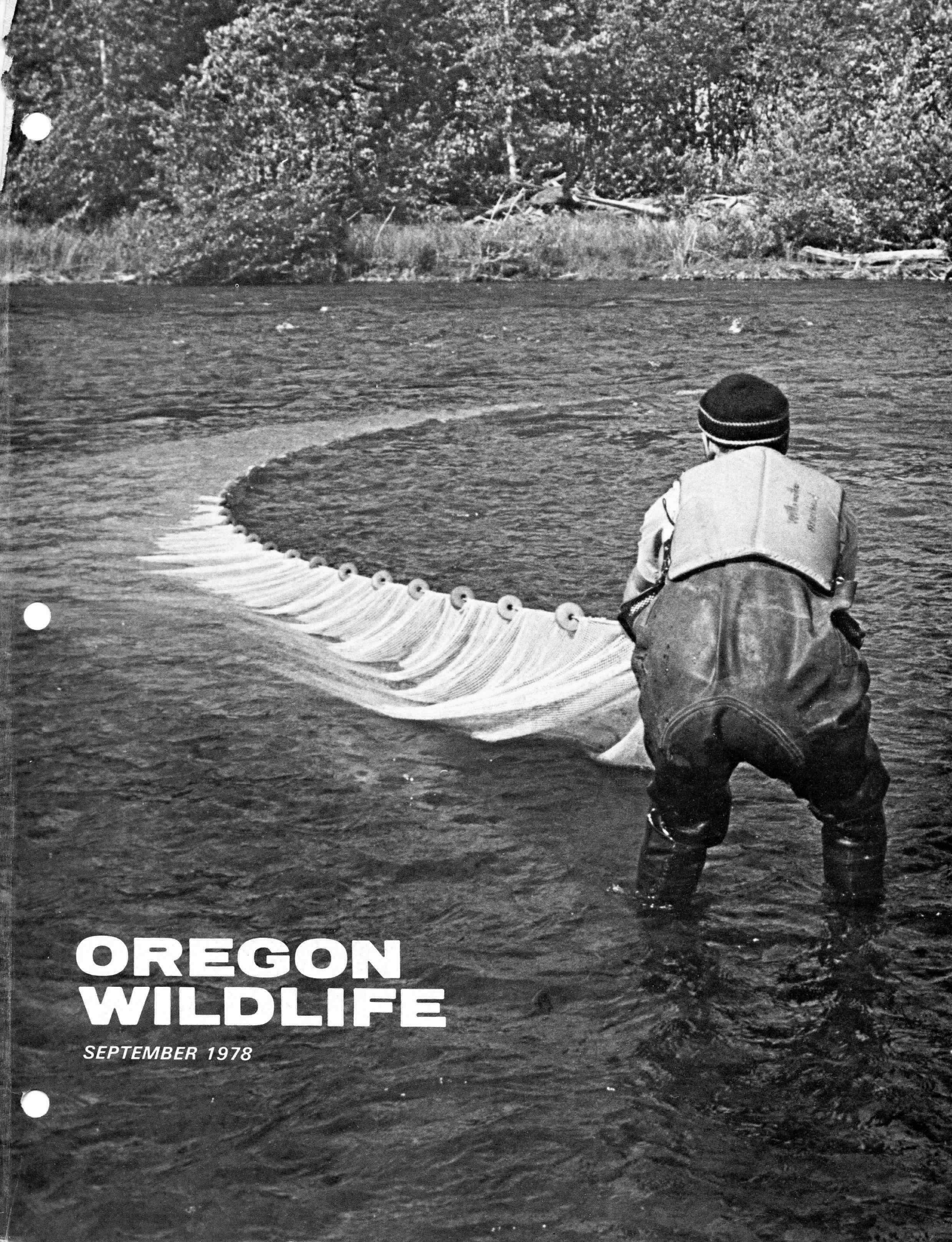

OREGON WILDLIFE

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OREGON WILDLIFE

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The Cover

A beach seine is one tool that helps biologists learn more about native fish populations in the Willamette Basin. Research biologist Jay Nicholas writes of wild trout in the Willamette Valley in this issue.

Photo by Ken Durbin

HUNTER EDUCATION PROGRAM
INSTRUCTORS APPROVED
Month of July.....15
Total Active.....1,429

STUDENTS TRAINED
Month of July.....318
Total to Date.....254,489

HUNTING CASUALTIES REPORTED IN 1978
Fatal.....1
Nonfatal.....8

We Don't Want To Lose You, But . . .

Normally, each month we receive a few letters from you readers concerning the content of our magazine. Some of the letters are bouquets and a few are brickbats. We appreciate hearing from you, no matter which kind of missive you send. However, there is one kind of letter that truly disturbs us. That is the one that we received from a relative telling us that one of our subscribers died five years ago, why don't we quit sending the magazine to him!

To try to eliminate some of these kinds of letters, we cleaned out our mailing list ten years ago. That was the first time we had carried out such an operation and it was a bit of a hassle. However, it appears the time has come to go through the procedure again.

We don't want to eliminate any of you who are truly interested in receiving OREGON WILDLIFE but, on the other hand, we don't want to be sending our publication to folks who just aren't interested or who may no longer exist. The reasons are rather obvious. Printing the magazine takes a goodly chunk of our information and education budget. Mailing it costs almost as much. In fact, our second class rates have increased at even a greater rate than first class postage did recently.

So here's what is going to happen. In October and November we will be running large reminders on the back page – and perhaps elsewhere – that the list is being rebuilt. We are going to ask that you send in the mailing label or an exact copy of the label from your copy of the magazine. With this information we will verify your name on the mailing list. Then, starting with the January 1979 issue, we will mail only to those individuals who have returned the necessary information.

