

Oregon State GAME COMMISSION BULLETIN

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No. 6

Malheur County Pheasant Facts

By ARTHUR S. EINARSEN, Leader, Oregon Cooperative Wildlife Research Unit

It has been our lot to walk the pheasant habitats of Oregon for the last twelve years to measure pheasant populations and to learn their distribution trends and reproductive secrets. An intensive search into pheasant habitats of Malheur county has been carried on for five years. If there is any inclination amongst sportsmen to "gripe" about pheasants in that productive range, why not take a little time out now and face facts, draw conclusions, and place our shoulders to the wheel.

You may have no reason to remember back to 1943 when the Game Commission was making the annual management regulations. There was a common demand for long seasons and high bag limits. In Malheur county 42 days of hunting was agreed upon with a daily possession limit of six birds of which one could be a hen. This meant a possession limit of 18 pheasants (15 cocks plus 3 hens).

We measure pheasant populations by actually getting into the area where they live and determining the number of pheasants per hundred habitat acres. It is a method that has been tried and tested for twelve years. We, like the hunter, concede that the actual test of measurement is the number of birds that rise before the gun in open season and in no year have the measurements before season failed to correspond with gun success of the hunter on the opening day. In other words, in walking these numerous rectangles which we call "quadrats," we get a fair cross section of the birds that actually are living in the field. Applying this method before and after the shooting season for five consecutive years we have the best record of population trends possible under existing conditions.

The hunt in 1943 reduced the population over 50 per cent and by the succeeding nesting season in 1944, over 65 per cent of the pheasants in Malheur county had been removed from these habitats. The conservative regulations of the Game Commission in succeeding years resulted in a gradual upward swing of the population until in 1947 we entered the nesting season with the best population, averaging the area, of any year during the period under observation. This ample stock however did not result in high levels of abundance in several problem areas to be mentioned later.

In making comparisons, there has been

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Why Special Seasons?

It indeed appears inconsistent for the Game Commission and sportsmen of Oregon to express concern for the rapid increase in hunting pressure and the illegal harvest of protected game animals and then turn around and authorize additional hunting seasons and in some areas make it legal to take females which are the producers of future generations of game.

If there are too many deer and elk in Oregon, most hunters would say they certainly hide well during open seasons and with the harvests that have been made in recent years it is hard to believe that there could be any substantial increase in game numbers.

The facts of the case are that there are not enough game animals and birds to meet the demands of the sportsmen and with our expanding economy it is not probably that there ever will be. In fact density measurements on big game ranges indicate that some of the more heavily hunted mule deer herds are slowly declining under present hunting pressure and increases are normally so slight that they are difficult to measure.

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Hunting Regulation Hearing

Hunting regulations for 1948 will be considered by the Oregon State Game Commission at a public hearing starting at ten o'clock in the forenoon, July 9, at the Commission headquarters, 1634 S. W. Alder Street, Portland.

Seasons, bag limits and methods of taking game birds, game animals and furbearing animals will be considered.



View of pheasant farm and surrounding territory near Ontario, Malheur county.

☆ **THIS AND THAT** ☆

Weather worked against the fishermen during the first month of the general trout season, with waters being too high and roily in most sections to provide favorable angling conditions. Bait and spinner fishermen fared the best.

* * *

June 15 marks the opening to trout fishing not only of tidewater areas along the coast but also of several well known fishing lakes in the Cascades, including Paulina, East, Davis, Diamond, North and South Twin lakes. As all of these lakes attract large numbers of anglers, particularly at the beginning of the season, opening them simultaneously permits a distribution of the fishing pressure.

* * *

The first angler this season to turn in a tag taken from a marked trout was H. B. Kilmer of Florence. He caught a cut-throat trout, nine inches long, in Sutton Lake although the fish had been released in Mercer Lake. Tagged or marked fish have been liberated in several different bodies of water and anglers are urged to be prompt in forwarding information to the Game Commission when catching such fish.

* * *

The Needy Rod and Gun Club in Clackamas county has volunteered to see to the delivery to the Game Commission of all tags recovered from the 1,000 marked trout liberated in Rock and Bear creeks, tributaries of Pudding river. During the first few days of the season approximately 100 tags were turned in to members of the club.

* * *

All fish liberation equipment has been kept in constant use releasing the trout held over the winter at the hatcheries. As many of the fish were released prior to the season as possible; however, many areas were still inaccessible so that liberations are continuing this month. The releases of legal sized fish will total approximately 2,500,000.

* * *

To obtain a measure of the loss of nests by predation, district agents of the Commission have been provided cull pheasant eggs from the game farms for planting of dummy nests which will be examined periodically to determine the time and places in which the greatest loss of nests occurs.

* * *

Two of the regular beaver trappers employed by the Commission will be assigned this spring to trap foxes in the Willamette Valley to help with the fox control program.

