

OREGON WILDLIFE

APRIL 1981

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OREGON FISH AND WILDLIFE COMMISSION

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Ron E. Shay, Editor
Ken Durbin, Managing Editor

The Cover — Graduate student Scott Lutz tracks transmitter wired turkeys with a radio receiver. For more on wild turkey research turn to page 7.

Photo by Ken Durbin

HUNTER EDUCATION PROGRAM

INSTRUCTORS APPROVED

Month of February 16
Total to Date1,626

STUDENTS TRAINED

Month of February 285
Total to Date 281,112

HUNTING CASUALTIES REPORTED IN 1981

Fatal 0
Nonfatal 4

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ARE YOU CONCERNED ABOUT THE PROBLEM . . . OR PART OF IT?

If you care about endangered animals and plants, you will want to think twice before bringing home a cactus from your vacation trip or before buying a pet bird for your house. Though many people mistakenly think the sport hunter may be the greatest enemy of wildlife, they themselves may be a worse enemy.

According to the *IUCN Bulletin*, international trade in live parrots is believed to be about one million birds annually, but losses during capture and in transit from stress and mutilation are huge; every 10,000 parrots entering the U.S. in a year may represent a quarter of a million dead parrots.

Quoting *Newsweek*, the latest Traffic (International) Bulletin reports that in the U.S.A.'s Southwest, cactus rustling is becoming very serious. According to one reliable estimate, rustlers stole around \$600,000 worth of rare plants from Arizona alone.

Rustlers drive into the desert at night, uproot the plants and sell them to unscrupulous nursery owners or individual collectors at prices ranging from \$25 to \$1,000.

Similar stories may be told about trade in tortoise shell, monkeys, ivory trinkets and the hides from various of the African cats. Though there are laws prohibiting such trade, many of the source nations have little money or desire to enforce the laws. The market is largely here in the U.S., in Europe and for some items in Asia. And, as long as the market exists, the poaching will go on.

If you plan on shopping in foreign countries this year it would be well to obtain copies of the laws that list illegal imports. It will not only prevent you from having materials confiscated in Customs upon your return, but will also help dry up the demand for protected species.

Even if you aren't going abroad, you can help by resisting temptation . . . Temptation to pick up that desert tortoise and haul it home . . . Or temptation to dig that pretty cactus or other exotic flower and bring it home from vacation.

There is a certain irony in this situation that has brought some species to the brink of extinction. Individuals who ostensibly love nature and oft times damn the sport hunter while carefully tending their garden of exotic plants and feeding imported pet birds may actually be the true threat to certain wildlife species.

Persons wearing fur coats made from hides of farm grown animals or species being properly managed often draw the wrath of certain groups, but seldom if ever do you hear of someone being harassed for buying or having a parrot or other exotic pet that may be completely protected in its country of origin.

Too often emotional concern not backed by facts, for endangered species masks the true problem and may even make the concerned individual part of the problem.□

R.E.S.

COMMISSION AND COMPACT MEETINGS

The Fish and Wildlife Commission will meet and conduct a public hearing before setting 1981 Ocean sport and commercial salmon seasons for waters under state control on Monday, April 20, beginning at 8 a.m. The meeting will take place at Fish and Wildlife Department headquarters, 506 SW Mill Street in Portland.

On Tuesday, April 21, the Columbia River Compact will meet to review status of Columbia River spring chinook runs. The meeting will begin at 10 a.m. at City Council Chambers, 210 East 13th in Vancouver, Washington.□

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HOW ARE ALL THOSE REGULATIONS MADE, ANYWAY?

By
Ken Durbin

Anyone who hunts or fishes or otherwise becomes involved in use of our fish and wildlife resources soon becomes aware of a great and sometimes complicated array of rules and regulations. Who makes all these rules, anyway, and how?

First of all, it might be helpful to distinguish between a law or statute and a regulation or rule. Laws in Oregon are established by the Legislature. There are a number relating to fish and wildlife, its protection and its uses. The Fish and Wildlife Department is set up by and operates under laws enacted by the Legislature. Laws, once passed, usually remain in effect until changed.

Rules or regulations affecting fish and wildlife are set by the Fish and Wildlife Commission. The Commission is a seven-member citizen's board appointed by the Governor to staggered four-year terms. Regulations are usually set only for a one year period and are renewed or modified annually. Laws form the skeleton to which regulations add the flesh.

The process that goes into setting
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a regulation is complex. It involves a lot of people including the general public, and it varies somewhat depending on whether federal jurisdictions or other states are involved. We might take a quick look at how a regulation comes to be and how the process can vary.

Regulations involving big game, upland birds, furbearers and inland sport fishing are all set by a similar process. It begins at the ground level with field biologists. The state is divided into seven regions, of which all but the Marine Region are divided into fisheries and wildlife districts. The district biologists work throughout the year to gather biological data on the status of populations, changes in habitat, impact of harvest seasons and opinions and desires of local users of the resource.

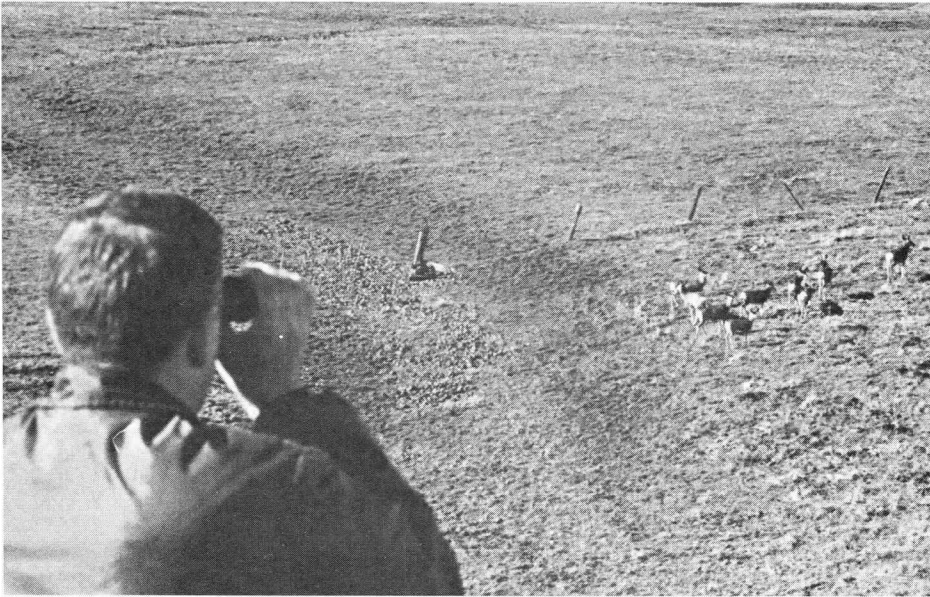
Each biologist formulates his own recommendations for season regulations for his particular area. Then the biologists within each region meet to consolidate information which is then presented to staff fishery or wildlife biologists from the Department's headquarters office.

