

Oregon State GAME COMMISSION BULLETIN

Vol. IV

PORTLAND, OREGON, AUGUST, 1949

No. 8

HABITAT IMPROVEMENT FOR UPLAND GAME

A little more than a year ago the Department of Habitat Improvement for game was established by the Game Commission. From a summary of its activities during this period, the following material regarding cover, food and water developments for upland game is extracted.

Of a total of 182 projects (locations or properties improved by one or more practices), 163 are designed to benefit upland game birds. The great majority of these consisted entirely or in part of shrub and tree cover plantings. Lack of adequate winter cover is recognized as an important and frequently limiting factor over a large percentage of the Oregon pheasant range. Woody plants and other perennial species provide the most satisfactory type of winter cover. Its value increases annually and it is particularly adapted to use on small, waste areas and fencerows. This first year the plantings were made on established demonstration areas and on a wide variety of sites scattered throughout the state. The purpose of the latter group is to determine the environmental limitations of promising exotic plant species. Test plantings have been set out in 27 counties, including all those in eastern Oregon. The varieties used to date are all particularly recommended for soil conservation and other direct farm uses in addition to their wildlife value. Most of the shrub and tree species used also produce fruits which serve as emergency food. About ninety per cent of the shrubs planted were the much publicized and very promising multiflora rose; however, ten other species also are being tested under various eastern Oregon conditions.

The multiflora rose was purchased from commercial nurseries. A total of 102,000 was ordered for delivery during this period, but less than 94,000 could be produced. Local growers now expect to meet future demands. This spring, as a trial, 35,000 rose cuttings were

(Continued on Page 3)

1949 Game Outlook

By JOHN McKEAN and R. U. MACE, *Chief Biologists*

After the hunting regulations are established each July, it seems appropriate to review some of the reasoning behind these regulations. At the same time, the outlook for hunters can be discussed.

Oregon's hunting regulations are based upon data supplied by the Game Commission's statewide field organization. The information and desires of all interested groups, including sportsmen and landowners, are also given full consideration by the Commission at the time seasons are established. This insures the management of Oregon's game resources on a sound factual basis, at the same time correlating the interests of sportsmen with those of other land users. The use of Oregon's game resources is an important activity, not only from a recreational aspect but also economically. Our annual cropping program is designed to achieve, insofar as possible, the sustained use of these resources over the years.

See page 6 for
summary of 1949 hunting
seasons and limits.

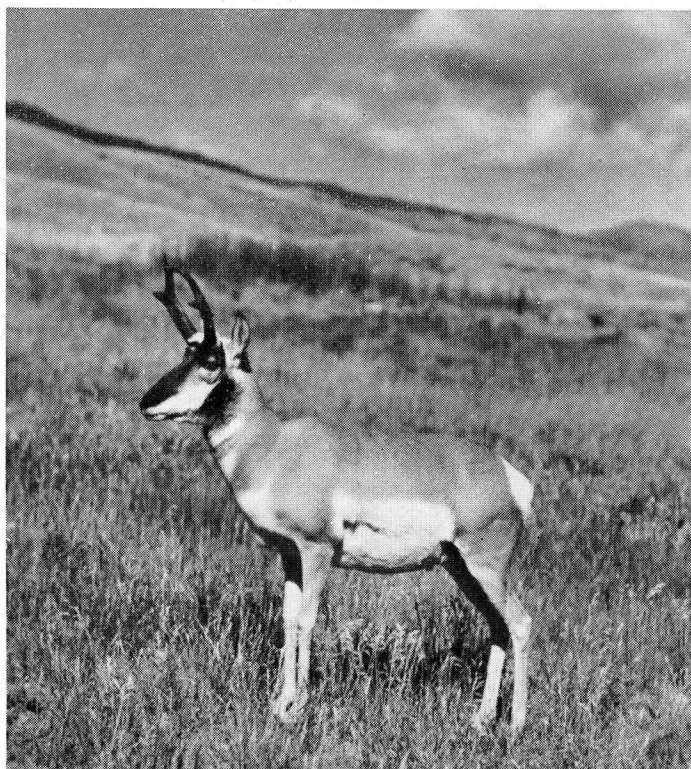
Oregon has a variety of big game species widely distributed throughout the state. Mule deer and Rocky Mountain elk are generally confined to the eastern part of the state while black-tailed deer and Roosevelt elk are found west of the Cascades. An interesting species, the prong-horned antelope, is distributed throughout much of the high desert country in southeastern Oregon.

In order to remain properly informed on game conditions throughout the state, observations on each species in each area must be continued from season to season and year to year. Changing conditions affecting the welfare of game necessitate this concentration of effort. Field observations are continued by Commission personnel who are thoroughly trained and indoctrinated in modern game management techniques. This procedure insures the collection of pertinent data so essential in keeping abreast of changing conditions.

Antelope Season

For the first time since 1945 a limited antelope season will be held. A decline in antelope numbers required closing of the season in 1946. Favorable fawn crops during the past three years have provided a

(Continued on Page 4)



Antelope may be hunted this year under limited regulations after a closed season of three years.

☆ THIS AND THAT ☆

The Game Commission now has available for distribution a pamphlet giving more detailed information on the back country lakes. Requests should be mailed to the Portland office of the Commission.

* * *

Block salt is being dropped from planes this summer in the big game ranges of eastern Oregon, particularly in the Blue and Wallowa mountain areas. One reason for this program is to attract the game onto more suitable ranges where they will not be in competition with livestock.

* * *

A marked rainbow trout released in Little river (Umpqua watershed) June 12, 1948, was recovered on May 26 of this year at least one mile above the tagging area in which it was liberated last year. Anglers are urged to continue sending in reports on all marked or tagged fish they catch.

* * *

Diamond Lake continues to be the main activity of the trash fish control division. The population of roach appears to be much greater than it was last year and an all-out effort is being made to bring them under partial control at least. Traps have recently been installed to determine if this method of removal will be effective and seining has been attempted with minor success. The most effective means of removal, however, has been by the use of rotenone in the shallow areas around the lake where the roach are found in large concentrations. To facilitate this method of control, no plantings of rainbow fry will be made this summer as the fry remain in the same shallow areas when released. Instead, it is planned next spring to give the lake a boost by stocking approximately 50,000 yearling fall rainbow trout.