* * *

Tags have been ordered for marking all beaver that are live-trapped and transplanted this coming summer.

* * *

The annual staff conference of the game division personnel is being held this month to discuss past and future work programs.

East and Paulina Lake Creel Census

These two popular fishing waters located near Bend will again be open to angling June 15. This will begin the third year of the fishery investigations on these lakes, the study having started in 1946.

During the angling season a creel census is conducted by members of the fisheries staff of the Game Commission. For proper management the total number of trout taken by anglers must be known. Survival to the angler of various plants are determined by the number of marked fish caught. For these reasons it is necessary that all anglers fishing these lakes have their catch examined. The importance of cooperation by sportsmen in the investigation cannot be over-emphasized.

At East lake during 1946 nearly 13,000 trout were caught by 14,000 anglers and approximately 17,400 were caught in 1947 by 14,700 fishermen.

Paulina lake catch increased from 7,300 trout caught by 7,700 anglers in 1946 to 19,650 fish returned to 10,740 anglers in 1947.

The 1948 angling season for these lakes is June 15 through September 15.

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May Meeting of the Game Commission

The Oregon State Game Commission held its regular monthly meeting in Portland on May 7 and 8 and conducted the following business:

Resolution was read from the Condon Rod and Gun Club requesting all waters inaccessible to the general public be closed to angling and that the Commission do not stock fish in such waters.

Application for a game reserve in vicinity of Moore Park, Klamath Falls, was continued for further investigation.

Representatives of the State Grange and sportsmen were heard in regard to the question as to whether or not cottontail rabbits should be introduced into the Willamette Valley. Matter was taken under further advisement.

Staff was authorized to negotiate exchange of parcel of land at Summer Lake for another owned by Wm. Kittredge which extended into and broke the present boundary line of the area.

With reference to the hearing to be held in June by the U. S. Reclamation Service regarding dams proposed by that department for the Rogue River, it was decided to have representatives of the Commission present to protest the construction of any dams on the river.

The Supervisor was instructed to have such repairs as necessary made to the Rock Creek hatchery. He was also instructed to write to the Roseburg Rod and Gun Club thanking them for offer of site at Winchester, explaining the reasons for not proceeding with construction of hatchery there.

The Supervisor was authorized to negotiate for a hatchery site on the Miami river in Tillamook county.

Supervisor was instructed to have prepared plans and specifications for improvements at Roaring River and Diamond Lake and issue a call for bids.

An appropriation of \$35,000 was made to be used for habitat improvement during the balance of 1948 and the staff instructed to detail a long-range program for approval of the Commission.

Following bids were received for construction of grinding room, shop building and other improvements at the McKenzie hatchery, contract being awarded to Teller Construction Company of Portland:

- Gale M. Roberts, Springfield.\$12,275
- Ken Ward Construction Co.,
Portland 11,500
- Teller Construction Co..... 10,881
- John Koutynovich, Eugene.... 14,240
- Touf Charneski, Eugene.... 18,956

Application was denied for reinstatement of a license agency for a Grants Pass firm which had previously been cancelled because a license sale had been predated.

One application for a guide's license was denied on basis that applicant had been arrested for a game law violation within the last two years.



Before and after views of the Gate Creek holding ponds near the McKenzie hatchery recently leased from the Fish Commission. Right view shows the ponds ready to receive fish.

Conserve Cover Conference

Due to the present farm practices of clean cultivation, intensive land utilization, weed control and eradication, and land reclamation, the favorable game bird cover is rapidly vanishing. Consequently, every effort should be made to preserve the remaining habitat. With this in mind, James Savage of the U. S. Fish and Wildlife Service at Klamath Falls, initiated a meeting for the preservation of railroad right of way cover.

Representatives of the Great Northern and South Pacific Railways, Klamath Sportsmen's Association, U. S. Fish and Wildlife Service, and Oregon and California Game Departments met at Klamath Falls to review the present plans and policies of the railroads in regard to the burning of their right of ways, and to determine what steps might be taken to preserve as much cover as possible.

The problems of railroads are to eliminate the fire hazards and to control noxious weeds. This is accomplished by burning or by the use of chemicals. It was pointed out that most counties are organized weed control districts which make it mandatory to control noxious weeds. As many of the road beds are constructed of combustible peat it is necessary to remove any fire hazards. Consequently the vegetation must be burned during the winter months (the most critical period for upland game birds) when the road beds are frozen. The railroad representatives assured everyone that their policy is not indiscriminate burning, that only areas of fire hazard were burned, and that these fires were controlled.

The borrow pits and sloughs along the tracks present another problem. They are used extensively by mallards and cinnamon teal for nesting and by pheasants for escape cover. However, the farmers use these pits for drainage ditches on irrigated lands and request the

railroads to keep them clean.

