Hunters will be required to check in and out at Ukiah.

Game Commission Exhibits Again At Pacific International Exposition

The Game Commission made its annual exhibit of live fish, birds and animals at the Pacific International Livestock Exposition held the week of October 3-11 in Portland.

The display included approximately 20 varieties of game and food fish, part of which were furnished by the Fish Commission; different kinds of upland game and show birds, migratory waterfowl, deer and raccoon.

1948 Angling Regulations Will Be Considered At January Hearing

Regulations for the taking of game fish during the 1948 season will come up for consideration by the Game Commission on January 9.

The statute provides that the Commission shall hold a hearing on the second Friday of each January in regard to seasons, bag limits and methods of taking game fish.

The hearing will be held at the Portland office of the Commission.

Aerial Antelope Census

District Agents of the Oregon Game Commission stationed in the Central Harney, Malheur and Lake-Klamath Districts have been engaged in the annual fall aerial antelope census. The Oregon Game Commission conducts two annual aerial surveys of these fleet-footed animals of the high semi-desert lands of eastern Oregon to determine general distribution and abundance of the species and existing sex ratios. An airplane has been found the most effective and economical means of covering the vast expanse of country over which Oregon's antelope herds occur and the open sagebrush and juniper habitat lends itself ideally to observation from the air.

In addition to the aerial surveys conducted in September and February a ground survey is made during May and June to determine the relative abundance and survival of antelope kids which are born during the middle of May. The survival of antelope kids born in 1947 has been substantially higher than in 1946.

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Application for entry as second-class matter is pending.

Federal Aid Wildlife Program for States Gets $9,000,000

For the first time since the Pittman-Robertson Act became effective on July 1, 1938, Congress appropriated an amount equal to the Federal tax collected on firearms, shells, and cartridges for the year ended June 30, 1947, to provide Federal funds for the restoration and development of wildlife resources in the various States during fiscal year 1948, it is announced by the Secretary of the Interior J. A. Krug.

The sum appropriated was $9,031,273.51—more than three and one-half times the appropriation for fiscal year 1947.

Under the terms of the Pittman-Robertson Act, as amended on July 24, 1946, appropriated funds are apportioned to the States on the basis of land area and the number of paid hunting license holders in each State, but no State may receive more than five percent nor less than one-half of one percent of the total amount apportioned to all the States which, for fiscal year 1948, amounts to $8,263,771.63.

Under the new formula Michigan and Texas are reduced to $413,188.58 each and therefore top the list in funds. In applying the minimum formula Connecticut, Delaware, Rhode Island, and Vermont are boosted to receive $41,318.86 each. California ranks second with $374,283.09; New York receives $349,520.79; Pennsylvania $344,642.91, and Ohio $297,778.46. Oregon is in thirty-fifth place and receives $198,084.33.

All States are now participating in the program. They match the Federal funds of $8,263,771.63 by providing State funds of $2,754,590.55, making a potential sum of $11,018,362.18 available for wildlife restoration projects.

Projects submitted by the States are approved by the Fish and Wildlife Service on behalf of Secretary Krug to determine soundness of character and design. They consist of surveys and investigations, land acquisition, development of areas, coordination, and maintenance of completed projects. Project costs are borne initially by the State game departments, after which reimbursement is made from Federal funds for the Federal pro-rata share which may not exceed 75 per cent of the cost of the project. Each State, therefore, is required to contribute 25 percent or more of project costs from its own funds.

The federal excise tax on sporting arms and ammunition collected and set aside in the Treasury in the "Federal Aid to Wildlife Restoration Fund" from July 1, 1938, to June 30, 1947, has amounted to $36,898,742.12. From this $23,431,273.51 has been appropriated to date, to leave a balance of $13,467,468.61 which is earmarked for wildlife restoration in the States subject to appropriation by the Congress.

This and That

To gain more desirable distribution of deer herds in the Deschutes Game Refuge, the possibility of water development has been under consideration for some time. During the past year three developments have been installed in cooperation with the U. S. Forest Service, and additional ones are being planned to be used in conjunction with a salting program.

* * *

Aerial coyote hunting, sponsored by Game Commission, federal and county funds, is to start the early part of November. Work will be done mostly in Lake, Harney and Malheur counties where conditions are best for this type of control, but some also will be done in Union, Baker and Klamath counties. Aerial coyote poisoning likewise will be carried on this winter in suitable areas in eastern Oregon and in Douglas county on the coast.

