

OREGON STATE
GAME COMMISSION
BULLETIN

NOVEMBER, 1952





Queries have been received as to the length of time game animals and birds may be kept in storage after being legally killed.

Federal regulations allow migratory game birds to be kept for a period of 90 days following the close of the open season. State regulations, however, do not limit the time that other legally taken game animals or birds may be kept in storage provided there is no waste of the meat. Wanton waste of game is a violation of the law.

* * *

Releases of Oregon's new game bird, the Chukar partridge, totaled 10,000 for this season. The birds, raised at the Hermiston and Ontario game farms, were released in the Deschutes, John Day and Owyhee river canyons, the Steens mountains and Malheur river foothills. In these rough areas there is no competition with other game birds.

* * *

Furs and fur garments hereafter must be sold in the United States under the "true English name of the animal from which the fur was taken" and may not be disposed of under more glamorous titles.

* * *

Plants of winter wheat have been made on Fern Ridge reservoir lands to provide green winter feed for ducks and geese in the Eugene area. Portions of a 2,000 acre flood land tract were seeded by plane. Past plants of rye grass and barley have been used by 5,000 Canada geese. These lands are planted by the Game Commission through an agreement with the U. S. Army Engineers.

* * *

Oregon's share of the Dingell-Johnson federal aid fishery funds for the coming fiscal year amounts to \$52,026. Total receipts from the excise tax on sport fishing tackle, source of these funds, was \$2,508,527. This money is apportioned to the states on the basis of area and number of fishing licenses sold.

COVER PICTURE

Bird loss is reduced by a good dog such as this golden retriever, Champion Oak Creek's Golden Rita owned by Frank Fowler. (PHOTO BY TOM McALLISTER)

Oregon Man Goes to California

William (Bill) B. Morse, 33, chief biologist in charge of small game for the Oregon State Game Commission, was one of the five successful applicants for the regional manager positions recently created in the reorganized California Department of Fish and Game. The state has been divided into five administrative districts, somewhat similar to the plan followed in Oregon, and Morse will head Region IV with headquarters at Fresno. The five men appointed were chosen from 308 applicants throughout the nation who qualified in written test and oral interviews.

Morse, who had been an Oregon resident for 30 years, graduated from Oregon State College in 1940, a major in fish and game management. While attending college, he was temporarily

employed on the Malheur Wildlife Refuge and also by the Game Commission. He served with the 41st Army Division in the Southwest Pacific from February, 1941 to November, 1945 and now is a Major in the army organized reserve corps. He became a full-time employee of the Game Commission following his return from the service and in 1947 was placed in charge of waterfowl operations. Appointed chief of small game operations in 1950, he then had supervision over both the upland game and waterfowl programs.

He is married and has four children.

The Oregon department regrets its loss but is proud of this recognition of one of its employees. All wish Bill well in his new position.

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LITTLE FISH SURVIVE

Little fish are hardy despite the hackneyed phrase "little trout all die so why throw them back in."

In past experiments conducted at trout hatcheries sub-legal fish have been gingerly removed from hooks and placed back in ponds for prolonged periods of observation to prove nearly all survive.

Now, Fishery Agent Ralph Swan, who covers Columbia and Clatsop county streams is testing the survival of sub-legal fish under conditions encountered by anglers to clinch the knowledge that little fish definitely do survive the rigors of being hooked and released.

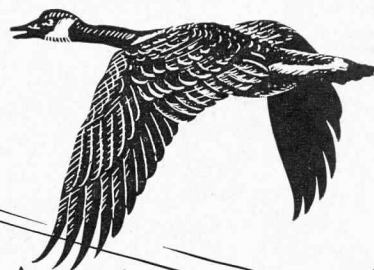
This past summer Swan caught 85 sub-legal fish with worms and eggs on a number 8 hook and he exercised no particular caution in releasing the small fish. The fish were tossed into a wire box anchored in Big creek for a period of observation.

After treatment, such as they might receive from any disgruntled angler, only 3 fish died in the 72 hour observation period. The fish that died did so immediately, and they had been hooked deeply. The leader was snipped short on another trout that swallowed the hook, and the trout was lively upon release. Use of hooks smaller than a number 8 would probably have increased the incidence of swallowing and consequently mortality when the hook was pulled out.

