



OREGON WILDLIFE

FEBRUARY 1981

OREGON WILDLIFE

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OREGON FISH AND WILDLIFE COMMISSION

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Ron E. Shay, Editor
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Cover — Throughout Oregon there are many streams like this one; lacking vegetative cover, abused by flooding and unrestricted grazing, subject to severe erosion, and lacking in the ability to support fish or streamside wildlife. Jim Newton describes in this issue how one such stream has been repaired.

Photo by Ron Shay

FOR YOUR CONVENIENCE

Elsewhere in this issue is a rundown of the opening dates for the big game and upland bird seasons for this year. This is nothing new at this time of the year since the Fish and Wildlife Commission has been setting these opening dates in January for many years. The length of the seasons, bag limits and other details will be set later in the year when the necessary biological data is available from the field staff.

Setting of the openings and the seasons has evolved considerably over the years. Until about the 1940's, the legislature set the seasons every two years when they were in session. After World War II when a biological staff was created in the old Game Commission, the legislature gave the Game Commission the authority to set the annual seasons. This reflected the increasing complexity of the seasons as more hunters entered the scene and also the fact that biological data were available on an annual basis making it possible to set seasons based on these counts.

At that time, opening and closing dates and all of the details of the seasons were set in the middle or late summer. Also, at that time, there weren't as many people in the state who had to plan their vacations several months ahead.

Because of requests from the public, a few years ago the Commission began setting opening dates in January to allow for advance planning of vacation times. This still allows for adjustment of seasons lengths and bag limits later on in the year after the necessary biological information has been collected. Some of this data such as winter mortality, brood counts, and herd compositions cannot be collected any earlier because of the cycles of nature.

However, an increasing number of individuals have to set their vacation times a year in advance. At its January meeting the Commission took one more step to assist these people. The details of the seasons will still be set in early and late summer. However something new was added.

The Commission adopted a policy indicating when the major seasons would open in the future. For example, the policy states, "The general deer season will open on the Saturday closest to the first of October." This is the pattern that has been followed for many years, but now it has been adopted as policy giving vacation planners a bit more assurance that the pattern will continue. This doesn't cast it in stone, however Commission policies are not usually changed regularly nor without good reason. The other opening day policies that were adopted are included in the story elsewhere in this issue.

The new policies will not only assist the resident hunter in planning ahead, but will also be a convenience to the visitor who may be planning a trip to the state. If you are one of those who has to plan vacation time a year in advance, we suggest you cut out the story listing the pattern for the opening dates and tack it to the wall of the gun cabinet. Barring unforeseen problems, it should be a handy reference for future years.□

R.E.S.

HUNTER EDUCATION PROGRAM	
INSTRUCTORS APPROVED	
Month of December	14
Total Active	1,587
STUDENTS TRAINED	
Month of December	497
Total to Date	280,681
HUNTING CASUALTIES REPORTED IN 1980	
Fatal	6
Nonfatal	29

COMMISSION MEETING

The Fish and Wildlife Commission will conduct a general business meeting beginning at 8 a.m. on Friday, February 20 in the conference room at Fish and Wildlife Department headquarters, 506 SW Mill Street in Portland. The public is welcome to attend.□



A stream in ruin. Fifteenmile Creek following years of abuse and the Christmas Flood of 1964.

A STREAM ON THE MEND

*By Jim Newton
Fishery Biologist*

For the past six years segments of Fifteenmile Creek, a small trout and steelhead stream in northern Wasco County, have been undergoing a remarkable process of environmental recovery. Fifteenmile Creek had been ravaged by two severe floods within 10 years, and in addition had suffered a gradual deterioration of in-stream and shoreline habitat. A cooperative stream restoration/stabilization project initiated in 1974 has begun to turn things around and the results thus far are encouraging.

Fifteenmile Creek's headwaters are in the Mt. Hood National Forest just east of Mt. Hood. It flows northeast out of the timbered higher elevations before circling north through the wheat country south of The Dalles. The stream empties into the Columbia River just downstream from The Dalles Dam. Historically it supported populations of resident trout, **OREGON WILDLIFE**

steelhead and possibly salmon. The tangle of brush and trees along its banks was prime habitat for upland game birds, furbearing animals and nongame wildlife, as well as black-tailed deer and mule deer.

During the past 100 to 150 years this stream has felt the impacts of man's increasing presence within the watershed. The valley bottom was cleared for crop production and livestock grazing, reducing or eliminating streamside vegetation. Winter runoff from the dryland wheat fields carried countless tons of sediment into the stream channel. Intensive timber management and harvest in the headwaters combined with the annual cultivation of a significant portion of the lower watershed resulted in increased peak flows and reduced summer flows. Low summer flows were reduced even more by irri-

gation withdrawals, which resulted in higher maximum water temperatures further aggravated by the lack of streamside shade. At stream mile three on May 31, 1975, the daytime water temperature reached 84F, a point that is well above the lethal level for cold water fish species.

A 1975 report by the State Engineer stated that the Fifteenmile Creek watershed produces approximately 149,000 tons of sediment per year. This silt load has choked gravel bars and eliminated former steelhead and trout spawning and rearing areas. The increase in peak winter flows culminated in two floods within a 10 year period. Experts predicted such floods would occur only once in a hundred years. These floods caused severe bank and field erosion and removed most of the remnant streamside vegetation.



Attempts to reduce annual flood damage by straightening and clearing the stream failed. A stream "fixed" in this manner requires more "fixing" each year.

Cold water fish, in particular trout, are often excellent biological indicators of a stream's physical condition. A field survey in the summer of 1975 found that the lower 20 to 25 miles of Fifteenmile Creek did not support trout or steelhead production. This section of the stream provided little more than a transportation corridor for fish traveling to or from the Columbia River during more favorable times of the year. Biologically the lower 25 miles of the creek was dying.

