

C. J. Campbell

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The Cover

District game agent Glen Ward is stopped by a flat tire one early winter morning in the hills above Heppner. Weather conditions: six degrees below and a strong wind blowing. Game agents cannot afford to be stopped by the weather—winter is the time when much of the information on big game herds is obtained. (Photo by Ron Shay, who is the authority for the temperature report.)

BULLETIN HUNTER SAFETY TRAINING PROGRAM

Instructors Approved	
Month of December	12
Total to Date	3,403
Students Trained	
Month of December	251
Total to Date	52,282
Firearms Accidents Reported 1962	
Fatal	15
Nonfatal	42

JANUARY MEETING OF THE GAME COMMISSION

At its meeting on January 11 the Game Commission acted upon the following matters:

New Chairman. Elected Rollin Bowles as chairman to succeed J. W. Smith for the current calendar year.

Capital Outlay. Authorized following expenditures for capital improvements: Oak Springs Hatchery brood pond, \$5,000; Roaring River Hatchery brood pond, \$4,000; Klamath Hatchery gas space heaters, \$1,513; Hood River Hatchery domestic water supply, \$3,600; Wizard Falls Hatchery fork lift truck, \$2,000; and improvements at Portland office, \$4,165.

Salvaged Timber. Authorized sale of timber salvaged from Sauvie Island and Roaring River Hatchery as result of recent storm.

Public Law 566. Reviewed small watershed projects being considered by Soil Conservation Service under Public Law 566.

Legislation. Recommended legislation to change date of annual hearing on angling regulations from January to some date between November 1 and January 31, authorization to issue separate elk tags for Roosevelt and Rocky Mountain elk; and minor correction in law listing scientific names of game fish species. With regard to proposed bill to authorize State Board of Education to create position of consultant in conservation education, the Commission indicated general approval.

On January 25 the Commission considered the following matters:

Capital Outlay. Authorized purchase of five current meter sets at total cost of \$2,675 for use in stream flow studies in each region.

Game Refuge Application. Considered request for creation of game refuge at Devils Lake. Favorable action on the request was not taken as Commission's policy on establishing refuges or closed areas is based upon need for wildlife management rather than for purpose of public safety or trespass control.

Option. Exercised option for purchase of a tract of 663 acres in the White River management area.

Game Bird Allocation. Approved suggested production for 1963 of 15,000 pheasants at the Corvallis game farm; 5,000 pheasants and 10,000 chukars at the Hermiston game farm.

National Wildlife Week dates have been set for March 17-23 by the sponsoring agency, National Wildlife Federation. "Chemical Pesticides Are Poison—Handle with Care," is the chosen theme.



Game habitat crews have been busy this winter. The Willamette Valley winter shrub planting was completed with the placement of 9,700 multiflora roses on five new sites and 300 replacements in established sites. Check of damage done by the October windstorm revealed approximately 30 per cent of the wood duck nest boxes in Yamhill and Washington Counties had been destroyed.

