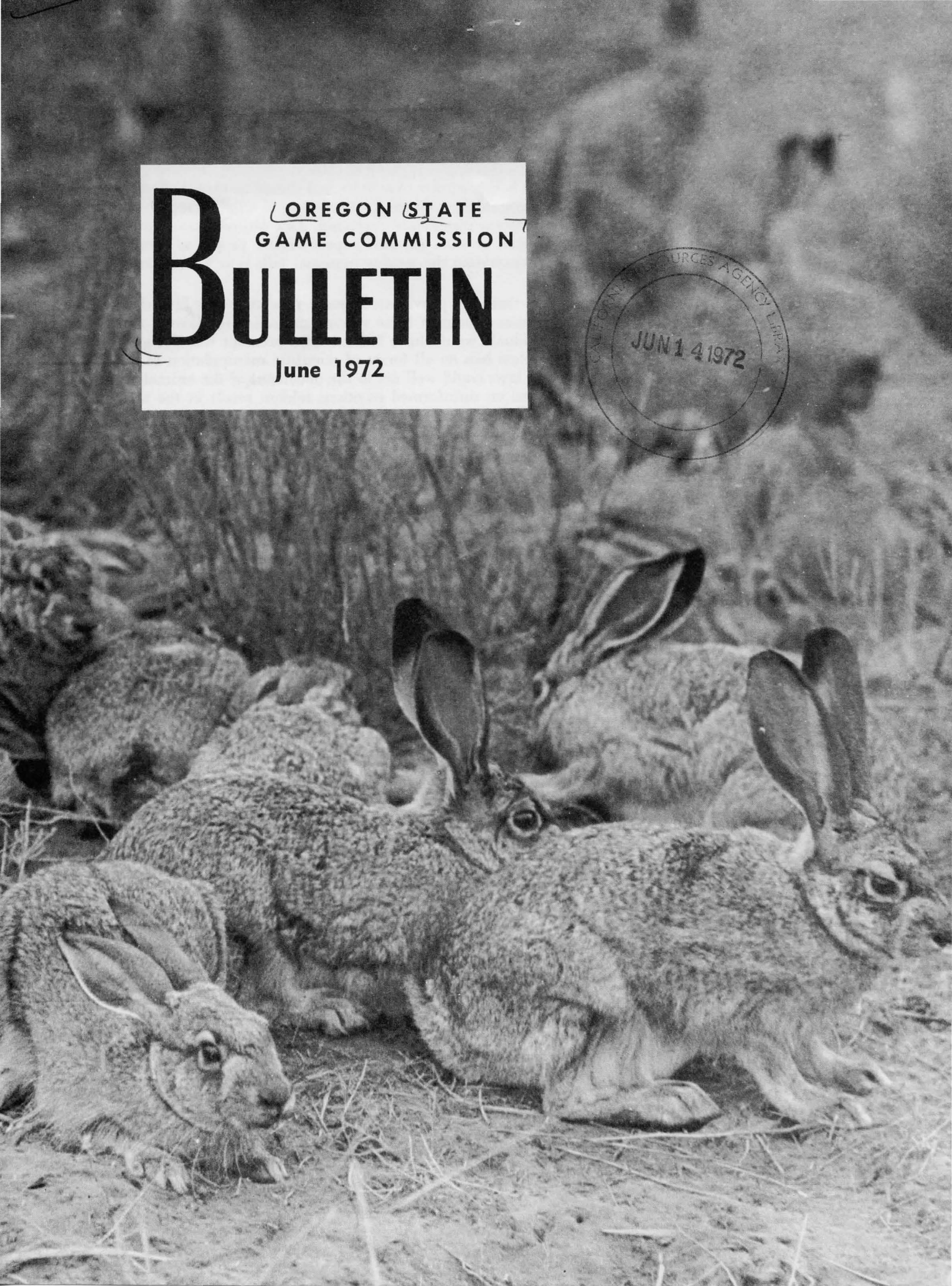


# BULLETIN

OREGON STATE  
GAME COMMISSION

June 1972



# OREGON STATE GAME COMMISSION BULLETIN

**JUNE 1972**  
**Volume 27, Number 6**

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## The Cover

Jackrabbit populations in eastern Oregon fluctuate rather dramatically at times illustrating a cyclic characteristic. See feature article.

*Photo by William Finley*

## HUNTER SAFETY TRAINING PROGRAM

### Instructors Approved

Month of April .....	22
Total to Date .....	2,675

### Students Trained

Month of April .....	818
Total to Date .....	179,676

### Firearms Hunting Casualties Reported in 1972

Fatal .....	1
Nonfatal .....	3

# COMRADES IN ARMS

Elsewhere in this issue we have included President Nixon's proclamation of National Hunting and Fishing Day. Resolutions asking for this proclamation passed both the House and Senate unanimously.

Without a doubt this is going to raise the hackles on some citizens who feel hunting is a barbaric form of activity and should be abolished in all of its forms. Others profess a deep concern for the future of wildlife and on that basis want to have all forms completely protected. This attitude has been manifested by advertisements in some eastern papers urging people to write to their congressmen concerning the marine mammal bills now being considered in committee.

Though there are provisions in some versions of the bills that would allow scientific management of these species and allow for taking of the surpluses, some individuals would have federal laws preempt states' rights and further put a complete ban on all forms of scientific manipulation of animal populations. Such laws could well act to the detriment of the animals concerned but actions based on uninformed emotions seldom result in the taking of a long rational look at the consequences that may result.

Here in the west we have not seen as much of the protectionist hysteria as have our eastern counterparts. The campaigns are here, but not quite as blatant or numerous perhaps.

