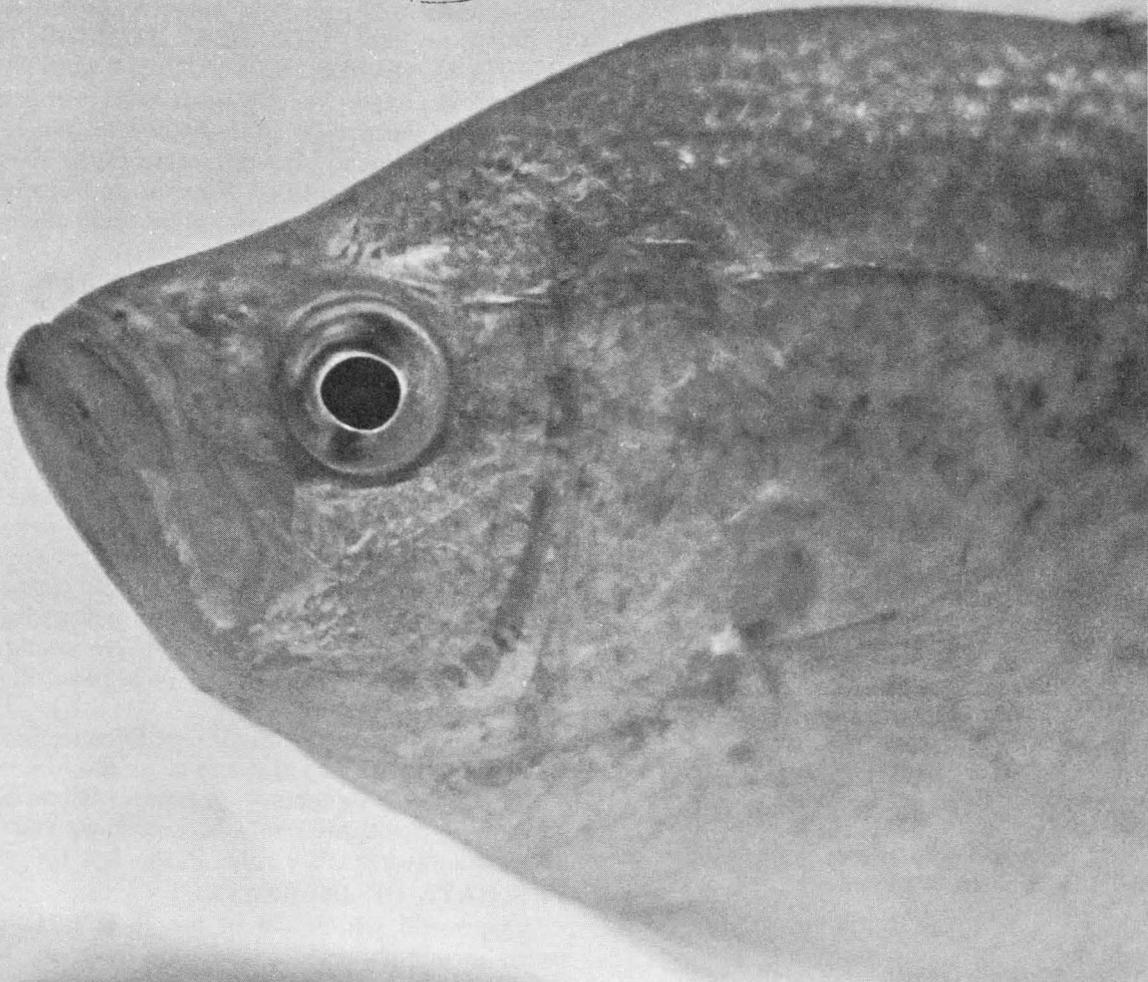
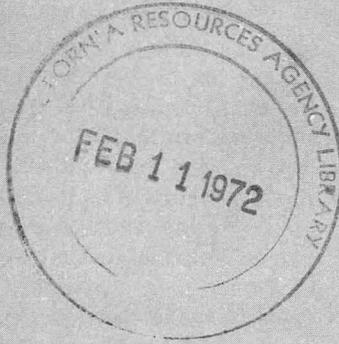


OREGON STATE
GAME COMMISSION

BULLETIN

February 1972



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FEBRUARY 1972
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The Cover

Profile of an under-used resource. A crappie, one of the numerous kinds of warm-water fish found in Oregon that could stand heavier angling pressure.

Photo by Al Miller

HUNTER SAFETY TRAINING PROGRAM

Instructors Approved

| | |
|-------------------------|-------|
| Month of December | 18 |
| Total to Date | 2,583 |

Students Trained

| | |
|-------------------------|---------|
| Month of December | 379 |
| Total to Date | 177,850 |

Firearms Casualties Reported in 1971

| | |
|----------------|----|
| Fatal | 4 |
| Nonfatal | 53 |

Page 2

What Is Endangering Wildlife?

In recent issues we've pointed out that **legal sport hunting** is not endangering any of the world's wildlife. This is not to say that poaching and commercial hunting are not putting some species in danger. However, even these activities are not the most serious threats to continuing populations of wildlife.

A recent series of seminars at the Portland Zoo called together a number of well-informed persons from various backgrounds and experiences to discuss endangerment of wildlife. The different speakers approached the subject from a number of ways but all of them were in basic agreement about the major threat to future wildlife populations.

In the course of the discussions, different figures were put forth pointing out the numbers of birds and animals taken by man each year. Some are taken for the use of their fur or feathers to satisfy current fashions, others are taken by legal hunters in virtually all nations of the world, and a surprisingly large numbers are taken for sale in the exotic pet trade, to mention but a few of the demands on the resource. However, the most significant figure cited concerning the future of wildlife was **180,000 per 24 hours**.

Each day 180,000 new human beings are added to the population of the earth. This means that every other day we add a city approximately the size of Portland to our globe. With such an increase going on, certain forms of wildlife are doomed to extinction. They are being crowded out by people. The displacement takes place in many ways but regardless of how it takes place it illustrates that **THE MOST SERIOUS THREAT TO THE FUTURE SURVIVAL OF WILDLIFE IS THE DESTRUCTION OF ITS HABITAT**.

Here in Oregon we still seem to have much room but in a recent issue of the British Columbia Wildlife Review an article by Bristol Foster of the British Columbia Provincial Museum discusses the situation in terms that might apply here. His article is entitled "Crowds and Crowds". We present it here as food for thought for everyone who appreciates the quality environment of Oregon.

