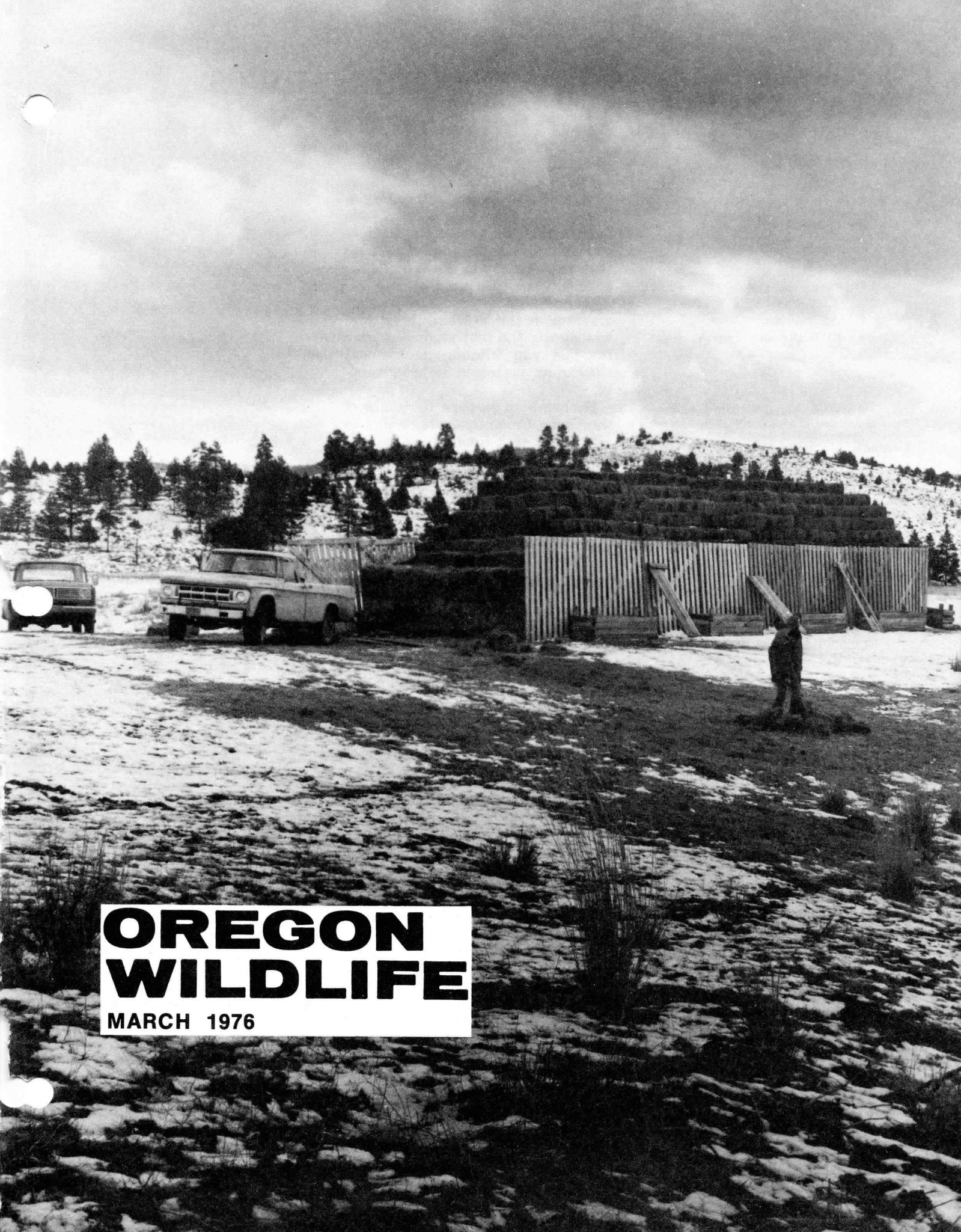

OREGON WILDLIFE

MARCH 1976

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RON E. SHAY, Editor

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The Cover

Auburn elk feeding site. Up to 270 elk have used the area at one time. See feature article.

Photo by Paul Ebert

HUNTER EDUCATION PROGRAM

INSTRUCTORS APPROVED

Month of January	16
Total Active	1,663

STUDENTS TRAINED

Month of January	131
Total to Date	229,650

HUNTING CASUALTIES REPORTED IN 1976

Fatal	0
Nonfatal	0

Director Announces Retirement

John W. McKean, director of the Oregon State Game Commission, Oregon Wildlife Commission, and most recently the Oregon Department of Fish and Wildlife, has announced that he will retire at the end of June after 40 years of service.

McKean is a native of Oregon, who grew up in the Roseburg area, and was among the first graduates from the fish and wildlife management curriculum at Oregon State University.

He came up through the ranks of the Game Commission beginning in 1936 as a part-time helper on the game farm at Corvallis. He was soon placed in charge of western Oregon game bird management and later was put in charge of game bird studies for the entire state. In 1949 he became chief of the Game Division, a position he held for some 20 years. In 1969 he was appointed head of the Department upon the retirement of Phil Schneider, and in the summer of 1975, after merger of the Wildlife Commission with the Fish Commission of Oregon, was appointed director of the combined organization.