In a recent edition of the Massachusetts Wildlife magazine the director of that department addressed himself to the situation. We want to pass his words along. He speaks from amongst the hotbed of anti-hunting sentiment. Because of their great numbers the eastern crusaders may succeed in getting federal laws passed that affect all of us. Here are the comments of Director James Shepard of the Massachusetts Division of Fisheries and Game.

RES

Hunting and nonhunting environmentalists are squabbling over scraps of meat while jackals slink off with the kill. The clash, long mired in the muck of emotion and personal morality, may shortly be ended by a third party—men who are not interested in hunting or "anti-hunting," game or nongame, but solely in wringing the last drops of goodness from the earth in a blind rush to glut themselves on quick profit.

When the concrete lobby has succeeded in its plot to pave America, when we have permitted our remaining rivers and wetlands to be dammed, dredged, drained, and channeled into permanent sterility, when old-school industrialists stuff the banner of "Progress" down America's windpipe, and East meets West in a transcontinental housing development, debate over wildlife harvest will be irrelevant for there will be no wildlife.

Veteran conservationists who lean to guns or field glasses, as the case may be, are not without blame in perpetuating the resource-wasting bickering. But the real culprits are certain urban eco-phytes who have been stylishly concerned about the environment since they heard about it back in '69. These folks want to "help animals" but an insane, consuming, Captain Ahab hate for hunters cripples good intentions.

"The only good time I have during the entire hunting season," piped one evangelizing eco-phyte on a recent New York radio show, "is at the end of the season when they say 27 hunters . . . were killed . . . It's my fondest wish that all these people are terrible shots and they'll all be dead at the end of the hunt."

The Washington, D. C.—based Committee for Humane Legislation lists a total ban on hunting as one of its five goals for the 92nd Congress. Think of it. People who call themselves conservationists are throwing money, manpower, and time into a campaign that, if successful, will all but abolish wild-

*(Continued on Page 11)*



# POPULATION DYNAMICS

by WARREN ANEY  
Systems Ecologist



A lemming. Probably one of the best known examples of a spectacular population increase followed by self destruction is the lemming's march to the sea. Scientific explanation of the phenomenon is still scanty.

## DEFINITIONS

**Exponential:** A curve whose rate of climb keeps increasing as time goes by, since time is an exponent (or power) in its equation. For example  $N = ab^t$ , where  $N$  is the population number,  $t$  is a time value, and  $a$  and  $b$  are constants. Also called a J-shaped curve.

**Asymptote:** A limit which a curve approaches but never quite touches.

**Asymptotic:** A curve which approaches a limit but never quite touches it. Also called a logistic, sigmoid, or S-shaped curve.

**Cyclic:** A curve having regular repetitions of the same pattern. The sine wave is a type of cyclic curve.

**Dampening:** Process by which a curve's cycles steadily diminish in size until the curve is essentially a straight line.

**Biomass:** The total weight of a living population of plants or animals.

Population explosion. Population boom. The population bomb. You've heard these terms — and maybe you've asked: Do they have real meaning, or are they just some copywriter's dramatics? Should we think of population growth in terms of a dynamite blast or exploding bomb? Maybe we should examine, with the help of a little theory from the science of population biology, how populations of real living organisms grow and respond to their environment, and maybe we'll find out whether or not the exploding bomb is a realistic analogy.

## The Exponential Growth Curve

All living populations reproduce at rates dependent on: 1) the number of mature individuals present, 2) the number of offspring each adult can have, 3) how quickly the offspring mature, and 4) how long the adults produce offspring. But no matter how fast or how slow a population reproduces, its unhindered growth rate is never a straight line—as the number of mature individuals increases, the population growth rate increases even faster, so we have a population growth curve like the one shown in figure 1; this is called an exponential growth curve.

The horizontal scale of the exponential growth curve may be hours and the vertical scale thousands of bacteria, or the horizontal scale may be centuries and the vertical scale millions of human beings; the curve fits both cases. This curve also fits the early stage of a dynamite blast, if the horizontal scale is microseconds and the vertical scale foot pounds of pressure.

(Continued next Page)

# Population Dynamics

(Continued)

## Asymptotic Growth Curves

No population can grow exponentially forever—it will eventually run out of food, out of room, or succumb to contagious disease. However, it is not normal for a population to entirely use up its environment and then fall back down to zero or become extinct, as would happen in a dynamite blast when all the nitroglycerin has been “used up” (transformed into energy and stable chemical compounds).

All populations possess some sort of growth regulatory mechanism. Like the governor on a motor, each population has a limit, or asymptote, determined by some environmental factor or combination of factors such as food, space, or water. As a population approaches its limit the effects of crowding, reduced food supply, or some other inhibiting reaction causes the reproductive and survival rates to go down. These rates decrease until the population is no longer growing but is remaining constant in size. This growth pattern, illustrated in figure 2, is characteristic of many populations such as fish in a lake or trees in a forest, particularly if we express them in terms of “biomass” present (total weight of all fish or board feet of lumber, instead of the number of individuals present). This curve also fits the way many individual animals or plants grow in size (height, weight, or volume).

Some biological populations are less sensitive to their limit than others—some populations may actually grow past their limit and then bounce back to it, as in figure 3. We’ve seen this happen in Oregon with several introduced species such as chukar partridge and ring-necked pheasant.

