

# OREGON WILDLIFE

May-June 1990



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## The Cover

**"They cannot shoot or throw their quills, but North American porcupines can make life pretty miserable for visitors who don't show the proper respect."**

## HUNTER EDUCATION PROGRAM

April - May 1990

Instructors Approved ..... 9  
Total Active ..... 800  
Students Trained ..... 741  
Total to Date ..... 350,240  
Hunting Casualties Reported in 1990  
Nonfatal ..... 3  
Fatal ..... 0

# Looking at Issues

Earlier this year, the Department of Fish and Wildlife began a new series of public information meetings designed to provide background information on key issues facing fish and wildlife resource management. We are calling the series "Issues 90."

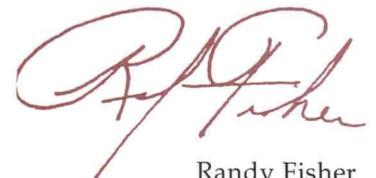
Our first meeting this spring dealt with heap leach gold mining, including a description of the mining process and its possible effects on wildlife. In May the department sponsored a presentation on Rocky Mountain elk management and potential reductions in these populations. The most recent "Issues 90" session covered a status report on selected wild stocks of Columbia River salmon.

The timing was right on that one, coming only five days after conservation organizations filed a petition to list some salmon runs as endangered species. Articles on both the elk issue and salmon status are also included in this *Oregon Wildlife*.

More of these discussions will be scheduled in the months ahead, as will supporting articles and other information. The decision on what to cover will always be based on our best judgment about what important resource issues need closer public attention and greater understanding.

In many cases, other state and federal agencies are actually the final decision makers on how certain regulatory questions will be handled. If those actions affect fish and wildlife, however, the outcome is still very much our business. The department, as a natural resource agency, has always been deeply involved in these decisions, providing technical expertise and impact assessments to other regulators.

Having a say in decisions is also the business of people who care about these resources. While we may lack formal authority to say yes or no on certain issues and activities, we can play a major role in keeping the public informed. Open, public scrutiny and discussion of land and water use impacts on fish and wildlife helps people get involved in the decision-making process. Such dialogue also leads to better ultimate decisions.



Randy Fisher  
Director

# Oregon's Mule Deer Management Plan

## The Process Begins

*"Habitat degradation, periodic severe winters, limited control over hunter numbers and distribution, and predation make it difficult to meet management objectives for herd size and buck escapement. The result is that recreational opportunity is being lost."*

**S**o says the "Problem Statement" in a draft plan that will ultimately set the course that guides mule deer management in Oregon for the next several years. This public review draft of the Department of Fish and Wildlife Mule Deer Management Plan was assembled in May by a work group comprising agency biologists, representatives of various users groups, federal land managers and private land-owners. All have a stake in curing what ails the deer of eastern Oregon. The plan goal is to "Manage mule

*deer populations to provide optimum recreational benefits to the public, and be compatible with habitat capability and primary land uses."*

This planning process will be a very public one, with ample opportunities to review the current and future drafts of the plan and attend public meetings scheduled around the state during July and August to share concerns and ideas (See schedule below). Wildlife managers intend to bring a final draft of the plan, reflecting comments from the public meetings and a second taskforce ses-

sion, before the Fish and Wildlife Commission in December, 1990 for review and adoption. Approved plan concepts will be used to shape proposals for 1991 mule deer seasons.

Copies of the draft plan are available for inspection at department regional and district offices. It is also available by mail — Mule Deer Plan, Attn: Wildlife Division, PO Box 59, Portland, OR 97207. People who want to be on a special mailing list to receive periodic updates on the planning process may request that service by writing the same address 

### PUBLIC MEETING LOCATIONS FOR MULE DEER PLAN

(All meetings are from 7-10 p.m.)

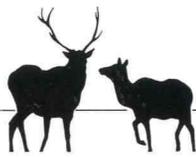
AREA	DATE	PLACE	ADDRESS
La Grande	7/31/90	Zabel Hall, E.O. State Col.	La Grande, OR
John Day	8/1/90	Grant Union High School	John Day, OR
Burns	8/2/90	Burns High School	Burns, OR
Eugene	8/7/90	Forum Rm 308, Lane Com. Col.	Eugene, OR
Coos Bay	8/8/90	North Bend High School	14th & Pacific North Bend, OR
Newport	8/9/90	Marine Sciences Center Auditorium	Newport, OR
Pendleton	8/13/90	Morrow Hall, Blue Mtn. Com. Col.	Pendleton, OR
The Dalles	8/14/90	Dry Hollow Elem. School	1314 E 19th The Dalles, OR
Portland	8/15/90	ODFW Headquarters	2501 SW First Portland, OR
Salem	8/16/90	Building 3, Rm 116 Chemeketa Com. College	Salem, OR

? Future Uncertain For ?  
Northeast Oregon Elk . . . ?  
? And Elk Hunters ?

*by Pat Wray*



UNKNOWN



*"Elk face three problems in northeast Oregon. They are habitat, habitat and habitat."*

*Don Wilt, ODFW wildlife biologist*

**N**ORTHEAST OREGON'S Rocky Mountain elk population is like a medical patient that looks healthy but is feeling poor inside. Although the symptoms are not yet easy to see, northeast Oregon elk herds could soon be in trouble, according to Oregon Department of Fish and Wildlife biologists.

People accustomed to seeing, photographing and hunting thousands of elk in the Wallowa-Whitman, Malheur and Umatilla National Forests over the past several decades might find it difficult to believe that animals in such numbers could actually be in decline. But numbers of elk don't tell the whole story about the general health of the herds.

Don Wilt, Pendleton wildlife biologist, explains the situation this way. "Elk face three problems in northeast Oregon," Wilt says. "They are habitat, habitat and habitat. Northeast Oregon elk habitat is lacking in quantity, generally poor in quality and good remaining habitat is poorly distributed."

These factors lead to deteriorating herd conditions that dictate a variety of fundamental hunting regulation changes and access restrictions in the years to come. On June 2 of this year, the Oregon Fish and Wildlife Commission took a step toward protecting herds by proposing that all northeast Oregon hunt units that currently remain open to general season hunting be restricted to limited entry beginning in 1991. Only the first hunt period would be limited to a drawing in 1991, however, while the second period remains open to all appropriate tag holders.

"This action should come as no surprise," says Department of Fish and Wildlife Director Randy Fisher.

