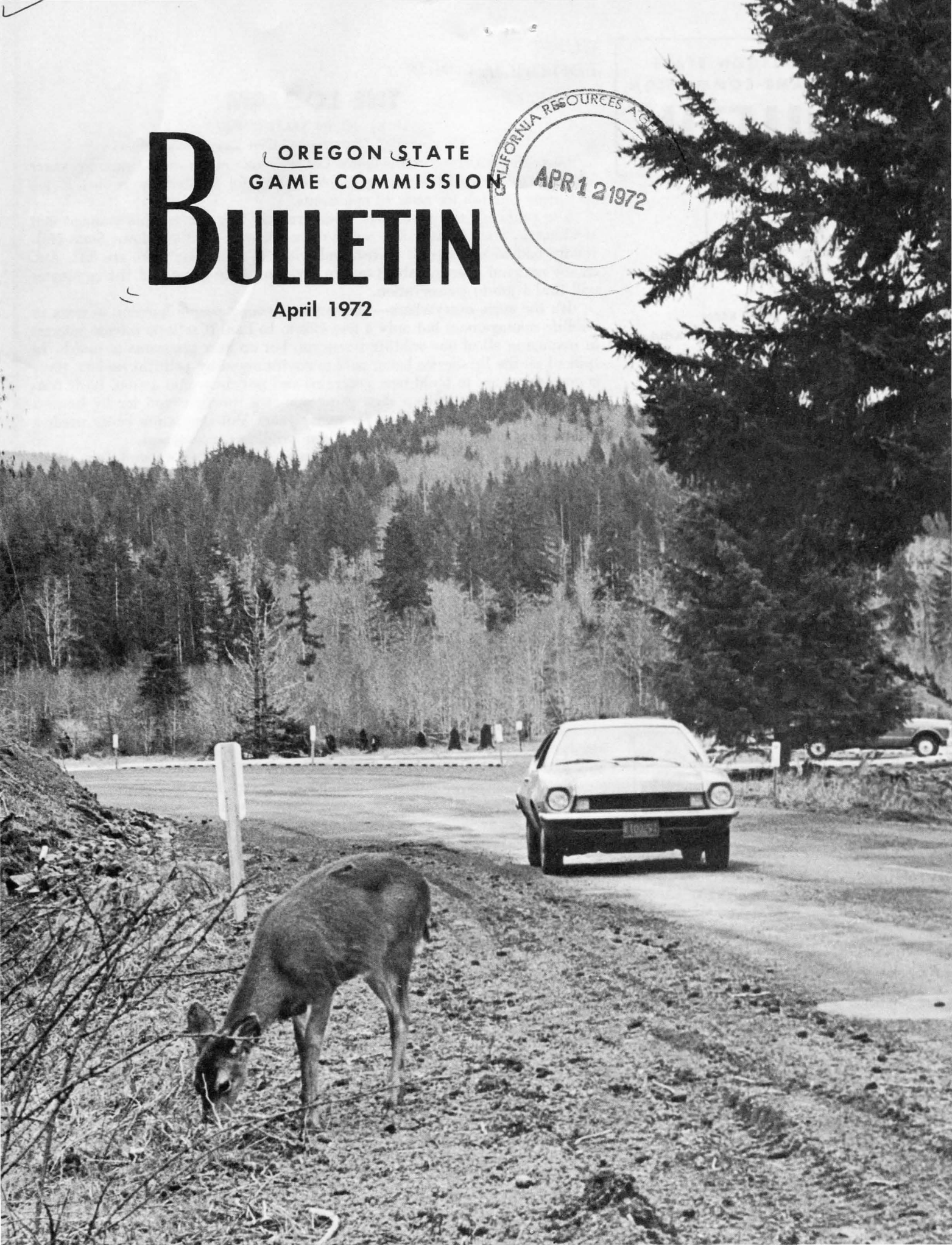
OREGON STATE
GAME COMMISSION

BULLETIN

April 1972



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APRIL 1972
Volume 27, Number 4

RON E. SHAY, Editor
HAROLD CRAMER SMITH, Staff Artist
A. L. MILLER, Photographer

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The Cover

A setup for possible disaster. A quick move by the deer could cause a collision and one deer may mean more nearby.

Photo by Cliff Hamilton

HUNTER SAFETY TRAINING PROGRAM

Instructors Approved

Month of February	19
Total to Date	2,621

Students Trained

Month of February	325
Total to Date	178,412

Firearms Hunting Casualties Reported in 1972

Fatal	1
Nonfatal	0

GUEST EDITORIAL

THE LOGJAM

by JOHN MADSON
Conservation Department, Olin Corporation

Last fall the Pennsylvania Game Commission announced a Game Protector job exam and over 1,000 young people applied for it. There were just 25 job openings—one job for each 40 applicants.

Ten years ago there were 122 undergrads in fish and wildlife management at Colorado State University; today there are 472. In 1960, Iowa State University had 65 undergrads in fish and wildlife—this year there are 322. And on the national average, about one in seven of these game and fish graduates will find a job in conservation.

It's the same everywhere—thousands of young people burning to work in wildlife management but only a few jobs to be had. It reflects intense interest in managing all of our wildlife resources, but no new programs to match. In spite of all the lip service being paid to environment by political leaders, there is no real money to build new programs and put them into action. Basic conservation continues to be a state game and fish function paid for by hunters and fishermen—as it has been for many years. But the nation badly needs a major breakthrough into broad-spectrum wildlife conservation.

