

Oregon State GAME COMMISSION BULLETIN

Vol. IV

PORTLAND, OREGON, JULY, 1949

No. 7

WINTER BIG GAME LOSSES

Eastern Oregon deer losses were heavy in the Pine creek area near Halfway and the Keating area near Baker. Game Commission field agents systematically sampled winter deer areas with a view toward comparing losses on the various ranges. The losses in these areas were much greater than the average for eastern Oregon.

On the Keating range, an average of one carcass was located for every 0.4 mile of travel. The average on eastern Oregon winter ranges was one carcass per 1.8 miles of travel, or less than one-fourth as numerous as at Keating.

Another area where losses were heavy was the North Fork of the John Day river east of the mouth of Camas creek. This and the other loss areas mentioned have had a history of high winter mortality. Hay and concentrates were supplied in quantity to deer on these ranges.

It is interesting to note that on some of the better browse ranges losses were light. This is true of parts of Lake and Harney counties where weather conditions were just as severe as farther north and where no artificial feeding was done. This situation re-emphasizes the necessity for maintaining adequate winter browse supplies and the fact that artificial feeding cannot be relied upon for continued deer maintenance over extended periods of extreme weather.

Heavy losses were anticipated during the spring months when weakened deer began feeding on green grass. These did not materialize as expected, however. When the break-up came, it was rapid and was not followed by additional extreme weather. This permitted a widespread dispersal of deer, which was beneficial.

Elk losses were heavy on one range along the Wenaha river above Troy. A heavy concentration of elk in the area were fed hay for over two months. Mortality was heaviest among the older bulls and among the calves.

With the exception of the few
(Continued on Page 8)

The Band-Tailed Pigeon

By W. B. MORSE, Biologist

Constantly increasing hunting pressure has necessitated shorter seasons and smaller bag limits on most game species. Hunters have turned to utilizing all game animals and birds. Seven years ago the band-tailed pigeon was scarcely hunted, now hunting pressure is constantly increasing and a reasonable doubt exists as to whether or not the bird can tolerate the existing kill.

Band-tailed pigeons are migratory game birds and as such fall under regulatory jurisdiction of the federal government. States may decrease the federal bag limits or seasons. Migrations are usually rather slow and comprise relatively small flocks of birds. Under present shooting dates it is possible for the same

bird to be shot at in Washington in September and in Southern California in December.

Most hunters who formerly were not interested in pigeons become rabid pigeon hunters once they try the sport. Pigeons weigh from twelve ounces to a little less than a pound; they are fast fliers, hard to hit and equally hard to drop. Their habit of flocking in small areas makes them easy to hunt, and their apparent lack of fear of men makes them easy to shoot at. Many times the birds come in over the hunters in the open, are shot at and circle right back again.

Summary of 1949 Hunting
Regulations Will Appear in
August Issue.

Life History

Band-tailed pigeons acquire their name from a broad, pale grey band at the end of the tail. Seen from a distance the bird is generally slate grey in color. A close-up view shows the head to be an iridescent pinkish brown, and a white collar is present on the back of the neck. Young birds do not have this collar. Weights vary between 8¾ and 15½ ounces.

Pigeons nest in the timbered country of western Oregon. The nest is a flimsy structure of twigs usually high in the branches of a conifer. Nests are widely scattered and difficult to find; locating a nest is more a matter of luck than skill.

The eggs are pure white in color. Usually only one egg is laid; rarely two eggs are produced. Egg laying is at its height in May and June; however, the seven western states have nesting records running from March through October. The only available information on the incubation period indi-

(Continued on Page 5)



A pigeon hunter in action

☆ THIS AND THAT ☆

Frank Smith, fisheries field agent, reports that anglers had unusually good luck this spring in taking large mackinaw and dolly varden trout from Odell lake. The mackinaw trout were first stocked in Odell, Crescent, and Big lakes in the Cascade mountains many years ago but since that time very few of them had ever been taken.

Smith reported that over Memorial Day weekend he checked one mackinaw taken from Odell lake that weighed 22 pounds. A second one also taken in Odell lake weighed 16 pounds. A third lucky angler landed a dolly varden that tipped the scales at 18 pounds. During the first few weeks of the season, between 80 and 90 of these whoppers were taken in Odell, and many reports of smashed tackle came in, indicating that the biggest ones are yet to be caught. When asked what caused this unusual good luck, Smith stated that the only thing he could attribute it to was that the anglers were just beginning to learn how to troll for the big boys. This fishing is good until summer weather warms the water of the lake, when the fish seek the deeper waters and are much harder to take.

* * *

To aid in the airplane fish planting program, a new airstrip recently has been developed near the Fall River hatchery on national forest land. It is 200 feet wide and 3,000 feet long and is so close to the hatchery that the plane will almost be able to taxi down to the ponds. Permission also has been obtained to use strips available at the Klamath Indian Agency, at Oakridge, Santiam Junction and Sisters. Landing facilities at Estacada and Gates also can be used if needed.