* * *

An elk trap has been constructed on Hunters Creek in Curry county as an experiment to determine whether this method is practical for taking care of isolated damage complaints that do not justify the holding of a special season. If any elk are taken by this means, it is planned to transplant them to the "Grouleway Country" east of Sixes in northern Curry county, which is removed from cultivated agricultural pursuits and possessing extensive high meadows and logged and burned off areas.

* * *

Both preseason and postseason upland game censuses are being held in all sections of the state having open seasons this year and in addition censuses will be run in October in the Willamette Valley area.

* * *

Several weed plots in both Siltcoos and Tahkenitch lakes have been treated with various chemicals but insufficient evidence is at hand as yet to determine definitely the most suitable of the weed-killing compounds now being used. Treatments made thus far have not resulted in any fish loss.

* * *

While most of the trash fish control work was ended during the month of August, plans are made to poison Meacham, Pole Creek and Unity reservoirs in eastern Oregon during the low water draw down periods in the fall.

* * *

Statement of receipts of the Board of Game and Fish Commissioners of the State of Delaware for the fiscal year ending June 30, 1945, shows the total revnue from the sale of dog licenses was greater than the combined receipts from the sale of resident hunting, fishing and trapping licences. The revenue from dog and kennel licenses comprised nearly 50 per cent of the total receipts of the Commission.

Opening day at South Twin Lake.

Angling Statistics for South Twin Lake, 1947 Season

A record number of 5,392 anglers checked in 8,444 rainbow trout at South Twin Lake this season. The number of fish caught was lower than the previous season, but the total poundage removed was higher. This, of course, indicates that the fishermen had a little more fun by catching larger fish this year than last. The largest fish brought into the checking station weighed 4½ pounds which is a new record for size of trout in South Twin since the lake was poisoned in 1941.

Approximately 95 per cent of the trout taken from South Twin this year had been marked by the removal of one or combination of fins. Consequently, much valuable information has been obtained about the growth rate and survival of the various plantings.

The season's catch statistics for the past three years of checking are presented in the following table:

Season	1945 May 30-July 31	1946 June 20-Aug. 31	1947 June 28-Aug. 24
Angler trips	3,149	4,729	5,392
Fish checked	9,365	10,043	8,444
Total weight	9,694 lbs.	6,537 lbs.	7,020 lbs.
Average weight of fish	1.03 lbs.	0.65 lbs.	0.83 lbs.
Catch/surface acre	74.6 lbs.	50.7 lbs.	54.0 lbs.
Man hours fished	11,989	21,640	25,549
Average catch	2.9 fish	2.12 fish	1.5 fish
Hours per fish	1.28 hours	2.15 hours	3.0 hours
% catch "ripe" females	14.5%	2.5%	0.6%
Range in size	7-18"	6-18"	7-21½"

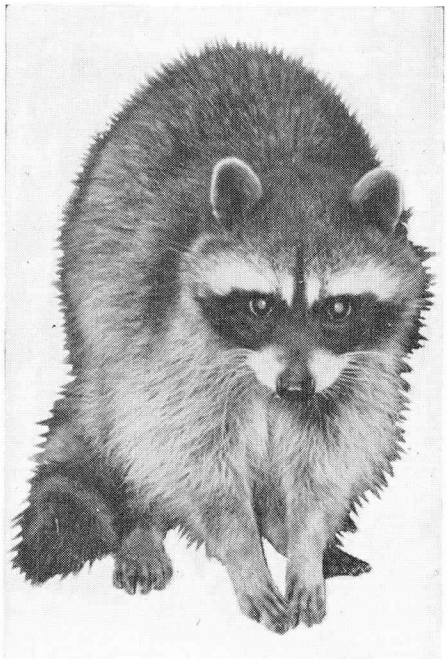
Two-inch Size Grouping of Catch

Year	6-8	8-10	10-12	12-14	14-16	16-18	18 & over
1945	2	426	421	3,089	5,408	19	
1946	134	3,338	4,711	249	1,243	370	
1947	4	1,062	4,737	1.038	966	579	58

Progress Made At Wizard Falls

Construction work at the Wizard Falls hatchery site is proceeding satisfactorily and contractor Carl Halvorson reports that pouring of concrete work is practically complete. He expects to be through with work called for under his contract by the first of the year.