"We have been warning people that timber harvest, cover loss to insects and fires, and extensive roading in those units are at odds with maintaining elk herds at current levels on public lands. Since we have no power to manage land use, we use the only tool we do possess — restricting animal harvest," he said.

Elk require three things from their habitat — food, water and cover. Water is not normally a limiting factor for Oregon elk. A moderate rate of timber removal can even benefit elk by providing more food if cover is maintained in sufficient amounts. Logging, much like forest fires, creates open areas in which forage vegetation flourishes. Bert Cleary, a recently retired ODFW habitat biologist, put it this way. "If I were managing a forest just for elk, I would cut some timber, too."

Extensive timber removal, however, often reduces cover to the point that elk will not remain in the area, even though their food may be plentiful. Elk require both hiding and thermal cover. Hiding cover is thick vegetation, providing a security area, within which elk can escape detection and disturbance. Thermal cover, which may consist of fairly open vegetation at ground level, is found under a multi-layered, insulating tree canopy. Thermal cover protects the animals from summer and winter extremes of temperature. It is especially important in winter because it reduces snow depths.

Studies indicate that a ratio of 60 percent forage areas to 40 percent hiding and thermal cover stands is ideal for elk. Under current federal land management, this ratio has been difficult to maintain, according to wildlife managers.

A number of unsettling symptoms have shown up in the last 20

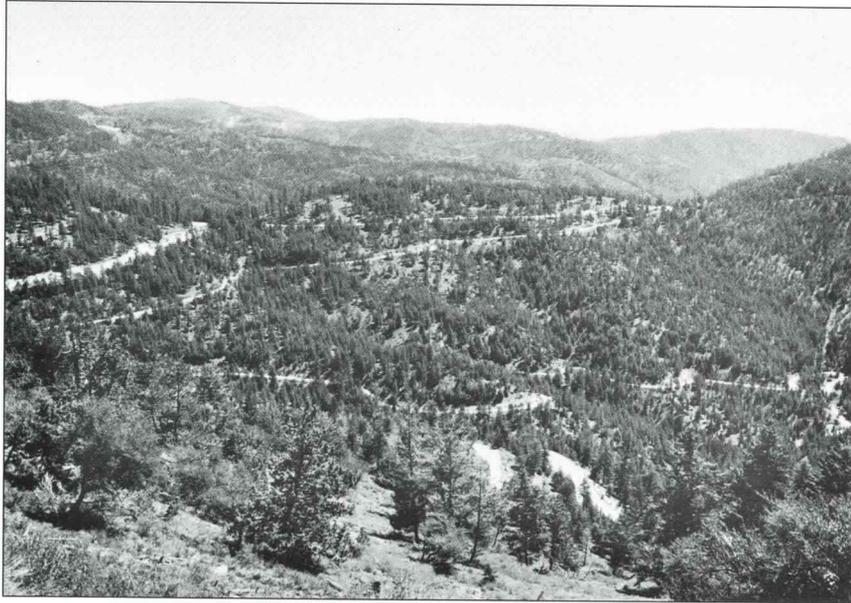
years to illustrate the problem. Although cow elk pregnancy rates remain fairly high, calf survival rates have declined dramatically. In many areas, bull ratios have dropped below the five to 10 per 100 cows considered necessary to maintain a healthy herd.

Tim Schommer, wildlife biologist for the Wallowa-Whitman National Forest, says that "Since the early 1980s we have been dipping well below the 30 percent cover level in many forests in the northwest United States. In some places it is now in the 20 percent range. Elk on public land have difficulty finding places to hide from human disturbance or avoid thermal stress," he said.

The problem of cover loss has been compounded by recurrent insect outbreaks, that began in the early 1970s, and recent forest fires, according to biologists.

Logging roads worsen the already serious problem of habitat loss in elk country. Rock or earthen roads are typically built in national forest lands to support logging or timber salvage operations. Unfortunately, logging roads make nearby elk herds more vulnerable to human interference year-round, not just during hunting season.

"There are currently 6,000 to 9,000 miles of roads on each of the three northeast Oregon national forests and more roads are being built each year," says Dan Carleson, department Forest and Grassland Program Manager. "Road densities exceeding four miles per square mile are common. Each mile of road eliminates four acres of cover or forage and replaces it with rock. But even more important is the effect on elk of the increased vehicular traffic and numbers of people which travel the roads."



PAT WRAY

*Logging roads, and the hum activity that takes place on them, make adjacent areas less acceptable to elk. When roads are constructed in close proximity to each other, like these in the Wallowa-Whitman National Forest, they cause a significant loss of useful elk habitat.*

Elk move away from people and spend less time in habitats near roads. Each road bulldozed through the forest reduces the desirability of habitat on each side. Roads built close together effectively enclose large tracts of land between them, making them unattractive to elk. All of these factors combine to reduce areas used by elk and force them away from their historic habitat. Elk unable to avoid roads are much more vulnerable to people who scout or hunt from vehicles.

"We use what we call a Habitat Effectiveness Index or HEI to rate elk habitat," says Schommer. "The HEI model has three main factors: forage, cover and road density. When considering the roading factor, for example, no roads would result in 100 percent habitat effectiveness. One mile of road per square mile of forest equals 70 percent effectiveness. Four to five miles of road per square mile results in a 22 percent HEI. The Wallowa-Whitman National Forest averages nearly five miles of road per square mile on managed forest lands."

New forest management plans recognize the impact of roading and call for a density of 1.5 to 2.5 miles of road per square mile of land open to

public use when designing future timber sales. "Federal land managers understand there are short and long-term habitat problems out there," says Jim Lauman, Department of Fish and Wildlife regional supervisor in LaGrande.

"I believe we are developing productive partnerships to address critical habitat issues. We are all involved in a good faith effort to correct past concerns and prevent future problems," Lauman said.

Road closures have been a fairly effective method of protecting elk in heavily traveled areas where roading is already a problem. The department works with the U.S. Forest Service to determine what roads might best be closed to public access to benefit elk. Some roads are closed year round, while others are closed only during hunting seasons. Locked gates work well in some cases, while earthen berms block other access points. In some permanent closures, the road may be dug up and replanted.

Public reaction to road closures is varied.