The Great Northern Railroad advised they had ordered a four bottom plow to make furrows for fire breaks adjacent to the farmers' fields and along the road bed wherever feasible. This will leave a twenty to thirty foot area of cover between the fire breaks.

After a discussion of the practicability of leaving as much cover as possible, the following policies were decided upon:

1. The railroads will arrange to do their mandatory winter burning as late in the winter as possible. (February and March).

2. All burning will be controlled.

3. Fire breaks will be constructed and cover left wherever possible.

4. The game biologists in the Klamath-Modoc area will pick out the most critical areas for game along the right of ways and submit in writing a description of the location of such areas to the railroads. The railroads will take all steps that are feasible to preserve the cover in these areas. Dates of nesting of affected species will also be submitted to eliminate game destruction on areas that may, from time to time, have to be burned.

Some of the practices already being carried out for game protection by the railroads were discussed. In the lava beds mule deer were being caught in the right of way fences. Metal strips were hung on the fences so the deer could see the wire. Other fences were let down completely to allow the deer to pass. Refrigerator cars dripping salt brine on the zinc chloride-treated ties caused the deer to congregate on the tracks to lick the salt in the ties. To reduce deer kill by the trains, the zinc-treated ties were replaced by creosote-treated ties that are distasteful to the deer.

The sincere interest and full support of the railroad representatives in this undertaking to preserve cover was appreciated greatly by the cooperative agencies.

South Twin Lake Receives Fish

South Twin Lake has recently received a stocking of approximately 26,000 yearling rainbow trout reared at the Game Commission's Oak Springs hatchery.

These fish were marked by the removal of the right pectoral fin to facilitate identification. Some 200 trout of this plant were marked by the use of small metal jaw tags. Accurate length and weight measurements along with scale samples were taken of these to determine rate of growth, survival, and scale reading data when the fish are again checked over in the angler's creel. This is the third year of stocking marked trout in this water.

The increased planting of this experimental lake should bring the success ratio up to approximately three fish per angler. An effort is being made to find the maximum carrying capacity of this body of water. Increased stocking coupled with studies of the lake's production of available trout food, rate of growth, and condition of trout returned to the angler should provide some factual information to determine just what the lake is capable of producing.

A stocking of unfed fry will also be made in South Twin to determine the return to the angler and rate of growth of the particular method of stocking lakes. No trout of this size have ever been planted in South Twin since the lake was reclaimed in 1941.

South Twin will probably not be stocked in 1949. The hold-over fish and plant of fry in 1948 should provide a sufficient population to keep the angling success up to the present level.

Anglers fishing South Twin are again requested to bring all fish caught to the Game Commission checking station so that important data may be recorded. Excellent cooperation has been received from anglers in the past three years of operation.

1948 Deer Tags

Many purchasers of 1948 hunting licenses have commented upon the lack of a deer tag which has been attached to the license in past years. This year the Oregon State Game Commission is instituting a separate deer tag as authorized by the last legislature. These tags which will be available at the regular license agencies by mid-summer will cost 50 cents for residents and \$2.50 for non-residents. Money obtained from these tags will be used for the cost of the tags, the return report cards that will be attached and for a statistical analysis of the information returned.

It will be necessary for every deer hunter, successful or otherwise, to fill out and mail in the return report card. The law authorizing the tags requires that the attached return cards be filled out and mailed to the Game Commission not later than thirty days after the close of the season. A stamp will not be necessary since postage will be paid by the Commission. Failure to return these cards is punishable by the right to refuse a tag for the next succeeding season.

The information that will be obtained from these reports is essential for the proper management of Oregon's deer herds. Each season the total number of deer hunters and the total deer kill will be learned. It will also be possible to determine the areas that are supporting the heaviest kill and the age classes of bucks that are killed in each area.

Separate elk tags with an attached return card have been issued in Oregon for several seasons. The information obtained from these elk reports has proven to be of great value in the securing of information for management and regulations concerning elk. Experience with these elk return cards has shown that a very satisfactory report can be expected from the hunters of Oregon. The success of any program of this nature naturally

Big Game Salting Operations Nearing Completion

The spring salting operations on big game ranges by Oregon State Game Commission district agents is nearing completion. Between ten and eleven tons of salt are being distributed this season over the ranges of eastern and southwestern Oregon. The salt, in fifty pound blocks, is being set out by the use of aeroplanes, pick-up trucks and pack horses.

All salting stations being set out have been approved by the Forest Service or other land administrative departments. This is done so that the work will not interfere with established stock salting programs.