We hope you won't consider this just another example of government harassment. We want to keep our magazine free but we must also be as certain as possible that we are not wasting printing and postage costs. We don't want to lose you as a reader but we must temper our desire to reach you with a bit of realism. The realism is that we can't allow the mailing list to continue to grow forever.

While we are on the subject of costs and postage, we would like to urge that if you move, please send us a change of address immediately. If the post office does this, it costs us 25 cents per copy and this shortly adds up to quite a piece of change that could be avoided.

But most importantly, watch the next two issues and be sure to send in the mailing label or an exact copy of it from the October or November issue if you want to continue receiving OREGON WILDLIFE. Following the December mailing, we will be preparing the new mailing list and if you haven't responded, you will not receive the January 1979 issue.□

RES

September Commission Meets

September 8 the Oregon Department of Fish and Wildlife will participate in a Columbia River Compact meeting to consider the late fall gillnet season on the Columbia River. The meeting will be at the Monticello Hotel in Longview, Washington and will start at 10 a.m.

September 12 there will be a Columbia River Compact meeting to discuss the Indian set net commercial season above Bonneville. This meeting will be at Department headquarters at SW 5th and Mill starting at 10 a.m. On the same day starting at 1 p.m. the Commission will discuss the adoption of rules concerning the conversion of dressed weights of commercially caught fish to round weights and also the design and construction of commercially used crab pots. At 2 p.m. a rule concerning the commercial taking of shrimp will be discussed.

September 22 there will be a general business meeting starting at 9 a.m at the Department office in Portland.

September 23 the Commission will hear the staff recommendations for the 1979 sport angling regulations at a meeting starting at 9 a.m.□

Wild cutthroat

Wild Trout:

A Willamette Perspective

by Jay W. Nicholas
Fisheries Research Biologist

Mention wild trout and most people think of streams like the Deschutes, Williamson, and Blitzen. But there are thousands of stream miles populated by wild trout much closer to Oregon's population centers – in the Willamette Valley. In this article we'll look at factors relating to wild trout in general with particular emphasis on the Willamette Basin.

Some anglers have strong notions about wild trout. One widely accepted idea holds that restrictive angling regulations are the key to preserving and enhancing wild trout populations. But this is only partly true. In actuality, habitat is the cornerstone of wild trout management.

Wild trout are completely dependent on their stream for living space, food, shelter, and reproductive areas. We can state it simply. Pristine habitats can support pristine trout populations but degraded habitats can only support degraded populations. Once the primary importance of habitat protection is understood, restrictive angling regulations can be discussed in their proper perspective.

Another popular concept equates "wild" trout with "large" trout. Does quality wild trout fishing require large quarry? All wild creatures deserve a position of respect regardless of their relative size or species. Why should we have less regard for a 10-inch cutthroat trout in a Willamette tributary than for a 20-inch Deschutes redsides? Each trout is a product of thousands of years of natural selection in its native habitat. Both have adapted to a seasonably variable environment, capturing food, avoiding predators (including man), and surviving through instinct, individual learning, and chance. We should not judge evolutionary excellence by the size of the frying pan required.

In summary, we need to recognize the intimate relationship between the environmental health of a watershed and its fish communities. The genetic diversity in natural trout populations merits protection on biological, economic, and philosophical grounds.

The Species

Rainbow and cutthroat are the only native trout species in the Willamette watershed and the cutthroat has a much wider range of distribution than the rainbow. Historically, cutthroat was the only trout species present in west side tributaries of the Willamette. Larger east side tributaries of the Willamette originally contained cutthroat and either rainbow or steelhead trout while smaller east side streams usually held only cutthroat trout.

Years of introducing various stocks of rainbow and steelhead trout throughout valley streams have extended the range of rainbow trout slightly but historic distribution patterns are still dominant. Some of these streams, or parts of streams, presently support better trout populations than others. Conversations with anglers throughout the Willamette Valley indicate that many streams provide reasonable wild trout fishing during part of the year.

Knowledgeable anglers will schedule their fishing trips at times when trout are likely to be most active. For example, fishing success is generally good throughout the day in the spring and the fall. Winter trout fishing, on the other hand, is likely to be most productive around midday while midsummer anglers will often have better luck in the morning and again in the evening. These patterns can be altered by unseasonable weather, such as a mild, sunny period in winter or a passing rainstorm in midsummer.

The Rationale of Regulation

Angling regulations can be used to manipulate annual mortality rates in a fish population. Many fish die each year from natural causes such as disease, starvation, predation, injury, and old age. Even without fishing, there will be naturally large annual mortalities in a trout population. With low levels of fishing, the total annual mortality rate may be similar to when the population was completely unfished. Removal of a few trout by anglers simply takes some of the trout which exceeded the num-

ber the habitat could support. However, as more and more trout are killed by anglers, the total annual mortality rate increases because fish are being removed from the population in numbers which exceed natural losses. One function of angling regulations is to insure that fishing mortality does not contribute to such a large increase in mortality rates that the fish are depressed to low levels or become extinct.

With this goal in mind, restrictions are commonly placed on length of season, methods anglers can use, and number and size of trout which may be harvested. What is the rationale behind these restrictions and how effective are they?

A limited fishing season is probably most effective when applied to protect a fish population during a particularly vulnerable part of its life cycle. Examples include the closed season on the coast during downstream migration of juvenile steelhead trout and the winter closure on small Willamette Valley tributaries when they are being used for spawning by adult cutthroat trout.

Restricting trout anglers to the use of artificial lures or flies won't necessarily limit harvest. In some cases fly fishing is the easiest way to catch trout. However, the use of lures or flies with barbless hooks helps reduce losses in small released trout because removal of the hook does not cause further injury, thus minimizing handling stress.