"The timber industry likes closures," says Schommer, "because less road maintenance is necessary. And a good portion of the hunting

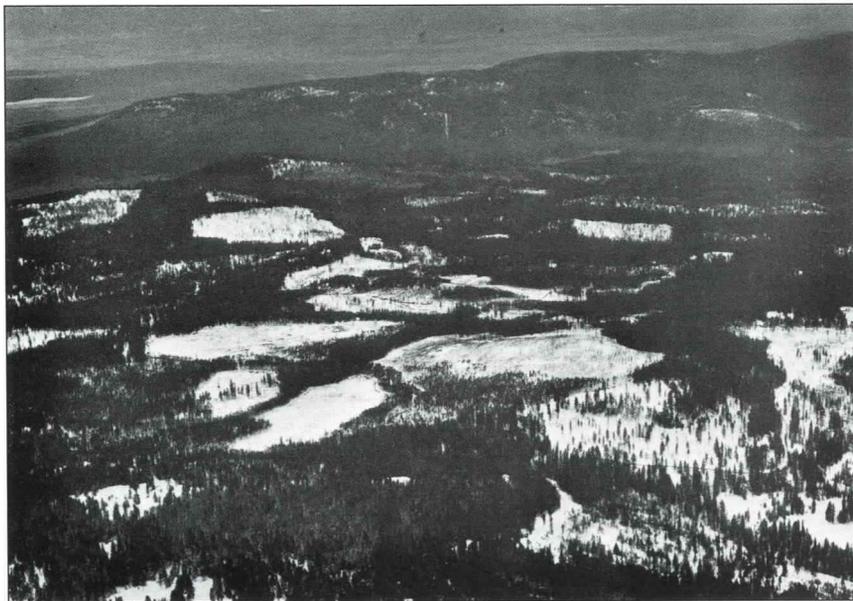
public likes closures because they know closures are good for elk and contribute to a quality hunting experience. Besides reducing the harassment factor, closures also tend to spread hunters."

Other hunters dislike the closures, however, because they are unable or unwilling to walk long distances or pack out their kills, according to wildlife managers. Some people object on principle, saying that a public road should always be open to public access.

Firewood cutters, berry pickers and other forest users are often more stridently anti-road closure than hunters and have occasionally demonstrated against planned closures.

Timing of road closures is important as well. "Once people get used to driving on new roads it's a lot tougher to close them," says Dan Carleson. "We would prefer to limit motorized access to one or one and one-half miles per square mile, but motorized access to public land is still much greater now than it has ever been in the past.

"Heavy hunting pressure, combined with extensive roading, unrestricted vehicular access and reduced cover means that hunter harvest of



*While timber harvest creates forest openings which may improve big game food production, hiding and thermal cover are sometimes lost or left in such small segments that they are useless to elk.*

PAT WRAY

surplus animals occurs in hours instead of weeks," says Carleson. "In fact, there are several areas in northeast Oregon where mature, branch-antlered bulls are very rare and most spike bulls cannot expect to live past opening weekend of rifle season."

Such a situation has a negative effect on both elk and humans. Elk herds forced to live in such vulnerable circumstances show a significant drop in productivity possibly caused by a chain reaction of factors. One widely held explanation is that spike bulls are not as effective at impregnating cows as older, branch-antlered bulls. Spikes are thought to be less able to service as many cows and they tend to breed later in the year.

Cows that conceive late drop their calves later. The younger a calf is when winter arrives, the less chance it has of surviving the colder months. In the longer term, late-born cow calves are less likely to become pregnant in their third autumn than those born a month or more earlier. Also, late-born bull calves will mature later, thus further delaying the breeding season.

The question of spike bull breed-

ing effectiveness is presently being studied at the Starkey research area in northeast Oregon.

Another reason for reduced productivity is simple harassment. Elk which must continually avoid people and vehicles, both during and outside hunting seasons, cannot maintain prime body condition. The result, according to wildlife biologists, is a gradual decline in the quality of elk herds.

Some biologists believe that the timing of hunting seasons, when combined with reduced hiding cover and extensive roading, may affect pregnancy rates, breeding dates and the ability of elk to store body fat prior to winter. This concern, and other factors, will be addressed in a new elk management plan to be initiated in 1991.

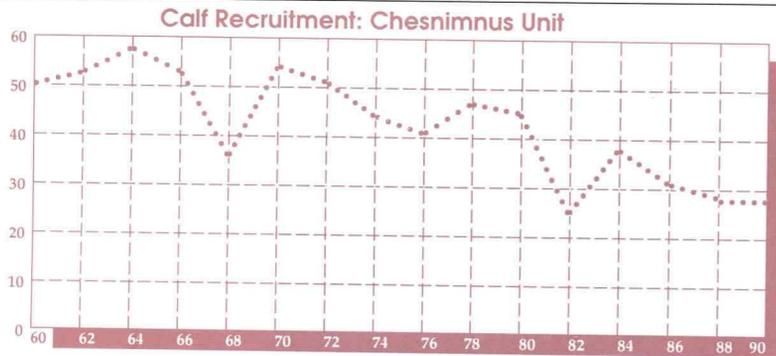
Usually, the quality of traditional hunting also deteriorates with the proliferation of roads. As hunter concentrations increase, hunting from vehicles on roads becomes more common and human competition for animals more intense. Ugly behavior sometimes follows.

Rocky Mountain elk are very mobile animals, and will change locations if their historic habitat is made unsuitable. This movement of elk in

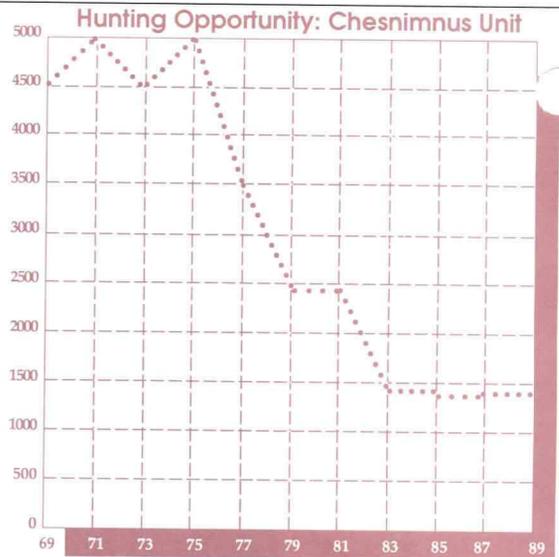
the last decade in northeastern Oregon has established a consistent pattern. When life gets hard on public land that has been too severely logged or roaded, elk simply move to private lands. The animals may not find better cover there, but there is definitely a higher degree of security from harassment, according to wildlife managers.

Private lands usually restrict public access to some degree and thus provide a more hospitable area than heavily used public lands. There are some landowners who like having elk on their property. Other farmers and ranchers may accept some elk damage, but are not willing or able to sacrifice their fences, crops and hay.