McKean has been known and respected for his candid approach to solving wildlife management problems and his ability to work with diverse groups of people. He was the father of a plan, adopted by the Commission, to decentralize wildlife

(Additional personnel changes on page 5)

Commission To Meet

On March 19, 1976 the Fish and Wildlife Commission will hold a public hearing at 10:00 a.m. in the Western Forestry Center Auditorium located in the Zoo-OMSI area just off S.W. Canyon Road, Portland, Oregon, to consider:

1. *A closure of the Columbia River, Snake River and Deschutes River to spring and summer chinook angling.*
2. *A closure of the Columbia River to summer steelhead angling.*
3. *Restrictions involving area and season opening dates connected with the Pacific Ocean commercial and sport salmon fishing.*
4. *Redefining the method of measuring commercial troll-caught salmon.*
5. *Increasing the minimum length of sport caught chinook salmon in the Pacific Ocean.*
6. *Amending OAR 625-10-625 to require striped bass taken incidentally in the coastal rivers shad fishery be returned to the water.*

Interested persons may present their views or arguments orally or in writing at the hearing. Written communications prior to the hearing should be addressed to the Department of Fish and Wildlife, P.O. Box 3503, Portland, Oregon 97208. Copies of the proposed rules may be obtained by writing to this same address after March 5, 1976. □

Elkhorn Wildlife Area

by Dick Humphreys
District Wildlife Biologist,
Baker

The beautiful Elkhorn Mountains on the west side of Baker Valley contain nearly 180 square miles of summer range for the elk herds in the area. These lands receive little grazing by domestic livestock, leaving ample forage for elk. The Elkhorn Mountains, however, are quite precipitous, with their steep slopes continuing down to the valley floor, with no intermediate foothills for elk to winter on. Consequently, when winter snows drove the elk from the mountains, the only wintering areas available to the elk were ranchers' fields. The most abundant food available was haystacks which the ranchers depended on to provide food for their herds of domestic cattle.

Obviously there was a conflict between the ranchers and the elk. An intermediate solution was for the Wildlife Commission to loan 8-foot-square wooden panels for ranchers to place around their haystacks. The panels have been helpful in saving the haystacks from destruction by elk. Haystack panels did not solve all the problems, however. Besides being a nuisance for the ranchers and an expense to the Wildlife Commission, the panels also left many hungry elk which would range farther, looking for more haystacks. This in turn required more panels, more expense, and the elk were still hungry.

Post-season elk hunts were first employed in 1945 to help reduce elk numbers, thus alleviating damage done by the marauding elk. In order to eliminate all damage problems, however, the elk herds would have to have been practically eliminated. This would leave 180 square miles of elk summer range virtually unused, depriving many persons of the opportunity to hunt elk.

In 1971 the Oregon Wildlife Commission proposed purchasing land near Shaw Mountain to provide a wintering area for elk. This first attempt was unsuccessful but approximately 4,000 acres in the Anthony Creek area west of North Powder became available and were purchased later in the same year. These lands extended from the Anthony Lakes road on the south nearly to Wolf Creek on the north, approximately 5 miles along the foot of the Elkhorn Mountains.

Shortly thereafter, 1,650 acres became available on the southern end of the Elkhorn Mountains near the old gold mining townsite of Auburn. This land was also purchased to provide a wintering area for wildlife.

Since these original purchases were made, additional land has been acquired near the North Powder site. Both areas have federal lands managed by the United States Forest Service and the Bureau of Land Management within or adjacent to them. These two agencies were approached concerning these areas. They have set aside, by agreement, an additional 1,710 acres of land with wildlife production as its prime use. The lands managed for wintering wildlife in the two locations now total nearly 8,000 acres. These two tracts of land are called the Elkhorn Wildlife Management Area.

(Continued on Page 4)

The North Powder area of the Elkhorn Wildlife Area. The Anthony Lakes area is in the left background.

The first winter after the purchase, elk damage complaints in the Auburn area prompted attempts at feeding. Thirty-five elk were crossing Oregon Wildlife Commission land to get to haystacks on adjacent property. Second cutting alfalfa hay was strung out for a quarter of a mile across the path the elk had been using. The elk found the hay the first night and continued to accept feed for the rest of the winter. The herd grew from the original 35 to 134. Hay was provided to them until March 15. Pellets which were formulated for deer use were also provided on a limited basis.

Approximately 60 deer accepted pellets on that first winter of feeding.

Snow depth reached 20 inches at the Auburn site near the feeding area. Snow at the North Powder site averaged 4 feet.

Thirty elk sampled the hay on the North Powder site, then continued on to areas with less snow. Six elk, three of which were crippled or injured, accepted feed throughout the winter. The crippled elk had been captured at other areas and hauled to the North Powder site where they would be assured adequate feed throughout the winter.

Elk herds wintering on the Elkhorn Wildlife Management Area have continued to grow. There were at least 248 elk using the Auburn site this last winter. Approximately 100 elk accepted hay at the North Powder site at three feeding stations, paying little attention to the 4 feet of snow on the area.

The two tracts managed by the Oregon Wildlife Commission helped alleviate elk damage in adjacent areas but depredation continued in the areas between the two areas and near Shaw Mountain. Special antlerless elk seasons have been continued in these areas to reduce elk numbers and to force them onto the feeding areas purchased for that purpose.

In addition to the special elk seasons, a trapping and transplanting program has been carried out in Baker Valley. One hundred fifty elk have been trapped in areas of chronic elk damage and transplanted to other areas. Ninety-five elk have been relocated onto the Auburn site since the spring of 1974. Eleven elk were transplanted onto the North Powder site. The remainder were released in Hells Canyon in the vicinity of other elk, and many miles away from the nearest haystack.

Approximately 70 acres of land on the Auburn site have been cultivated and reseeded to several varieties of browse, grass, and legume species to provide additional feed for wildlife.

