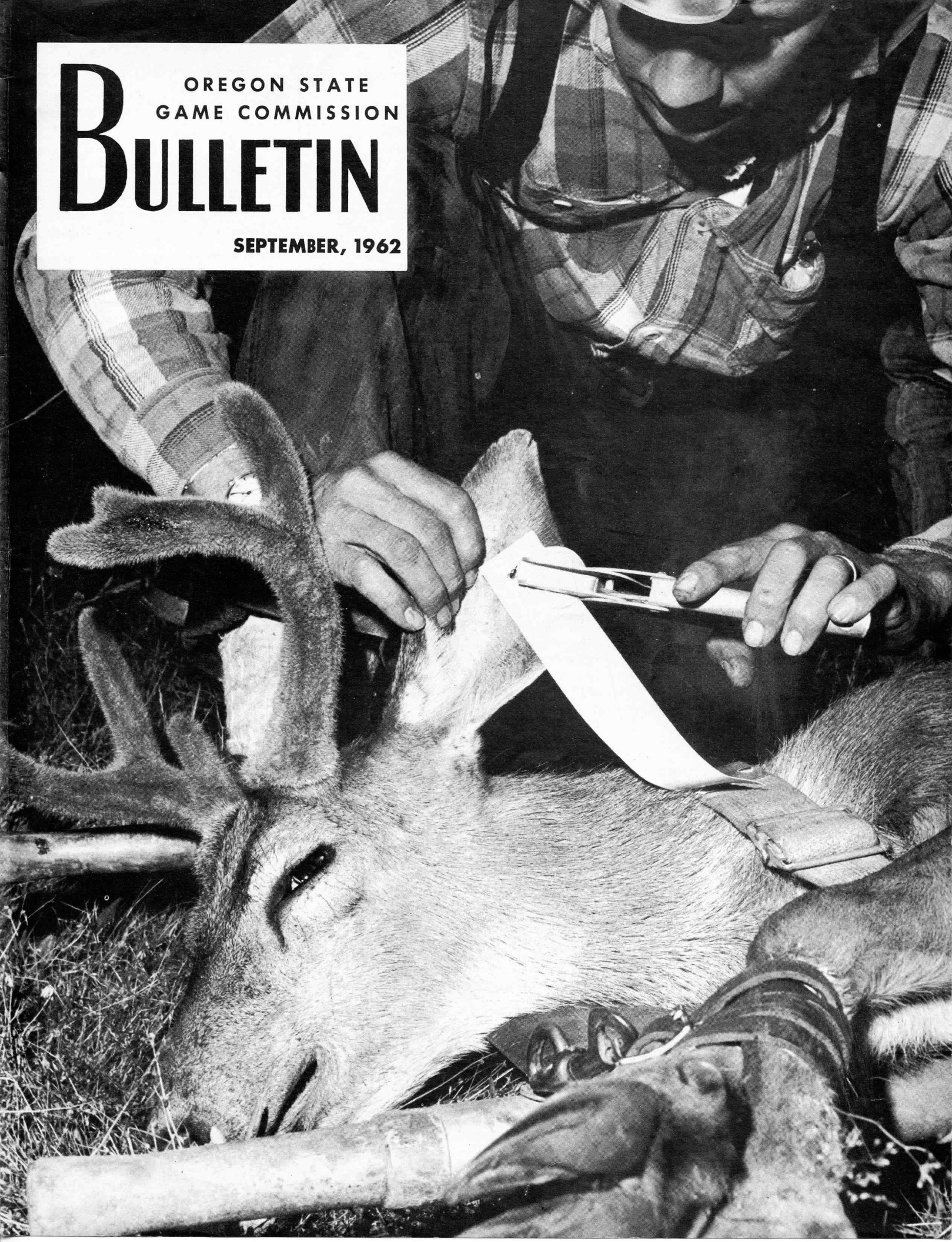


OREGON STATE  
GAME COMMISSION  
**BULLETIN**

SEPTEMBER, 1962



# OREGON STATE GAME COMMISSION BULLETIN

SEPTEMBER, 1962

Number 9, Volume 17

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At the present time the Bulletin is circulated free  
of charge to anyone forwarding a written request.