Fifteenmile Creek was struck by the first 100 year frequency flood in 1964. This flooding caused extensive damage to homes, farm buildings, equipment and acres of valuable cropland.

Following the 1964 flood the Soil Conservation Service worked with private landowners to solve the flooding and erosion problems. The accepted corrective techniques at that time were to straighten the channel to speed the passage of flood waters and to remove streamside vegetation to avoid potential debris jams and associated problems. However, following the implementation of these practices many landowners discovered that the "improved creek channel" required "fixing" after each winter's high flows. The straightened channel accelerated the stream velocity, and this increased destructive force chewing gaping holes in the barren streambanks.

After the second "100 year flood" ravaged the stream bottom in 1974, landowners again sought assistance to repair the damage and prevent future reoccurrences. The Wasco County Soil and Water Conservation District spearheaded the search for funding assistance; while the SCS in cooperation with the Department of Fish and Wildlife and other agencies, evaluated the extent of the damage and considered acceptable remedial practices.



Members of The Dalles Chapter of the Northwest Steelheaders leant assistance in planting new streamside trees and brush, and seeding raw banks with grasses and other soil-anchoring vegetation.

The various agencies agreed the best methods for stream channel stabilization were to slope vertical cut banks and seed with a grass mixture, armor vulnerable sites with rock riprap, construct rock check dams to reduce stream velocity and fence the stream corridor to exclude livestock, except at controlled crossings or watering points.

These proposed steps were then discussed with affected property owners. In general, their response was positive. Some individuals, in fact, had become so frustrated with their attempts to control the annual erosion problems, that they were willing to try anything.

Shortly after the evaluation and preliminary planning was completed the Soil Conservation District received a federal small watershed restoration fund grant of more than \$700,000 for corrective action on several county streams. The program required no monetary participation from the property owners, since funding provided for all equipment, labor and material costs. The landowner's only obligation was to grant a temporary easement to permit construction activities on his property.

Private contractors under SCS supervision started the stabilization work during the spring of 1974 and the project was completed the follow-

ing year. Following completion of bank sloping and rock riprap placement, sportsmen from The Dalles Chapter of Northwest Steelheaders applied a grass seed mixture to more than 10 miles of streambank in an attempt to speed the revegetation of exposed soil. Sportsmen, Boy Scouts and several landowners also planted hundreds of trees and willow cuttings to hasten the growth of shade-producing stream cover.

After the stream corridor fencing was completed the problem of maintenance began. The landowners had no written obligation to maintain the 16 miles of new fence, the stream fence crossings or the fence livestock water access points. However, the ability of the streambanks to revegetate was dependent upon protection from livestock grazing and trampling. Some of this maintenance burden has been undertaken by Department of Fish and Wildlife employees and members of The Dalles Steelheader Chapter. These individuals have assisted with needed fencing repairs during the spring months

when normal farm operations are so demanding on the time of farmers and ranchers. The arrangement has not only increased the chances of stream corridor recovery, but has also helped to improve landowner-sportsmen relationships.

The level of stream corridor recovery seen in a number of locations where streambank sloping, seeding, rock placement and fencing was provided has been phenomenal. These areas demonstrate what sound conservation measures can accomplish. Unfortunately, there are also several sites where these practices were developed but, due to continued livestock grazing, plant recovery has been severely retarded. However, the vegetative extremes between grazed and ungrazed stream reaches provides a vivid contrast that has been observed by landowners, as well as resource people from throughout Oregon and other western states.

Where stream corridor fencing has been maintained, the growth of trees, shrubs and ground cover has been dramatic. In these fenced livestock

enclosures, young alder, cottonwood and willow growth along the stream often forms nearly continuous hedge-like bands from 15-20 feet high. Where growth has been accelerated with fertilizer and irrigation water, the stream disappeared beneath a complete tree canopy within five growing seasons. Grasses, sedges and legumes have armored previously exposed banks. This ground cover has not only protected streambanks, but has stimulated the natural bank rebuilding process. The vegetation has begun to trap silt and sediments carried by high flows, which in turn has provided better growing conditions for additional vegetation.

Since the conclusion of the construction phase of the Fifteenmile Creek Project, there have been several periods of moderately high winter streamflow. These freshets have caused only minor erosion in areas where there has been good cooperative maintenance of streamside fencing. However, bank erosion is a continual problem along stream sections where fencing was not provided or



1974 (all photos taken from same location)



1975



1976

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1978

where it has not been maintained. Rock riprap has helped to reduce erosion in some of these areas, but it is readily apparent that a long-term solution to this problem is dependent upon revegetation of streambanks.

The Department has not had the opportunity to fully evaluate the response of Fish and Wildlife to the project. However, observed improvements in instream habitat should eventually increase resident and anadromous fish production. These improvements include dramatic changes in the channel configuration. Natural processes have begun to re-establish a desirable pool-riffle ratio, where previously the only pools were associated with the temporary rock check dams. The stream width has been gradually reduced, with a corresponding increase in average water depth and hence improved cover for fish. The increased growth of streamside vegetation will eventually result in reduced maximum water temperatures, potential increases in minimum streamflows, additional organic food material for aquatic insects and overhanging stream cover.

The evaluation of the response of wildlife to the project is also incomplete, but field tours of the recovering stream segments have shown that upland game birds, waterfowl, non-game wildlife and an occasional deer have already discovered this narrow strip of desirable habitat. Continued growth of riparian and upland vegetation will result in further habitat improvements for all terrestrial wildlife.

This stream stabilization project has been successful in the treatment of approximately 8-10 miles of stream. This success has been totally dependent upon cooperative landowners and in some instances other individuals who have worked to speed streambank revegetation. The cooperative interactions between agencies, landowners and agencies, and landowners and sportsmen was also a significant aspect of the overall project. Without this level of cooperation and sincere interest in the resource, the final outcome would have been questionable.