The Portland staff then has the

job of assembling this information, making such modifications as are necessary for uniformity of rules, or to conform with policy direction from the Commission, or with long-range management goals of the Department. They prepare a package of staff recommendations for presentation to the Fish and Wildlife Commission in a public meeting. A news release detailing major features of the package is then issued by the Department (although this has not always been possible when staff recommendations are not completed until just before the Commission meeting.) Sometimes the recommendations are printed in this publication as printing schedules permit.

For deer, elk or angling regulations there is usually time to allow about a month between the time staff recommendations are presented and the time the Commission meets again to act on them. For some others, where biological data is still being gathered until just before the Commission receives it, the period is necessarily shorter.

During this period (and throughout the year for that matter) written comments are solicited and well-



Biologists' seasonal counts of game animals are a major factor considered by the Fish and Wildlife Commission when setting season dates and special hunts.

came from the public. Each member of the Commission receives a copy of every letter pertaining to regulations and these comments are part of the public record. Often during this period town hall or public information meetings are held in various cities throughout the state to give more public exposure to proposals.

On the day regulations are to be set, a public hearing is conducted to receive verbal comments on regulation proposals. Sometimes several days of public hearings are scheduled. In spite of what you sometimes hear, public comments often do influence changes from staff proposals when the Commission finds them appropriate.

After all this input is in, the Commission has a most difficult task, and few members of the public except those who regularly attend regulations meetings appreciate how tough their job is.

They must consider the welfare of the fish and wildlife resources, the biological recommendations of field and staff biologists, the desires and opinions of the general public, physical limitations imposed by there being only so many days in the year and so many acres of habitat in the state, concerns expressed by private landowners on whose lands the wildlife may exist

and who stand to be affected by any regulations. . . . They must consider all this and more, and adopt a package of regulations which, because of all these factors, is usually guaranteed to please no one entirely.

For this the Commission receives no pay and its members devote a minimum of 50 days a year to scheduled meetings, and many additional hours on the telephone, attending sportsmen's club and other group functions, and reading voluminous reports, letters and other materials in preparation for meetings.

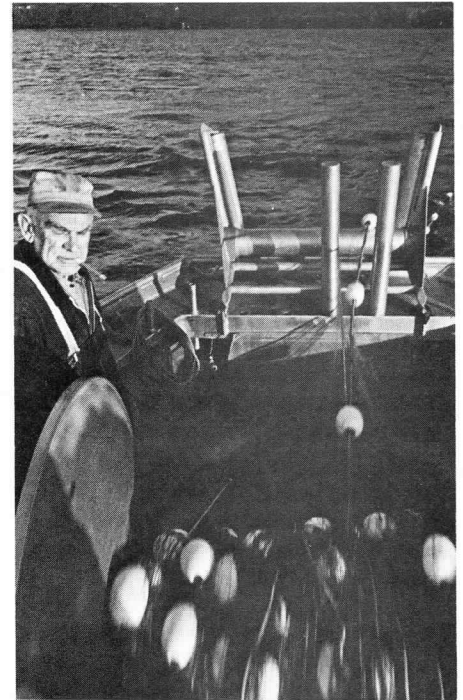
The procedure for setting waterfowl and other migratory bird seasons is similar except that the staff proposals and Commission regulations must fit within a framework established by the federal government. This is necessary because the bulk of the birds hunted in the continental U.S. are produced outside this area, and the birds pass through and are hunted in successive states. There is a separate framework for each of the four major flyways in the U.S.

So far we have talked about regulations involving sport hunting and fishing. Trapping is a unique mix of commercial and recreational pursuit, but fits in this same category as do regulations govern-

ing protection of nongame wildlife and most other general rules adopted by the Department.

Regulations governing commercial fishing involve a somewhat different procedure. On the Columbia River, for example, regulatory power of the Commission is shared with the Director of the Washington Department of Fisheries. Oregon's seven-member board and Washington's Department Director make up the Columbia River Compact. This body regulates all commercial fishing on the Columbia River.

The Columbia River has been termed the most complex fisheries management problem in the world. Two countries, the U.S. and Canada, harvest fish destined for the Columbia. Four Indian tribes have fishing rights on the river under federal treaties and might be likened to a third foreign country. Four states, Oregon, Washington, Idaho and Montana, as well as Canada, are drained by the Columbia system although currently only the first-mentioned two states are involved in regulating commercial fishing on the river. This has been the cause of some complicated and drawn out lawsuits.



Columbia River commercial fishing regulations are set by a joint Oregon/Washington fisheries compact.

There are mixed stocks of fish, some in good enough shape to sustain substantial harvest, some in such threatened condition that no harvest can be justified, and some classified as sport fish and not legally available for commercial harvest. There are fish moving up the river, down the river, and some that stay in the river year around. There are passage problems at dams, and many conflicting uses for the river's water and the certainty of increased demands in the future.

Commercial season regulations again begin at the field level with biological input from the fishery staffs of both Oregon and Washington. Biologists monitor the status of the runs, production, harvest, and other factors. For each run of fish or commercial season they prepare a joint staff recommendation based on their findings.

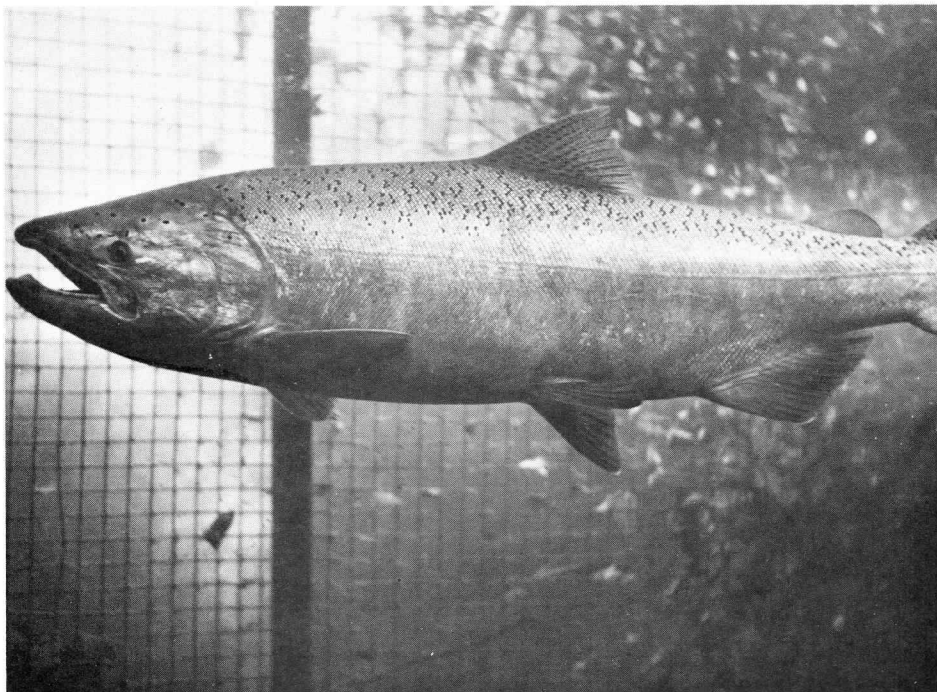
These recommendations often are neither well understood or well accepted by the public. Usually they are rather complex and often are based on precise timing of various runs as determined from experience and historical data. Recommendations often attempt to achieve such near impossible feats as permitting maximum harvest on hatchery stocks which will show up as surpluses at hatcheries if they are under harvested, yet protecting those stocks on which no harvest is justified. No easy trick when the stocks may be intermixed.