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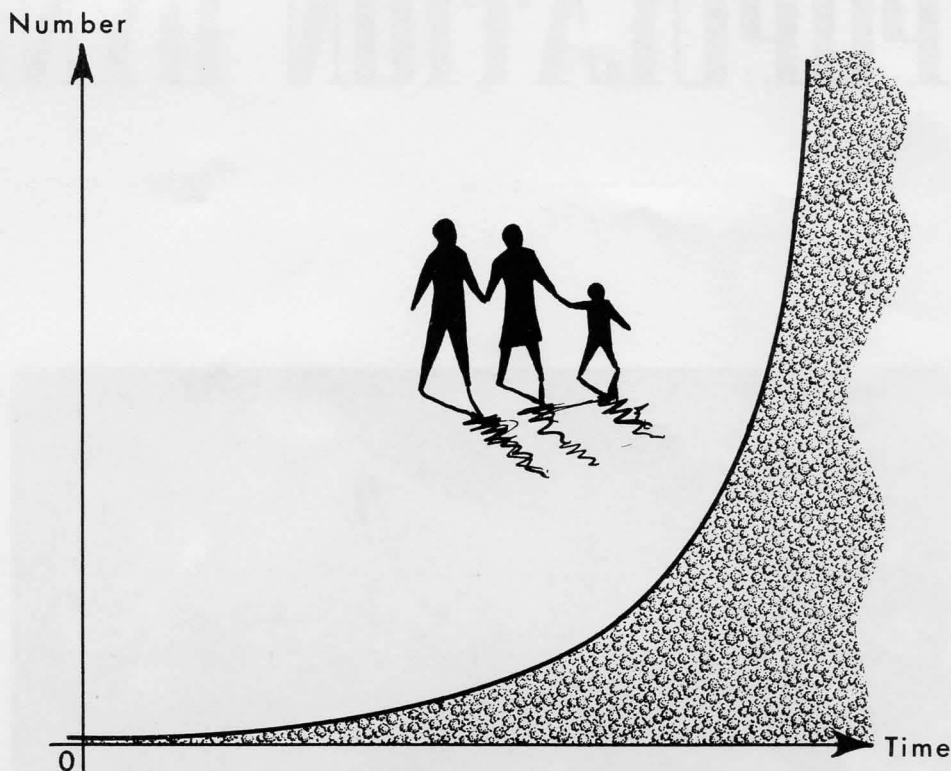


Figure 1. EXPONENTIAL GROWTH

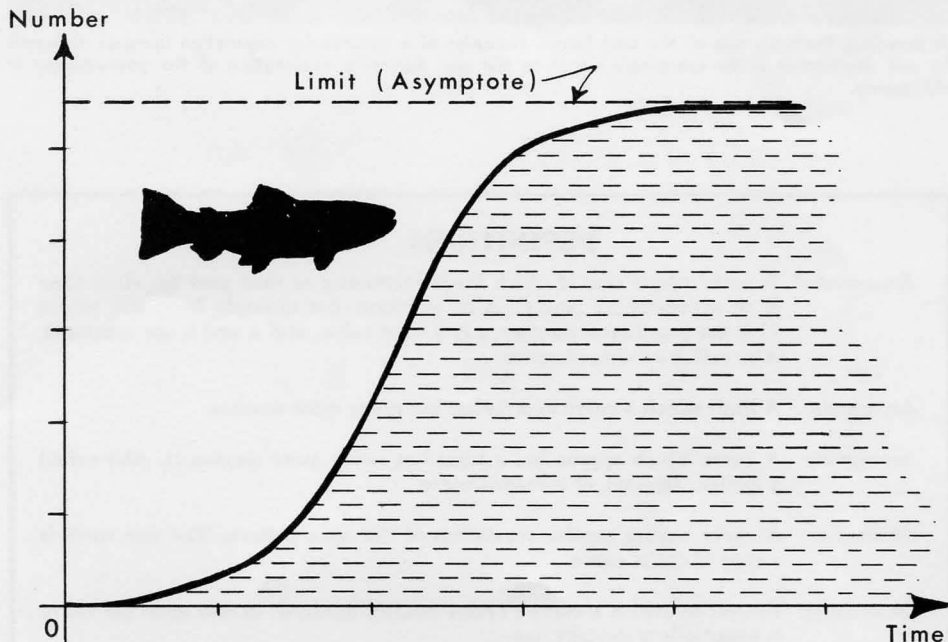


Figure 2. ASYMPTOTIC GROWTH CURVE (Asymptotic from below)

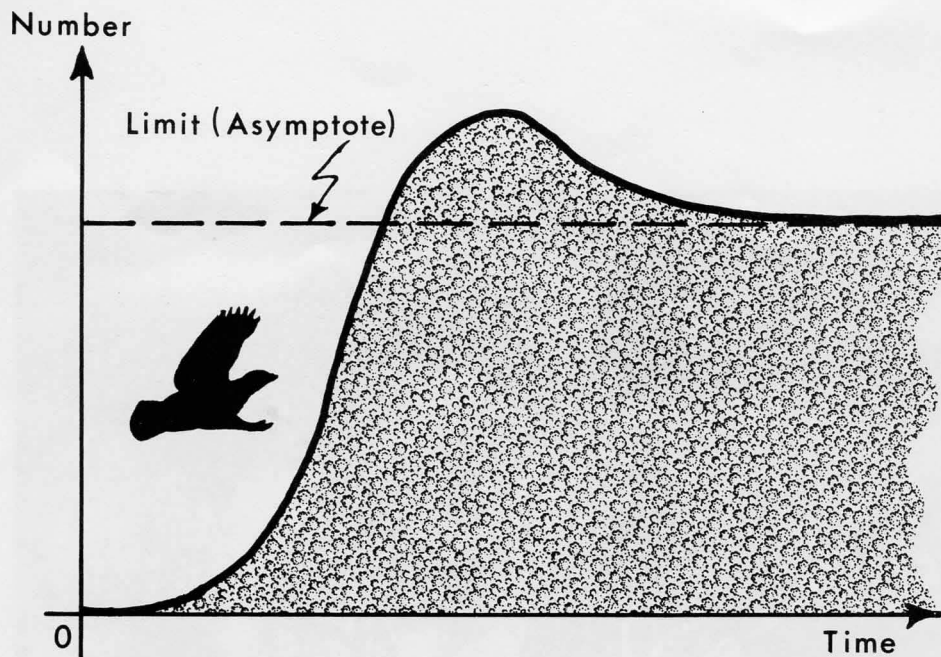


Figure 3. ASYMPTOTIC GROWTH CURVE  
(Asymptotic from above)