Other lakes also are receiving attention, including Fish Lake and Lake of the Woods in Jackson county and Davis Lake in Deschutes county.

* * *

Spawning operations at East Lake this spring yielded 817,000 rainbow trout eggs. The crew kept a tabulation of the marked and unmarked fish in the spawning run to add to the data being acquired in connection with the fish population in this lake.

* * *

The California State Wildlife Conservation Board recently earmarked a large percentage of its three-year capitalization of \$9,000,000, derived from pari-mutuel horse racing receipts, for the state's waterfowl and trout programs. For the acquisition and development of waterfowl management areas \$2,380,436 was allocated. Fish hatcheries received an appropriation of \$1,363,700 and \$726,225 was authorized for fish ladders and screens, game farms and other projects.

"JOE BEAVER"

By Ed Nofziger



"Fire-flap Pete is a one-man fire crew!"

Contracts Awarded for Construction Work

Several contracts for construction work were awarded by the Commission last month.

Bids were received as follows for construction of residence and nursery ponds at the Wallowa trout hatchery:

Teller Construction Co. \$25,845.00
McCormick Construction Co. 18,600.00

The bid of McCormick Construction Co. was accepted.

The following bids were received for construction of residence, utility building and hatchery floor at the Fall River hatchery in Deschutes county:

Archie R. Averill \$19,773.00
Robert M. Bowen 20,926.00
Raymond P. Syverson 14,565.40
Teller Construction Co. 24,564.00

The bid of Raymond P. Syverson was accepted.

The following bids were received for construction of garage and replacement of pipe line at the Roaring River hatchery in Linn county:

H. Den Herder \$7,928.18
Archie R. Averill 9,388.00

The bid of H. Den Herder was accepted.

The Pioneer Construction Company was awarded contract for construction work at the Summer Lake management area on basis of bids previously received, it being the lowest qualified bidder.

E. C. Hall submitted a low bid of \$93,570 for improvements at the Rock Creek hatchery.

Do you want to receive this BULLETIN each month? If so, send in your name and address and you will be placed on the mailing list free of charge.

New Laws Now in Effect

Most of the game laws passed by the last legislature became effective on July 16, including the increase in deer and elk tag fees. The resident deer tag fee will be \$1 and the nonresident deer tag \$15. The fee for a resident elk tag will be \$7.50 and for a nonresident, \$35. However, the effective date for the increase in the general angling and hunting license fees is delayed until January 1, 1950, because these licenses already have been printed and distributed to license agencies.

Big game hunters are reminded of the importance of making reports to the Commission after completing their hunts. The high percentage of elk and deer tag returns last season was gratifying and the Commission desires to have an even greater return this year. At its discretion the Commission can refuse to issue anyone a deer or elk tag if the applicant has failed to file a report on his previous year's hunt.

Another new law affecting hunters is Chapter 541, Oregon Laws 1949, which defines as a crime the negligent wounding of another person with a firearm and provides as a penalty, in addition to a fine and imprisonment, the forfeiture of the privilege to hunt for a period of five years.

Oregon State Game Commission Bulletin

Published Monthly by the

OREGON STATE GAME COMMISSION

1634 S. W. Alder Street — P. O. Box 4136
Portland 8, Oregon

MIRIAM KAUTTU

Editor

Members of Commission

Carl C. Hill, Chairman Days Creek
Donald Mitchell Taft
Delbert Gildersleeve Baker
J. H. Van Winkle Oregon City
Loyde S. Blakley Bend

Administrative Staff

C. A. Lockwood State Game Director
P. W. Schneider Asst. State Game Dir.
F. B. Wire Secretary
F. C. Baker Controller
Ellis Martin Engineer
H. R. Mangold Director of Supplies
C. B. Walsh Director, Public Relations
R. C. Holloway Surveys and Salvage
E. W. Goff Hatcheries
H. J. Rayner Diseases and Nutrition
John McKean Upland Game
A. V. Meyers Fed. Aid and Waterfowl
R. U. Mace Big Game
C. E. Kebbe Furbearers
Frank Stanton Habitat Improvement
G. E. Howell Fishways, Screen, Stream and Lake Improvement

Entered as second-class matter September 30 1947, at the post office at Portland, Oregon, under the act of August 24, 1912.

At the present time the Bulletin is circulated free of charge to anyone forwarding a written request.

Permission to reprint is granted provided proper credit is given.

Habitat Improvement For Upland Game

(Continued from Page 1)

set out on the Eugene game farm and 5,000 on Sauvies Island. These should be rooted and ready for transplanting this fall. A demonstration planting of multiflora rose was made at each game farm. Through agreement with the Southern Pacific Company, cover plantings may be conducted upon its right-of-way on specified areas in Klamath county. Two such sites were planted this spring. Permission has just been received from the Union Pacific Company to conduct habitat improvement plantings along their railroad right-of-way in Wallowa county.

Planting arrangements and operations in all cases were under the direct supervision of the District Agent who also did most of the actual planting. Some permanent personnel, particularly from Hermiston game farm, materially assisted. In most instances the landowner provided the equipment and prepared the ground. Some equipment was rented and one tractor was provided by the game farm.

Shrubs and Trees Planted for Cover

Multiflora rose	93,175
American plum	10,000
Caragana	5,000
Southernwood	4,900
Bladder senna	3,200
Russian olive	2,000
Black locust	2,000
Ponderosa pine	200
Scotch pine	200
Chinese arborvitae	200
Russian mulberry	200

Total.....121,075

Grass and legumes were seeded on a small scale on five sites. Canal and ditch banks are especially desirable sites for this type of cover. A permit granted by the Bureau of Reclamation offers an opportunity to seed perennial grasses or other plants on rights-of-way along their waterways within the Klamath project.

