

OREGON STATE
GAME COMMISSION

BULLETIN

AUGUST 1968

OREGON STATE GAME COMMISSION BULLETIN

Number 8, Volume 23
August 1968

Published Monthly by the
OREGON STATE GAME COMMISSION
1634 S. W. Alder Street — P. O. Box 3503
Portland, Oregon 97208

MEMBERS OF COMMISSION

Joseph W. Smith, Chairman.....Klamath Falls
J. Pat Metke.....Bend
John P. Amacher.....Winchester
George L. Hibbard.....Oregon City
James Whittaker.....Pilot Rock

P. W. SCHNEIDER, Director
RON E. SHAY, Editor
H. C. SMITH, Staff Artist

Second-class postage paid at Portland, Oregon
Please report promptly any change of address.
Send in address label from a recent issue with
notice of change. Include zip code number. Bulletin
is circulated free of charge.

The Cover

Ron Rohweder at the Clackamas County 4-H
Camp. For more pics and story see page 5.

Photo by Al Miller

HUNTER SAFETY TRAINING PROGRAM

Instructors Approved

Month of June 34
Total to Date 3,544

Students Trained

Month of June 549
Total to Date 124,406

Firearms Casualties Reported in 1968

Fatal 4
Nonfatal 14

COMMISSIONERS APPOINTED, REAPPOINTED

James Whittaker, 54, of Pilot Rock was sworn in on July 17 as a new member of the Oregon Game Commission. He was appointed by Governor McCall to fill the

unexpired term of Wayne Phillips of Baker who passed away last month.

Mr. Whittaker is a cattle and wheat rancher and member of the Oregon Cattlemen's Association and the Oregon Wheat League. For three years he was chairman of the Association's Wildlife and Conservation Committee and also served as co-chairman of the rancher-sportsman relation committee with Mr. Hawk Hyde.

A member of the Umatilla County Parks Commission, Whittaker is also active in a number of other civic affairs.

On the same day, J. Pat Metke of Bend was reappointed to the Commission to serve until 1973. This is the second term on the Commission for Mr. Metke.

MIRIAM SUHL RETIRES



Miriam Kauttu Suhl, editor of the Game Commission Bulletin since its beginning in April 1946, retired on July 17. Mrs. Suhl started with the Commission in May of 1932 and since 1934 was secretary to the State Game Director and to the Commission. During that period of time she served under three directors and 28 different commissioners.

In addition to her regular secretarial duties, Miriam had the responsibility of preparing all of the various legal orders covering the regulations adopted by the Commission.

Miriam is a native Oregonian and a graduate of the University of Oregon. She and husband Walter plan to spend more time traveling now that Miriam is free of the confinements of her position.

Siletz Summer Steelhead Trapped

A summer steelhead population build-up from approximately 500 fish to well over 4,000 in ten years has been the result of annual Game Commission trapping operations on the Siletz River. This year's trapping was completed about the middle of July.

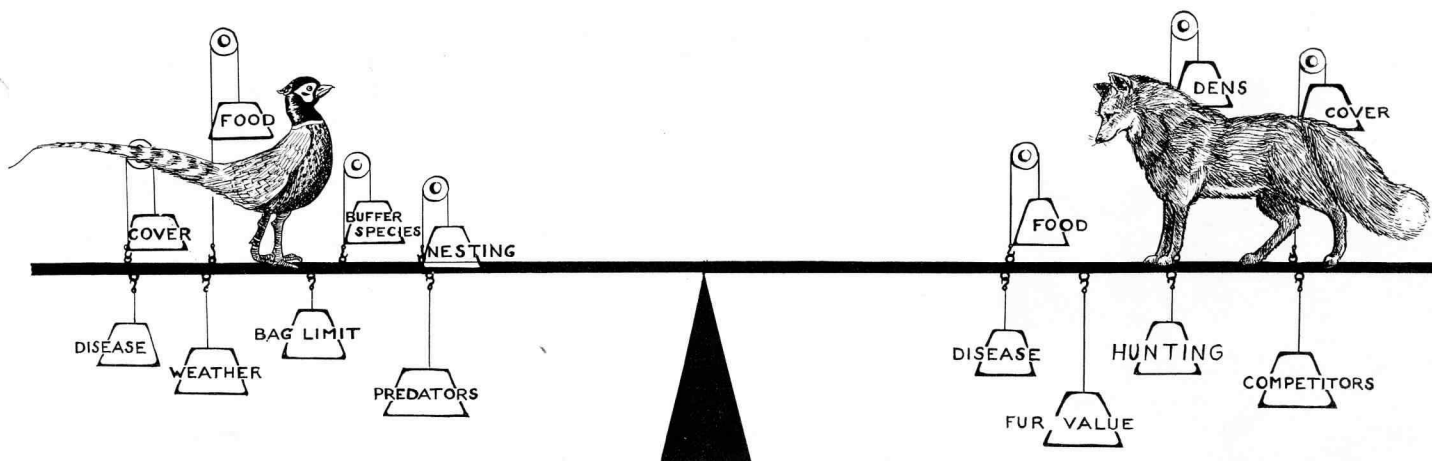
In 1957 the operations started on this stream, which is the only short coastal river in Oregon that has a native run of summer steelhead. These fish that come into the river starting in July don't spawn until the following March and April. For this reason the adults are trapped on their upstream run and then held at the Roaring River Hatchery until ready to be spawned.