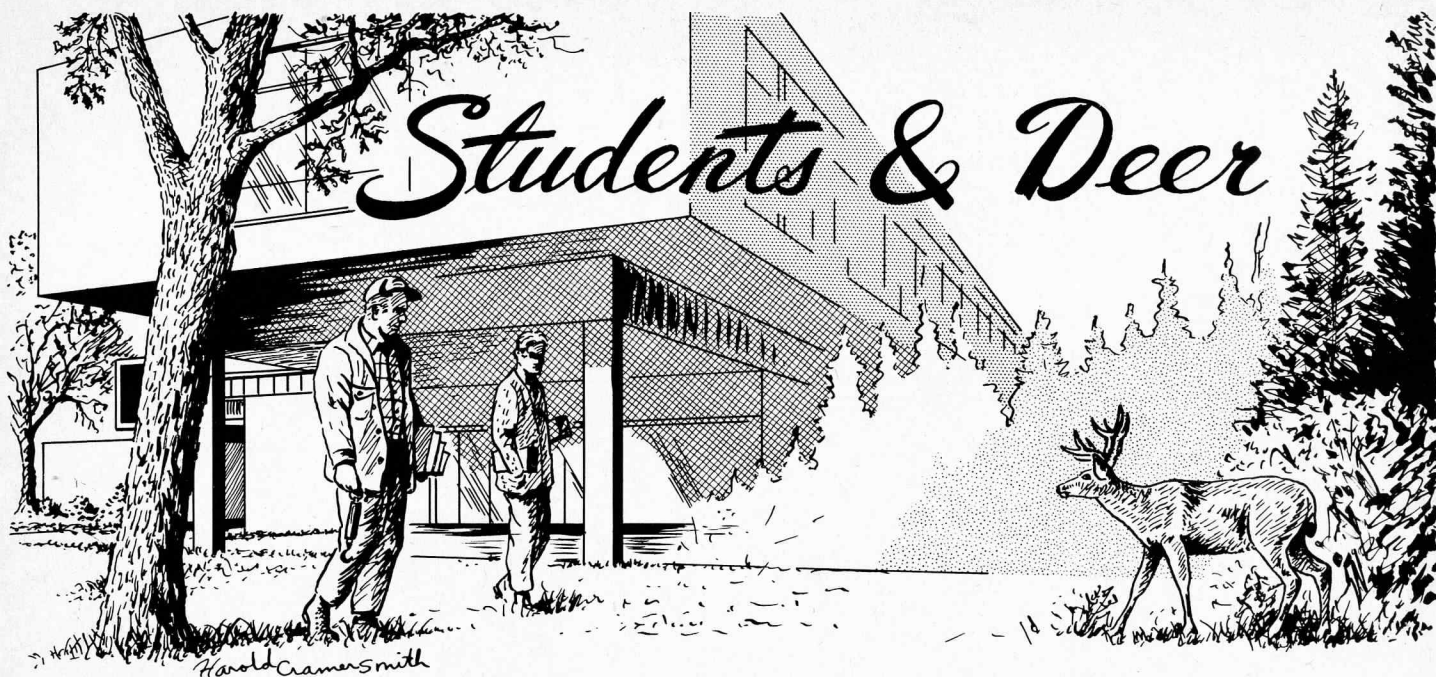
In eastern Oregon, 45 new upland game water cisterns were installed, 26 in Morrow County, 17 in Gilliam County, and 2 in Jefferson County.

Anglers report some wonderful fishing last year in 65-acre Morgan Lake (Union County) which after chemical treatment a few years ago was restocked with trout. The 1962 creel check shows that anglers caught 35,945 trout, approximately 599 trout or 150 pounds of trout per surface acre. Rapid growth is indicated by the fact that the fingerlings stocked in 1961 averaged about 11 pounds of trout per surface acre and in 1962 an average of 18 pounds.

Game farm liberations for 1962 included the release of 17,240 pheasants from the Corvallis game farm and 7,112 pheasants and 10,685 chukars from the Hermiston farm. In addition, 585 grey partridge were released in western Oregon. A small transplant of bamboo partridge was made in Coos County to determine the adaptability of the species.

Howard Prairie Reservoir in Jackson County yielded an estimated 622,000 trout to the 165,000 anglers fishing in 1962.

The annual hunter access survey to determine the trend in land posting indicated some improvement in 1962 over 1961. Sample routes in 13 counties covering a total of 421 miles showed 75 per cent of the fields not posted, 22 per cent posted against hunting, and 3 per cent posted to hunting by permission.



By **LEE W. KUHN** and **HOWARD F. HORTON**
 Department of Fish and Game Management, Oregon State University

WHOWER HEARD of a college or university course in which some of the laboratory periods start at 4:30 in the morning? Sounds ridiculous, doesn't it? Yet, each fall for the past ten years students taking Big Game Management and Forest Wildlife Management at Oregon State University have found this to be the case. Why? To man the checking station during the annual controlled deer hunt on the McDonald Forest-Adair Tract north of Corvallis as a part of their regular laboratory work.