CROWDS AND CROWDS

Among the adaptations which are crucial for survival of an animal species is to have, in the long run, the birth rate balanced by the death rate. If the death rate exceeds the birth rate for too long, the animal will become extinct. If the birth rate exceeds the death rate for too long the animal will eventually begin to destroy its own environment. As this happens, the death rate will rise and the population will fall. The environment will have a chance to recover, but it might take a long time and it might never return to its former state.

The potential for increase in numbers of an organism in the absence of disease, predation, and so on, is often incredible, since the progression is exponential (2, 4, 8, 16, 32, 64) and **not** arithmetic (2, 4, 6, 8, 10, 12). Thus, a pair of field mice, giving birth to five young every three weeks, and whose young begin giving birth at five weeks old, will produce over a million progeny in one year **if they all live**.

Fortunately, they don't all live. Disease, predation, a place to live, and lack of food all take their toll, more so as the animal becomes numerous.

These are some facts from nature. What do they mean for us?

New agricultural methods, medicine, and pesticides have drastically reduced human mortality rates in the last 100 years.

THE RATE OF INCREASE

The world population of people is increasing exponentially; it took 80 years for our population to double from one to two billion (1850-1930) but it will take only 45 years for the population to double to four billion. The present doubling time is 35 years.

How long can this rate of increase go on? Isaac Asimov has calculated that, at the present doubling rate, the total mass of human beings will equal the total mass of all animal life presently living on earth in 466 years, will equal

(Continued on Page Twelve)

FEBRUARY 1972



by CLIFF HAMILTON
Environmental Education Biologist

Editor's Note

Since our feature article this month deals with some of the under-used species in the state, we thought it appropriate to include a couple of recipes for preparing two of our rather abundant imports. We are indebted to Marjorie Latham Masselin for the starling and opossum recipes from out of the south. These were written for Virginia Wildlife magazine published by the Virginia Commission of Game and Inland Fisheries.

Because brook trout often overpopulate lakes to their own detriment, we have included John Rayner's article to give you some lead time to prepare for fishing trips this coming summer.

We cannot vouch for any of the methods described—cooking or fishing.

Rarely a day goes by that the phone doesn't ring or a letter come in asking the same question: Where can one find an abundance of pheasants, trout, deer, or some other popular form of game reasonably near their metropolitan home. Two problems arise in answering such a query. First, with the increasing human population and loss of wildlife habitat, such areas are rare indeed. Secondly, the inquirer is seeking large, popular, traditional species (which are also being pursued by perhaps a half million other sportsmen in the state) and is overlooking some under-utilized resources that offer a real sporting challenge and some fine eating.

Youngsters who have not yet become indoctrinated with the notion that trout are somehow better than bluegills do not usually care what kind of fish they catch—so long as they catch some. Probably no other group of fish has provided more recreation to American anglers than the species collectively known as the warm-water game fish. The large and smallmouth bass are well known among the angling fraternity and the bluegill, yellow perch, and bullhead

catfish were once a household word with almost every school boy across the nation.

The sloughs, backwaters of major rivers, sluggish streams, many gravel pits, farm ponds, and lakes abound with these overlooked fish. Worms are the traditional bait but the taking of crappie on small jigs, bass on a variety of surface and subsurface plugs, and bluegill on artificial flies are well-worn methods to a generally small group of anglers. Even former trout addicts find that it takes not only fishing skill, but on light tackle these fish are scrappers in the finest sense and their eating quality is superb.

Overpopulation and the subsequent "stunting" is perhaps the most serious problem in the management of these fish. That is where the sportsman can play a much-needed management role by utilizing the population at every opportunity and, in doing so, provide himself and his family with some fine recreation and great table fare.

For those who just will not consider anything except salmonids but find the favorite fishing hole looking

UNDER-USED

(Continued)

like opening day on every visit, there is still hope. Ranked by many as the tastiest of all trout and living in many cold mountain streams and lakes of Oregon is the brook trout. Cold temperatures and a short growing season at the higher elevations where "brookies" are found keep these fish generally small. Many areas have no size limit for this reason.

Like warm-water fish, if not properly harvested (and few areas are), brook trout tend to become overpopulated and stunted from lack of food and crowded conditions. Therein lies the opportunity to get away from the crowds. Stock the larder with some delicious meals and at the same time do the fish a real favor by thinning their ranks. The season to do this, however, is not the weekend when the high lakes open. Those spring days would best be spent in other pursuits. When the shorter days and cooling temperatures of approaching fall trigger the feeding urge, time is right to cast a fly, small spinner and worm, or small slow-working lure into that high mountain stream or lake.

Creeks below high lakes or the tributaries above may be often passed by also. This writer recalls a trip to the high Wallows in late August this past summer where perhaps several thousand people had traveled the well-used path to a popular lake. The trail followed a beautiful stream that meandered through several miles of alpine meadow. Brook trout overpopulated the clear, cold water in a classic manner but most other hikers had their eyes on the lake at the head of the valley. Stream fishing between the two of us produced an average of one fish every two minutes! Even a 30 fish per day limit does not last long at that rate. Far more fish would have been taken from the area and the resource would be better off if others had spent some effort on the stream.

Some of the least publicized fish that provide sport to Oregon anglers are the rock, surf, and bay fishes found along the coast. These gamey

residents of the open ocean, bays, and brackish lagoons are frequently overlooked by all but a few local coast dwellers. Charter boat operators can rarely be persuaded to spend time fishing for them although their firm, flaky, white flesh is second to none in eating quality.

Some fish in this group will hit a variety of lures but worms, shrimp, or chunk bait are the old favorites. It is not possible in the space available to go into numerous methods of surf and jetty fishing. Observation of those enjoying the sport or a stop at a coastal tackle shop should produce good results. Incidentally, no fishing license is necessary for these marine species.

Some people will try anything once and, if it is good eating, they may try it again. Another of our overlooked finny friends is one of the fishery biologist's biggest headaches, the carp. Introduced into the United States in the 1800s as a food fish, carp have spread nationwide through one means or another. While most Oregon anglers regard carp as totally worthless, there are those who consider them a delicacy. Those taken during cold-water periods of winter and early spring are fine eating when prepared in a manner that will allow the diner to remove the numerous small bones.

Carp are excellent smoked. Although lacking the glamour of smoked salmon, they have all the qualities that any backyard smoker desires. If

you have not already tried them, save the next carp you catch and sample it. You may be back for more.