Approximately 130 adult fish are taken each year. This number provides from 350 to 400 thousand eggs. After the eggs are hatched and the young reach smolt size, 60,000 are returned to the Siletz.

In addition to building the Siletz run, an effort is also being made to establish runs of these fine fish in the Nestucca, Wilson, and McKenzie Rivers. The hatchery operation has not only increased the total run in the Siletz considerably, but has greatly assisted the river in putting some 2,000 to 2,500 fish in anglers' creels each year. From 70 to 90 percent of the fish taken have marks indicating hatchery origin.



A summer steelhead being removed from the Siletz River trap. These slow maturing fish will be held at a hatchery until next spring when eggs will be taken.



A DIAGRAMMATIC OVERSIMPLIFICATION of one aspect of the balance of nature. The factors that tend to favor the animals are shown as weights suspended over pulleys and pulling up on the balance arm. Factors which work against the animals are shown as weights pulling down. All of the weights do not weigh the same and their importance changes with the circumstances. They are shown as being equal in the diagram to simplify the example.

The fox is a predator which feeds upon the pheasant when it has the opportunity. Our first assumption would be that many foxes mean few pheasants. It is

not that simple and direct, however, and in some instances may not be true.

Bad weather or lack of cover during the nesting season may cause pheasant declines while foxes increase in numbers because of irruptions of mouse populations, another important food for the fox.

Conversely, rabies could decimate the fox population while a like drop was being experienced in the pheasant population because of a poor nesting season.

The variations are endless. These are just two examples of how the balance might be made to sway back and forth.

(Artwork Courtesy of New York Conservationist)

Balancing Act

By Ron Shay

FROM time to time individuals rise up in righteous wrath at game managers, claiming the biologists are completely ignoring the "Balance of Nature" in their manipulation of wildlife numbers. The argument goes that nature will establish a neat, orderly arrangement of relationships and things will go along smoothly if man will just leave the situation alone.

This presumption is based on two fallacies. It is not only unrealistic in the light of our current civilization, but it ignores some basic facts of population dynamics. The "Balance of Nature" is not a static unchanging thing but could perhaps better be compared to a teeter-totter than a balance.

All living things on this earth are affected by the other plants and animals around them. It has been said that "All Flesh is Grass," indicating the dependence of the birds and mammals on various

plant species to survive. The life cycles and interrelationships of fish to their surroundings are very similar to those of birds and mammals. The cast of characters may be slightly different, but the plot of the play is the same.

But back to our aforementioned fallacies. Underlying any discussion of the balance of nature or the ecology of wildlife, currently, must be a basic consideration of man's activities. Direct harvest of various species is the most apparent form of interference; however, it is probably the least significant. Of much greater consequence is the changing of wildlife habitat. The destruction or production of necessary food, water, and shelter for various species makes the minor effects of hunting quite insignificant. Dr. James Westman of Rutgers University points this up in an article for the New York Conservationist. He stated, "In short, it

was not understood that the killing of a portion of a population—sometimes as much as 70 percent by man alone—could actually increase abundance by creating a natural vacuum. Nor was it understood that changes in environment not only changed the number of species, but also their abundance and the degrees of fluctuation. Nor was it understood that planned and executed changes in environment could bring about vast increases in the abundance of desired forms.

