January-February 1986

OREGON WILDLIFE

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Ron E. Shay, Editor

The Cover
Ospreys at Crane Prairie Reservoir are having a housing problem. For details, see page 12.

Bald Eagle Conference

The seventh annual Bald Eagle Conference will be held in Klamath Falls starting the evening of February 14 and running through the 16th.

The meeting is a joint effort of the Klamath Basin Audubon Society, Oregon Department of Fish and Wildlife and the U.S. Fish and Wildlife Service. Field trips are scheduled for the mornings of the 15th and 16th. The indoor meetings will be held at Oregon Institute of Technology.

The conference was originated in 1979 to draw interested people together to see and learn about bald eagles. Since the first meeting, conference attendees have expanded their scope of study to include othe raptors and birds as well. The Klamath area has some of the world's most spectacular concentrations of migrating waterfowl as well as some 170 species of birds that nest in the area.

Appropriately, the meeting is scheduled so participants can see the largest wintering population of bald eagle in North America outside of Alaska.

Further information on the conference and registration details may be obtained by writing to: Klamath Basin Bald Eagle Conference, 4647 Miller Island Road, Klamath Falls, OR. 97603.□

Steelhead Planning —A Status Report

By Nancy MacHugh

A statewide plan for the management of steelhead trout will be proposed to the Oregon Fish and Wildlife Commission in public hearing July 18, 1986. The purpose of this status report in *Oregon Wildlife* is to update progress toward completion of that plan.

The Department of Fish and Wildlife conducted 15 workshops statewide during 1983. These sessions brought out a variety of public concerns and recommendations regarding steelhead management. These comments covered the following topics:

HABITAT. . . quality. . . protection

WILD FISH. . . protection

EFFECTS OF OCEAN ENVIRONMENT

PREDATION

HATCHERY FISH. . . quality. . . survival

HARVEST. . . fair distribution. . . access

STATUS OF PRESENT MANAGEMENT PROGRAMS. . .benefits and liabilities of hatchery programs. . . status of funding

ODFW'S PROGRAM OF PUBLIC EDUCATION

CONTINUED PUBLIC INVOLVEMENT IN STATEWIDE AND RIVER BASIN PLANS

Anglers fishing for steelhead in the winter of 1982-83 found themselves faced with one of the poorest runs on record. After two mediocre seasons, the bottom had fallen out. It was in this gloomy atmosphere that a group of biologists began developing

(Continued on page 6)