Several years ago the School of Forestry, which is responsible for the over-all management of the land area, concluded it was necessary to reduce the number of black-tailed deer. Browsing deer had severely damaged Douglas fir plantings, experimental plots, and even natural reproduction. In the fall of 1953, after discussing the problem with the Department of Fish and Game Management and the Oregon State Game Commission, it was decided to open the area to controlled hunting by the public. It has been open to hunting for three or four weekends every year since. During this nine-year period, "Mac" Forest has provided Oregon deer hunters with over 20,000 man-days of recreation as well as serving its primary purpose—an outdoor laboratory for students in Forestry and Fish and Game Management.

As early as 1935-36, Professor R. E. Dimick and his students attempted to survey the forest to determine the deer population. After numerous field trips

and scouting expeditions, it was estimated that not more than seven or eight deer existed on the entire 6,700-acre forest. However, during the next three decades, deer numbers increased rapidly necessitating the decision to open the refuge to hunting. After ten years of controlled hunting, student biologists have checked, weighed, measured, and removed "spare parts" from over 2,900 deer from the combined 11,500-acre McDonald Forest-Adair Tract.

Under the guidance of District Game Agent, Francis Ives, and a Fish and Game staff member of the University, the students check hunters into and out of the area. After gaining the consent of the hunter, harvested deer are weighed and their jaw bones removed or examined to classify the animals into their proper age group. Frequently, additional studies have been conducted, which at times may appear strange to the uninitiated hunter. Nimrods who return to the area year after year, as many do, have become accustomed to such peculiar "goings on". At one time or another, students have requested lower jaws, eye lenses, blood samples, reproductive tracts, freak or unusual antlers, parasites, hoof measurements, and leg bones. This has both amazed and amused some hunters—particularly those in the area for the first time. Some, however, have become so accustomed to the many and varied requests that one individual is reported to have unthinkingly agreed to give one of the professors the right ham off his fine buck. When it suddenly dawned on

him that this was above and beyond the usual activity, he quickly changed his mind—much to the delight of the on-lookers.

The unusual "spare parts" were collected as a part of the basic training for the student biologists. The serum was wanted for use in a blood parasite study. Reproductive tracts provided valuable information on the number of previously born fawns. Deer are aged on the basis of tooth replacement and wear in the lower jaw, and the eye lenses are now being studied as still another technique for aging deer.

Many fine bucks and does have been harvested during the seasons which have been open to either-sex hunting since the beginning. C. E. Bond, Fisheries professor at Oregon State, still holds the unique distinction of having killed the largest buck weighed at the checking station. This big five-point, killed in 1958, weighed 182 pounds hunter-dressed. Several unusual trophies have also been taken including a buck with 15 points on one side and 11 on the other. One prime three-point "buck" killed in 1960 by Robert Fechtner, a Forestry student, turned out to be a doe that appeared normal in every respect except for the unusual "hat rack". Light-tan or buckskin colored deer have been checked out from time to time but other than color these have all been normal blacktails. Hunters occasionally report seeing or shooting at white tailed deer but none have ever been brought into the checking station.