* * *

Plans are underway to conduct fish salvaging operations on Sauvies Island and adjacent areas as soon as high waters have receded. An attempt will be made to obtain two small holding ponds for bass and bluegills so that fish can be held for distribution in suitable waters in other parts of the state.

* * *

Creel census data are being gathered on many of the streams and lakes and anglers are asked to cooperate when contacted by members of the game department. In some places sportsmen's organizations are assisting in this work. Ten-mile Lake Sportsmen's Association is continuing the creel census it carried on last year. Marked fish have been placed in many waters and whenever one is caught, a report should be given either to the local field agent or sent to the Portland office of the Game Commission.

* * *

Anglers complaining about the lack of signs indicating closed areas often do not realize that actually several thousand signs are posted each year by members of the Game Commission and State Police field forces. The law does not require the

June Meeting of the Game Commission

The regular meeting of the Oregon State Game Commission was held on June 10 and 11 at its Portland office. The following business was transacted.

It was decided to continue the daily shooting fee of \$2 for public shooting grounds owned or leased by the Commission.

A shooting ground again was authorized at Chewaucan Marsh, 30 miles south of Summer Lake, under agreement with Chewaucan Cattle and Land Company. This area, while not very heavily used because it is not well known among hunters, is capable of providing good shooting for a large number.

The Commission also authorized the operation of checking stations for hunters using the area open to hunting in the Malheur National Refuge.

Archie R. Averill, Portland, was awarded the contract for construction work at the Oak Springs trout hatchery amounting to \$19,595.

A bid of \$18,950 submitted by Loring and Son for construction at the Wallowa hatchery was rejected.

Authorization was granted for construction of a new hatchery in the coastal region to be located on Big Creek in Lane county.

It was ordered that the Commission in its application to the War Assets Office for land at Camp White eliminate a parcel of 24.5 acres desired by Jackson County because of the gravel on it.

Bert Harr appeared before the Commission in regard to his previous request to have Squaw Lakes, owned by him, stocked with trout by the Commission. The application had been denied because the general public did not have free access to the lake. Mr. Harr submitted a proposal to provide an easement for \$465 a year but this offer was not accepted in view of the fact that the present supply of fish was not adequate to take care of all the public waters that needed stocking.

July-August Calendar

Species	Season Open
Trout	Both months
Salmon	Both months
Steelhead	Both months
Spiny-ray	Both months
Predators	Both months

posting of waters closed to angling or having special seasons but an attempt is made to do this for the convenience of the law-abiding sportsmen. Keeping the signs up, however, is another problem. In some areas as fast as the signs are nailed up they are torn down by individuals who either enjoy wanton destruction of property or who think they might get by fishing in closed waters if they can show there are no closure signs posted.

Trash Fish Control In Lakes Underway

Trash fish control work for 1949 is now well under way at some of Oregon's Cascade lakes. Many of the lakes of Oregon have had rough fish introduced into them, quite possibly by unthinking anglers who brought them to be used as live bait. Although this practice is prohibited by law, it has occurred extensively in the past. These fish reproduce very rapidly and have built up to the point in many lakes where they compete for the food present in the lake to such an extent that the effects on game fish are disastrous.

For several years, the Oregon State Game Commission has carried on an extensive program of controlling the numbers of these rough fish. This year's control work started at Diamond lake on June 1, and will continue until the first of October. An estimated seven million roach have been killed in the lake during the period from June 1 through June 9. In spite of the fact that during the past three years approximately twenty million of these trash fish have been poisoned, the roach are still at a dangerous population level in the lake because of their high rate of reproduction.

The Northern Sea Otter cracks shell fish on a stone held against its chest.

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 the Commission

E. E. Wilson, Chairman.....Corvallis
Theodore R. Conn.....Lakeview
Kenneth S. Martin.....Grants Pass
R. D. McClallen.....Enterprise
Larry Hilaire.....Portland

Administrative Staff

C. A. Lockwood...State Game Supervisor
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
G. E. Howell...Fishways, Screen, Stream and Lake Improvement
P. W. Schneider...Director of Game
John McKean.....Upland Game
A. V. Meyers...Fed. Aid and Waterfowl
R. U. Mace.....Big Game
C. E. Kebbe.....Furbearers
Frank Stanton...Habitat 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.

Western Association Game Commissioners Meet in Seattle

The twenty-ninth annual conference of the Western Association of State Game and Fish Commissioners held in Seattle June 14 to 16 was attended by approximately 200 delegates from the eleven western states.

Several representatives from the Oregon State Game Commission attended and papers were presented by the following: "Effects of High Dams on Fishery and Wildlife Resources" by C. A. Lockwood, state game supervisor; "Control of Big Game Conflicts on Range" by R. U. Mace, chief of big game; "Waterfowl Public Shooting Grounds" by W. B. Morse, waterfowl biologist; and "Oregon's Beaver Program" by Chester Kebbe, chief of fur resources.

Director Albert M. Day of the U. S. Fish and Wildlife Service, in a talk relative to present conditions of the waterfowl resources of the nation, stated that for the first time in a number of years it may be possible to consider some relaxation of waterfowl regulations if last minute information now being secured from the northern breeding grounds indicates a satisfactory spring reproduction. After several very critical years, encouraging improvement of the continental waterfowl picture is evident from wintering waterfowl numbers although much improvement is still needed.