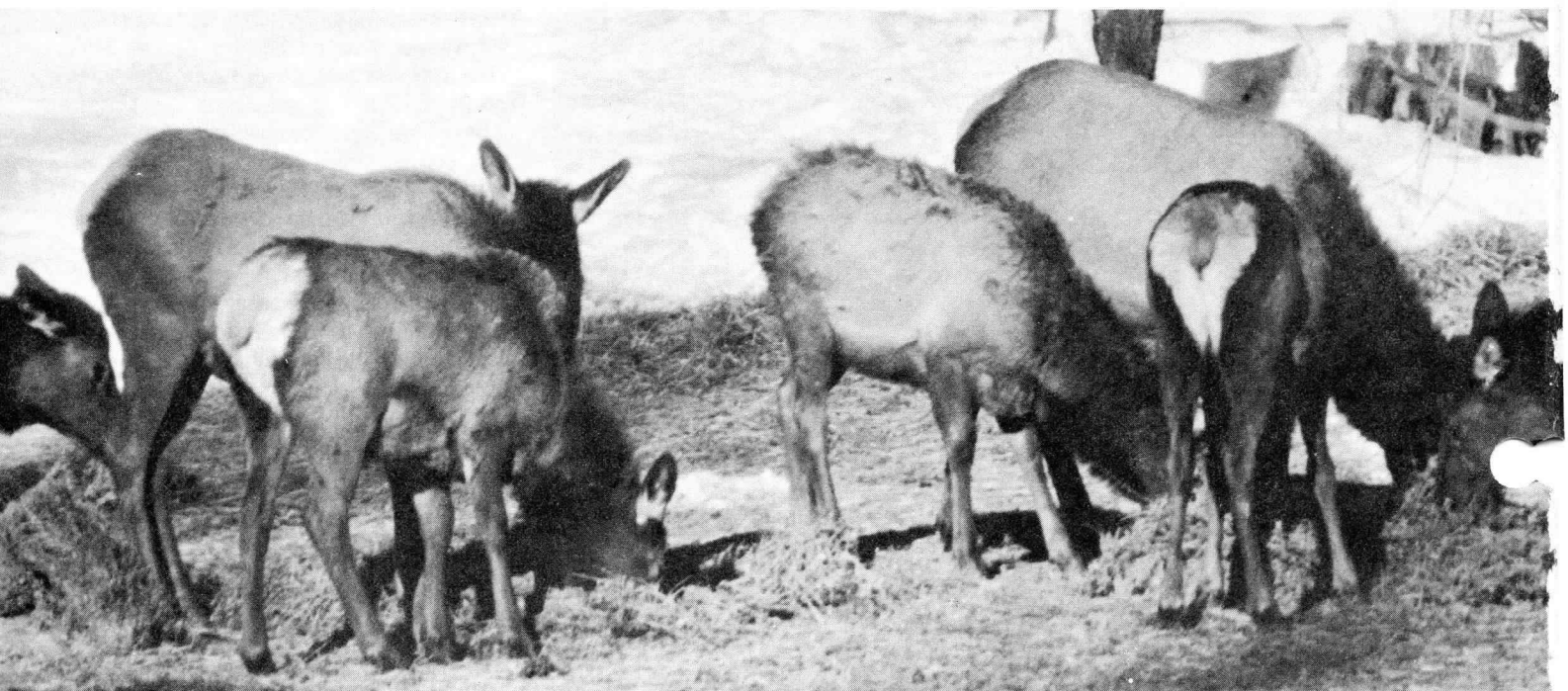
Many miles of unnecessary fence have been removed from the areas. Necessary fences have been repaired or replaced. An excess of 1,200 animal unit months of grazing by domestic livestock has been leased annually to nearby ranchers on the North Powder site. Irrigated pastures which the elk have made little use of are harvested by grazing cattle.

Nearly 300 bird nesting boxes have been placed on the management area to provide nesting space for small cavity-nesting birds such as western and mountain bluebirds, swallows, wrens, and chickadees. These nest boxes have received 85 percent usage since they were placed on the area. These in turn provide a valuable service to the area by harvesting numerous insects each summer.

The Elkhorn Wildlife Management Area has provided many hours of recreation. Hunters test their skills against the elk on the area; elk winter on it; and fishermen, picknickers, campers, photographers, and wildlife watchers all visit the area. An estimated 2,000 man-days of recreation were realized per month by people driving out to watch the elk come in to feed at the Auburn site. As many as 60 cars per day were observed on weekends. Many people who had never seen elk are given the opportunity at the management area.

A timber management plan will be made in cooperation with the Oregon State Department of Forestry. Timber management will be conducted in a manner that will provide the best habitat for wildlife while realizing a cash return for the harvestable timber on the area.

The Elkhorn Wildlife Management Area is providing wintering space and food for big game. Additionally, it provides food and living space for many forms of wildlife, recreational use both on and off the area for many people, and a method of alleviating elk damage to the ranchers of Baker Valley plus timber production and grazing for domestic livestock. Are you getting your money's worth? We think so. □



Director Retires

(Continued from Page 2)

managment in Oregon through a system of field districts and regions, and that plan has served as a model adopted by other states over the years.

He has been active in the Western Association of State Game and Fish Commissioners, serving as president in 1971-72; the International Association of Game, Fish and Conservation Commissioners; and The Wildlife Society. He serves on the Marine Fisheries Advisory Committee of the Department of Commerce.

McKean helped organize the Oregon Chapter of The Wildlife Society and served as its president as well as president of the Northwest Chapter. He is an active member of the Izaak Walton League and Oregon Wildlife Federation. He received the American Motors Conservation Award in 1962; the Golden Beaver Award of the Oregon Division, Izaak Walton League in 1973; and the William Joy Smith Conservation Award of the Oregon Wildlife Federation in 1976. □

Mace Named Deputy Director

Bob Mace was named by State Fish and Wildlife Director John McKean to succeed Dr. Thomas E. Kruse as deputy director of the Department of Fish and Wildlife.

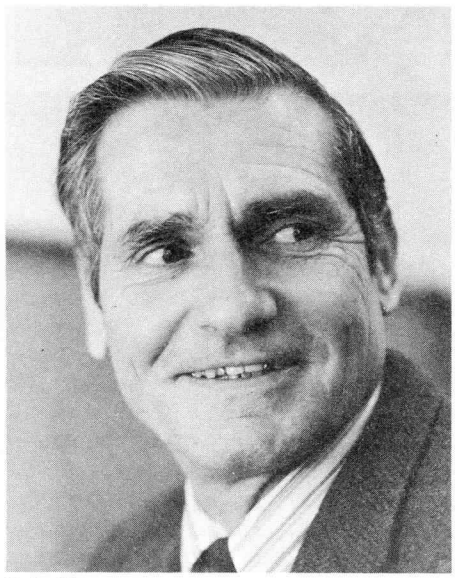
Kruse left March 1 to accept a position with the National Marine Fisheries Service in Seattle. He served as director of the Oregon Fish Commission prior to its merger with the Oregon Wildlife Commission and since that time has been deputy director of the new organization.