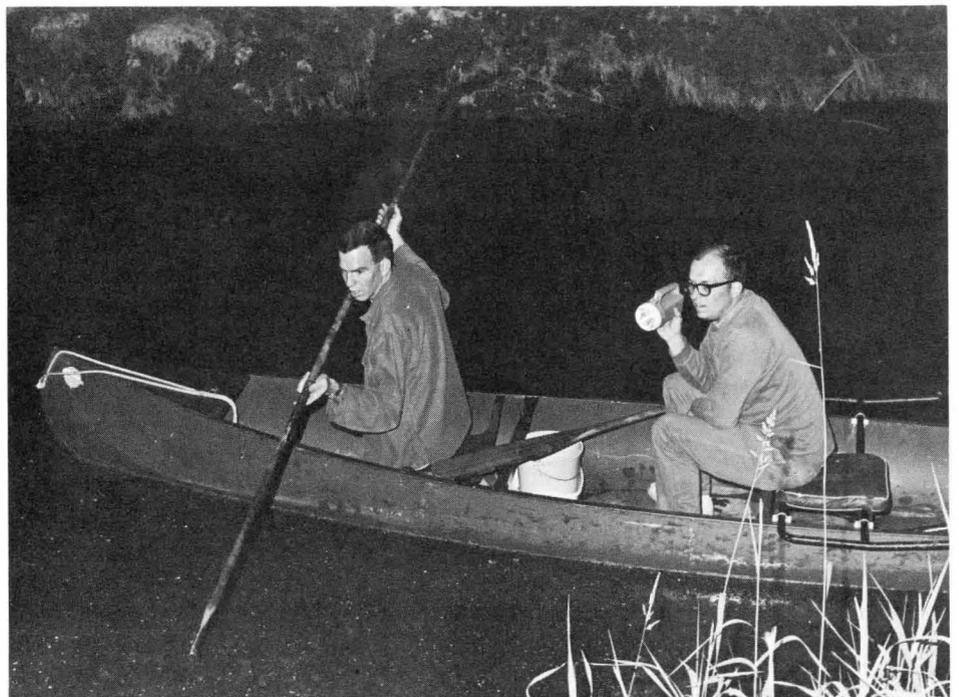
Angling takes many forms and one of those is fishing not for fish but for bullfrogs. There is real challenge to this sport and some gourmet dining at the conclusion of a successful trip. Hunting them at night with the use of a light and a gig, spear, or just the hands is another way to put their delicious white meat on the table.

An adult bullfrog on a fly rod or light gear is a sport not soon to be forgotten. Almost any bass plug, piece of bright rag, large fly, or cork with hooks will work as a lure. The best are homemade, however. Take a medium-sized cork, paint it a bright color like yellow or red, and weight it so it will float with the hooks in an upright position. The latter feature will prevent its hanging up on the aquatic vegetation in sloughs or ponds where the frogs live. These amphibians are somewhat territorial and will usually be spaced out nicely along the shoreline. Add binoculars and a clipboard to your gear to spot and map the location of each frog.

Bullfrogs are wary if harassed to any extent, so stalking is important. If casting poses a problem, do not be discouraged. Frogs have been known to attack a lure from up to 10 feet away. Once hooked, the secret of landing your catch is to keep the rod high so the front legs stay off the water or ground.

(Continued on Next Page)

Bullfrogs provide tasty eating and may be angled for, gaffed, or "handed". The latter method involves leaning precariously over the front of the canoe and quickly grabbing the frog before he dives. The method has merits in that the small frogs may be released unharmed.



UNDER-USED

(Continued)

During the major hunting seasons for deer, waterfowl, and pheasants, the alert or well-equipped hunter occasionally bags some incidental species along with his primary game. Rabbits, quail, and forest grouse are among those taken most often. As excellent eating and recreational resources they, too, are largely overlooked. All have good reproductive potential and a short life expectancy. Predators, storms, starvation, and sporadic disease take a heavy toll. Hunting generally replaces this natural mortality rather than adding to it. Harvest of these wildlife forms, while perhaps not benefiting the resource in the manner described for brook trout or warm-water fish, does prevent "wasting" the animals through natural losses.

In the United States, rabbits provide more pounds of meat for the sportsman's table than any other form of game. Hard to believe but true. The cottontail is king among game species. Few Oregonians actually concentrate on this form of hunting and most of the harvest is confined to the more eastern states. Jackrabbits as well as the smaller cottontails are taken by some Oregon gunners but the larger jacks are usually not considered table fare. The snowshoe or varying hare is fine eating, however.

Cottontails are found statewide with most hunting done east of the Cascades after the closure of seasons on game animals. Thickets along the edges of fields and the sage areas near agricultural lands are favorite haunts for this typically brushland inhabitant. Light tracking snow and the use of a dog will improve the success of any winter hunt.

Snowshoes are native to the timbered areas throughout the state.

They are not readily seen for, as the name varying hare implies, they change their reddish-brown summer coat to a snowy-white raiment in winter. Fresh snowfall is almost a must for locating this camouflage expert. The animals usually do not move a great distance and a fresh track is worth pursuing.

A note of caution for those who may stalk b'r'er rabbit. The possibility of encountering tularemia or plague, while remote, still exists. Animals which appear sluggish, lack alertness, and are unwilling to run should be carefully examined with the aid of a stick or other such object. Do not handle them. If the animal is thin and emaciated or has sores on the skin, leave it lay. The use of plastic or rubber gloves is recommended when cleaning wild rabbits. During this operation, if the liver or spleen are found to have white spots, discard the animal and thoroughly wash your hands as soon as possible.

Quail are frequently bagged in conjunction with other game. They are a fine game bird from both the sporting and eating standpoint and deserve to be allotted much higher status among upland game. Valley quail are found in most areas of Oregon adjacent to and in the farmlands. Brushy edges and draws with water near by are the most likely place to look. These birds are highly gregarious and tightly bunched coveys are the rule. Lighter-gauge shotguns and small shot produce the best results since shooting is often fast and close. Picking up singles after the main flock has been broken is an especially good way for the neophyte shotgunner to see a lot of action and begin to get the feel of things.

Mountain quail, as the name implies, are residents of the brushy hills and mountainous areas of the state. They are scattered and not abundant

in any section. A sporting bird when flushed, like the valley quail, they often prefer to run rather than fly.