The successful stabilization and revegetation of some sections of Fifteenmile Creek have already had

some spin-off benefits. Practices that have proven successful have been incorporated into other stream improvement projects in other parts of the state. In addition, at least one private landowner along Fifteenmile Creek removed livestock from the stream corridor after noting the revegetation of streambanks in an adjacent livestock enclosure and the corresponding increase in streambank stability.

Protection of stream and riparian habitats is necessary to preserve or restore streambank stability, water quality, fish, wildlife and other important values. The habitat problems found on Fifteenmile Creek are not unique, rather there are many streams around the State suffering similar symptoms. Restoration methods used on this stream should produce similar results on many of the other degraded waterways.□



This pair of photos shows the remarkable recovery that can occur in a brief period provided new plantings are given the protection they need. The photo above was taken in 1974 and the photo below is of the same spot in 1978. Alder has grown to form a closed canopy for shade, and plant roots help stabilize streamside soil.



THIS AND THAT

Compiled by Ken Durbin

A Ceiling, Not A Goal

... all bag limits are evil if they are regarded as a mark to fish for or shoot at, and this is almost invariably what happens to them. They are set as control, as a maximum not to be exceeded. Instead of using them in this way the hunter or fisherman tends to use them as a minimum measure of his sport; "I got my limit in a couple of hours," he will say. Or, if things didn't work out that well he will come home almost ashamed to admit that his skill has not yielded him every last measure of death the law allows, regardless of whether his day has been a good one. I have two hopes for the future. The first and lesser one is that game commissions will one day have sense enough to set limits that measurably reflect the sport safely available. The second and deeply urgent one is that we shall grow a race of sportsmen no one of whom will ever consider it a matter for pride to have killed a limit.

Roderick L. Haig-Brown in
Fisherman's Spring

*

Illinois Wildlife Arrests

Federal and State law enforcement officers arrested 28 people and cited 37 others for more than 600 wildlife hunting law violations last week in the Illinois River area near Springfield.

Arrests centered on the Illinois towns of Beardstown, Rushville, Browning, and Frederick in the middle of the heavily-hunted Mississippi Flyway. They included charges of illegal shooting and sale of migratory waterfowl, violation of bag and possession limits, hunting over baited fields, and possession of migratory nongame birds.

Under the Federal Migratory Bird Treaty Act, the sale of wild waterfowl is a felony, punishable by a maximum fine of \$2,000 and up to two years in jail. In one instance, Federal Government undercover agents said they had purchased as evidence 345 wood ducks and green-winged teal from two defendants.

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Firearm Safety Booklet Available

Whether you are a hunter, target shooter or casual weekend plinker, from the time you pick up a firearm, you become a part of a system over which only you have complete control. You are the only part of the system that can make a gun safe — or unsafe.

Although hunting and target shooting are among the safest of all sports, a firearms safety booklet, newly available from the National Shooting Sports Foundation, is intended to make shooting even safer.

The booklet is intended primarily for new shooters, and in fact has been packed with many new guns along with the instruction manual. The pocket-sized booklet goes beyond simple do's and don'ts to include specific "why's" and "why not's". The booklet covers the basics and may be just the ticket for a youngster who received a new gun under the Christmas tree two months ago.

The booklet is available for 25¢ each (10 for \$1) from NSSF, Literature Department, 1075 Post Road, Riverside, CT 06878.

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Treat Your Feet

Ever had sore or blistered feet after a long day afield? Of course you have. Here's a worthwhile tip from Cecil Heacox's new book *The Gallant Grouse*. You wear two pairs of socks under your boots, a light pair inside and a heavier pair over. That's nothing new, most of us have done that for years. But his suggestion is to wear the inside pair inside-out. This puts the smooth side next to the skin and any seams away from the skin. Having tried it on several chukar hunts, I can affirm that the suggestion is a good one and makes a noticeable difference.

*

Fishermen Can Help

Please carry your worn, snarled and broken monofilament — as well as any you can retrieve while fishing — home with you and dispose of it in your garbage. Remember, it *eats* your hooks, lures and outboard propeller bearings, as well as strangling and starving wildlife.

Oregon Bass & Panfish
Club Newsletter

NWF Offers Ocean Slide Show

An all new slide show, "We Care About Oceans", has been created for Wildlife Week 1981. The program focuses on sea history, natural history, marine life and marine issues. The \$9.95 price includes more than 40 color transparencies, a cassette recording and a 20-page teacher's guide. To order, send a check or money order for Item 79441 (Wildlife Week Slide Program) to: National Wildlife Federation, 1412 16th Street N.W., Washington, D.C. 20036.

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Wild Sheep Books Available:

The Boone and Crockett Club still has a few copies of its excellent book on wild sheep management for sale, the Wildlife Management Institute reports. Entitled *THE WILD SHEEP IN MODERN NORTH AMERICA*, the book is the most definitive work of its kind yet compiled.

The text is the proceedings of a workshop on the management of wild sheep held at the University of Montana in 1974. It represents the most comprehensive collection of data available on the past, present, and future status of those important game animals. Each chapter was contributed by renown wild sheep authorities from throughout North America.

Copies of the 302-page book are available from the Boone and Crockett Club, 413 N. Washington Street, Alexandria, Virginia 22314 for \$10 each.

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"Why And How" Of Waterfowl Regulations

What factors determine hunting seasons and bag limits, and what good do posthunting surveys do? What is the relationship between nesting surveys and waterfowl hunting? What do images from satellites tell biologists about goose habitat? Is banding still an important tool of waterfowl management? These and many other topics are covered in a newly printed folder, "Waterfowl Regulations: Why and How?" The publication is available free in single copies from the Publications Unit, U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240.