"The axe, the saw, the plough, the dredging machines and the chemicals—even the gun and fishing devices—have been found to be creative tools for greater abundance if used wisely. It remains for us to do so in a world of inevitable, perpetual change."

Even if man were not on the earth, nature would be in a continual state of change. Man has accelerated this change and from all indications will continue to do so. Wildlife management must recognize changes caused by our civilization and try to work with them and anticipate what is to come.

The second part of the fallacy concerns the visualization of the "Balance of Nature" as a stable, unchanging thing. Na-

(Continued on Page 6)



'68 BIG GAME OUTLOOK

ON June 7 the Game Commission adopted big game hunting regulations for 1968. These regulations were made following public meetings in Coquille, Bend, LaGrande, Burns, and Portland. Recommendations of staff biologists from throughout the state were also studied as were letters from private citizens.

To accommodate those who use their vacation for hunting and must schedule months ahead, the Commission set the opening dates of the general deer season and the elk season on April 5. The balance of the regulations were finalized at the June meeting. There will be some kind of big game hunting somewhere in the state from August 10, 1968 through April 15, 1969, if archery and firearms seasons are included.

Antelope hunters have five days, from August 17 through the 21st, to bag their trophy instead of the nine days allowed last year. The season was shortened to reduce the length of time the animals might be harassed from water holes. With the extremely dry conditions this year a longer season could have put undue stress on the herds. Population inventories show a slight decline from last year and the production of young has been low for several years, so the number of tags to be issued was reduced from 845 last year to 785 for 1968. About half the hunters are successful.

Deer hunters will have opportunities to fill their general season buck tag during portions of four months this fall. The first chance will be the High Cascade Buck Season from September 3 through September 15. A new idea is being tried

this year. Since its beginning, this season has opened on the Saturday following Labor Day weekend to avoid jamming deer hunters into camps already filled with hikers and fishermen. Many schools start on the Monday after Labor Day. This year, with the Tuesday season opening, students will have almost a week before school begins. This should encourage family pack trips to hunt deer and to fish high mountain lakes.

General buck season will open October 5. This is a week later than was scheduled last year but about the same date the season actually opened because of the severe fire conditions. The general season will run through October 27 in eastern Oregon and through November 3 in western Oregon. Unit permits which authorize the taking of antlerless deer will be valid in eastern Oregon management units from October 19 through October 27. The antlerless permits for western Oregon units will run from October 19 through November 3.

The average annual deer kill for Oregon over the last 16 years is 130,363. Last year 142,000 deer were taken. The 1968 harvest should be less than last year's but at or above the 16-year average. The fawn crop in southeast Oregon has been low for several years and declined further last year. Production in the central and northeast sections of the state has been higher but also declined in 1967. This decline is partially offset by excellent adult survival through the mild winter but still should cause some reduction in take.

The black-tailed deer ranges of western Oregon are expected to produce an increased kill. Production of fawns has been high and survival good. Best hunting will be found where logging or fire has removed the vegetation and regrowth is three to ten years old.

Rocky Mountain elk hunting runs from November 2 through November 20. In previous years this season was about a week longer. Last year it was shortened to increase the survival of bulls. This appears to have been successful so is being repeated in 1968. In 1967 calf crop was below that of the previous year, but again, winter survival was good. The total kill should be very similar to that of the 1967 season with the Wenaha Unit producing the highest number.

Those who hunt elk in the southeastern units will note a regulation change. In past years an elk of either sex could be taken on a general elk tag for the entire season. This year the either sex rule will be in effect only from November 2 through 15. From the 16th through the 20th only bulls with antlers longer than

the ears will be legal. This is an attempt to resolve a law enforcement problem and stabilize the elk harvest in that area.

Roosevelt elk hunting will probably produce better than it has for the past three years; elk numbers show an increase and the ratio of bulls to cows has increased. An 11-day season is scheduled from November 16 through 27. This is the same number of days as last year. The Clatsop Unit will continue as the highest producer in western Oregon.