In order to effectively limit harvest, creel limits must be set at a point below the average number of trout that people catch. A creel limit of ten trout per day does little to restrict harvest because the average daily catch of trout anglers is around one to two fish per day. A creel survey conducted in 1976 on the North Fork of the Willamette River provides an example of the potential for reducing harvest with creel limits. A reduction in daily limit from ten to five would only have reduced harvest by 19 percent, a four fish limit by 27 percent, a three fish limit by 37 percent, and a two trout daily limit would only have reduced the harvest by 49 percent. Studies in Oregon and other states have verified that creel limits of five to ten trout per day are too liberal to have much impact on harvest.

Size limits on the other hand, are an extremely effective, selective means of regulating harvest. Size limits can be applied to protect specific portions of a trout population from being harvested. Studies in Idaho, for example, showed that cutthroat trout were not maturing until they were four to six years old and 12-14 inches long and juvenile cutthroat were relatively scarce. The minimum size limit was increased from 6 to 12 inches so that cutthroat trout would be protected until they were mature. These populations responded very favorably to the new regulations and, although a simultaneous reduction in creel limit and termination of yearling rainbow stocking probably contributed to the improvement, the biological logic of the size limit is self-evident.

By evaluating the age structure of a particular trout population, the growth rate of individual trout, and the age at which female trout first spawn, a size limit can be set that will protect none, part, or the entire population.

Size limits provide unequal protection, however, when applied to a trout community composed of two or more species with differing age of maturity or growth rates. The 6 inch minimum size limit on the North Fork of the Willamette River, for example, permits harvest of wild rainbow trout for two or three seasons before the females spawn (at age four or five and 11-14 inches) while many female cutthroat trout spawn (at age two or three and 5-6 inches) before they are harvestable. The logical answer to this dilemma is the use of a size limit "tailored" to the protective needs of each species, but more complex regulations confuse people and are difficult to enforce.

One assumption inherent in creel and size limits is that released fish will survive and continue to grow. A "catch-and-release" or "no-kill" regulation is a special case where all trout must be released. If these fish do not live, the potential benefits are lost. Mortality of released trout is quite variable, depending on such factors as the trout's general state of health, hook and handling trauma, extent of fatigue, and water quality (temperature and dissolved oxygen content). No doubt some trout populations could benefit from severely curtailed harvest regulations. But blanket application of extremely conservative harvest regulations has more basis in culture than biology.

The Significance of Stream Productivity

Any stream that supports a self-reproducing trout population can be managed for wild trout. Highly productive waters with good reproduction emphasize rapid turnover of trout biomass and produce a large "harvestable" surplus. Streams with lower productivity rely on "stockpiling" slower growing trout and simply do not produce large "harvestable" surpluses. Thus, it is acceptable to harvest a lot of trout from a highly productive stream population while less productive stream populations would decline rapidly if similarly harvested.

Two mature wild cutthroat from the Willamette. Top fish is a male and the bottom fish a female.

Willamette tributaries are generally less productive than, for example, the lower Deschutes River. The result is that trout here generally grow more slowly and fewer trout can be harvested without depleting the population. Trout in the main Willamette grow rapidly but they just are not as abundant as trout are in the Deschutes, a situation which may be entirely natural or which may be the result of man's activities in the valley.

A shocker boat permits biologists to sample fish populations in a lot of water during a relatively short time. Electricity stuns fish which are netted, examined, and released.

Age of Maturity and Ultimate Size

The maximum size likely to be attained by a trout is a product of its environment and its physiology. On one hand trout growth is influenced by the amount of space available, food resources, and stream temperatures. On the biological side, growth is affected by the stage of maturity of each trout. Immature trout are able to apply most of their food energy toward the task of building a bigger fish (growth). Sexually maturing trout, on the other hand, must allocate a major part of their energy reserves towards developing reproductive organs: eggs or milt. Furthermore, the spawning act requires the expenditure of a great deal of energy.

Trout which spawn at an early age will probably never reach the ultimate size possible for a trout which matures at an older age in the same environment. In the Willamette watershed we are dealing primarily with low productivity streams and cutthroat trout which mature at a relatively young age. While female rainbow trout first spawn from age three to six, cutthroat females may spawn as early as age two and most spawn at age three.

Wild Trout and the "Vibert Box"

The Vibert box, both in original and modified design, is essentially a plastic box into which fertilized trout eggs are placed for protection while awaiting hatching. The boxes are placed in depressions in the stream bed and covered with gravel, just as wild trout cover their redds. The boxes contain slots which permit the necessary flow of oxygenated water through the developing eggs. Round eggs will not pass through the slots but newly hatched trout fry wriggle through these slots and thence upwards through the gravel to the stream.

The Vibert box is not a magical answer to an abundance of wild trout in our streams. It is simply one of several methods of artificially hatching fertilized eggs in a stream. There are two major drawbacks to stocking fertilized eggs. First, eggs should never be stocked unless it is known there are not enough natural trout fry to adequately use the available habitat. Second, if egg stocking appears to offer promise in a specific situation, great care should be exercised to insure that the introduced population will survive well in its new home without adversely affecting any remnant native population. The key to success of egg (or fry) stocking programs lies in understanding why the population became depleted in the first place. Chances are good that trout populations which are low compared with their former levels were reduced by some combination of habitat degradation and overharvest. Unless these causes are understood and corrected, they will continue to doom enhancement efforts.

Introduction of Exotic Trout Species

Why not introduce brown trout to the Willamette system? It's a question often asked. Brown trout are fast growers which feed on dace, sculpins, and shiners and they survive well in warmer water. But there are several reasons why brown trout probably would not become established here and additional factors which suggest their introduction might not be any improvement over native trout species.

Brown trout have been planted in many areas in Oregon (including the Willamette drainage), as have brook trout, and they have been a conspicuous failure in most of these areas. The exact reasons for these failures are not known but it is probably because these fish simply are not adapted by evolution to survive in most of our stream habitats. Just as Siletz summer steelhead are unable to survive in the Willamette system due to a high susceptability to local disease organisms, brown trout may be similarly unable to cope with diseases which native trout have become accustomed to over thousands of years.

