

OREGON WILDLIFE

JUNE 1980



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Ron E. Shay, Editor
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Cover — A valley quail perched atop a fence post is a common sight throughout most of the state.

Photo by William Finley

A LIMITATION, NOT A GOAL

It appears that in this day of the glamour of competitive sports, the same competition is creeping more and more into angling. In the past we have mentioned the bass derbies and there appears to be increased effort to up the legal limits on the value of prizes that can be given in all kinds of angling and hunting related contests. It seems that to some, sport angling has little of the contemplative left in it, but instead has to be goal oriented.

A recent letter we saw castigated the Commission for increasing the ocean salmon bag limit back up to three fish pointing out that this certainly wasn't in line with efforts to save fuel. The writer suggested that this bag limit increase would force anglers to stay out fishing longer to be sure to get their limit.

Another letter writer addressed the matter of the trout bag limit and felt it was very discriminatory in that the stream angler could have only five trout and the lake angler could have ten. It was the view of the writer that the stream person had to go just as far and work just as hard so he should be able to take just as many fish.

Both of these letters, keyed to bag limits, seem to illustrate a point. To many, the success of a fishing trip is measured by whether the limit is taken or not. We've heard anglers who had a pleasant week of fishing and who had taken over 70 trout legally, suggest the trip really wasn't that good because they hadn't filled their 80 fish possession limit.

In another instance we heard complaints about one of the lakes because it was producing mostly fish over 12 inches long. This made it very difficult to catch the portion of the limit of trout under 12 inches and so the two day bag limit was in essence 10 fish over a foot long.

We often wonder about these limits of fish that are hauled home and shown to all who will view them. We would speculate that all too often they are only partially used because there are too many to be eaten in one setting and everyone soon tires of fish every night for dinner.

All of this is not to say that all anglers fit into this mold. Additionally, it is not to say that a limit of fish well taken care of and properly prepared is undesirable.

There is no doubt that going fishing is costing more in fuel and other expenses and to many the meat brought home is an important part of the diet. However, it seems that the word sport should be kept in sport angling. If the success of a trip is going to be equated with bringing home a limit the cost will be even higher. The dollars spent going and coming won't even bring a period of relaxation and peace of mind if the limit is considered an essential goal instead of being recognized as a device to protect and distribute the resource. The angler who has to have a limit to consider a trip successful has to be overlooking some of the most important reasons for going fishing. □

R.E.S.

HUNTER EDUCATION PROGRAM	
INSTRUCTORS APPROVED	
Month of April	6
Total Active.	1,763
STUDENTS TRAINED	
Month of April	308
Total to Date	271,640
HUNTING CASUALTIES REPORTED IN 1980	
Fatal	0
Nonfatal	0

COMMISSION HEARING

The Fish and Wildlife Commission will conduct a public hearing on furbearing mammal, dove and band-tailed pigeon regulations beginning at 9 a.m. on Friday, June 20, in the conference room at Fish and Wildlife Department headquarters, 506 SW Mill Street in Portland. Following public testimony, the Commission will set regulations for 1980-81. Other business may follow. □



The wide current distribution of quail in Oregon is due in part to early trapping and transplanting programs. This photo, circa 1949.

THE QUAIL OF OREGON

by Dr. John A. Crawford
Department of Fisheries and Wildlife
Oregon State University

The New World quail, a group of about 30 species which are related closely to pheasants and partridges, range from South America to extreme southern Canada. Six species occur in the United States, but only the bobwhite is widespread in its distribution.

Quail are extremely popular with bird hunters; indeed, more than 42 million birds are bagged each year. Of this harvest, the bobwhite comprises over 80 percent (about 35 million) which makes it the most heavily harvested gamebird in North America. The annual kill of bobwhites often exceeds the take of all North American waterfowl combined.

Millions of people hunt quail, and millions more photograph or actively pursue observations of these birds. An unknown number of people, undoubtedly enormous, merely enjoy having quail around. Quail are so popular that in many parts of the U.S., they are known simply as
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"birds." Three species of quail occur in Oregon: bobwhites, California quail, and mountain quail.

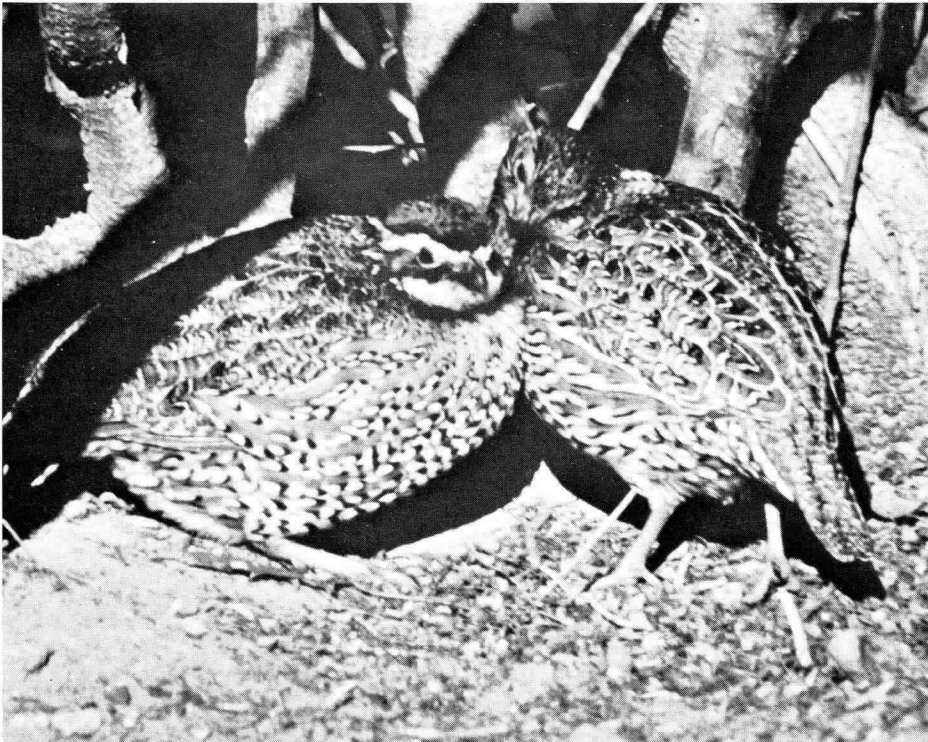
Bobwhite (*Colinus virginianus*)

The bobwhite was not native to Oregon. Likely it was introduced because it was familiar to many settlers from the East. Approximately 100 years ago, Solomon Wright introduced the first bobwhites into the Willamette Valley. From this initial planting and subsequent introductions, the bobwhite became widely distributed throughout the Willamette Valley.