A critical review of the big game situation in the 11 western states was conducted. In general, the pattern of big game management problems is similar throughout much of this region. A lack of understanding of fundamental management objectives and problems on the part of the general consuming public is frequently handicapping state administrators in carrying out the necessary harvests of some big game herds. In addition, the value of our big game resources is not fully realized nor the importance of protecting the basic forage and soil resources for future use of big game herds. From time to time, it is necessary to afford a high degree of protection on declining herds while in other circumstances special harvests are needed to stabilize or reduce a given herd to a population level more nearly within the carrying capacity of a particular range. Public recognition of these management procedures is essential.

The meeting was a joint session with the western division of the American Fisheries Society.

President of the Western Association this year was Don W. Clarke, director of game for the Washington State Game Commission. Officers elected for the coming year were: president, A. A. O'Claire, State Fish and Game Warden, Montana Fish and Game Commission; vice-president, C. A. Lockwood, state game super-

"JOE BEAVER"

By Ed Nofziger



Forest Service, U. S. Department of Agriculture

Areas Needed for Habitat Improvement Program

In general, the habitat improvement program inaugurated just a year ago by the Oregon State Game Commission has gotten well under way. The program is designed to improve habitat for big game, upland game, waterfowl and furbearers. Although the work is unspectacular, it is thought by game men to be vitally important in the long range program.

One segment of the habitat improvement work for waterfowl has been meeting with difficulty. The work for waterfowl has been mainly in two parts, one consisting of improvement work on large tracts of land that will be used both as nesting and resting areas and also as public shooting grounds. The other part consists of many very small developments for the nesting and resting areas. It is this work which has been slow in getting started.

The Oregon State Game Commission is searching for small areas in the Willamette Valley for this work. One or two acre tracts which can be leased for three to five years are needed. The areas would be fenced, water developed, and plantings made of grains and beneficial shrubs or plants. With numerous developments of this type, resting and nesting areas would be provided for waterfowl, and it is also thought they would aid in holding these migratory birds for a longer period of time in Oregon.

Anyone owning or knowing of small waste tracts which could be used in this manner is asked to write to the Oregon State Game Commission.

visor, Oregon State Game Commission; and secretary, Ben Glading, California Fish and Game Commission.

1948 License Sales Show Increase

Preliminary figures on 1948 license sales show that the number of hunting and angling license holders increased about 3.7 per cent over 1947. During 1948, 386,600 individuals held some form of hunting and/or angling license. Hunters totalled 219,072 and anglers 269,918. In 1947, 372,813 persons bought licenses.

Revenue for 1948 from the sale of licenses and deer and elk tags was \$1,614,383, compared to \$1,335,166 for 1947.

Following is the breakdown according to numbers and kinds of licenses sold during 1948:

Kind of License	Number Sold	Amount Received
Res. Comb.	95,096	\$ 475,480.00
Resident Angler . . .	127,784	383,352.00
Juvenile Angler . . .	17,667	17,667.00
Vacation Angler . . .	16,849	84,245.00
Non-Res. Angler . . .	4,198	41,980.00
Resident Hunter . . .	106,853	320,559.00
Juvenile Hunter . . .	6,659	6,659.00
Non-Res. Hunter . . .	2,704	67,600.00
Cert. Lost Lic.	3,009	1,504.50
Spec. Ann. Comb. . . .	7,208	7,208.00
Spec. Ann. Ang.	1,028	514.00
Spec. Ann. Hunt. . . .	552	276.00
Spec. Ann. Elk	317	792.50
Resident Elk	21,563	107,815.00
Non-Res. Elk	500	12,500.00
Resident Deer	163,072	81,536.00
Non-Res. Deer	1,878	4,695.00
Res. Ang. (Free)	88
TOTAL	*577,025	*\$1,614,383.00

*Incomplete returns.

Pheasant Field Rearing Projects Set Out by Game Commission

Nine pheasant field rearing projects were set out this year by the upland game department, one being located in each of the following counties: Douglas, Lane, Yamhill, Polk, Washington, Columbia, Lake, Jefferson and Wallowa.

Approximately three thousand day-old pheasant chicks were placed on each project. Coops are set out at a predetermined site which has been chosen for the availability of feed, cover, and water for the young birds. The hen is confined in the coop, but the young chicks have free access to come and go as they choose. This method of field rearing of pheasants has been tried experimentally for several years by the Game Commission but has never been tried as extensively as it will be this year.

A caretaker will be left on each project to take care of the feeding of the birds until they distribute themselves naturally over the surrounding country. This year extensive predator control work has been carried on at each site previous to the delivery of the day-old chicks.