New money is the key log in this environmental logjam and new efforts are being made to find it. The International Association of Game, Fish and Conservation Commissioners—working with the Wildlife Society—is developing a model law for nongame wildlife. This model will provide guidelines for raising new money and putting it to work.

The Missouri Department of Conservation—one of the finest conservation agencies in the world—is fighting desperately for a state constitutional amendment that would earmark up to $21 million per year for a great new conservation program. This money would come from a proposed state tax on soft drinks and be spent to double Missouri's public land and water holdings—not just for sportsmen but for the entire outdoor public. The bitter, uphill fight is being watched with keen interest by 49 other state conservation agencies, for victory in Missouri could signal a break in the national environmental logjam.

When such a break does come, it will probably be at the state level. Good state conservation departments are surprisingly close to the land and to the needs of the people, while the federal agencies are heavily insulated from such mundane matters by a thick, woolly bureaucracy.

Meanwhile, we solid citizens and our politicians bray environmental platitudes as time and resources are being wasted—and the greatest of those resources is the growing reservoir of young energy that longs to be spent improving the American outdoors.

Game Commission Girds For Ecological Workload

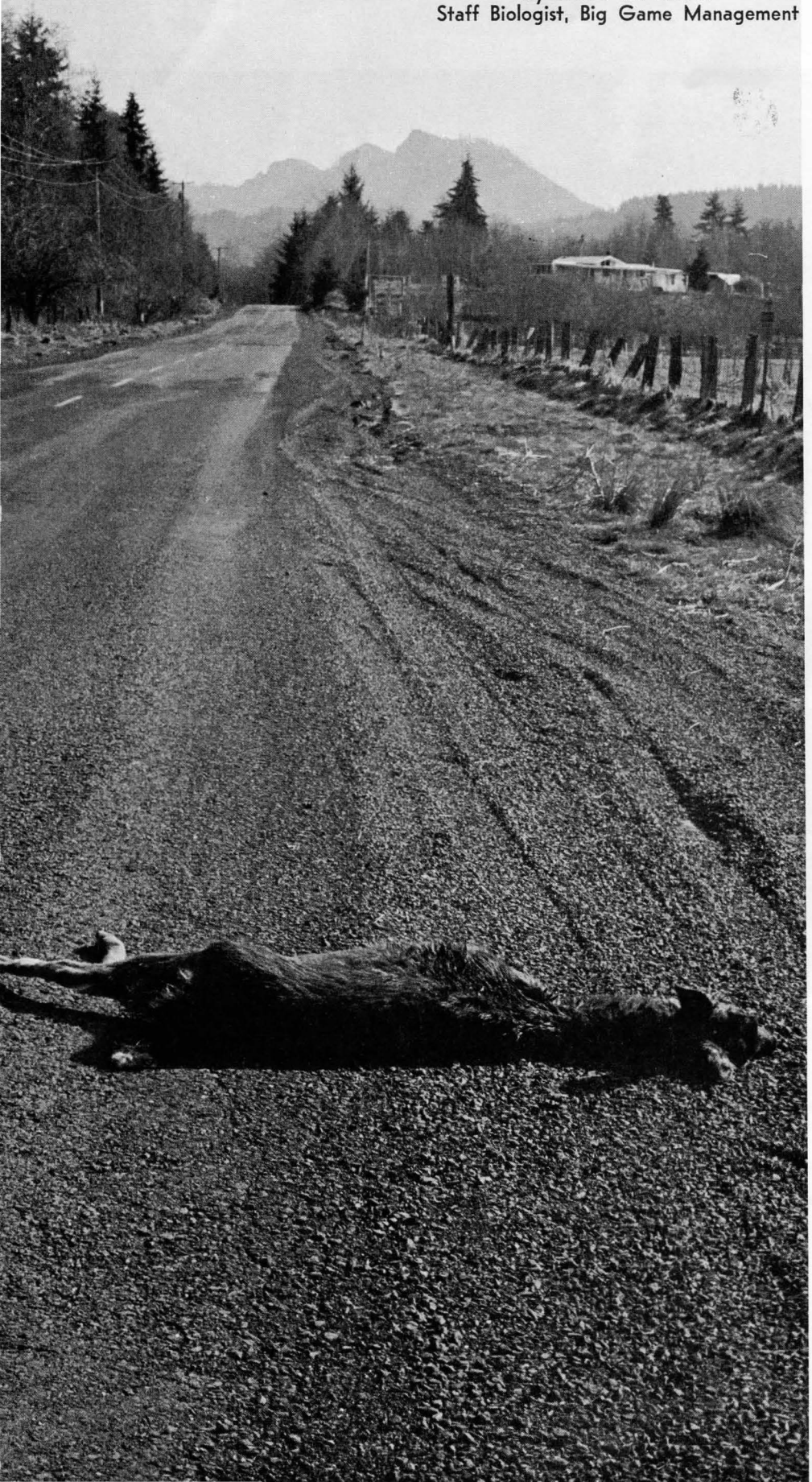
The Game Commission has reorganized its Basin Investigations Section into an Environmental Management Section.

Fish and wildlife have been under increasing threats in recent years from water pollution, land and water developments of all kinds, and from general pressures of the population. Heavy workloads associated with impact statements and negotiations to maintain productive fish and wildlife habitat require greater effort and improved coordination with other organizations.

Bill Pitney, long-time head of the Basin Investigations Section, will supervise statewide functions of the new section, which will concern itself with the impact of water and land development projects, coastal and estuarine planning, stream flow investigation and uses, pesticides, industrial developments of all kinds, urbanization, and other land and water activities that affect the state's fish and wildlife resources.