The Compact meets in public session and hears the joint staff recommendations for seasons (sometimes the recommendation is for no season at all). A public hearing is always conducted and the Compact hears from commercial fishermen, sport fishermen, treaty Indians, attorneys for the federal government, more attorneys for the user groups, and often many others.

Then the Compact weighs the welfare of the resource, harvest strategies, federal court orders, Indian treaty obligations, the statements of the public, and requests from Idaho, (whose fish all have to run the Oregon-Washington gauntlet) before setting the seasons.

The problem is further aggravated by the fact that fisheries management is not and can never be a

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Biologists closely monitor the movement of salmon from the ocean to hatcheries and natural spawning areas. Projected run sizes determine fishing seasons in the ocean and rivers. Sometimes three separate regulating bodies determine who will catch the fish and how many fish can be taken by each group.

precise science. Biologists make their best recommendations, but sometimes more fish are caught than anticipated and sometimes fewer. The weather and water conditions are unknowns that often influence the outcome of the catch. When estimates are off, disgruntled users cry incompetence on the part of the biologists. The anger expressed by different groups varies according to whether the catch is under or over estimates and on which species is involved.

The Compact only has jurisdiction over commercial seasons. Sport fishing seasons in the Columbia River are set for Oregon by the Fish and Wildlife Commission. For Washington some are set by the Department of Fisheries and some by the Department of Game depending on the species of fish. Often these two Washington agencies disagree and sometimes all three regulating agencies have trouble finding common ground. All this can result in confusing and conflicting regulations where the angler is concerned.

The process that goes into developing ocean salmon sport and com-

mercial fishing seasons is perhaps even more complex and equally full of sound and fury. The Fishery Conservation and Management Act of 1976 (adopted by the U.S. Congress) places regulation of most of the ocean fishing under the jurisdiction of the U.S. Secretary of Commerce.

Seasons considered by the Secretary are recommended by Councils set up under the Act. Oregon is a member of two of these Councils, the North Pacific Fishery Management Council which includes Alaska, Washington and Oregon, and the Pacific Fishery Management Council which includes the states of California, Oregon, Washington and Idaho. The second mentioned Council recommends the seasons off Oregon's coast.

The Director of the Oregon Department of Fish and Wildlife is a voting member on the Councils and staff biologists with the Department are represented on the Salmon Advisory Teams which prepare season options and recommendations for the Councils to consider.

The Councils in turn recommend seasons to the Secretary of Commerce who then adopts regulations for a zone extending from three miles off the west coastal shores to 200 miles offshore. Each of the three states adopts its own regulations for waters which remain under state jurisdiction. These extend from the shore out to three miles. For uniformity in regulations the states have usually adopted seasons identical to or at least compatible with those set by the Secretary of Commerce. States also retain jurisdiction over landing laws, and so can effectively set regulations more restrictive than those adopted by the federal government if all three coastal states act in concert.

So, while the ocean salmon sport and commercial seasons are effectively set now by the federal government, the states are represented in those negotiations and provide the biological advice that goes into the season options. And the state does set the rules for its near-shore waters.

The general public has input into the ocean regulations through hearings held during deliberations by the PFMC and by the Fish and Wildlife Commission. User groups also can and do present their case directly to the Secretary of Commerce and have been successful in having Council recommended seasons modified in at least one instance.

As we said at the onset of this article, most of us are affected one way or another by regulations involving fish and/or wildlife. Sometimes we've been frustrated by their complexity or because they keep us from doing something we want to do. Regulations are usually a mix of professional, public and sometimes political input. Because of all the conflicting interests in our natural resources the best rule is often the one which pleases no one.

But basically regulations are designed to permit the reasonable use of our fish and wildlife resources forever. They are only one tool in the management scheme, but without them, complicated and imperfect as they often are, much of the fishing, hunting and trapping we know today would be gone. □



Some landowners want fewer elk while hunters want more.



Competition among users for a limited fish catch is intense.



Wildlife survival is threatened by man's demand for space.

PUTTING THE BUG ON TURKEYS

by Ken Durbin

Oregon's largest upland game-bird is the subject of a cooperative research study that began last year. When the field work on the Merriam's turkey is completed next spring, graduate student Scott Lutz hopes to know a lot more about what makes this secretive game-bird tick. Fish and Wildlife Department biologists hope his work will provide them with better information to guide management of the species.

In spite of the turkey's large size and popularity with hunters, relatively little is known about its life history and habitat needs in Oregon. The ancestral range of the Merriam's turkey was the Rocky Mountains from the Mexican border to Pike's Peak, Colorado. This subspecies was not introduced successfully to Oregon until 1961 when 58 birds from Colorado, Arizona and New Mexico were obtained. Thirty-eight of them were released on the White River Game Management Area in Wasco County.

The birds flourished and soon provided both fall and spring hunting seasons. But after an initial bloom, as often happens with new introductions, the population settled back to a lower level where it has remained with seasonal ups and downs ever since.

The generally secretive nature of the birds, their extreme wariness at certain times of year, seasonal migratory habits and the brushy forested terrain where they live all have combined to hamper efforts to learn more about the birds. This was further complicated by other demands on management biologists who were unable to spend as much time working with this bird as they would have liked.

Scott Lutz, a doctoral student in wildlife science with Oregon State University's Department of Fisheries and Wildlife, was selected to conduct a study jointly sponsored by O.S.U., the Mt. Hood National Forest and the Oregon Department of Fish and Wildlife.

Lutz spent considerable time reviewing the literature on the Merriam's turkey and this past winter began attempts to live trap wild turkeys in south Wasco County so they could be fitted with small radio transmitters or colorful wing tags. In all, he caught about 50 birds at three different trap sites, put radio transmitters on 18 of them and wing tags on an additional 24.

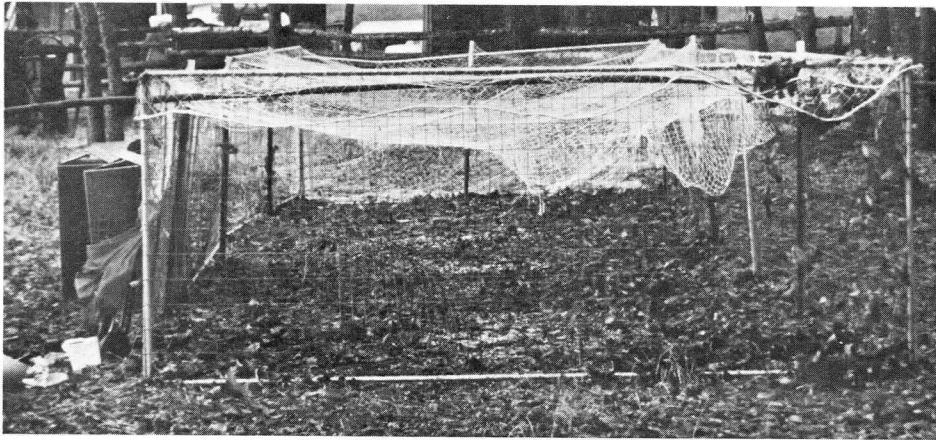


Wild turkey populations in Oregon appear stable, but not much is known about bird movements and habitat needs. New research is filling in knowledge gaps.