Mountain goats will be hunted again in a portion of the Wallowa Mountains by eight hunters. In three years of goat hunting, 15 tags have been issued and 100 percent success has been enjoyed.

Bighorn sheep hunting will be expanded this year. In 1965 six hunters took five rams. In 1966 all three hunters were successful. No season was scheduled in 1967. These seasons were all in the Hart Mountain Refuge. This year three hunters will be after sheep in the refuge, and three others will hunt on Steens Mountain. It is very likely that all will get their sheep.

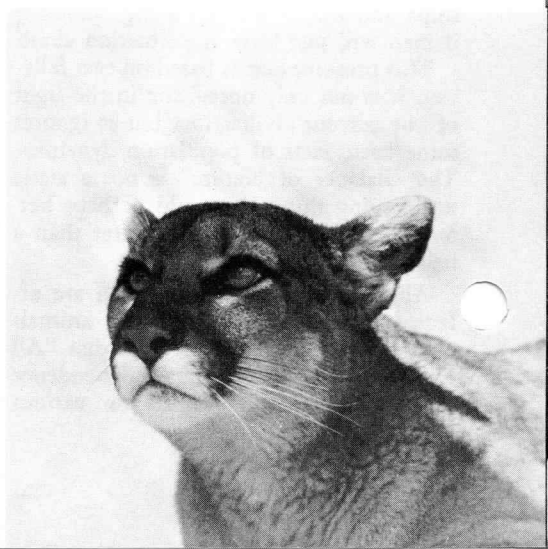
Bear hunters should check page 23 of the big game hunting synopsis to see in what portions of the state the bear is a game animal with an open season from August 10 through December 31. Bears are legal game the year around in the rest of the state.

There will be no open season on cougar.

In addition to firearms hunting seasons, archers have 11 seasons described in regulations. These start as early as August 24 and some terminate April 15, 1969. Scattered throughout the state, these seasons provide many man-days of recreation but a very limited harvest of the big game resource.

FRANCIS IVES,
Chief Big Game Biologist

Oregon's largest cat. There is no open season for taking cougar.



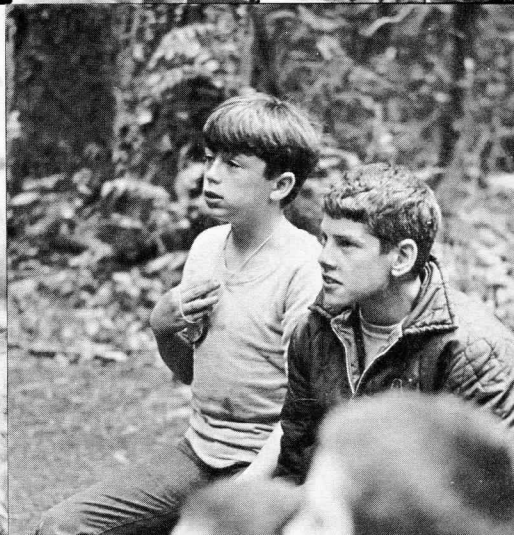
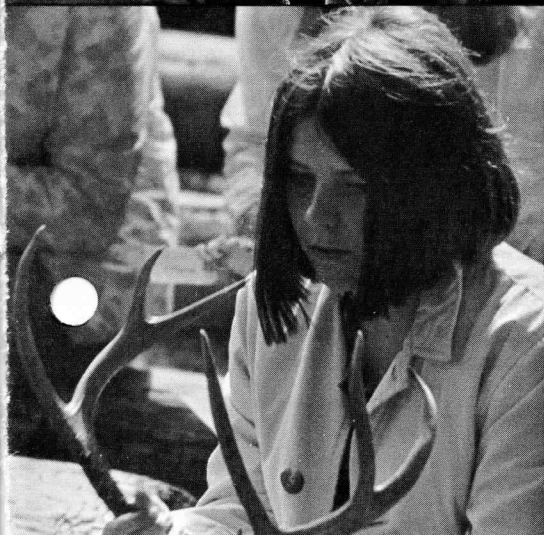
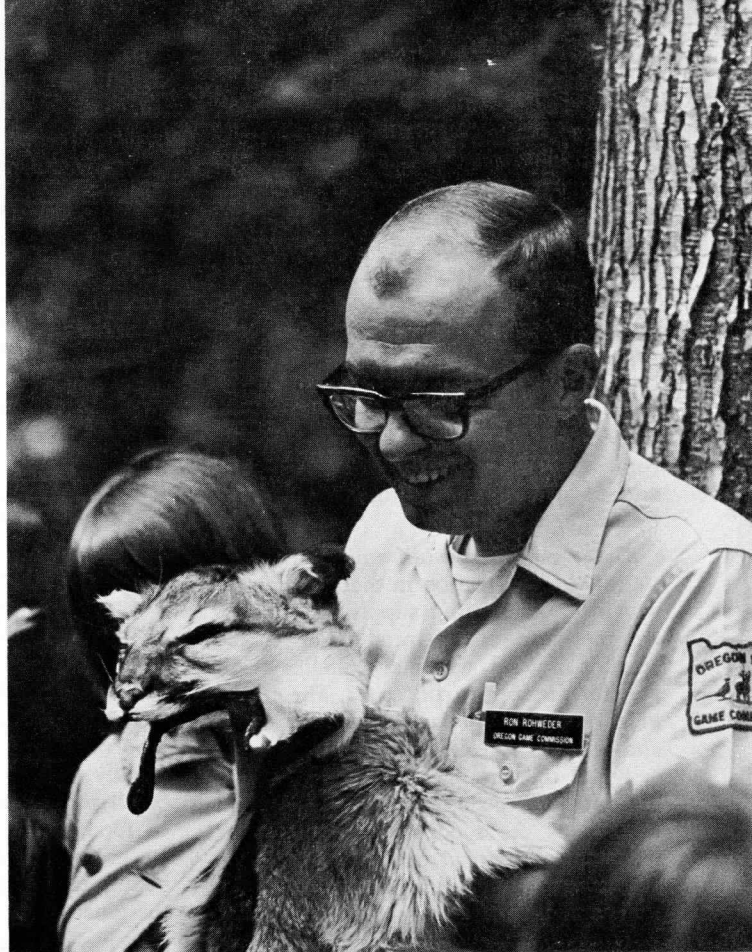
WONDERFUL WORLD OF OUTDOORS