Once elk are established on private lands, a whole new set of issues arise. Some landowners have taken advantage of the elk influx onto their land by charging money for the opportunity to hunt. These fee hunting operations provide landowners with another source of income, but may cause an overall loss of hunting opportunities to other Oregon hunters. Relatively few people are willing or able to pay hundreds or even thousands of dollars for hunting access.



Degradation of hiding and thermal cover combined with harassment caused by increased vehicular traffic, results in the gradual decrease of elk calves surviving to join the herds as adults.



As bull elk survival has decreased due to habitat loss and extensive roading, wildlife managers have been forced to reduce opportunities for hunters. This graph reflects declining hunting opportunities in the Chesnimnus Unit over the last 20 years and probably foreshadows the future in much of northeast Oregon.

The movement of elk from public to private lands results in a related human migration. Elk hunters disenchanted with poor chances of success in once-favorite areas typically concentrate on other accessible public lands which still hold elk. This human migration further narrows the focus of hunter effort and continues the downward cycle of opportunity on public land.

A decline in elk hunter numbers, for any of a variety of reasons, will cause a direct decrease in the funds cycled through Oregon outdoor-oriented businesses. Throughout the state, and especially in northeast Oregon, this impact is significant. Elk are big, big business.

Elk generate about \$30 million each year in secondary revenues to Oregon communities. Many small northeast Oregon businesses depend on the seasonal influx of money generated by hunting. Wildlife management programs funded by license buyers are also affected as license revenues decline.

Obviously, many Oregonians have a decided interest in maintaining the northeastern Oregon elk population at, or very near current levels. But will it be possible? Only in the short term, says Rod Ingram, ODFW Wildlife Division Chief.

"We can protect some bull elk by

imposing restrictive hunting measures, such as limiting hunter numbers," says Ingram, "and maintain the overall elk population at current levels for a while. But, if habitat destruction continues on public lands, elk numbers and hunting opportunities will decline.

"Even if a drastic change were made in timber harvest and road building practices today, the extensive loss of cover and increased road access in northeast Oregon National Forests will probably still require some restrictive measures in order to ensure bull escapement and herd productivity," Ingram says.

"Realistically, Oregonians need to understand that we are on the verge of a significant, long-term reduction in hunting opportunities for elk in northeast Oregon," Ingram warns.

"The bottom line is this," says Donavin Leckenby, an ODFW elk research biologist. "If elk don't have adequate habitat, if we can't protect them from the inadvertent harassment resulting from extensive roads, then we can't manage them like we are supposed to. We can only restrict hunting opportunities."

Fish and Wildlife Director Randy Fisher agrees that the department's ability to do more is limited, but does not believe the situation is hopeless. "We are not trying to tell

elk hunters they should sell their guns. We are telling them the straight facts in an effort to get them involved — that's the key.

"Management of public lands is not in Department of Fish and Wildlife control. We can offer biological data and management opinions on potential land and water use impacts, but the actual land use decisions are made by the Forest Service and the Bureau of Land Management based on Congressional direction," Fisher says. "They oversee timber harvest, grazing, mushroom picking, sightseeing, road-building and everything else that affects those public lands. Because these are public lands, the federal agencies do try to be responsive to public concerns," he said.

Although most national forest plans are at or near final form, actual timber sales and road construction proposals are still open to public review and comment, according to Fisher. "Hunters can still control their own destiny, if they take the time to understand the issues and get involved by offering their opinions. While some level of reduced hunting opportunity may be inevitable, how large those reductions will be in the long term is still part of the public decision-making process. People can make a difference."



# HABITAT REBIRTH

*Conservation Reserve Program, Green Forage program work for benefit of ranchers and wildlife*

*by Randy Henry*



RANDY HENRY



RANDY HENRY

*Erosion — barren soils allow heavy rains to sweep soil away.*

*Oregon Department of Fish and Wildlife biologist Don Wilt talks with farmer Lee Porter. Cooperative efforts between farmer and agency, made possible by Green Forage Funds and the Conservation Reserve Program, means better habitat for wildlife.*

**L**EE PORTER was like many Umatilla-area farmers in the 1950s. As wheat prices surged to \$6 a bushel, Porter scrambled to put every inch of land he could into production.

"I broke this land myself," he says pointing across the hillsides near Pilot Rock. His hard work paid off for a while, until the "big flood" hit and washed seed and topsoil right off the fields.

Other years, the wheat was like a sponge on the shifty Palouse soils of northeastern Oregon. Year after year, the wheat sapped the moisture from the hilly terrain, eventually leaving bare soil exposed to the wind and rain. As the nutrients were

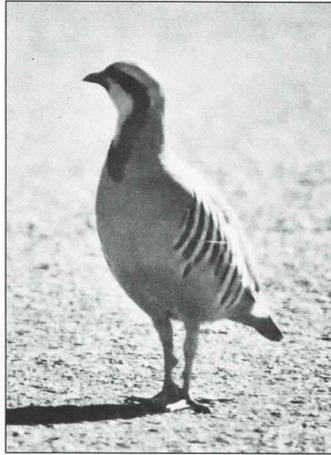
sucked out and the erosion worsened, long scars cut into the flesh of the land. "It was very apparent to me that the land should no longer be farmed," he says.

The farming took its toll on wildlife, too, and not just in the hills, says Oregon Department of Fish and Wildlife biologist Don Wilt, of Pendleton. Rodents were driven out of the fields, so hawks had little food. Marsh land was drained or dried up. The wheat was a poor year-round habitat for pheasants and chukars, and cattle grazed stream sides to dust. Chemical spray occasionally drifted through uncultivated areas, killing or weakening protective trees and bushes. Deer and other wildlife

congregated on green cropland forcing many damage complaints from farmers, says Wilt.

The scene is familiar throughout northeastern Oregon. While many areas continue to produce high quality wheat, alfalfa, potatoes and cattle, other areas can barely grow thistles. "This land wasn't just used. It was abused," says Porter.

But now as Porter looks over his land, he sees a different and changing sight. Just north of his home, a small herd of white tail deer drinks at a pool in a draw that was once dry. Pheasants call and beat their wings, and hawks circle the skies looking for prey. The land is waking up. "It's a good feeling," says Porter.



RANDY HENRY

*Why did the chuckar cross the road?  
To get to the CRP/Green Forage land.*

### **CRP and the Green Forage Program**

Two programs have come together in the last decade to help alleviate over-farming and improve wildlife habitat. The results are impressive, say biologists.