Sub-legal fish are a particular problem in coastal waters where the minimum length is 8 inches and anglers

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Waterfowl



Harold Cramer-Smith

By CHESTER E. KEBBE, Chief Biologist

WATERFOWL MANAGEMENT, because of migratory traits that disperse the birds across North America and into South America, is an international program.

Migration length varies with individual species, the majority nesting in the northern states and prairie provinces of Canada and wintering in the southern states and Mexico. The blue-winged teal which breeds in the northern marshes winters from the Gulf Coast south to central Chile and Brazil. Some of our snow geese nest on islands in the Arctic Ocean north of 70 degrees latitude.

Seasonal migrations covering many states and provinces complicate management and necessitate cooperative programs with all interested agencies. Each agency must take an active interest in fact-finding in order to present the current situation accurately to the U.S. Fish and Wildlife Service. This government agency derives its authority for management of all migratory birds from statutes enacted by Congress. Signing of migratory bird treaties with Canada and Mexico has made it possible to inaugurate management projects on an international basis. Fact-finding resulting from these programs is used as the basis for setting waterfowl regulations for all states in accordance with production of the particular flyway in which the states are geographically located. There are four of these main migration routes, designated as the Pacific, Central, Mississippi, and Atlantic flyways. The Pacific flyway extends from the northern tip of the continent to South America and from the Pacific Coast east to the Rocky Mountains. Since Oregon falls within that geographical area, we are directly concerned with changing conditions every-

where in the West, North and South which has a bearing on the number of birds inhabiting or moving through our state.

Preservation of waterfowl nesting areas in the form of marshes, potholes, and sloughs; establishment of resting and feeding areas for the birds enroute; and the maintenance of key wintering areas are the chief items of concern in maintaining waterfowl populations. Inroads made through human development and expansion continue to complicate the management program.

The Klamath Marsh area is a most glaring example of destruction of waterfowl habitat in the interests of other uses. Of the original 187,000 acres of water and marsh in Tule and Lower Klamath Lakes, there remain today about 30,200 acres. Although this is the largest reclamation area in the state, smaller areas can be found everywhere. Practically all remaining marshes have been surveyed by reclamation interests to determine the feasibility of converting lake beds to agriculture. Many of these, with complete disregard of their value to wildlife, have been approved by the Bureau of Reclamation for early "development." If we are to continue to enjoy the sight of waterfowl and the recreation they provide, the future of these birds must be taken into consideration in any long-range program of wise land use. Continuation of reduction of habitat can only mean decline in waterfowl numbers.

Along with maintenance of habitat for waterfowl is the problem of ever-increasing hunting demands. Last year 1,900,000 sportsmen hunted ducks and geese nationwide. Nature has ably assisted in increasing waterfowl numbers in recent years by providing an abundance of moisture in some of the prin-

cipal Canadian breeding grounds. The Pacific flyway is also in a better position than the others as many of our birds, particularly the geese, come out of Alaskan, Yukon, and northern British Columbia breeding grounds which have not been affected by man to the degree of our own native habitat.

Although the breeding grounds in the prairie provinces of Canada supply a large percentage of the waterfowl for the Pacific flyway, each of the western states contains large and important nesting areas which annually produce millions of birds. Malheur National Wildlife Refuge each summer has a breeding population of about 200,000 ducks and 9,000 geese. Other large marsh areas, such as Warner Valley, Klamath Lake and Summer Lake, contain additional thousands of breeders. Not to be overlooked are all of the thousands of streams, lakes and potholes in the state which collectively add importance to the value of Oregon as a waterfowl production state.

Pacific Flyway Organizations

In February, 1948, representatives of the U.S. Fish and Wildlife Service,

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WATERFOWL*(Continued from Page 3)*

Province of British Columbia, and states of California, Oregon and Washington met in Portland at the office of the Oregon State Game Commission to form the Pacific Flyway Committee, formulate plans for taking inventory of the factual information already accumulated, correlate procedures for uniformity and to review and revise programs already in effect for the Pacific flyway. It was determined basic information was needed on: (1) Inventory of resident and migratory waterfowl populations; (2) Complete kill analysis to determine annual harvest; (3) Waterfowl production by states, provinces or regions; and (4) An extensive banding program to determine movements and area relationships. Since formation of this committee, the States of Idaho, Montana, Nevada, Utah and the Territory of Alaska have joined as they also are in the path of these migrating western birds. This technical study committee is represented by one technical employee of each game department whose job is to obtain and assemble all facts possible in a uniform manner on waterfowl in his respective state or province. The job of assembling, coordinating and interpreting the vast amount of factual information supplied by each state in the flyway was delegated to the U. S. Fish and Wildlife Service. Similar committees have been or are in the process of being formulated in the three other flyways.