Another potential problem is the fact that, as a fall spawner, the eggs of brown trout might experience exceptionally high mortalities from winter freshets that are avoided by native spring-spawning trout.

If brown trout were successfully introduced, there is no reason to believe that they would experience better growth than native trout in tributary streams. Growth of brown trout in small, cold streams is limited by the same factors that slow growth of cutthroat trout. The fish-eating habits of brown trout might increase their growth rate in the Willamette and larger tributaries but they might feed on small trout, salmon, and steelhead smolts as well, thus jeopardizing natural anadromous populations.

Perspective On the Future

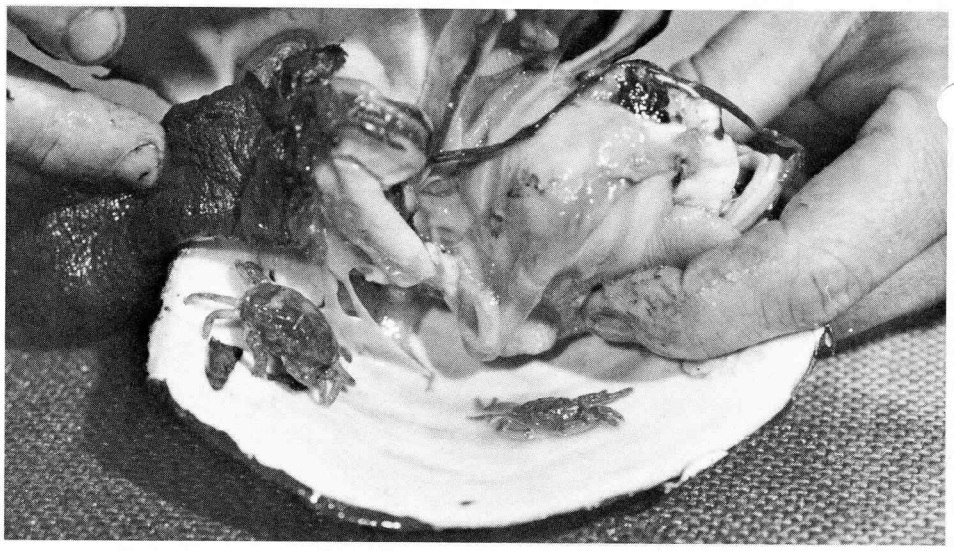
Wild trout fishing in the Willamette watershed has not received much attention. Nevertheless, there is a core of knowledgeable anglers who have fished for wild trout in this region for years. The most successful ones generally shun publicity, carefully guarding their secrets from exposure. Some of these local waters are fished heavily while others are less popular either because they are not stocked with hatchery trout or because they are less accessible. Most of our local streams are populated by cutthroat trout that mature at an early age. They are probably not productive enough to permit an intense harvest without becoming depleted.

What does the future hold? Fishing pressure is likely to increase dramatically in the Willamette watershed. Population growth in the Willamette Valley and increasing energy costs will contribute to increased angling pressure on native trout.

Are these wild populations safe? Can they be enhanced by the application of different management techniques? The answer to both questions is probably a guarded "yes". Habitat protection will be a major factor in determining the future abundance of wild cutthroat and rainbow trout in the Willamette Basin.

Although some local populations have been depleted by habitat degradation and intense harvest, many populations are not fished heavily and are in relatively stable habitats. Efforts are presently underway by the Department of Fish and Wildlife to obtain information on the distribution, movements, growth, and age of maturity of wild trout in the Willamette watershed.

Various sportsmen's groups and individuals are expressing a desire to cooperate in both data collection and potential enhancement programs. A basic understanding of the life history requirements of these wild fish is necessary to predict the impacts of habitat alterations, introductions of nonnative fishes, and fishing mortality. The input of local groups and individuals is important; without it, regional fishery management policies cannot accurately reflect the desires of the user groups.□



These two pea crabs find a cozy home in a gaper clam. The larger crab on the left is the female; the little guy is her mate.

Home Is Where the Clam Is

by Jim Gladson
Staff Writer

One thinks of crabs as creatures of the sea floor and intertidal rocks, scurrying about in search of food. But some members of the tiny pea crab family are exceptions. These crustaceans find a favored spot and wait for food to come to them.

This favorite location is inside a clam. While these crabs may take up residence in many types of clams, the most common site is in the gaper clam.

The gaper provides shelter and is also the source of food and oxygen for the crabs. Excess food drawn in by the clam is claimed by the pincered guests. Contrary to the belief of some, the crabs do not eat the clam. While the clam provides everything for these uninvited guests, the pea crab neither hurts nor helps the accommodating host. In scientific terms this is called a commensal relationship. In common terms it is called freeloading.

Nature designed the pea crab to be a dependent. Outside the clam, the crab would not survive.

For a time in the larval stage, the crabs are on their own – but not for long. The free-swimming crab larvae enter the clam through the siphon. Once inside the shell of a live clam, the female pea crabs begin to grow. Mature size for the female is about 1/2 inch across the shell. The male reaches about half that size.

Because of her size, the female is trapped within the clam for life. The smaller male can escape, moving at will from clam to clam. This explains why one nearly always finds a female crab in the gaper but not always a male. He either escaped after the clam was dug or just was not home at the time.

The crabs do within the gaper all the things that other creatures do, including breed. The product of this is more larvae which are ejected from the clam via the exhale hole. These larvae then search for a new host.

Competition for a spot is fierce. Seldom is more than one female found in the clam. More than one male may drop in, however. How this balance is maintained has not been verified but speculation says that would-be competitors for space are summarily consumed by the resident female.