The Game Commission conducts its salting operations for several purposes. In some places it provides necessary min-

DEER TAG 1948

Have This In Your Possession When Hunting

PUNCH HOLES TO INDICATE MONTH AND DAY OF KILL

● AND ATTACH TO CARCASS AS SOON AS KILLED ●

FILL IN AND MAIL ATTACHED CARD AT ONCE

Signature _____

Sept. (1) (2) (3) (4) (5) (6) (7) (8) (9) (10)

Oct. (11) (12) (13) (14) (15) (16) (17) (18) (19) (20)

Nov. (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31)

STATE OF OREGON
1948

No. 00025

DEER HUNTER'S CHECK OUT CARD

THIS CARD SHALL BE PROPERLY FILLED OUT AND MAILED WITHIN 30 DAYS AFTER THE CLOSE OF THE REGULAR DEER SEASON. FAILURE TO REPORT IS A MISDEMEANOR AND SUCH PERSON FAILING TO REPORT MAY FORFEIT THEIR RIGHT TO PURCHASE A DEER LICENSE THE SUCCEEDING YEAR.

REPORT WHETHER YOU HUNT DEER OR NOT

I killed a Buck Deer with _____ and _____ antler points, on _____ date _____ 1948, near _____ (TOWN OR UNINCORPORATED) _____ County.

Signature _____
of Hunter _____

HUNTER: THIS CHECK OUT CARD PROVIDES NEEDED INFORMATION FOR MANAGEMENT OF OREGON DEER. PLEASE RETURN THIS CARD PROMPTLY.

New deer tag being issued for the first time this year.

depends upon the fullest cooperation of every individual hunter. A prompt submission of detailed reports by them will greatly aid the cause of sound game management. It is hoped that the success of Oregon's deer return cards will be as gratifying as it has been in the case with elk.

erals to big game diets. By the location of these stations it is also possible at times to induce earlier migrations of big game from problem winter ranges and make for a more uniform use of forage on crowded summer and winter ranges. By encouraging a more widespread use of range in this manner game and livestock competitions can be reduced. In some instances it is also possible to lessen game damage to crops by drawing the animals away from the problem area.

In the coastal sections of the state some small experimental salting stations are being operated, although, so far it has been difficult to get big game animals to use the salt in this part of the state.

With the unerring instinct of a homing pigeon, the Pacific salmon returns from the sea to the streams and lakes of its origin to spawn and die.

Malheur County Pheasants Facts

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a noticeable change in the distribution of the birds since 1943. At that time some of the more richly stocked areas were found in the southern portion of the Owyhee irrigation project. One of the measurement units to which we returned periodically near Adrain, held a population of over a bird to the acre in the first years of the study. At that time sugar beets were considered a part of the diversified farming program and were not the principal crop. The spread of interest in beet raising has swept through this range until now it is the predominant crop to the distinct disadvantage of the pheasants. In walking through these farm fields no observer could fail to see the gradual shift of population coming with the change in crop rotations, and even though the total breeding populations of birds was high in the spring of 1947, it was not in its original location; thus in the pre-season census in the fall of 1947, the Adrain unit had only 16 birds per 100 acres. While the area where "row cropping" is practiced showed a downward trend, the diversified farming areas held good levels of abundance and high populations in a few spots.

The inventory for the entire block of land included in the Owyhee project shows a population for 1947 that can conservatively be estimated at about 40 pheasants per hundred acres of habitat. In the territory adjacent to Ontario and Nyssa, however, the records show a level of less than 30 pheasants per hundred acres of habitat and it must be remembered that these figures resulted from the samplings before the season opened. The intensity of the hunt in October must surely have reduced this smaller stock to a low ebb as reports of pheasant scarcities at these places were common as the season progressed. Thus in parts of this country, 1948 may be a critical year.

Pheasant habitat fortunately does not have to be just one ideal farm crop such as corn or other grain. If that were true, the diversified areas stretching from above Jamieson down Willow Creek and up the Malheur above Harper would not run so high in the scale of pheasant production. These districts had a pre-season level in 1947 of about 40 pheasants per hundred acres with more in some districts. It was noted in checking with hunters that those who worked the coverts in this range were usually very successful and complaints of pheasant scarcities were few.

But this alone is not the entire picture in the irrigated section of Malheur county between Jamieson and Adrain, Oregon. With the scarcity of gasoline during the war years, there was an extraordinary concentration of hunters around each center of population since this shortage limited travel. This was es-

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Game Division Program

By P. W. SCHNEIDER, Director of Game

(Editor's Note: The first half of this article, covering Big Game and Upland Game activities, was printed in the May issue).

Waterfowl

Until recently, the management of waterfowl was considered dominantly a federal problem inasmuch as migration occurred over vast areas involving all the states, territories and foreign governments. As a greater demand in the face of diminishing supply developed, it has become imperative that more critical and precise knowledge of the resource be secured and maintained from year to year. It is recognized that the individual states, by more actively functioning in this field, can assist substantially in waterfowl work. The Oregon Game Commission recently acted as host to representatives from the U. S. Fish and Wildlife Service, British Columbia Department of Game, Washington Department of Game and the California Fish and Game Commission in an initial effort to coordinate all waterfowl work of the respective organizations in connection with the Pacific flyway.