The preservation of existing suitable habitat is to be an important objective of the department. Destruction of cover by fire, grazing, spraying and cutting is often done unnecessarily. As part of our agreement with the Southern Pacific Company, they will confine burning of vegetation on designated areas to a minimum and wherever possible will conduct it in the late winter months. The Oregon Northwestern Railroad Company has verbally agreed to allow all vegetation on five miles of its right-of-way in Harney Valley to remain uncut and unburned. Three private landowners in Harney county have agreed to give complete protection to a total of 37 acres, and the county has agreed not to burn vegetation along its roadside ditches and fences during the nesting season.

Governor Appoints New Members to Game Commission

Five new members of the Game Commission were appointed on July 20 by Governor Douglas McKay after the 1949 legislative enactment reorganizing the Commission became effective.

The new members of the Commission are: Carl C. Hill of Days Creek, sawmill operator; Loyde S. Blakley of Bend, sales manager for the Brooks-Scanlon Lumber Company; Delbert Gildersleeve of Baker, stockman and president of the Oregon Game Protective Society; J. H. Van Winkle, editor of the Oregon City Banner-Courier; and Donald Mitchell of Taft, pharmacist. Mr. Hill was elected Chairman.

Governor McKay assigned the five-year term to Mr. Hill, the four-year term to Mr. Mitchell, the three-year term to Mr. Gildersleeve, the two-year term to Mr. Van Winkle and the one-year term to Mr. Blakley. Thereafter all appointments to the Commission will be for five-year terms, thus making one term expire each

year. Former members of the Commission were: E. E. Wilson of Corvallis; Theodore R. Conn of Lakeview; R. D. McClallen of Enterprise; Kenneth S. Martin of Grants Pass; and Larry Hilaire of Portland.

The new law declares the Commission to be a budgetary and policy-making body and creates the office of state game director to act as administrative officer. At its first meeting on July 23, the Commission appointed C. A. Lockwood, former state game supervisor, as director for a term expiring December 31, 1949. The office of assistant state game director also was authorized by the Commission. Mr. Lockwood announced the appointment of P. W. Schneider to fill this position.

The regular meetings of the Commission will be held quarterly, with special meetings subject to the call of the Chairman. The next quarterly meeting will be on October 14 at the Portland office of the Commission.

Food

Food plantings in addition to the shrubs include five grain patches totaling about 25 acres. Several pheasant field rearing project sites have been seeded to grain prior to raising the birds in order to provide suitable habitat in their immediate area. Eighteen strips of standing grain averaging one-quarter acre were purchased in eastern Oregon primarily to test the value of this method of providing emergency winter feed and to compare it with results obtained at approximately one hundred feeding stations which were operated in eight east side districts during the severest part of the winter.

As might be expected, reports from the district agents varied somewhat in their estimates of the comparative value of these two feeding methods; however, all districts but the Lake-Klamath reported heavy use of grain from both the strips and hoppers. The Central district reported all patches were used by both pheasants and quail (plus a small flock of Canada geese) with up to 50 quail and a dozen pheasants using individual strips. In Umatilla county, 16 pheasants were flushed from one strip and 21 from another which held birds every time it was visited. Among the comments on feeding stations the Central District agent says, "There are probably around 350 or so valley quail using the self-feeders. Up to five pheasants have been noted at one time around some of the feeders." And from the Northeast District, "Some needed refilling every four or five days. Pheasants and quail stayed in vicinity of feeders after once using them. Huns apparently used the feeders for awhile and then deserted them." The Grant county agent estimates some 50 mountain quail and 1,500 valley quail fed at ten hoppers during a two month period. In Harney county during January from 50 to 150 pheasants

(Continued on Page 8)

Fish Plantings Continue

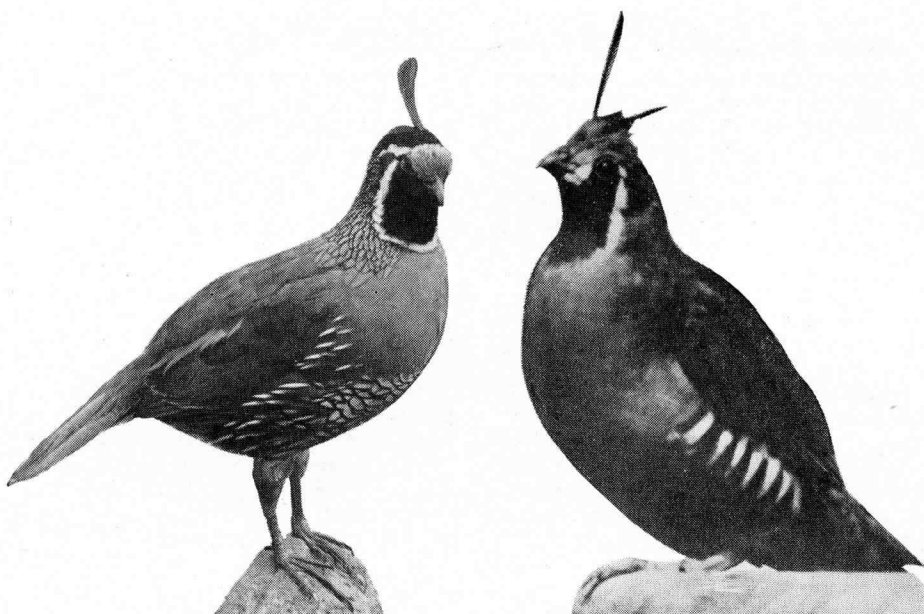
The liberation of yearling hold-over fish and thin-out releases of this year's hatch has been continuing at most of the fish hatcheries. The last releases of yearling fish are being made from Oak Springs, Wizard Falls, Klamath and Alsea hatcheries.

Packing operations commenced late in June, the crew starting at Douthitt Springs in Jefferson county. From there the packing crew will move into the Klamath area. The Wizard Falls hatchery is furnishing the fish for packing.

Airplane planting operations were delayed somewhat but got started early in July. The new air strip at the Fall River hatchery provides an excellent base and it is anticipated that economical operations can be carried on within a 50-mile radius. The plane can plant two lakes on the same trip and carries twice as many fish as were carried last year.