The birds in southeastern Oregon are believed to have come from populations established in Idaho about 1875. Further introductions, both by individuals and the Oregon Department of Fish and Wildlife, resulted in the establishment of bobwhites in a variety of locations in central and

eastern Oregon, especially in Morrow and Umatilla counties. Eventually, bobwhite populations declined, most notably during the mid-1950's, and restrictive bag limits were imposed. At that time, the Oregon Department of Fish and Wildlife began reintroduction efforts to supplement existing populations, but to no avail.

Populations continued to decline. By 1963, the bobwhite was removed from the list of hunted species. Today, bobwhites occasionally are seen in the Willamette Valley (especially Lane, Washington, and Yamhill counties) and in eastern Oregon (primarily Malheur and Umatilla counties). The initial increase and subsequent decline of bobwhite populations in Oregon during the past 100 years most likely were related to the many changes in land-use practices during that time. Specific causes remain unknown.



The white eye-line and throat of the male bobwhite (replaced by buff color in the female) and the lack of a top-knot distinguish the bobwhite from other Oregon quail. The distinctive "Bob White" call is well known to those who've been around them.

Photo by Andrew Wilson



The tear-drop shaped top-knot is characteristic of both male and female California quail. The striking black and white pattern on the head of the male contrasts to the mottled facial pattern of the female.

Photo by Michael Passmore

California Quail (*Lophortyx californicus*)

California quail, commonly known as valley quail, originally inhabited only Jackson, Josephine, Klamath, and Lake counties in Oregon. Transplants of these birds beginning more than 100 years ago resulted in a statewide distribution. They are uncommon or absent in many montane, forested areas and very arid habitats.

California quail are common, even abundant in some places, in Oregon. Their populations are a product of land-use practices, principally agriculture. Because California quail are dependent on weedy and brushy habitats, intensive clearing of such areas has a negative effect on population sizes. Consequently, numbers have declined in some parts of the state. Brush and low growing trees such as sagebrush, blackberry, willow, or Russian olive are used for escape cover, roosting, daytime resting areas (known as "headquarters"), and sometimes nesting.

The birds usually feed in fields or weedy areas. Legumes such as vetch, lotus, and sweetpea are important components of the diet. Even when the birds feed in fields, weed seeds often are preferred to waste grain. Nevertheless, California quail display considerable flexibility in their diet; for example, the birds may consume apple pulp, blackberries, Russian olives, watermelon seeds, false dandelions, wild carrot greens, and ants.

Given the proper food, cover, and water, California quail are quite tolerant of human activities. In fact, these birds may be found in suburban parts of towns and city parks. California quail and their familiar "chicago" calls are commonplace to many Oregonians, but proper habitat must be maintained for these birds to ensure their continued survival and abundance.

Mountain Quail (*Oreortyx pictus*)

The mountain quail, a native species, is distributed statewide, but in some areas it is confined to very particular habitats. Mountain quail are most commonly associated with mountainous, forested areas; however, they also occur in wooded draws, valleys, and sagebrush habitats, especially during winter.

In forested zones, mountain quail usually are found in regenerating clear-cut areas, ranging from brushy stages through the time when the young coniferous trees are 5 to 10 meters in height. They use older forest stands for escape from predators or inclement weather. Like California quail, mountain quail roost communally in trees or shrubs several meters above the ground.

Mountain quail consume a variety of foods. Weed seeds, especially from lupines, and fruits and berries, such as snowberry, are common in their diet. Unlike other North American quail, some mountain quail are migratory. During migration, mountain quail may move 25 kilometers or more from high elevations where they breed to low elevations for winter. Other populations are sedentary or may move only short distances.