In addition to the flyway technical committee, the Pacific Flyway Council was organized at Pendleton, Oregon, on January 16, 1952, for the purpose of establishing policies concerning waterfowl management. This committee, composed of members of seven Western states, uses the factual information received from the technical committee and formulates and coordinates policies on a flyway basis on such items as land use and hunting regulations. Two states, rather than individual members, were elected to represent the Pacific Flyway Council at all National Waterfowl Council meetings called by the U. S. Fish and Wildlife Service. The State of Washington was elected for a one-year term and the State of Utah for two years. The flyway councils, for each of which there is a functioning council, has its origin from action taken by the International Association of Fish and Game Commissioners at their 1951 meeting in Rochester, New York.

RETURNS FROM BIRDS BANDED BY THE GAME COMMISSION BETWEEN MAY 1, 1948 AND APRIL 30, 1952

	Mallard	Gadwall	Pintail	Baldpate	G. W. Teal	Cinnamon Teal	Redhead	Canvasback	Greater Scaup	Lesser Scaup	Ringneck Duck	Bufflehead	Canada Goose	Snow Goose	Coot	Total
Oregon.....	315	54	34	23	23	...	8	4	1	3	1	1	23	1	1	492
Washington.....	111	2	4	2	3	...	...	...	...	1	1	...	2	...	...	126
California.....	83	23	17	7	13	1	2	...	...	1	...	...	8	...	1	156
Idaho.....	110	...	...	1	2	...	1	...	...	...	...	...	1	...	...	115
Nevada.....	2	2	1	...	...	1	...	...	...	...	...	...	...	...	...	6
Montana.....	20	...	1	...	...	...	...	...	...	...	...	...	...	...	...	21
Utah.....	2	1	1	...	...	...	1	...	...	...	...	...	...	...	...	5
North Dakota.....	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	3
Iowa.....	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Colorado.....	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2
Texas.....	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	2
Alaska.....	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	3
Alberta.....	78	...	1	2	...	...	...	...	...	...	...	...	3	...	...	84
British Columbia.....	17	...	1	1	1	...	...	...	...	...	...	...	...	...	...	20
Saskatchewan.....	14	...	2	...	...	...	...	...	...	...	...	...	...	...	...	16
Ontario.....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Mexico.....	...	1	...	...	...	2	...	...	...	...	...	...	...	...	...	3
Totals.....	759	83	65	37	42	4	13	4	1	5	2	1	37	1	2	1,057

A random survey by mail has been conducted the past two years, and from questionnaires returned by 4,651 hunters in 1950 and 4,731 hunters in 1951, total kills have been computed by multiplying the average kill by the total known duck stamp holders in the state. In 1950, this computation amounted to 560,048 ducks and 79,440 geese killed during the season. Figures for 1951 show 798,605 ducks and 105,242 geese.

Permanent census samples have been established to measure both breeding populations and production of young. Such samples are small and centered primarily in the marsh areas of eastern Oregon. They are of little value directly to the state but when combined with samples from the other states and provinces in the Pacific flyway their breeding population censuses are very significant of the waterfowl production and extremely valuable to the Fish and Wildlife Service in setting waterfowl regulations.

Banding Studies

Since formation of the Pacific Flyway Committee, the Game Commission has constructed and operated ten banding traps. In five years, 14,626 ducks, 265 geese and 54 coots have been banded. As of April 30, band returns from birds killed have been received on 1,017 of these ducks, 38 of the geese and 2 of the coots. A breakdown showing the location of each of these kills by species is presented in the accompanying table. In addition to this recent work by the Game Commission, the U. S. Fish and Wildlife Service has banded over a long period of years additional thousands of birds, primarily at Malheur Refuge.