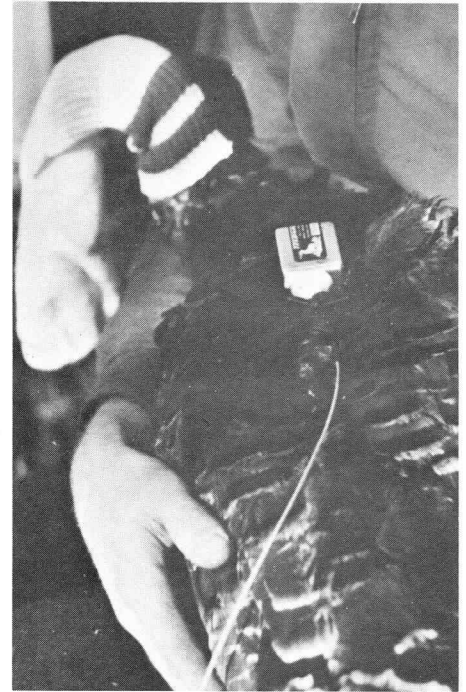
Birds were baited into the traps

with corn. The birds can be formidable to handle because of their size (up to 18 pounds and more for a mature gobbler) and the strength of their powerful wings. It was found that slipping a common sock over the birds heads to blindfold them and hobbling the feet calmed them so they could be easily handled.

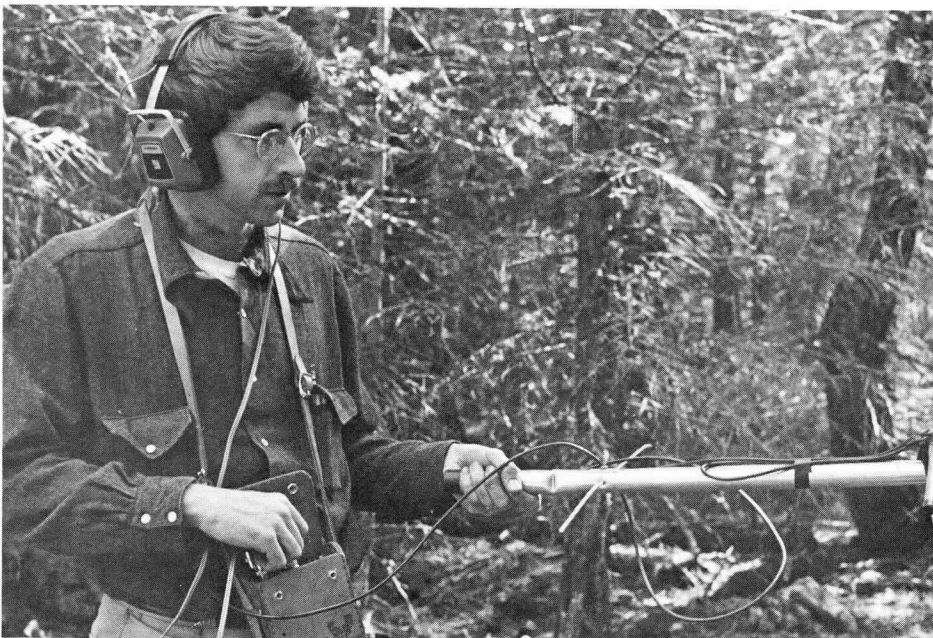
Each bird marked with a wing tag has a different color combina-



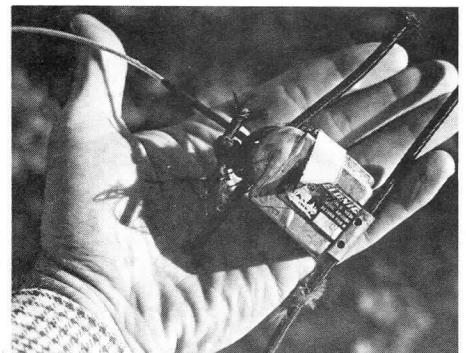
Turkeys were baited into walk-in traps like this one. Corn was used as bait. Over 50 turkeys were trapped during the study this season.



Gym socks over the head calmed the turkeys while transmitters were attached. The wire on the turkey's back is an antenna.



Graduate student Scott Lutz uses a sensitive radio receiver to track turkeys fitted with small radio transmitters.



A predator ate the bird that wore this transmitter shortly after the bird was fitted and released.

tion so it can be identified in future sightings. A predator killed one of the radioed birds and the transmitter somehow came off another, so he now has transmitters on five adult males, five juvenile males, two adult females and four juvenile females.

Lutz followed the radioed birds as they began a gradual migration from the lower areas where they wintered to the higher ground where they will mate and nest. He has already found that the birds disperse widely from their wintering sites and it will be a challenge

to keep track of all of them even with the sophisticated radio monitoring equipment specially designed for the job.

A number of different types of habitat have been identified within the study area and water sources have been located and mapped. Throughout the study turkey sightings will be recorded along with the kind of habitat they are using to learn more about specific habitat preferences at different times of the year.

Lutz is also trying to locate roost trees to find out whether the birds

have very specific requirements in this regard. Of the trees he has thus far located, most are old growth ponderosa pine with strong horizontal limbs that the birds can easily fly to and roost upon. A few are in old fir trees. Many roost trees are used traditionally, year after year.