In addition to the Federal Aid waterfowl work, there has been established a waterfowl department to do regular field work comparable to that of big game and upland game. It is necessary to secure a more thorough knowledge of resident and migrating waterfowl, kill data and other pertinent facts relevant to waterfowl populations by species. A series of key census areas have been established for weekly checks of waterfowl. The securing of access for administering as public shooting grounds such areas as Che-

vaucan Marsh is a phase of active administration of private lands hunting control.

Federal Aid

Under the so-called Federal Aid Program, Oregon has a number of projects underway. The federal government provides 75 per cent of the funds for certain types of restorative and management activities for game resources. The state must contribute 25 per cent. The major current activities consist of development of game management areas designed for waterfowl. Summer Lake management area of 13,650 acres is well over half developed. Camas Swale is 90 per cent acquired with development scheduled to start in 1948 as indicated from the basic engineering survey, and acquisition has started on Sauvies Island game management area as the third unit in this category.

Basic data secured since 1946 is at an advanced stage to provide sufficient knowledge for considering waterfowl management potentials in geographical subdivisions of the state.

Other work consists of inquiry into survival of artificially reared pheasants, game damage control methods, investigation of game habitat development areas and other similar activities.

Furbearers

With the fur resources, unlike other game species, we are dealing with a crop providing direct monetary returns to those participating in its harvest and this financial interest constitutes its chief attraction. In addition to the biological or



Transplanting beaver to prepared site.

environmental factors involved in wild fur management the matter of economics, therefore, more directly affects the demand than with other wildlife. Fluctuating demand for various types of fur is immediately reflected in its harvest which in turn affects necessary regulatory procedures. The artificial production of fur on many fur farms of the country constitutes only one-sixth of total fur production in the United States. With five-sixths of the fur crop coming from wild-caught forms, it is obvious that active and sound management of our wild furbearers be exercised. During the 1945-46 trapping season in Oregon, approximately 2,500 Oregonians harvested about \$500,000 worth of fur.

Probably less is known regarding the management potentialities of our fur resources than with any of the other wildlife forms. Basic research is needed. The major activities in fur management at present consists of fur-catch analyses to determine trends in numbers taken, location of take by species and an appraisal of the responses of the various forms to regulatory measures. The marten was trapped in 1946 and 1947 after several years' protection. The season was again closed during the 1947-48 trapping season to test the validity of past protection measures on this species. Legislative statutes have been secured which require registration of traps, mandatory catch reports and annual re-registration. The Commission has secured statutory authority to refuse issuing a trapping license the following year to those failing to make a catch report. Various tech-



Beaver dams build up the water supply.

(Photo by John L. Covey)

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Game Division Program

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niques are being tested and developed by district agents as a standard means of determining population indices for stream dwelling forms. A program is being developed to inquire into and inaugurate habitat development and improvement.

Beaver Management

The management of beaver is considered a special activity as it is recognized that in this mammal, where maintained in the right places, there lies a value to our state's economy far in excess of any direct monetary return which may be derived by general trapping for fur. The beaver has a high commercial value and is further one of the easiest fur animals to trap. Consequently, general open seasons have demonstrated that the species is readily depleted by general trapping seasons. The objective of the beaver program is to utilize this mammal to the highest degree possible in soil and water stabilization and thus contribute directly to the welfare of Oregon.

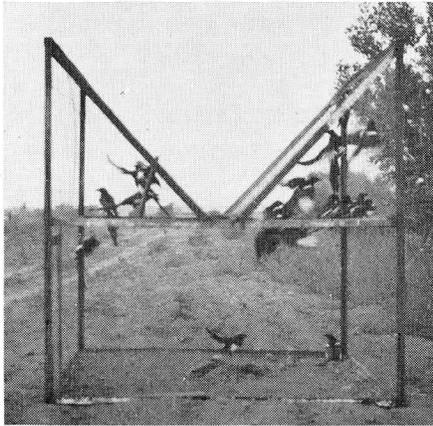
A year-round beaver management program is in operation, consisting of live-trapping and transplanting in the summer, stream surveys for locating planting sites and potential complaint areas during the spring and autumn, and a dead-trapping and pelting program from complaint areas during mid-winter. Plantings of suitable beaver food plants have been completed in the past and are again being initiated. Seven full-time trappers are employed who are highly skilled in trapping and transplanting, preparation of pelts, and the carrying out of miscellaneous management procedures.

It is the "little waters" of the mountainous regions of Oregon where flood control and soil conservation must start. It is also here that the industrious beaver is of maximum value and is being maintained.