Hungarian partridge season is open in Malheur county after a three-year closure in entire state.



Valley quail (left) may be hunted in certain counties. Mountain quail (right) are protected in the entire state. For the hunter the easiest method of identification is the top knot or plume, which curls forward on the valley quail but is straight on the mountain quail.

1949 GAME OUTLOOK

(Continued from Page 1)

surplus of bucks in some areas which may be harvested.

It is doubtful if antelope will ever increase to the point where controls on numbers of hunters and sex taken will be unnecessary. At the present time, a more widespread distribution of the species is needed since much of their suitable range is unoccupied. Since surplus bucks exist in some herds, a limited season has been designed to crop this surplus and encourage distribution to adjacent ranges.

That portion of Oregon east of U. S. Highway 395 and south of U. S. Highway 20 will be open to hunting. One thousand permits will be issued for the taking of bucks with horns longer than the ears. Permit holders will be determined by a public drawing.

The season will be open from August 20 to August 25, inclusive. Antelope begin rutting during the first of September. Disturbance by hunters during this critical period should be avoided. After the rut the flesh is not in prime condition and loosened or shed horns may reduce trophy value. Since opportunities for bagging antelope will be restricted, the value of the head as a trophy must be given full consideration. Few North American game species offer as attractive mounted heads as does the mature buck antelope. An emphasis on stalking skill will insure maximum satisfaction to those participating in antelope hunting.

Immediate attention to the dressing of carcasses will prevent meat spoilage in late August. Care must also be exercised in preventing range fires and in restricting the kill to mature bucks.

Hunting from, or with the aid of, automobiles is prohibited by law. This will necessitate stalking in order to realize success. Hunters are encouraged to seek out those isolated ranges in Malheur and Harney counties where antelope occur in scattered abundance and the vast areas involved insure freedom from interference during stalking.

It is emphasized that careful regard to the ethics of sportsmanship by participating hunters will insure a perpetual harvest of antelope. If this creed is violated, closed seasons will necessarily follow.

Deer Seasons

A general open season for mule deer and black-tailed deer with not less than forked antlers will extend from October 1 through October 20. This is the same season that has been in effect for the past two years. All counties except Sherman will be open.

In addition, white-tailed bucks will be legal in Douglas county. Periodic increases on the white-tail refuge necessitate the cropping of surpluses, although only limited numbers are available. Because of the limited area of this range and its privately owned status, it will not provide sport to many hunters. Success is expected to be low.

The opening date of deer season is established so as to follow the period of major forest fire hazard. This insures accessibility to as much hunting territory as possible. Closing of the season is designed to precede the peak of fall migration and the rutting period.

This will be the second year in which a separate deer tag has been in effect. The return of information cards attached to deer tags last year was very satisfactory. From the high percentage of card re-

turns, an analysis indicated that approximately 40,000 bucks were harvested during the fall of 1948. The trend in harvest cannot be determined until return data is available for a period of years. However, observations by field agents indicate that the annual kill continues to increase. This heavy pressure undoubtedly will affect the individual's chances of bagging a buck.

The percentage of bucks in western Oregon deer herds continues to be much higher than in eastern Oregon. Although much of the country is brushy and difficult to hunt, the many open burned and logged-off areas can furnish sport to additional hunters.

Each year the trend is toward smaller percentages of bucks in eastern Oregon. Heavy hunting pressure on the more accessible ranges accounts for this.

Three areas will be open for archery hunting this fall. The season will extend from September 17 through September 28 in the Mt. Emily area and in a portion of the Tillamook Burn. On the Canyon Creek Refuge, this archery season will extend through October 20. In addition to deer, elk will also be legal for archers on the Mt. Emily and Canyon Creek areas. No elk may be taken in the Tillamook Burn area.

Elk Seasons

The general elk season will open on October 25 in both western and eastern Oregon.

In that part of the state west of U. S. Highway No. 97, exclusive of Tillamook and Washington counties, and Douglas county east of Highway No. 99, elk hunting will be allowed for bulls having three points or more. This season closes on November 3. Although the major elk concentrations are to be found in Clatsop, Coos, Douglas, and Lane counties, scattered herds are to be found elsewhere.

Restricting the kill to three-point bulls has proven beneficial in western Oregon by insuring the survival of young males for future breeding, at the same time providing for an annual harvest by sportsmen. In addition, annual hunting has had an effect in encouraging distribution on adjacent ranges. This is particularly important in the case of Roosevelt elk which are prone to occupy limited ranges with the resultant "homesteading" of the herd. Because of these factors, the harvest of mature bulls is considered desirable even where elk numbers are limited.

The elk season east of U. S. Highway No. 97 will extend through November 20. Either sex will be legal in this area with exception of northern Wallowa county and a portion of Union county southwest of LaGrande. In keeping with the policy of holding elk numbers in check on browse ranges, either sex hunting will be continued. This regulation has proven a practical means of harvesting elk in areas where it is desirable to control numbers.

That area east of Pendleton in the north end of the Blue Mountains will be

(Continued on Page 5)

1949 GAME OUTLOOK

(Continued from Page 4)

open to either sex hunting for the first time in several years. Inaccessibility of this section to hunters and protection have resulted in an increase of elk which should be harvested. Due to the possibility of being snowed in by early storms, this region is hazardous after the first few days of the elk season. Although hunting conditions will be rugged, this area offers probably the best chance of success. It is emphasized that the higher country should be abandoned after the fall storms commence.

Excellent opportunities exist for pack trips during the elk season in the Wenaha, Minam, Lostine, and Imnaha River areas of Wallowa county. Packing will also offer the most efficient means of hunting the Blue Mountain area east of Pendleton later in the season when roads become impassable.

Upland Game

Upland game birds have a much shorter life span than big game animals but also have a higher reproductive rate. For this reason most upland game species must be managed as an annual crop, and the surpluses to be harvested in the fall are largely dependent upon current reproduction.