State legislator Mike Thorne (D-Pendleton) was one who heard the complaints from his constituents in Wallowa County. Deer and elk were causing extensive damage to crop land. "It became apparent to me that something had to be done to help solve this problem and mediate the situation," said Thorne. The Green Forage bill was developed. By its order, funds were set aside to pay for wildlife habitat improvement on public or private lands. The improved habitat would, in theory, draw deer and elk from green alfalfa fields and other crops and cut down on agricultural damage.

Green Forage funds were set aside at the direction of the 1981 and 1983 Oregon legislature. The money was only to be used for forage development and maintenance — not to pay farmers to take land out of production.

The federal government has taken various tacts to deal with the problem of over-farming. The latest venture is the Conservation Reserve

Program (CRP), a product of the federal 1985 Farm Bill. The Farm Bill takes marginal lands out of production and reduces agricultural surpluses of certain crops. The program pays qualifying landowners \$50 an acre per year to put these marginal lands "to bed" for 10 years. Wheat grass is planted and noxious weeds are controlled at the farmer's expense. For 10 years, the farmer agrees to not harvest, graze or otherwise draw a profit from the land agriculturally.

CRP addressed some of the problems facing these lands, but it didn't specifically address wildlife habitat. Because CRP pays farmers to take the land out of production, it seemed natural that the Department of Fish and Wildlife should get involved, said Thorne, and that the Green Forage program could compliment CRP. With that in mind, Glen Ward and Bob Krein, of the department's Heppner office, proposed that one pound of alfalfa be added to each acre of wheat grass seed. The alfalfa would provide better forage for wildlife, a better mix for birds, and would replenish the nitrogen in the soil. Ward and Krein worked with the Soil Conservation Service to get seed mixtures approved, and used state Green Forage

funds to foot the bill for farmers. This approach soon became standard practice in northeastern Oregon.

CRP requirements allow 25 percent of highly erodible land per county to be enrolled in the program. Nearly 170,000 acres have been entered in Wasco and Sherman counties; 110,000 acres in Morrow; 40,000 in Gilliam; and 100,000 acres in Umatilla.

Not all land is eligible for CRP. Soil Conservation Service classifies land by its erodibility. Only land that is susceptible to wind or water erosion at a pre-defined level can be entered, and it must have been planted to annual crops for three of the five years before the application was filed.

Land targeted by department biologists is within winter forage areas, which are designated within each county's comprehensive plan. These areas are where big game is likely to feed during the winter months, according to studies by department biologists.

### **Program benefits wildlife, farmers**

Fish and Wildlife participation and success in CRP varies from region to region, but biologists and farmers in the Columbia counties are praising the work as highly successful. Crop damage from game animals has dropped significantly throughout the Umatilla, Morrow, Gilliam and Sherman counties, says Krein. He used to get 20 or more complaints a year from farmers. Reports that 200 to 300 deer were grazing in a field of alfalfa were not uncommon.

There were four complaints last year, says Krein. The deer prefer the CRP land, especially land seeded with the alfalfa mix. The deer don't just feed on this land — they live there, says John Beck, biologist in The Dalles. He's seen a 250 percent increase in the number of deer on certain routes over CRP land during aerial surveys. He can't say if the populations are increasing, but he



*A small herd of mule deer gathers on CRP/Green Forage land near Heppner. Damage complaints on agricultural crops have dropped, say biologists, because deer would rather winter and graze here.*

knows that animals are using the CRP land in much greater numbers.

Farmers are reacting positively, too. "This has dramatically improved relations with ranchers," says Wilt. "Now that crop damage has been reduced, attitudes have changed and the two sides are working together, not against each other." Senator Thorne agrees, saying the program has done some good. Part of his own farm, located between Hermiston and Pendleton, is also in CRP.

Biologists offer their expertise to farmers to make the habitat projects as beneficial as possible. Krein says he is working with 15 to 20 landowners to add shrubs to the CRP land — a move that would improve year-round cover for upland game birds.

In The Dalles, farmers have literally lined up to take on such projects, says John Beck. There are already 300 ground-level water tanks, called "guzzlers", in Wasco and Sherman counties. A guzzler is a 500 gallon tank buried in the ground with a tin roof several feet above it. The roof is slanted with a gutter on the lower end to drain rain into the tank. A ramp descends into the tank so small animals can reach the water year-round.

Since CRP began, 15-20 guzzlers have been added and there is a waiting list for another 25. Ranchers are also finding that fencing stream

edges from cattle not only provides better habitat for fish, birds and other wildlife, but improves water quality and quantity while decreasing erosion. About 70 miles of fencing have been built in Sherman County and positive results are well documented. "It's been very successful," says Beck.

The number of pheasants, chukars and other upland game birds is increasing. Beck says he counted 200 pheasants wintering along four miles of stream in Fulton Canyon where there were recently none. Krein says the populations are healthy around Heppner. Participation in CRP is in its first years in Pendleton and Pilot Rock, so "the bucket isn't full yet," says Wilt. But as more alfalfa-grass mix and shrubs are planted, and as farmers become more attuned to wildlife habitat, he expects the numbers to improve. Wilt would like to see Green Forage dollars used to purchase Russian olive trees, poplar trees and shrubs to benefit upland game birds. Projected costs for trees and shrubs are about \$300 an acre. Trees and shrubs being planted now are put in at the cost of the farmer.

Beck points out that other forms of wildlife are also benefiting. He notes a 30 percent increase in raptors, including rough legged and red tailed hawks, kestrels, shrikes and prairie falcons. "What that tells me is our rodent population is definitely improving," he says.

In the past, Beck says he would go five or six years without seeing a burrowing owl. Now he sees several each year. The observations are echoed in the other districts.