At certain periods the lemmings, small rodents, native to Norway and Sweden, migrate in large hordes to the sea, swimming out to certain death.



Changes in 1947 Trapping Regulations

With the approach of the 1947-48 trapping season, trappers are advised to read the trapping regulations on Page 18 of the current hunting synopsis for complete information as to laws and regulations now effective.

The following changes have been made:

1. Closure of season on marten.
2. Abolishing the sale of trapper's license to non-residents.
3. Opening of state refuge and closures to the taking of furbearing and predatory animals during the regular open season, except in Summer Lake Management Area, Lake Oswego Game Refuge, Sturgeon Lake Game Refuge, Whitetail Deer Refuge and all city and municipal watersheds now in refuges.
4. Requiring all landowners or lessees to renew their land registration permit each year in order to trap on their own land without the purchase of a license.
5. Giving the Commission the right to refuse to issue a license the succeeding year to anyone failing to make a report as required by law.

The season for mink, muskrat, otter and raccoon opens on November 15 and runs through to February 15. Species that may not be trapped this season include marten, fisher, beaver and ringtail cat.

Other fur animals are not classified as furbearers by law and, therefore, may be hunted or trapped at any time of year, a partial list of these being weasel, skunk, badger, foxes, bear, cougar, wildcats, wolves.

The trapping license fee is $3 and all traps must be marked with a brand registered with the Game Commission.

1947 Pheasant Liberations

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game agents of the Commission, who each year carefully select liberation sites upon which the highest survival of the released birds may be expected and obtain the consent of land owners before releasing the birds.

Of the 48,074 pheasants released, 6,565 were mature birds which were held over from the 1946 season and 41,509 were released during the summer months at an age of from 7 to 10 weeks.

The following chart summarizes the 1947 pheasant liberations by counties and management districts and indicates the source of the birds released.

District and County	Pheasants Released
Willamette District:	
Benton	1,821
Clackamas	1,380
Columbia	720
Lane	2,273
Linn	3,411
Marion	3,701
Polk	2,153
Washington	2,867
Yamhill	2,207
Multnomah	60
Sub Total	20,593
Southwest District:	
Douglas	2,473
Josephine	804
Jackson	1,536
Coos	574
Sub Total	5,387
Lake-Klamath District:	
Lake	924
Klamath	1,805
Sub Total	2,729
Central District:	
Deschutes	350
Crook	1,180
Sub Total	1,530
Columbia District:	
Hood River	600
Wasco	2,348
Jefferson	600
Wheeler	...
Gilliam	600
Sherman	1,056
Sub Total	5,204
Umatilla District:	
Umatilla	2,060
Morrow	1,435
Sub Total	3,495
Northeast District:	
Wallowa	1,949
Union	2,460
Baker	2,100
Sub Total	6,509
Grant District	1,200
Harney District	1,047
Malheur District	380
Total 1947 Release	48,074
Source of Pheasants Released:	
Oregon State Penitentiary	1,339
Corvallis Game Farm	12,868
Eugene Game Farm	11,027
Ontario Game Farm	15,184
Pendleton Game Farm	5,199
4-H Clubs	47
Field Rearing Projects	2,410
Total	48,074

Wing banded pheasants have been released in the vicinity of Summer Lake, Pendleton, The Dalles and Myrtle Point this year. It is requested that any person who may have bagged or found one of these banded birds report the number of the band, the time and place at which the bird was found, and any other information which might be of value.

A new game farm is now being constructed at Hermiston to replace the Pendleton farm. It is anticipated that half of the planned construction will be completed by spring and that over 10,000 pheasants will be produced on the new farm in 1948.

A Grateful Fisherman

The following letter was received recently from Cliff Brignall, Long Beach, California, who a few years ago attained some degree of fame when he landed one of the largest rainbows known to have been taken on a fly in Oregon:

"For the past fourteen years I have had many pleasant days fly fishing at Diamond Lake, Oregon.

The purpose of this letter is to let you know what a fine job I think you are doing.

This year, while the average size was a little bit lower in weight than in the past, the man who knows the game could easily take a limit of nice trout. There is plenty of action there at all times.

In August, 1942, I had a thrill that only comes once to a fly fisherman, when I took a thirteen pound, fourteen ounce rainbow at Diamond Lake. Since that time I have taken many marlin swordfish here in our Southern waters, but none could compare with the thrill of taking that beautiful rainbow, which is one of the largest taken on a fly in your State."