If a clam is captured or dies, the male moves on if he can. The oversized female goes down with the ship.□

A nanny mountain goat and her kid — Photo by Don Alan Hall

How Are the Goats Doing?

by Paul Ebert
Staff Big Game Biologist

Last month Oregon Wildlife ran the success story of the reintroduction of bighorn sheep in the state, but the story of our attempts to establish the mountain goat is not so encouraging. Although the mountain goat was never native to Oregon, there appears to be some suitable goat habitat in the state and this prompted attempts to establish the species. Two areas of the state presently have small populations but the future is uncertain for both of these groups.

The Eagle Cap Wilderness area goat population is the largest and oldest in the state. It started with five goats captured in Washington and released in the Wallowa Mountains in 1950. By 1965, this population had expanded to more than 35 animals and appeared to be really going places.

Limited controlled hunting was allowed for four years in hopes that hunter harassment would force the goats to expand their range, but only the older billies moved from the traditional range of the nannies and kids. Hunting was terminated when reproduction started to taper off.

Low production and survival continued to be a problem in this herd until recent years. The population continues to winter high under harsh conditions, and occasionally even adult animals are killed in avalanches. The population presently is estimated at 25 to 30 animals but is showing encouraging signs of improved reproduction and survival.

These goats are generally found along Hurricane and Hurwal Divides although older billies occasionally are seen as far east as Bonneville and Aneroid Mountains. The Francis Lake Basin is a popular area for hikers to observe both the goats and the Rocky Mountain bighorn sheep.

Attempts to establish a population of goats in the Tanner Butte area of the Columbia Gorge have been discouraging. Five releases totaling 14 goats were made in this area between the years 1969 and 1976 and to date not a single kid has ever been observed.

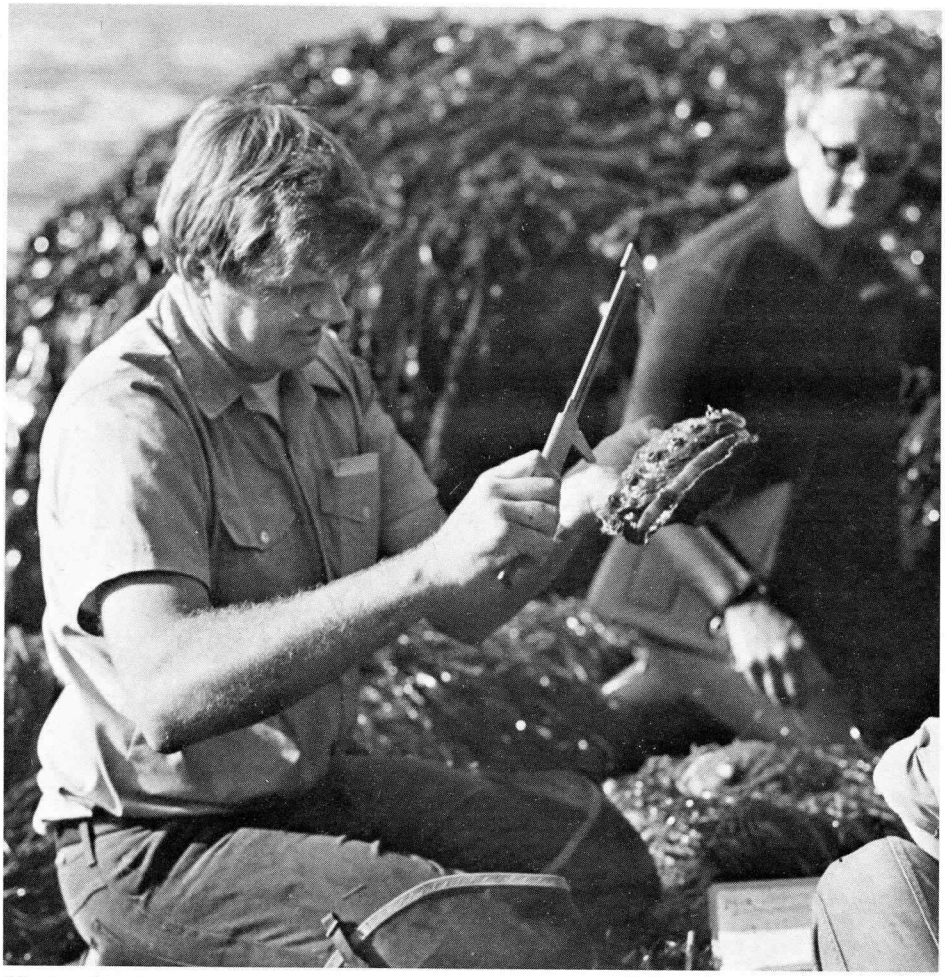
Occasionally during the summer time singles or pairs have been observed in the Indian Mountain area between the drainages of Lake Branch of Hood River and Eagle Creek near Tanner Butte, in the headwaters of Eagle Creek and near Mt. Talapus in the Tanner Creek drainage. Last winter, two goats were observed on the slopes overlooking the Columbia River but these disappeared as soon as the snow melted at higher elevations.

The Tanner Butte area could never carry a high population of goats because of the limited habitat, especially during the winter months. The area does have some potential for goats but, unless there is some reproduction soon, the population is bound to disappear.

A domestic white goat that lives on the cliffs of the gorge approximately two miles east of the Bridal Veil highway overpass has excited many a passerby. This goat looks at a distance to be a wild goat, but it is a domestic variety. Like other domestic animals that occupy an unusual area along a major highway, this goat has created considerable interest.

The future of mountain goats in Oregon remains uncertain and, at best, they will never occupy many areas. Wilderness area regulations currently prohibit introduction of the goat since it was not native, and expansion of the Eagle Cap Wilderness area population through transplanting is not allowed. Idaho has a commitment to provide Oregon with some stock and approval for release in northeastern Oregon has been requested.