## the cover

Black-tailed deer introduced into the Cedar  
Creek enclosure are captured with drugging  
equipment. Individual markings are placed on  
each animal so that their presence can be  
verified after release. The Cedar Creek Deer  
Study is a cooperative effort between the Game  
Commission and Oregon Department of For-  
estry. (Photo by Bill Wick, O.S.U. Extension  
Service.)

## BULLETIN HUNTER SAFETY TRAINING PROGRAM

### Instructors Approved

Month of July ..... 43  
Total to Date ..... 3,246

### Students Trained

Month of July ..... 1,361  
Total to Date ..... 41,255

### Firearms Accidents Reported 1962

Fatal ..... 1  
Nonfatal ..... 8

## August Meeting of Game Commission

Business considered by the Oregon State  
Game Commission at its meeting on Au-  
gust 14, in addition to hunting regula-  
tions, included:

**Bids.** Accepted following bids: Ross  
Brothers, \$7,300 for repair of Valsetz fish  
ladder; Wm. Fredericks, \$25,540, for new  
residence and remodeling of old residence  
at Oak Springs Trout Hatchery; Schrader  
Construction Company, \$31,550 for  
Wizard Falls Hatchery pipeline. All bids  
were rejected for construction of a deer  
fence at Silver Lake.

**Access.** Contributed \$600 toward con-  
creting of the boat ramp at Holiday Har-  
bor, with equal amounts being paid by  
City of Florence and Lane County.

**Chemical Treatment.** Approved treat-  
ment of small pond owned by City of  
Salem to be stocked with warm-water  
fish; also approved treatment of Bully  
Creek project and Malheur River waters  
if determined feasible by the fishery  
staff, and Moon Reservoir.

**Youngs Bay.** Decided to take no action  
to open to silverside salmon angling the  
closed section of the North Fork Klaska-  
nine River.

**John Day Project.** In statement to be  
presented to Corps of Engineers, urged  
amendment of the John Day Dam project  
to provide 12,580-acre waterfowl manage-  
ment area as a minimum program to help  
mitigate the loss of waterfowl production  
resulting from inundation of waterfowl  
habitat by the John Day and other Colum-  
bia River development projects.

## Bitterbrush Seed Available to Plant

The ninth annual campaign of the  
Multnomah Hunters and Anglers Club for  
distribution of bitterbrush seed to improve  
the big game ranges has been underway  
the past few weeks.

Seed gathered earlier has been pack-  
aged and placed with game license agen-  
cies. Sportsmen planning trips east of  
the Cascades are asked to pick up some  
seed for planting in suitable spots.

### Remember the Red Hat Pledge:

- to be law abiding
- to respect the rights and  
property of others
- to be careful with fire  
and firearms



A new movie on hunting safety has  
recently been completed. It is a coopera-  
tive project of the Washington, Idaho,  
and Oregon game departments.

An initial transplant of 30 bamboo  
partridge has been made on Rhoda Creek  
near Broadbent in Coos County. The birds,  
surplus breeders from the game farm, may  
provide some information as to their  
adaptability and habits under wild con-  
ditions. Oregon's original stock of 19  
birds came from Japan in 1959 through  
cooperation of the U. S. Fish and Wild-  
life Service. The bamboo partridge is a  
rich, mottled olive brown above, buffy  
below with bands of gray and chestnut  
on the breast. The forehead and back  
of the neck are dusty gray, while the  
cheeks, throat, and remainder of the neck  
are rufous. The tail is deep rufous, finely  
barred with black. It is about the same  
size as the native mountain quail. Per-  
sons observing any of the birds are re-  
quested to report them to the local game  
agent, Harold Sturgis, at Coquille.