Ennis R. Goff

Ennis R. Goff, foreman of the trout hatchery at Hood River, was killed October 6 in an airplane crash near Cherryville on the Mount Hood Loop. He was 37 years old.

Having spent practically all his life from childhood on at one or other of the Game Commission fish hatcheries, he was one of the ablest men in the fishery division and his loss will be keenly felt.

Goff had been in charge of the Hood River station since 1934 with the exception of the period he served overseas during World War II, where he fought in the Battle of the Bulge and was taken prisoner by the Germans.

Surviving are his widow, Allean; son, Ronald; parents, Mr. and Mrs. E. W. Goff; and brother, William.

October Meeting of the Game Commission

The Oregon State Game Commission met in regular session at the Portland headquarters on Saturday, October 11.

The following business was transacted.

Minutes of the previous meeting were approved as read with the exception that the resolution outlining the duties of the Secretary were amended to read as follows:

"Resolved that the duties of the Secretary of the Commission are as follows, to wit:

To act as recording secretary and keep a record of the official proceedings at meetings of the Commission.

To approve voucher claims covering indebtedness or expenses that have heretofore been authorized by the Game Commission, and in the performance of this duty, to examine each claim presented for payment out of the game fund. If it is found upon such examination:

1. That the payment of the same has been specially authorized by the Game Commission; or
2. That the same is included in the current budget and the amount thereof does not exceed the balance remaining unexpended in the corresponding item in said current budget,
3. That the amount claimed is a reasonable charge, and
4. That in the opinion of the Secretary the same is properly payable out of game funds;

Said Secretary shall endorse the same "Approved," adding the date and sign the same officially;

No claim against the game fund shall be paid until the same has been formally approved by the Secretary as above provided.

The Secretary shall also act as Director of the Budget. In his capacity as Director of the Budget it is his duty to have charge of the preparation of the budget and see to it that annually a budget is prepared for the expenditure of the game fund it is anticipated will be received during the succeeding calendar year, as is provided in the "Outline of Game Commission Operations."

Said Secretary shall also perform such other duties as may from time to time be delegated to him by the Commission.

Thereupon Frank B. Wire was duly elected to the position of Secretary."

Request from Bonneville Rod and Gun Club for planting of spiny-rayed fish in Bonneville Lake was referred to the Supervisor for action.

Authorization was granted to sell to Sher Khan of Eugene for $11,000 certain lands in Camas Swale that were not needed for the development of that project as a waterfowl management area.

The Chairman, Commissioner Cathey and the Supervisor were appointed a committee to revise the Postwar Budget, taking into consideration expansion of physical operations such as game farms, fish hatcheries, acquisition of public shooting grounds and all other factors involved in a proper game and fish management program.

Memorandum was read from S. Waldron of the small game committee of the Multnomah Hunters and Anglers Club requesting that cottontail rabbits be declared by the legislature a game animal and that steps be taken to investigate the cottontail rabbit situation in Clark county, Washington. Action on the request was postponed until the reaction of the Oregon State Grange could be learned in regard to the introduction of cottontail rabbits into the state.

The Director of Game, P. W. Schneider, reported that the suggestion had been received that the three coastal states cooperate in gathering information on migratory waterfowl situation. The game staff was authorized to pool information collected on migratory waterfowl studies with the states of California and Washington and the Fish and Wildlife Service.

The Supervisor was instructed to ask the Department of Interior that public lands in Lake county known locally as Beatty Point and Greasers Ridge be reserved from exchange with private interests in such manner as to permit the public the right of access for hunting for all time to come.

Several claims for payment for game damage was referred to the Supervisor for action in accordance with stated policy on game damage adopted previously by the Commission.

John Epping of Tillamook and C. W. Scott of Southwestern Sportsmen's Association requested that the Commission give first consideration to the following four areas as possible development of feeding and resting areas for migratory waterfowl: Netarts Bay, Sand Lake, New Lake and Henderson Marsh-Coos Bay area.

Mr. Scott also requested that if the Commission had any surplus cutthroat trout eggs that they be hatched and the fish turned over at swim-up stage to the sportsmen's association for release. The Commission advised, however, that all available eggs were being hatched and fish raised to a larger size.

The following bids were received by the Commission for the Eel Lake property: $15,150 from Wm. Vaughn and $31,000 from the City of Reedsport. The bid of the City of Reedsport was accepted.