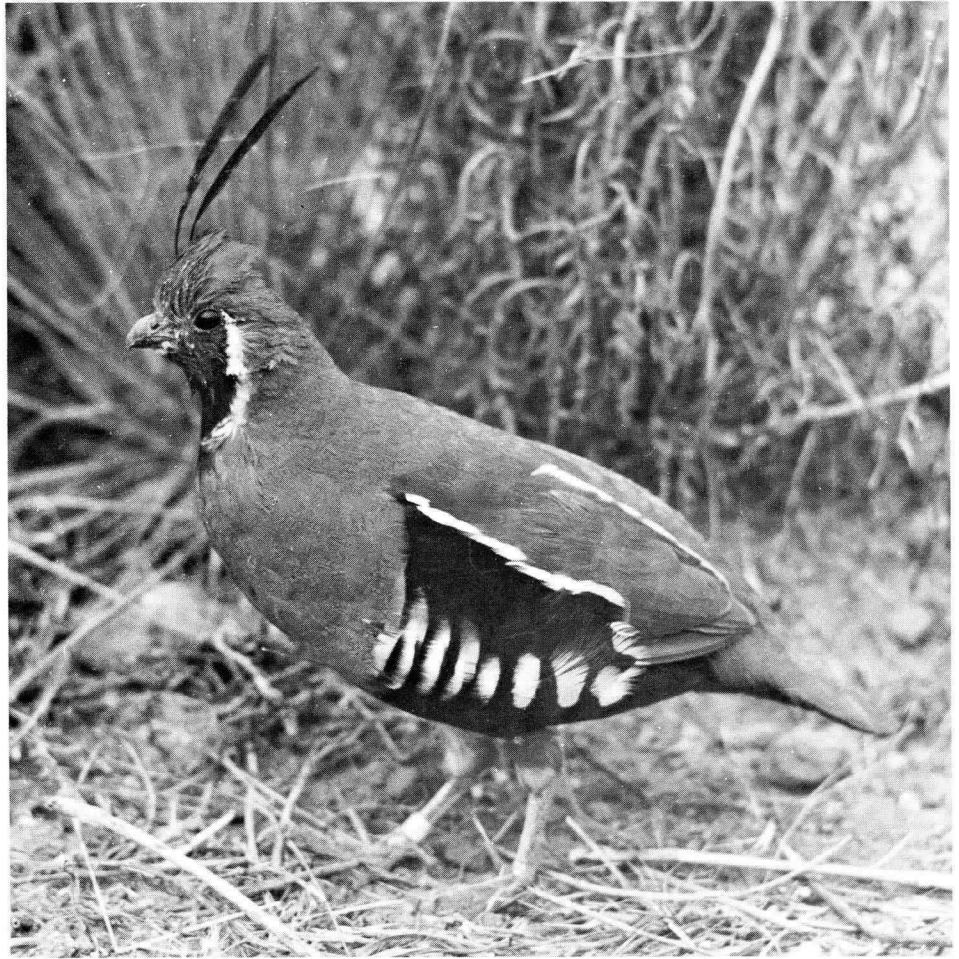
Because of this "altitudinal migration," mountain quail hunters may encounter a number of coveys (usually 10 to 15 birds each) in an area on one hunting trip and return later only to find few, if any, birds. Mountain quail populations are greatly dependent on forestry practices, but, unfortunately, little is known about the precise impacts of many forestry techniques on these birds. Seemingly, the abundance of mountain quail in western Oregon is rather variable. In some locations they are extremely numerous, but in other areas populations exist at low densities.

Population Factors

Quail are "annuals" in much the sense that many plants are "annuals." At hatching, an average quail chick can look forward to only about six to nine months of life. In quail populations, the average annual mortality is between 60% and 90%. Many mortality factors, including hunting, disease, predation, accidents, and severe weather conditions, affect quail populations.

Because quail have such high mortality rates, many management efforts were directed toward protecting the birds. Many early programs involved a host of laws which restricted the taking of quail to certain times and bag limits, control of animals which prey on quail, propagation efforts, and feeding programs in an attempt to reduce losses of quail.

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Mountain quail are the largest North American quail. The chestnut colored throat and long straight top-knot (composed of two feathers) differentiate the mountain quail from other species. The appearance of the plumage of males and females is virtually identical.

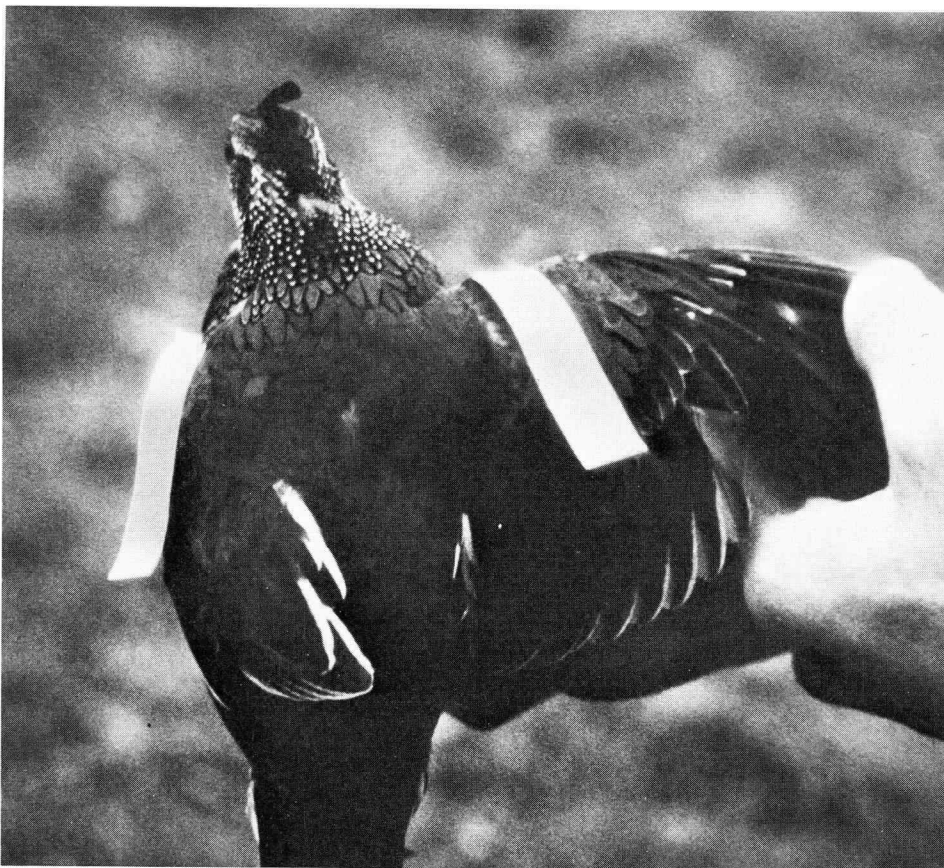
Laws, which eliminated the market hunting of quail (most of which were passed during the late 1800's), were important for the protection of these birds. Sport hunting restrictions, however, emanate more from a social basis than a biological one. In good habitat the hunting of quail is said to be "self-limiting." By this, it is meant that although birds may be taken rather easily by hunters early in the season, as time progresses, the birds become more experienced at avoiding hunters and the density of the population has declined to the point that birds are considerably more difficult to bag.

The late Paul Errington, renowned wildlife biologist in Iowa, discovered two important phenomena regarding bobwhites. He found that for populations in good habitat, mortality factors functioned in a complementary manner; in other words, if one mortality factor, such as hunting, in-

creased, the relative influence of other factors decreased. He termed this situation "compensatory mortality."