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1980 HUNTER CASUALTIES TIE RECORD LOW

*by Tony Faast,
Hunter Education Coordinator*

In compiling these annual statistics I always find myself trying to determine what it is that contributes to cause unnecessary and often tragic hunting accidents. Oh, I know what caused each one individually because I've got a detailed Officer's report on each one. But some patterns which recur each year begin to cause concerns about the basic motivations among some hunters in the field.

Many of the accidents involve hunters who insist on having their firearms loaded at all times, whether in their vehicle, hunting camp, or while standing around talking to one another. Remember, 60 percent of all accidents occur at a range of less than 10 feet! The question I ask is why that firearm is loaded in these circumstances? Where an accident occurs in a vehicle, I think the unfortunate answer is rather obvious. The "hunter" wants to be *ready* when he spots a deer or other game along the road. In fact, that's how one of our fatal accidents occurred this year.

In the process of jamming on brakes and piling out of the vehicle, a rifle went off and the driver was fatally shot in the head. It was a tragic accident that could happen to anyone foolish enough to be riding around with a loaded gun "ready to go — just in case".

Is it really worth the risk? Is the bagging of any game animal so important that we would risk an accident that could kill or injure a son, daughter, brother, uncle or friend? Most of us would answer "of course not!" Yet every year these accidents happen again and again.

The notion of having to be "ready" every second while in the field carries over into other aspects of the hunting accident picture as well. Hunters constantly risk having an accident by



A downward trend in hunting firearms casualties continues even in the face of growing hunting pressure.

keeping guns loaded even in non-hunting situations, in camp for instance, or while sitting around eating lunch. What better way to show respect and concern for our hunting partner than to pop the shell out of the chamber *before* approaching one another to talk about the day's hunt? Failure to take this simple precaution, unfortunately, is the basic cause of many of Oregon's hunting accidents.

Every hunter, before going into the field, should sit down and try to determine just what it is he is after with his hunting experience. Even if filling a tag or bagging the limit is *the* goal for that day in the field, the risk involved in keeping a firearm loaded every second is hardly one worth taking.

Recent hunter attitude surveys, however, have shown that hunters go

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afield for lots of other reasons: enjoyment of the out-of-doors, comradery with hunting partners, the chance to be close to wildlife of all kinds, etc. These reasons often rank higher than the "getting the game" category. I suspect this is the case for lots of us as there are many hunter days expended and not everyone fills a tag or bags a limit. If this is true, then why not do everything possible to enjoy the hunting experience yet minimize the chance that an outing will turn into a tragedy?

Take some time to review these hunting accident statistics. Then think back to some of your latest hunting trips with regard to firearm safety. Ask yourself did you have the kind of hunting experience you went out there for and did you take every precaution you could to safeguard yourself and others in your group?□

OUT OF SEASON SHOOTING NETS SENTENCES

THE ROSEBURG NEWS REVIEW recently ran a story summarizing several violation cases handled in that area. Three Myrtle Creek individuals and a man from Alaska were convicted of the out of season killing of two bull elk prior to the season.

One individual claimed major responsibility and received a \$1,025 fine with \$400 suspended, a 90 day jail sentence with 80 days suspended, two years probation, and his hunting privileges revoked for two years. The other three individuals each received fines of \$250.

In another big game violation case, a Myrtle Creek man was convicted of illegal possession of deer — two

first year fawns — and for waste of a game animal. The sentence for the illegal possession was a \$1,025 fine, a six month jail term with all suspended except 10 days, three years probation and hunting privileges revoked for two years. His sentence for waste of a game animal was \$1,025 fine, six month jail term with all suspended except 15 days, which is to be served after the 10 days of the first sentence, and three years probation to be served in conjunction with the first sentence.

Justice Court Judge Gloria McGinnis gets the tip of the sportsman's hat for the handling of these cases indicating her concern for the illegal use of the wildlife resource.□

OREGON'S 1980 HUNTING CASUALTIES

Oregon hunters were involved in 35 hunting accidents in 1980, equaling the record low for these statistics tallied in 1974. Six of these mishaps were fatal, which again matches the '74 total. This year's total continues the downward trend in accidents among hunters in the last few years. This trend has continued while the number of hunting license buyers has increased, recently topping the 400,000 per year mark. Statistically there are no surprises about the how and why of these latest hunting accidents. Most of them occur between a hunter and a hunting companion both of whom are usually less than 30 years old. The accidents occur at very close range and often while in or around a motor vehicle.□

<i>Total Casualties</i>	35	
Fatal	6	17%
Nonfatal	29	83%
Self-inflicted	11	31%
Hunting partner	19	54%
Other shooter	5	15%

DURING THE PAST FIVE YEARS HUNTING LICENSE SALES HAVE AVERAGED APPROX. 400,000 PER YEAR.

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<i>Season</i>		
Fatal	5	15%
Nonfatal	25	70%

<i>Pre-Season</i>		
Fatal	1	3%
Nonfatal	4	12%

<i>Distances</i>		
Less than 3 yards	21	60%
3-25 yards	5	14%
26-50 yards	3	9%
51 yards and farther	5	14%
Unknown	1	3%

<i>Hunting Equipment Involved</i>		
Handguns		
.22 caliber	3	9%
Other	1	3%
Rifles		
.22 caliber	7	20%
High power	9	25%
Shotguns	14	40%
Muzzleloaders	0	0
Bow	1	3%

<i>Comparison Statistics</i>		
<i>Year</i>	<i>Total Casualties</i>	<i>(Fatal)</i>
1979	35	(6)
1978	50	(5)
1977	41	(6)
1976	50	(4)
1975	58	(7)
1974	35	(6)

<i>Animals Being Hunted</i>		
Deer	9	25%
Upland game birds	9	25%
Elk	4	12%
Migratory birds	5	15%
Rabbits	3	9%
Squirrels	2	6%
Predators	1	3%
Other species	2	6%