Predator Control

There is probably no other single phase of game management which draws such popular acclaim and is accepted so universally as is predator control. Yet few more complex phases of management can be considered than that involved in predator-prey relationships. The activity of so-called predator control is popularly accepted as the answer to many management problems, although a perusal of past results in predator control leads one to wonder if our understanding of the long range net results of control of some predator species is that which was desired.

As a general policy, at the present time, it is assumed that game areas having unusually large populations of "predators" and manifesting losses of game to these species require intensive control activities. A predator control department has been established to engage in active



Twenty-one magpies in trap near Nyssa.

control measures both as a departmental function and cooperatively with the Predatory Animal and Rodent Control Division of the Fish and Wildlife Service. Specific activities underway by department personnel at present consists of fox control in the Willamette Valley, construction, maintenance and operation of magpie and crow traps, blasting of crow rookeries, aerial shooting of coyotes in areas of concentration and cooperative participation with the Fish and Wildlife Service in their statewide program. The above activities are conducted at a time and in areas where maximum effectiveness can be obtained for dollar expended. Trap designs have been made, plans are provided and assistance rendered to any sportsman's organization or other local group desiring such. Routine predator control of certain known predators is exercised by all field personnel when engaged in other field work. The above is in addition to the allocation of funds to the cooperative predator control program functioning between the Oregon Game Commission, the State Department of Agriculture, Fish and Wildlife Service and various counties.

Research

As previously mentioned, fundamental research in game management is recognized as an extremely important and highly specialized phase of a comprehensive, long range management program. The development of new techniques and determination of numerous unknown factors of a biological nature fall in this category. As a general policy for the past several years this activity has been a function of the Oregon Cooperative Wildlife Research Unit at Oregon State College. Major problems of a research nature are turned over to this Unit for solution or development and it is conducting a relatively large number of projects for the Commission. The subject of small game in the Willamette Valley is being investigated under several specific projects relating to winter food, fox-pheasant relationship, field rearing of pheasant chicks and the introduction of Hungarian partridges. Another phase of up-

land game research is underway by the Unit in the Puget Sound area where an island is being used to conduct controlled tests for determining productiveness and survival of game farm hens following release from game farms, the determination of the proper age class for releasing game farm chicks, comparison of survival rates of pen-raised and field-reared pheasants, the relative value of incubator versus hen-hatched chicks, and mountain quail management.

The Unit has underway several projects in connection with big game, chief of which may be mentioned the life history and management of the antelope, blacktail deer research, and mule deer distribution in central Oregon.

The setting up of a long range management and development program for upland game and waterfowl resources for the Madras Irrigation District has likewise been assigned to the Unit for activation.

Game Protection

The matter of game law enforcement is by statute a function of the Oregon State Police. However, close liaison is maintained between Game Commission personnel and members of the game law division of the State Police, and all game division personnel are deputized and are responsible for apprehending violators at every opportunity.

In the above brief outline of Division activities and program, a number of proposed activities not yet underway but planned for early activation have been omitted.

The difficulty of maintaining our game resources is humbly recognized and the test of this stewardship is being measured in returns not only to the sportsmen but to all of the citizens of Oregon who in some way derive a value from the presence of wild forms of life in the fields and woods of the State.



Dead crows in trees along Snake River after blasting of crow rookery.

Malheur Pheasant Facts

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pecially true at Nyssa and Ontario. This intensive pressure began to be reflected in pheasant scarcity in these areas as early as 1944 and it is predicted that its influence will be felt for a considerable period and may not be corrected until this pressure is reduced to allow a gradual restoration to the higher levels once enjoyed. This is possible only to the level that habitat will permit.

There is a certain finality of viewpoint in the average hunter when he says, "By the great horn spoon, the pheasant just aren't as thick as they used to be." With this statement he might just as well add, "and someone ought to do something about it," because that is just about what he means. In reality, the person that is going to do something about it will perhaps be John Citizen himself rather than relying on some magician's trick that puts two pheasants down where one grew before.

It usually means just a certain degree of restraint plus habitat improvement, the latter, of course, being a factor that is quite complicated since it involves long range planning and crop rotations acceptable to the farmer.

Row crops are no help to the pheasants. A hen on her nest is continually endangered by cultivating machinery. She likewise may be flooded out. Setting hens in the alfalfa are often killed by the high speed mower. She and her chicks likewise are menaced every time that alfalfa is cut. A biologist's prayer would usually include a plea for a hatch before an alfalfa crop was ready. The hen is the pheasant factory, and every hen lost is a serious matter in pheasant management. That this loss is formidable is found in the pre-season inventory for 1947. These records show that after four full years of regulated hen protection, the sex ratio in Malheur county was 1 cock to 1.2 hens (1:1.2). This isn't what one would expect at all after four such seasons. It could logically be assumed that if hen hunting was not allowed there would be at least four hens to each cock and that pheasant production would be at a high level.