Return from bands are the best source of information as to migration routes the birds follow, locations of their summer and wintering areas, intensity of kill by various species and age groups, speed of migration, length of life in the wild and other valuable data. Each hunter is urged to promptly submit any band found and give information as to place and date killed and species of bird taken. All of these returns plus banding data from other states and provinces is providing an ever-increasing knowledge of the birds' life habits.

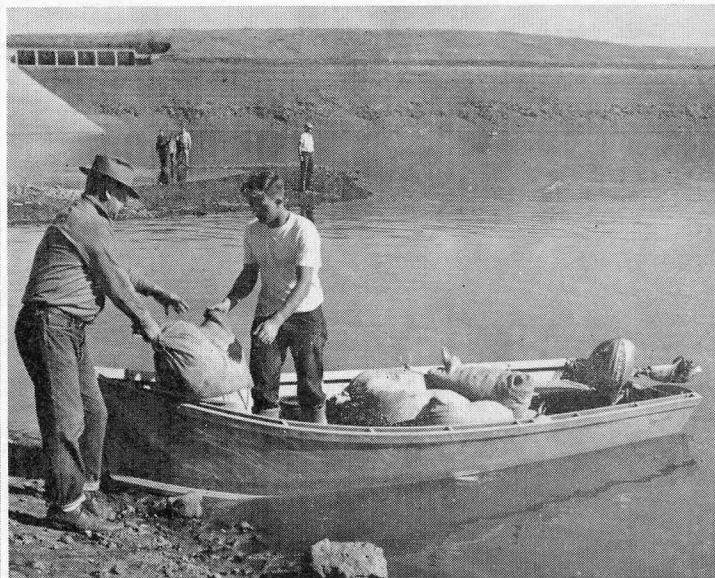
Some remarkable migration histories have been discovered due to banding studies. One banded mallard duck has nested in the same identical spot in Nebraska eight consecutive years. Recently a banding report was received on a female mallard shot on November 8, 1951 on Pte. Mouillee Marsh, Michigan, which was banded on McFadden Lake near Corvallis on November 25, 1941. Another mallard banded at the same station on November 26, 1942 was killed at the mouth of the Nanaimo River, British Columbia on December 15, 1951. There are, no doubt, a great many more unusual instances on record in Washington, D.C. than the two cited. These two records, however, show something of the life expectancy and migratory tendencies for this duck.

Field agents of the Game Commission collected gizzards from cooperating sportsmen during the past season and shipped them to the State Natural History Survey of Illinois for lead poisoning analysis. Out of 421 gizzards sub-

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Assembled local residents and Game Commission employees receiving briefing just before undertaking treatment of McKay Reservoir.



Glen Ward, game agent from Heppner, and Charles Goodyear, Pendleton resident, load sacked rotenone before putting out on the reservoir.

McKAY RESERVOIR PURGED



Aftermath of McKay project—a windrow of carp and crappies washed ashore.

McKay reservoir, near Pendleton, has been purged of all fish following the largest lake rehabilitation project yet tackled by the Game Commission fishery division and completed October 15 following a five-day operation.

Live-boxes filled with test fish were placed at 10, 20, 30 and 40-foot levels in the reservoir prior to treatment, and when recovered two days later all test fish were dead.

A 24-man commission crew using two pre-mix concrete trucks spent a day mixing 21 tons of dry rotenone valued at \$10,000, sacking the wet mix, and distributing the sacks in stockpiles around the reservoir.

On Sunday local residents teamed up with the Commission crew to distribute the rotenone by towing the sacks behind boats and agitating them. Each boat was assigned a section, the reservoir having previously been surveyed and platted into 28 sections with markers and buoys.

Twenty boats and crews were supplied by members of the Pendleton Boat Club, Pendleton Fish and Game Club, and East End Rod and Gun Club of Milton. A group of sportsmen from Athena and several members of the Eastern Oregon College of Education also assisted.

Fish died by the hundreds of thousands and the mixed kill included large quantities of crappies that were stunted in growth and "paper-thin," catfish, yellow perch, and trash fish including carp running from 4 to 12 pounds in weight, chisel-mouth, squawfish and suckers. Many sackfuls of panfish were hauled home by the estimated 2,000 persons who visited the reservoir.