A year's leave of absence was granted Ben Snyder, superintendent of western Oregon game farms.

Beaver Transplanted

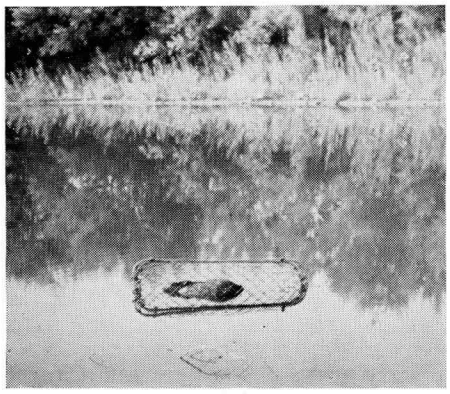
Last summer 249 beaver were live-trapped from areas where they were causing damage and liberated in streams where the construction of dams will be beneficial in soil and water conservation. This is a continuation of the program started in 1939 to reestablish beaver on all suitable waters in the state.

Since 1939, the Game Commission has relocated 2,028 beaver. Through transplanting and protection these animals are again becoming established wherever there is a favorable food and water supply. Experiments have been made in planting willows and other trees preferred by beavers for food along barren and eroded streams in order to make these waters suitable for future stocking.

Wherever beaver inhabit streams in agricultural lands there is always a possibility of damage resulting in irrigation and drainage ditches, orchards and crops. This is the source of animals used in restocking previously determined streams on public or private land.

Little live-trapping is done before July 1 because of the loss in young or kits. Three or four kits are usually born in May, and by the first of July are large enough to transplant or to survive if the adults are removed.

In live-trapping, the Bailey Trap is used which, when sprung, catches the animal in a woven wire enclosure. The animal is not injured. Some losses, however, are suffered from cold and exposure, especially during cold nights. Because of this, live-trapping is limited to the summer months when the weather and water are the warmest, and does not ordinarily extend beyond September 15.



Beaver in live-trap.

Young beaver taken when early live trapping was necessary.

One of the numerous pack lakes in the Cascades.

Oregon's Cascade Lakes

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Diamond, Odell, Crescent, Miller, Fish, Big Lava and Little Lava now have or have had large trash fish populations. Control operations were started on many of these lakes in 1941 only to be halted by the outbreak of the war. South Twin Lake was completely rehabilitated before the war and is now an excellent example of what can be done by the application of practical fish management techniques. The war years provided a period of protection for the roach, the most common trash fish, during which they multiplied rapidly so that today their populations are numbered in the millions in the large lakes. Such large populations of trash fish use up tremendous amounts of aquatic food forms that normally go into the production of trout. This of course reduces the amount of trout that can be produced by a lake and so reduces the per angler take.

Control operations carried on at East Lake in 1941, 1942, and 1946 killed upwards of five million roach and thus prevented a large part of the lakes' productivity from being wasted on these trash fish. This summer almost one million roach weighing seven and one-half tons were removed from the lake.

Roach control was well under way at Crescent Lake in 1942 but had to be discontinued before the desired results were obtained. Hundreds of thousands of roach were destroyed here and millions were left to be destroyed. This summer intensive control operations were instituted at this lake as well as at Davis and Odell Lakes where heavy roach populations were known to exist. A total of 8,200,000 roach were destroyed in these three lakes in a period of two and a half months. The removal of these trash fish will allow more of the aquatic food to be translated into pounds of trout rather than pounds of roach.

An estimated 250,000 roach were poisoned in Diamond Lake in August of 1946. Further attempts at that time were discontinued when rainbow fingerlings were found in the shallow water areas along with the roach. This summer intensive control operations over a period of a month caused the removal of approximately 5,000,000 roach. It seems evident that the large population of rough fish in this lake has had a definite influence on the productivity of the lake with respect to trout.

The Game Commission conducted an extensive poisoning operation at Lake O' The Woods in Klamath county in August of 1946. Thousands of young and adult carp, suckers, chub, yellow perch and catfish were killed in the outlet slough where it was once possible to catch trout. This year a field agent stationed at this lake and doing control work there as well as at Fish Lake in nearby Jackson county, removed or poisoned approximately two tons of rough fish of several different species. Some of these fish were transported to the Butte Falls Fish Hatchery to be used as fish food. The continued removal of these undesirable fish combined with spawning stream improvement that was undertaken this summer should be reflected in an increased trout production in Lake O' The Woods.