Even though the goat was never native to this state, its presence fits with the rugged alpine areas and maintenance of small populations provide a chance for viewing.□



Marine biologist Laimons Osis measures growth of abalone

Abalone Research

by
Tony Faast
Staff Writer

Trapping and transplanting various species of wildlife has been a Department activity for many years. We usually think of deer, elk, bighorn sheep, turkeys, chukars, or pheasants when transplanting is mentioned but other critters are also included in relocation efforts.

Oregon has a naturally occurring population of red abalone (*Haliotus rufescens*) in the rocky coastal area south of Coos Bay. Suitable habitat is available farther north along the coast but abalone have not been found there until the Oregon Fish and Wildlife Department began transplanting operations in 1967.

Laimons Osis, shellfish biologist for the Department's Marine Region, offers several reasons for the absence of these mollusks north of Coos Bay.

"One of the theories maintains that the large stretch of sandy beaches just to the north (including the Oregon Dunes National Recreation Area) prohibit the natural dispersal of the rock-dwelling abalone," explains Osis. "The spawning season for these red abalone occurs in the summer when there are southerly currents off the coast, preventing the northerly movement of the free-swimming larvae. Another possibility is that the red abalone is found primarily off the central California coast and the Coos Bay area may well be the northern limit to the natural range of this species."

Transplanting operations were started in 1967 when several thousand red abalone, each only a few millimeters in size, were released at selected sites along the Oregon coast. Release sites were selected for their abundance of food (sea lettuce and kelp), convenient location, and strategic position along the coast where population centers could be established. Adult abalone were added to the original transplant in 1971 in an attempt to speed up the establishment of a breeding population of these animals.

Tagging studies of the adults have shown a good growth rate of 1 to 2 inches in diameter since their release. A survey of the overall population has revealed a problem; there are no one to two-year-old juveniles showing up in the survey, indicating that there is not a mix in the age classes of the transplanted abalone. The problem may correct itself in the years ahead but this seems to indicate a possible lack of juvenile habitat available at the release sites or a lack of natural spawning success. Only time will give us the answer to this question and determine whether abalone can maintain their population on Oregon's northern coastal area.

Abalone poachers are another problem that has hindered the success of the project. Divers on the project have found several abalone shells stuffed into cracks in the rocks and covered up, hardly the work of natural predators or death from natural cause. Abalone is considered a delicacy by many and the temptation was apparently too much for some unscrupulous scuba divers. The taking of shellfish is prohibited at the release sites in order to give the newly introduced abalone a better chance to establish themselves.

The successful transplanting of any species often takes years of experimentation, reintroduction, and management. While no additional transplants are being considered in the near future, hopefully later efforts will overcome the problems of habitat, ocean currents, and poachers facing the abalone in this introduction attempt. With some luck, and a little help from the Department of Fish and Wildlife, the red abalone may become a permanent resident along all of Oregon's rocky coastline.□

This and That

compiled by Ken Durbin

Maps Reissued By OFPA

Two free maps covering the part of northwest Oregon roughly north of McMinnville and west of Hillsboro are being reissued by the Oregon Forest Protective Association. The updated forest maps are provided as a service to hunters, fishermen, and other outdoorsmen and their cost is footed by the member organizations of OFPA. The map designated Sunset North covers Clatsop and Columbia Counties; the other includes Tillamook, Washington, and Yamhill Counties and is named Sunset South.

Before hunting season opens, maps should be available in northwestern Oregon from forestry offices, chamber of commerce information centers, and many agencies where hunting and fishing licenses are sold. First issued several years ago, the new maps have been updated and printed on a different paper stock.

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Help for Handicapped Anglers

According to an item in MISSOURI CONSERVATIONIST, official publication of Missouri Conservation Commission, the Garcia Company is now producing fishing equipment especially for people who have lost the use of one arm. They make a lightweight aluminum harness that is designed to function as a second hand when fishing and spin-casting reels for either left or right-hand use.

We have known several outdoorsmen who lacked the use of one arm. One was a superb wingshot and another an avid fly-caster. Both had learned to get by with standard hunting and fishing equipment. But for the sportsman who suffers a similar handicap later in life, perhaps because of a stroke or accident, the new equipment might be a valuable help in getting back to the outdoor pursuits.

For information on the equipment, write The Garcia Corporation, 110 Charlotte Place, Englewood Cliffs, New Jersey 07632.

Big Squid Found

A 225-pound squid recently caught by a Brookings fisherman near Mack Arch is the largest specimen of its kind to be found off the west coast north of South America.

Gary Steffensmier, a commercial fisherman, caught the giant cephalopod while he was dragging for bottom fish late in June. A Brookings restaurant owner processed the animal into steaks but saved the squid's beak and samples of its sucker disks, which he showed to Mike Hosie, marine biologist from the Department of Fish and Wildlife in Coos Bay.

Hosie and other specialists examined the beak and disks and determined the "Mack Arch squid" is the first whole creature of the *Architeuthis* genus which has been recorded off Oregon, or anywhere off the Pacific Coast of the North American continent. Usually this member of the squid family lives in the Atlantic Ocean.

Squid belonging to the *Architeuthis* genus generally weigh from 60 to 2,000 pounds. By comparison, the most common squid found off the west coast is usually less than 12 inches and weighs about 1 or 2 pounds.

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Last Two Lakes Publications Out

The remaining two publications in the Department's "Lakes of the National Forests" series are now available. The two new brochures are "Lakes of the Crooked River National Grasslands and Malheur, Ochoco, Umatilla, Wallowa-Whitman National Forests" and "Lakes of the Fremont, Rogue, Siskiyou, Siuslaw, Umpqua, and Winema National Forests". Other publications available previously covered the lakes in other national forests in Oregon. The publications list the lakes by name, their location, elevation, acreage, depth, and species of fish present. Also included is instruction in using a map to locate a lake by township, range, and section, and a list of sources for maps. Single copies are available free upon request from the Fish and Wildlife Department, P.O. Box 3503, Portland, Oregon 97208.