Apparently the hazards of life for the hen are great. Farm machinery alone is not to blame for this unbalance since predation is known to be a factor and hunting waste is unreasonably great.

There is no law or regulation that will stop this leak. It means one of two things — carelessness on the part of the hunter, shooting when he is not sure of the quarry, or plain indifference. There is ample evidence supporting this latter position. In the hundreds of miles which we walk annually in the inventories it is not uncommon to see the footprints of some hunter coming up in loose sand or soft soil, the sign of a pause as he scans the kill and assures himself it is a hen, and the tracks heading off as the hunter

A Hybrid Trout From Fish Lake

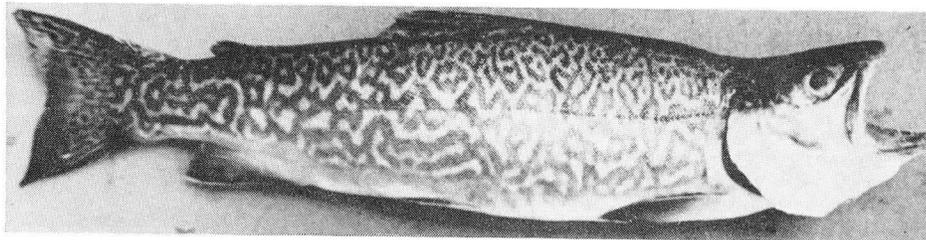
M. W. Webber, 1315 S. E. Taylor Street, Portland, Oregon, while trolling in Fish Lake, Jackson county, in August, 1947, caught a salmonoid fish which shows some intermediate characters between the charrs, which includes the eastern brook trout, and the trouts of the genus *Salmo*, which includes the rainbow, cutthroats and brown trout. Since the only salmonoid fishes known to be present in Fish Lake are the eastern brook and the fall-spawning rainbow, and since both reproduce in the lake, using the same limited spawning area, there is a possibility that this is a chance hybrid which occurred naturally in the lake.

Webber's fish, which measured 14 inches, was caught on a flatfish. Mottling, such as is found on the back of the eastern brook, is found on the back and sides of this fish, but is placed on a silver background. Fin color, though dull, follows the pattern of the eastern brook. Black spots, characteristics of *Salmo*, occur on the head and to some extent on

the dorsal and caudal fins. Scales along the back are very small, resembling those of the charrs, but on the sides the scales are much larger, there being 151 oblique lateral rows above the lateral line. This number falls within the range of the rainbows, but the number of scales on the lateral line, 110, is below the ranges of both the supposed parent species. The dentition and maxillary length is that of the eastern brook. Other characters are as follows: scales above lateral line, 43; scales below lateral line, 30; gill rakers, 18; rays in anal fin, 9, (one abnormally unbranched); pyloric caeca, about 23; sex, male. The lateral line has an accessory branch on the left side.

Hybridization of brown trout and the eastern brook trout has been accomplished in both Great Britain and the United States. One such hybrid which is discussed by Malloch (1910) is very similar in appearance to the hybrid from Fish Lake. Eddy and Surber (1943) mention the zebra markings of *Salvelinus* x *Salmo* crosses.

There may be a possibility that Webber's fish was produced by accident in a hatchery and planted in the lake.



Hybrid trout caught in Fish Lake, Jackson county. (Photo by Sidney Blood)

leaves his kill and tries for another shot. On one 40 acre tract southeast of Ontario and near the Union Pacific grade, in the fall of 1946, I found seven dead hens with the aid of my dog. Tracks indicated they were killed and left. Police officers in the area made approximately 100 arrests for this and similar violations in 1947. No management program can succeed under such conditions. The solution lies in a common revolt against those who follow this practice.

Fortunately for the irrigated sections of Malheur county, the sagebrush escape cover adjacent to the fields and meadows is good insurance against the complete loss of the pheasant from that range. Birds hunted too heavily on the lowlands work into the hill slopes and learn not to rise before either the gunner or his dog, and escape by running, showing great staying powers as a result. Obviously the old ringneck can meet handicaps that few of our native birds could cope with.

There is one condition that the pheasants must not be denied. They should have a fair chance to live. The increasing practice of driving areas by great groups of hunters with several dogs will have to be discontinued if the ringneck is to sur-

vive. In fact, there are several corrections in hunting which fall directly into the hands of the hunter. These include a reduction in crippling loss, the discontinuance of pheasant shooting when concentrated on their night roosting areas, and in accepting harvest regulations based on the crop. If he is not inclined to make these common sense adjustments, he will hasten the day of the clay pigeon and "ersatz banquets."

These are the high lights of the Malheur pheasant picture. Where the trends go now depends as much on the human element as it does on weather and the pheasant.