The Game Commission's policy has been to encourage an increase in the number of breeding birds through stocking coverts with farm reared and trapped pheasants and quail and authorizing conservative open seasons that will not result in the harvest of more than the annual increases. It has been demonstrated that polygamous species such as the pheasant, can withstand heavy hunting pressure over a long period if hunters restrict their shooting to cocks only, as established by law.

Early in the spring of each year a census of upland game birds throughout the state is obtained by systematically sampling the same units of ground. This procedure does not enumerate each individual bird but does provide an indicator of population trends. In the spring of 1948 the average density of pheasants was higher than at any time during the preceding five years, averaging 25.1 pheasants per 100 acres of suitable habitat. Unfortunately, weather conditions were severe during the nesting season and reproductive success was below normal. Anticipating a poor crop the Commission authorized a very conservative season in 1948 to assure maintenance of ample breeding stock.

Although the hunting season was short and limits were small, most hunters found good hunting in 1948. At the present time the Commission does not have a measure of the numbers of game birds harvested each year and must depend upon a knowledge of the effect of previous regulations in estimating the length of season and bag limits that populations can withstand.

Extreme cold temperatures and deep snows handicapped upland game birds in many eastern Oregon counties last winter and these factors combined with the poor nesting season in 1948 are believed responsible for a slight decline in the number of breeding pheasants in some counties this spring. The statewide average density of pheasants dropped from 25 pheasants per 100 acres in March, 1948, to 22 pheasants per 100 acres in March, 1949.

During the period from June 27 to July 5 of this year, field agents of the Commission recorded sight records of 772 pheasant hens, 55 per cent of which had broods. These broods averaged 6.9 chicks each and on the basis of these counts the average state-wide ratio of chicks to hens was 3.8 to 1. At a similar period in 1948 the ratio was 3.3 chicks per hen and in 1947 the ratio was 4.5 chicks per hen. These current brood counts indicate that pheasants reproduced more successfully in western Oregon than in most eastern Oregon counties this year. Cold spring rains, which are common in western Oregon during the months of May and June on normal years, were not prevalent this year and although similar good weather prevailed in eastern Oregon, observations indicate that heavy losses of hens, nests and broods occurred as a result of early mowing of forage crops. For example in the spring of 1948 the growing season was retarded by continued cold weather and mowing operations did not begin until late in June after most of the nests had hatched. This year the season was much earlier and mowing began in late May catching a higher percentage of the birds on nests. In Malheur county only

43 per cent of the hens observed had broods, the average brood included 4.6 chicks, and 20 per cent of the hens observed had one or both legs missing. Nest predation by magpies and crows also caused a substantial loss of early nests.

In view of these facts, the Commission has little assurance that the 1949 upland game crop will be outstanding but it is known that a good supply of breeding pheasants and quail were present in most counties at the beginning of the nesting season and this year's crop should be larger than normal.

The 1949 pheasant season and bag limits vary in different areas. The Willamette Valley, and Douglas, Coos and Klamath counties will have a 5½ day season beginning at noon, October 21, with a daily bag limit of 2 cocks. All eastern Oregon counties except Klamath and Malheur will have a 9½ day season with a daily bag limit of 3 cocks; and Malheur county will have a 19½ day season with a daily bag limit of 4 cocks.

A change in regulations will allow hunters to possess three daily bag limits instead of two as on previous years but no person can legally take more than 12 pheasants in the aggregate during the season.

A special pheasant season, concurrent with the waterfowl season, will apply in Summer Lake Valley in Lake county where the Commission has been studying the survival of released pheasants. All hunters participating in the Summer Lake hunt will be required to check in and out of the area.

Few valley quail had hatched by July 5 but the broods observed were large av-

(Continued on Page 7)



A pheasant hunter and his dog working a grain field. Use of a dog greatly reduces the crippling loss of game.

1949 HUNTING REGULATIONS

UPLAND GAME SEASONS

SPECIAL REGULATIONS

Any upland game birds to be transplanted through or possessed in a closed area or area of lesser bag limit must be checked by a state officer in the area in which they were legally taken. Said officer will record the date and county of kill on the hunter's license. It shall be unlawful to possess more than the legal limit of upland game birds in any area unless license is marked to indicate that the birds in possession were killed in an area where such a possession limit is legal.

Limits may be checked at any Game Commission or state police station or by any state officer in the field within the county or area where such bag limits apply.

RINGNECK PHEASANTS

Area I.

Season: Noon, October 21 through 26 in Columbia, Washington, Multnomah, Clackamas, Marion, Yamhill, Polk, Benton, Linn, Lane, Douglas, Coos and Klamath counties. Bag limit, 2 cock pheasants per day and not more than 6 during the entire season.

Area II.

Season: Noon, October 21 through October 30 in Josephine, Jackson, Deschutes, Crook, Hood River, Wasco, Sherman, Gilliam, Wheeler, Morrow, Umatilla, Union, Wallowa, Baker, Grant, Harney and that portion of Jefferson county outside the Madras Irrigation Project. Bag limit, 3 cock pheasants per day and not more than 9 during the entire season.

Area III.

Season: Noon, October 21 through November 9 in Malheur county. Bag limit, 4 cock pheasants per day and not more than 12 during the entire season.

Area IV — Summer Lake Pheasant Study Area.

Season: Noon, October 21 through November 9 and Noon, December 19 through January 7, 1950, in the Summer Lake Valley. Bag limit, 4 pheasants of either sex per day and not more than 12 during the entire season.

It shall be unlawful for any hunter to take more than 12 pheasants in the aggregate during the 1949 season.

VALLEY QUAIL

Season: Noon, October 21 through October 30 in Josephine, Jackson, Deschutes, Crook, Hood River, Wasco, Sherman, Gilliam, Wheeler, Morrow, Umatilla, Grant, and that portion of Jefferson county outside of the Madras Irrigation Project. Bag limit, 5 valley quail per day and not more than 15 during the entire season.

HUNGARIAN PARTRIDGE

Season: Noon, October 21 through November 9 in Malheur county only. Bag limit, 3 Hungarian partridge per day and not more than 6 during the entire season.