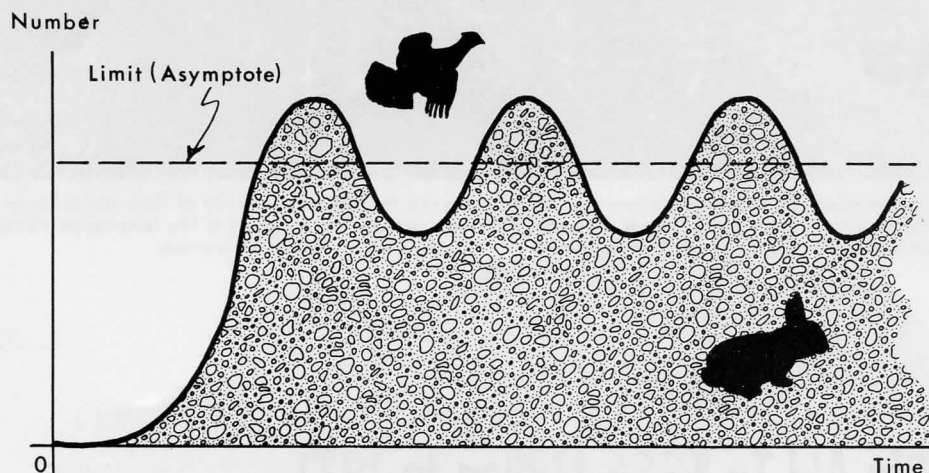


Figure 4. CYCLIC POPULATION

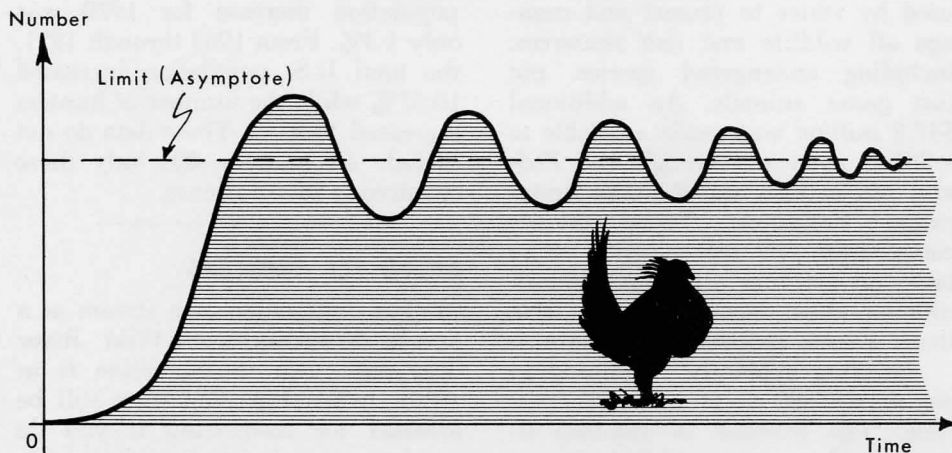


Figure 5. CYCLIC POPULATION, WITH DAMPENING

## Population Dynamics

(Continued from Page 4)

### Cyclic Populations

Sometimes, for reasons relating to the whole complex ecological situation a population finds itself in, it never seems able to adjust itself to its limit. As a result, the population grows past the limit, then drops back. But it declines too far back so it now starts growing again—and again it grows too big and must drop back. This situation repeats itself and, like some perpetually bouncing ball, the population keeps cycling back and forth around its limit, as in figure 4.

The cyclic case fits such species as blue grouse and the Arctic hare. It also fits species dependent on these cyclic populations such as the Arctic fox, certain plants which the Arctic hare eats, other animals which the fox eats, and other animals which eat the same food as the fox or the hare.

In some cases this cyclic pattern diminishes over time due to some dampening effect. We then have a situation such as shown in figure 5. Eventually this population can be stabilized in relation to its environmental limit—but some disturbance could set it to bouncing again like a ball on the end of a rubber band. Theoretically it should be possible for wildlife management to exert a dampening effect on some of our cyclic populations. This could be done to stabilize the availability of a popular wildlife resource such as blue grouse or sage grouse, or to prevent damage caused by population peaks of jackrabbits or meadow mice. But we do not now know enough about the ecology or population dynamics of these species to exert such sophisticated population management techniques.

So you see, the analogy of population growth to an explosive dynamite blast has only limited usefulness—they both start out the same, but whoever heard of a dynamite blast holding itself at some limit, or bouncing back and forth like some eruptive yo-yo? But the uncontrolled growth of a population

(Continued on next Page)



(Concluded)

can cause more wide-range devastation than any explosive bomb. History has seen such effects from plagues of locusts, rats, and mice—and perhaps we'll soon see the effects of a plague of humans. Our population has been growing exponentially for several centuries, but all living populations have a limit, even human populations.