Many subsequent studies have shown that intensive harvests of quail, sometimes approaching 40 percent of the population or more, did not increase the annual mortality rate. Errington found that once this "biological surplus" was removed, the remaining members of the covey were safe from many mortality factors like hunting, disease, or predators. Nevertheless, numbers could be depleted by severe weather conditions.

Errington also noted what he called "inversity" in bobwhites. When quail densities were particularly low in the spring, the reproductive success of the adults and survival of the young were greater than in years with high spring densities. The occurrence of "compensatory mortality" and "inversity" in quail popula-



Wing markers, called patagial tags, aid researchers in the identification of individual birds for studies of quail populations, range, behavior, mortality, etc.

Photo by John Crawford

tions afford the possibility of large harvests without affecting the year-to-year density. In addition, because of the high natural mortality and other factors mentioned above, protection of quail from hunting in areas of high quality quail habitat is a meaningless gesture from a biological viewpoint.

Quail serve as prey for a variety of other creatures, ranging from ants, snakes, and ground squirrels which consume eggs to great horned owls and Cooper's hawks which take young and adults. Efforts to control predators to enhance populations of quail largely have met with limited or no success. Time, money, and energy directed at the control of predators could be better used for the improvement of habitat, especially escape cover and nesting cover with nearby food supplies. If proper cover exists, quail mortality due to predation also functions in a compensatory manner.

The stocking of quail in areas already occupied by the species is an expensive undertaking which may in-

crease the number of birds available to hunters for a short period, but accomplishes little to help wild populations. Feeding of quail is a common practice. Sometimes the birds are fed so that they may be observed more easily. Other times they are concentrated for increased accessibility for hunters. Large-scale efforts to feed quail for population enhancement result in little more than a concentration of birds, a result which may appear superficially as a success. Concentrating birds, however, has numerous undesirable side effects. Predators may exert an unusually great influence on a population if it is concentrated, and contagious diseases may spread rapidly through such a population as well.

In retrospect, it can be seen that many early management practices did little to help the quail. Current management programs are directed primarily at improving water supplies, natural foods, and various types of cover required by each species. Some of the procedures successfully used for quail management

throughout the United States include controlled burning in grasslands and forests, rotational grazing, planting of shrub cover, disking to stimulate annual weed production, and development of watering devices called "gallinaceous guzzlers." To assist with the development of habitat management programs, research often is required to identify those factors which are limiting populations. In summary, habitat is the key to the success of quail populations.

Hunting

During the past 30 years, the number of quail hunters in Oregon ranged from fewer than 12,000 in 1950 to more than 38,000 in 1958. Accordingly, only about 64,000 quail were harvested in 1950; whereas, in 1958, hunters took more than 280,000 birds. During the 1970's, an average of 29,000 hunters took approximately 180,000 quail annually. Thus, the average quail hunter in Oregon bagged about six quail per season. For the typical hunter, this would require about 30 shots.

Bag limits have fluctuated considerably since 1950. In 1975, only five quail (California or mountain) were permitted in the daily bag. By contrast, hunters in 1959 were allowed 25 quail (15 California, 5 mountain, and 5 bobwhite) daily. During the latter part of the 1970's, 10 quail per day was the typical bag limit. However, in 1979, California and mountain quail were treated separately according to the regulations, and 10 birds of each species were allowed during the appropriate seasons.

The mountain quail season (open only in western Oregon in 1979) corresponded to the western Oregon grouse season. Hunting of California quail coincided with the pheasant season, except in eastern Oregon, where the birds could be taken through the end of December.

Elsewhere in the country regulations are quite variable. In some states, quail are afforded complete protection whereas in others regulations are rather liberal. In Texas during 1979, for example, the quail season was three months long and the daily bag limit was 20 birds. The harvest in Texas often accounts for 20

percent or more of the entire kill in North America. Despite this heavy harvest, populations remain healthy because of favorable habitat conditions.

Quail hunting is rewarding and, at times, frustrating. Because quail are rather small in size and fast fliers, they present a challenge to the skill of the wing shooter. Thus, choosing the proper equipment is essential. Because quail hunting requires considerable walking, comfortable clothes and good walking boots are most important. Most hunters select short, open-bored guns, ranging from 12 gauge to .410 bore.

Cylinder or improved cylinder boring is satisfactory for most shots with which the hunter is presented. Owners of tightly-choked guns, used for hunting other species, might consider use of "spreader loads" which are available as factory loads or may be hand-loaded. These shells give roughly improved cylinder patterns even from full choked barrels.

A properly trained dog is one of the greatest assets for successful quail hunting in Oregon. Pointing dogs, such as English pointers, German shorthaired pointers, and Brittany spaniels, are most effective on California quail in open country. In areas of dense brush, especially blackberries, flushing breeds like the Labrador retriever and the English springer spaniel are often more useful for putting California quail into the air.

Almost any trained hunting dog can be used for mountain quail. These birds show a tendency to run or flush wild initially, especially if they have had some hunting pressure. When a covey is scattered, however, singles often hold closely to cover and a pointing dog becomes most helpful. Because both hunted species of quail in Oregon often occur in dense cover or difficult terrain, a retrieving dog can greatly reduce the number of birds lost by the hunter.

The quail hunter experiences many recreational and aesthetic pleasures not the least of which is the culinary delight derived from eating these birds. The meat, especially the white breast, can provide one of the finest tasting meals obtained from any animal, wild or domestic. In all, quail represent some of the finest sport available to the hunter.□

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HUMMINGBIRDS

The bird world is full of long distance travelers that spend their winters in southern climes and return north for nesting. But few species can compare to the hummingbird when it comes to distances traveled in relation to body size.