### The future of CRP

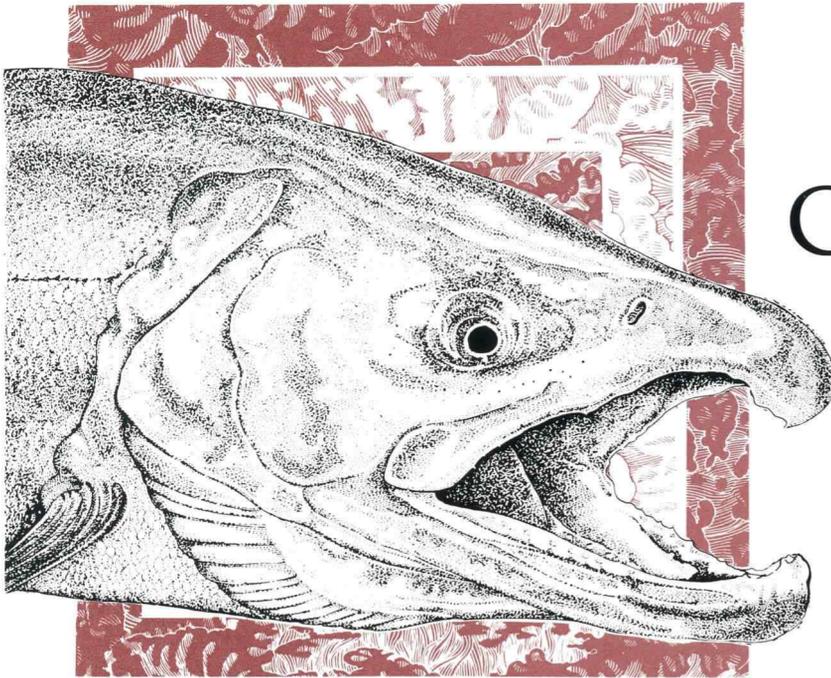
The clock is winding down on some CRP lands. The first lands will leave the program in 1996. Ranchers and biologists speculate on whether the program will be continued, or what will follow.

As the CRP lands continue their 10-year journey, several things will happen, according to biologists. The grasses will mature and collapse into dense mats of vegetation, explains Beck. Evaporation will be cut and should help replenish ground water supplies so needed by farmers. But as the stands mature, the thick vegetative mat will inhibit future growth and cut the habitat value dramatically. Krein, Wilt and Beck all feel that some sort of manipulation — either burning, flail mowing or even grazing — will help assure that the fields will provide maximum habitat. Senator Thorne expects such options for management to be considered in the future.

CRP was not designed to produce better wildlife habitat, says Wilt. But by taking an active part, being creative and working face-to-face with farmers, that habitat is being provided. "The CRP program has dramatically decreased damage complaints. We've assisted in that," says Wilt. "We have an opportunity to substantially improve habitat."

Rancher Lee Porter is just one of hundreds of farmers to play a part in the process. Porter has sold off most of his equipment and has all of his 500-plus acres in CRP. Sipping a cup of coffee in a lush green garden amidst the dry, grass-covered hills, he explains his future plans for his ranch, house and garden. He intends to continue improving his land for wildlife, he says. "It'll never stop as long as I'm topside."





# Columbia Basin Wild Salmon

By Jim Gladson

In recent years, the total number of adult salmon returning to the Columbia River Basin has averaged about 2.5 million fish annually. That sounds like a lot of fish, and it is. So why is the federal government now considering listing some salmon species as endangered?

Consider this. Biologists estimate that total annual salmon runs in the basin prior to the arrival of white settlers may have reached 16 million fish. All of those salmon were wild. They spawned in streams and tributaries ranging from the lower Columbia to the far reaches of Idaho and eastern Oregon and Washington.

A lot has changed since that pristine time. Today, naturally-spawning salmon make up only a portion of the fish returning to the system. The majority of returning adults started life in hatcheries.

While some wild salmon stocks have managed to hang on at reasonable population levels, others have suffered. A variety of land and water use practices as well as fish management activities over the last century have had an unmistakable impact.

Now the National Marine Fisheries Service (NMFS) is considering whether several wild salmon runs should be listed as endangered species by the federal government. In February, the Shoshone-Bannock In-

dian tribes petitioned NMFS for the listing of an Idaho race of sockeye salmon. On May 30, a group of conservation organizations followed with a petition for listing of the spring, summer and fall chinook stocks of the Snake River system, and wild coho that enter tributaries in the lower Columbia.

Under the federal Endangered Species Act, the Secretary of Commerce, acting through the National Marine Fisheries Service, has oversight responsibility for fish caught commercially or in ocean recreational fisheries and marine mammals, while the Secretary of the Interior, through the U.S. Fish and Wildlife Service, oversees all other fish, wildlife and plants. Review of petitions and decisions on listing by either cabinet officer follows a strict timetable.

First, the responsible agency has 90 days from the date of petition filing to decide whether the listing request has merit and justifies continued review. NMFS has already accepted the sockeye petition. Simply having a petition accepted, however, does not automatically mean the species will be listed as threatened or endangered.

Once further study is considered justified, the agency must then complete a status review of the petitioned species and make a proposed

listing decision within one year of the filing. This decision must be based on the best available scientific information, and usually comes after an exhaustive technical study by qualified scientists.

Such action is followed by a public review period of up to one year before a final rule on listing is adopted. So legal listing of any species may take two full years from the original petition filing date.

If the final decision is to put a species on the federal list, then the process moves on to development of what is called a recovery plan. The objective of all recovery plans, according to federal officials, is to find a way to restore troubled populations to the point they can be removed from the list.

Plan development can take several years, or move very quickly depending on the species and the complexity of its circumstances. While the listing decision is based entirely on scientific data, the recovery plan must also consider economic impacts of various recovery options before adopting a final plan. To date, fewer than half the species on the federal threatened or endangered list have approved recovery plans.

Let's move to a brief question and answer format to see what this

# What's Going On Here?

means for the Columbia River salmon now under review.

Q: Are these salmon stocks really in trouble?

A: Based on a report compiled by the Oregon Department of Fish and Wildlife at the request of Oregon Senator Mark Hatfield all of the species in question have suffered serious population declines. This report does not draw any conclusions, however, on whether any of these species should be listed. That decision will come only after intense scientific investigation and public involvement over the next two years.

Q: If we already knew about these problems, why haven't fishery managers done something about it before now?

A: Very strict regulations protecting many of these species have been in effect within the Columbia Basin and in ocean waters for years. This is particularly true for the spring and summer upriver salmon runs. Ocean catch quotas have been limited and in-river fisheries either restricted to short time periods or eliminated completely to conserve some stocks. A Columbia River fishery management plan, in place since 1988, sets strict guidelines for allowable harvests. In addition, millions of dollars have been spent to restore habitats and improve fish passage over dams.

What is the state role in the status review process?

A: All management authorities in the Columbia Basin — including the

states, Indian tribes and other land and water use managers such as the Corps of Engineers, the U.S. Forest Service and the Bonneville Power Administration — will be heavily involved in the scientific review process.