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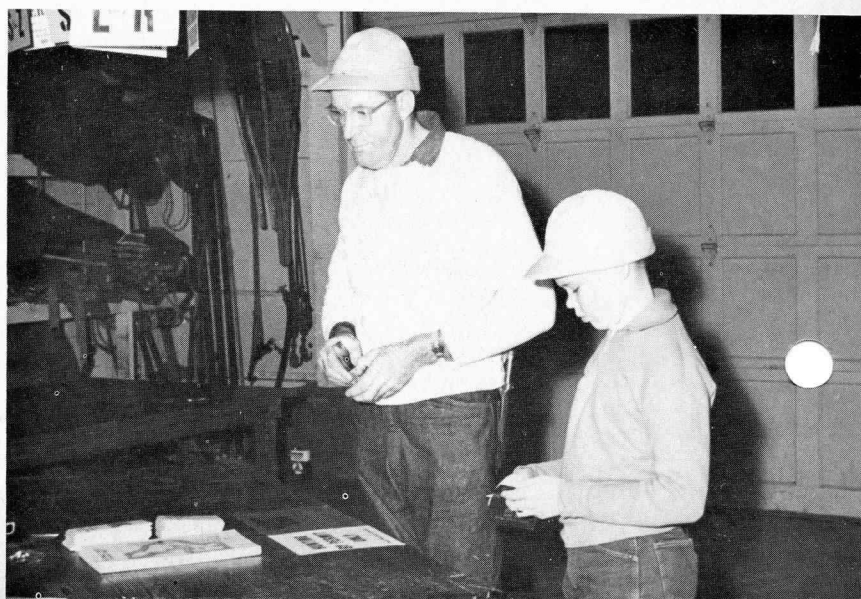
Hunters are checked in and out of area by OSU fish and game students . . .

"MAC" FOREST Deer Hunt

Check-in time . . . 4:30 A.M.



Boundaries of area and access roads are pointed out . . .



Hunters come in all sizes.



Weighing deer brought out by successful hunters is part of the job.

Prof. Kuhn discusses antler development with student biologist.



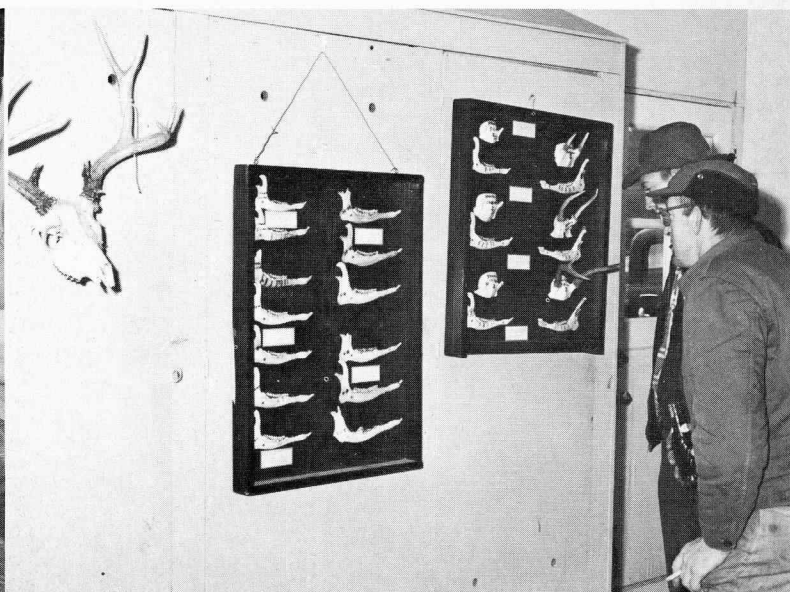
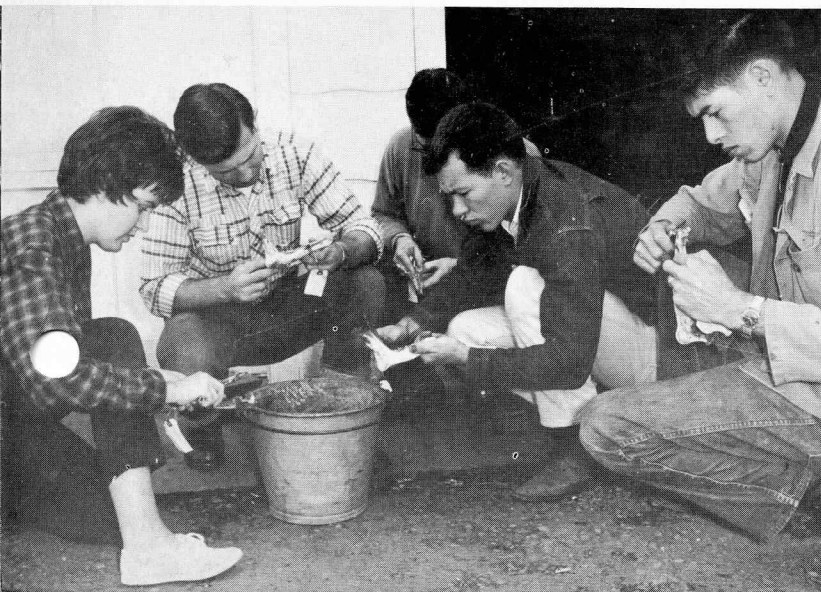
Eye lens weight may offer new aging technique.