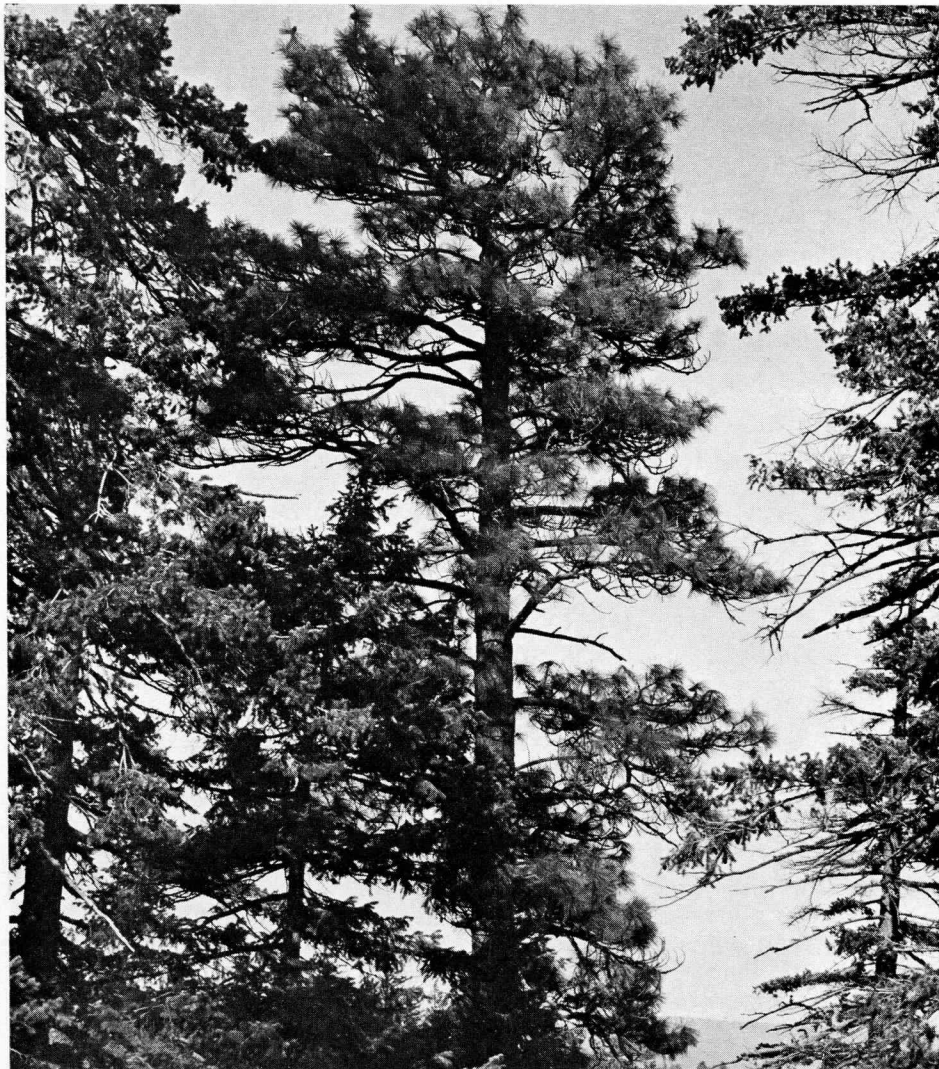
Lutz will be attempting to locate as many nests as possible to learn more about the areas preferred and types and ages of vegetation associated with the sites. He had hoped to place radio transmitters on more adult hens as an aid to locating nests but found them especially dif-

ficult to lure into the traps. Some gobblers, on the other hand, were recaptured several times.

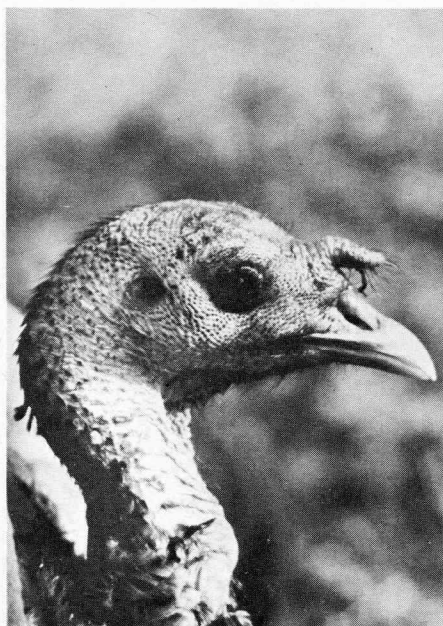
In addition to the data that should be forthcoming from the radio and tag marked birds, Lutz will be recording information from other sources including sightings by employees of the Department of Fish and Wildlife, Forest Service, Warm Springs Indian Reservation, and others.

Biologists with the Fish and Wildlife Department hope to learn how to improve the habitat for turkeys in Wasco County. But they also believe information on habitat preferences and requirements from the study will help them to select the best potential sites for future releases of Merriam's turkeys.

Although Wasco County is the major population center for the Merriam's turkey, scattered populations exist in the Metolius and Three-fingered Jack area and throughout the forested regions of northeast Oregon.□



Roost trees are usually ponderosa pines 200-250 years old with strong horizontal limbs. Some roosts have been found in old fir. Birds often use the same trees year after year.



Trapped turkeys showed the population was healthy. Tracking of transmitter wired birds also revealed that turkeys move to lower and higher elevations following the changing seasons.

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This turkey has a viral disease called fowl pox. It was the only trapped bird with this affliction.

THIS AND THAT

Compiled by Ken Durbin

Good Point!

With regard to the recipe for elephant stew which ran in this column last month, Mrs. L. J. Armbrust of Creswell writes, "I strongly suggest you do not add the rabbits. After all, nobody likes hare in their stew."

*

Outright Nongame Donations Welcome

We've had some folks write in saying they don't get a state income tax refund, but would still like to donate to the nongame wildlife program. Anyone in that dilemma can simply send in a check made out to the Oregon Nongame Wildlife Fund. The money will go into that specific fund along with the dollars received from the checkoff and will be used in the nongame management programs.

*

Fish In The Trees

A survey underway in the floodplains of the Amazon Basin has turned up evidence of a remarkable interdependence of fish and forest. Between June and November the waters of the Amazon and its tributaries flood a 40,000 square mile area. When this happens the fish migrate into the forest and feed on the seeds and fruits falling into the water.

The fish depend on the trees of the floodplain for food and in turn the trees depend on the fish to disperse the seeds. More than 200 fish and tree species have been identified which rely on each other in this way.

The fish of the Amazon have become specially adapted with molars to crunch nuts and bloated stomachs to enable them to build up a store of fat for the dry season when the rivers retreat. Several types of piranhas have been found which have given up the pleasures of the flesh for a vegetarian diet.

Fish are a major source of protein for Amazonians with three quarters of the catch coming from the floodplain forests.

IUCN Bulletin

Mermaids Being Killed

Many people feel that the dugong or manatee is the animal that mariners of the past thought were mermaids. The inoffensive sea mammals have been suffering in Florida waters because of their lack of fear of humans and their consequent encounters with the propellers of high speed motorboats in certain areas.

Now a story in the *IUCN Bulletin* indicates Muslim fishermen in the southern Indian state of Tamil Nadu are killing dugongs, "for no other reason than that they resemble pigs." According to the report received by the BULLETIN the fishermen persecute the harmless dugongs because they imagine them to have unclean habits.

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Bibliography On Urban Wildlife Management

To help satisfy the increasing demand for information on how to conserve fish and wildlife in urban and suburban areas, the Fish and Wildlife Service has published an "Annotated Bibliography on Planning and Management for Urban-Suburban Wildlife." The bibliography, which lists 464 relevant publications, will be of interest to planners, developers, biologists, and others who are working to develop effective policies and programs for wise planning and management of wildlife resources.

The publication, prepared by the Urban Wildlife Research Center, Inc., for the Service, is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, at a cost of \$6.00 a copy. Purchasers should specify Stock No. 024-010-00547-5 when placing orders.

*

New Conservation Directory Ready

The National Wildlife Federation's 1981 CONSERVATION DIRECTORY is available for \$6 by writing NWF, 1412 16th Street, N.W., Washington, D.C. 20036. The 300-page directory lists about 12,000 individuals and 1,800 organizations concerned with natural resource use and management. It is invaluable.

Boone & Crockett To Handle Awards

The Boone and Crockett Club assumed sole responsibility for maintaining the trophy records for North American big game January 1, according to the Wildlife Management Institute.

Since 1973, Boone and Crockett has been sharing responsibility for the program with the National Rifle Association, which handled the everyday administration of the program.