Q: Must development of a recovery plan wait until the two year process is completed, or can something be done now?

A: As noted above, many protective regulations are already in place, and scientific study continues. Senator Hatfield has also urged authorities within the basin to step up coordinated efforts aimed at developing recovery plans for these stocks.

Preparation of such plans, however, will not necessarily prevent a decision to list one or more of these stocks. Such advance work, under any circumstance, would provide a greater opportunity to halt these population declines.

Q: Why is protecting these fish so important?

A: Allowing all of the salmon runs in the Columbia Basin or any other system to become totally dependent on hatchery production does not make good scientific sense. These wild stocks are the products of evolution and adaptation spanning thousands of years. They are literally the best fish in the river. They carry within them a genetic history that is vital to long term survival of the species.

Hatchery production methods and fish stocking guidelines are be-

coming very sophisticated. Fish produced in hatcheries today are the best they have ever been. This does not mean, however, that even the most dedicated hatchery manager would say naturally producing stocks are unnecessary. Wild fish serve as a critical source of brood stock to assure the continued strength of hatchery programs.

Q: What does all this mean to people who fish on the river or in the ocean?

A: It will certainly mean a period of confusion, controversy and speculation. But there will be no speculation here. Trying to predict ultimate impacts on fishermen and other water users so early in this process would be extremely irresponsible and certainly unproductive.

Keep in mind, however, that before any recovery plan is adopted under the Endangered Species Act, there must be an opportunity for public review and comment. Even if none of the species are formally listed, coordinated efforts to protect these populations would be adopted only after extensive involvement of all parties likely to be affected. 

## ANSWERS (QUIZ PAGE 14)

- A You should have placed your "A" somewhere in the shallows near the brushy area. The food for the aquatic insects is provided by the brush (leaves, twigs, etc.).
- B Your choice here should be near the spring. Fish hang out here when water in the rest of the lake is warm and contains less oxygen than they would like.
- C This place is where the incoming stream enters.
- D Your "D" should be in the gravel or mud area near the gravel bar.
- E This would be near the outflow point.
- F This place would be near the logs and brushy shoreline.
- G Any place that the bottom changes (gravel to rock, mud to gravel, etc.) is a good place for fish to hide.

# To Fish A Lake

By Bill Hastie

**Y**ou fight your way through another patch of underbrush, snagging your lightweight flyrod, again, on branches that seem to constantly grab at you.

Up ahead, somewhere, is water to be fished — if you can just find it. Your struggle through the brush is rewarded a few minutes later when the forest opens onto a beautiful lake.

You have fished many lakes before, but none quite like this one. It seems there are never two alike: each one offers its own special gifts and challenges. You study your discovery carefully. Where you choose to cast your fly is all-important, for fish will not travel far for a meal.

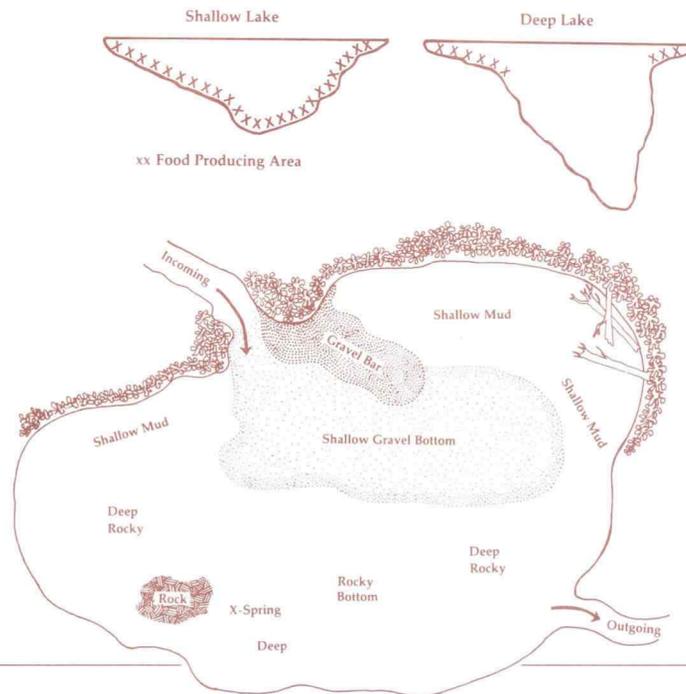
Like people, they hang out near food sources. Humans can usually be found at restaurants, in frozen yogurt shops or resting between meals. Fish are no different.

They can usually be found near their food sources of aquatic insects, small shellfish such as crayfish, and other small edibles (even small fish!).

As an experienced angler, you also know that the shape and depth of a lake have a lot to do with its ability to grow food and fish. Shallow lakes, especially those with muddy bottoms, make good homes for many insects that live in the water during the larval (early) stage of their life cycle.

For example, the lake diagrams show the majority of bottom food for fish is in fairly shallow water. So, a shallow lake is productive over its entire bottom, while deeper lakes are limited to their shallow edges for food production.

Now, the decision is yours. Where will you fish the pictured lake? In the deep areas? Near the rock? Where the stream enters? Many places in the lake offer something that fish need, either for food or resting places.



## Questions

- A - An area rich in food for aquatic insects. The insects often lay their eggs here, and the large changes in water temperature cause the eggs to hatch at distinct times. Small fish come here to eat the insects, and big fish come to eat the small fish (especially early morning and late evening).
- B - Fish can be found here during times of highest lake water temperatures. Here, the water is cooler and therefore contains more oxygen.
- C - A place where immature insects (and some adults) that fall into flowing water are brought into the lake. Small fish also come here to feed, and in turn, attract larger fish.
- D - Another area of large changes in water temperature. Here, the insects and crustaceans in the lake are dislodged from their hiding places by wind and waves. Again, small fish and large fish feed here.
- E - A place where insects that hatch in the lake are accidentally concentrated. Big fish feed on these insects in the eddies here.
- F - Area where most of the cover in the lake is concentrated; a favorite hiding place for large fish.
- G - Something on the bottom here attracts fish, where they hover just above.

Answers on page 13

I was walking in the coast range one day when I was surprised to see a fern walking alongside me.

Suddenly the fern stiffened, quivered and fell to the ground. I leaped over to it, prepared to render first aid if necessary. As I reached down to help I was startled by a snarly little voice and an even snarlier little message.

"If you want to keep all those fingers, you'd better leave my lunch alone."

Quickly withdrawing my hand, I searched for the speaker. He was sitting a few inches away from the fern. He looked a little like a small gopher, with no discernible head or tail. He had very wide whiskers and hairless feet that resembled human hands.