HUNTER EDUCATION PROGRAM

Months of Oct. and Nov., 1985

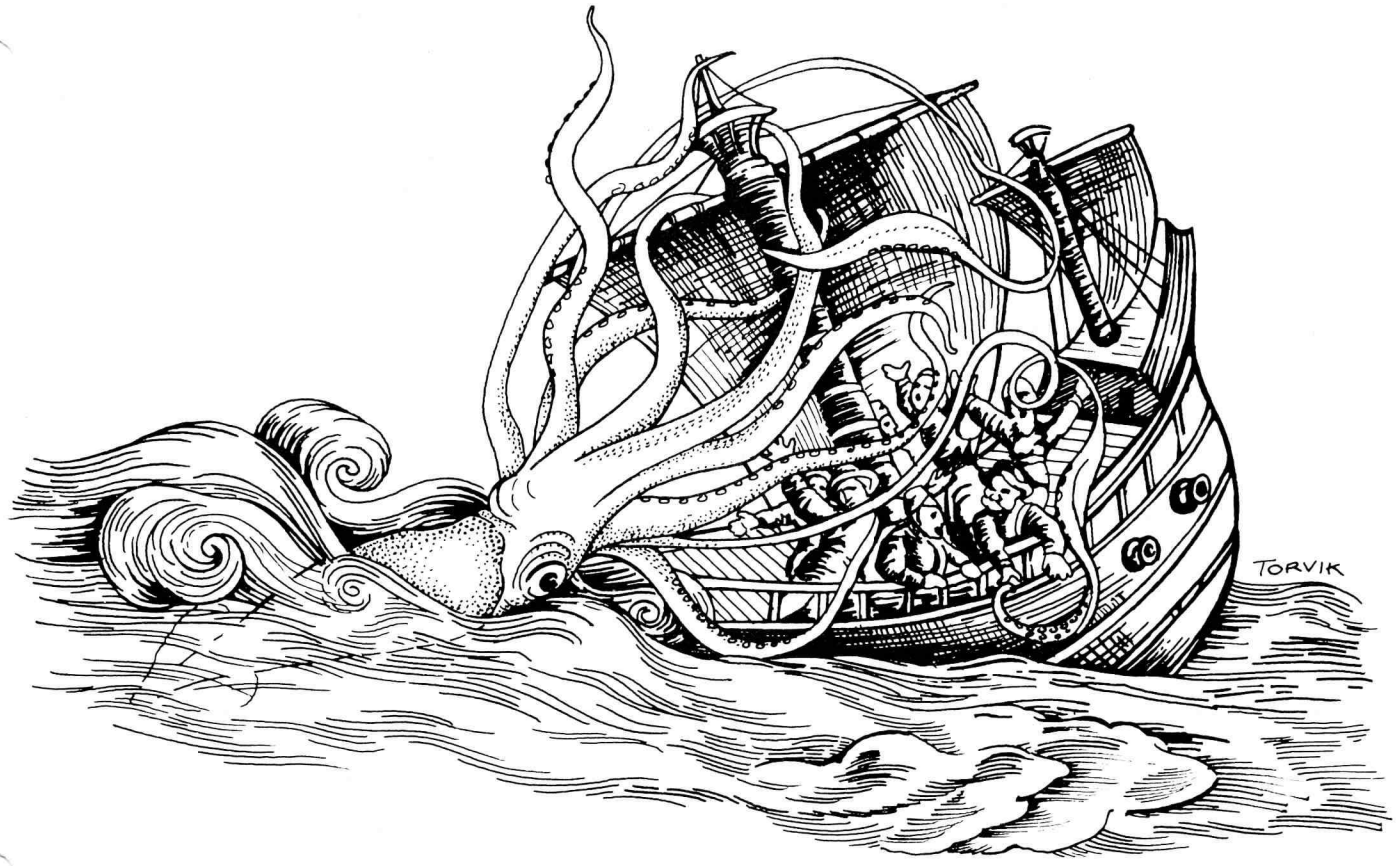
Instructors Approved	37
Total Active	1,496
Students Trained	2,416
Total to Date	325,524

HUNTING CASUALTIES
(Reported in 1985)

Fatal	2
Nonfatal	14

Commission Meetings

1-23 8:00 a.m.	*Columbia River Compact to set Winter Commercial Seasons*
1-23 1:00 p.m.	*Commission setting of big game season opening dates & Bear take and pursuit seasons.*
1-24 8:00 a.m.	*Commission to consider OCZMA adipose fin clipping proposal, PFMC salmon plan amendment & policy on fishway*
2-21 8:00 a.m.	*Falconry regulations*
2-22 8:00 a.m.	*Public/Department discussion of trout, steelhead & warmwater fisheries.*□



rawing after a 16th century woodcut.

Squid!

by
Richard Starr
Marine Biologist

Squid. The very sound of the word is enough to bring vivid images to the minds of landsmen and mariners alike. Frequently, the name conjures notions of giant many-armed beasts that roam the seas in search of hapless prey. Ancient mariners knew of squid as Kraken, sea serpents or devil fish; tales of battles with giant monsters originated from glimpses of squid on the ocean's surface. Old seafarers thought these creatures were able to crawl on land as well, as the following report from the *Histoire Naturelle Des Mollusques* (Paris, France) describes:

"Instantly four arms were drawn up and twined rigidly about the dog, who struggled vainly to free himself, and, for once losing his courage, uttered piteous howls and cries for help. Meantime the (squid), whose huge protruding eyes seemed actually to flash fire and whose body had turned many colors, from dark violet to bright scarlet, was drawing itself with considerable speed toward the water, dragging with little effort the heavy body of my struggling dog. The rough rocky ground helped him to drag the weight along, by giving his arms secure holds.

Already the monster had reached the water side, when I could no longer bear the sight, and rushed to the aid of my faithful dog. . . I succeeded in tearing loose these arms. . . I determined never again to attack an animal of this kind unarmed, or to venture to close quarters with it."

Although some people envision squid as the symbol of everything dark and dangerous in the sea, most of the approximately 300 species of squid are relatively small animals, and numerous species are caught for food. In fact, squid provides a prim-

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Squid

(Continued)

ary source of protein in many of the heavily populated coastal areas in the world. Squid is also a delicacy in the finest restaurants in the world.