Quail have a high population turn over each year. Eighty percent of these birds probably do not live to their first birthday. As mentioned earlier, hunting removes some of the surplus and provides another use for those that would otherwise be lost through natural causes.

Forest grouse populations fluctuate irregularly and hunting seasons seem to have little effect on their density. Ruffed or blue grouse are found in most wooded or timbered areas. They become quite wary when hunted and seem to flush with a tree or other obstacle between themselves and the hunter. Stalking these forest dwellers around natural openings, ridge tops, and cutover areas is a challenge for the best of nimrods.

Numerous other possibilities for recreation and savory dining exist. Opossum is consumed in large quantities in some sections of the United States. The nutria, an introduced South American pest, is excellent baked or roasted. They feed on succulent vegetation and the flesh is pork-like and mild flavored. Muskrats are much the same. Oregon crayfish bring high prices in foreign markets due to their exceptional quality and efforts are even under way to raise them commercially. As for "four and twenty blackbirds baked in a pie," certain history buffs have concluded that the star of this old nursery rhyme is none other than the starling.

This article is not meant to be a complete where-to-find-it, how-to-do-it manual. Perhaps it will, however, shed light on a few more opportunities and help some overlooked, under-used wildlife that could benefit from the harvest. Remember, though, a license is required to pursue any of Oregon's wild birds, animals, or game fish. That license is not a guarantee of game in the bag.

Much of the real pleasure of hunting and fishing should come from the self-satisfaction of finding new areas and learning about the wildlife being sought. Meat is cheaper in the store. Outdoor recreational experiences, however, are not stocked on supermarket shelves.

Some of the least publicized fish that provide sport to anglers are the rock, surf, and bay fishes found along the coast. Some fish in this group will hit a variety of lures but worms, shrimp, or chunk bait are favorites. No fishing license is necessary to take these nongame marine species.



Virginia Wildlife

Let's Cook Starlings

The other day I noticed a bumper sticker. I collect these the way Mrs. Miniver used to collect interesting morsels, filing them away in a pocket of the mind to be rummaged through later when at leisure or in need of a conversational trifle. This one read: "Keep Your City Clean—Eat More Pigeons." It startled me a little because it is some time since I have even *seen* any pigeons. They used to come to the bird feeder and gobble up all the cracked corn, chasing the other wild birds out of their way. But, as I say, they never seem to come now. The problem is to keep the *starlings'* appetites sated so the other birds get a whack at what is left. One does not hear much about *them* now either. A few years ago the newspapers were loaded with articles about how the county was setting off explosions to drive starlings into the city, whereupon the city was obliged to take steps to drive the immigrants back to the county and so on.

Starlings *are* immigrants, you know. Some Literary Ladies a few generations back hit upon the brilliant thought that America ought by rights to have *all* the birds mentioned in the works of William Shakespeare. In consequence, the starling was imported. Shows how little we once had to worry us, does it not? Somehow our national problems seem to be a bit more pressing now and in different areas.

In any case, the starlings came, and since no one had the forethought to import any or all of their natural enemies along with them, they multiplied alarmingly. Flocks of starlings often darken the sky in the same way that flocks of Passenger Pigeons once darkened it.

When one considers the superior job we did in eliminating the passenger pigeon, it crosses the mind that with a similar dedication we could

also eliminate the starling. The thing is, when one thinks "pigeon," one immediately thinks as well, "squab." And then one also thinks, "Ah, now that would vary the menu and supply a tasty treat." No one here, however, seems to have considered that the starling is as much a table delicacy as squab—or at least is considered so in Europe.

The best time to get tasty birds is either before or after the reproductive season when they are not obliged to feed their young. After you have some, they should be dry plucked and eviscerated. It is not a good idea to let them get high. They taste better fresh. Once you have them ready to cook, simply take Escoffier from the shelf and follow any of the recipes given for lark.

Like doves, there is very little meat on a starling. The breast is about all you will want to bother with, but of course the rest of the carcass makes a very fine stock which can be served as a clear soup or with slivers of the breast meat, previously poached in wine, with aromatics added to it. It will also make a very nice aspic in which the breast meat may be molded.

The finest way to prepare them, I think, is to make up a liver paté using whatever livers one has at hand. These may be chicken, turkey, goose, duck, or any of the livers commonly found in a market. They can be combined in any convenient proportion.

When this is ready, take small oblong individual size bread pans (or even the larger cupcake tins will do). Line each with a layer of fresh pork fat. If this is too difficult to come by, salt pork may be substituted after simmering it a few minutes to get rid of a good bit of the salt.

Into each prepared pan, spoon a layer of the raw paté. Lay on a raw starling breast, and spoon more paté over and around it. Set these small pans in a larger one of water and bake in a moderately hot oven, about

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375 degrees until the loaf is set and pulls away from the edges of the pan. Cool somewhat and then unmold on a rack to drain off the fat. When thoroughly cool, remove the pork covering so that only the neat little meat loaves remain.

Using the same pans (washed, of course) prepare a rich pastry dough using butter for the shortening. Chill it well, and then roll out as for a pie crust. Line the pans with this dough, and cut any remaining bits into attractive shapes for a topping.

The pastry cases may be baked separately with the paté inserted and topped with the shaped pieces at serving time. Or if one prefers, the already cooked paté can be placed in the unbaked crusts, covered with a crust and the edges crimped, then rebaked as a single unit. When this procedure is followed, it is necessary to have the paté completely covered with pastry to prevent its drying out overmuch.

This is a marvelous first course at a special dinner party if it is made quite small—say in the two-inch cupcake pans—but it makes a hearty luncheon as well as a festive one if made in the tiny bread loaf pans. A restaurant near *Les Halles* in Paris used to specialize in this dish, and made quite a reputation with it.

Anything one can do with dove lends itself very well to the preparation of starling. Just to split the dressed birds and grill them in butter, adding a splash of good tart red wine to deglaze the pan and pour over the birds for serving, is quite an excellent preparation.

This has been said before, by me as well as any number of other people, but a repetition may be worthwhile. With the price of meat going up and up, it does seem a shame that we fail to make better use of the foods that are available to us as a gift of our environment. A tremendous number of people could dine and dine *well* on starling before the species is in any danger of extinction *here*.

WRITTEN

BY:

**MARJORIE
LATHAM
MASSELIN**

Richmond Va.