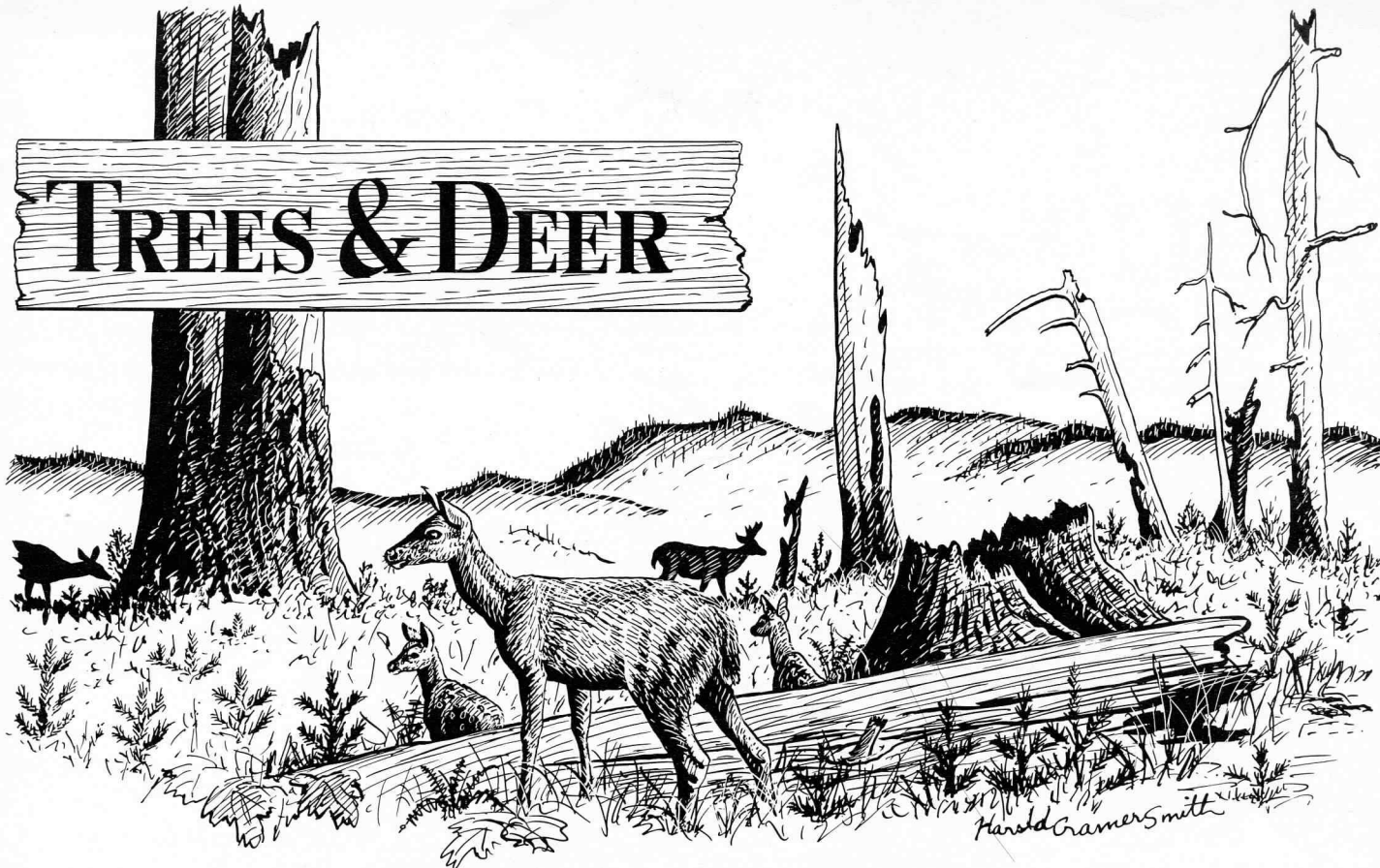
Liberations of young pheasants raised  
on the game farms totalled 5,817 from  
the Corvallis farm and 4,296 from Her-  
miston farm. There were also released  
from the Hermiston farm 5,638 young  
chukar partridge.

Twenty-two elk in Coos County had  
been tagged by the end of July by local  
game personnel. Hunters are urged to  
report any tagged elk seen or taken.

Elk herds in the central Cascades ap-  
pear to be increasing and extending their  
range. In July, 92 elk were sighted from  
a plane in the vicinity of Sisters' Mirror  
Lakes west of Bend.

Applicants for the 600 antelope tags  
authorized this year totalled 2,545. For  
the 800 tags issued last year there were  
4,195 applicants.