The decision to terminate the co-sponsoring agreement and for the Club to assume full responsibility for the records-keeping program was reached after careful evaluation of the objectives and essential priorities of both organizations, which have pledged mutual full cooperation for the future of their respective endeavors.

*

Firewood Brochure Issued

The Pacific Northwest Region of the U.S. Forest Service has published a new brochure entitled "Firewood in Pacific Northwest National Forests" that gives tips and instructions for obtaining firewood. Information in the publication includes reminders on safety, where wood is available, how to prepare for a trip to get wood, the need to let wood dry for several months, and leaving snags to benefit wildlife.

Copies of the folder can be obtained from the Forest Service-Park Service information office in the lobby of the Multnomah Building, 319 S.W. Pine St. (P.O. Box 3623), Portland, or from National Forest offices in Oregon and Washington.

*

Rare Lizard Re-found

One of the world's rarest lizards, Gray's monitor, found only in the wild Bicol region of the Philippines has been rediscovered by an American scientist who says it is in danger of extinction. Dr. Walter Auffenberg of Florida State University found some of the metre-long reptiles in the mountain forests of Caramonan peninsula about 30 metres above ground.

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DUCK HUNTERS APPLAUD CAROL MOON

Carol Moon, a 28 year veteran of the Department's Portland headquarters, was recently honored by the Oregon Duck Hunters Association for her continuing contributions to Oregon's wildlife and its management.

As a member of the Department's Information and Education Section, Carol answers people's questions both over the phone and in person concerning a wide variety of fish and wildlife related subjects. She also loans live traps to help local landowners remove various pests, issues deer repellent and has the answer to just about any question you might have.

Carol started working for the State Game Commission shortly after graduation from Portland's Cleveland High School, first in the mail room, then upstairs in the mapping section of the Lands Division before moving to the front counter where she sold hunting and fishing licenses for 17 years.

The Oregon Duck Hunters Association was founded in 1954 and has since grown to 350 members throughout the Willamette Valley. The organization has been on the forefront of waterfowl management in cooperative habitat restoration and improvement projects with both state and federal agencies. The Oregon group was named a life sponsor by Ducks Unlimited last year for its total contribution of over \$10,000 during the past 34 years.□

*

Going Around In Circles

The earth spins on its axis at the rate of 700 miles per hour, says *International Wildlife* magazine. It's also barreling along at about 66,000 miles per hour on its annual 584,000,000-mile track around the sun. Meanwhile, the earth is accompanying the sun on its 225,000,000-year orbit around the center of the Milky Way galaxy — traveling at about 481,000 miles per hour. □

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MUSKRAT

Now you see it. Now you don't. One minute there is a small brown spot plowing a wake through a channel in the marsh tules. Then the wake is gone. That sighting is likely to be a muskrat, Oregon's most common furbearing mammal. Although muskrats are numerous, that brief glimpse of a nose above water is all most people ever get of this beaver-like animal.

The muskrat, known to scientists as *Ondatra zibethicus*, is a creature of the water. Marshes and slow moving rivers throughout the state are preferred habitats. Unlike the beaver, the muskrat is uncommon in higher elevation timberlands. Some of the largest populations inhabit the marshes of southern and southeastern Oregon. Although many muskrats now live in the waters of Klamath and Lake counties, these furbearers were not found in those particular marshlands until they were introduced in the 1920's by fur farmers.

A person sighting a muskrat out of the water will see an animal about 20 to 25 inches long, weighing two or three pounds and standing above five inches tall at the shoulders. The hind feet are long and partially webbed, and the narrow tail is scaly and flattened vertically.

Like the beaver, the muskrat will build houses or use bank dens. The lodges are built of cattails, reeds, sticks and other vegetation cemented with mud. The structures may rise like islands five or six feet out of the surrounding water. Within is a single room where an entire muskrat family may live.

The first muskrat litter, averaging four to six young, usually appears in May. Females may produce up to three litters per season. The young stay at the lodge for about a month until they are weaned and sent on their way to make room for the next batch of little ones.

Muskrats eat mainly marsh vegetation, but they will also consume field crops, vegetables and even meat including mussels, crayfish and carrion.

Muskrats mean many different things to different people. The rich, brown fur is a staple item in the catch of commercial trappers. The musk from the animals' two musk glands is used in making perfumes and trap scents. To landowners the muskrat may be a pest that digs holes in dikes and irrigation ditches. But to waterfowl, this mammal is an engineer that creates open waters in marshes by eating tules and other thick vegetation. Even the muskrat lodge is sometimes used by geese as a nesting platform.□

Jim Gladson

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While helicopters and airplanes are widely used for animal census work, the horse is still a reliable and efficient way for

biologists to make game counts in roadless backcountry.

IN WITH THE OLD, OUT WITH THE NEW

by *Bruce Craven*

With the increased reliance on radio collars for big game and upland bird studies, coded wire tags for salmon migration studies, helicopters for fish stocking, and census work, it's pretty obvious the world of high tech has taken over many areas of wildlife management. However, in the Bridge Creek Wildlife Area some traditions seem to die hard — especially since the old ways are still the most effective.

The basic question is how to get a monthly winter census of deer and elk populations on a 15,000 acre, basically roadless, open plateau. The answer: on horseback.

The area is located 45 miles south of Pendleton on the North Fork John Day River. What roads there are through the area are closed to all vehicles after the hunting season to minimize road damage. Horses naturally solve the access problem to the vast area so a thorough evaluation of many different factors can be obtained. While the mode of transportation may not be too sophisticated by to-

day's standards, the use of the information gathered certainly is, as a wide range of management objectives are based on the information.

Begun 15 years ago, the elk and deer censuses are valuable management tools, providing information needed by Department biologists to keep abreast of the current status of the herds which use the area as a wintering ground. Biologists ride the same route each month from December to April, noting the number and location of animals seen, range use and population patterns.

They use the population statistics gathered during these rides to determine the ratio of bulls to cow elk or herd composition. Population trends over a period of years are important in recognizing problems that may be developing. The potential impact of such problems can be reduced by regulating the length and type of hunting seasons. A season is recommended that will best maintain the herd's relationships with the carrying capacities of the area, sustain a harvestable surplus, and minimize de-

predation to adjacent private lands used as summering areas by the elk.

These range uses, and plant type composition patterns are valuable for comparison with previous years' findings so the most optimum range conditions for the elk and deer can be maintained. An area not being used as much as in the past may indicate a decline in the availability of preferred forage plants. If this is the case, necessary action can be taken before the problem becomes more difficult to correct. Some areas have been fertilized to encourage elk to use a larger range. Seedling pine trees have been planted to one day provide a travel and shelter corridor.

The success of this management work is best shown by the increased number of Animal Unit Month measures or AUMs the area produces per year. When the Bridge Creek project was begun in 1962, the area, including 420 acres of BLM land and 1,200 acres of State Parks land produced about 2,000 AUMs. Today the same area produces 4,000 AUMs. Of this, 1,000

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AUMs are devoted to a cattle grazing program begun in 1974.

The use of cattle can be a very effective management tool for many wildlife species. At Bridge Creek, cattle are rotated among six different pastures, with two pastures in use at a time between June and August, and for two additional months in the fall. This grazing creates a substantial spring and fall regrowth, providing a valuable food source for elk calving and fall

preparation for the winter pinch period.