LET'S COOK 'POSSUM

When I first began writing these articles, one of my friends whom I thought not much interested in game, complimented me on them and then in great seriousness proceeded to tell me that I ought to write one on cooking 'possum. He would even be willing, he said, his hand under my elbow to edge me over to a quieter place where we would not be disturbed by others present, to give me a very good recipe he knew for the preparation of an opossum. Half taken in by his lowered tone of voice and half by the natural curiosity of the cook, I listened. The thing to do, he explained, was to cook the animal with plenty of good sweet potatoes, after which he advised me to throw away the possum and eat the potatoes. I smiled dutifully while he broke up in hysterics. The trouble with jokers is that they always think they originated the joke.

There is really nothing very funny about a possum cooked with sweet potatoes unless you consider how many people never do it. Even then it is not funny-amusing; only funny-strange, or possibly funny-sad. It always stuns me to find how many people simply will *not* try something they have never eaten. "No thanks," they will tell me. "I'm afraid I wouldn't care for *that*." How do they *know*? If one refuses to *taste* a new dish, how can one wrinkle the nose and say, "Oh, I wouldn't like that!"

Now it is true that possum is a very fat meat and that if you fail to get rid of as much fat as possible before entering upon the final preparation, the completed dish will be swimming in grease. But this is true of domestic duck and a good many people eat those. One supposes they roast the duck on a rack and let the grease drain out of it. That is *one* way to eliminate the fat. There are others. With a possibly tough specimen, parboiling is another simple means of cooking out the fats. Spit-roasting is

another way to do it. And in many cases, depending on the way you wish to cook the meat, simply peeling off that outer layer of fat is the easiest way of all. The first time I decided to try that method with a duck which I considered otherwise inedible, I was agape at the ease with which that layer of fat came off. Fat, you know, just sits there; it is not attached to anything. Pull it, and it comes off with no trouble at all.

The primary drawback to removing *all* of this outer layer of fat is that it exposes the meat completely. Fat is as much a protection in the cooking process as it is to the living animal on a cold winter night. Without *some* fat, meat is dry and tasteless, and worst of all *tough*, because fat is also a tenderizing agent. If you have ever tried to broil a hamburger made of completely lean beef, you will understand what I mean. So the point of all this is that, like everything else God gives us, He had a reason for putting fat in a possum.

The best way to cook a possum is to spit-roast it in the open where you have the facilities for arranging to keep the fat out of the fire but are under no obligation to keep it off the kitchen floor. This can be accomplished by preparing a well banked fire of very hot coals and roasting the meat *in front of it*—the way Pioneer Women did it in front of a fireplace. To be *sure* the fat keeps from dripping onto the coals and thereby flaming the meat to a charred cinder, it is well to take another cue from the old-time cooks and set a dripping pan beneath the spit. Lacking a pan of the right size and condition, this can be done by folding heavy duty aluminum foil so it makes a trough.

To enhance the flavor of the meat, the cavity can be stuffed with aromatic vegetables and herbs. These should be chopped, mixed together and stuffed in the possum after which the opening is trussed up like any other stuffed roast. Cooking should

be slow and the spit turned continually to assure even browning. The stuffing is usually discarded when serving, although there is no reason not to eat it if you wish. Use onion, celery stalk and tops, carrot and parsley. Turnip or parsnip might be substituted for the carrot or added along with it. The more delicate herbs add little or nothing, but a few spiky leaves of rosemary or a bit of fresh sage do well.

To go with the roast possum, one should have sweet potatoes, roasted in their skins, and plenty of new applesauce cooked so that there are chunky pieces of apple still remaining. In other words, use a spoon, not a sieve, in preparing the applesauce. Cranberry sauce is good, too, because this meat demands that tartness accompany it. It also demands a green salad made of the more strongly flavored leafy vegetables such as curly endive, escarole, young spinach or chard leaves and the more pungent herbs such as parsley. Dress the salad with cider vinegar and a good *olive oil*. The usual salad oils lack sufficient character for so richly flavored a game animal as possum.

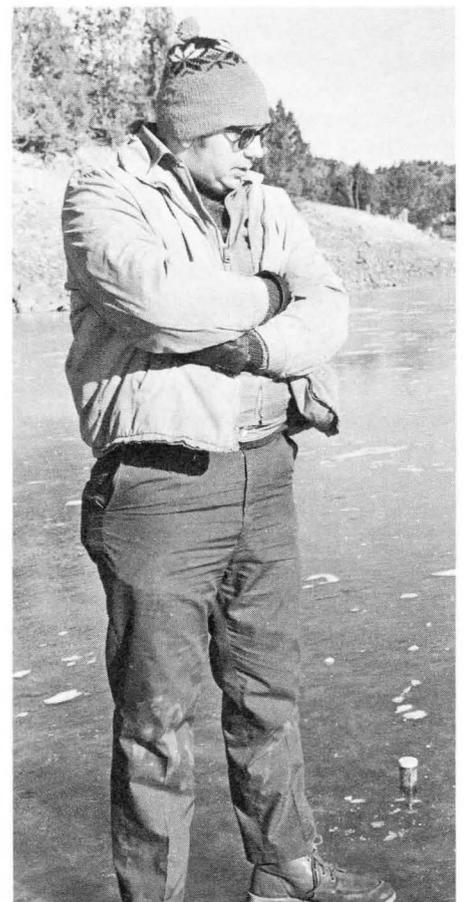
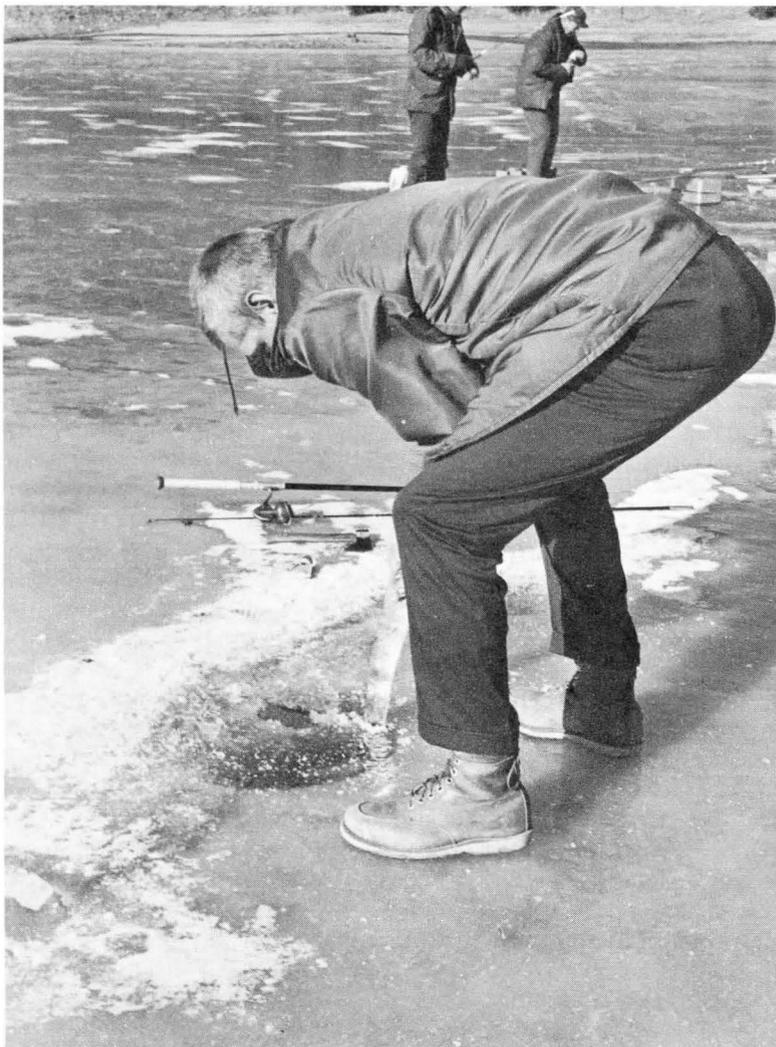
Essentially, 'possum, 'coon, boar are outdoor foods. Everything tastes better out in the open, but this seems especially true of these game animals. However, possum can certainly be prepared in a kitchen. In the event you will be cooking one there, I suggest parboiling as the best means of handling the excess fat. Cook it tender, in water to cover, and add the aromatics suggested above to the cooking water. When it is tender but not falling from the bones, remove from heat and let it cool in the cooking liquid. Chill it, in fact, to congeal the fat which can then be lifted off without difficulty. **T r a n s f e r** the drained possum to a roasting pan and brown it nicely. Instead of sweet potatoes, you might like to substitute corn bread or spoon bread, but the tart sauce and salad discussed above should also go to the table.