## AN ACCOUNT OF THE RELATIONSHIP OF BLACKTAIL DEER TO THE PROPAGATION OF DOUGLAS FIR SEEDLINGS

William W. Hines, Oregon State Game Commission  
and

Carl W. Smith, Oregon State Department of Forestry

**EMBARRASSMENT** MIGHT result if we mentioned the names of all people who, as it turned out, unwisely ventured estimates of the number of deer that were confined within a 340-acre Cedar Creek deer enclosure upon its completion in 1958. Several estimates came from individuals who hunted the area during the years preceding fence construction. Opinions of the number of deer trapped within this relatively open pen ranged from a conservative three to a liberal sixteen. Our initial counts indicated that the enclosure contained approximately 33 deer. When the population was reduced to a known number of marked deer, it was found that 47 (88 deer per section), including fawns of the year, were trapped within the pen when the last section of fence was completed.

Why do we have high deer populations today when early explorers and pioneers reported a lack of deer abundance? The Oregon lumber industry, through its logging and slash burning operations, is largely responsible for improving western

Oregon deer habitat. Direct sunlight reaching the ground in logged areas stimulates shrub and forb growth far exceeding that found beneath the dense canopy of mature timber stands. Such low growing vegetation provides more available and nutritious deer food than existed before logging. Thus, more deer can be supported on these logged areas during the critical winter months when deer food supplies are at a minimum. Good habitat and deer management have resulted in high black-tailed deer populations for Oregon hunters.

In recent years timberland owners and public land agencies have formulated policies aimed toward growing trees as a crop. This means that after timber harvests, lands are placed back into tree production as soon as possible. Foresters are hand planting and aerially seeding conifers in an attempt to get cutover and burned lands back into production.

**The Tillamook Burn** is a good example of an attempt by lumber companies and public agencies to put denuded lands back into production. Here the timber re-

source on 365,000 acres was destroyed by the three man-caused fires of 1933, 1939, and 1945. Rehabilitation of the Burn was started in 1949 after the Oregon voters approved a bond issue the preceding year. The Oregon State Department of Forestry is responsible for carrying out much of the reforestation. Construction of access roads, snag-free corridors, water holes, and fire lookouts were part of the early "fire insurance" phase of rehabilitation. For some years to come there remains the costly and time consuming work of getting new trees established. Some 127,000 acres have already been hand planted or aerially seeded. Nearly every acre, it seems, has its problems which affect tree survival. Shallow rocky soils, hot dry south slopes, unseasonable frosts, drought, and rank, competing vegetation are but a few of the factors which cause poor tree survival in planted and seeded areas.

Animals, too, are important in limiting plantation successes. Deer, elk, bear, rabbits, mountain beaver, and mice are

(Continued on Page 6)



# CEDAR CREEK DEER STUDY

Deer are captured at night by using the Cap-Chur drugging equipment. An air gun is used to propel a syringe containing an immobilizing drug. (Photo by Carl Schonbrod)



Ear streamers, numbered bells, and other markings are applied to deer so that their presence within the enclosure can be verified. Controlled populations within enclosures enable researchers to relate their findings to known deer population levels. (Photo by William Z. Wick, O.S.U. Extension Service)



After being tagged and recovering from the influence of the drug, deer are released within the enclosure.

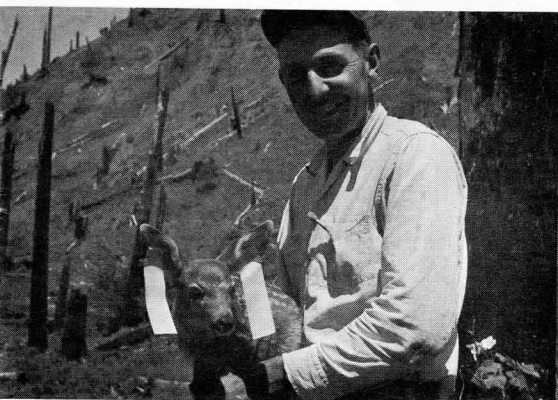




Artificial respiration is sometimes necessary to help drugged deer back to recovery. (Photo by Carl Schonbrod)



Deer are secured to a stretcher for transportation to the Cedar Creek enclosure. (Photo by Carl Schonbrod)



Each June attempts are made to catch all fawns born within the enclosure. All captured fawns are tagged and released. Twenty-one fawns were tagged this spring while five fawns eluded the net. These 26 fawns were produced by 15 adult does this spring.