While many of the management practices are designed for the elk, and deer, other species benefit from management too. More than 400 birdhouses have been added to the area and most are used by many types of birds such as bluebirds, flickers, and other cavity dwellers. Bald eagles often winter in the area.

Hunting is the major recreational use of the area during part of the year, but other uses are encouraged as well. In fact, almost one-third of the recreational use the area gets is for wildlife viewing and photography, with fishing also being a major activity. The multiple use concept is applied to ODFW wildlife areas like Bridge Creek: multiple recreational use, multiple land use, and multiple species use — including an occasional horse. □

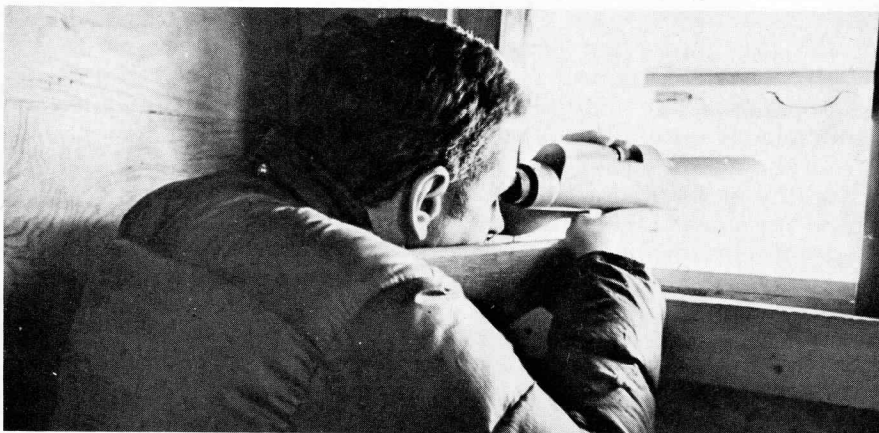


Animals appear less wary of biologists on horseback.



No concerns about the energy shortage here. The horse refuels while the biologist does his work.

*Photos by
Bruce Craven*



A viewing shed at Bridge Creek allows hidden viewing of herds.



Elk sometimes walk right up to the viewing shed making the spotting scope unnecessary.

SUSPECT SOUGHT

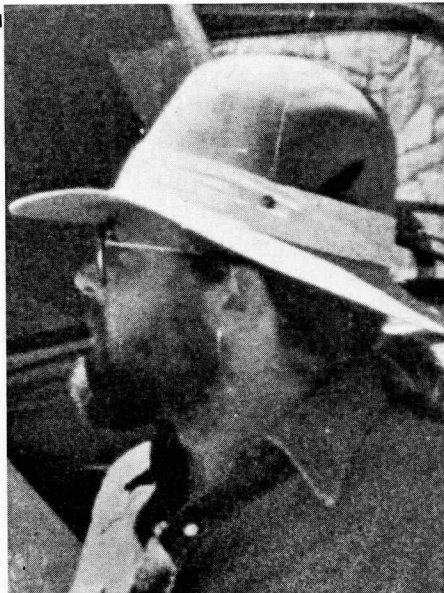
Arrest warrants have been issued by Idaho and by federal agents for Claude Lafayette Dallas, Jr., 30, of Paradise Junction, Nevada. He is wanted for questioning in connection with the shooting deaths of two Idaho Department of Fish and Game conservation officers.

Dallas is described as 5 feet, 10 inches tall with brown hair and brown eyes. He wears shaded, steel-rimmed glasses and wears his hair collar length with a small ponytail. When last seen, he had a full beard. He weighs approximately 190 pounds and has no known scars or marks.

When last seen in Nevada, just north of Winnemucca, he was wearing a blue denim shirt and blue jeans, a brown, down-filled jacket and a green backpack. Law enforcement officers report he carries a .357 magnum revolver and a rifle of unknown caliber.

Information accumulated so far on Dallas is that he should be considered extremely dangerous. Anyone who has seen him should contact a law enforcement agency immediately. He is described as a loner, a person who will resist what he considers an attempt to arrest him.

Dallas is thought to be well versed in outdoor survival techniques and guerrilla warfare. He is



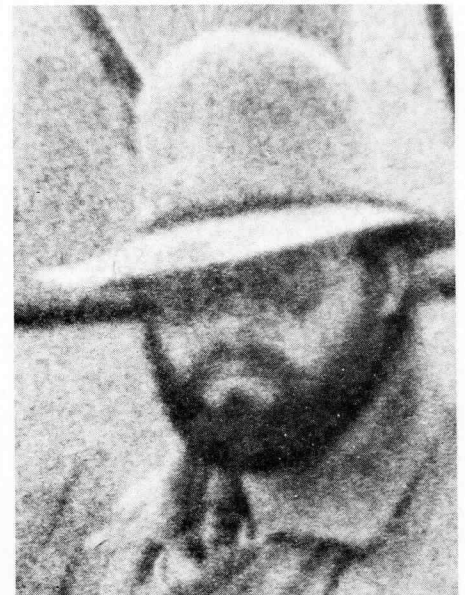
Claude Lafayette Dallas, Jr.

an expert in the use of firearms and archery, and is in excellent physical condition.

Occupations Dallas has held include truck driver, ranch hand, cowboy and lumbering. He has a Nevada chauffeur's license.

Dallas was born in Virginia, but has lived in Ohio, Florida, North Carolina and perhaps Arizona. He had been a resident of northern Nevada for the past 10 years. He speaks fluent Spanish.

Anyone with information on Dallas should immediately contact the Boise or Butte, Montana offices of



FBI photos

the FBI, telephone (208) 334-1030 in Boise or (406) 792-2304 in Butte.

Information on Dallas may also be given to the Owyhee County Idaho Sheriff Tim Nettleton by telephoning (208) 337-4222 or (208) 459-2441. The number to reach Humboldt County Nevada Sheriff Frank Weston is (702) 623-5081.

The Idaho Department of Fish and Game also may be contacted via the department's Citizens Against Poaching toll-free telephone number — 1-800-632-5999. □

WILDLIFE ENFORCEMENT COSTS . . . BUT IT ALSO PAYS

The cost of keeping people honest, or at least protecting those that are from those that are not, is a high one. The same fact holds true even when the police are protecting wildlife and fish instead of people.

Although the actual wildlife enforcement work is carried out by officers of the Game Division of the Oregon State Police, a major share of the funding for their work is provided by the Department of Fish and Wildlife from license and tag sales revenues.

During the 1979-81 budget period the Department of Fish and Wildlife has or will provide almost 75 percent of the operating funds for the Game Division. The remainder comes from the general fund to

cover expenses for commercial fisheries enforcement, plus an additional \$96,000 from the federal government for enforcement of the Marine Mammal Protection Act.

For the 1981-83 budget period, the Department of Fish and Wildlife is proposing a two-year budget for enforcement totalling \$9.7 million from the wildlife fund, 15 percent additional from the general fund and the same \$96,000 for marine mammal protection.