<i>Reason For Casualties</i>		
Insecure rest	1	3%
Defective firearm	2	6%
Mistaken for game	5	14%
Loading and unloading	1	3%
In or on a vehicle	8	23%
In the line of fire	5	14%
Negotiating obstacle	0	0
Horseplay with firearm	1	3%
Drawing or holstering handgun	2	6%
Swinging on game	3	9%
Unclassified	7	20%

<i>Ages of Shooters</i>		
(including self-inflicted)		
-19	11	32%
20-29	9	27%
30-39	5	14%
40-49	5	14%
50-59	2	3%
60-69	0	0
Unknown	3	9%

FISH AND WILDLIFE COMMISSION PASSES ON HUNTING SEASON ISSUES

The Fish and Wildlife Commission has adopted opening dates for most 1981 hunting seasons. Closing dates, bag limits, open areas and other regulations will be set later after biological data on animal populations has been gathered from the field. The opening dates were set early for the benefit of those planning vacations or trips to the state.

The general statewide buck deer season will open October 3. Rocky Mountain elk seasons will open October 31 for the first period and November 7 for the second. For Roosevelt elk the first period will begin November 14 and the second will start November 21. Antelope season will begin August 15 and the statewide deer and elk bowhunting season will start August 22.

Blue and ruffed grouse season will open August 29 statewide and eastern Oregon chukar and Hungarian partridge season will open concurrent with deer season on October 3. In western Oregon and Klamath County the season will open October 17. Pheasant and valley quail season will begin statewide on October 17, with mountain quail season to begin August 29 in western Oregon and October 17 in eastern Oregon provided census data indicates a season is justified in 1981. There has been no eastern Oregon mountain quail season the past two years because of low populations.

Closing dates and other regulations for all these species will be set March 20 for antelope, cougar and bighorn sheep; May 30 for deer and elk; and August 21 for upland birds and waterfowl.

In addition to setting opening dates in January, the Commission adopted a policy which, among other things, spells out the opening dates for future years. This will benefit sportsmen in the future who must commit to a vacation date a full year in advance. In practice the Commission has adopted opening dates that vary only slightly from one year to another, anyway, so the convenience afforded the sportsman will cost little



in management flexibility. But the policy goes beyond opening dates for some seasons. As finally adopted the policy is:

- * No general big game hunting season (one for which hunter numbers are not limited) would begin prior to August 1 or after December 15.
- * Statewide general buck deer season will begin the Saturday nearest October 1.
- * Rocky Mountain bull elk season will begin the Saturday nearest November 1 (two or more seasons are possible).
- * Roosevelt bull elk season will begin the second Saturday in November (again two or more seasons are possible).
- * Buck antelope controlled season will begin the third Saturday in August.
- * General early bowhunting season will begin on the Saturday six weeks prior to opening of the general rifle deer season, and end not later than the Sunday before opening of the rifle deer season. Late bow seasons will be provided for deer and elk in selected areas where management objectives would not be adversely impacted.
- * A bear summer pursuit season will begin August 1 and end no later than three days prior to the bear take season. The bear kill season will begin the Saturday nearest September 1 and end no later than November 30.

* Antlerless deer and elk seasons will be scheduled as needed to control populations or alleviate damage problems.

* No muzzleloader deer seasons will be held prior to the general buck season and no muzzleloader seasons will be set for elk.

* Handguns would be permitted during bear, deer and cougar seasons under the single weapons concept where the hunter has his tag or permit validated by the Department "handgun only" and is limited to that weapon for that species for the season.

In addition to the opening dates and policy, the Commission set pursuit and hunting seasons for bear. The open harvest season will be August 29 through November 30. A spring no-kill pursuit season is set for March 28 through April 26 and a summer pursuit season from August 1 through August 26. In these seasons no weapon can be carried, and bears may not be killed or injured.

Fish and Wildlife Department staff had proposed some changes in procedure for administering controlled hunts, and the Commission adopted some proposals and turned down others.

A proposal to eliminate the first come, first served system for issuing permits in some controlled hunts and go to a drawing for all controlled hunts was rejected by the Commission. Although the Commission recognized there are currently serious problems with the first come, first

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served system because of inconsistent mail service, post office bundling of community mail, and other factors, they nonetheless hesitated to drop the system this year because of the inability under the current computer drawing program to handle large party hunt applications.

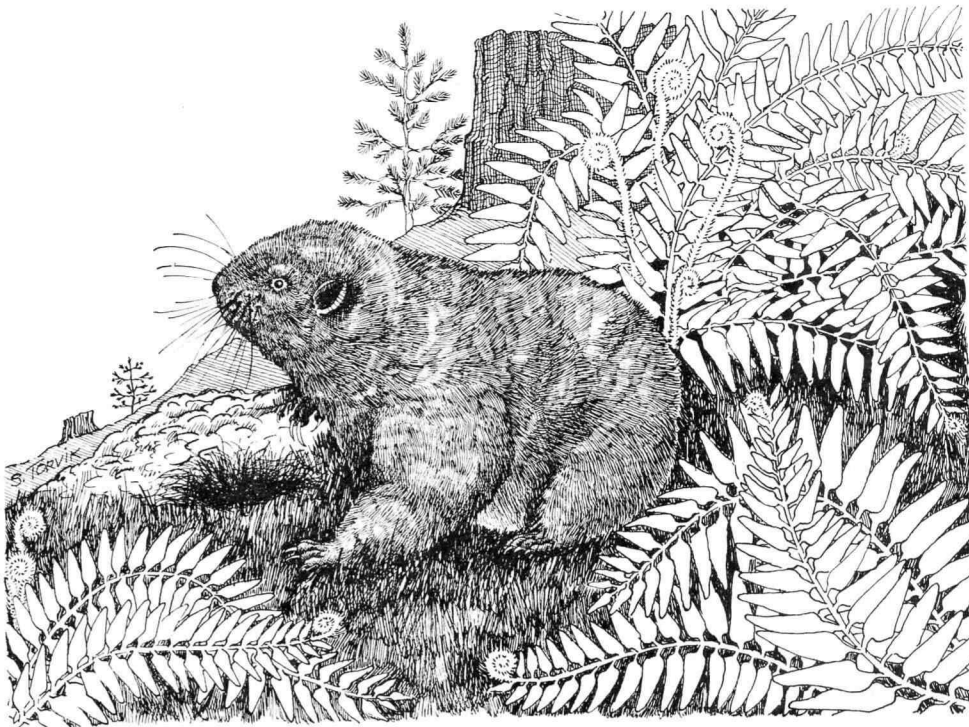
The Commission also decided not to drop the \$1 controlled hunt application fee as recommended by staff. Instead a suggestion that controlled hunt application cards be purchased at local license agencies for \$1 each was adopted. This would continue to bring in revenue to pay for administration of controlled hunts and drawings, yet eliminates the problem of sending cash through the mail. The license agent would be entitled to charge the 25¢ transaction fee charged for issuing other documents. Controlled hunt permits and tags for deer and elk will also be issued through license agents, again eliminating the need for sending cash or tags through the mail. Under the new system, an applicant successful in a controlled hunt drawing for deer or elk would receive a permit authorizing him to purchase the necessary tag from a local license agent.