BLUE AND RUFFED GROUSE

Season: September 1 through 5 in all counties west of the Summit of the Cascades. Bag limit, 2 Blue or Ruffed grouse during the entire season.

SAGE GROUSE

Season: October 1 through 5 in that portion of Harney and Malheur counties south of U. S. Highway 20. Bag limit, 2 sage grouse during the entire season.

It shall be unlawful to have grouse in possession in camp or in the field more than 4 days after the close of the stated grouse seasons unless tagged with the official seal of the Game Commission.

SILVER GREY SQUIRRELS

Season: October 1 to 20 in Benton, Linn, Lane, Douglas, Josephine, Jackson, Coos and Curry counties.

Open season entire year in Columbia, Washington, Multnomah, Clackamas, Marion, Yamhill, and Polk counties. Bag limit, 5 in possession.

FURBEARING ANIMALS

Mink, Muskrat and Otter: Season, November

15, 1949 to February 15, 1950, both dates inclusive.

Raccoon: Season, November 15, 1949 to October 15, 1950, both dates inclusive.

Marten, Fisher, Beaver, and Ringtail Cat: Season, closed entire year.

State refuges and closed areas will be open to trapping for furbearing and predatory animals during the regular furbearing animal trapping season with the exception of the following areas which are closed to all trapping: Summer Lake Management Area, Sturgeon Lake Game Refuge, Whitetail Deer Refuge, and all city and municipal watersheds now in refuges.

BIG GAME SEASONS

ANTELOPE

Open season, August 20 to August 25, inclusive. Number of permits, 1,000. Bag limit, one adult buck antelope having horns longer than the ears. All hunters required to return report card attached to antelope tag.

Open area: Those portions of Lake, Harney, and Malheur counties east of U. S. Highway 395 and south of U. S. Highway 20.

GENERAL DEER SEASON

Open season, October 1 to October 20, in all counties except Sherman for black-tail and mule deer having not less than forked antlers; and in Douglas county only for white-tail deer having not less than forked antlers. Bag limit, one deer having not less than forked antlers.

Report card attached to deer tag required to be returned to the Game Commission within thirty days after the close of the deer season, whether the hunter is successful or not. Failure to comply gives Game Commission right to refuse deer tag the following season.

ARCHERY SEASONS

All archers required to have archery permit in possession while hunting in any archery area. Report card attached to this permit required to be returned to the Game Commission within thirty days after the close of archery season.

Archery permits issued free upon application to Game Commission.

All archery hunters required to have deer and/or elk tags in possession as well as archery permit.

All deer and/or elk must be taken by means of long bow and barbless broad arrow only. Following minimum weights and sizes are recommended: Bow, not less than 40 pounds. Arrow, not less than 1 ounce (437½ grains). Arrowhead, not less than ¾ inch wide.

Open seasons and bag limits for special archery areas are as follows:

Mt. Emily Game Refuge (Union and Umatilla Counties)

Open season, September 17 to September 28, inclusive. Bag limit, one deer of either sex and one elk of either sex.

Open area, Mt. Emily Game Refuge. (Note: This area open to rifle hunting under general regulations during regular deer and elk seasons.)

Canyon Creek Refuge (Grant County)

Open season, September 17 to October 20, inclusive. Bag limit, one deer of either sex and one elk of either sex.

Open area—That portion of Canyon Creek refuge lying north and east of Canyon Creek described as follows: Beginning at the mouth of Sheep Gulch Creek on Canyon Creek at a point approximately 4 miles south of Canyon City, thence south and east along Canyon Creek to the mouth of Middle Fork of Canyon Creek near Wickiup Camp, thence north and east along the Middle Fork and the Indian Butte Trail to the summit, thence north and west along the summit past Pine Creek Mountain to Canyon Mountain, thence west down Sheep Gulch Creek to Canyon Creek, the point of beginning.

Note: All other sections of the Canyon Creek Refuge will be open to rifle hunting during the

general deer season and the entire refuge will be open during the elk season.

Tillamook Burn (Tillamook County)

Open season, September 17 to September 28, inclusive. Bag limit, one deer of either sex.

Open area—Beginning at the junction of the Jordan Creek road with the Wilson river Highway No. 6, thence up the Jordan Creek road to the summit, thence north along the South Fork of the Wilson river road to the Old McNamer Camp on the Wilson river Highway No. 6, thence southwesterly along the Wilson river Highway No. 6 to the Jordan Creek road, the point of beginning.

GENERAL ELK SEASON

Report card attached to elk tag required to be returned to the Game Commission within thirty days after the close of the elk season, whether the hunter is successful or not. Failure to file such report gives Game Commission right to refuse elk tag for the next season.

Western Oregon:

Open season, October 25 to November 3, inclusive. Bag limit, one bull elk having antlers with three points or more, including the brow tine.

Open area—That portion of Oregon west of U. S. Highway No. 97, with the exception of Washington and Tillamook counties and that part of Douglas county east of Highway No. 99.

Eastern Oregon:

Open season, October 25 to November 20, inclusive.

Bag limit, one elk of either sex in the area east of U. S. Highway No. 97, except that only bull elk having antlers may be taken in the following described area: Beginning at the junction of the Grande Ronde River with the state line, thence south and west up the Grande Ronde River to its intersection with U. S. Highway 30 near La Grande, thence northwesterly along U. S. Highway 30 to its junction with the Starkey road, thence west and south along the Starkey road to Starkey, thence south and east along the Chicken Hill road past Chicken Hill to Anthony lakes, thence north along the Anthony Butte road past the Porcupine Guard Station to the intersection with the Beaver Tower Road, thence northwesterly along the Beaver Tower Road to its intersection with the Telephone Line Trail, thence northeasterly along the Telephone Line Trail to Pedro Cabin, thence easterly on posted road to the Howard Meadows Road, thence southeasterly along posted road to intersection with Ladd Creek Road, thence northeasterly along the Ladd Creek road to its junction with U. S. Highway 30 at Hot Lake, thence northwesterly along U. S. Highway 30 to La Grande, thence northeasterly along Highway 82 to Joseph, thence northeasterly along the Sheep Creek road to its junction with the Imnaha River, thence northeasterly down the Imnaha River to its confluence with the Snake River, thence following the state line to the north and west to its intersection with the Grande Ronde River, the point of beginning.