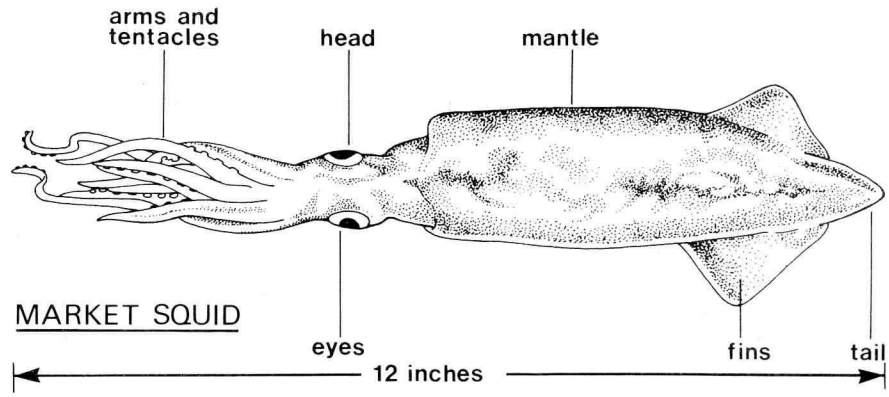
Squid are ancient animals. They are closely related to octopuses and chambered nautiluses, and more distantly related to clams and oysters.

They are descendents of animals that first appeared 450 million years ago. While their ancestors all had external shells, over time, the shell evolved until it now exists as an internal form called the pen. The pen looks like a thin piece of clear plastic but is made of a substance called chitin.

Squid are soft-bodied animals with eight arms and two longer tentacles for grasping and holding prey. Individuals swim by expelling water from the body cavity through a funnel that can be turned in all directions. Fins near the tail-end help stabilize and direct the swimming motion. They can swim quickly for short time periods; or jet backwards to avoid fish or birds that want to have them for dinner.

The squid that is most frequently caught in Oregon is *Loligo opalescens*, also known as the market squid, California market squid or opal squid. It is a small squid achieving a maximum size of about 14 inches, and lives one to two years. It is found from southeast Alaska to central Baja California, Mexico. *Loligo opalescens* is called the market squid because, among the approximately two dozen species of squid off the west coast, it is the primary species that is harvested commercially. It is also called the opal squid because at times its translucent blue body, combined with flashing chromatophores, create a radiant blue-green opalescent hue, a beautiful sight when squid are massed on the ocean surface on a calm night.

Chromatophores are areas in the skin of the animal that contain red, brown, orange or yellow pigment. When the animal is excited, these chromatophores display brilliant colors. During mating, the male squid often flashes a deep scarlet red; when catching prey the opal squid may display a wave of red, yellow and brown; and the animal in unfamiliar surroundings may appear gold and brown, then turn almost black as it flees from danger. The black color allows the squid to blend into the ink cloud it ejects when frightened.



Opal squid congregate to spawn in large schools in shallow water (30-200 feet deep). Spawning off the Oregon coast occurs primarily between March and July. During this time, the animals mate and the females lay their eggs in clusters. One of the arms of the male squid is especially adapted for implanting sperm in females, and the eggs are fertilized as the female extrudes them from her body cavity. Each female lays 20-30 egg capsules containing 100-300 eggs per capsule. The egg capsules are attached to sand or rock by a sticky secretion. Both males and females die soon after spawning. The eggs incubate for four to six weeks, then hatch, producing tiny squid. The young stay schooled for about two months, then disperse over the continental shelf. We do not see large numbers of them off Oregon until they return one to two years later to spawn as adults.

Squid have a highly developed central nervous system, and have especially complex eyes that are used to locate their prey. They feed on small shrimp and shrimp-like animals and small fish. They, in turn, provide a major food source for many species of fish, birds and marine mammals. Squid thus play a very important part in the ocean's ecosystem because they efficiently transfer energy from the lower level producers up the food chain to higher level carnivores.

Humans are one of the higher level carnivores that eat squid. About 2.5 billion pounds of squid are caught in the world annually. Japan catches about 60% and consumes about 75% of the squid harvested in the world. The United States catch is a relatively small 1-2% of the squid harvest in the world.