VEHICLES, ROADS AND WILDLIFE

by PAUL W. EBERT
Staff Biologist, Big Game Management



The thrill of seeing big game animals nonchalantly grazing alongside Oregon's highways never ceases to excite the traveler. The occasional graceful deer, or less often seen magnificent elk, should excite the passerby, but for more than one reason. These seemingly unconcerned animals plus the many animals standing obscured by the roadside vegetation or shadows of the bordering forests constitute a potential hazard to the unsuspecting motorist. Annually over 126,000 deer are killed on the highways of the nation, causing an estimated 34 million dollars of damage to the vehicles involved.

Because of road construction and increased mobility of the human race, the number of deer-vehicle accidents is increasing at the rate of 5 to 10 percent annually. High standard highways now permit the average person to travel at speeds never before experienced. The problem is compounded as more people with more time and more cars travel the highways at all times of the day and night and at all seasons. Although a big game animal standing along the highway may not appear to be frightened, the speed, sound, and light from an oncoming vehicle will often frighten and confuse them, causing them to lunge unexpectedly into the path of the approaching car or truck.

States with extensive road systems and high human densities coupled with moderate to high big game populations experience the heaviest losses annually. New York and Pennsylvania average 24,000 and 22,000 deer killed, respectively.

Oregon's recorded highway deer loss during a one-year study ending on August 31, 1968 totaled 3,151. Heaviest mortality of 507 deer occurred in Klamath County while

(Continued page 5)

Chuck Bruce holds up the windshield of an auto that collided with an elk. In the lower left is the elk, partially covered by a load of dirt dumped to cover the carcass.

Though dead deer and elk along highways are usually reported, it is rarely possible to salvage the meat. Usually the internal damage that killed the animal makes it useless for human consumption and only a few hours after such collisions spoilage has taken place.

DEER & VEHICLES

Douglas County followed with 378 deer. Ninety-one percent of all the accidents occurred on state highways while the remaining 9 percent was reported from county roads.

The 126,000 deer estimated to be annually killed on the nation's highways represents a tremendous loss of wildlife and of recreational opportunity. Alaska reports the annual highway kill of moose in one unit usually exceeds that of the hunter's harvest within that same area.

The greatest problem occurs when high-speed two-lane highways bisect the normal migration route of deer. In Oregon this occurs in the case of U. S. Highway 97 from Bend to Klamath Falls. Movement of deer on the migration route generally occurs during the night hours when the animals are easily confused by the lights of the approaching vehicles. Heavy losses also take place when animals attempt to move from nearby escape cover across a highway to a feeding area. Irrigated pasture lands or alfalfa fields draw animals for many miles during the dry summer months, creating a problem on any highway which cuts across this movement.

Also, highways through timbered areas can create an edge effect, thus attracting game to a danger area. This effect takes place as the highways are cut through the areas where tall trees have shaded the ground so much that small plants needed for game food have ceased to grow. As the forest cover is opened up by road construction, the sun once again is able to get through to the ground and the small plants start coming back. This sets up a dangerous attractant for animals. The nearby timbered areas provide escape cover while the cleared area along the road supplies food. Obviously animals startled or deciding to sample food morsels across the road are apt to tangle with fast-moving vehicles going by.

Many states have expended considerable time and money installing and researching possible corrective measures. Some of these are:

1. Warning signs
2. Reflective devices
3. Fencing
4. Underpasses and overpasses
5. Clearing wide rights-of-way
6. Lighted sections
7. Diversion of animals by waterhole construction

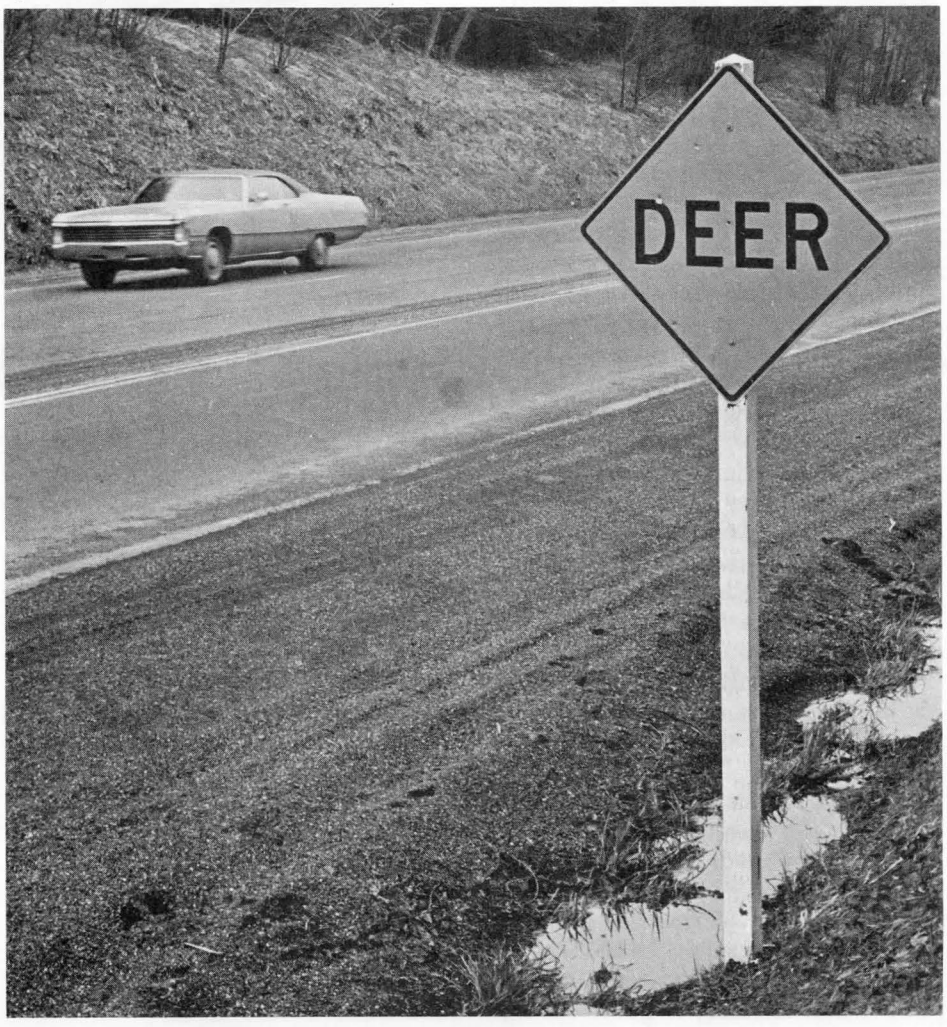
Fencing, although the most direct solution to the problem, has its limitations. Where a highway bisects a migration route, fencing is only practical when movement is concentrated in a limited area. Fencing can then be used in conjunction with underpasses or overpasses to allow deer free movement to their historical ranges. Most other techniques have been only partially effective and are not considered effective solutions to the problem.