The hummingbird is the smallest bird in the U.S., and Oregon is the summer home for two species that are also notable within their breed. The rufous hummingbird travels farther than most hummers migrating over 2,000 miles from its winter grounds in Mexico to its nests in Oregon. The calliope hummingbird of eastern Oregon is the smallest of the 15 species that regularly summer in the U.S.

Rufous hummingbirds are about average size at three and one-half inches and weigh in at less than one-half ounce. The calliope is smaller at about two and three-fourths inches in length.

The male rufous is the only North American hummer with a reddish-brown back and tail that gives it its name. The throat patch is a brilliant red-orange. The female has a green back with some rufous on its sides, and is hard to distinguish from several other species, including the female calliope.

The male calliope is also distinctive with the usual green back accented by a throat patch with red stripes over a white background.

Two other species, the black-chinned and the broadtailed hummingbirds, are occasionally found in far eastern Oregon.

The trademark of all hummingbirds is the flying style. The hummer actually flies more like an insect than a bird. Its wings move back and forth in a horizontal plane at up to 60 beats per second. This wing movement gives the hummingbird the maneuverability of a helicopter allowing it to move forward, hover and even fly backwards.

This freedom of movement and a specially adapted tongue that rolls up like a straw allows the bird to seek its food deep within flowering plants. The hummingbird eats not only nectar but small insects found within the flowers.

The rufous arrives in western Oregon in March. Arrival of the rufous and the calliope east of the mountains is usually later.

The birds build nests no bigger than half a chicken egg using plant down, lichens and other plant material bound together with spider webs.

Two pea-sized white eggs are laid and hatching chicks resemble little caterpillars. Growth rate is rapid, however. Chicks are usually fully plumed within 14 days and leave the nest after 20 days.□



Although small, Three Mile Island has more than 4,000 nests built by almost a dozen different bird species.



Two young black-crowned night herons express individual reactions to photographer invading their nest site. Several heron nests are located in a few brushy trees that cling to the island.

Three Mile Island — A Haven For Birds

There is an island in the Columbia River that one might say is for the birds; literally. Three Mile Island, near Boardman, was once part of a planned boat basin development. Some birds, thousands of them, had a better idea and adopted the island as a breeding site.

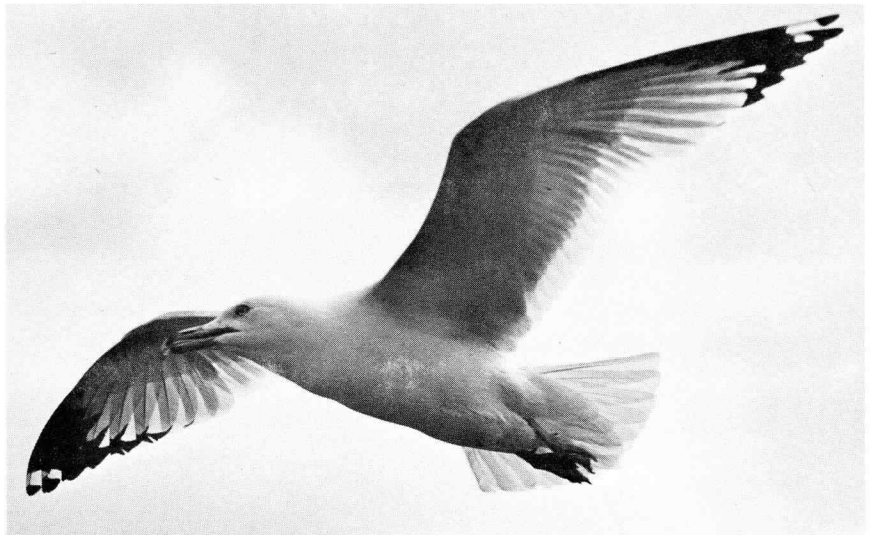
Over the years, Three Mile Island has developed important breeding populations of ring-bill and California gulls, Caspian and Forster's terns, black-crowned night herons, Canada geese and several other common land birds.

Once the importance of the site was recognized and explained by wildlife management agencies, the Corps of Engineers dropped plans for heavy development of the area for recreational use.

Now, where high speed boats might have sped, only an occasional scientist in a small boat journeys to the island. He goes there to look, to study and perhaps give thanks that these birds of land and sea have found a safe place to secure their future.□



Caspian terns (with black heads) and gulls share nesting space. Nests are so thick in some areas that scientists must watch their step to avoid crushing eggs and chicks.



Although the gull has a reputation as a rather inelegant bird, the reputation on the ground is erased by grace in flight.

Story & Photos by Jim Gladson



Ring-billed gulls do not take a lot of trouble with nest construction. The new home this chick shares with one yet unborn consists of a shallow depression in the gravel and a few sticks.

CLUB PROJECTS BENEFIT FISH AND FISHERMEN

by Galen DeShon

Fish Biologist, Southwest Region

Making life easier for spawning steelhead has become a primary objective of one southwest Oregon sportsmen's organization. The Rogue Flyfishers of Medford, Oregon, not only perpetuates the art of fly angling, but also has as its objective the conservation, preservation and enhancement of Oregon's fishery resources.

Ever since it organized in 1971 the club has worked in close harmony with the Department of Fish and Wildlife, and has been active in fish habitat improvement projects throughout the upper Rogue River system.

During 1979 the club undertook four such projects.

The first was of a somewhat different nature. A 10-foot diameter culvert some 250 feet in length in Hog Creek was thought by Department biologists to be too steep for good passage of steelhead. The culvert passes under Galice Road.

To remedy passage problems, the culvert needed baffles installed to break the current at regular intervals. Club members cut baffles from donated scrap metal to fit the radius of the culvert and obtained the use of a portable arc welder.

The small stream was temporarily dammed up and its flow piped through a bypass while the baffles were welded in place at intervals throughout the culvert. A gasoline driven fan was necessary to vent toxic fumes from the welder out of the culvert while the men worked.

The baffles broke the flow to provide easier passage for fish through the culvert, above which lies four miles of good steelhead spawning and rearing habitat.