Three additional days were spent by the Commission crew in treating McKay Creek and its numerous tributaries which feed the reservoir. This was done to prevent a reinfestation of trash fish from the tributaries, and required the packing in of rotenone by foot through numerous small canyons.

Plans call for restocking the reservoir with rainbow trout early next year, and it is believed fishing comparable to that provided through treatment of Ochoco and Malheur reservoirs will be made available.

The Northwest Region

By LES ZUMWALT, Supervisor

THAT PORTION of Oregon lying north of the Umpqua drainage and west of the Cascade Mountains is known as the Northwest Region (Region I). Administrative headquarters are located in Albany, with warehouses on the old Camp Adair unit. Although this area comprises only one-sixth of the state, two-thirds of the state's population resides within it.

At first thought, the statement, "one-sixth of the state's area, two-thirds of the state's population" paints a picture to the sportsman of a place not to seek hunting or fishing. In actuality, the Northwest Region furnishes an abundance of recreational opportunities in fish and wildlife lines.

Fishing of one kind or another can be enjoyed 365 days of the year. There is salmon and steelhead fishing on all major coastal streams from the Siuslaw River to the Columbia, and in the Willamette, Santiam, Sandy and Clackamas Rivers. There is a rainbow and/or cut-throat trout fishery on such coastal stream systems as the Nestucca, Siuslaw, Salmon, Siletz, Alsea, Nehalem, and Wilson; in such inland systems as the Clackamas, Sandy, McKenzie, Santiam, and upper Willamette; and on such lakes and reservoirs as Dorena, Waldo, Clear, Cullaby, Breitenbush, Olallie, Marion, Woahink, Tahkenitch, Siltcoos, Mercer and Gold. Eastern brook and/or rainbow trout can be taken from nearly two hundred high Cascade pack lakes. Sturgeon sport fishing on the Columbia is available now, with a possible future in the Willamette. Periodically, thousands of fishermen enjoy dipping tons of smelt from the Sandy River.

The underfished warm-water fisheries offer generous recreation in waters throughout the Willamette Valley floor and in many coastal lakes. Almost unsurpassed bass and catfish (bullhead) fishing is available in Tahkenitch and Siltcoos Lakes. The increasingly popular off-shore sports salmon fishing flourishes at Pacific City, Newport, Depoe Bay and Seaside. Off-shore fishing also offers an almost untouched but excellent sport in the form of bottom fishing for such fish as rock bass, ling cod, flounder and an occasional halibut or shark.

On the game side of the picture, the Northwest Region has limited elk hunt-

ing in Clatsop, Tillamook, Lincoln, Lane, Marion and Clackamas Counties, and excellent blacktail deer hunting generally throughout the area. The Jordan Creek and Clatskanie deer archery areas provide maximum recreation for bow and arrow enthusiasts.

The unrestricted yet little utilized sport of hunting raccoon could be enjoyed over the entire region, as could both red and grey fox hunting in the Willamette Valley. Also falling in the unrestricted, little hunted class, is the snowshoe rabbit, present in spots along the Cascade slopes and in Clatsop County.

Bandtail pigeons afford a limited number of hunters with excellent sport, as do doves. Blue or ruffed grouse hunting is good in the Cascade slopes and the Coast range; and fair pheasant hunting is provided on cooperative game management areas and throughout the Willamette Valley. Moderate numbers of waterfowl are available in the Willamette Valley, along the Columbia River and coastal bays.

In 1951, two-thirds of the beaver taken in the state were taken in the Northwest Region. Trappers seeking mink, muskrat and marten do as well

here as elsewhere in Oregon. Yes, wildlife enthusiasts have diversified opportunities in the Northwest Region.

Constant surveillance is necessary to administer and manage this resource. Seventeen permanent field workers are employed to this end.

Game

For purposes of game management, Region I is divided into three game districts, each headed by a field agent. These men are responsible for all game activities within their respective areas. Their basic duty is to gather information on population trends of deer, elk, pheasant, grouse, quail, pigeon, doves and waterfowl. They are also charged with game damage, pheasant liberation and many additional duties in the line of public service function. The following typical weekly report turned in by Francis Ives, South Willamette district field agent, shows the widely diversified nature of the activities of this category of field personnel.

Sunday, September 23, 1951

Wrote letters to Mr. Elton Fishback, Monmouth, and Mr. Clarence Hiebert, Falls City, explaining Game Commission participation in deer fencing agreement to alleviate damage. Remainder of day off.