With hunters' permission students remove lower jawbones . . .



Bones are boiled to remove excess meat and the teeth examined to determine the deer's age.

Hunters examine the "bone board" used as reference in aging deer.



Angling Regulation Changes

THE NEW angling regulations adopted by the Game Commission at its January meeting become effective on February 9. They do not differ very much from the 1962 regulations. Opening of additional lakes and impoundments to year around fishing, elimination of the November salmon closure for the Columbia River and tributaries, and a special bag limit for jack salmon in certain waters are the major changes.

The general trout season dates are essentially the same as before: April 20 to October 31 in all zones except streams in Zones 1, 3, and 4. The streams in Zone 1, the coastal area, and the Cascade lakes, reservoirs, and their tributaries have a general open season from May 25 through October 31. Exceptions to these dates are listed by zone in the official angling synopsis.

Repeal of the closure of the Columbia River and its tributary streams to November salmon fishing resulted when it was agreed by the Game Commission and Washington Department of Fisheries that the runs of silver salmon in the lower tributaries were sufficient to allow sport fishing during that period.

New waters open to year around trout fishing include Garrison, Saunders, Loon, and Selmac Lakes; Emigrant, Ana, and Priday Reservoirs; and all lakes, impoundments, and dredge ponds in Zones 7 and 8 except Malheur, Krumbo, and Baca Reservoirs.

A summary of this year's changes follows. Copies of the official synopsis containing the complete regulations will be available at license agencies as soon as possible.

GENERAL TROUT SEASONS

April 20 to October 31 in all zones except streams in Zones 1, 3, and 4. May 25 to October 31 for streams in Zone 1, and for lakes, reservoirs and their tributaries within the forest boundaries in the Cascade Mountains (including Paulina and Siskiyou Mountains).

BAIT REGULATIONS

Living, dead, or preserved fish or parts thereof, exclusive of salmon eggs, may not be taken, used, or held for use as bait in angling in any waters;

Provided that cottids and nongame marine species may be used in Zone 1 and tidewater areas;

Provided further that dead fish or parts thereof may be used for bait in Gerber Reservoir, Klamath and Owyhee Lakes; in the main stem or flood plain lakes and sloughs of the Willamette and Columbia Rivers; in the Snake River main stem, and all slack water of Snake River impoundments; and in Zone 1.

ZONE 1

Coos River (South): Closed to salmon angling entire year above old hatchery bridge site ½ mile above Dellwood.

Fall Creek (Alsea): Closed to all angling from Carns Creek up to 200 feet above Fish Commission hatchery water-supply intake dam—a distance of about ¼ mile.

Garrison Lake: Open to trout angling entire year (summer bag limit).

Klaskanine River (North Fork), Clatsop County: Closed to all angling from ¼ mile below the hatchery dam down to tidewater May 25 to June 15.

Klaskanine River (North Fork): Closed to salmon angling except for the period October 1 to February 28.

Saunders Lake: Open to trout angling entire year (summer bag limit).

Siletz River: Closed to all angling for a distance of 900 feet (marked boulder) below the falls to 200 feet above the falls.

ZONE 2

Blair Lake: Closed to fishing from a motor-propelled craft.



Clear Lake outlet (Linn County): Closed to all angling between markers established by the Game Commission.

Eagle Creek (Clackamas County): Closed from 200 feet above the fish ladder at Eagle Falls to 300 feet below.

Eagle Creek (Clackamas County): open April 20 to salmon and steelhead.