Colorado is presently studying the use of underpasses and has found that deer do not readily accept these artificial travel routes. In cases where a resident population of deer experiences heavy mortality on the highways, special hunting seasons are sometimes used to reduce deer numbers.

Considerable publicity has been given to the use of small reflectors that shine flashes of car light back into the woods adjacent to problem stretches of highway. Originally developed in Europe, the reflectors have been tried in some areas in the United States. Unfortunately, the results have been less than spectacular. A recent story from Minnesota reads, "Experimental mirrors, designed to scare deer off of highways by reflecting flashes of light onto the highway ahead of oncoming cars, have been judged ineffective by the Department of Natural Resources.

(Continued next page)

Motorists traveling through areas where contact with animals is likely should heed any warning signs and proceed with caution.



DEER & VEHICLES

"The mirrors, set up on the North Shore Drive near Cascade River to test the idea, will be removed this spring.

"The study has been carried out for five years and the results are similar to the findings recently made in other states, the Department said.

"Officials noted that the highest deer kills from motor vehicles have occurred in the vicinity of artificial feeding stations established by private persons who feed deer in the winter between Highway 61 and Lake Superior."

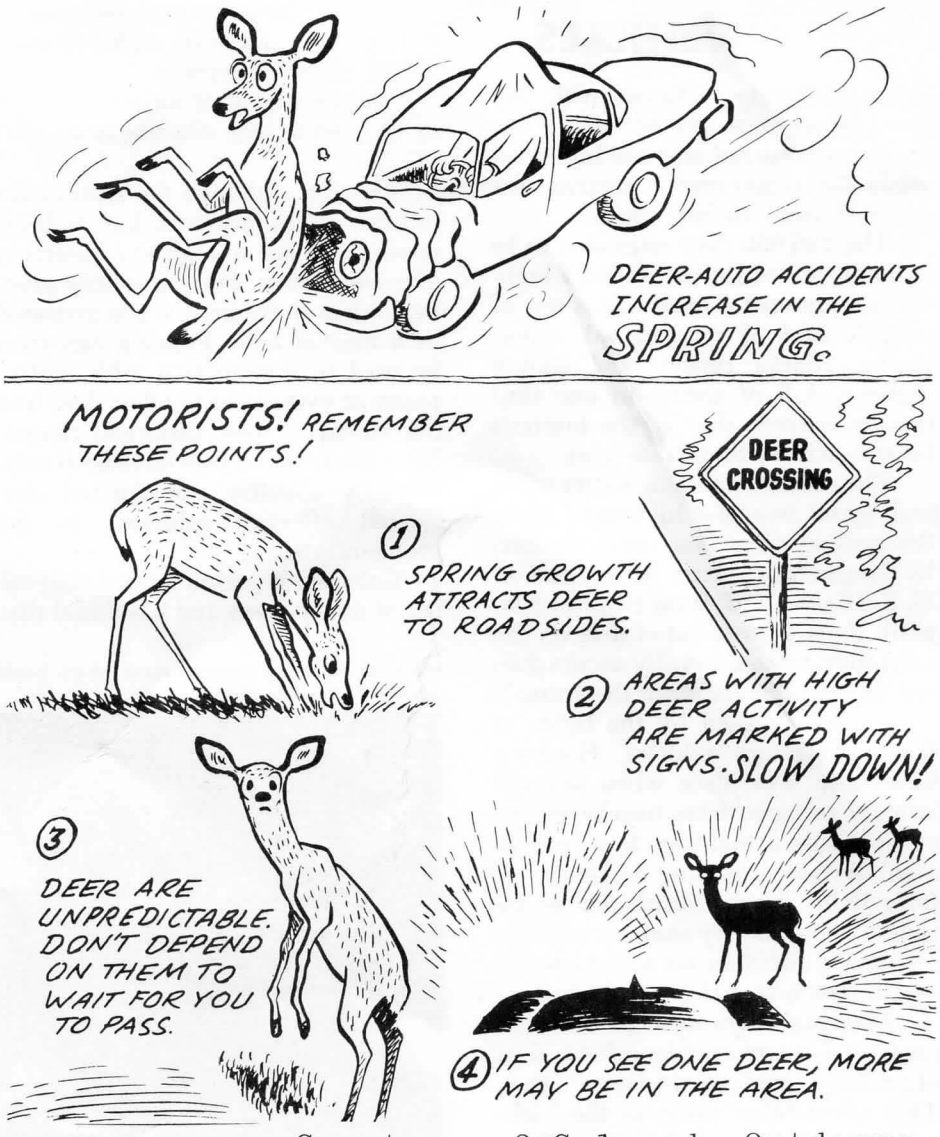
Although preventive measures are very expensive, consideration must be given to the human injury, loss of life, and personal inconvenience caused by accidents and to the loss of wildlife resource. Mechanical devices and habitat manipulation can help reduce the number of deer-vehicle meetings. However, use of judgment on the part of the driver is probably the best deterrent of such incidents.