Monday, September 24, 1951

Left home 4:00 a.m. to run Green Peter Mt., Linn Co., deer sample. Walked 5 miles; sight record: no bucks, 8 does, 6 fawns, 1 unclassified; 3 blue grouse, 13 mountain quail, 23 band-tailed pigeons. Completed sample by 10:00 a.m. To Lebanon to investigate complaint of deer damage to strawberries. Measured and signed fencing agreement for 70 rods of deer-proof fence. Stopped by Regional Office for deer season instructions. Home 3:00 p.m.

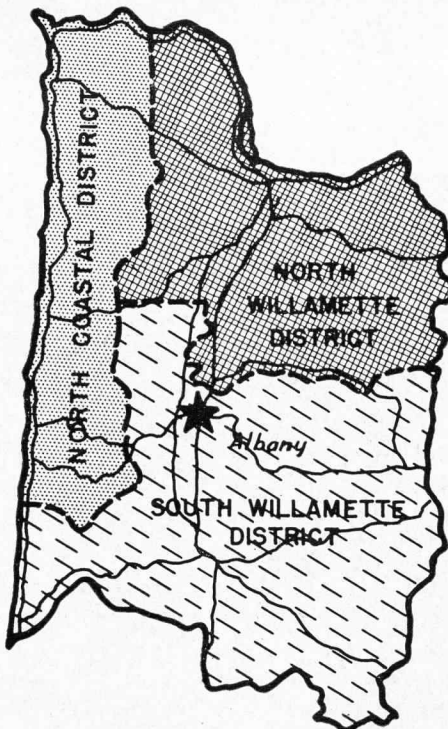
Tuesday, September 25, 1951

Left home 5:00 a.m. Took Mill Creek, Polk Co., deer sample. Sight record: 6 bucks, 9 does, 7 fawns, in 4 miles walked. Investigated request for pheasant refuge and turned it down. (Was to solve trespass problems and would not benefit upland game birds.) Investigated water right application of L. V. Wallingford, Willamina. Promised to send fish ladder specifications. Home 6:00 p.m.

Wednesday, September 26, 1951

Left home 11:00 a.m. for Wendling Basin, Lane County. Talked to Curly Bailey regarding whether or not Booth Kelley gates would be left open during deer season. Took 6-mile foot sample around Mt. Nebo in evening. Sight rec-

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The Northwest Region (No. I)

THE NORTHWEST REGION

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ord: 2 bucks, 5 does, 7 fawns. 1 coyote killed on sample. Camped in area.

Thursday, September 27, 1951

Broke camp at 6:00 a.m., took sample on Oshkosh Mt. Sight records: 7 bucks, 11 does, 10 fawns; 2 broods blue grouse in 6 miles walked. Contacted P. B. Myers in Springfield and issued Goodrite Z.I.P. deer repellent for garden. Home 3:00 p.m.

Friday, September 28, 1951

Left home 9:00 a.m. Contacted William Glaser, John Ropp, O. M. Conrad and Louis Grell, of Tangent regarding farm game cooperative pheasant hunting area. Signed 3-year agreements after explaining plan to liberate mature cocks on lands open to the public through this contract. Area of 4,400 acres now completely set up. Camped near Wendling area, Lane County. Patrolled for pre-season hunting and spot-lighters.

Saturday, September 29, 1951

Helped Curly Bailey check hunters through Wendling gate until 6:00 a.m. Checked hunters on Wendling tree farm until noon. Took 13 deer weights. Camped in Fischers Logging.

Similar activity is carried on by the other two field agents, Mel Cummings, 3011 S.W. Texas Street, Portland, in charge of the North Willamette District and Wes Batterson, Nehalem, in charge of the North Coastal District.

Five game management areas, Camas Swale, Fort Stevens, Government Island, Sauvies Island and E. E. Wilson, fall within the boundaries of this region. These Game Commission-owned lands are in the process of being developed to produce maximum numbers of small game for the public. At the present time the E. E. Wilson Management Area is set up to handle dog training, field trials, and limited pheasant hunting for juveniles, in addition to having a game farm segment. Four-fifths of the game birds produced on this game farm are released in the Willamette Valley.