Hills Creek Reservoir and tributaries: Open to angling April 20 to October 31.

Lost Lake and tributaries (Linn County): Open April 20 to July 31.

McKenzie River, South Fork: Closed to all angling from a marker 200 feet below salmon trap at Cougar Dam upstream to concrete bridge at head of reservoir from June 15 to October 31.

ZONE 3

Loon Lake: Open to angling entire year (summer bag limit).

Diamond Lake: Open May 25 to October 31, except those portions within a radius of 450 feet of the mouths of Silent and Short Creeks and 1,000 feet of outlet open July 1 to October 31.

Umpqua River: Summer deadline changed from Steamboat to Mott Bridge.

ZONE 4

Emigrant Reservoir: Open to angling entire year (summer bag limit).

Rogue River: From Gold Ray Dam to a point 950 feet below Copco Gold Ray bridge from January 1 to August 31; and to the U. S. Geological Survey gauging station cable crossing approximately 500 feet below said bridge from September 1 to December 31.

Selmack Lake: Open to angling entire year (summer bag limit).

ZONE 5

Crescent Lake: Open April 20 to October 31.

ZONE 6

Ana Reservoir: Open to angling entire year (summer bag limit).

Priday Reservoir: Open to angling entire year (summer bag limit).

ZONE 7

Open to angling the entire year all lakes, impoundments, and dredge ponds.

John Day River (Middle Fork) below Highway 395: Open to steelhead and salmon angling except from March 15 to June 30.

Mill Creek: Open to trout angling April 20 to October 31.

ZONE 8

Open to angling entire year (summer bag limit) all lakes, impoundments, and dredge ponds except Malheur Reservoir, Krumbo Reservoir, and Baca Lake.

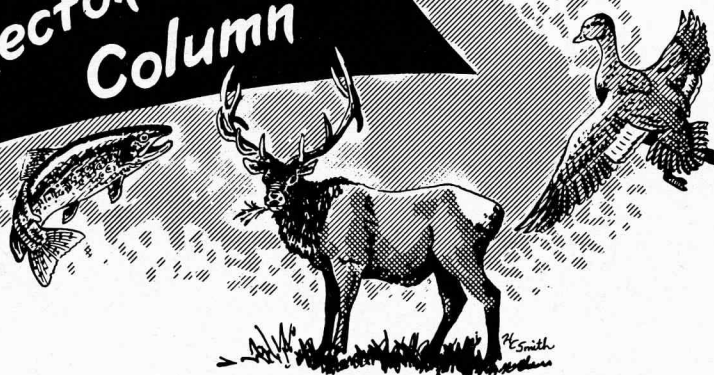
Malheur and Krumbo Reservoirs open April 20 to October 31.

ZONE 9

Camp Creek: Open to angling.

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The Director's Column



THE PAST two years have been marked by continued progress in the management of Oregon's sport fish, wildlife, and wild fur resources. Most populations of resident species are in excellent condition. Two species have been added to our capital stock. The fisher, a furbearer originally native to the state, was reintroduced to selected areas of the Cascade and Wallowa Mountains. Wild turkeys were imported and stocked in appropriate habitat in the eastern portion of the state.

Encouraging progress has been made in rehabilitating some runs of anadromous fish, but it is in this area of resource management that the most difficult and massive problems continue to exist.

Normally, a two-year period does not provide an adequate interval of time to detect positive trends in nondomestic resources. Relating current conditions with those of several previous years, however, affords a clearer indication of the basic accomplishments of a program.

In the past ten years, significant changes in the status, composition, and yields of fish and game have taken place. The annual deer harvest has tripled and the elk kill has doubled. New species such as mountain sheep, chukar partridge, Atlantic salmon, and golden trout have been introduced under a careful plan compatible with environmental requirements and existing species. Of these, the chukar partridge has made the most spectacular contribution, adding substantially to the hunting picture in eastern Oregon. Public access to streams and lakes has been developed. Several thousand acres of lakes and reservoirs have been chemically treated and restocked with desirable species of fish from which markedly improved yields have resulted. Rapid advances in fish rearing techniques have been made. Game management areas, public shoot-

ing grounds, and big game winter ranges have been acquired and developed. Research has been reorganized and stepped up. Hunter safety training for young people was started. In fact, the last decade has witnessed an unprecedented growth in all aspects of fish and game resources management and in diversification of our program consistent with the needs of a growing state.