Essence of

A rather new but growing sport in Oregon is ice fishing.

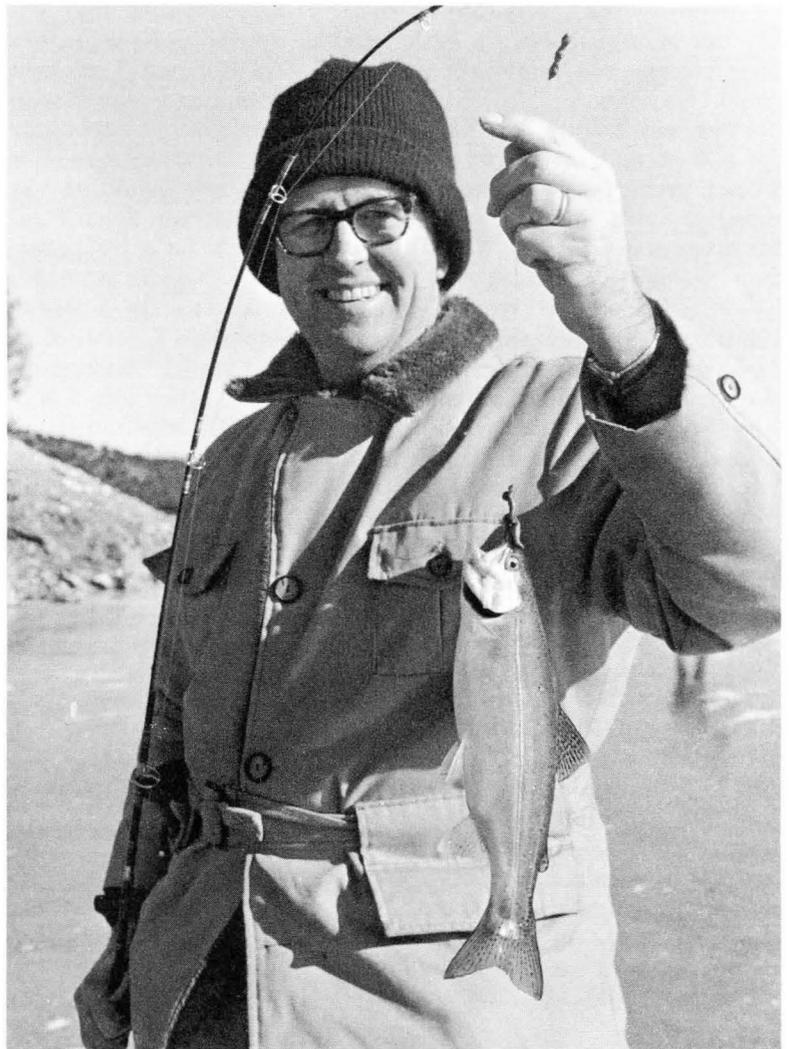
The greatest concentrations of anglers seem to prefer Lake of the Woods in the southern Cascades but many of the wintertime fishermen have been using Magone and Bull Prairie Lakes in northeastern Oregon.





Ice Fishing

Numerous bodies of water in eastern Oregon are open to year-round trout fishing but not every winter puts on a thick enough coat of ice to make the sport possible. Al Miller, Game Commission photographer, caught the spirit of the sport in this series of pictures taken at Ochoco Reservoir just east of Prineville. Ice fishing is still largely an under-used and uncrowded sport.



So you can't catch brook trout!

by H. J. RAYNER
Chief, Research Division

The district fishery biologist in northeastern Oregon tells me that he has an abundance of eastern brook trout up to 4 pounds and 20 inches in Olive Lake and kokanee averaging 9½ inches but anglers don't fish for them. The fishery biologist at Bend says that the big brook trout in Elk, Big Lava, and East Lakes and Crane Prairie Reservoir on the Century Drive are hardly touched by the angler.

The successful angling methods are simple but they must be followed to the letter. They have been used successfully in lakes all over the western United States and Canada. The methods were divulged to me in 1937 by Bill Garner of Convict Lake, California, who found them to be successful even on the crafty brown trout. On top of that, there's a little mild physical exercise thrown in and this could be a bonus.