Within our life span we have seen the results of uncontrolled big game population growth. Some of our deer herds have increased beyond the carrying capacity of their environment, resulting in severe winter losses due to malnutrition and exposure. The resulting severe winter loss is dramatic and pathetic; however, perhaps more serious is the long-term effect. Severe overuse of winter food supplies decreases the carrying capacity of the range for many years to come. In addition, the lack of proper plant cover may allow erosion and continuing degradation of the land.

Through sound management it should be possible to keep big game populations within their environmental limits. But the management of both animal and human populations eventually becomes the responsibility of society and its leaders, armed with facts from biologists, sociologists, economists, and other population experts.



Uncontrolled big game populations may increase beyond the carrying capacity of their winter range. The resulting severe winter loss is dramatic. However, perhaps more serious is the long-range effect on important browse plants that may never completely recover from the overuse.

## Sportsmen Increased Wildlife Aid To \$256 Million In 1971

After all the concern and talk during 1971 about imminent dangers to wildlife, official tallies show that American sportsmen were the ones who provided most of the money for the improvement of wildlife resources last year, according to the Wildlife Management Institute. Although bombarded by unknowing protectionists who contributed virtually nothing toward assisting wildlife, sportsmen supported wildlife protection and management efforts to the tune of over \$256 million.

Hunters spent more than \$108 million and fishermen almost \$100 million for licenses, tags, permits,

and stamps. These revenues are used by states to protect and manage all wildlife and fish resources, including endangered species, not just game animals. An additional \$47.8 million was made available to wildlife agencies through the Federal Aid in Fish and Wildlife Restoration Programs. These monies come from manufacturers' excise taxes on sporting arms and ammunition and on certain fishing tackle items which sportsmen purchase.

Hunting evidently is gaining in popularity as a recreational pastime. The number of hunting license holders rose to 15,977,588, an increase of 607,107 or 3.8 per cent

over 1970. The estimated total U.S. population increase for 1970 was only 1.3%. From 1963 through 1971, the total U.S. population increased 10.57% while the number of hunters increased 14.97%. These data do not include all hunters, but only those required to have a license.

### NOTE TO ANGLERS

The designation of a stream as a Scenic Waterway or Wild River does not mean the shoreline is in public ownership. You may still be arrested for trespassing if you do not have permission from a private landowner to be on his property.

# CATCHING KOKANEE

By MILT GUYPON

Many Oregon anglers have made the kokanee number one in their fishing preference, especially in the deeper lakes of the state.

This fact is borne out by fishery investigations at several deep-water lakes where over the years the kokanee — the little landlocked red salmon — has inched his way into the hearts of anglers. In these lakes, because of his abundance he has become the star performer, with rainbow, brook, mackinaw, and other trout relegated to the role of supporting cast.

The star billing may be the result of his willingness to bite and his energetic antics when hooked, in addition to being one of the finest table delicacies to be found.

To indicate just how important this little red salmon has become, creel checks and interviews at Crescent and Odell Lakes reveal that about 95 per cent of all anglers are after kokanee, with the remainder after rainbow, lake trout, or anything they can catch. From early spring to late June, fishing for the little red fish is generally excellent but after that, angler success de-

clines rapidly. Kokanee at Crescent average around 12 inches in length but the range extends from about 9 to 16 inches. At Odell two size groups predominate, one averaging 8 inches and the other around 13.

Numerous lakes in Oregon contain kokanee with some of the better ones being Lake of the Woods, Big Cultus, Crane Prairie, Davis, Elk, Wickiup, and Wallowa. Fourteen-inch kokanee are no exception at Big Cultus, Crane Prairie, and Wickiup. Some reach lengths of 19 inches or more.

In these lakes kokanee furnish a considerable amount of sport fishing and in several actually dominate the catch. But in all lakes like Crescent and Odell the tempo drops off significantly in July through the rest of the summer. Kokanee seem to just up and disappear and it is the whereabouts of this little red fish that puzzle and frustrate most anglers. Nonetheless, the kokanee is still there and is ready and willing if sport fishermen will take the time to learn a few of its secrets.

Kokanee are schooling fish. If anglers will remember this characteristic, their chances for success will be materially increased. Depth range of the schools will also vary,

usually shallow in the spring and early summer to depths of 50 feet or more during the heat of the summer and back toward the surface in late fall.

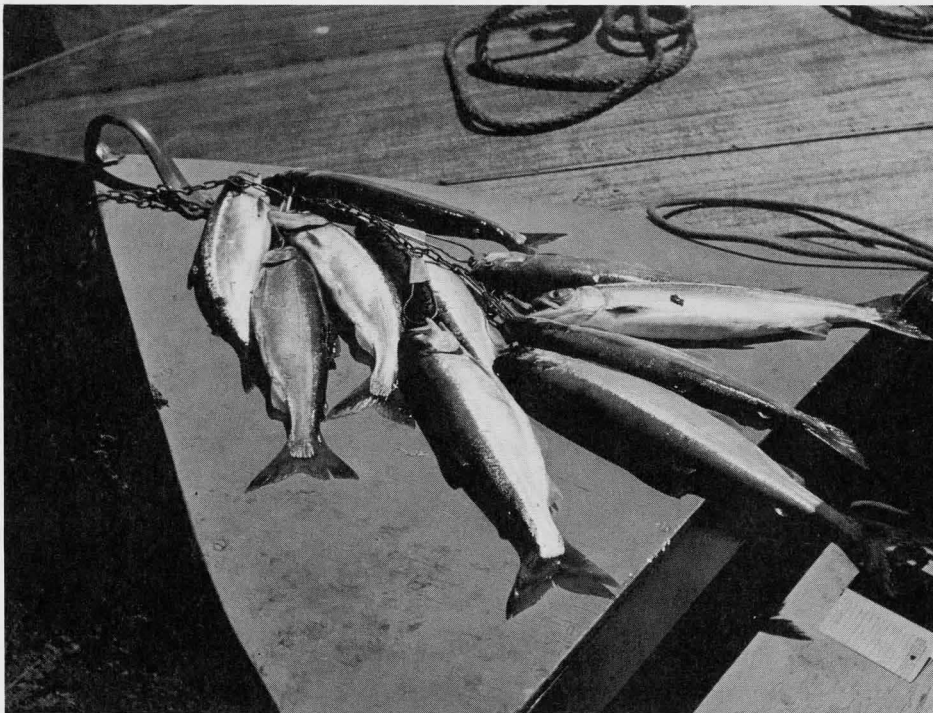
In general, kokanee are plankton feeders and the fish follow this food source at all times. In the spring plankton (mainly small animals such as daphne, freshwater shrimp, copepods, etc.) is well distributed at most depths and is especially abundant in the surface layer. And this is the water layer the angler should fish from spring into June. As the surface water warms, plankton migrate downward to cold water depths, which means at great depths during the heat of the summer. This, too, is where kokanee congregate.