Nongame Budget Tripled In Colorado

The Colorado Division of Wildlife's pioneering efforts to get money for its nongame wildlife management program appear to be paying off. The Division's nongame budget reportedly is more than $688,000 this fiscal year – three times that of last year.

The main source of new money came from Colorado taxpayers who donated a portion of their state tax refund to the Division for nongame management. The opportunity to donate was provided by a check-off box on state tax returns. The system is patterned after federal tax returns which have check-offs for contributing to presidential campaigns. Collections from that source have exceeded one-quarter of a million dollars so far this year.

John Torres, supervisor of the Division's nongame program, said the increased budget will enable the Division to undertake its most substantial nongame wildlife program ever. He said that the contributions also will enable the Division to receive increased federal funding under the Endangered Species Act. That program provides two federal dollars for each state dollar.

Wildlife Management Institute

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Poachers Take Most California Deer

More deer are taken by poachers in California than by licensed hunters. In 1977 the California Department of Fish and Game conducted a study of the state's poaching problem and found 50,000 deer were taken illegally as compared to the legal harvest of 36,687. The study involved simulated poaching activities by four department employes without the knowledge of wardens. During the 102 days of work only three of the actual and faked deer kills were discovered. Kills were made at night and during the day. Despite the fact that some of the staged kills were witnessed by citizens, not a single citizen report of game law violations was made.

Texas Parks and Wildlife

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Nearly a mile of trail has been constructed by YCC and YACC employes. When completed, the four-foot-wide paths will be curbed with rock and covered with wood chips. Future plans include paving portions to make them easily accessible to the handicapped.

A Place for People

by Cliff Hamilton
Education Supervisor

One of the most challenging problems in wildlife management today is the lack of public understanding of basic conservation concepts. Another is providing suitable places for wildlife viewing by those who may not wish to hunt or fish. These problems increase as a larger percentage of our population become urban dwellers. Simple open space and natural areas serve a purpose for some people. For many others the values and uses of outdoor lands must be interpreted for them to gain a full measure of appreciation.

The Department's Sauvie Island Wildlife Area was initially developed for waterfowl. Located within an hour's drive of a million people, this 8,000-acre site now serves dozens of varied recreational uses. School classes regularly visit the area. A wide range of groups come to view the waterfowl and other birds that frequent these lands. Unfortunately, some of these users spill onto surrounding private land, causing conflicts with landowners.

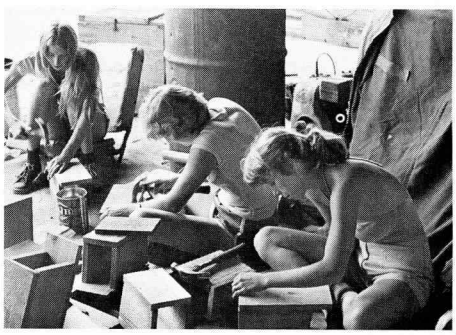
A portion of the management area has long been protected as refuge. The Department has begun a project to focus many of the nonhunting and nonfishing users into a section of the refuge designed especially for them. Viewing areas, instruction sites, interpretive trails, and an education center are part of the developments planned for completion in the next several years.

Initial work was begun early this summer. A raised trail system, several ponds, plus wildlife food and cover plantings are among the features to be completed this season. Much of the development will be accomplished by Young Adult Conservation Corps (YACC) employes provided through the U.S. Fish and Wildlife Service. Youth Conservation Corps (YCC) members working through City of Portland programs are also participating in the construction efforts.

In addition to developments on the approximately 100-acre education center site, a small satellite viewing area is planned nearby at the location of an old dairy farm once leased from the Department. Young people employed in the YCC and YACC programs have participated in cleaning up and returning much of the old farm site to a more natural condition as well as working on the main center area.

Manpower available through the federally funded youth employment programs was a major factor in getting the project underway at this time. Need for such a facility has continued to increase since initial plans were outlined almost ten years ago. Volunteer groups have also assisted in portions of the project and donated materials have been important since little budget is available for this program. Other assistance and materials are still needed to supplement Department efforts.

The area for the center was previously used for grazing and crop production to support the leased dairy operation. The planned development will convert it back to a varied habitat and improve the land for wildlife as well as make it a place for people to view and enjoy this interesting resource.□



Most YACC members had little experience in many of the tasks involved in the summer's work. These bird houses will be used throughout the site and elsewhere on the management area.

Deschutes Closed to Steelhead Fishing

Deschutes River

The Deschutes River closed to steelhead angling for the first time in history under emergency action taken by the Fish and Wildlife Commission last month. A much below normal run and a near failure in the "one-salt" segment of the run prompted the recommendation by Department staff.

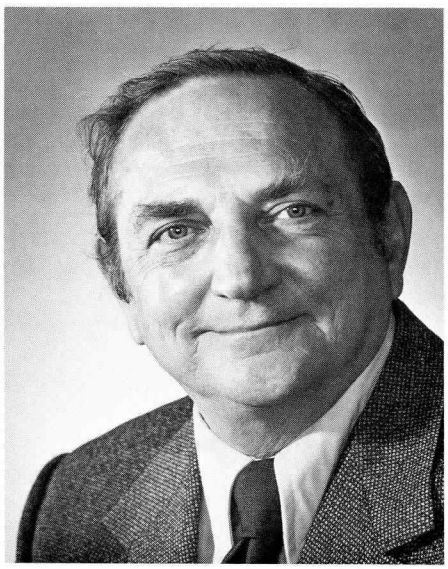
Trapping at Sherars Falls on the Deschutes as part of the Department's ongoing research program showed the run down 35 percent compared to 1977 in mid-August. But equally important was the near absence of fish that had spent just one year in the ocean. This age group normally makes up 50 to 60 percent of the Deschutes run but only 10 percent of the fish trapped at Sherars Falls had been of this age group. In addition to the shortage this year, the weak one-salt age class means an almost certain shortage in the two-salt portion of next year's run.