Another project took place at the mouth of Star Gulch on the upper Applegate River. Members improved a fish ladder previously built by the club by constructing a special jump pool at its lower end to make the ladder more effective during low water periods. In effect, the jump pool turns one large jump for fish into two



The photo above of the project on Yale Creek shows how one tall jump for fish was made into two smaller ones. Below Rogue Flyfishers club members work to install and fill gabions with rock.

Photos by Tom Simmons





Star Gulch Fish ladder above was difficult for fish to enter during low flows. Below, club members work on a jump pool at the base of the ladder to improve its effectiveness. Flows were temporarily diverted through the culvert at upper right of photo.



smaller ones which are easier to negotiate.

Club members dewatered the work area by temporarily routing the stream through a metal culvert around the area. Following the construction of a steel reinforced concrete footing, native stone was mortared in place to create the 30-inch deep jump pool. Although the pool will be submerged by the Applegate River much of the winter, it will prove invaluable during drought years. Once fish pass the ladder they have access to six miles of stream above it.

Project number three for the summer took place on Yale Creek, a tributary of the Little Applegate River. The problem here was a five foot high irrigation diversion dam which restricted the passage of steelhead. Using five gabions (wire "boxes" filled with local rock), club members deepened a pool below the dam, reducing the jump to less than three feet. As a result, steelhead can now make better use of the six miles of stream above the dam.

The club's fourth project, in mid-September, was on Little Applegate River, and again involved a diversion dam with an inadequate jump pool below it. Here again gabions were used to plug holes in the bedrock, backing more water up against the dam and making an easier jump for fish. Twelve miles of stream has been made more readily available as a result of the endeavor.

One might think with summer gone and hundreds of man-hours spent on four very worthwhile projects, enthusiasm of the members would wane. But in October the club held a fund raising auction which brought them several thousand dollars. The money has been earmarked for the reconstruction of a badly eroded fish ladder on lower Evans Creek near the city of Rogue River. The project has the financial support of many Rogue Valley businesses, and the club members have already shown their capacity and willingness to undertake hard work.

That kind of dedication can mean nothing but better days ahead for the fish resources of southwest Oregon, not to mention improved sport for area anglers.□



THE DRACULA BUG

If you've spent much time in the out-of-doors you've probably been, at one time or another, the unwilling host for a tick. Perhaps you were lucky enough to discover your guest before it had time to burrow through your hide. Frequently, however, ticks go unnoticed until they have attached themselves and begun extracting a meal of blood.

Since ticks can cause us problems ranging from simple infection to much greater discomfort in the form of various diseases, it behooves us to know something about ticks and about what precautions we can take against them.

The following information has been extracted from an informational bulletin issued by the Oregon State Health Division. This information refers specifically to the hard-bodied or "wood" tick with which outdoorsmen are most likely to come in contact. There are also soft-bodied ticks found in Oregon, one species of which can transmit disease, but they are

usually confined to animal burrows and occasionally old buildings. The information that follows generally applies to both types.

Ticks are not insects and are distinguished from them by three characteristics; the head, thorax and abdomen in ticks are fused into one unsegmented body region, the nymph and adult stages bear four pair of legs rather than three, and there are no antennae or "feely-bars" as one youngster so picturesquely described them.

Tick Biology

Adult ticks rest on grasses and low herbaceous plants and attach themselves to people or other animals that brush against the vegetation. Typically they are no more than 18 inches above the ground while resting in ambush. Ticks are most abundant in shrubby areas, especially along paths, animal trails and roads. Generally they are scarce in the deep forest. Tick activity in the state is

variable with the time of year (see map). Only in southwestern Oregon does some tick activity occur year around.

Once a tick has located a host, it climbs over the host's body in an upward direction holding on by means of claws. Ticks frequently attach to the scalp or back of the neck. Eventually an incision is made with special cutting mouthparts, and then other mouthparts designed for piercing and sucking are inserted into the skin.

The salivary glands produce a secretion which helps to cement the tick mouthparts into the skin. This action accompanies the injection of another substance into the tissue which liquifies tissue and blood vessels in the immediate area. Blood and liquified tissue are then ingested. Hard-bodied ticks may feed from several days to two weeks if left undisturbed. Consumption of a blood meal is requisite for the development from one stage to the subsequent one.



A greatly magnified view of the mouthparts of a tick shows why they are so difficult to remove. In addition to the barbed surfaces, the tick secretes a special "cement" to help hold it in place.

Photo by George E. Runyan

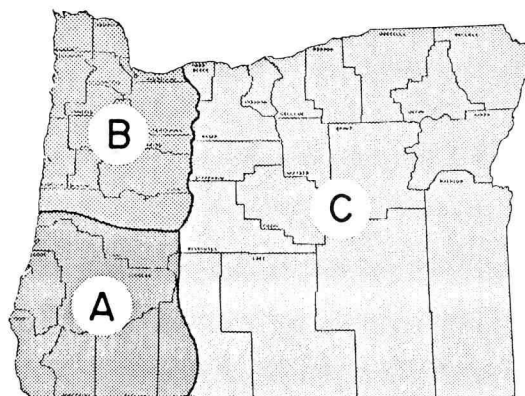
Ticks pass through four stages in their life cycle; egg, larva, nymph and adult. After mating the male dies and the female drops to the ground and seeks a sheltered place to lay her eggs. Accomplishing this, she, too, dies. Usually several thousand eggs are deposited in a single batch.

In feeding to completion, male ticks can increase their weight from one to three times and females from 80 to 120 times. The life cycle of some species may be completed in less than a year while others require two to three years or even longer. Before engorgement, ticks found in Oregon may range from less than a tenth of an inch in length to nearly a quarter of an inch.

Four species in Oregon are important as carriers of disease; the Rocky Mountain wood tick, Pacific coast tick, American dog tick and Pacific tick. To the layman they all look pretty much alike. A tick bite may cause localized irritation, secondary infections, tick paralysis or a variety of tick-borne diseases such as Colorado tick fever, Rocky Mountain spotted fever or tularemia. Soft-bodied ticks can carry a disease called relapsing fever. Infected ticks may require several hours of feeding before sufficient parasites are passed to cause infection, thus the longer a tick remains attached and feeding the greater potential for disease transmission.