Mace, a 30-year veteran with the Department, was born and raised in the Medford area, graduated from Oregon State College in fish and game management and then went directly into the service where he served as a lieutenant commander in the Navy in the Pacific area.

He began his career with what was then called the Oregon State Game Commission in 1946, serving as an assistant biologist in Lake County. In 1947 he moved into the Portland office, serving 12 years as chief of big game, then moved to chief of upland game with photography duties in his spare time, then to head of the statewide habitat improvement program.

During his time in these positions he was involved in much of the planning and negotiations for the introduction of the mountain goat, California bighorn sheep, and wild turkey. He also compiled and edited many of the Department's wildlife publications.

He was appointed to his present position as chief of the Wildlife Division in April 1969. □



Bob Mace

Gene Kruse

Montgomery Named Regional Supervisor

Monty L. Montgomery has been named by State Fish and Wildlife Director John McKean as the new supervisor for the Department of Fish and Wildlife's Northwest Region.

From the regional office north of Corvallis he will be responsible for the coordination of fish and wildlife programs in a 12-county area west of the Cascades summit and north of the Lane-Douglas County line.

He will succeed L. "Hank" Schneider who retired from that position the end of December.

Montgomery, a 26-year veteran with the Department, grew up in the southern Oregon community of Talent and is a graduate of the fish and wildlife management program at Oregon State University.

He began working for the Oregon State Game Commission, as it was known then, in 1950 as a biologist on a river basins investigation crew. Later he became a district fisheries biologist with management responsibilities for all the popular fishing country around Bend.

In 1963 he moved to Portland, serving in several Fisheries Division staff positions. He is known as an expert in the field of chemical rehabilitation of lakes and streams to increase their production of game fish species.

He returned to Bend in 1969, and has worked since that time as assistant supervisor for the Central Region of the Department. □

A Native Oregonian You Should Get To Know

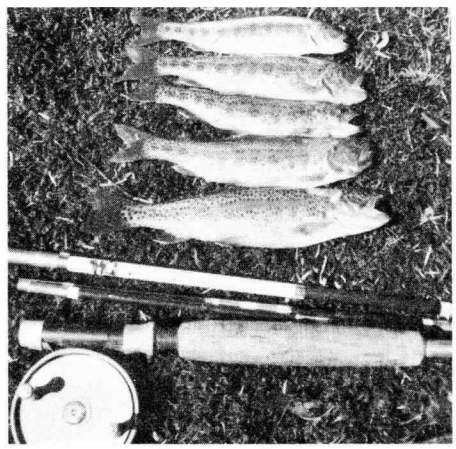
by Joe Wetherbee,
District Fishery Biologist,
Salem

In the Willamette River drainage, there is a unique species of fish. You've all heard of it, but do you really know it? By name—maybe. It's called everything from a speckled brook trout to a blueback. Its ability to adapt to nearly every type of water in the drainage, and its variety in physical appearance among races, make it hard to believe this is one species. Some rather peculiar spawning migration patterns make its life history very interesting. To me, the native cutthroat in the Willamette drainage is a unique creature.

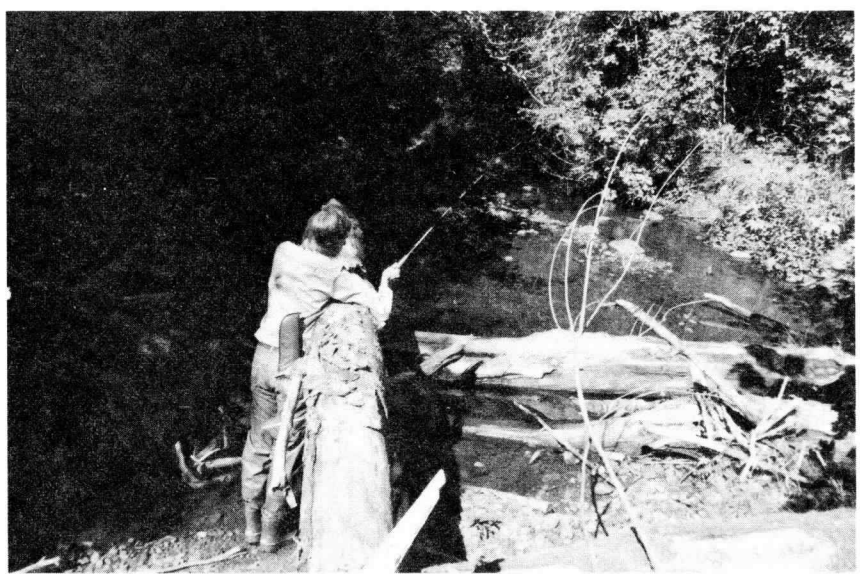
First, let's look at the Willamette River system. Draining the western slopes of the Cascades and the eastern slopes of the Coast Range, it encompasses a drainage of 11,200 square miles. Streams of all imaginable types total about 10,000 miles. Streams may vary from ice-cold waters tumbling over boulders to slow, meandering cut-bank streams where temperatures exceed 70 degrees. On the valley floor, all waters eventually join the main stem Willamette River. This is the habitat of the native cutthroat. No matter what part of the valley you're in, you're near cutthroat water.

The cutthroat has adapted well to the wide variety of waters, but does seem to avoid certain parts of the habitat. These are primarily the middle sections of larger tributaries and larger reservoirs. In many cases, high water temperatures and competition from other fish may reduce their presence.

Man's early exploitation of rich farmlands and forest products has undoubtedly made serious impact on the cutthroat populations. A long list of man's activities affecting streams can be documented. The once meandering cut-bank stream that is now a rock-lined channel is lost to cutthroat production. Nature, in her own time, has healed the scars of many streams, and the cutthroat has "hung in there." Present environmental controls will certainly benefit the cutthroat population in future years.



On the left, no trophies but tasty and fun to catch on light tackle, 6 to 8 inch cutthroat. Below, a small valley floor stream which is typical habitat. In a 300-foot sample, 17 fish over 6 inches were present. The lower picture shows a typical headwater holding area.