Fish Lake in Jackson county has long been noted for the excellent fishing provided there. Roach were first noticed there in considerable numbers in 1946. This year, poisoning operations resulted in the eradication of 5,000,000 of these pests. It might be well to mention here that if it were not for the indiscriminate and unlawful use of live bait by some fishermen who are not aware of the consequences of such a practice, most of the lakes now infested with these trash fish would be free of them.

Roach control operations also were carried out this summer on Paulina Lake and Big Lava Lake, both in Deschutes county.

The improvement of the Cascade Lakes infested with undesirable fish will be continued and expanded as the situation demands. The cooperation of the sportsmen is urged in refraining from the use of live bait which is in violation of the regulations as outlined on page 3 of the Official Synopsis of Oregon Angling Laws for 1947.

Undesirable Game Fish Species

Research work conducted on East and Pauline Lakes in 1946 disclosed the presence of large, cannibalistic populations of brown trout. It was agreed that these brown trout were making serious inroads into the populations of the other more desirable game fish and so should be removed. Therefore, in the late fall of 1946 300 large brown trout, averaging fou pounds in weight, were trapped out of Paulina Lake and were transported by tank truck to the Deschutes River where they were released. It is planned to trap as many brown trout as possible out of both East and Paulina Lakes later this fall. As the brown trout are removed from these lakes, predation loss will decrease and fishing should improve.

Work done on Odell and Crescent Lakes in 1946 indicates that large cannibalistic trout are damaging the sports fishery there. Dolly Vardens, a very poor game fish, are uncommonly abundant in Odell Lake and are undoubtedly preying upon other game fish. Further investigations are needed to determine whether or not this species should be trapped out. If they are preying upon the landlocked blueback salmon to any extent, they will be trapped while on their spawning run and removed from the lake.

Whitefish are common in Odell Lake and like the roach are taking much food that could be used better for the production of rainbow trout. If it is found possible to trap these whitefish in any numbers, they will be removed in favor of the rainbow trout.

Crescent Lake has a population of very large brown trout that are undoubtedly damaging the rainbow trout fishery. If further investigations indicate that th brown trout are causing more damage than they are worth, they also will be trapped and removed.

Little Cultus Lake annually produces very little except a large crop of whitefish. The small rainbow population present there is unable to get sufficient food and is stunted as a result. Obviously, the whitefish must be removed as quickly and as completely as is possible. Since the whitefish is a late fall stream spawner, they can most easily be removed by the use of spawning stream traps. Once their population has been reduced to a low level the rainbow trout will be able to compete successfully with them for food, and more food per fish will be available. The lake will then produce a much greater poundage of trout than ever before, trout that will be normal in all respects.

If sufficient quantities are taken, these and other trash fish may be frozen and fed as food for rearing trout at our hatcheries.

Stocking Program

Hatchery reared fish are a very important and necessary part of our Cascade Lakes sports fishery. East and Paulina Lakes, for instance, have almost no natural propagation and are thus dependent upon the annual plants of eas ern brook and rainbow trout. Many othe lakes are equally dependent upon the stocking of hatchery fish.

There are, however, those lakes, such

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Pollution A Measure of Civilization

From an article by KARL E. MUNDT

Next to the weather, there has probably been more talk and less action on the subject of the pollution problem than on any other problem concerning private citizens and public officials since the turn of the century.

Pollution has been discussed, debated, diagnosed, surveyed, studied, analyzed, condemned, investigated, and criticized but nothing has been done to provide effective Federal controls to reduce its menace or to eliminate its sources. The time has come when Congress, state and local authorities can not postpone taking constructive and compulsory action to correct the evils of pollution.

Water pollution is the last important, unregulated, pagan practice in the United States. We have provided protection for forests, protection against the waste and misuse of our soil resources and for game, fish, and migratory waterfowl. We have protection against the misuse of our navigable waters although we do nothing to protect them against pollution; we have protection against crime, fraud, epidemics and many other vices and evils. However, we have done nothing effective on a Federal scale to protect the people of America against the destructive and dangerous results of water pollution.

Many of our public waters have become unfit for either fish, animal, or human life. They have degenerated into slow-flowing cesspools bearing mute testimony to the callous disregard which our civilization has paid to the safeguarding of its public waters despite the fact that water is the most basic of all our natural resources. As Ding Darling's cartoon here points out, many of our once noble rivers have become obnoxious open sewers.