Permits for cougar, bighorn sheep, antelope and turkeys would continue to be issued by the billing method used in the past, but the volume of these permits is relatively small and much less of a problem than when all permits were issued by mail.

Because the new system represents new procedures for license agents, License Revenue Supervisor Norm Goodfellow has scheduled 51 training meetings for license agencies throughout the state. Meeting locations are now being lined up and a schedule will be sent to agents as soon as possible. Goodfellow says all meetings will take place between March 2 and May 21.

A proposal to eliminate the big game tag sale cutoff dates was not considered by the Commission although it had been proposed earlier by the staff. Although the regulation causes problems in keeping license agents supplied with tags and has also caused a few people each year to miss out on deer or elk hunting, the rule is popular with the public and there has been much support expressed for it.□

OREGON WILDLIFE



MOUNTAIN BEAVER

Oregon's most misnamed creature has got to be the mountain beaver, for this large rodent is neither a beaver nor does it really prefer the higher elevations. Compounding this problem is the animal's colorful nickname of "boomer", for it hardly makes any noise at all except for the crunch-crunch at mealtime.

Historians have no concrete answers to the origins of these handles, except that boomers like to dine on young trees of sapling size and perhaps this similarity to the beaver stuck through the years.

The first recorded information on the mountain beaver is found in the journals of the Lewis and Clark Expeditions. Chinook Indians called long robes and blankets made from mountain beaver hides "sewellel". The journals also indicate that this was also the tribal name for the animal itself.

Boomers are found throughout the foothills and slopes of the North Pacific coast from British Columbia down into northern California, preferring logged-off areas and clearings. A maze of twisting tunnels keeps this animal busy year-round, as this creature does not take winters off to hibernate.

When springtime comes, mating occurs with each female bearing two to three young in a nest made from leaves, dried ferns and grasses. Three months later, the youngsters set out on their own.

Appearing much like a reddish-brown muskrat with no tail, mountain beavers are nocturnal, secretive and rarely seen. Small eyes, short ears, long whiskers, highly developed front feet designed for digging, and apparent lack of a tail, distinguish this rodent from lookalikes.

Until recent times, boomers never much got in the way of civilization, preferring to eat the weeds, small plants and wild saplings near home. But as more lands went into reforestation, the new second-growth fir seedlings became too tempting as did future crops standing on Christmas tree farms.

Besides the angry woodland owner, however, the mountain beaver has only two real natural enemies in the mink and the weasel, both of which like to inhabit the same tunnels, sometimes chasing the boomer through its own maze.□



Too many deer for the existing food supply means poor general herd health and winter losses to starvation, disease, and parasites.

GAME MANAGEMENT MISCONCEPTIONS

*By Hammond Eve
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Note: This article originally appeared in the June, 1976 issue of OUTDOOR OKLAHOMA, and appears here courtesy of the Oklahoma Department of Wildlife Conservation.

A general misunderstanding of ecology has led a faction of our population to conclude that "game" management is detrimental to nongame species, and that hunting is an unnecessary, cruel activity. The leaders of this parade are often taken in by some writers who find it rewarding to attack hunting; so rewarding in fact that it becomes their livelihood. All one needs to do is to report a certain game management activity, which can be verified; present whatever uninformed or purposefully in-

accurate interpretation meets the personal scheme of the instigator; then rely on the gullible to become so biased they refuse to communicate with the "enemy".

Assuming that animal populations, if left alone, will stabilize at a level in balance with available food is a fallacy. Some will, and some will not. A robin is adept at extracting worms from lawns, but he also eats caterpillars, beetles and assorted fruits. When there are too many robins for the available food, the bird's only alternative is to seek a less populated feeding area. He cannot rip the earth asunder in search of worms. So, the earth will continue to yield worms at a given rate. He cannot change food habits or invade the niches of other species. The robin consumes the "interest" that the habitat provides, but

he is incapable of destroying the "principal". He cannot render his environment incapable of supporting robins.

Most species of wildlife live in harmony with their environments, as does the robin. A notable exception, however, is the hoofed browser. Where food production exceeds consumption, deer move about feeding and nibbling on various plant species, stripping none. Under these conditions the plant community is diverse, and the food the deer consume may be considered the excess yielded by the habitat.

As deer density increases, however, the most desired food plants will be nibbled more frequently by more deer, until they are consumed or die. The disappearance of these plants is a slow process apparent only to the

trained observer. The diversity of plant species is reduced slowly, eventually forcing deer to eat plants of inadequate nutritional value. Deer first exceed the habitat's carrying capacity, then begin to reduce the carrying capacity itself.