Each summer, more than 15,000 Oregon youths come in contact with Game Commission wildlife naturalists. Initiated in 1950, the program has been in operation every summer except 1964 when budget limitations formed discontinuance.

The program provides conservation education to youngsters attending organized summer camps, including Boy Scouts, Girl Scouts, Camp Fire Girls, 4-H, YMCA, YWCA, church and others.

An attempt is made to acquaint youngsters between the ages of 9 and 15 with wildlife management principles and basic conservation concepts which can be discussed and demonstrated at the camp site. More than 220 individual visits from one to several days duration will be made this summer.

Ron Rohweder, education biologist (shown at the right at a camp) directs the program. He is assisted by six students majoring in fisheries and wildlife management at Oregon State University.



BALANCE . . .

(Continued from Page 3)

ture's balance is never stable. There are constantly forces pulling up or down on population numbers of various species. These forces may be acting over a long period of time as in the case of a gradual vegetative change because of a drouth cycle, or they may be short-term influences such as the yearly increase and decrease of animals. These annual changes come about when the population is increased by the spring births and decreased by winter mortality.

Game managers work with certain basic bits of information in their attempt to provide a continuing supply of wildlife. At the base of all production is the amount of food, water, and shelter available for the species concerned. The ability of a given area of land to support birds and animals is called the "carrying capacity" of the land. Land will stay healthy if it is just raising as many birds and animals as the food, water, and shelter will support without deteriorating. If the habitat starts going downhill, the carrying capacity has been exceeded. A greater harvest of animals is indicated and will be accomplished. If excess animals are not taken through means of hunting, nature will pare them down to fit the capacity of the habitat.

In walking his tenuous tightrope, the manager tries to help the land produce a

maximum crop without breaking over the top. Though the results of overpopulations in some species simply means excess animals or birds will die, consequences can be more dire with large herbivorous animals. Such species as deer, elk, moose, elephant, and other plant eaters can soon ruin their food supply for many years to come if they overeat the plants.

It is for this reason that the balance of nature is constantly swaying back and forth. Ignoring other things such as predators, accidental deaths, etc., animal populations would go up and down rather violently because of food supply alone.