For bait fishing, the first need is for a boat that can really be rowed. I use a pram, but it's a one-man boat, usually. Try to avoid a wide-sterned, beamy, runabout type. You'll not do much with it under oars, or as they're called, "Norwegian steam." Forget the outboard motor except to get to and from your fishing spot. Now for the gear. Use a big flasher like the Les Davis No. 3 "Odd Ball" or the Luhr Jensen 2-bladed "Lake Troll No. 3," standard. It should have one 8 to 10-inch willow-leaf leading flasher and one 3 to 4-inch trailing spinner of "Bear Valley" shape. Use brass on overcast days and a bright nickel or chrome under sunny conditions for best results, although brass alone will serve. Attach a hook (Nos. 4 to 10) on a 10 to 15-inch terminal leader. Use a single night crawler or two to four smaller worms. Use the lure in the following manner and here's where the secret lies. Put the lure over the side and observe the action when a stroke of the oars is taken. The blade of the big flasher should not turn over but should oscillate from side to side. As the effect of

the oar stroke subsides, the lure sinks deeper but continues to oscillate. Then as another stroke is taken, the lure rises toward the surface. Now that you've seen the thing in action, let out 30 to 50 feet of line, take an oar stroke and watch the rod tip. Its oscillations will follow the movement of the big flasher. When it has almost become still, take another stroke, or as needed, two, though one will usually do the trick. The brook trout (and brown, or rainbow trout, or kokanee, for that matter) will usually hit when the flasher starts to rise as the oar stroke is taken. As you can see, the lure rises and falls from the effect of the intermittent oar strokes. At times, fishing close to or even occasionally touching the bottom is productive, especially where the bottom is smooth and silty or muddy.

There are other ways to catch trout, certainly, and they might be more efficient but this one should do the trick for the bait fisherman.

For those of you whose way of life demands that you use a fly to outwit brook trout, here is something for you, too. I am indebted to an old friend and wizard with a fly rod, Mr. Earl Ellis of Salem, for the following.

No fancy special gear is needed. The rod should be 8½ to 9 feet with a medium to stiff action. The line should be a weighted DTS No. 6 or DTS No. 5, tapered or double tapered, the fly a tied-down caddis or Metolius Special. A tied-down bucktail Royal Coachman might be tried if the other two don't produce. Have an assortment of sizes on hand. Since weighted lines are more dangerous

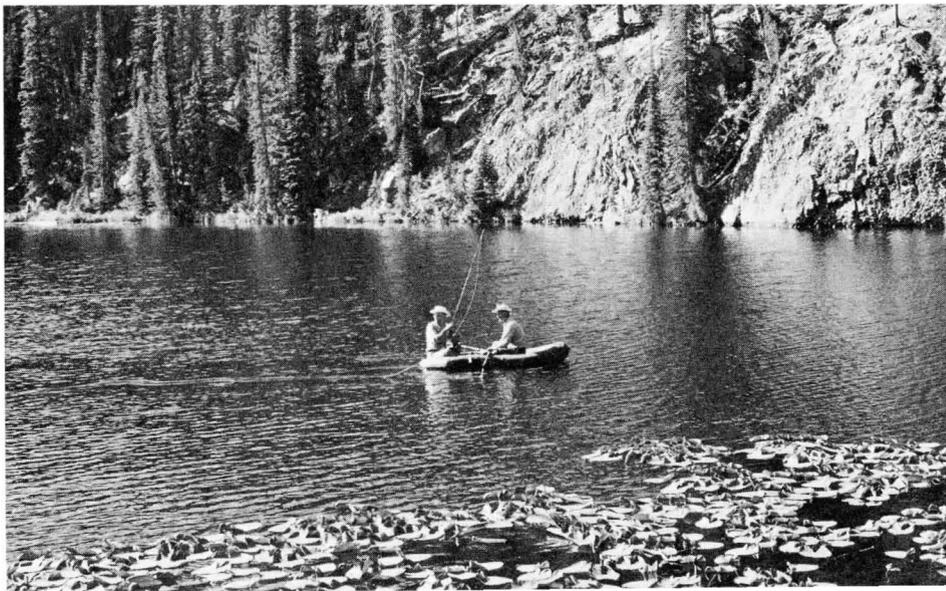
than light ones, a special amount of care must be taken. Make a long cast over 10 to 20 feet of depth or deeper and allow the fly to sink to the bottom. Then point the rod in the direction of the fly and twitch the fly on the retrieve. It's the twitch that does the business. It should be short and sudden, activated in such a manner that the fly stops short between twitches. If there is a fissure in the bottom of the lake that you can locate, as at Sparks Lake, get the fly right down in it.

If you would prefer to *troll* a fly, use a 5 or 6 level line, weighted, and fast-sinking fly in 15 to 20 feet of water, and let out 70 to 80 feet of line. Do not go more than one or two miles per hour which is about idle speed for a 3 horse-power outboard or as slowly as it will turn over. If you can persuade a partner to row the boat that's just as good or better. There are at least two methods of activating the lure. In the first, point the rod at the lure and twitch the line at the reel in 2-inch to 3-foot twitches although short twitches are usually best. In the second method, hold the rod at right angles to the line and twitch the line with the rod but *try to make the fly stop* between twitches and this is accomplished by a quick return.

With the trolling method, use No. 8 to 16 hooks, medium to long shank in the larger sizes, and a tied-down caddis, yellow-bodied fly, or a Metolius Special.

So go get 'em, and if these methods don't work, you're just not doing them right and you'll have to go back and practice some more.

As do warm-water fish, brook trout will often overpopulate a body of water. Large bag limits have been set on certain waters to allow anglers to thin fish populations and allow the remaining brooks to grow larger. The special techniques described by John Rayner will help assure success in such ventures.



GOOSE NESTING PROGRAM ON LADD MARSH

by MIKE KEMP
District Game Biologist

Some of the older lifetime residents of the Grande Ronde Valley can still recall the large numbers of waterfowl that used to darken the valley sky. Many of these waterfowl were produced within the valley where abundant water, food, and cover were available for nesting and rearing of young.

Quite some time before 1950 the Canada goose ceased to nest in the valley. Whether man's proficiency at draining the land, eliminating nesting habitat, construction of dams on the upper Columbia River, or overhunting eliminated the Grande Ronde Valley's resident goose population is not known. To many in Union County it appeared the goose had been crowded out much the same as the wolf and the antelope many years before.