FUR CATCH REPORT

1948-49 TRAPPING SEASON

COUNTY AND NO. TRAPPERS' REPORTS	OTTER	MINK	MUSKRAT	RACCOON	SKUNK	CIVIT CAT	WEASEL	RED FOX	GRAY FOX	WILDCAT	*MISCELLANEOUS	TOTAL AMOUNT
	No. Amount	No. Amount	No. Amount	No. Amount	No. Amount	No. Amount	No. Amount	No. Amount	No. Amount	No. Amount	No. Amount	
Baker	79	847.74	3,095	\$ 3,497.35	10	\$ 9.40	10	\$ 9.40	31	\$ 14.57	2.43	\$ 4,386.65
Benton	48	1,122.36	249	281.37	190	140.60	3	2.82	78	36.66	4.05	1,599.70
Blackamas	75	1,086.54	536	605.68	218	161.32	6	5.64	33	25.41	2.37	2,378.78
Clatsop	163	4,752.12	2,589	2,925.57	44	32.56	15	14.10	62	47.74	69.86	8,043.06
Columbia	118	1,516.38	2,974	3,360.62	50	37.00	12	10.34	27	20.79	3.63	5,303.79
Coos	104	3,904.38	489	552.57	218	161.32	11	10.34	19	14.63	11.62	4,779.92
Crook	10	59.70	232	262.16	122	90.28	1	.94	6	4.62	76.14	402.62
Curry	31	1,408.92	341	385.33	122	90.28	1	.94	3	2.31	56.34	2,023.47
Deschutes	34	525.36	847	957.11	9	6.66	6	5.64	32	24.64	31.06	1,547.43
Douglas	110	5,181.96	402	454.26	271	200.54	6	5.64	39	30.03	21.34	6,103.11
Gilliam	12	59.70	106	119.78	4	2.96	3	2.82	2	1.54	183.98	622.24
Grant	19	310.44	272	307.36	6	4.44	4	3.76	11	8.47	3.24	9,825.84
Harney	20	382.08	8,341	9,425.33	4	2.96	4	3.76	3	2.31	713.87	5,607.18
Hood River	24	358.20	292	329.96	24	17.76	6	5.64	3	1.41	200.24	374.14
Jackson	76	907.44	3,875	4,378.75	112	82.88	3	2.82	3	1.41	43.21	2,196.28
Josephine	126	1,671.16	130	146.90	79	58.46	2	1.88	3	1.41	23.04	5,083.36
Klamath	61	131.34	1,334	1,507.42	104	76.96	5	4.70	8	3.76	102.82	10,249.53
Klamath	36	119.40	4,204	4,748.26	104	76.96	5	4.70	8	3.76	10.00	2,368.02
Lane	199	6,889.38	2,316	2,617.08	331	244.94	31	29.14	65	30.55	145.84	8,271.74
Linn	89	1,361.16	659	710.77	218	161.32	16	15.04	3	1.41	.81	2,622.69
Lincoln	122	4,417.80	525	593.25	174	128.76	11	10.34	59	27.73	92	379.48
Malheur	71	847.74	6,548	7,395.24	14	10.36	8	7.52	19	8.93	162	2,500.60
Marion	94	1,373.10	955	1,079.15	160	118.40	5	4.70	3	2.31	175.95	4,316.99
Morrow	9	71.64	288	323.44	45	33.30	2	1.88	4	3.08	20.25	4,246.83
Myrtle	64	764.16	1,053	1,223.79	45	33.30	7	6.58	5	3.85	25.11	2,629.95
Polk	14	226.96	58	59.85	94	69.56	2	1.88	3	2.31	32.68	2,371.79
Sherman	28	274.20	117	1,263.97	46	34.04	12	11.28	4	1.88	8.10	1,162.46
Tillamook	90	1,189.18	3,053	3,463.89	32	23.68	22	20.48	47	22.09	4.68	759.48
Umatilla	41	1,189.18	1,227	1,384.51	32	23.68	22	20.48	327	\$153.69	\$1,371.38	\$110,827.81
Union	50	1,189.18	1,227	1,384.51	32	23.68	22	20.48	327	\$153.69	\$1,371.38	\$110,827.81
Wallowa	13	358.20	1,547	1,748.11	6	5.64	213	200.92	4	1.88	32.68	2,371.79
Washington	32	358.20	1,116	1,311.08	29	39.96	2	1.88	6	2.92	8.10	1,162.46
Wheeler	38	453.72	523	590.99	54	39.96	5	4.70	6	2.92	8.10	1,162.46
Yamhill	44	334.32	7	7.91	1	199.06	2	1.88	47	22.09	4.68	759.48
TOTAL	2,113	\$45,921.24	51,020	\$57,684.24	2,956	\$2,188.18	423	\$395.62	327	\$153.69	\$1,371.38	\$110,827.81

*Includes returns from 496 Coyote, 39 Bear, 23 Cougar, 119 Opossum, 6 Badger, and 16 Nutria.

Trappers Receive Less Revenue '48-'49 Season

During the 1948-49 trapping season 2,113 trappers caught 60,766 fur animals which brought them a revenue of \$110,827.81. This is less than half the revenue realized last year by a comparable number of men who took 78,751 animals and received \$225,603.57 for their efforts.