This phenomenon is easily understood, if a single browse plant is considered. A plant must have a minimum amount of foliage to meet its own metabolic needs, and it will have some foliage in excess of this. This excess, the "interest", can be consumed by browsers over an indefinite period with no harm to the plant. As the deer population continues to grow, however, the deer will consume more than the plant can afford to supply, and will begin to destroy the "principal". This begins to reduce the habitat's capacity to provide food. Thus, deer have the capability of altering their environments to their own detriment.

If exceeding the carrying capacity resulted in a sudden die-off and removed the bulk of the deer herd for a period of quite a few years, the habitat could recover to some extent. But this is not what normally happens. A slow decline begins in the health of all deer, followed by declining reproductive success and increasing fawn mortality. Enough deer continue to survive, however, to prevent full range recovery, and the continuing food shortage results in malnourished deer. In the absence of some form of control, both deer and habitat decline. The deer are poor physical specimens subsisting on the brink of starvation, consumed within and without by parasites, but still producing enough offspring to perpetuate their dilemma.

Some people who believe in letting nature take its course have claimed that, with the reduction in deer numbers, other wildlife species could increase to occupy a larger portion of the habitat. An ecological principle, Gause's Law, states that two different species cannot continue to occupy the same niche at the same time, or that two species in direct competition cannot coexist. Removal or reduction of deer will not result in an increase of other species, unless these species are competing with deer.

OREGON WILDLIFE



The spikey branch tips in the photo above are the result of annual growth. Below, deer have removed the annual growth and have begun to get into the heavier, woodier parts of the plant. They have eaten all the vegetative interest and are beginning to dip into the capital.



Birds and other animals needing low shrubs for nest sites or other purposes would definitely be scarce on an area seriously overpopulated with deer. Overpopulation is not the biologist's objective, however, and where it occurs it does so because the biologist has not been granted the authority to rectify the situation. Most wildlife areas are not overpopulated with deer. Thus, to eliminate scientific

deer management would result in environmental abuse, rather than balance. Specifically, a decline in diversity of both plant and animal species would occur, not an increase.

A productive game management area is diversified. There will be tracts of mature forests and both grassy and brushy areas. Where any of these communities join an ecotone is created, and many different species



In years when deer create browse lines on secondary food plants like juniper as shown in this photo, you can be sure they have already severely damaged the primary food plants such as bitterbrush.

abound. Good game lands also produce excellent habitat for a variety of nongame species. The bird-watcher can hardly condemn conservation departments which urge diversification of mature hardwoods to get more brushy growth for deer, since cutting some hardwoods creates nesting habitat and cover for wrens and many other species.

Deer in many parts of the eastern United States were extirpated by the turn of the century. The game departments, with hunter support, eventually reestablished deer in these areas. To allow the herds to expand, it was at first necessary to harvest a percentage of the herd that was less than the annual rate of increase, which was accomplished through "bucks-only" laws. This led to the

public belief that with bucks-only laws there would be deer, and without that law there would be none; so what is now an out-moded practice in some areas cannot be abolished. The hunter is presently in a transition period between sticking to his buck-only heritage or going to harvest of doe on areas where this is necessary.

Another erroneous belief non-hunters hold is that animals displaced by habitat destruction constitute a surplus population, which they say is one of the goals of game departments. Such departments would not create population surpluses through habitat destruction. The objective is to develop good habitat. When animals are displaced by habitat destruction, they generally just disappear. Habitat destruction, short of

floods and fires, is an insidious process that gradually reduces the animals' living space and does not create surpluses.

Any successful population increases at a geometric rate, while its means of subsistence increases at an arithmetic rate. Ideally, the population will increase to the habitat's carrying capacity. When an overpopulation develops, the source is within the population, the simple result of natality exceeding mortality. Intrinsic checks on deer population growth rates are inadequate, and overpopulation is inevitable if deer are not harvested. When a deer herd grows larger than the number which the habitat can sustain, it will eventually consume all natural vegetation within reach and starve. This illustrates another aspect of deer behavior; they stay in place and starve, rather than leave in search of food.

Animals are not people, and anyone assigning human attributes to animals or trying to understand their behavior in terms of human needs and emotions is destined to remain ignorant. The life spans of most animals are rather brief. Nature is a killer with a voracious appetite. Of 1,000 song sparrows hatched, 900 will die in less than 18 months. Of 1,000 rabbits born, 800 will die during the first year. In an unhunted population, the majority of deer will die within three years. Causes of these deaths are starvation, predation, diseases, parasites and accidents. An animal is lucky to be killed by a predator, either man or animal, rather than undergo the lingering agony of some of nature's other processes. Deaths among animal populations are of awesome magnitudes, yet the species survive. Man's intelligent harvesting of wild creatures is, in fact, a part of natural phenomena.

Man is a part of the natural world, not an intruder from outer space, and his right to live on this planet is equal to that of any of the other life forms. Man's knowledge and intelligence separate him from other animals. He can transmit knowledge from one generation to the next, and it is perfectly reasonable to expect him to be able to manage his environment for recreational and aesthetic enjoyment without endangering the survival of wildlife species.□



Oregon's

WILDLIFE WINDOW

Perhaps the most important and basic of all principles applied in the science of fish and wildlife management is the concept of *carrying capacity*. Roughly defined it is the number of living forms of a particular species that any area of land or water can provide the essentials for and support until the next breeding season.

Every identifiable unit of land or water has a limited amount of basic necessities for survival: food, water, cover and space. The quantity and quality of these set the upper limits of any population. No species can exist in a healthy state for long above the carrying capacity of the habitat it occupies. A physical area of land or water will usually have a variety of carrying capacities; one for each different species that lives there. Unless several species compete for similar basic requirements the carrying capacity for each is separate from the others.