The distribution, physical appearance, and migration patterns of the Willamette cutthroat make it hard to believe this is *one* species in *one* river system. The spawning migration discloses some interesting patterns. Although little is really known, some tagging studies have shown some definite patterns. For instance, brood cutthroat that reside in the main stem above Corvallis drop downstream and migrate up the Mary's River system in the fall and winter months to spawn in smaller tributaries. Other studies show that larger cutthroat residing in the lower Santiam have dropped into the Willamette and migrated up the Luckiamute River to spawn in smaller tributaries.

These brood cutthroat that reside in the lower Santiam and Willamette may range from 12 to 20 inches. As a summer resident they are quite robust and shiny, and bear little resemblance to their offspring in tributary streams. Apparently, over the years they have sought the best areas for summer rearing and suitable smaller tributaries for spawning which were not necessarily in the same stream.

In physical contrast to fish of the larger streams is the highly colored and spotted resident of the headwater tributaries. In many cases, these fish have had to adapt their migration habits to minimal movement. Frequent populations above high falls will prove this point. In many streams that are steep, and perhaps have a succession of falls, these fish have to be true residents in order to maintain their population. Their life-time movement may be restricted to a few pools or a few hundred feet. In some of the streams with restrictive growing conditions and cooler waters, many mature spawning fish may not reach legal size (6 inches).

In addition to stream fish that are restricted in movement, cutthroat in many lakes and beaver dam impoundments are more or less confined. Usually a spawning migration will occur into tributaries or perhaps the lake outlet. Physical characteristics of cutthroat in lakes will vary depending on the type of water and growth.

Cutthroat of Coast Range and lower elevation streams generally spawn during the winter and early spring months. In the higher Cascade streams, it's common to find them spawning in June. Not a prolific spawner, an 8-inch female may contain only 150 eggs. Lack of angling harvest and their tenacity in headwater streams above other fish populations usually results in fairly abundant populations.

With the widespread distribution in a vast system like the Willamette, one might ask, just how many of these native trout are there? Or what is the real fishing potential? Population samples from numerous tributary streams on both sides of the Valley have revealed a wide variety in numbers of fish over 6 inches. Some overpopulated streams have very few fish reaching legal size, while others may have as high as 300 legal fish per mile. A good average for a typical stream would be about 200 legal fish per mile. Expanding the average number of legal fish per mile can really open your eyes when it is applied to a stream system. For instance, the Mary's River drainage, which is managed primarily for native trout, could have as many as 40,000 legal-size fish. Theoretically, the Willamette drainage could have a population of one million legal-size cutthroat.

The first thing that comes to mind with this kind of population is why aren't more people angling for these "natives"? Another question might be why are we stocking all those hatchery rainbows?

One has to realize that just because this potential number of cutthroat is there, it's not a simple matter of going out and catching them. Many things contribute to the lack of interest and harvest. Access may be very difficult. Many good cutthroat streams near the valley floor go through restricted private land. The type of terrain and dense cover on many streams is enough to discourage many anglers. The size of fish may not appeal to some, although this will vary with the size of stream and abundance, not to mention skill in catching them. Many streams would have to be considered too small to feasibly fish. This is true to an extent. There are untold numbers of small tributaries you could jump across that have ample numbers of legal-size fish in them. This does not preclude angling on streams this small, but it would certainly require much patience and stalking ability.

Stocked hatchery trout are released to fill certain voids where access is good and heavy angling pressure dictates their need. These stream sections are usually the middle section of streams where native trout are low in numbers. Usually, this type of stocking is a short term benefit and can be competitive, as the native cutthroat is available the entire season.

Although many streams are restricted in fishability, there are still hundreds that are fishable and with good cutthroat populations. In the national forest land alone, there is ample opportunity with good access on streams of all sizes. Of course, you may have to change your style. A cautious "sneak" is necessary to prevent spooking fish in smaller streams. Minimal movement in casting will also help. Unusually clear water will require you to go to the smallest leader tippet you can handle. And don't forget to try flies. Cutthroat are usually quite susceptible to them. You don't have to own a fly rod or be a skilled caster. Just a few feet of fine leader attached to anything will do the job. Quite often you won't have room to make a cast anyway. (I once caught a cutthroat on a fly attached to a hand-held foot-long piece of leader.)

Don't settle for trying your luck only at road crossings or easily accessible areas. These may be the only parts of the stream other anglers have tried. Put on your sneakers and carefully explore the stream for at least ¼ mile. Sure, you may have to climb over a log, through some brush, and even climb a bedrock falls, but the overall benefits can often be quite rewarding. One thing you may have to get used to is the overwhelming solitude and the absence of other anglers.

I hope this short introduction will offer you some incentive to meet Mr. Cutthroat. Don't be dependent on your favorite stream being stocked or stick your rod in the closet during the "dog days" of summer. The native cutthroat in the Willamette River drainage challenges you. □

A Silent Friend

by Ron Rohweder
Wildlife Biologist,
Northeast Region

Owls have fascinated man for countless time. Earliest records date back to Cro-Magnon man in France who made cave drawings of these birds. Owls in Oregon were recorded by our Indians in the forms of utensils, paintings, and stone carvings. Any bird that flies by night, when the unknown and mysteries of life have always been most turbulent in men's minds, must have had a profound place in his imagination.

Oregon has over a dozen different species of owls, many of which the casual observer seldom sees. Most of our owls spend daylight hours in seclusion resting in preparation for the rigors of the nightly hunt. However, there is one species of owl that is apt to be seen during the daylight hours. This is the short-eared owl.

The short-eared owl is quite cosmopolitan in its distribution and may be found nearly everywhere in the cold and temperate regions of the world except Australia and New Zealand. It prefers the more open areas of fields, marshes, dunes and meadows near farm land. It is not uncommon to see it in our mountain meadows during the summer months. Shortears have a rather large seasonal distribution pattern depending upon climate and food supply. They may nest in the tundra lands of Alaska and Canada and winter in the southern United States. In Oregon, they are a common nesting bird, and in years of high mouse populations become an abundant nesting species.