This decrease in total number of animals taken is attributed to: (1) lower fur prices caused by the large importation of Russian and other foreign furs, complete disregard for long-haired furs by manufacturers, the continuation of the federal government's 20 per cent luxury tax on fur garments, and the general lowering of economic conditions. Fur prices are less than half the quotations of 1946, the peak period of the market. (2) Because of the high prices realized for muskrats and mink at the end of the war the trapping intensity increased and this pressure has resulted in the lowering of the number of these animals being carried over as breeding stock. And (3) the abnormal winter made trapping extremely difficult for half of the open season, lessening the catch per trapper.

Most of the long-haired fur animals, such as raccoon, fox, skunk and coyote, have commanded such low prices that trappers have not found it economical to trap them. Due to this light trapping pressure they have increased considerably in certain areas and have become quite predacious on game and domestic animals and birds.

Opossums have continued to increase in Clatsop county and have now spread into Columbia county, where six were reported taken. An average of 20 cents per pelt is not an inducement for trappers to trap these animals and the total catch reported, therefore, gives little indication of the actual density or number now inhabiting the northwestern section of Oregon.

The accompanying table shows the total number of trapper's reports by county, as well as the number of the various animals taken and the price received from the sale of the pelts.

Second Beaver Sale Held

A sealed bid sale of 668 beaver pelts was held at the Game Commission office on May 25 and brought an average price of \$18.43 per pelt. The sale was attended by four fur buyers who paid \$12,309.30 for these furs.

Of the total revenue received, \$3,823.13 has been paid to 161 landowners who participated in the beaver management program and who were entitled to a one-third share of the proceeds from the sale of beaver taken from their property. Trappers, who worked on a share basis, received \$3,133.52, and the Game Commission retained \$5,352.65. The Commission

(Continued on Page 8)



A band-tailed pigeon

The Band-Tailed Pigeon

(Continued from Page 1)

cates that it is 14 to 18 days long. Nesting studies conducted by Colorado showed that a pigeon squab was brooded by both parents working in relays until it was 20 days old. It left the nest between the 28th and 30th days.

Pigeons are very gregarious and are found in flocks except when nesting. The birds found in Oregon apparently winter in California, returning to Oregon and other northern states in March and April. The peak of southern migration is generally over by September 20 or 25.

The food of band-tailed pigeons consists primarily of acorns, mountain ash berries, blackberries, raspberries, salmonberries, thimbleberries, elderberries, cascara berries, currant, kinnikinnick, dogwood, seeds, peas, various legumes and other seed and berry producing plants.

Green prunes, cherries, garden patches, nut crops, and grain are the subject of damage complaints. They do pick up seed left on the surface of the ground, but they are not known to scratch out planted seed.

Hunting

Routine annual measurements of the pigeon kill have been made since the 1946 season by district agents of the Oregon State Game Commission. The wide range of pigeons has not permitted the application of any measure of population densities other than systematic kill measurements. Work is continuing and it is hoped that a satisfactory census technique may be developed soon.

Pigeon hunters are easier to check than hunters for any other game in the state. This is due to flocking of pigeons into small areas. They are usually attracted by mineral springs, although in certain specific areas food appears to be the major attraction.

The accumulated data show a distinct downward trend in hunter success and thus reflect the status of pigeon numbers over a period of years as well as the increased hunting pressure. Data obtained are shown in Table I.

TABLE I
Western Oregon Hunting Check
Band-Tailed Pigeon

Year	Hunters Checked	Pigeons Killed	Success Ratio Birds Per Man Day
1946	74	394	5.32
1947	304	1,053	3.41
1948	466	1,405	3.01

This data shows the pigeon kill per day hunted has constantly declined since 1946.

Hunting pressure has been much heavier in the Willamette Valley than in any other section of western Oregon. In addition, pigeons do not congregate in readily accessible areas in southern Oregon and the coastal regions to the degree that they do in the Willamette Valley. The decline, if any, in these other regions does not appear to be serious.

The Willamette Valley areas give reason for serious concern from game administrators and sportsmen alike. An intensive survey was conducted during the hunting season of 1947 and the same survey was expanded in 1948.

Before giving any results of this field work, it is well to discuss the habits of the pigeons as well as hunting conditions and practices in the Willamette Valley. There are fourteen known pigeon "stands" where most of the hunting takes place. These are scattered on both sides of the

Willamette from Columbia county on the north to Lane county on the south. The attraction to pigeons at ten of these areas is mineral springs. Two areas provide food as the principal attraction. Reasons for pigeons frequenting the remaining two are not known.

These areas are rarely over 100 acres in size. Many are commercialized or leased by shooting clubs. Observation over a period of several years has revealed a constant decline in the number of pigeons frequenting these areas. Certain areas where the total kill has been restricted by the landowner or club members have held up their pigeon numbers. Areas that have been intensively shot have declined more rapidly.

TABLE II
Willamette Valley Pigeon Kill

	1947	1948
Number of areas checked	5	10
Hunters checked	191	317
Pigeons killed	564	918
Success ratio	2.95	2.89

A decline of only six one-hundredths of a bird per man day is not excessive. However, it will be noted that twice as many areas were checked in 1948 as had been checked in 1947. Table III shows an individual comparison of the five areas that have been checked both years.