This proposed budget contains \$760,000 for the addition of seven new troopers to the existing 111 person Game Division. Some of that money would also be used to reinstate the State Police Cadet Program.

While enforcement work is costly, the benefits of the efforts are many. The greatest reward is, of course, protection of Oregon's vulnerable wildlife and fish populations. But there is another reward that is figured directly in dollars.

In 1979, officers of the Game Division made 11,753 arrests. With those arrests went fines totalling more than \$400,000 called for in most cases by county Justices of the Peace or District Courts.

Under Oregon law, fines collected for recreational fish and wildlife law violations are divided evenly by the county where the case was tried and the Department of Fish and Wildlife. □

Jim Gladson
APRIL 1981



Oregon's

WILDLIFE WINDOW

As the science of wildlife management developed it went through several phases where early managers thought they had found the best solution to problems of abundance. In the end, each of these solutions proved to be only another technique to be added to a growing tool chest. Stocking was one such technique.

It seemed like such a good idea at the time. In the wild, less than one percent of the naturally spawned fish survived to become adults of catchable size. In hatcheries this figure was as high as a whopping 80 percent. The same was true with game birds. Sometimes fewer than 50 percent lived to reach the fall hunting season. Game farms produced survival in the 85 percent range up to the fall releases. From about 1930 to 1950 these discoveries put farms and hatcheries into high gear.

In time it was discovered that in suitable habitat wildlife were living at the highest level they could sustain based on carrying capacity. Where habitat was not the best, stocked forms soon perished. The case of new or introduced species is another aspect of this stocking that will be discussed in this space next month. Stocking today is recognized as an important tool to supplement natural production and provide additional recreational opportunities.

Modern studies continue to show that stocked species often disappear within a few weeks of release.

OREGON WILDLIFE

Some of this is removal by hunters and fishermen, the target audience of the stocking program. Those not taken however usually succumb to the rigors of survival in the wild. Generally, the longer reared in captivity the lower the survival after release. Stocking can also be a form of natural replacement such as the salmon released to compensate for fish habitat lost through human activities. In this case the young fish are replacing natural ones in the downstream habitat on their way to the ocean. Hatcheries and stocking allow a smaller number of adults to supply a population due to

much higher survival. This advantage ceases once the human-raised wildlife are released. From this point the wild-reared ones have all the advantage, having previously learned to fend for themselves.

Like other wildlife management techniques, habitat quality is also important to stocking. Habitat that is already at carrying capacity is like a full bucket. Add more and it just overflows. For a short instant even the overfilled bucket does not overflow. It is in this instant of a few weeks that hunters and fishermen must harvest the stocked surplus or lose it. □

THIS MONTH'S WINDOW

Put and Take

Design an experiment using an aquarium to study the effect of age on the ability of a fish to survive an increase in competition. This parallels the problems of a newly stocked fish.

Conduct a class debate on whether to stock or not to stock a local stream or lake.

Find out what kind of fish or birds are stocked in your community and why. What might be done to make it unnecessary to stock?

How much money is spent stocking wildlife or fish in your area? What else might the money be used for? What community values would be lost if stocking were halted?

COLUMBIA BASIN SALMON CUTS NECESSARY

A shortage of federal dollars nearing \$600,000 this year may force substantial cuts in production of salmon intended for the Columbia River system and personnel cuts at two hatcheries, according to Jack Donaldson, Director of the Department of Fish and Wildlife. And the funding outlook for 1982 looks no better.

The Columbia River Fisheries Development Program (CRFDP) consisting of eight hatcheries, several rearing pond complexes, support activities and research programs, is funded largely by the National Marine Fisheries Service. In spite of inflation and expansion within the program, funding has been held at a static level of about \$1.3 million for the past several years. The program was able to continue without cuts only because of income from the sale of surplus salmon carcasses and eggs at program hatcheries.

This year, however, the price paid for surplus carcasses has dropped, inflation continues and the program is headed for a substantial funding deficit. Additional funds expected from NMFS to meet the shortfall this year are now frozen and will almost certainly not become available, so unless other funds are found the only alternative will be to cut the program.

Fish Culture Supervisor Ernie Jeffries says details of the program reduction are still being worked out, but so far plans call for cutting production of four million tule stock fall chinook salmon (stocks on hand at the hatcheries will be released). A similar number would be dropped from next year's production schedule.

Some three million coho now on hand and due for release in about a month may be released early. Some 2,850,000 fingerling coho that would have been reared for release in the spring of 1982 would also be turned loose early to save feed and manpower costs.

Most severely affected by the cuts would be Cascade and Oxbow hatcheries located in the Columbia River Gorge near Bonneville Dam. Three positions are planned to be cut at Cascade and one at Oxbow Hatchery. Personnel would be shifted elsewhere in the agency if possible.

No improvement in the funding situation is seen for next year, Jeffries said, and all production at Stayton Ponds may be cut in 1982. Some seven million fall chinook for the Willamette River system are normally reared there each year.

As now planned, 11.3 million fall chinook from eggs taken last fall will be cut from the program or released early, leaving 21.9 million in the program. All of the 400,000 spring chinook of the 1980 brood year will be released.

Of coho hatched in the fall of 1979, some 4.2 million will remain for scheduled release a month from now; three million would be released early. Some 4.4 million coho from eggs taken last fall would be reared for release next spring under a reduced program, a 39.6 percent cut from planned production.

Jeffries said attempts were made to plan cuts in the areas that would have the least detrimental effect on the overall Columbia Basin development program.

The CRFDP in Oregon is a big program. It includes operation of eight large hatcheries including Big Creek, Bonneville, Cascade, Clackamas, Gnat Creek, Klaskanine, Oxbow and Sandy hatcheries, two rearing pond complexes at Stayton and Wahkeena, monitoring and treatment of hatchery fish for disease, and some hatchery biology studies on nutrition, genetics, etc. Counts of salmon and steelhead at Willamette Falls fishway, operation and maintenance of downstream migrant screens on irrigation ditches in eastern Oregon streams, engineering services for hatcheries and stream improve-

ment, and data collection on sport and commercial fisheries in the Columbia and Willamette rivers are also part of the program. □

TWO TRAPPERS GET TRAPPED

As a result of sound police work by Oregon State Police Senior Trooper Russ Wymore, two Sisters men were cited for using game meat to bait traps.

Both men pleaded guilty before District Judge George Neilson and were sentenced to serve 15 days each in the Jefferson County Jail and had their hunting rights and privileges suspended for two years. Additionally, one of the violators had his rifle seized and forfeited it to the State.

This month's tip of the sportsmen's hat to Trooper Wymore and Judge Neilson. □

STONE BLASTING SET

Florence — A stepping stone to the Devils Elbow State Park area that has caused the deaths of seven people will be blasted in an effort to save lives, government agencies have decided.

The U.S. Forest Service plans to remove a large section of one of the stepping stones that people use to cross from the shore to Conical Rock.

The large waves that sweep without warning into the gap between the rocks are forceful enough to sweep victims into water a Coast Guardsman called "too thin to swim in and too thick to breath in."

The blasting project, to be completed this winter, will widen the gap to about nine feet, which the Forest Service hopes will sufficiently discourage potential climbers.

Powder River Sportsmen



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