Each winter one-fifth of the enclosure is planted to Douglas fir seedlings at a rate of 900 trees per acre. Approximately 90 man-days of planting are required to establish new plantations each year.



The history of each sample tree within all damage and survival plots is being compiled to determine what influence animal damage and other factors have upon the growth and survival of Douglas fir.

# Trees & Deer . . .

(Continued from Page 3)

all known to use some portion of the Douglas fir in their diet. Black-tailed deer have been one of the browsers of Douglas fir in the Tillamook Burn. The majority of this use occurs during the winter months when the deer food supply is at a minimum. Spring damage surveys in the Burn have revealed that deer browse approximately 28 per cent of the Douglas fir seedlings annually.

Deer usage of conifer seedlings is not a local problem. It has hindered reforestation efforts in many areas of the European and North American continents. Extensive and costly fencing projects for excluding deer from plantations, the application of foliar repellents for making trees less palatable, and the control of deer populations by hunting have all been helpful in reducing damage to young trees.

The Cedar Creek Deer Study was designed to evaluate the interrelationships between deer and trees in a specific location. One of the basic goals of the project, which is a cooperative effort of the Oregon State Game Commission and the Oregon State Department of Forestry, is to determine the effects which known numbers of black-tailed deer have upon survival and growth of planted Douglas fir seedlings. Thus, game biologists and foresters are joining forces to obtain basic information of value in the management of timber and wildlife. It is believed that closer integration of the management of the two resources can result in maximal benefits to both.

Work started on the project in the summer of 1958 with the building of an eight foot, deer-proof enclosure. The enclosure topography ranges from the deep soil benchlands at 800 feet elevation to the shallow soil ridges above 2,000 feet. The site is considered representative of Tillamook Burn topography.

Soil surveys and low elevation photos were taken of the area to facilitate the establishment of units which would permit the planting of one-fifth of the enclosure area each year on an unbiased basis. Two-year-old Douglas fir seedlings are planted at a density of 900 trees per acre within these units.

Reservations were made to establish randomly located permanent sample plots in each year's planting location on the basis of soil depth, exposure, slope, and altitude. Methods were concurrently devised to count, capture, mark, and remove deer as part of the animal control

phase of the program.

Forty-three deer (eight acres per animal) of the original 47 were held within the enclosure during the first winter (1958-59). One-fifth of the enclosure area was planted to Douglas fir in February 1959. By assessing the damage on sample plots in April 1959, it was found that the 43 deer had damaged 45.2 per cent of the planted trees. Damage ranged in severity from trees being killed outright (11 per cent) to light lateral branch cropping. The majority of damage was in the severe classification, which meant that the terminal stem and over 50 per cent of the lateral branches had been browsed.

In December 1959, when the second one-fifth of the enclosure was planted, 4 bucks, 7 does, and 4 fawns, all marked, made up the population of 15 deer (22 acres per animal) within the enclosure. The April 1960 assessment of the two plantings revealed that the damage rate had dropped to an unexpected low of 5.2 per cent of the available trees.

The third one-fifth of the area was planted in December 1960 after the enclosure population was again readjusted to 15 animals. April 1961 damage surveys once again revealed light usage with 6.9 per cent of all trees in the three plantings being browsed.

At this time it was felt that the impact of an intermediate population of 33 deer (10 acres per animal) was desirable in evaluating conifer usage in relation to deer population densities. The fourth plantation was established in December 1961 after the resident deer population had been increased to 33 animals. The April 1962 assessment of damage on all four plantings revealed a sharp upturn in the average damage rate. A total of 40.5 per cent of all trees had been browsed.

Thus, an interesting trend is emerging in the relationship between deer densities and damage rates. During the first three years it was found that a population reduced by approximately two-thirds produced nearly a ninefold decrease in damage rate. During the fourth year when the reduced population was doubled, damage rates increased nearly six times. Thus, the study reveals that the amount of deer damage on conifers is not in direct proportion to animal densities.