Motorists traveling through areas where contact with animals is likely should heed any warning signs and proceed with caution. If a deer or several are seen standing along the road, it is well to be alert for additional animals and not assume the ones you've seen are the only ones around.

Most of the accidents occur during the hours of dusk and dark with the greatest risk period the two hours immediately after sunset. When in big game country, an alert driver can cut down the chances of having an accident by using a phenomenon of nature to his advantage. Because of their structure, the eyes of deer (as well as those of elk and cattle) reflect light that shines into them. A good driver going through big game country at dusk or after dark will have his headlights on and keep scanning the roadsides for the bright reflective eyes of animals. Though this won't reveal all animals and can't prevent collision with one that leaps from a bank onto the road, it does often give warning that there is a potential problem because of roadside grazers.

Despite what might be thought to be true, most of the accidents take place when visibility is good, during clear weather. Two-lane roads where high speeds are permitted are the most likely locations for these accidents with the greatest number of occurrences taking place when vehicles were traveling between 50 and 70 miles per hour. One could surmise that at slower speeds drivers are able to dodge animals or slow down enough to avoid contact.

Caution and alertness by drivers are the keys to cutting down the number of animal-vehicle collisions. Appropriate driving habits in game country can save wildlife and may well save human lives.



Courtesy of Colorado Outdoors

Record Number of Whoopers Return for Winter

Aransas National Wildlife Refuge officials in Texas in early December reported 59 whooping cranes have returned to their wintering grounds, the highest number since the counts of the rare bird began in 1938. Last year it was 57. The news was tempered by the fact that only four young were counted (two less than last year), the only birds added to the wild flock as a result of last spring's breeding season in Canada.

WHY DEER DIE IN WINTER

By W. C. LIGHTFOOT, Research Division

There are obviously many reasons why deer die in winter, the season when the heaviest natural mortality occurs, but the principal cause of loss, affecting animals directly and indirectly, is inadequate nutrition.

It follows that inadequate nutrition, if extended long enough, results in death by starvation. Before death occurs, the malnourished animal is more susceptible to disease, parasites, predation, injury, exposure, and other factors which can hasten death.

When plants are dormant in the winter, nutrients are withdrawn from the aerial portions and stored in the roots and basal stems, greatly reducing the value of the parts available to browsing animals. It is doubtful if any winter forage supplies in Oregon, even on good ranges, are capable of maintaining condition in deer because it has been observed that the animals invariably lose weight during winter. At that time, deer also eat less, probably because the fiber content of the ingested food is higher and more time is required for breakdown of material in the rumen and for passage through the digestive system.

Winter is also the time when greatest stress is placed on the animals and highest energy expenditures are required to maintain body temperature, operate body functions and perform the work required to live.

To cope with these conditions deer have developed, to a high degree, the ability to store reserve energy during the growing season when forage is more nutritious and available.

In good forage years deer harvested in the fall are "hog fat" with copious deposits under the skin on the rump, sides, and brisket, around the internal organs and in bone marrow. Such fat reserves are drawn upon to make up the deficit between winter energy demands and the energy obtained from winter food resources.

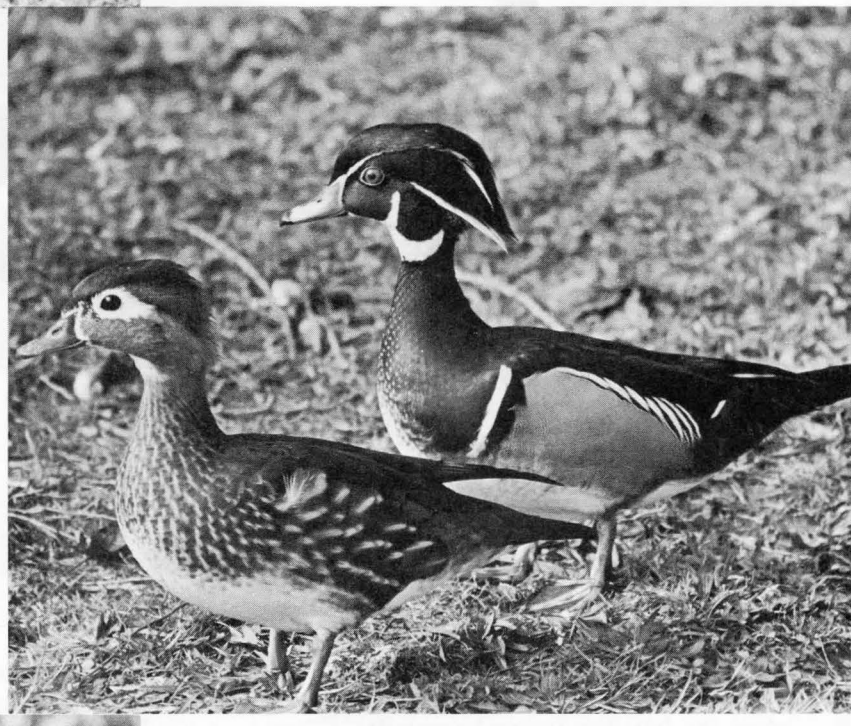
The fortune of a wintering deer therefore depends on the forage resource of the summer and fall ranges which enable the build-up of body reserves, and on the condition and availability of forage on the winter range, and the severity and duration of winter weather which together determine the energy deficit the animal must draw from stored reserves.