Trolling is probably the most popular and effective means of taking kokanee but anglers must remember that proper depth is vitally important. During the heat of summer the angler must get down to that cold water layer which might be to depths of 40 to 60 feet or more. Small flashing lures and flies are effective as are spinner and worm or spinner and eggs. Numerous kokanee are taken on small wobbling spoons and plugs.

Once kokanee are located (at the proper depth), the angler should troll back and forth over the area. A slow troll is considered best, a speed which barely turns the spinner blades. Some anglers insist the best trolling speed is to have the spinner blades merely wobbling instead of turning in complete revolutions.

When hooked, kokanee fight a stout, courageous battle. Aerial acrobatics are not uncommon. The kokanee has a tender mouth so it behooves the angler to handle with care, especially when it appears the fish is about to come to creel. Many fish are lost at this final maneuver by over-eager anglers as a seemingly whipped kokanee takes off on another swift, dazzling run.

A landlocked version of the ocean-going sockeye or red salmon, the kokanee is a miniature duplicate, usually silver bright with bluish back. Its flesh is bright red to orange and as a table fare it is unsurpassed.







# Lake Abert

by HENRY MASTIN  
Fishery Biologist, Lakeview District

As one drives north from Lakeview on Highway 395 it is virtually impossible to overlook the huge scarp called Abert Rim. As it thrusts some 2,000 feet into the sky about 25 miles north of this southeastern Oregon community, it makes a landmark visible for many miles.

Nestled at the foot of the imposing uprising is one of Oregon's larger lakes carrying the same name as the nearby mountain of rock. Both were named in 1843

when Captain John Fremont traveled through the area and honored Colonel J. J. Abert of the U.S. Topographical Engineers.

Fed by the small outflow of Crooked Creek and the Chewaucan Marsh, Lake Abert has a surface covering over 60 square miles. Actually the lakebed extends along the highway some 16 miles and is as much as 6 miles wide in some areas. Though it is reported to have gone dry in 1924, there are no other recent reports indicating total lack of

water. Generally the average depth is less than 10 feet with a maximum of 15 feet.

Geologists tell us the lake was once part of a much greater lake. Along with Summer Lake, it is a remnant of a former body of water some 350 feet deep called Lake Chewaucan by the students of the past. Geologically the large lake was a rather recent thing, having been in existence sometime within the past million years.

*(Continued on next Page)*



# Lake

# Abert

(Continued)

But back to our present body of water. Despite its size and easy availability from a main highway, the activity on Abert is virtually nonexistent. Occasionally a letter is received from out-of-staters perusing maps, wanting to know what kind of fish are found in this huge lake in south-central Oregon. The reply to such a letter is easy—no fish are found in this great expanse of water.

For a number of years the Game Commission, U.S. Geological Survey, and U.S. Bureau of Land Management have carried on various studies concerning the lake and its possible productivity.

Chemically, the lake is highly saturated with carbohydrates that limit fish production. As might be suspected, the lake is very alkaline with a pH rating from 9.6 to 10. On the pH scale a rating of 7 is considered neutral with lower readings indicating acid conditions and higher readings up to 14 indicating base or alkaline situations.

Another indication of its content is the amount of solids that are dissolved in the water. Though it varies considerably depending on the amount of water present, the lake has about twice as much material dissolved in it as does ocean water. In a given sample of water from Abert Lake from 1/12 to 1/10 of the sample is dissolved solid materials.

The materials that are in solution in the lake are much the same as those in the ocean; however, the proportions are considerably different. The following table shows the comparison.

Percentage of Total Solids  
Abert Ocean

Calcium (Ca) .....	0.01	1.2
Magnesium (Mg) .....	0.01	3.7
Sodium (Na) .....	40.0	31.0
Potassium (K) .....	1.3	1.1
Carbonate plus bicarbonate (as Ca CO <sub>3</sub> ) .....	22.0	0.4
Sulfate (SO <sub>4</sub> ) .....	1.8	7.7
Chloride (Cl) .....	35.0	55.0

Since this is one of the largest bodies of water in the Northwest, the question immediately arises, "What kind of fish can be supported by it?" Natural life in the lake consists of brine shrimp and brine flies with some plankton. There are a few chubs found in the peripheral freshwater springs mainly along the north edge but it is not known if these fish ever enter the lake proper.