The low water spring of 1977 is apparently the major cause of the poor run. That year most of the water in the Columbia River went through power generating turbines at The Dalles and Bonneville Dams and so, therefore, did many of the fish. The low run is reflected equally in both the wild and hatchery portions of the run.

The Deschutes remains open to angling for trout and salmon. But steelhead, which are frequently caught while fishing for these other species, must be immediately released unharmed.

The Columbia River was closed to steelhead fishing earlier in the month because counts at Bonneville Dam indicated a poor run. At that time there was no evidence of low runs to tributary rivers and it was thought the problem was due primarily to shortages of fish destined for the Snake River and its tributaries.

At Commission request, letters were sent asking for a suspension of Indian dipnet fishing for steelhead at Sherars Falls on the Deschutes and for a voluntary reduction of fishing effort during a scheduled commercial treaty Indian salmon season in the Columbia River above Bonneville Dam.□



Noxious Weed Crosses Cascades

According to the State Department of Agriculture, tansy ragwort, a weed poisonous to cattle and horses, continues to find its way to central and eastern Oregon. Until a few years ago, the weed had been confined to the Willamette Valley and it is suspected it crossed the mountains in hay or straw taken as livestock feed or bedding.

The Agriculture folks have asked that anyone taking any hay or straw from western Oregon to east of the Cascades be sure it is not contaminated with the rapidly spreading plant.

Also, if you see any of the weed east of the Cascades, the Agriculture Department would appreciate a call so they can get at it. Use the toll-free number 1-800-452-7813 and ask for extension 3774. Don't pull the plant up, but note its location so the weed control personnel can investigate the finding. Tansy ragwort has a bright yellow flower, grows 2 to 3 feet tall, and has rather frilly-looking light green leaves.□

Chuck Junge Receives Award

Chuck Junge, program manager in the Columbia Region of the Oregon Department of Fish and Wildlife, was presented a special award for his work on Columbia River fish passage problems. The Western Association of Fish and Wildlife Agencies, meeting in San Diego last month, recognized Junge's work with the special award, pointing out the many contributions he has made in analyzing and suggesting remedies for the fish passage problems at the Columbia River dams.□

New Booklet for Birders

Managers of forest resources are developing a new respect for cavity-nesting birds and are planning management programs to provide them with essential habitat. In fact, Forest Service regulation now requires that each national forest not only preserve snags to support present bird populations, but to plan ahead by saving some large, living trees that will become snags for future bird generations.

A new pocket-sized book, "Cavity Nesting Birds of North American Forests", summarizes what is currently known about the habitat requirements of 85 cavity-nesting bird species. The handbook, illustrated with color drawings, is co-authored by wildlife biologists Virgil E. Scott and Charles P. Stone, U. S. Fish and Wildlife Service; and Keith E. Evans and David R. Patton, U. S. Forest Service.

It was published by the Forest Service as an aid to owners and managers of forest lands.

"This is a good book for active birders or anyone interested in birds and their habitat," says nongame wildlife biologist Bob Maben with the Fish and Wildlife Department. "It is not a field guide. The color plates and distribution maps are from the good field guide 'A Guide to Field Identification of Birds of North America' by Robbins, et al. It can be used in cooperation with a field guide. Of the 85 species of birds included, 35 are not present in Oregon," Maben added, "but the book does contain excellent information on habitat, nest and food preferences of each bird – information not found in field guides."

If you would like a copy, send $2.75 to the Superintendent of Documents, Government Printing Office, Washington, D. C. Request "Cavity Nesting Birds of North American Forests", Agriculture Handbook 511, GPO Stock No. 001-000-03726-4.□

1977 GAME BIRD SEASONS

	Open Season	Open Area	Daily Bag	Possession Limit
Blue & Ruffed Grouse	Sept. 1-24	Eastern Oregon	3	6
	Sept. 1-30	Western Oregon	3	6
Chukar & Hungarian Partridge	Sept. 30-Dec. 31	Eastern Oregon	6	12
	Oct. 14-Nov. 19	Western Oregon & Klamath County	4	8
Cock Pheasant	Oct. 14-Nov. 19	Entire State	2	8
Valley & Mountain Quail	Sept. 16-Nov. 19	Western Oregon	10	20
	Oct. 14-Dec. 31	Eastern Oregon	10	20
Turkey	No fall season. Controlled gobbler season April 14 through 22.			
Mourning Dove	Sept. 1-30	Entire State	10	20
Band-tailed Pigeon	Sept. 1-30	Entire State	5	5
Duck	Oct. 14-Jan. 14	Entire State	7	14
	Oct. 14-Jan. 21	Columbia Basin Counties	7	14
Coot	Oct. 14-Jan. 14	Entire State	25	25
Merganser	Oct. 14-Jan. 14	Entire State	5	10
Goose	Oct. 14-Jan. 14	Western Oregon	2	2
	Oct. 14-Jan. 14	Eastern Oregon	3*	6
	Oct. 14-Dec. 24	Baker & Malheur Counties	2	2
	Oct. 14-Jan. 21	Wasco, Sherman, Gilliam, Morrow & Umatilla Counties	3*	6
Black Brant	Nov. 18-Feb. 18	Entire State	4	8
Common Snipe	Oct. 14-Jan. 14	Entire State	8	16

*Daily bag limit may be increased to 6 providing not more than 3 are dark geese nor more than 3 are white geese including 1 Ross' goose daily and in possession. In Lake and Klamath Counties, however, the bag and possession limit of white geese from October 14 through November 9 is 1, and from November 10 through January 14 is 3 white geese, one of which may be a Ross' goose.

OREGON Fish & Wildlife

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