The open season for elk of either sex shall be extended from November 21 to December 31, inclusive, in the following described area: Beginning at the city of Baker, thence south along State Highway No. 7 to its junction with Elk Creek, thence northwesterly up Elk Creek to its junction with the boundary of the Baker Watershed, thence following the east and north boundary of the watershed to the summit of Elkhorn Ridge, thence northwesterly along the ridge summit to Anthony Lakes, thence north along the Anthony Butte road past the Porcupine Guard Station to the intersection with the Beaver Tower Road, thence northwesterly along the Beaver Tower Road to its intersection with the Telephone Line Trail, thence northeasterly along the Telephone Line Trail to Pedro Cabin, thence easterly on posted road to the Howard Meadows Road, thence southeasterly along posted road to intersection with Ladd Creek Road, thence northeasterly along the Ladd Creek Road to its junction with U. S. Highway 30 at Hot Lake, thence south along U. S. Highway 30 to the city of Baker, the point of beginning.

(Continued on Page 7)

Summary of 1949 Hunting Regulations

(Continued from Page 6)

GAME REFUGES OPEN TO HUNTING

The following game reserves will be open to hunting during the regular open seasons for game birds and game animals except as otherwise specified:

Canyon Creek Game Refuge.

Salt Creek, Grass Mountain, Steens Mountain, Cow Creek, Mule Deer, Three Sisters, Mt. Emily Game Refuge, Warner Game Refuge outside the exterior boundaries of the Hart Mountain National Antelope Refuge, and the following portions of other state refuges:

That part of Oregon Caves Refuge outside the Lake and Cave Creek drainages which includes the Oregon Caves Monument and is bounded by summits on the north, east, and south.

The Ochoco Refuge with the exception of the northwest corner, bounded on the south by the Gerow Butte road and on the east by the Lookout Mountain road as posted.

The Burnt River Game Refuge and the Whitetail Deer Refuge open to deer hunting only during the regular open season.

Wallowa Sheep Refuge open to waterfowl only.

That portion of the Deschutes Game reservation lying south of the posted Paulina Creek road from its junction with U. S. Highway 97 on the west and the China Hat road on the east.

CLOSED AREAS

Onion Peak Area (Clatsop and Tillamook Counties): Same area as last year.

Provided that the area shall be open to pigeon hunting during the season.

Eola Park Area (Clatsop County): Same area as last year.

Santiam Area (Marion County): Same area as last year.

Molalla Area (Clackamas County): Same area as last year.

Tillamook Burn (Tillamook County): Beginning at the junction of the Jordan Creek road with the Wilson River Highway No. 6 thence up the Jordan Creek road to the summit, thence north along the South Fork of the Wilson River road to the old McNamer Camp on the Wilson River Highway No. 6, thence southwesterly along the Wilson River Highway No. 6 to the Jordan Creek road, the point of beginning, provided that the area shall be open to archery hunting during the archery season.

McKay Creek Area (Crook County): (This area closed to deer hunting only). Same area as last year.

Wanoga Butte Area (Deschutes County): This area closed to deer hunting only). Same area as last year.

Bessie Butte Area (Deschutes County): Beginning at the junction of the northwest corner of the Deschutes Game Reservation with U. S. Highway 97 thence northerly along U. S. Highway 97 to its junction with the Arnold Ice Cave road, thence southeasterly along the Arnold Ice Cave road to its junction with the Deschutes Game Reservation boundary thence west along the north boundary of the Deschutes Game Reservation to its junction with U. S. Highway 97, at the point of beginning.

Devils Lake (Lincoln County)

Summer Lake (Lake County): That part of the Summer Lake Game Management Area not operated as a public shooting ground.

Chewaucan Area (Lake County): Same as in 1948.

Ladd Marsh (Union County): All lands owned by Game Commission.

Sauvies Island, and others (Multnomah and Columbia Counties): All lands owned by Game Commission on Sauvies Island, Government Island, Lemon Island, McGuire Island and Sand Island, except area set aside as a public shooting ground on Sauvies Island.

Nehalem Bay (Tillamook County): (Closed to

waterfowl hunting only.) Beginning at the junction of the east bank of Tubesing Creek with U. S. Highway No. 101; thence westerly along Highway No. 101 to its junction with Cemetery Road; thence south and west along Cemetery Road to its junction with Bennett Road; thence west and south along Bennett Road to its end; thence west and south along the trail which is a continuation of Bennett Road to its junction with Nehalem Bay; thence northeasterly in Nehalem Bay along a line of markers to be established by the Game Commission to the mouth of Tubesing Creek; thence north along the east bank of Tubesing Creek to its junction with U. S. Highway No. 101, the point of beginning.

Coos Bay (Coos County): (Closed to waterfowl hunting only). Same area as last year.

ALSO ALL STATE AND FEDERAL PARKS AND REFUGES ARE CLOSED TO ALL HUNTING, except those specifically opened to hunting as herein listed.

GUN REGULATIONS

IT IS UNLAWFUL:

To use .22 rim fire shells to hunt or kill any game birds or big game.

To use shotguns loaded with buck or bird shot to hunt or kill any big game.

To use rifles to hunt or kill any migratory or upland game birds.

To use shotguns capable of holding more than three shells to hunt or kill any migratory or upland game birds.

To use pistols or revolvers to hunt or kill any big game or game birds.

To use any shotgun larger than 10 gauge to hunt or kill any game birds or animals.

To use any foreign or domestic semi-automatic military rifles, M-1 military carbine, or machine guns to hunt or kill any wild birds or animals.

To use any full metal-jacketed, solid-nosed bullet to hunt or kill any big game.