Tests mainly have been run to determine if any saltwater forms might be able to adapt to the rather "thick" waters of Abert Lake. Chinook and coho salmon fingerling were proposed as the first trial fish. At Lint Slough on the coast, coho salmon were being raised in near marine conditions. The chinook that were used started life in a freshwater hatchery but were acclimatized to a saltwater life prior to their introduction in the lake.

The program was to place groups of these fish in live-boxes at various locations in the lake. Several sites were utilized since the salinity of the lake varies considerably from near the freshwater stream entrances out to the middle of the lake.

First fish were placed in an area with the lowest salinity. Prior to their introduction into the lake, the fish were conditioned to the 70 degree water temperature they would have to survive in. All preparations were futile, however. As soon as they entered the water, the fish showed signs of distress and died almost immediately. The remaining salmon were released into the Chewaucan River and, though the water there was at 75 degrees, they did not show any immediate distress. Though these fish had been conditioned to tolerate water of very high salinity, they just couldn't take the Lake Abert water.

The search continued for a fish species that might be able to survive in the adverse environment at Abert Lake. To this end the Game Commission and the Bureau of Land Management agreed to determine if any fish species from the Salton Sea in California could survive. The California Department of Fish and Game agreed to test Salton

Sea fish to determine if they could be acclimated to Abert Lake water and BLM transported 200 gallons of the water to the California laboratory at Chino, California.

Five species were tested at the laboratory. Three of these species had a high tolerance to saline conditions. The fish were tested in various concentrations of Salton Sea and Abert Lake water. As the fish became acclimated to a lower dilution over a 48-hour period, they were transferred to the next higher concentration.

Two species died after a 44-hour exposure to 75-per cent Salton Sea and 25-per cent Abert Lake water. One of the species showed distress in any concentration above the 75-per cent Salton Sea and 25-per cent Abert Lake water. Two other species were able to acclimatize at the 75-per cent Salton Sea and 25-per cent Abert Lake water. One of the species was able to survive for 23 hours in a concentration of 50-per cent Salton Sea and 50-per cent Abert Lake water.

The desert pupfish appeared to be the species most likely to adapt to Abert Lake water. Some pupfish were able to become acclimated to a concentration of 50-per cent Salton Sea and 50-per cent Abert Lake water. One even survived for 18 hours in 25-per cent Salton Sea and 75-per cent Abert Lake water. In 100-per cent Abert Lake water they all showed immediate distress.

And so the tests continue. None of the five species of fish from the Salton Sea could tolerate a 100-per cent dose of the potent waters of Lake Abert. It has been speculated that the high carbonate content of the water is the factor that makes survival impossible for the fish thus far tested. More thorough analysis of the water may reveal a lethal factor in the water or it may reveal that the tremendous amounts of dissolved solids are just too much for fish life.

In the meantime, one of Oregon's largest bodies of water continues to lie silent beneath Abert Rim. Of geological interest, it appears likely the lake may never join the ranks of Oregon's fish producers.

## STEELHEADERS TAKE ON TRASK TASK



Muddy water in the Trask River was the problem. A huge slide high above the South Fork of the Trask was the cause. The solution might be to fertilize and plant grass across the face of the slide to stabilize it. The Game Commission provided the seed, fertilizers, and advice. The Northwest Steelheaders, the majority from the Beaverton Chapter and the remainder from Tigard and Tillamook, supplied the labor. Only time and rain next winter will tell if the operation was a success. A part of over a hundred volunteers take a look at the problem in the distance before beginning the chore.

## New Film Available

A new 16 mm sound, color film is now available from the Game Commission for loan to groups. Produced by the Commission staff, it is entitled "Fish Factories" and follows the life of a fish from egg stage to liberation as raised at the various Game Commission hatcheries. Approximately 17 minutes long, the film is available from the Portland office of the Commission or the regional offices but borrowers should schedule it well in advance.

With the fishing season just underway, two other films from the Commission are also appropriate for showing to clubs. "High Lakes"

tells the story of the biological management of the high Cascade lakes while showing some magnificent scenery. If your group is interested in seeing how a lake is chemically treated for the removal of undesirable fish populations, the film "To Reclaim A Lake" should be a good one for a program.

Both of the latter films are 16 mm sound and color and about the same length as "Fish Factories." There is no charge for borrowing the films but the user is asked to pay return postage and get the films back promptly after use.



## BIRD HUNTERS REPORT FAIR YEAR

Upland bird and waterfowl hunters enjoyed fair hunting success during the fall months of 1971 with a reported take of just over 1,418,300 birds of all species.

Just over 80,700 shotgun enthusiasts took after upland game birds and small game last fall and reported taking 830,700 upland birds and over 13,000 squirrels. This was a drop from the more than one million birds taken in 1970. The reduced harvest was uniform in all species with the exception of grouse and Hungarian partridge where the take was approximately the same as the previous year.

More than 57,000 hunters participated in the waterfowl season and reported taking just over 587,600 ducks, geese, and other waterfowl.

The following table shows upland game and waterfowl hunting results for 1971.

Species	Number of Birds Taken Hunters	
Pheasants .....	167,915	54,400
Quail .....	179,050	27,296
Chukar Partridge .....	148,146	23,088
Hungarian Partridge .....	24,074	6,614
Grouse .....	43,193	15,825
Sage Grouse .....	3,102	2,068
Doves .....	180,757	17,508
Pigeons .....	84,318	10,798
Squirrels .....	13,059	4,064
Turkeys .....	168	1,900
Ducks .....	525,822	55,050
Geese .....	47,450	25,300
Snipe .....	14,334	4,137



## Steelheaders Improve Site

Twenty members of the Oregon Steelheaders from the Springfield, Eugene, and Riddle areas converged on the rough Winchester Dam boat landing site recently and cleared the area for use during the coming angling season.