JUNE-JULY CALENDAR

Open season both months for:

- Trout
- Salmon and Steelhead
- Jack Salmon
- Spiny-rayed fish
- Predatory animals

Note: For specific exceptions, consult official synopsis of hunting or angling regulations.

Oregon State Game Commission Bulletin

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Why Special Seasons?

(Continued from Page 1)

It certainly is not true that there are too many deer and elk in Oregon. The problem lies in the fact that the distribution of the animals we have is not always proper. These problems fall into two major categories. The most serious of these are the forage problems which occur when seasonal concentrations of deer or elk are greater than the forage on the ranges used will sustain. The second type are the nuisance or damage problems which inevitably occur when any big game species attempts to utilize agricultural lands.

Forage Problems

In eastern Oregon deep snows force deer and elk to concentrate in winter on limited low ranges which are privately owned and utilized by domestic livestock during the grazing season. On some ranges livestock utilize the available forage so completely that little forage is left for game during the critical winter months; but if a range is properly grazed, livestock will normally shun many of the species most coveted by game in winter and by the same token use of these well managed ranges by reasonable numbers of game in winter does not seriously affect the carrying capacity for livestock. With these conditions, the multiple use of range lands by both livestock and game appears very practical but an overstocking of either class of animals may cause permanent damage to the forage resources which in turn will reduce the carrying capacity for both classes of animals. Both livestock and game managers recognize mistakes that have been made in the past which have seriously reduced the carrying capacity of range lands and realize that careful management will be required to bring back the valuable forage plants which have been destroyed by past abuses.

During the past fifteen years big game winter food problems have occurred on many of the eastern Oregon ranges but by judicious use of special seasons nearly all of these have been controlled. There is no question but that these special seasons have caused a reduction in game numbers on the ranges on which they were applied but that was the objective, and it follows that these ranges will support more deer in the future than they would have if numbers had not been reduced to a safe level.



"Keep Oregon Green"

The trend of forage on several important eastern Oregon winter ranges continues downward and on some of these it is evident that game hunters exceed carrying capacities and should be controlled.

Damage Problems

Damage problems frequently occur on cultivated lands adjacent to big game habitat and although these problems are serious to the land owners involved they are not nearly as serious a threat to the future generations of big game animals as the forage problems because usually only a small number of animals are involved and they are individuals that have developed a preference for agricultural crops as a result of their convenient location or because of a lack of natural food on the adjacent lands. Elk are notorious offenders and blacktail deer in western Oregon run a close second.

It is true that cattle and sheep are allowed to graze seasonally on these agricultural lands but the time and place of their grazing can be easily controlled. With big game animals it is different, they have little respect for fences and often develop a preference for high value crops such as strawberries, potatoes, fruit trees and gardens. It therefore is not practical to attempt to produce or maintain big game animals on these well developed agricultural lands where the damage they may cause can be much greater than any benefit the people of the state would derive from their presence.

Special seasons have been demonstrated to be the most practical tool for control of these problems. The experience of Oregon and other states indicates that such heroics as fencing, feeding, trapping, hazing or payment of damage claims seldom alleviates these problems or benefits either the game or the public.

All or a part of the animals involved

in such problems should be considered surplus and harvested for the benefit of the greatest number of people. In order to selectively remove only the animals involved it is essential that special seasons be scheduled at the time and place at which the problem occurs. For this reason special seasons do not normally occur during regular open seasons and when only a part of the animals need be removed, the number of permits must be limited in relation to the number of surplus animals present.

Although special seasons for the selective harvest of surpluses on problem areas will probably be necessary every year, these should not be accepted as an indicator of a general over abundance of game or blind us to the opportunities for development of big game herds and ranges that could be much more productive than at present.

A Smallmouth Bass From the Snake

A fish identifiable as a smallmouth bass, *Micropterus dolomieu* Lacepede, was taken from the Snake River at Nyssa, Oregon, March 20, 1948, by Robert Long, well-known trapper of that town. The bass, which weighed about two pounds and measured 14 inches in length, was taken on angleworms.

Characters which were utilized in the identification of this fish included the following: 1. maxillary short, not reaching to posterior edge of eye; 2. dorsal fin shallowly emarginate; 3. preopercle scaleless; 4. pyloric caeca unbranched; 5. scale rows on check 15; 6. color at time of capture olive green with no longitudinal dark band.

According to Mr. Long and other residents of the area, fish of this species were taken at Nyssa last year. It is locally believed that these fish have arisen from plants made on the Boise River in Idaho. As far as is known, the only other confirmed records of this fish in Oregon have been from the Tahkenitch Lake area, although there have been reports of its occurrence in the Willamette system.

Porcupines have been known to nibble on dynamite for the small amount of salt it contains.

* * *

The thread-finned fish, found in the Amazon River, leaps out of the water and lays its eggs on overhanging plants.