To hunt or kill elk and antelope by means of guns smaller than .30 calibre except when using cartridges with bullets that either have not less than 1400 foot-pounds energy at 100 yards distance or weigh not less than 150 grains. Provided, long bows and barbed broadhead hunting arrows may be used.

WATERFOWL REGULATIONS

The official waterfowl regulations were not announced early enough by the federal government to be included in this issue but will be published next month.

Dove season will be open in all counties.

1949 GAME OUTLOOK

(Continued from Page 5)

eraging 12 chicks per brood. Excellent quail hunting can be found in Central Oregon counties with highest densities occurring in the canyons and foothills of Wheeler and Grant counties. The valley quail season will extend from October 21 through 30 with a daily limit of 5 quail and season limit of 15.

Hungarian partridge have been protected by closed seasons since 1945 and, although increases have occurred in some counties, their density is still low, and this year only Malheur county has enough Huns to support a conservative open season. The Malheur county Hun season will be concurrent with the pheasant season with a daily bag limit of three Huns.

Blue and ruffed grouse may be hunted in western Oregon counties during the first five days of the pigeon season. On previous years grouse have been hunted during the deer season.

In view of recent increases of sage grouse in southeastern Oregon counties

Angling Stress Heavy in Central Oregon Waters

Central Oregon waters opening to fishing on June 15 proved as usual to be a major attraction to the angling fraternity. Creel census data gathered at Crane Prairie Reservoir, East Lake, Paulina Lake and South Twin Lake by the Game Commission field agents, assisted by State Police officers, members of local sportsmen's groups and resort owners, indicated that good catches were made. The large influx of anglers made it impossible to have them all checked but a good sample was obtained.

Crane Prairie Reservoir, which has been closed to angling for approximately 20 years, had the greatest number of anglers. Game Commission personnel estimated that on opening day there were from 600 to 700 boats on the Prairie carrying around 2,000 anglers. During the first four days of the season, 840 fish were weighed and measured to obtain data on the catch. Based on this sample, the biggest percentage of the fish caught were in the 14-16 inch size class, the next highest group being the 12-14 inch.

Statistics on the first of the season catches on these waters follow:

Crane Prairie Reservoir

June 15 through June 19

Fish per angler	3.25
Hours per fish	1.5
Per cent Rb.	98%
Per cent Eb.	2%
Lures used:	
Troll	95%
Bait	3%
Fly	1%
Combinations	1%

Size distribution:

6-8 inches	0.2%
8-10 inches	2.2%
10-12 inches	6.3%
12-14 inches	29.3%
14-16 inches	42.2%
16-18 inches	16.2%
18-20 inches	3.6%

100%

the Commission has authorized the harvest of not to exceed 2 sage grouse per hunter during the first five days of deer season. It is known that young sage grouse are most palatable in August and that old grouse are not a delicacy at any season. However, in order to allow all persons an equal opportunity to participate in the season, the later date has been chosen.

This year's upland game seasons are more liberal than last year but if all hunters will respect the stated limits and protect female pheasants ample breeding stock should remain for a 1950 season.

Homing pigeons have been known to carry messages over 800 miles.

Oregon State Game Commission Bulletin

1634 S. W. ALDER STREET
P. O. BOX 4136
PORTLAND 8, OREGON

Habitat Improvement For Upland Game

(Continued from Page 3)

(and in some cases mallards) were using each of the hoppers. It is planned that these observations be continued next winter. Improvements in the construction and locations of the feeding stations should help to remedy two main criticisms: heavy use by jackrabbits and some, though not severe, loss of birds to predators. It is probable that neither of these feeding methods will be as generally satisfactory as the establishment of permanent vegetation; however, they are widely used practices in some regions and should be particularly valuable here during the interim while perennial species are becoming established.

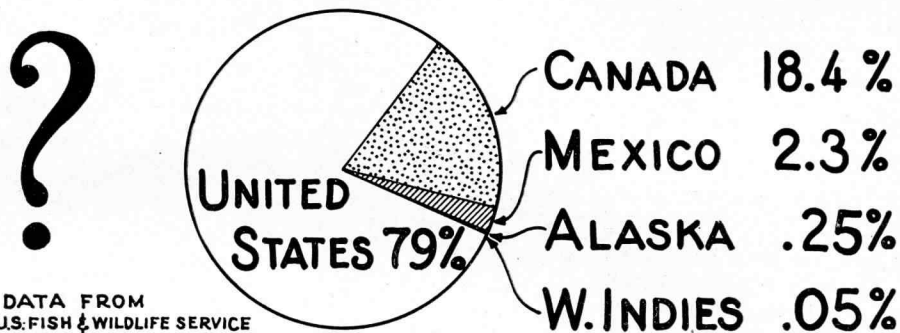
Water

Water, in some form, is one of the essential components of the habitat. In the more arid portions of the state carefully located water developments would be an important and effective means of increasing game bird distribution to areas which otherwise are uninhabitable. Development of springs, seeps and ponds, when located properly, could be put to multiple use and should be the most satisfactory type of improvement. It is probable, however, that in most instances such measures will not be possible, and one of several specially constructed devices must be used. Two of these are being demonstrated in the Columbia Basin wheat belt.

One type, composed of a 50-gallon oil drum and a small, open container connected by a pipe with a float valve attachment, has been in operation several seasons. Disadvantages are the necessity of hauling water to fill them and the frequent attention required for maintenance. The devices are used, however, by pheasants.

The "gallinaceous guzzler" is a self-filling permanent installation consisting of a collecting apron and a concrete cistern with a connecting access ramp. This device, developed by the California Division of Fish and Game for quail, is also being used successfully in eastern Washington for pheasants. A modified version was constructed as a trial by the Umatilla district agent and personnel of the Hermiston game farm. When visited in March, it was completely filled and in April it was reported that pheasant tracks were found at the entrance to the ramp. It is planned to construct additional guzzlers this summer as proper sites are located.

Who Kills The Ducks -



1948-49 DISTRIBUTION BY FLYWAYS OF WATERFOWL, HUNTING PRESSURE & KILL