PERIODS OF PEAK TICK ACTIVITY IN OREGON

- A. JANUARY - JULY
- B. FEBRUARY - JULY
- C. MARCH - JULY



Protecting Your Pets

If pets have acquired ticks, the ticks should be removed by the owner or by a veterinarian. Additionally, tick-infested pets may be treated with insecticides specifically prepared to control ticks on animals. These preparations may be obtained at pet shops and drug stores or from veterinarians.

How to Protect Yourself

Wear boots and close-fitting clothing of tightly woven material in known or suspected tick areas. Keep shirts tucked into trousers and trousers tucked into boots or fastened tightly around them.

The use of a repellent on clothing and exposed areas of the body may help to keep ticks off. Repellents containing diethyl toluamide (DEET) are the most effective.

Make periodic inspections of your clothing and that of your companions. In addition, carefully and thoroughly examine all parts of your body twice daily to see if any ticks have attached themselves. Be certain to check beneath the hair on the head and the back of the neck.

Tick Removal

1. Tick mouthparts don't extend far into the skin. But care must be taken during removal so as not to break the mouthparts leaving pieces imbedded in the skin.

2. The application of a light oil (mineral oil, vaseline, baby oil, etc.) to the tick may aid in its removal. Allow about 40 minutes for removal by this method.

3. To remove attached ticks grasp the tick with tweezers or between the fingers and exert a steady, gentle pull.

4. Avoid crushing the tick since infectious organisms may be present in its body fluid.

5. Apply an antiseptic to the site of the bite, or cleanse the area thoroughly with soap and water.

6. Wash hands thoroughly after removing ticks. (Be sure to avoid rubbing your eyes with your fingers until your hands have been washed).

7. If you are unable to remove the tick or if you suffer infection or other side effects from a tick bite, seek a physician's services.

THIS AND THAT

Compiled by Ken Durbin

Never Kiss a Turtle

After it won a race in Newport, California, a turtle named Number Six received a congratulatory kiss from its trainer. Number Six promptly latched on the upper lip of the affectionate human and did not loosen its grip until it had received a dose of valium.

Texas Parks & Wildlife

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Don't Belittle Hearing Protection

If you've ever heard a ringing in your ears after firing a rifle or shotgun, please listen up. Your ears are trying to tell you something.

Ringling in the ears is a signal that you are subjecting yourself to potentially damaging sound levels. Numerous tests conducted over the past 30 years have revealed that continued exposure to gunfire can cause gradual — and permanent — hearing damage. The ringing will go away. The damage will not.

There are several different types of hearing protection. Some are better than others. All are better than nothing.

A 12-page booklet highlighting the importance of hearing protection and numerous other aspects of firearms safety is available for only 25 cents from the National Shooting Sports Foundation, 1075 Post Road, Riverside, CT 06878.

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End of a Line

On Pinta Island, George is the last known survivor of the Giant Tortoise species in the Galapagos Islands. It was in these islands that Darwin found living evidence to support his theory of the evolution of species and the survival of the fittest. But that is no comfort to George whose future is bleak to say the least. Unless a Giant Tortoise female can be found, the species will cease to exist when George lumbers off to meet his ancestors.

African Wildlife

Whiskey Watch-Honkers

Geese, the sentinels that reportedly warned the Romans of encroaching Gauls, are still used as watchdogs. In Dunbarton, Scotland, 70 or so white geese guard about 30 million gallons of whiskey, valued at over \$900 million dollars. Any intruder is greeted with a fanfare of hissing and honking. This web-footed security force has been found to be more effective than dogs, people, or mechanical devices. Geese work for free, don't drink the scotch, and even lay eggs.

*The Gift of Birds,
The National Wildlife Federation*

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Skulduggery

Twenty years ago there were 500 mountain gorillas on the Zaire-Rwanda border. Today, due primarily to habitat destruction numbers are down to about 250. Trade in gorilla skulls has now become a lucrative business as they are sought as souvenirs by European tourists and consequently poaching has become a serious problem. At least 16 gorillas have been killed for their heads since 1976. In 1978 the dominant male of a troop was killed; this may result in the whole troop of animals dying out as younger animals probably have not attained the maturity necessary to hold the group together.

African Wildlife

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Battle Continues on South Dakota Dove Hunting

The war in South Dakota continues between pro and antihunting forces with the mourning dove at the center of the conflict. A dove season first was authorized in 1967, but a referendum in 1972 led to its repeal. In 1978, both houses of the state legislature voted to reinstate the dove season, but the governor vetoed it. In 1979, the measure again passed with the governor's signature, but opposition forces submitted a petition which automatically suspended dove hunting until after elections in November 1980. The Wildlife Conservation Fund of America is spearheading an effort to combat antihunting forces and to reinstate hunting of the mourning dove in South Dakota.

Texas Parks & Wildlife

Extinct Tigers

Although the future of the tiger as a species is assured, two forms of tiger seem to have disappeared. Despite occasional rumors of its existence, Indonesia has no evidence that the Bali tiger survives; and no recent trace of the Caspian tiger has been found. At an international tiger symposium this year it was strongly recommended that every effort be made to preserve the tiger's natural habitat.

African Wildlife

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Bird Braces

A San Francisco dentist has constructed a new lower beak for a black-crested night heron which had its natural beak snapped in two. He used the same pink acrylic used in making human dentures and attached it with tiny wires in a six-hour operation. The heron is out again spearing fish with his man-made mandible.

Texas Parks & Wildlife

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When Crocodiles Go

It is always difficult appreciating nature's delicate balance until a link in the chain goes missing. India has suddenly found that the bottom has dropped out of the commercially important fishing stock in their rivers. The reason? With the disappearance of crocodiles the catfish population has exploded. And their source of food, of course, is the same as the Indians.