As animals reach the point where they overbrowse their range and kill off most of the plants, their days are numbered and virtually all of the population may be lost during the next winter. This can have two different effects.

If the range comes back with the same type of plants, the animals will increase rapidly as the food supply flourishes. Small populations of animals with plenty of food, water, and shelter tend to have larger broods and greater survival of the young than those where conditions are marginal.

If the same types of plants do not come back, an evolutionary step can take place with a new animal species moving in to inhabit the area.

The large plant-eating animals we've been discussing do not completely destroy themselves because of a number of limit-

ing factors. In some cases a climatic change will slow the population increase. Secondly, almost all animals have what is called "territorial demands." They will stand only so much crowding. When a certain population density is reached, breeding slows down, the number of young born drops, and mortality occurs in adults.

If a range is overused, it often comes back with plants that are less desirable to the offending animals. This limits their increase. Finally, as animals get more numerous and weak and malformed ones are more common in the population, predation increases. This upswing in activity by the carnivores is caused not only by the availability of additional easily-caught individuals but also by greater numbers of predators brought about by the increase in their food supply.

In the past, much concern was expressed over the number of birds and animals being taken by predation and hunting. This was manifested in bounties, predator control, and severe hunting restrictions. Now it is quite generally agreed by biologists that hunting has little lasting effect on populations unless it is extremely heavy or unless population numbers are very low, such as the case of the California condor and the whooping crane.

The second set of factors the biologist has to work with are the birth rate, death rate, and life span of the species concerned. Every year a new crop of game is available. It cannot be stockpiled like one puts preserves on the pantry shelf.

Large animals such as deer have a relatively low reproductive rate, with a fairly long life span. Even so, in a hypothetical case, if there were no losses of adults or young, one pair of deer and their offspring would produce 140 deer in ten years. This is assuming an average of 1½ fawns for each pair per year.

This increase is even more spectacular in smaller mammals. One pair of mice having six offspring every 21 days would produce over 5,000 mice in six months and well over 7½ billion mice in 18 months! Fortunately, the smaller species have a higher loss rate. The failure to take small game doesn't jeopardize food supplies as rapidly as does failure to take the large animals such as deer and elk.

Wildlife management is one of the newest sciences. Much basic knowledge is still needed regarding the various species; however, attitudes and ideas are constantly changing. In the past, the reproductive potential of animals was greatly under-

Signs that a range is being used beyond its carrying capacity. Dead and dying browse plants on the ground and trees stripped as high as deer can reach indicate overuse. Domestic livestock compete for the same plants on many ranges.



(Continued on Page 7)

AUGUST 1968



Nature's harvest of surplus animals. If the annual increase produces more animals than the food supply can support, winter mortality occurs. Game management attempts to use hunting as a "tool" to take the surplus while providing food and recreation.

estimated, and at the same time, the effects of predation were grossly overestimated.

Most importantly, a greater realization of the environmental changes that are taking place is coming about.

It is no longer possible to consider our wildlife without at the same time considering man's activities. Man's ability to change the natural environment has accelerated almost unbelievably in the past 50 years. Chemicals, air and water pollutants, industrial developments, freeways, housing projects, airports, and outdoor recreationists are all important factors in altering our available wildlife habitat. Every one of the factors may be either beneficial or harmful to a species. Every factor may be beneficial to one species while being harmful to another, but more than likely they are interrelated with several, involved in the life cycle of the same birds, mammals, or fish.

This is the game manager's chessboard. Food, water, and shelter are his basic play makers. Added to these are the important factors of the reproductive rate, life span, and death rate of the animal or animals involved.

The strategy of the game is constantly shifting as climatic conditions change, food plants flourish or die, animals increase to overcrowded situations, and disease and predation take their toll.

Through the manipulation of all of these factors the manager tries to let the habitat carry as close to its "capacity" of animals as possible without allowing the future of the animals or their food supply to be endangered. Some of the factors can be controlled; others cannot. It's a precarious, narrow line he walks. In addition to biological considerations, there are myriad sociological considerations. The perfect job will never be accomplished, but more knowledge and better understanding by both biologist and interested citizen will help approach more closely that happy state.