Ultimately the annual weather pattern has perhaps the greatest influence on animal survival, for weather determines forage production on the seasonal ranges and wintering conditions.

A differential response is exhibited by deer to winter nutritional stress. Fawns are most adversely affected. The young, rapidly growing animals expend much of their food intake on growth and are unable to store up body reserves to the same degree that adults do and consequently are the first to succumb. The still growing yearlings are the next most susceptible to winter loss, followed by adult males who expend much of their stored reserves during the fall breeding season and enter the winter period in poorer condition than adult does. Adult females enter the winter in the best condition of all and have the highest survival potential.

The effect of severe weather on a deer population can extend into succeeding years. Adult females carrying fawns usually produce smaller and less viable offspring when exposed to a severe winter. Subsequent high fawn mortality prevents replacement of previous winter losses and thus herd numbers remain at a low level.

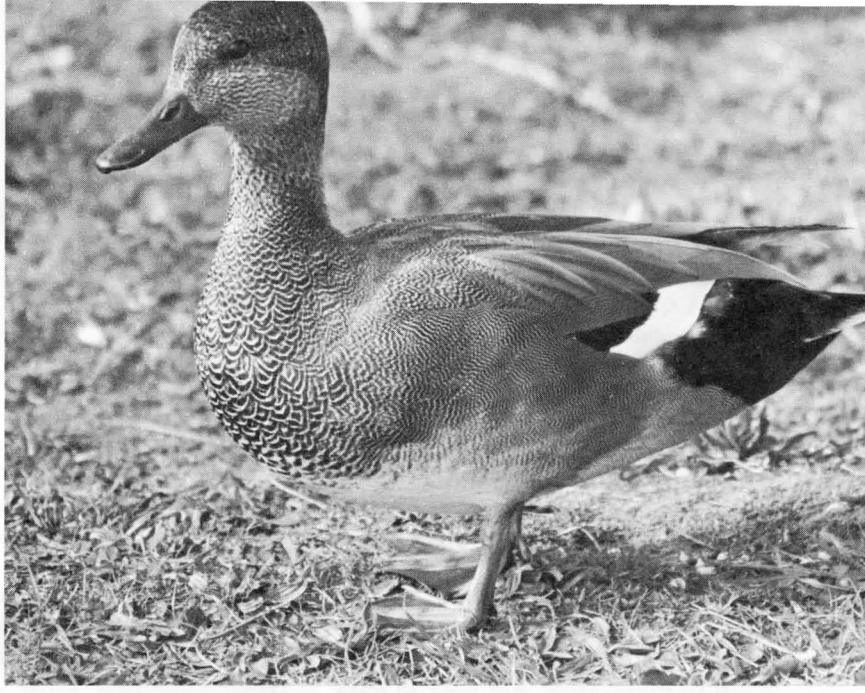
Male Mallard



Female and Male Wood Duck

Male Baldpate or Widgeon

SPRING FINERY



Male Gadwall

During the spring breeding season, waterfowl and many other birds are adorned with their most spectacular colors of the year. The individual with a color camera can capture color combinations that dazzle the eye.

However, even black and white film can present the feel of the grandeur of nature's designs. The patterns of nature must be a constant fascination.

Here for your interest are a few of Oregon's nesting waterfowl captured by Al Miller, Game Commission photographer. If you want to try for photos of your own, don't wait too long, for the brightly marked males will have molted their feathers in a few short weeks to spend the summer with less spectacular markings resembling those of the female.

Male Green-winged Teal

SHOOTERS HELP WILDLIFE

Conservation and wildlife restoration programs in the United States might be more successful and their budgets much larger if our sporting firearms industry were ten times as large as it is today.

The reason for this relationship between conservation and the firearms industry is that for every dollar spent on recreational firearms and ammunition in the United States, a percentage goes to wildlife. The source of these wildlife-directed funds is an 11 percent excise tax on sporting arms and ammunition. Collected since 1937, the proceeds of this tax are earmarked for wildlife restoration under the Pittman-Robertson Federal Aid in Wildlife Restoration Act, and to date the pennies have added up to over $450 million for these programs.

Such yearly excise tax collections, which have increased steadily and sharply since 1937, topped $29 million in 1970. And in addition to this $29 million collected from the tax on rifles, shotguns, and ammo, almost $7 million more was provided by a 10 percent levy on handguns. Such taxes are unique in that they were sought by sportsman and manufacturer alike.