Carrying capacity varies with the season. Most of us are accustomed to thinking of it at least in winter, when the food, and shelter are minimal in many areas. This is true for most terrestrial creatures. For many fish it occurs in summer when the water is scarce and its temperature rises to or near the tolerance limit.

The lowest carrying capacity reached during the year often sets the population level for wild forms. Despite man, disease, predation and accidents, the lowest carrying capacity during the year on whatever suitable habitat is available usually has

the most impact on both high and low population levels. Many species do not have sufficient reproductive ability to reach carrying capacity when the latter is at its maximum. They do, however, produce more than can live through the time when the carrying capacity is most limited. Thus it is the low level that really governs population size.

A frequently asked question by the summer visitor to the outdoors, be it park, forest, beach, or streambank is "why aren't there more ..." of whatever creature they expected to en-

counter. Carrying capacity is usually the answer. Not all waters are good for trout. Not all green things in the forest are deer food. Not every tree is suitable for a woodpecker's nest. Everywhere, even the ocean, has a carrying capacity for the creatures that live there.

People have the same basic needs as animals. We have a better way of getting and moving them to where they are needed but there are limits for us too. Carrying capacity applies to all living things.□

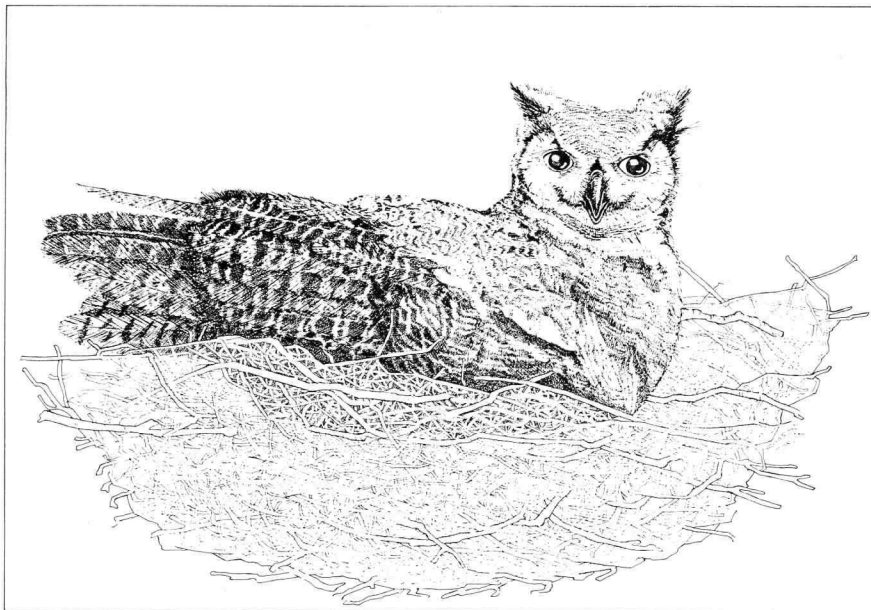
THIS MONTH'S WINDOW

So Many and No More

Check with your principal about the effect on school facilities of adding 30 percent more students each year. Does your school have a carrying capacity?

Design an experiment to demonstrate carrying capacity using an aquarium, a supersaturated liquid, or your own classroom.

Discuss the carrying capacity of the earth for humans. Is there such? Who decides what it is? Do humans compete with any animals for space and other necessities of life? What is the result of this competition?



Great Horned Owl

DO SOMETHING *Wild*

This year you will have a chance to donate part of your Oregon Income Tax Refund to the Nongame Wildlife Fund. The Fund is used for the study and protection of nongame wildlife and their habitats.

Watch for the check-off box on your Oregon Income Tax Form.

Make your mark for Oregon's wildlife future.



SUPPORT OREGON'S NONGAME WILDLIFE
Oregon Department of Fish and Wildlife

Single copies of the 9½x20-inch nongame poster shown above are available from the department by writing the address at the bottom of this page.

NATIONAL HUNTING AND FISHING SURVEY UNDERWAY

One of the oldest and most comprehensive continuing surveys of Americans who participate in fishing, hunting, and other pastimes involving fish and wildlife began again last month when the U.S. Fish and Wildlife Service began its 1980 "National Survey of Fishing, Hunting, and Wildlife-Associated Recreation."

This survey has been conducted every five years since 1955 by the FWS as a way to gauge American participation in hunting and fishing. Survey results provide federal and state planners with information useful in the management of fish and wildlife resources and in providing adequate recreational opportunities for the public.

In 1975, for instance, the survey found that nearly 96 million Americans nine years of age or older took part in one or more types of wildlife-

related recreation. Included in this figure were 20.6 million hunters, 53.9 million anglers and over 49 million people who observed wildlife.

The 1980 survey will be conducted in two phases. The first phase began in January when more than 100,000 households, randomly selected from across the country, will be polled by telephone for information measuring their participation in fishing, hunting, and related "nonconsumptive" activities such as wildlife observation, photography, and feeding.

During the second phase of the survey in March and April, close to 40,000 individuals will be interviewed by the U.S. Bureau of the Census to gather detailed information about the activities in which they participate, including, among other things, the amount of time and money spent on fishing, hunting, and other wildlife-related activities.

The survey is paid for with proceeds from excise taxes on sporting arms, ammunition, archery equipment, and fishing tackle, as authorized by the Federal Aid in Fish and Wildlife Restoration Acts, commonly known as the "Dingell-Johnson" and "Pittman-Robertson" Acts.

The 1980 survey has been designed in conjunction with other federal and state agencies to provide fish and wildlife managers in each state with detailed information about their particular areas, as well as a national summary.

The FWS expects to publish its report "1980 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation" in early 1982. Copies will be available for sale by the Superintendent of Documents, U.S. Government Printing Office, at that time. □



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