A variety of methods are used to catch squid. One of the most interesting methods is the use of jigs. Squid are attracted to the surface with lights, then caught as they attack sharp jigs strung on long lines. This method is quite successful and can be employed on a small or large scale. In the Pacific Northwest, many people look forward to jigging and catching squid off the docks in downtown Seattle in the winter. The Japanese have gone about squid jigging in a big way, and commercial squid jigging accounts for 30-40% of the world production. The Japanese have some ships 400 feet long that are built specifically for squid fishing using hundreds of automatic jigging machines.

In the late 1800's, Chinese immigrant fishermen living in Monterey, California, started fishing for the market squid. The early fishermen rowed out from the harbor in small skiffs on dark nights and attracted squid to the surface with lighted torches. When enough of the schooli squid were at the surface, two vessels surrounded them with a large net.

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Squid

(Continued)

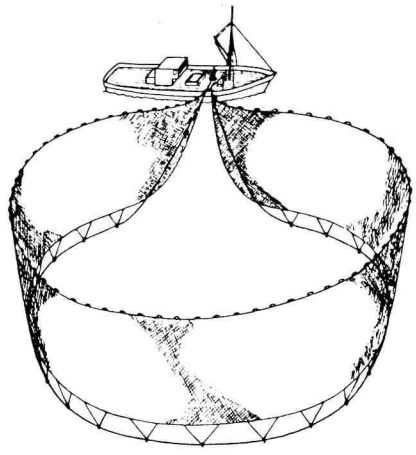
The harvested squid were dried on lines and shipped back to China.

In 1905 immigrant Italian fishermen moved into the Monterey area to fish for the market squid as well. These fishermen canned parts of their catch for export to Europe and marketed the rest of their catch in California. The Italian fishermen introduced lampara nets to the fishery early in this century, and the method of catch has changed little in Monterey since that time.

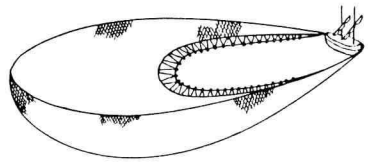
Lampara nets, or seines, are large semi-circular nets with two broad wings and a loose middle area called the bag. When a squid school is located, a small skiff carries the end of the seine away from the stern of the vessel. The remainder of the net is played out as the main vessel circles the squid school. When the large vessel meets the skiff at the close of the circle, the two wings of the lampara seine are pulled on board. Pulling on the lead-line on the bottom of the seine corrals the squid in the loose middle bag. The net is brought along the side of the vessel and squid are transferred to the ship's hold with the aid of dip or brail nets.

Purse seines are another effective method used to catch squid. Purse seines are large circular nets that are deployed in a similar manner as lampara nets. A skiff pulls the end of the net off the stern of a vessel encircling a school of squid. When the two ends of the seine meet, the lead-line is pulled and the entire net is closed or pursed. At this point, all squid in the confines of the net are trapped. The bottom of the seine is brought aboard the vessel and squid are again transferred via brail net to the ship's hold.

Oregon fishermen have long known that the market squid occurs off our coast. In the past, squid were harvested only incidentally as a by-catch of other fisheries. The squid that were accidentally collected in nets were usually tossed overboard or saved and sold for crab bait. In the last four years, however, market and fishery conditions have turned Oregon squid into a valuable commodity. Fishermen geared up to fish for squid, and harvest tripled each year from 1982 to 1984, then doubled in 1985 when almost two million pounds were landed.



Purse seine



Lampara seine

Sketches courtesy of Sea Grant

Oregon Squid Landings (in pounds)

1980 — 0
1981 — 225
1982 — 113,138
1983 — 297,410
1984 — 946,725
1985 — 1,751,773

In response to the increase in harvest of the market squid, ODFW designed research projects to obtain information needed to manage the fishery. The research projects are designed to describe the biology and life history of squid in Oregon, and to estimate the abundance of these valuable molluscs.

We are finding some interesting facts about Oregon squid. They appear to have slightly different biological characteristics than California squid. In California, males are heavier and longer than females. Here, male squid are heavier, but shorter than females. The opal squid spawns earlier here than in California, and females seem to produce fewer eggs than do the squid to the south.

We are using sophisticated electronic equipment to estimate squid abundance in spawning schools. The equipment consists of an echosounder that transmits sound into the water and a microcomputer that measures the amount of energy reflected from the squid. The total amount of sound energy reflected by all squid in the school, divided by the amount of sound energy one squid reflects, provides an estimate of how many squid are in the school. This abundance estimate allows us to evaluate the rate of commercial harvest to ensure that the fishery maintains an orderly development and the squid resource is conserved.