"I'm not here to bother you or your lunch," I said indignantly. "I only came over to help this fern. It was walking along beside me and suddenly fell over."

"That fern is my lunch, you dolt!" said the creature. "I was carrying it back to my house when you scared me and I dropped it."

"Oh," I said, feeling small enough to run from spiders. "Sorry."

"Oh, that's all right," he said, softening quickly. "I shouldn't have snapped at you but I'm feeling a little rough around the edges today. The fleas are especially bad this year."

"They sure are," I agreed. "My dog has been just miserable."

"Your dog doesn't know what misery is," said the creature. "How do you think your dog would feel if he carried around a few of these?" He pointed to a monster insect, almost half an inch in length, that was crawling in the fur behind his left foreleg.

"What in the world is that thing?" I asked.

"That," said my companion with more than a trace of pride, "is the world's largest flea, found only on me and others like me."

"Wow! That's quite an honor . . . well, that's . . . that's really . . . something." It's hard making a flea sound

# Mountain Beaver

by Pat Wray

like an accomplishment worthy of praise.

"By the way," I said when I got my tongue working again, "what are you and others like you?"

"Why, we are mountain beavers, or boomers as some of you humans refer to us."

"Oh, yes. I've heard of you and I read references to you in the journals of Lewis and Clark."

"Yes, they were the first white men to write about us. Of course, they named us inaccurately. We actually are more closely related to squirrels than to beavers. What else have you read about us?"

"Well, there doesn't seem to be an awful lot written about you. In fact, I think you might be one of the least well-known mammals in North America."

"Well, that's a fine thing, considering we are the oldest surviving rodent in the world."

"No kidding," I said.

"Nope. My ancestors go back 55 million years, to the late Eocene period. We've had all kinds of enemies during that time, bobcats, mink, weasels, owls, skunks and snakes. It's only been in the last 50 years or so that humans also became enemies. Now you and your kind trap many of us every year."

"I'm sorry about that, but mountain beavers are very abundant, and cause thousands of dollars of damage every year to young trees. People have to protect their investment and their effort."

"Yes, it is true that we can eat young Douglas firs at a rapid rate, but it's real hard not to, when you humans plant them in a big smorgasbord for us in the clearcuts.

When you consider that most of us never stray more than 50 yards from our burrows, you can probably un-

derstand how we might have an impact on trees planted nearby."

"That's interesting. We are a good quarter-mile from the nearest stream right now. How do you get enough water without traveling?" I asked.

"Good question. We get what water we need from the vegetation that we eat. In fact, we stack vegetation outside our burrows to dry, then we store it in chambers inside our burrow and eat it when it has the moisture content we need."

"Are there a lot of chambers in your homes?" I asked.

"If you were a little smaller, I'd invite you in to see," he said. "The older, better established homes have more chambers, but almost all homes have at least one food storage chamber, a sleeping or nest chamber and a chamber to store feces. Many also have a chamber where we store baseballs."

"Baseballs?" I asked.

"Not human baseballs. Mountain beaver baseballs are rocks that we uncover in our digging and keep for future use in the tunnels."

"How do you use them?"

"We block off portions of our burrows from predators with them. We can also sharpen our teeth on them."

"You sharpen your teeth on rocks?"

"Sure, they'd get pretty dull on a diet of ferns, fir and grasses. We need to keep them sharp to protect ourselves. We handle ourselves pretty well, you know. Even weasels think twice about coming straight at us in our own tunnels."

I had to be going so I thanked the mountain beaver for his time and turned to go.

"Don't forget," he called out to me. "People should know more about us. We're a great story. Oldest living rodent, world's largest flea, we sharpen our teeth on rocks. You'll never find a better story than we are."

When I looked back the mountain beaver was clipping fronds from the fern and stacking them neatly in a pile outside his house. His teeth really did look sharp. 

# "Wild and Fishy III"

## Oregon Wildlife's Third Annual Photo Contest

Oregon is a state with abundant wildlife, outstanding scenery and tremendous opportunities for outdoor experiences. That is the only conclusion a person can reach after viewing the photos submitted the past two years in Oregon Wildlife's photo contest.

Although it will be hard to beat the first two rounds, we are ready to see contest entrants give a good try. The deadline for entries will be January 7, 1991. Oregon Wildlife is also interested in hearing from businesses or organizations around the state that might be willing to sponsor some prizes for winners of the 1991 contest.

### CONTEST RULES

#### Divisions:

Entries may be either 35mm color slides or unmounted, 8 x 10 black and white prints (no framed or mounted photos please).

#### Categories:

1. **Wildlife**— This includes all animals, fish, reptiles, amphibians and invertebrates. It does not include photos that show people in the scene.
2. **Scenics**— This category offers entrants a chance to celebrate Oregon's beauty. It includes photos of all geographic regions with emphasis on landscapes.
3. **Fishing Scenes**— There will be two sub-categories in this level: one for sport, and one for commercial.
4. **Hunting Scenes**— This includes photos afield or in camp.

#### Rules:

1. All entries in this photo contest will become the property of the Oregon Department of Fish and Wildlife, and available for repeated use in department publications and audio-visual productions. No submissions will be returned. Duplicate slides will be accepted.
2. Entrants may submit a maximum of two entries per category.
3. Each entry must be accompanied with the completed form.  
Forms must be affixed to the back of prints or clearly associated with slide entries. Slides should be in some form of protective sleeve.

<b>"WILD AND FISHY"</b> Photo contest entry form A form must be submitted with each entry.			
(Please print)			
Name _____			
Street _____			
City _____		State _____	Zip _____
CATEGORY: (check one)			
1. Wildlife <input type="checkbox"/>		2. Scenics <input type="checkbox"/>	
3. Fishing Scenes <input type="checkbox"/>		4. Hunting Scenes <input type="checkbox"/>	
FORMAT: (check one)			
1. 35mm slide <input type="checkbox"/>		2. print <input type="checkbox"/>	
<small>I understand that this photo or slide entry automatically becomes property of the Oregon Department of Fish and Wildlife, and will not be sent back to me. This entry is released to ODFW for use at agency discretion with recognition of the photographer.</small>			
Signature _____		Date _____	

Mail all entries to WILD AND FISHY, PO Box 59, Portland, OR 97207.



Oregon Department of  
Fish and Wildlife  
PO Box 3349  
2501 SW 1st  
Portland, OR 97208