Every effort was made to check the areas on the same dates each year. It should be emphasized that many more hunters used each area and killed many more birds than are shown. However, a

(Continued on Page 7)

TABLE III
COMPARISON TABLE — PIGEON AREAS CHECKED 1947-1948

Area	Hunters Checked		Pigeons Killed		Success Ratio Birds Per Man Day	
	1947	1948	1947	1948	1947	1948
Polk County No. 1	9	11	55	42	6.1	3.8
Benton County No. 1	69	12	60	15	.9	1.3
Benton County No. 2	16	8	75	14	4.7	1.7
Benton County No. 3	16	15	90	54	5.6	3.6
Linn County No. 1	81	83	284	231	3.5	2.8
TOTAL	191	129	564	356	2.95	2.76



Typical Willamette Valley pigeon habitat in the background

TROUT FISHING -- SPORT OR MEAT

By F. A. WESTERMAN, Chief, Fish and Fisheries Division

(From "Michigan Conservation", April-March, 1949)

Do the fees paid for a fishing license and a trout stamp to be attached thereto guarantee the licensee a catch of trout? Well, hardly. If the Conservation Department must guarantee a catch of three or four 7 to 9-inch trout — which is about each licensee's share of the yearly plantings of legal-sized hatchery trout — it would be more economical to hand them over at the nearest hatchery on a cash-and-carry basis and to cancel the license on delivery. For a small additional fee, the trout could even be shipped as ordered on a specified date! As a matter of fact, the number of trout allotted to each licensed trout fisherman could probably be greatly increased under this system as the costs of planting could then be eliminated. Also a great saving would be effected for the angler! No fishing tackle or outdoor clothing to buy! No time lost from work or in travel to and from fishing waters! No more excuses to the wife and family for the empty creel!

Of course such a proposal is ridiculous, but perhaps it serves to emphasize that trout fishing is mainly recreation and the Department's real function is to provide as much *outdoor recreation in the form of fishing* as is possible. The program should also allow the maximum harvest of the fish crop by the greatest number of anglers without endangering the breeding stock and future fishing. Raising the natural productive capacity of trout waters by all practical means is implied. The planting of fish, the improvement of their environment, scientific studies of the factors affecting their abundance, and acquisitions of lands to provide public access to fishing waters are all a part of this program.

As in most trout fishing states, a major use of fisheries funds in Michigan is for the production and planting of trout. There are those who believe trout plantings in streams are not necessary or advisable. It is, however, quite commonly believed that planting of legal-sized trout is necessary for the maintenance of trout fishing of a satisfactory quality under present-day conditions.

Since the planting of trout was first undertaken, the program has been materially altered to fit changing conditions. Aside from the surplus trout fry and fingerlings planted in brooks and small trout lakes near hatcheries and rearing stations, plantings now consist largely of trout of legal size — mostly seven to nine inches — which are distributed in the larger streams and trout lakes. Trout lakes are generally planted in the fall because growth and survival over winter are good. But best results from streams are obtained from plantings made just before and during the open trout fishing season. Frankly, the results are far from

those desired in that on the average only 25 per cent of the brook and rainbow trout and only 12½ per cent of the brown trout are recovered by the fishermen. The stream plantings are generally caught too easily and in many cases a considerable percentage is otherwise lost. Few survive to build up the brood stock or to contribute to the catch in later years. In other words, stream plantings of legal-sized trout mainly provide what some describe as "put and take fishing." In contrast, the same trout stocked in suitable lakes may yield twice as many fish over a period of several years, gaining a pound or more in weight, a "wild trout" look, and fighting qualities. Since it is believed there is little or no natural reproduction of trout in most trout lakes, fishing can only be maintained by continued stocking. As the facilities and funds for the production of trout are limited, it would seem that in the future more of the hatchery production might properly be diverted to stocking suitable trout lakes.

The program for the improvement of trout streams to increase their capacity for producing and supporting a larger population of trout was considerably expanded during 1948 and may be further increased in 1949. Although costly, it is believed such work represents a more permanent contribution to trout fishing than does trout planting. It should be kept in mind, however, that there are definite limits to stream improvement just as there are to any type of fisheries management. Many stream sections now appear ideal for trout and could not be improved by any known method. Others are probably hopeless — waters are too warm or their flow too unstable to warrant any expenditures. Records of the character of every stream are lacking, so that it is impossible to say just how much improvement work is required or where it is needed, but it is known that there are many streams where the habitat for trout and the fishing by anglers can be made better by planned improvements.

Another phase of this program has been the restoration or development of trout lakes by chemical treatment to destroy competing or predaceous species. A number of lakes were treated in 1948 and were stocked with trout and should produce some interesting fishing in 1949 and later years. Lake surveys constantly add to the list of lakes having trout possibilities, and, as this program progresses, trout fishing opportunities will be increased and extended in many sections.