Fall Chinook Started At Cape Meares Lake

This past spring the Commission tried experimental rearing of fall chinook salmon in a brackish water environment at Cape Meares Lake near Tillamook. The lake lies within a sand spit that separates Tillamook Bay and the Pacific. This experiment was an outgrowth of the excellent results obtained at the Commission's salt water research station at Lint Slough near Waldport.

At Cape Meares Lake, approximately 460,000 two-inch fingerling chinooks were released in early April. Prior to the stocking the lake was chemically treated to

ATLANTIC SALMON: A STATUS REPORT

When the first eyed Atlantic salmon eggs arrived from Gaspé Peninsula, Quebec in the fall of 1950, several Oregon lakes were considered suitable for fry or fingerling plants. Fishery biologists agreed that plants should be confined to lakes without surface outlets. Eighteen years later the Atlantic salmon program is well established but with some major revision of the original management concepts. Where it was anticipated that natural reproduction would eventually provide a fishery, we have found it necessary to rely entirely on hatchery production.

Although it has been demonstrated that Atlantic salmon mature in some Oregon lakes, the adults apparently find stream conditions unsuitable for spawning. Only one small fingerling observed to date could be attributed to natural reproduction.

At the present time the Game Commission plants Hosmer, Sparks, and Elk Lakes with fingerling or yearling Atlantic salmon. Davis Lake, which was high on the original priority list, turned out to be disappointing. Several early plants were made in Davis Lake, but anglers caught only a very small percentage of the fish liberated. Lucky Lake was also removed from the list receiving plants following the disappearance of the original releases.

A total of ten different bodies of water has been planted with Atlantic salmon to date, including Lint Slough, a brackish water impoundment on the central Oregon coast.

The fishery at Hosmer Lake is maintained by plants of yearlings every other year. Growth rate is excellent in Hosmer.

(Continued on Page 8)

eliminate all predation and competition from other species.

By early June the young fish had grown to four to five inches in length and were crowding at the outlet trying to go to the ocean.

At the outlet the fish were trapped, then marked and weighed before they were released into the sea. Originally the youngsters weighed about 280 to a pound. After about two months in the rich, brackish water they had grown to 40 to the pound. At this size the chinooks had gone through the process of smoltification, indicating they were ready to head out into the wide world.

ATLANTIC SALMON planted as 9-inch fish one year are 14 inches the second year. In their third year they range from 16 to 20 inches and in the fourth year are from 20 to over 22 inches in length.

The largest Atlantic salmon known to have been taken at Hosmer was just over 8 pounds; however, salmon up to about 15 pounds have been reared at Wizard Falls Hatchery on the Metolius River. The majority of fish caught at Hosmer are three years old and range from 16 to 20 inches.

More recent plants of Atlantic salmon have been made in Elk and Sparks Lakes; however, it will be several years before we can determine growth rates and check for natural reproduction in these areas.

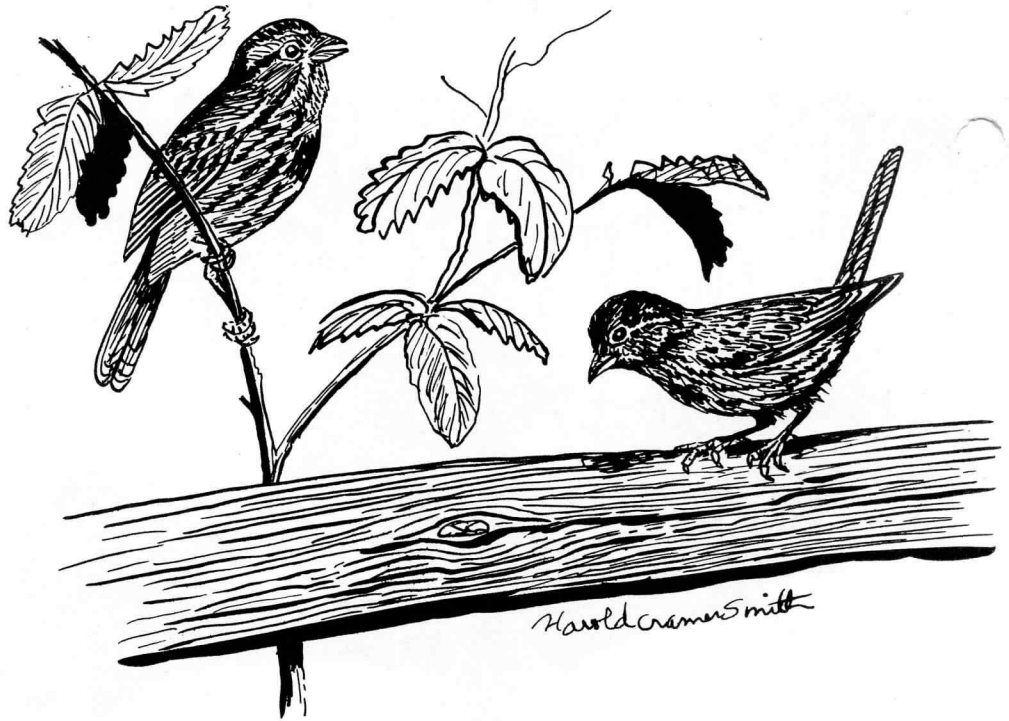
The Atlantic salmon is a trophy fish in Oregon. To our knowledge it has not been cultivated in North America other than in Oregon and a few northeastern states and Canadian provinces. The catch and release fishery at Hosmer Lake has evoked many favorable comments from pleased anglers. Today there are about as many out-of-state anglers fishing Hosmer as resident anglers.