Habitat Improvement

In an attempt to correct limiting factors which hold down game populations, a habitat improvement section, headed by field agent C. R. Shepard, Corvallis, is a working part of the organization.

Under this program it is planned to make the following improvements annually: to plant 100,000 shrubs (principally multiflora roses); to provide cover now lacking for upland game birds; to build water guzzlers where water is not available during dry summer months



A crew of Northwest Region field agents gather at the Alsea hatchery to help fin clip fish prior to their liberation. Anglers can be of aid by reporting all catches of marked fish.

for game birds; to plant 400 acres of big game range lands on selected areas in the Tillamook burn to lotus and clover; to develop five waterfowl resting and feeding ponds in the Willamette Valley for the purpose of holding more birds during shooting season; to put out 100 wood duck nest boxes.

Fisheries

From a fishery management standpoint, the Northwest Region is divided into six fishery districts, again each headed by a field agent. Fisheries field personnel charged with creel census, stream and lake survey, population studies, public access, stocking recommendations, liberation, and such public service functions as pollution investigations and water right application approval.

The following weekly report submitted by Ralph Swan, Gearhart, North Coastal district field agent, characterizes the activities of these men:

Sunday, March 2, 1952

Left home 9:00 a.m. Checked 35 anglers on Nehalem with a total of 25 steelheads. Posted upper Nehalem and Rock Creek. Saw 2 steelheads on spawning grounds on Rock Creek. Arrived home 6:00 p.m.

Monday, March 3, 1952

Left home 8:00 a.m. Checked Lewis and Clark River and Klaskanine River but found no fishermen. Went to Cronin Creek to make steelhead spawning survey. Water too high for good results. Arrived home 4:00 p.m. Worked on creel census records in evening.

Tuesday, March 4, 1952

Took day off.

Wednesday, March 5, 1952

Left home 8:00 a.m. Took water measurement and changed thermograph chart on Gnat Creek. Went up Plympton Creek to locate additional fish planting sites. Found very few; upper portion still under snow. Investigated Rainieron Slough to determine feasibility of carp control. Showed color slides series at Rainier Rod and Gun Club meeting in evening. Arrived home 1:30 a.m.

Thursday, March 6, 1952

Left home 9:00 a.m. Checked 15 anglers on Nehalem River, no fish. Surveyed Cronin Creek for spawning steelhead, saw 19 spawning fish and 15 additional redds where no fish were observed. Traced source of muddy water in Beaver Creek to rock quarry. Operator promised to correct condition. Arrived home 6:00 p.m.

Friday, March 7, 1952

Left home 8:00 a.m. Helped Roy Delozier plant 3,000 yearling marked silver salmon in Necanicum River. Investigated 4 fishing access points on lower Nehalem. Arrived home 6:30 p.m.

Saturday, March 8, 1952

Left home 9:00 a.m. Checked 61 anglers on Nehalem with 10 steelheads and 1 cutthroat. Saw 1 pr. spawning steelhead in lower river. Home 8:00 p.m.

Although every individual body of water presents a different biological

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WATERFOWL

(Continued from Page 4)

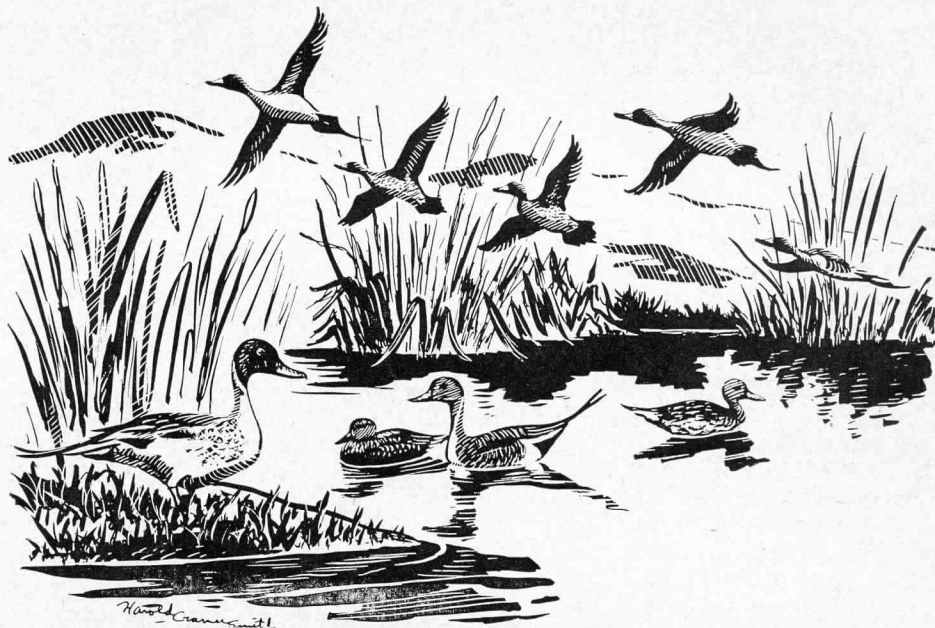
mitted 24 or 5.7 per cent contained ingested lead shot. Twelve in one gizzard was the largest number found.