Short-eared owls are most apt to be seen during the twilight hours of morning and evening, but during the nesting season they are commonly observed throughout the day foraging for food for their offspring. For much of the remaining year they are the nocturnal equivalent of the marsh hawk in both hunting methods and prey.

A pattern of hunting has formed which largely eliminates direct competition with other birds by hunting either different habitats or the same habitat in a different manner.

Owls tend to concentrate on two methods of hunting. Many like to wait, watch, listen and, after a short glide, pounce, while others prefer to glide on silent wings a few feet above the ground. In both situations, hearing is used to supplement their vision. Owls in general respond most readily to high frequency sounds, such as the squeaking of mice and other high-pitched sounds made by rodents as they move about. It is not surprising then to find owls dependent more on hearing, at times, than on their ability to see under extreme low light intensities of nighttime hunting. The

I may not say much, but I'm a good listener.

Short-eared owls are 13-17 inches long with a wingspread up to 40 inches. Females are larger than the males.

location of their eyes also plays a very strategic part in their hunting. Owls in general have eyes located in a forward-facing direction, much like man, and unlike a chicken which has eyes on the sides of its head. The frontal location of the eyes gives the bird a rather narrow (110°) field of vision. However, 70 degrees of this vision is covered by both eyes which enables them to judge distance, a very important factor in catching prey. The rather narrow field of vision is compensated by their ability to turn their head a full 180°.

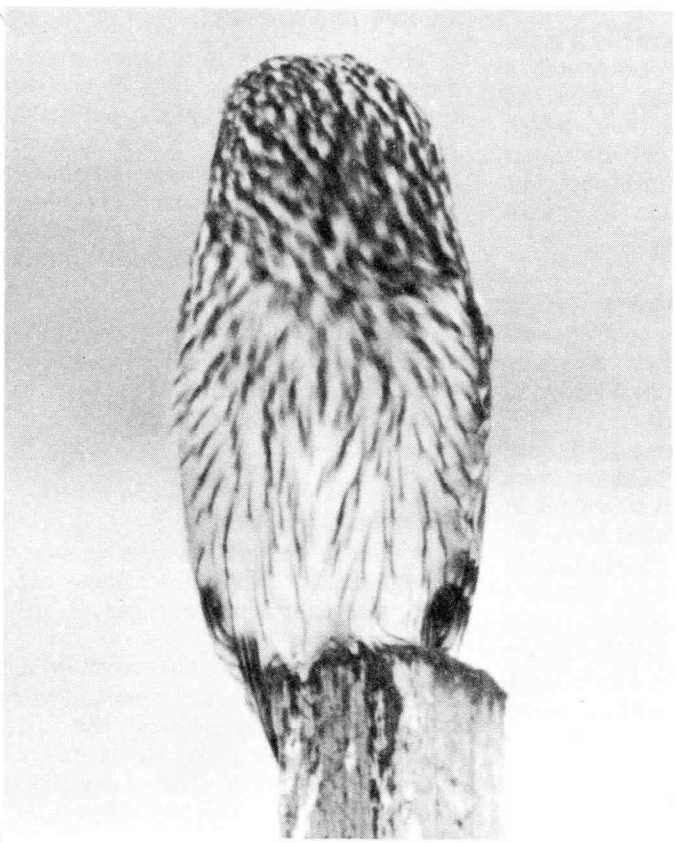
Another feature which helps the owl catch its prey is the long primary wing feathers which are soft and finely fringed. These soft feathers are designed for slow flight and have a dampening or deadening effect which enables them to approach their prey quietly as they wing their way through the air.

Most owls have rather boisterous hooting and barking calls, but not the short-eared owl. Except for the breeding season, the short-eared owl is one of the most silent of birds. Prior to and during the breeding season one can hear the high-pitched "toot-toot-toot" followed by a barking sound. If the young are approached at the nest they will give forth with a clicking noise made by their beaks.

During courtship one can observe the spectacular displays of the short-eared owl over meadows, fields and marshlands. They gain elevation and then go into slanting dives and upward swoops, usually followed by a clapping sound of their long, primary wing feathers meeting under their body.

Nesting usually takes place on the ground in a scooped out depression which is lined with dry grasses, weeds, and some feathers. Most of the material is gathered in close proximity to the nest and it usually blends with the surrounding grasses and weeds. Four to seven creamy, white-colored eggs are normally laid, but during periods of high rodent populations as many as 14 eggs have been recorded. The eggs are laid on alternate days and, as with other owls, incubation starts when the first egg is laid. Incubation takes about 28 days and the young will leave the nest in 12 to 14 days after hatching, but will not be able to fly until about 25 days of age.

Short-eared owls have been known to congregate in areas of high rodent infestation and have provided a great service in destroying these species. Orchardists who have lost fruit trees from girdling by meadow mice should delight in having these owls in the vicinity. Meadow mice, gophers, and other small rodents are at the top of their prey list. □



Pardon me, something is happening behind me.

A bit of a stretch before going back to work.

Photos by author

This and that

compiled by Ken Durbin

Extinction Is The Rule, Researcher Says

Dr. Robert E. Sloan, University of Minnesota professor of geology and geophysics, has developed some interesting information on animal extinction during his years of studying the demise of dinosaurs, the Wildlife Management Institute reports. Sloan says, "Extinction is the rule rather than the exception, and we can, if we choose, calculate a sort of half life of a species."

Sloan stated that a long continued survival of a group of animals is a rare event. "Only some .003 percent of the species of vertebrates that lived at the end of the Paleozoic era, some 230 million years ago, have any living descendants at all," he wrote. Approximately 20,000 species of vertebrates were alive 230 million years ago, according to Sloan, and only about two dozen of those have any living descendants now. "Those two dozen, however, have nearly 50,000 species descended from them," he said.