The importance of scientific studies of the factors bearing upon the abundance of fish and other related phases, commonly referred to as fisheries research, is not always understood or appreciated. Organized in 1930 in cooperation with the Uni-

versity of Michigan, the Institute for Fisheries Research is the technical branch of the Fish Division of the Conservation Department. Michigan has pioneered in many fisheries investigations which only now are beginning to benefit trout fishermen. Stream improvement measures, first undertaken experimentally in 1927, and extensive studies started in 1930, have revealed some of the benefits as well as limitations of this work. Surveys and tests have led to the expansion of trout planting in larger lakes. Research in Michigan and in other states has demonstrated the lack of value of planting fingerling trout in streams and its success in small lakes. Michigan has made the most thorough test of the value of the legal-sized trout stocking program and has demonstrated its limitations and determined how such fish can be used to best advantage. The original idea for development of the special regulation trout fishing ponds must likewise be credited to research. Basic information on trout life histories and trout requirements is slowly being acquired and should result in more effective management of the trout fishery. Tests of the value of present regulations on size limits, creel limits and closed seasons are being conducted.

Providing sport for more than 165,000 people who fish trout cannot be guaranteed by planting alone. It is doubtful whether this program can or should be expanded. With rising costs, expansion or even maintenance of the present schedule of one million legal-sized trout yearly can only be carried on by cutting down on expenditures for other phases of the fisheries program already mentioned. A trout killed can be caught only once and the available funds can likewise be spent only once. It is doubtful whether any increase in trout fishing license fees, as has been suggested, would finance an expanded program. Such increase might have an adverse effect in barring many persons from the enjoyment of this type of fishing.

Though Michigan is blessed with a goodly number of trout waters, it must be remembered they are limited in the poundage of fish they can produce. The yield in many cases can be increased by improvement but never to a point that will assure a limit catch or even somewhat less to every angler on most days. Nor can the desired fish be produced in the hatcheries in anywhere near these numbers for the present cost of a trout fishing license. The only solution to maintenance of trout fishing of a reasonably satisfactory quality is to kill fewer trout. As demonstrated on the special trout fishing ponds, many fishermen secure greater satisfaction by catching and returning the trout alive to the water. We cannot eat all of our trout and have the sport of trout fishing too!

The Band-Tailed Pigeon

(Continued from Page 5)

reasonable sample such as this does indicate the trend of pigeon numbers.

The general decline of pigeon numbers and observations of areas where the kill has been restricted brings up an important question. Do the pigeons that frequent one particular shooting area range in that vicinity and return to it year after year? If that is true, then pigeons could be managed on a sustained yield by a "flock-range" method, comparable to the herd range management of big game. An intensive banding program is needed to answer this question as well as many other questions about pigeons.

Crippling loss is a very important factor in the pigeon kill. Hunter estimates as well as actual counts by game technicians indicate that birds in the hunter's possession account for only 50 per cent of the kill. Congestion of hunters, long range shooting, and brushy hunting areas are all responsible for this heavy crippling loss. Band-tailed pigeons have a relatively thin crop wall, and one shot can puncture it and eventually cause death. Retrieving dogs are badly needed for pigeon hunting.

The reproductive potential of pigeons (one egg per year) causes a preponderance of adult birds. An age sample of the hunter kill in Marion county gave 111 adult birds and 40 young birds, or an adult-young ratio of 2.78:1.

Management

The field program of securing factual data will be continued and expanded to as great an extent as the time of the various field agents permit. Present information on pigeons is admittedly inadequate. Data from the next two years should undoubtedly prove more exactly the status of the band-tailed pigeon. Based on this accumulation of information, there are several management tools



Band-tails killed in Benton county



Pigeon hunters being checked by Game Commission personnel. The right and the wrong way to hold a gun demonstrated by the two hunters.

or techniques that could be applied to pigeons. If the present indicated decrease in harvestable populations of pigeons in the Willamette Valley does not materialize, the present season and bag limits may be continued. Should the present decrease be confirmed, all or part of the following management methods may be applied to reduce the pigeon kill in an effort to place pigeons on a sustained yield harvest.

1. Reduced bag limits. This method would undoubtedly save many birds. A kill frequency table was made of 87 hunters in Marion county.

Pigeons Killed	Hunters Making the Kill
0.....	10
1.....	12
2.....	16
3.....	13
4.....	8
5.....	5
6.....	11
7.....	2
8.....	10

2. Shorten the season. The peak of the southern migration has usually occurred by September 20. Any effective reduction in the present season (September 1 to 30) would have to be made at the beginning of the season.

3. Special closures. Areas which seem to be shot out could be closed. Less than one hundred acres closed would generally eliminate most of the pigeon kill for many miles.

4. Education. With such a small bird and high crippling loss, hunters must be encouraged to realize that pigeon hunting is recreation and not a source of food.

5. Institute a weekly limit. With the limited pigeon areas available, this would

be easy to enforce and would eliminate the practice of one hunter killing a limit of birds every day.