Selfish industries, careless individuals, and indifferent towns and cities continue to dump sewage and industrial wastes into streams with complete contempt for hygiene, wildlife or the rights of others. Voluntary steps to correct pollution have failed dismally for more than a century; state laws and regulations have demonstrated that they alone cannot do the job; the time has come when we must have Federal legislation establishing minimum standards of water cleanliness in all the public waters of America. Either that or "America the Beautiful" will become a mere phrase in an historical reference book instead of a living reality for each and all to admire and enjoy.

Cartoon by Ding Darling.

The two main sources of water pollution in the United States are (1) Municipal — sewage and public wastes dumped into streams, lakes, and rivers without being put through a modern and effective treatment plant, and (2) Industrial — toxins and injurious fluids and solids of various types discharged into the public waters without adequate treatment to reduce their poisonous effects. Modern science has developed successful and effective treatment plants and processes to correct both major types of pollution. Only the easy habit of industries and communities to follow the lines of least resistance plus the greedy desire of some to save money and hold down expenditures even though it means ruining forever some of the most attractive and useful public waters in the world causes the pollution problem to continue and to grow.

An aroused public opinion could eradicate that menace. It is gratifying to note that during the past decade there has developed an enlightened public opinion against pollution which bids fare to demand the proper legislative correctives in the very early future. Each citizen can hurry the day by writing to his Senators and Congressmen demanding action.

Since in most cases the pollution problem involves interstate streams which frequently carry the pollutions and poisons of one state down to the river pools from which the people of another state derive their drinking water and their recreation, it is obvious that local legislation alone can never correct the problem. Our most offensive and persistent water polluters know this quite well and are quick to testify in pious tones that are in favor of anti-pollution legislation only — note the exception! — "only it should be handled by the states themselves and the Federal Government should be given no authority to compel the control of pollution."

On the surface that sounds very good but because of the peculiar interstate nature of pollution, in reality "State control of pollution" means no effective control of pollution at all. It is about as senseless to try to clean up the interstate waters of America by state regulations as it would be to try to protect our migratory ducks and geese by suggesting that each state pass its own laws on hunting seasons and bag limits.

When you write your Federal officials (and if you really want to help in this crusade to clean up the waters of America you will write them vigorously and often), it is important that you insist that the three minimum essentials of an effective program of pollution control be made a basic part of any corrective legislation which is passed: (1) Federal standards of cleanliness must be established; (2) Any law passed must outlaw the establishment of new sources of pollution; (3) An effective pollution control law must have "enough teeth" in it to compel reluctant or recalcitrant offenders to correct their abuses. When Congress has once passed a pollution control act containing these three basic features we shall be well on the road to correcting the evils which now plague and poison our American waters.

There is a small plover in Africa which picks the teeth of crocodiles, the reptile allowing the bird to enter its mouth unharmed. The bird also acts as a lookout against danger.

Member of Congress from South Dakota, one time National Vice President of the Izaak Walton League of America and in four different Congresses sponsor of legislation to correct pollution. He is currently the author of H. R. 123, commonly known as the Water Pollution Control Act, and he believes there is a reasonably good chance that this legislation will be approved by the 80th Congress before it expires late in 1948.

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States Are Increasing Cooperative Wildlife Unit Contributions

One of the most encouraging trends noted by the Wildlife Management Institute in recent months is the willingness of the State Game Departments in states having Cooperative Wildlife Research Units to increase, voluntarily, their financial contribution to this program. For example, the Missouri, Ohio, Utah, and Virginia Commissions recently doubled their contributions. Iowa has contributed on this basis for several years. The Oregon Game Commission repeated its offer of 1946 to contribute to its Unit over and above the stipulated agreement as needed.

Alabama, after a period of deactivation during the war, agreed this spring to resume full-scale contributions, but severe reduction of federal wildlife funds prevented the Fish and Wildlife Service from meeting its part of the cooperative agreement. Shortage of funds also required that the Service withdraw support from two other of the ten Units. Nevertheless, the state departments made up for the federal cut, and with the annual grant from the Wildlife Management Institute, the Unit work is going ahead.

The normal contribution of each participating state Commission to the Unit is $6,000 per year, the Institute advised. Doubling of this contribution represents, therefore, a 100-per cent increase in the states' support of a productive and truly cooperative, nation-wide, educational and game management program.