With the exception of disposing of an occasional overaged brood fish or surplus fry or fingerling, future plants will be largely confined to Hosmer, Sparks, and Elk Lakes. The possibility of planting Atlantic salmon in an Oregon coast stream has been considered, but in order to perpetuate a run it would be necessary to make a substantial investment in constructing a fish rack for taking eggs from returning adults. Although some Atlantic salmon in East Coast and European streams get much larger than steelhead, it is doubtful if this species would be much superior to our own native summer or winter race of sea-going rainbow trout.

If it were not for hatcheryman Gene Morton of Wizard Falls, it is unlikely that we could discuss an Atlantic salmon program in Oregon at this time. It was through Gene's dedication and perseverance that it has been possible to rear four generations of the East Coast salmon. Although tremendous improvements have been made in hatchery techniques, this species still remains one of the most difficult to raise in the hatchery. It is also one reason why the Atlantic will probably always remain a trophy fish in Oregon.

Oregon State Game Commission Bulletin

1634 S.W. ALDER STREET
P.O. BOX 3503
PORTLAND, OREGON 97208



The Song Sparrow

THROUGHOUT much of Oregon the song sparrow is the most common and best known songster of this very large family. During the spring and summer months it occupies practically every willow thicket and brushy area in the state and is a familiar bird of city gardens, where it finds ideal nesting habitat in the hedgerows and dense shrubbery. Only during very severe winters is it forced to migrate to a warmer climate.

When casually observed, this brown bird appears to be an unmarked, medium-sized sparrow, but a closer look will show a brown back containing many black streaks and light underparts strongly and sharply striped with brown. The heavy streaks converge to form a conspicuous dark spot in the center of the breast. The intensity of color varies greatly by locality. Birds of the coastal regions are a deep brown while those of the desert regions are of much lighter coloration.

The song sparrow takes his singing seriously and presents a continuous series of recitals from the top of a bush or fence post. There are many variations to the song, and sometimes several are presented in succession by the same individual. As many as 300 renditions per

hour may be given during the height of the breeding season. Through songs the male attracts his mate and announces the breeding territory he will defend against invasion by others of his race. This persistent songster continues singing into late fall, long after other species have become silent, and frequently tunes up on bright mornings throughout the winter months.

The nest is a thick-walled cup of woven grass placed in dense bushes or tussocks a foot or two above the ground. Four heavily-spotted, greenish-white eggs are usually laid and two broods raised during the long breeding season. Quite frequently the birds become unsuspecting foster parents of a young cowbird, as the nest of the song sparrow is a favorite site for this parasitic species.

More than half of the food of the song sparrow is composed of noxious weed seeds picked up from the ground, principally during the fall and winter months when insects are hard to find. During the summer months when animal life becomes plentiful the search turns to beetles, cutworms, grasshoppers, and weevils—insects which are highly destructive to gardens and farm crops.

- - C. E. Kebbe