The funds, regulated by the U. S. Department of the Interior, are made available to the states for approved wildlife restoration projects and land purchases. The amount available to each state is determined through a complex formula based on such factors as the area of the state and the number of licensed hunters in that state. Large states with many hunters, such as California, Michigan, Texas, and Pennsylvania, may receive more than $1 million each year. Distribution of the handgun tax money, however, is regulated so that no state shall receive more than 3 percent of the total nor less than 1 percent. The funds are used to repay up to 75 percent of the cost of approved conservation programs and the state pays the remaining 25 percent.

States have used these funds to improve game range by planting feed and cover, restocking game, constructing marshes and ponds for waterfowl, conducting research, and purchasing millions of acres of wildlife lands.

ROGUE FISHERMEN BUILD FISH LADDER

Instead of collectively sitting around grousing about environmental problems facing Oregon's fish and wildlife resources, sportsmen's clubs across the state are lending sweat and muscle toward the actual management of wildlife.

The latest volunteer project completed in mid-February was the construction of a fish ladder over a 6-foot falls at the mouth of Star Gulch Creek, tributary of the Applegate River, by the Rogue Fly Fishermen's Club of Grants Pass.

Except during high water periods, summer and winter steelhead were unable to jump this 6-foot barrier to reach spawning water above. When advised of this roadblock, the club requested engineering details and then took on the construction job. When completed, the new ladder opened up four miles of excellent spawning gravel to the big seagoing migrants.

The work involved drilling and blasting the bedrock formation, building the forms, and then pouring the concrete steps. There was no monetary return to the large and willing labor force but, according to word received, members of the club received tremendous satisfaction for a job well done. The club has turned its eye on even more difficult projects in the months ahead.

Den Allison Receives Award

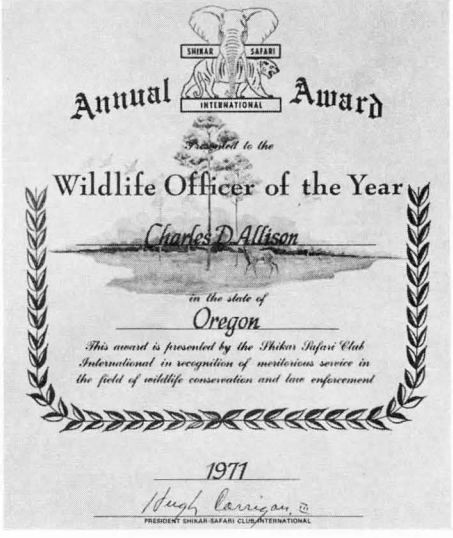
Den Allison, 20-year employee of the Game Commission at Sauvie Island Game Management Area, was recently awarded the Oregon Wildlife Officer of the Year Award by the Shikar-Safari Club International.

Den was recognized for his many years of work with the public in the art of retriever dog training and for his numerous appearances before groups at sport shows and on radio and television to demonstrate his skills and to talk about wildlife management.

The Shikar-Safari Club is composed of individuals who hunt wildlife throughout the world and the annual awards program is a part of its efforts to promote sound wildlife management and conservation. One individual from each state is selected to receive the annual award.

The presentation ceremony took place in Edmonds, Washington. Den received the handsome certificate shown here plus a check for $50. The presentation was made by Stu Roosa, command module pilot on the Apollo 14 moon trip. Roosa also presented Den with two autographed photos taken in color from the surface of the moon.

Den Allison with Duke



FROM OUT OF THE PAST

Another view of our intrepid wildlife photographers from out of the past. Here we see Finley and Bohlman eating lunch during one of their sojourns to the Malheur country. Glass plate negative was dated 1908.

Boeing Opens Land To Public Hunting and Fishing

The Boeing Company, working in cooperation with the Oregon Game Commission, authorized limited access to one of the largest single tracts of land in the state for public hunting and fishing.

Negotiations with Denver Grigsby, Boeing manager of the Boardman development in eastern Oregon, resulted in an agreement providing public hunting and fishing privileges on a large portion of the 100,000 acres under lease by the company.

Areas to be accessible and seasons of use will be designated annually at April meetings between the Boeing Company and the Commission. The potential of this area will not be realized until sometime in the future when irrigation and other developments are completed. **The agreement does not provide immediate public access.**

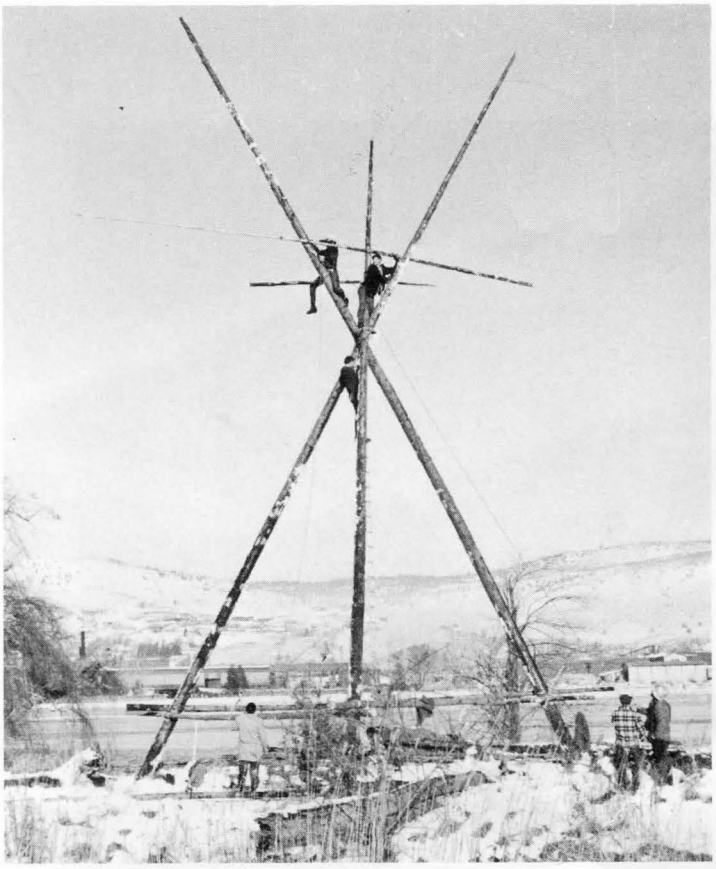
The agreement gives the Commission authority to carry out large-scale habitat improvements to increase the production of fish and wildlife. The Commission will also have the responsibility for patrolling the area during authorized hunting and fishing seasons to prevent violation of closures and to prevent fires and vandalism.