African Wildlife

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Fish Hooks Man

In the category of bizarre deaths, a man died recently after being hooked by a fish. The angler hooked the fish first, while fishing off the Philippines. He used his teeth to try to remove the hook, but the still-alive fish wiggled into his throat. The spines and fins became engorged and all efforts to remove the fish failed. He suffocated before he could be helped by the staff of a medical clinic.

Texas Parks & Wildlife

JUNE 1980



Oregon's

WILDLIFE WINDOW

With spring in full bloom outside our window this month, wildlife populations are double or triple what they are at other times of the year. This population boom is only temporary. As those young birds and animals move on through summer and fall, most of them will not survive.

Most wildlife species produce many more young each spring than could possibly survive through the year. The abundant food, water and shelter available this time of year won't last through the fall and winter. As the habitat shrinks, those surplus birds and animals become more vulnerable. Food and water become harder to find, cover areas become overcrowded, then mortality factors such as disease, starvation, and predation will begin to take their toll. These mortality factors indirectly determine the number of young born to a pair of animals or birds each spring. In order for a species to survive they must biologically anticipate the loss of many of their number throughout the year.

Ground nesting birds, such as valley quail have many survival hazards to contend with. They range from exposure to predators to destruction of young and nests due to fire or flooding. In order to ensure the survival of just a few quail each year, more than a dozen eggs may be laid, as an attempt to compensate for those losses. The loss of a large percentage of a population each year is known as population turnover.

Upland game birds, like quail and pheasants, have an annual turnover rate of over 75 percent. This means

that three out of four young born this spring will not survive even one year!

Species of birds with a low rate of turnover, like hawks, enjoy a better survival of their young. These birds lay only two or three eggs each spring with the prospect of raising at least one to adulthood. The number of mortality factors affecting young hawks is lower, so their number of young produced is lower also.

The number of young born to a

particular species is an indication of its role in the environment. Prey species, those that are eaten by others, produce large numbers of young each year to offset their high turnover rate caused by predation. Predators dependent upon their prey for food have a much lower turnover rate.

The upland game birds and hawks discussed above are examples of animals with different turnover rates found in nature. Can you think of others?□

THIS MONTH'S WINDOW

Observing Young Wildlife

Start a list of wildlife with young you observe this spring.

Try to determine the number of young produced by a bird, mammal, reptile or amphibian found in your area.

Record the above observations and refer to them this fall, winter, and next spring for comparison.

DEER AND ELK POACHERS WELL PUNISHED

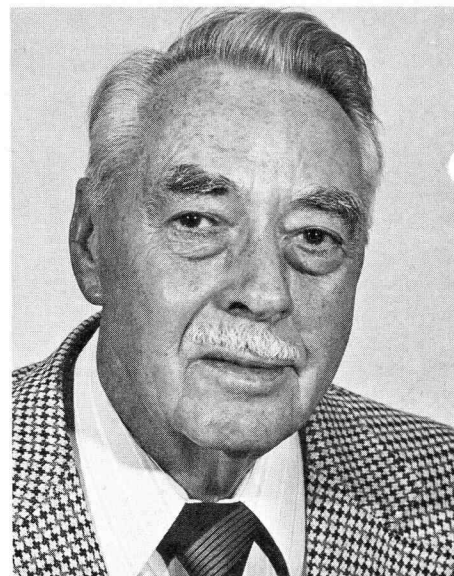
Three southern Oregon individuals who were apprehended for taking deer and elk during closed season may ponder a bit more before doing so again. According to Lt. Hyder of the Oregon State Police, they were found to have two deer and one elk in possession when they were cited.

Upon pleading guilty they were sentenced as follows: One individual received a fine of \$1,420 with \$1,100 suspended and a 120 day jail sentence that was suspended; the second individual also was assessed a \$1,420 fine

with none of it suspended plus a 225 day jail sentence with 150 days suspended and 75 days served; and the third partner received a \$1,420 fine with \$350 suspended plus a 210 day jail sentence with 170 days suspended and 40 days served.

All three were placed on probation and their hunting and angling licenses suspended for 24 months.

A tip of the sportsman's hat to Judge Merwyn Palmer of the Brookings Justice Court for taking the violation seriously.□



Herb Lundy

COMMISSIONER REAPPOINTED

Herbert Lundy, Lake Oswego, was reappointed to the state Fish and Wildlife Commission by Governor Vic Atiyeh. He completes his first term this month.

Lundy represents the first congressional district. Other commissioners on the seven-man board represent the other three congressional districts, western Oregon, eastern Oregon and the state at large. Commissioners serve staggered terms of four years.□

SAFARI CLUB HONORS BOWMAN

Howard Bowman, manager of the Kenneth Denman Wildlife Area near Medford, was honored as Oregon's Wildlife Conservation Officer of the Year by Shikar-Safari International during an April meeting of the Fish and Wildlife Commission in Portland. Shikar-Safari is an international conservation organization that honors a person annually in each state for wildlife conservation work.

In giving the award, Frank Hart, manager of the Wildlife Safari near Winston and Oregon's only Shikar-Safari member, cited Bowman for doing a "top-notch job of building something from nothing."

The Denman Area was originally known as Camp White during the war and used for training of troops. It was acquired by the State Game Commission following the war at which time development into a wildlife management area began.

After working four years in the Commission's fish screen plant at Grants Pass, Bowman moved to Den-

man in 1966 where he has been a one-man operation ever since.□



Howard Bowman

BAG LIMIT CORRECTION

In our last issue the bag limit for warm-water fish at St. Louis Ponds was incorrectly stated. The article said five fish were allowed per day of which only two could be bass or catfish.

The correct bag limit is five warm-water fish per day in any combination. Bass and catfish must have a minimum length of 12 inches. We apologize for the confusion.□



506 S.W. MILL STREET
P.O. BOX 3503
PORTLAND, OREGON 97208