Globally, the temperature underwent a 7-degree-Centigrade reduction at all latitudes and doomed dinosaurs all over the world. That was not a severe change, Sloan said, but it was enough to destroy the dinosaur's habitat.

"As dinosaurs became extinct, a very small percentage of placental mammals, essentially hedgehogs, developed rapidly to fill the role left by dinosaurs. Over a span of nine million years, this very small group of mammals developed into the ancestors of bats, whales, pigs, sea cows, proto-elephants, rodents, primates, and all other 24 existing orders of placental mammals."

According to Sloan, no two species have become extinct for exactly the same reasons, but most extinctions are linked to the rapid expansion of the human population. Further population expansion of humans will force more species to the wall, Sloan said. He concluded that man's extinction will come.

*

My Whale's Tooth Runneth Over

During the Middle Ages, emperors and kings paid large sums for drinking cups supposedly made from the horn of the fabled unicorn, in the belief that the horn would render poison harmless.

Although the miraculous power of the horn was as much a myth as the creature from which it allegedly came, the long, twisted ivory horn did in fact exist. But where did it come from, if not from the legendary horse-like unicorn?

Scientists today tell us that these unusual horns were and still are grown by small members of the whale family called narwhals (NAR-walls).

According to the January issue of Ranger Rick's Nature Magazine, published by the National Wildlife Federation, narwhals live only near the North Pole in the remotest regions of the Arctic. There are only about 20,000 of these creatures living in the world today.

The narwhal's horn is really a giant left front tooth, which can reach a length of almost 10 feet. Only the male narwhal has this tusk, which grows straight out through its upper lip. Like its human counterpart, the tooth has a hollow center filled with spongy pulp and nerves.

*

Record Year For Whoopers

Last year was the best year ever for whooping cranes as their numbers soared to at least 84 including 12 juveniles — both records.

In addition to the three birds still held in zoos, eight whoopers were hatched from the 49-bird wild flock in Canada and have migrated to Aransas NWR. At least four chicks hatched and reared by foster sandhill parents have migrated to and around the Bosque del Apache NWR in New Mexico. This transplant experiment is part of an effort to establish a second population of whooping cranes in the wild.

Prospects for additional birds hatched from the 20-bird captive breeding flock at Patuxent Wildlife Research Center are also bright.

Fish & Wildlife News

*

National Wildlife Recreational Survey Underway

The U.S. Fish and Wildlife Service is currently sponsoring a national mail survey on the activities of hunters and fishermen. In every state, between March and July, 1,000 sportsmen will receive mail questionnaires requesting information on their hunting and/or fishing activities in 1975.

An initial phase of the survey which began in January consisted of telephone interviews with more than 100,000 households in all 50 states. Those interviewed were asked to speak for their household in answer to such questions as whether any household members had hunted or fished in recent years, had engaged in target shooting, or had been active in wildlife photography.

This is the fifth in a series of surveys which began in 1955 at the request of the International Association of Game, Fish and Conservation Commissioners. National Analysts, Inc., an opinion research company located in Philadelphia, is conducting the survey for the Fish and Wildlife Service.

The results of this survey will be extremely valuable to the F&WS and to state fish and game directors in managing wildlife resources.

*

No Bows And Arrows

Of all the world's ancient peoples, the Australian aborigines alone did not discover the advantages of the bow and arrow.

They did develop the boomerang into a highly efficient weapon, but historians still puzzle over the fact that, during their many thousands of years of evolution, the Australian natives did not utilize the apparently obvious propelling qualities of the bow.

Colorado Outdoors

□

Environment Continues Downward Trend

The "quality of life" in the United States, measured by seven environmental yardsticks, continued on a downward trend in 1975 for the sixth consecutive year, according to the National Wildlife Federation.

The environment suffered setbacks in five of the seven "vital resource areas" surveyed in the conservation organization's seventh annual Environmental Quality (EQ) Index report, published in the current (February-March) issue of *National Wildlife* magazine. It moved ahead in only one area — air quality — and held its own in another, timber resources, while falling behind in water quality, soil, wildlife, minerals and living space, the survey found.

These trends produced a National EQ Index of 350 on a scale where 700 would represent the best possible environment. This is a drop of six points from the 1974 mark and is 45 points below the National EQ Index for 1969, the first year of the NWF survey. All seven indicators have declined since the first survey reported: "America is in trouble . . . Apathy is our biggest problem."

"It would be nice to report in this year of the American Bicentennial that the quality of life in the United States is quickly on the mend . . . (but) unfortunately, such is not the case," *National Wildlife* said. As one of the few encouraging signs in a "generally somber picture" the magazine cited the fact that "polls still show undiminished public support for environmental goals."

The EQ Index, based in part upon statistics and in part upon the "combined judgment" of NWF experts, has been commended by government officials as a unique, authoritative journalistic evaluation of the "quality of life." It is prepared each year as a special report to Associate Members of the NWF.

Single copies of the 12-page report, reprinted from the current issue of *National Wildlife,* can be obtained free of charge by writing to Educational Services, National Wildlife Federation, 1412 16th St. N.W., Washington, D.C. 20036. Additional copies, up to 100, are priced at 25 cents each, and in quantities over 100 at 15 cents each. □

Waterfowl Numbers up

Wintering waterfowl numbers in Oregon are up again for the second year in a row, according to results of the annual winter survey conducted jointly by the Oregon Department of Fish and Wildlife and the U.S. Fish and Wildlife Service.

The survey is conducted during January by about 40 biologists from the two organizations and this year showed 618,000 waterfowl wintering in the state. That is a 16 percent increase from 1975.

Nearly 443,000 ducks were recorded in the survey and 145,000 geese. The figure for geese is the highest ever recorded in the survey, according to Fish and Wildlife Department staff biologist Chet Kebbe. Slightly more than 6,000 swans and nearly 25,000 coots made up the rest of the total.

Compared with 1975, the duck population was up 10 percent, Kebbe said, and geese numbers have increased by 54 percent. Coots and swans were down somewhat, he added; the swans by 6 percent and the coots by 20 percent.