There is no time limit to the agreement although either party may terminate upon six months written notice.

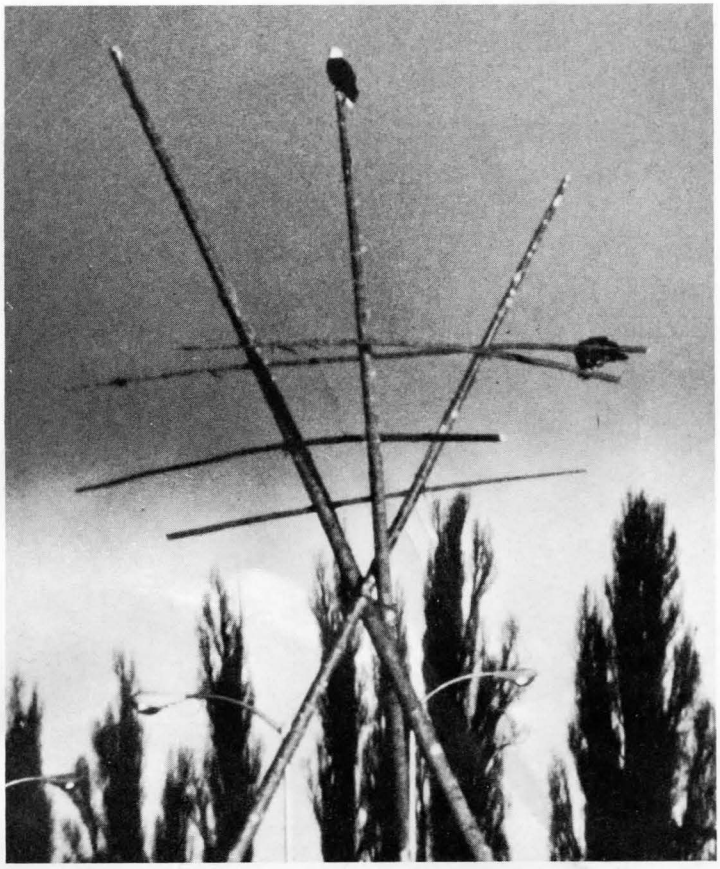
Boeing leases the 100,000 - acre Boardman tract from the State of Oregon through the state's Department of Veterans Affairs. The land lies south of Interstate Highway 80N and east of the John Day River in Gilliam and Morrow Counties.

FROM THE NATIONAL WILDLIFE FEDERATION

Although your next camping trip might be without any mosquitoes, if two researchers from India are right, it will also be without any friends! Two biology researchers from Bombay have reported that garlic (That's right, folks—garlic!) may provide a deadly diet for mosquitoes, houseflies, and certain other major insect pests while posing none of the hazards of DDT. The researchers reported that, particularly considering its nontoxic nature, **"garlic oil could be used as a pesticide."** So the next time you get out in those woods, just rub a little garlic all over and relax pest-free. Another good point: If you don't have a lot of wilderness around you, you soon will have!



Men scaled the logs and cabled the 20 to 30-foot cross perch poles into place.



A mature bald eagle watches from the top spot of the "tree" while an immature bird uses a lower level perch.

Photos courtesy of Dwight R. Schuh, Klamath Falls Herald and News.

THE EAGLE'S LAIR

Weyerhaeuser Timber Company recently came to the aid of some perchless eagles in the Klamath Falls area with the construction of a huge artificial tree.

The traditional roosting place of a number of the national birds of the area was two huge poplar trees. Last autumn, however, the trees toppled as a result of high winds and some weakening carried out by the local beaver family. The location of the trees made them favorites for the bald eagles. Nearby was a lake that provided food in the form of fish and occasional waterbirds. This was the only such body of water in the immediate area that remained open when the freezeup coated other areas with ice.

Bob Anderson, forester/biologist for Weyerhaeuser, was the instigator of the project although in all some 40 individuals were involved. About 25 of the company men donated a weekend in subfreezing weather to erect the huge tepee-like arrangement.

First use of the perch took place on Christmas Day when two of the big birds moved in and were soon munching fish hauled up onto the 60-foot creation. As might be expected, this gave the structure its nickname of "Eagle Christmas Tree."

Around the base of the eagle tree the crew planted fast-growing poplars and elms so eventually there will be a more natural and permanent viewpoint for the birds to use. Oh yes . . . the new trees and bases of the tripod poles are surrounded by wire to prevent further munchings by the local beavers.

OREGON STATE GAME COMMISSION
1634 S. W. ALDER STREET
P. O. BOX 3503
PORTLAND, OREGON 97208