The seasonal beginning of tree usage has been observed to start abruptly rather than gradually, suggesting that deer are not browsing trees until other forage is becoming "scarce". Intensive studies designed to evaluate deer food preference, forage availability, and plant utilization

were initiated in 1961 to determine exactly what influence such factors have upon tree damage rates.

Other necessary information is being accumulated from the wealth of data being obtained at Cedar Creek. In most cases individual plantations were browsed more intensively the second year than in the first year after planting. This presumably was the direct result of the availability of larger trees. First-year damage, however, tended to be more severe. In the first plantation, for example, twice as many damaged trees died (63 per cent) by the end of the first summer than did undamaged trees. Many newly planted seedlings were also pulled from the ground by browsing animals before their roots could become established.

Sample plots inside and outside the enclosure reveal that damage rates are greater on low versus high elevations, south versus north exposures, and flat versus steep slopes.

Much work remains to be done before

(Continued on Page 8)

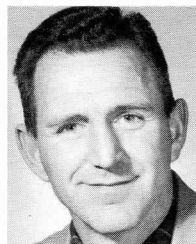
## About the Authors . . .

### William W. Hines



Bill received his Bachelor of Science degree at Humboldt State College after completing a two-year study of black-tailed deer population responses following redwood logging in northern California. He continued his studies at Oregon State University where he field tested various techniques for censusing deer in western Oregon. After completing work for his Master of Science degree, he went to work on the Cedar Creek Deer Study for the Game Commission.

### Carl W. Smith



For 19 years Carl has worked in and around Tillamook Burn for the Oregon Department of Forestry. Except for periods when he was finishing high school, or in the armed services during World War II, or finishing forestry school at Oregon State University, he has worked in this area. Since graduation in 1952 Carl has been closely associated with the reforestation phase of the Tillamook Burn project. He is currently in charge of reforestation in the northwest Oregon district.



## Upland Game Outlook . . .

The outlook for upland game hunting this fall is encouraging. More pheasants were seen during the late July and early August inventory period than last year, although production varies by area. The situation looks particularly favorable in the northern end of the Willamette Valley, the Rogue Valley, Columbia Basin (except for Morrow County), and in Baker and Union Counties. On the basis of the crop that is expected to be available, the Commission authorized a season extending from 8 a.m. October 13th through November 18th, with a daily bag of three roosters and a possession limit of twelve. Both the season limit and bag limits are similar to last year.

There was some decline in valley quail in southeastern Oregon as the result of winter losses but the current hatch is good although later than usual. Since a good crop is available and experience indicates that birds cannot be stockpiled from one year to the next, the season in eastern Oregon extends from October 13th through December 2nd. It closes on November 18th in western Oregon where current production is not so good. All quail are grouped together with the same season and bag limit.

This is a very good chukar partridge year and experience with a nine-day September season in 1961 was favorable. Hunters found it easier to locate and bag birds during this period when they were accessible near water. The chukar has demonstrated an amazing ability to elude hunters and there is little fear of over-shooting this species. A generous season

Species	Open Season	*Open Area	Daily Bag Limit	Poss. Limit
<b>Upland Game</b>				
Mourning Dove	Sept. 1-30	Entire State	10	20
Band-tailed Pigeon	Sept. 1-30	Entire State	8	8
Silver Gray Squirrel	Sept. 1-Oct. 31	*Southwest Area	5	5
	Entire Year	*Northwest Area	No Limit	
Blue and Ruffed Grouse	Sept. 8-23	*Eastern Oregon		
	Sept. 1-7	*Western Oregon	3(a)	6
Sage Grouse	Sept. 9-16	Lake, Harney, and that part of Malheur County south of U.S. Highway 20	2	4
Cock Pheasant	8 a.m. Oct. 13-Nov. 18	Entire State	3	12
Mountain, Valley and Bobwhite Quail	8 a.m. Oct. 13-Nov. 18	*Western Oregon		
	8 a.m. Oct. 13-Dec. 2	*Eastern Oregon	10(a)	20
Chukar and Hungarian Partridge	Sept. 8-Dec. 2	*Eastern Oregon	6(a)	12
<b>Waterfowl</b>				
Duck	Noon, Oct. 20-Jan. 2	Entire State	4(b)	8
Goose	Noon, Oct. 20-Jan. 2	Entire State	3(c)	6
Coot	Noon, Oct. 20-Jan. 2	Entire State	25	25
Black Brant	Dec. 1-Feb. 13	Entire State	3	3
Snipe	Oct. 27-Nov. 25	Entire State	8	8
American and Red-breasted Merganser	Noon, Oct. 20-Jan. 2	Entire State	5(a)	10

(a) Singly or in the aggregate.