Located at the upper end of the Winchester Dam impoundment, the unimproved site was acquired by the Game Commission to serve as a take-out point for drift boaters using the 14 miles of North Umpqua below Whistlers Bend Park.

When the dust had finally settled, the steelheaders had brushed out and constructed a boundary fence, felled several trees blocking vehicle access, and collected and disposed of brush and debris on the parking area. The group also installed a row of posts to act as a barrier to the launching of motor boats at the boat slip.

Parking is limited on the area and motor boating on this portion of river is hazardous. As such, the Winchester Dam boat landing will be used exclusively to accommodate the landing of drift boats. The entry of motor boats is prohibited.

## U.S. to Ban Trade In 8 Cat Species

Eight species of cats which are under pressure from the skin trade are being added to the U.S. list of endangered foreign wildlife, according to an official announcement in February.

They are cheetah, leopard, tiger, snow leopard, jaguar, ocelot, margay and tiger cat.

When the action by the Secretary of the Interior became effective in March further import into the USA of any parts of products of the listed animals was prohibited.

The present U. S. list of endangered wildlife covers the following cat species: Asiatic cheetah, Barbary serval, Formosan clouded leopard, Asiatic lion, Sinai leopard, Barbary leopard, Anatolian leopard, Bali tiger, Javan and Caspian tiger and Spanish lynx. All of these animals are listed in the Red Data Book.

# COMRADES IN ARMS

(Continued from Page 2)

life conservation by slicing out the hunter chunk of sportsmen's \$235 million-a-year contribution to state and federal conservation agencies.

"Friends of Animals" from New York City sponsors enormously expensive full-page newspaper ads that urge readers to "stop the murder of wildlife" by writing President Nixon. Friends presently backs a bill to ban hunting on federal lands—one-third of the United States. What will be the cost to wildlife?

The chilling truth is that this kind of rabid nonlogic works. In December of 1970 Friends, DEER (Deer, Ecology, Environment, Resources), and the Humane Society marched into New Jersey's Great Swamp National Wildlife Refuge to hamstring the U. S. Bureau of Sport Fisheries and Wildlife in its efforts to organize a one-day deer hunt desperately needed to trim a starving herd. The court considered half a century of proven wildlife management principle and, on the basis of an emotional harangue, tossed it out like used dishwater. Now—one long year later—the injunction is on the verge of being lifted.

So wildlife takes its lumps from the greedy and the naive and self-righteous. And the real conservationists—the decent people who should unite in their common love for the land and its wonderfully complex life systems—drift steadily apart, split by a moral argument that, when all is said, means nothing.

JAMES SHEPARD.

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Office of the White House Press Secretary

THE WHITE HOUSE

## NATIONAL HUNTING AND FISHING DAY A PROCLAMATION

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

For many years, responsible hunters and fishermen have been in the vanguard of efforts to halt the destruction of our land and waters and protect the natural habitat so vital to our wildlife.

Through a deep personal interest in our wildlife resources, the American hunter and fisherman have paved the way for the growth of modern wildlife management programs. In addition, his purchase of licenses and permits, his payment of excise taxes on hunting and fishing equipment, and his voluntary contributions to a great variety of conservation projects are examples of his concern for wildlife populations and habitat preservation.

His devotion has promoted recreational outlets of tremendous value for our citizens, sportsmen and non-sportsmen alike. Indeed, he has always been in the forefront of today's environmental movement with his insistence on sound conservation programs.

In recognition of the many and worthwhile contributions of the American hunter and angler, the Congress, by Senate Joint Resolution 117, has requested the President to declare the fourth Saturday of September 1972 as National Hunting and Fishing Day.

NOW, THEREFORE, I, RICHARD NIXON, President of the United States of America, do hereby designate Saturday, September 23, 1972, as National Hunting and Fishing Day.

I urge all our citizens to join with outdoor sportsmen in the wise use of our natural resources and in insuring their proper management for the benefit of future generations.

IN WITNESS WHEREOF, I have hereunto set my hand this second day of May, in the year of our Lord nineteen hundred seventy-two, and of the Independence of the United States of America the one hundred ninety-sixth.

RICHARD NIXON

and p. 3

# 1972 General Big Game Seasons

Consult regulations for details and exceptions and for information on  
Antelope, Sheep, and Antlerless Deer and Elk Seasons  
requiring separate tags and permits

SEASONS	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Archery	26	24			
High Cascade Buck Season		16	24		
Western Oregon Deer			7	5	
Eastern Oregon Deer			7	18	
Rocky Mountain Elk			28	15	
Roosevelt Elk				11	22
Bear	1				31

Numbers Indicate First and Last Day of Seasons

Bighorn Sheep Season: September 23 through September 29. Five tags Hart Mountain area.  
September 16 through September 22. Eight tags Steens Mountain area.

Cougar Season: December 1 through December 31. 75 tags Northeastern Oregon.  
(See synopsis for boundaries)

THERE IS NO OPEN SEASON ON MOUNTAIN GOATS.

## CLOSING AND DRAWING DATES FOR 1971 TAGS AND PERMITS

Kind of Tag or Permit	Deadline Date	Drawing Date
Antelope, Sheep and August Deer Permits	5:00 p.m. July 11	10:00 a.m. July 21
October and November Deer Permits	5:00 p.m. August 8	10:00 a.m. August 18
Cougar Tags Elk Permits	5:00 p.m. August 22	10:00 a.m. September 1

For forms and information regarding applications consult your local license agency.



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