Major increases were noted in the mallard, diving duck, and Canada goose populations while sharp declines were apparent in the numbers of wintering widgeons and pintails, Kebbe said.

Biologists also keep a tally on the eagle population while conducting the waterfowl counts and this year a substantial increase in the bald eagle winter count was noted. Ninety bald eagles were recorded this year compared with 59 in 1975. □

We Thank You . . .

After several months of sorting, comparing and rearranging in his spare time, staff artist Harold Smith reports he has all of the old licenses catalogued and in notebooks. He reports being rather overwhelmed with the tremendous response from you readers, with more than 350 letters and packages of licenses received.

We now have an almost complete record of 70 years of licenses for the Department archives. The first hunting license was issued in 1905, and the first angling license in 1910. Harold sends along a hearty *Thank You* to all of you who sent in the old-time documents. In compiling the notebooks, he finds we still lack four licenses to complete the record. If anyone has any of these, we would gladly receive them:

1908 Hunting License
1914 Resident Combination License
(also Nonresident for this year)
1917 Resident Angling License
1918 Resident Combination License

If you care to add one of the above to the archive books, send it along to Harold Smith, P.O. Box 3503, Portland, Oregon 97208. □

Antelope Deadline Later This Year

Antelope hunters can relax for a while. For the past several years they have had to be on their toes because the deadline for antelope tag applications was in May, substantially earlier than for other big game controlled hunts.

The schedule will be different with the new computerized drawing system that will be in use this year for all controlled season hunts, and antelope hunters won't be rushed so much.

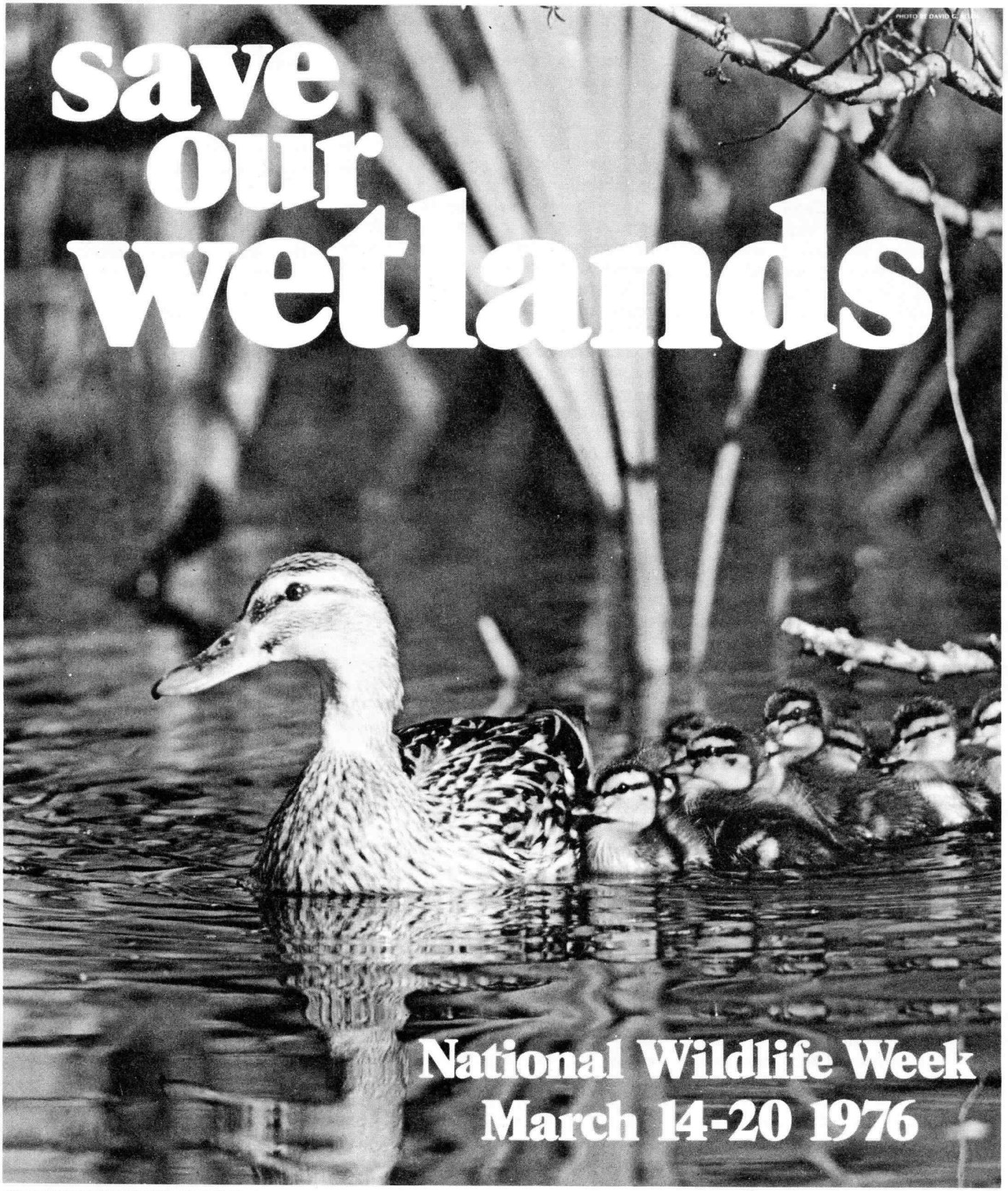
There are only two big game application deadlines to remember under the new system. They are July 10 for antelope, and July 20 for deer, elk, bighorn sheep and cougar.

Since a new application card will be used, the Department has asked license vendors to return all their old application cards. Anyone who has a supply of the special tag application card that has been used in recent years should dispose of them because they won't be accepted anymore.

By June 15, the new application cards as well as printed regulations will be available from all license agents. After that date hunters may apply for any of the controlled hunts for any species.

The printed regulations will list all 1976 controlled hunts along with dates, boundaries, tag or permit quotas, and other information, and complete instructions for applying.

More information concerning the new drawing system will be included in the May issue of *Oregon Wildlife* magazine. □



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