These state Commissions, the Institute continued, represented in Alabama by Bert Thomas, Iowa by G. L. Ziemer, Missouri by I. T. Bode, Ohio by H. A. Rider, Oregon by Frank Wire, Utah by Ross Leonard, and Virginia by I. T. Quinn, are to be congratulated for their forthright attitude toward sound game administration.

Two of the basic objectives of the Cooperative Wildlife Research Unit program are the training of men for technical and administrative positions in the wildlife profession, and assistance to states in important wildlife problems. During the past 12 years that the program has been in operation, at least 255 major wildlife investigations have been completed, and more than 500 men have trained. Together, these achivements have served to lift wildlife standards throughout the nation.

Oregon's Cascade Lakes

(Continued from Page 6)

as Mud and Sparks, that are maintained largely by natural propagation because of excellent spawning tributaries. Studies of the game fish populations in these lakes indicate that eastern brook trout are chiefly the result of natural propagation.

The Game Commission from its studies of high Cascade Lakes is developing a well balanced stocking program that will give much aid to the Cascade Lakes fishery.

Pack Lakes

A great deal of excellent fishing is offered today by the many small lakes that lie along the summit of the Cascade Range and are accessible only by trail. Actually many of them are overstocked, a condition that has resulted from insufficient fishing and much natural propagation. It can be said without exaggeration that some of the best fishing in North America is available in the literally hundreds of these small lakes. The price is a walk of from two to ten miles through beautiful country.

It would be well for our large roadside lakes if part of the fishing pressure could be diverted from them to the small pack lakes. Any man under forty should experience little physical hardship in reaching them. For those who dislike walking, horses are always available for hire. A week spent in this pack lake country is one that will never be forgotten. Forest Service maps show the location of the majority of these lakes and can usually be had for the asking. The Mink Lake Basin, for instance, in the Willamette National Forest is easily reached by trail and in it are a dozen or more fine lakes. The Island and Sky Lakes groups north of Fourmile Lake in the Rogue River National Forest provide good eastern brook and rainbow trout fishing. There are many others along the summit of the Cascades and these lakes comprise Oregon's largely untapped sports fishery resource.

Bulletin Applies for Second-Class Rates

The successful campaign of the National Association of Conservation Education and Publicity in having an amendment passed by Congress allowing state conservation publications without a paid subscription list to be mailed as second class matter means a considerable saving in postage costs and makes it possible to plan an increased direct distribution of this BULLETIN.

Anyone sending in a request will be placed on the mailing list and the sportsmens' clubs have been asked to furnish their membership lists as it will be cheaper and faster to mail a copy directly to each member than to send a package of bulletins to the secretary for distribution at meetings. It will take some time, of course, to have all the address plates typed but this will be done as quickly as possible.

Record Salmon Taken On Fly

The largest chinook salmon ever caught by L. W. Hofer of Oswego was the 37-pound, 40-inch fish he took on a fly October 13 in the lower part of Siletz Bay opposite Cutler City. As far as Game Commission records are concerned, this also is the largest salmon known to have been caught by this means.

Mr. Hofer reports he was fishing from a boat and the fly, a Polar Bear streamer with a No. 01 hook, was trailing the surface when the fish hit. Hooked at 9:45 a. m., it was landed in the boat an hour and 45 minutes later. The outfit used was an 8-ounce fly rod with a HCH tapered leader.

Spending his spare time experimenting on salmon with different patterns of flies, Mr. Hofer in the past has caught several, mostly silversides, in various streams along the coast but none of his previous catches had equalled this.

NOVEMBER CALENDAR

Salmon and Steelhead over 20″	Entire year
Jack Salmon under 20″	Entire year
Spiny-rayed fish	Entire year
Elk, western Oregon	Oct. 25-Nov. 2
Elk, eastern Oregon	Oct. 25-Nov. 16
Elk, Baker Area	November 22-30
Ducks and Geese	Oct. 21-Nov. 3
Pheasants	Oct. 22-Nov. 2
Pheasants, Malheur County	Oct. 22-Nov. 9
Valley Quail	Oct. 22-Nov. 2
Mink, Muskrat, Otter, Raccoon	Nov. 15-Feb. 15
Bear	Entire year
Predatory Animals	Entire year

Note: For exceptions, consult official hunting or angling synopsis for 1947.