The data available on band-tailed pigeons is not extensive; however, the orderly accumulation of information over a period of years is essential for sound management. Reports of increasing abundance insofar as can be determined are based on general observations and the incidence of damage complaints, many of which are possibly due to climatic variations. Damage control permits on all migratory game are issued by the U. S. Fish and Wildlife Service. No permits to kill were issued in Oregon during 1948, and only two herding or hazing permits were issued.

Oregon data cannot be accepted as absolute facts with the present knowledge available. However, evidence of a decline in the harvestable pigeon numbers in the Willamette Valley is indicated. When such a situation occurs in a species that lays only one egg a year, the time for conservation is at hand. To wait for accumulation of more data to prove that a major decline is occurring may cause pigeon hunting to be another unknown sport as happened during the closed season between 1913 and 1937.

The Pacific Coast States and Provinces are at present engaged in a cooperative program of accumulating data on waterfowl of the Pacific Flyway. It does not seem illogical that this program could not be expanded in the future in order that exact information on band-tailed pigeons may also be gathered and the status of this relatively little known bird may be better known.

Oregon State Game Commission Bulletin

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

Ask Landowner for Permission To Hunt or Fish

Poor public relations frequently existing between the landowner and the sportsmen usually are the result of the bad manners of a minority number of hunters and anglers but the effects are felt by all. The following editorial from the Oregonian on May 3, 1949, describes what often happens:

"NO RIGHT OF TRESPASS

A woman who lives beside Scappoose creek, on her own acreage, complains that uninvited fishermen, heedless of trespass signs, defy her when told that fishing is not permitted. One angler stayed all day, she said, at the same place on the creek — still-fishing — and steadfastly refused to leave. 'He said he had a \$6 license,' reported the agitated owner, 'and that he guessed he knew his rights.' Two things were wrong with this statement. There isn't any \$6 license, that's one; the other is that the obdurate angler had no least right to commit trespass. Neither angling nor hunting license confers such a privilege. What should she have done about it? Ma'm, the obvious thing to do was to summon the nearest peace officer and have the trespasser arrested. And that, clearly enough, is your problem.

"We mention the instance, however garbled the account may be, merely by way of illustrating the bad feeling, and lack of understanding, which too often exist between fisherman and property owner. Most of the trespass signs which forbid fishing were posted only when patience, long-suffering, ceased to be a virtue. Broken fences, opened gates, and sheer vandalism, usually prompted the prohibition. If fishermen were to make a practice of good behavior when on private land — or, for that matter, on public — the natural reaction of landowners would be that of tolerance and even of friendship. But it doesn't promote good relations to take a shortcut through a wheat field. Nor is there any gain to the angler, in the long run, who deliberately trespasses, and defies the property owner to make something of it. If he does it again, ma'm, call his bluff by calling an officer. Every honest fisherman hopes that you will."

While the title to the fish and game rests with the state as well as the water in the streams, the state does not control private land and, therefore, cannot with a hunting or angling license sell the right to trespass on private property.



WINTER BIG GAME LOSSES

(Continued from Page 1)

areas specifically mentioned where losses were quite high, the over-all picture is more encouraging. There is no evidence to indicate that total losses exceeded by any appreciable amount those which occur on a normal winter.

Past action by the Game Commission has attempted to control problem herds faced with heavy losses during extreme winters. This control has been in the form of special seasons designed to crop surpluses of game in excess of winter forage carrying capacities. A total of 20 special deer seasons have been held since 1938 to effect better management of Oregon's big game resources.

In western Oregon, the blacktailed deer losses were very light. Although there was a great deal of cold weather accompanied by snow, adequate food remained available through the winter. Many days were clear and bright which may have had some effect since losses in the past have followed periods of rainy, dull weather.

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.

Lake-Klamath Screening Program Started

An extensive screening program is underway in Klamath and Lake counties with the detailing of a four-man crew to each county last month. This is another step forward in the overall screening program to take care of the irrigation ditches in the state.

In Lake county work was started in the Honey Creek area, while in Klamath county Wood River valley is receiving attention first. Screens will be installed in all irrigation ditches leading from creeks in the valley. The first step is the construction of large cement boxes which will hold the revolving wire screens that are constructed in the Game Commission's screen factory at Central Point. After the screens are constructed, a maintenance man will be left on the job to see that the screens remain in good working order. Oregon's screening program is recognized nationally as one of the most outstanding and as far as is known, the screen factory at Central Point is the only one of its kind.

Screening of the irrigation ditches will save thousands of fish each year which otherwise would have escaped from the ditches onto pasture lands and fields and left to die.

Game Field Agents Meet

The annual conference of the game division field agents for the Oregon State Game Commission was held on June 23 and 24 in Portland.

The men are called together each year to discuss the progress of current activities, report on field conditions and review the general work program and policies of the division.

Subjects given particular consideration included big game census, big game damage, upland game program, Federal Aid activities, resume of Research Unit projects, waterfowl situation, fur resources management and habitat improvement.

Second Beaver Sale Held

(Continued from Page 4)
sion's share is used to administer the program and employ trappers to live-trap and transplant beaver during the summer months as well as dead-trap throughout the winter. Trapping is only carried on where it is necessary that beaver be removed for the protection of property.