(b) Includes not more than 1 wood duck and 1 hooded merganser. No open season on redheads or canvasbacks. An additional 2 mallards a day, 4 in possession allowed in Baker, Gilliam, Malheur, Morrow, Sherman, Umatilla, Union, Wallowa and Wasco Counties.

(c) No open season on Ross's goose. Daily bag may be increased to 6 providing 3 or more are snow geese.

\***Western Oregon:** All counties west of the summit of the Cascade Range, including all of the Green Springs Unit.

\***Eastern Oregon:** All counties east of the summit of the Cascade Range.

\***Southwest Area:** All of Benton, Linn, Lane, Douglas, Coos, Curry, Jackson, and Josephine Counties, and Klamath County west of U. S. Hwy. 97.

\***Northwest Area:** All of Multnomah, Clackamas, Marion, Washington, Polk, Columbia, and Yamhill Counties.

extending from September 8th through December 2nd was authorized in order to permit a greater take of chukar when they are available. Experience following the high year of 1958 indicates that chukar populations fluctuate without

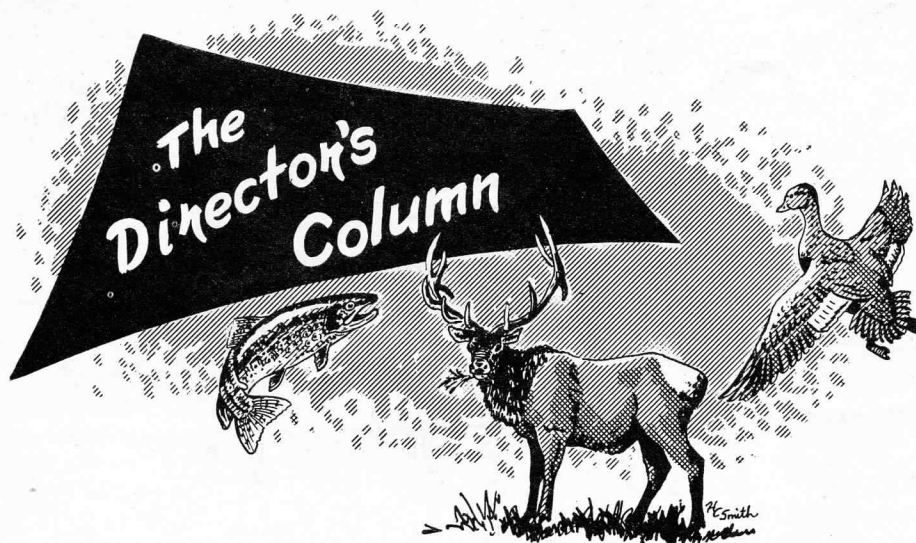
regard to hunting pressure and should be harvested as heavily as possible on good production years. Since Hungarian partridge occupy much of the same range and are similar in appearance, the same season

(Continued on Page 8)

Lint Slough impoundment, located on Alsea Bay within a stone's throw of Waldport, takes shape as heavy duty crawler hauls fill dirt and gravel to form core of earth-fill dam. The first of its kind in Oregon, the 55-acre impoundment will be used by the Game Commission for experimental rearing of salmon and steelhead. Water will be impounded to a maximum depth of 8 feet and will be controlled in such a manner that salmon and steelhead may be reared under various concentrations of salt and fresh water. Tide gates will control entrance of salt water from Alsea Bay.