In further retrospect, those familiar with Oregon's fish and game affairs over the past fifteen or more years will recall the existing organization and program to be the outgrowth of legislation enacted in 1949. Since then diligent attention has been devoted to building an organization and prosecuting a program based on sound business principles, competent scientific design, and continuity of effort, keeping in mind the objectives enunciated by the Legislative Interim Committee through House Joint Resolution No. 14 of the 44th Legislative Assembly, its subsequent report and the reports of succeeding legislative committees.

Many changes have taken place over this period of time and some of these have been noted above. Since 1950 the number of licensed hunters and anglers has increased from less than 400,000 to more than 670,000 in 1961. It is conservatively estimated that there will be approximately one million hunters and anglers by 1970, a 50 per cent increase over the number today. Increasing leisure time and growing interest in hunting and angling opportunities will further accelerate the direct demand on fish and wildlife stocks.

Developments that have taken place and which will continue in the years ahead pose a formidable challenge to the maintenance of fish and game stocks at present or higher levels of abundance. One of the principal problems faced by

the Commission is the continued attrition of productive habitat. This will become even more pronounced as the state continues to expand industrially and population-wise.

Freeways and other highway construction have removed extensive areas of productive wildlife habitat. Urban sprawl has swallowed upland game and waterfowl habitat near many population centers. The dispersal of industry and its by-products frequently has been harmful to fish and wildlife production. Power and irrigation developments have, in general, proved detrimental to anadromous fish. On the other hand, some reservoirs have provided additional fishing opportunities and some timber harvest activities have increased the productive capacity for some game species. Intensive farming practices have resulted in less food and cover for upland game. Drainage of marshlands has seriously reduced waterfowl habitat.

The Commission is faced then with two opposing forces—shrinking habitat and increasing demand. This means very simply that even more fish and game must be produced per acre of habitat than is presently being accomplished and that more effort must go into improving habitat which is now unproductive.

Programs prosecuted by the Commission in the past decade will be inadequate to meet the demands which are certain to be made in the future.

Current projections of resource needs for the next decade point to a number of program expansions in order to assure maintenance of and, in some instances, increases in the state's fish and game resources. More hunting and angling opportunities must be developed. Construction of impoundments properly located in those areas of the state where there is a current shortage of fish producing waters to provide fishing for resident species must be accelerated. Fish production facilities, possibly including the creation of additional salmon and steelhead rearing ponds, must be expanded. Accelerated development of public access sites on lakes and streams is needed. There must be increased assistance to landowners to control damage to property by wildlife and recreationists. Acquisition and development of additional wetlands for the production of waterfowl is necessary. These are but a few of the program activities that must be stepped up. From a policy standpoint, a more positive recognition of fish and wildlife as an integral part of major land and water use activities must evolve. Gratifying progress has been made in

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Students and Deer

(Continued from Page 3)

During the past eight-day, either-sex season, students checked 292 deer from the area. This compares favorably with the ten-year average annual harvest of 294 in spite of the fact that one of the four weekends of the hunt was disrupted by the severe Columbus Day windstorm.

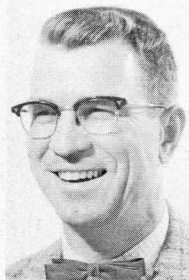
The Department of Fish and Game Management welcomes the opportunity to cooperate with the Oregon State Game Commission and the School of Forestry in manning this checking station. Not only has the activity been excellent laboratory experience for nearly 300 students during the past ten years, but equally important, checking station duty affords the student a chance to "rub elbows" with the sportsman. Listening to the sad tales of missing the big four-point and hitting the fawn right behind it is "on-the-job" training indeed!