Phenomenal success has been experienced in the use of nest boxes installed for wood ducks. Eighty such boxes have been put up on Sauvie Island with a use of 80 per cent of these birds. Only three remained empty during the nesting season, others being used by screech owls, sparrow hawks and bees. Like success has resulted from the installation of 170 nests throughout the Willamette Valley. Two nests were placed along Catherine Creek near La Grande and both resulted in wood duck use, despite the fact these birds are rare in eastern Oregon during the nesting season.

It is possible that lack of nesting sites has limited wood duck distribution. Additional nest boxes will be constructed this winter and placed in known nesting areas while others will be placed throughout the state on an experimental basis in an effort to extend the breeding territory. The Game Commission has distributed instruction sheets on wood duck nest construction to many individuals interested in the project.

The proper management of waterfowl is a complex problem but when one considers that each species should be considered individually, the problem becomes even more complex. Certainly all phases for correct management of mallards would not be proper for scaups, wood ducks, widgeons or geese, due to their differences in habits. Thirty species of ducks, geese and swan are regularly, seasonally or occasionally found in the state.

The Oregon State Game Commission has been purchasing areas suitable for waterfowl to provide nesting, resting and feeding areas and some portions have been set aside as public shooting grounds. Most notable of these are the Summer Lake and Sauvie Island Game Management areas. Other areas for development are now being purchased. To continue to have an abundance of waterfowl, it is necessary to maintain suitable places for them to nest, rest



and feed. Continuous reduction of such areas can only lead to fewer and fewer birds for us and the generations to come.

ABOUT THE AUTHOR

Chester E. Kebbe, who has been chief biologist in charge of furbearers for the Game Commission, now is taking over also the supervision of the waterfowl program, formerly handled by W. B. Morse. Always interested in birds, and particularly waterfowl, Kebbe takes to this additional assignment like a duck to water.

LITTLE FISH SURVIVE

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find they hook many fish too small before landing a "keeper." Of the 85 fish taken by Swan, 24 were steelhead, 18 cutthroat, and 40 were silver salmon. In time these immature fish go to sea and return pounds heavier as prime game fish. Studies show that the majority of these immature coastal fish are 8 inches or less in length.

Swan will continue his experiments next year, but the results already indicate that throwing back the small fish is a good means of providing a more bountiful harvest when future cutthroat, silver, and steelhead runs come up from the sea.

THE NORTHWEST REGION

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picture, similar activities are pursued by Chris Jensen, Eugene, in charge of the Upper Willamette district; John Dimick, Sherwood, in charge of Lower Willamette district; Frank Sumner, Bay City, in charge of Tillamook district; Art Gerlach, Newport, in charge of Lincoln district; and Fred Locke, Salem, in charge of warm water fisheries.

To carry on intensive creel checking and to get adequate coverage on specific problems, additional seasonal help is used. The complete production of the McKenzie, Willamette, Roaring River, Alsea and Cedar Creek hatcheries is utilized to maintain the fishery resource, as well as the partial production of three additional hatcheries outside the region.

Inasmuch as the central office of the Game Commission for the state is located in Portland, which is within this Northwest Region, residents of the region having game or fishery problems naturally tend to deal directly with that office. Our regional headquarters promises faster service on problems demanding investigation if you call or correspond directly with us in Albany. And whether you have problems or not, we will be glad to have you drop by.

Oregon State Game Commission Bulletin

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