Huge Gantry crane scoops 3 yards per bucket as it creeps along over the soft dirt and muck, digging half-mile diversion canal. The canal with a series of control gates and locks will be used to regulate the flow of fresh water from Lint Creek as well as bypass up and downstream migrating fish that home into the creek. Fish traps, marking stations, and a holding pond will also be incorporated at the upper end of the canal.





A great deal has been written and spoken during recent years regarding sportsman conduct. Problems arising as a result of unauthorized trespass by hunters and anglers on private property, of vandalism, of littering of camping areas, molesting of livestock, and similar activities objectionable to the landowner are matters of serious discussion with growing frequency. In like manner, complaints from hunters and anglers concerning no trespass signs, locked gates, and similar restrictions on ingress and egress from lands they formerly entered without restriction appear to be on the increase.

The Commission has for many years participated in activities both independently and cooperatively with other groups in an effort to assist the landowner and the sportsman. Fundamentally, it is not a problem of this Commission except to the extent that access to a given stock of game or to a fishery is a necessary tool in the sustained management of that resource and its environment. Such an assertion is, of course, often unpalatable to either the sportsman or landowner because of the growing acceptance of landowner-sportsman activities as a function of conservation organizations and as a part of normal governmental activities.

This is essentially a matter which rests most directly between the individual hunter or angler and the individual landowner upon whose property he wishes to enter. Among numerous reasons why this is true the following points must be kept permanently in mind.

1. Property ownership in our country carries with it certain constitutional pre-

rogatives among which is the precious right of the owner to decide who may enter or use his property for specified purposes.

2. Abuses by individual citizens to another's property is a matter of individual responsibility.

3. Governmental participation in what involves both a matter of property right and the question of human behavior should not supersede and take the place of the individual obligation of a citizen to respect the property and rights of others. The function of a conservation agency should be one of working with the landowner, the hunter, and the angler to the end that the rights and objectives of all parties are better understood and mutually acceptable programs worked out.

It has often been said in effect that the careless or thoughtless act of one hunter or angler may unfairly bring about a general condemnation of all sportsmen. By the same token, sportsmen must realize that in expecting permission to use private land for hunting and fishing they are expecting a substantial concession on the part of the landowner. It is only normal that the landowner should, as a very minimum, be afforded the courtesy of knowing who the sportsman is, when, and under what conditions he goes upon the land. If permission is granted, the landowner should be afforded extraordinary courtesy for the privilege, which indeed it is.

In the final analysis, the problem of landowner-sportsman relations rests most importantly on the shoulders of every individual sportsman. It is by his conduct as an individual citizen that this problem

## Waterfowl Dates Selected . . .

The federal framework for waterfowl regulations issued last month offered the Pacific Flyway states about the same season options as last year.

Within the outside dates of October 6 to January 6 set by the Interior Department, the Oregon Game Commission chose a 75-day season extending from noon October 20 through January 2 for ducks and geese.

For the bag limit on ducks, the Commission selected the option allowing four a day and eight in possession. This also is the same as in 1961.

The brant season was extended by fifteen days. Oregon hunters will have their 75-day season from December 1 through February 13.

## UPLAND GAME OUTLOOK

(Continued from Page 7)

with an aggregate bag is provided for both species. Chukar hunting is expected to be best in the lower John Day, lower Deschutes, and Snake River Canyons.

Little change in blue and ruffed grouse and sage grouse numbers prompted modest September seasons similar in length and bag limit of recent years. Blue and ruffed grouse hunting should be best in Umatilla, Union, and Wallowa Counties while Lake County offers the best chance for sage grouse.

## TREES AND DEER

(Continued from Page 6)

final conclusions are drawn on the Cedar Creek Deer Study. There are populations to manipulate, more plantations to establish, forage studies to complete, plant succession patterns to unravel, and capturing, marking, and censusing techniques to improve.

The study has already provided greater knowledge of and a deeper insight into the complex relationship of the deer to its forest land environment. Technicians in game and forest management fields will be searching further for ways of bringing black-tailed deer and forest resources to compatible, usable, and replaceable levels.

will be progressively improved over the years. The members of this department stand ready to assist in every way possible but the direct responsibility must be faced by the individual sportsman who wishes to hunt or fish on another's land.

—P. W. SCHNEIDER

## Oregon State Game Commission Bulletin

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