ABOUT THE AUTHORS

Lee W. Kuhn, after graduating in wildlife management from the Iowa State University in 1940, came to Oregon to continue his studies. He received his M.S. degree in wildlife management from Oregon State University in 1942. His thesis problem was concerned with mortality factors affecting black-tailed deer in the coastal region of Oregon.

After a hitch with the U. S. Army from 1942 to 1946, he returned to Corvallis to join the staff of the Department of Fish and Game Management. He teaches courses in big game, furbearers, and rodent control.

Howard F. Horton graduated in biological science in 1953 from California State Polytechnic College, after first serving in the U. S. Army from 1946 to 1948. In 1955 he received his M.S. degree in fish and game management from Oregon State University, and has pending a Ph.D. degree in fisheries. A study of delayed mortality of rainbow trout was his thesis problem.



Oregon State Game Commission Bulletin

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Angling Regulation Changes

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ZONE 10

Columbia River: Open to salmon and steelhead fishing entire year.

WINTER REGULATIONS

ZONE 1

Bag Limit: A special jack salmon bag limit of 5 fish per day or 10 in possession or in 7 consecutive days applies to the Alsea River, Fall Creek (tributary to Alsea), Siletz River, Tenmile Lakes, and Tenmile Creek for the period November 1 to November 30. The special jack salmon bag limit is in addition to the regular winter bag limit.

Open to angling.

Alsea River (North Fork): Up to first wooden bridge above Game Commission hatchery.

Big Creek: Up to Pig Pen Creek.

Coos River (South): Open to salmon angling up to hatchery bridge site ½ mile above Dellwood.

Coos River (South): Open up to Cape Creek except for salmon and jack salmon.

Drift Creek (Siletz Bay): Up to first concrete bridge above North Creek.

ZONE 2

Eagle Creek (Clackamas County): Up to the abandoned road bridge approximately ¼ mile above Eagle Fern Park.

Eagle Creek (Multnomah County): Up to and including the Punch Bowl.

Quartzville Creek: Up to Canal Creek.

Sandy River: Up to Brightwood bridge. (Closed to salmon and jack salmon December 1.)

In 1958 he joined the Fish and Game Management staff at Oregon State University, where he teaches fisheries and game management courses.

The Director's Column

(Continued from Page 7)

this connection but even greater strides must be taken in the next decade.

It is conservatively estimated that hunters and anglers spend approximately \$60,000,000 annually in pursuing these two forms of resource use. This contribution to the economy will exceed \$100,000,000 within the next ten years. It will be the Commission's objective, as it has always been, to do everything within its power to meet the challenges in the years ahead so that fishing and hunting may remain an important element in the social and economic well-being of Oregon's citizens.

P. W. Schneider, Director.

RANDOM SURVEY UNDERWAY

If you were one of the 20,000 hunters selected at random in January to receive a questionnaire on the success or failure of your hunts last year, we hope you cooperated and forwarded the information requested. Those who did not were to be contacted personally by Game Commission personnel. This survey is a part of the determination of how many big game animals, game birds, and waterfowl were taken. The sampling of hunter kill is a design developed by consulting statisticians using principles employed in other data analysis and is considered to possess an accuracy in excess of 99 per cent.

TURKEY TRAPPING

Eight wild Merriam's turkeys were trapped last month near Gate Creek in the White River Game Management Area and transferred to the Eden Bench country near Troy. Three toms and five hens made the move.

A year ago 58 turkeys were obtained through cooperation of Arizona, Colorado, and New Mexico. Of these 13 were released in the Metolius area, 7 in the Troy area, and the rest in the White River area. The White River birds have done especially well with numerous flocks observed over a large area, some as far north as the Columbia in the vicinity of The Dalles and Hood River.

Trapping, which is done with a cannon net, works best when snow covers the natural food and the birds can be baited more easily into the trap. Additional trapping attempts will be made if conditions are satisfactory.