In 1959 the Game Commission initiated the 3,000-acre Ladd Marsh Game Management Area five miles south of La Grande and in the south Grande Ronde Valley. During that year a pair of Canada geese spent the spring and early summer on the area. Two years later in 1961 a brood of young was hatched and became the nucleus of a resident goose population.

Canada geese are one of the earliest nesting species of birds in Union County and find their way to Ladd Marsh in early to mid-February to begin courtship activities and search for nesting sites. By early to mid-March nesting is begun with a clutch of four to ten eggs being laid. Incubation begins soon after the last egg is laid and continues for 29 days. As soon as the down has dried, the downy young abandon the nest in search of food. Hatching dates have varied from as early as April 6 to as late as April 26 and are greatly influenced by late winter storms.

Although Canada geese normally pair off as yearlings, breeding normally does not take place until the second or third year of life. This and the fact that the female chooses the nesting site somewhat impedes a rapid buildup in a local population.

Numerous developments have been created to benefit both geese and ducks on Ladd Marsh. In 1961 four elevated nesting platforms were erected. It was felt that seasonal flooding or perhaps ground predators might be discouraging nesting attempts by the geese. When in 1965 three of the four platforms were used by geese for nesting, others were soon

erected. Today 24 such platforms are available for goose nesting and receive about 50 percent use. Since the honkers do not carry material to their nest site, it is necessary to service nesting platforms every January to replace or add new nesting material. A mixture of bullrushes and baling twine was found to be the most suitable material. The platforms are free from flooding and from molesting by ground predators and offer the geese a 360-degree view of the surrounding marsh.

Waterways were constructed through dense stands of tules with bulldozers during dry years to provide avenues of travel for spring and summer waterfowl use. Material dozed was pushed into piles forming high islands called "push-ups" in the tules. The push-ups are used by both ducks and geese for nesting and resting areas and also provide a high spot for them to view and observe approaching danger. Since they are surrounded by water, predation by coyotes and raccoons is somewhat discouraged.

Over two miles of meandering canals have been constructed in the dense tule marsh to provide open water and create additional edge effect. The proximity of water and cover permits young waterfowl to escape when danger comes near.

Heavy cattle grazing is a management tool used on adjoining meadows to encourage goose use on the area. Geese are grazers much the same as cattle and when cattle are used to graze off old vegetation it makes an abundance of succulent new growth readily available to the geese.

The public has taken a great interest in the geese and numerous carloads of people tour the Foothill Road south of La Grande during the spring and early summer viewing the birds feeding on the meadows.

By the spring of 1971 the pre-season nesting population of Canada geese had increased to 118—quite an increase from the original pair that produced the first brood of young a short ten years before. More encouraging yet is the fact that geese are now seeking out other nesting sites in the valley. It looks like the Canada goose is back in the Grande Ronde Valley to stay.

An artificial goose nesting platform on Ladd Marsh Wildlife Management Area. Aluminum wrapped around the pole discourages predators from climbing the pole to the nest.



Crowds and Crowds

(Continued from Page Two)

the mass of the earth itself in 1,560 years, and the mass of the known universe (3 followed by 50 zeroes, in tons) in only 4,856 years.

Clearly, at some point in the future, either the human birth rate will fall or the death rate will rise; at some time there will be zero population growth. The choice is now, when there is some environmental quality left, or later.

North America's population is doubling only every 66 years, but still it is doubling and obviously it cannot continue to do so forever on a finite continent.

Some have suggested that there are already too many people in North America since this one-fifteenth of the world's population is consuming over half of the world's resources.

It has been calculated that the average Canadian uses about 50 times the resources of the average East Indian. If this is true, then Canada is populated with the equivalent of a billion East Indians!

Obviously we have an unrealistic standard of living (over-powered cars, disposable multipackaging, etc.) which the environment cannot sustain and most of the world can never achieve.

Some authorities conclude that, considering our standard of living, even Canada is already overpopulated. Dr. O. M. Solandt, Chairman of the Science Council of Canada, hopes that population control in Canada will begin in two or three years.

As if the human doubling rate of 35 years were not bad enough, the United Nations calculates that the populations of urban centers of the world are doubling every **11** years. The breakdown of law and order generally begins in cities.

How about British Columbia, with its 2,200,000 people in more than one-third of a million square miles? Could we have a population problem?

Beautiful British Columbia's population is doubling every **20** years, about triple the national average. Cities are growing particularly quickly. They are spreading over the choicest agricultural land. When only 2 percent of the Province is suited for agriculture of all types (including livestock), then obviously we, too, have a population problem, not so much with our numbers as with the way we live.

OPENING DATES SET

The general buck season will open Saturday, October 7. Staff reports indicated continued high mortality on 1971 fawns, especially on the mule deer ranges of eastern Oregon. This forecast prompted the Commission to set the opening later than usual and advised hunters that the outlook is also for a short deer season this fall.

Rocky Mountain elk herds look good and the Commission set the opening date for this season for October 28. November 11 was established for the opening of the Roosevelt

elk season. Early archery seasons will open August 26.

Pheasant and quail hunters will open the season on these upland birds on October 21, a few days later than usual. A week earlier opening would conflict with the harvest of seed crops in some of the better pheasant hunting areas. The general season for chukar and Hungarian partridge was set to open with the deer season October 7.

General regulations for the 1972 seasons will be established following a public hearing to be held on May 20 at the Western Forestry Center in Portland.

SEA OTTERS SEEN



Marine biologists making aerial surveys as part of life history investigations on the seals and sea lions of Oregon spotted at least eight otters. According to their report, two sea otters were observed at Orford Reef near the site of the original sea otter reintroduction in 1970. Two more were observed at Gull Island near the mouth of the Sixes River. Four otters were seen at Simpson's Reef near Cape Arago — two in Middle Cove and two in North Cove.

In addition to these observations, as many as five otters have been seen regularly at Simpson's Reef. One otter has been observed occasionally in Nellie's Cove near Port Orford and two more at Cape Sebastian located south of Gold Beach. The others are normally difficult to spot because of their habit of staying among the kelp beds.

HUNTING IMPROVES

Fewer hunters took home a higher number of deer, elk, and bear from Crown Zellerbach Oregon and Washington timberlands during the 1971 season compared to 1970.

The Clatsop Managed Forest near Seaside estimated that 282 deer, 381 elk, and 26 bear were yielded from its lands last year.

Hunter conduct also improved last year, as most CZ operations reported very minor or no damage from vandalism on hunting lands. Most of the damage was rutted roads caused by driving on wet muddy terrain.



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