Squid. A monster or a delicacy? Despite the odd shape of their bodies, we know they are highly evolved and exhibit complex social behaviors not usually associated with shellfish. They are beautiful under lights and are as graceful a swimmer as lives in the sea. They are a food item of just about anything that swims in the sea and are harvested for food and for bait by humans. Cooked correctly they are a delicacy rivaling razor clams, salmon or Dungeness crab. Our continuing research and management should help maintain the Oregon squid resource for years to come. □

Steelhead

(Continued)

a steelhead management plan. Only a year later, steelhead runs were above average, and last year the runs approached or set new records all over the state.

The lesson in all of this is that steelhead survival fluctuates from year to year due to environmental conditions encountered in their years of freshwater and ocean residence. Sometimes these environmental conditions cause several years of good survival, but sometimes result in a single or several years of poor survival. We can't yet predict good or bad steelhead runs; our knowledge of factors affecting the actual rate of survival is too limited. We strive toward that goal because only after we understand the system can we possibly effect changes to increase survival and benefits to you.

This is where the STATEWIDE STEELHEAD PLAN comes into the picture. This plan will lay the foundation for a systematic, formalized approach to wild and hatchery steelhead management over the long term. It establishes production and harvest policies, goals and objectives, and outlines strategies for achieving them. The plan also provides guidelines for developing the steelhead portion of fish management plans for individual rivers.

The first draft of the Steelhead Plan is currently under internal review. A second review draft will be available to interested parties to review prior to the July hearing.

Draft Management Objectives

The six draft objectives of the Steelhead Plan can be divided into two primary areas of concern related to managing the resource: production and use. Habitat management objectives apply to all fish species, not just steelhead; therefore, habitat issues are contained in a more general planning document. Habitat needs relative to steelhead management are included as actions under appropriate objectives and problems.

(1) Achieve escapement necessary to seed habitats for optimum freshwater recruitment while maintaining stock diversity.

(2) Maximize the use of the hatchery product.

(3) Provide a diversity of opportunities for consumptive and nonconsumptive use of wild and hatchery steelhead.

(4) Maintain a diversity of stocks throughout the state.

(5) Minimize hatchery stock impacts on wild fish.

(6) Develop a common management strategy with adjoining states and treaty tribes for the Columbia River.

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PROBLEMS: So far, 22 major and, to various degrees, interrelated problems have been identified as needing to be resolved to achieve the six management objectives. The plan describes priority actions to be taken to solve the problems listed below. For example, the plan proposes a cap on the number of streams receiving hatchery steelhead. An exception to this approach would be allowed only if a basin management plan containing the change was approved by the Fish and Wildlife Commission.

Completion and adoption of the steelhead plan will not solve the problems, nor instantly achieve the objectives. But, for the first time, a comprehensive approach to management of the steelhead resource will have been developed. □

- Steelhead habitats are affected by competing uses for land and water.
- Lack of long-range objectives for steelhead management has hampered budgeting for programs.
- Fisheries on mixed stocks often overharvest wild and underharvest hatchery stocks.
- The contribution of hatchery steelhead to wild production is unknown.
- Fish management programs of state and federal agencies and treaty tribes on the Columbia River and its tributaries are uncoordinated.
- The escapement level necessary for maximum freshwater recruitment is unknown.
- A description of characteristics and spawning distribution of Oregon steelhead stocks is needed to develop appropriate stock/unit boundaries.
- Data on abundance and contribution of hatchery and wild stocks are inadequate to manage river fisheries.
- Catchable trout releases may depress survival of wild steelhead juveniles from biological interactions and increased fishing mortality.
- Harvest and effort estimates and data gathering systems are inadequate for effective fishery management.
- Major fluctuations in run size of steelhead cannot always be anticipated with accuracy in advance of the season.
- Measurements of spawning and rearing populations are inadequate for effective management.
- Treaty rights are poorly understood by non-treaty fishermen.
- Inadequate upstream and downstream fish passage at dams and other man-made obstacles results in delayed migration, injuries, and mortalities. These mortalities have resulted in steelhead production in most tributaries of the upper Columbia and Snake rivers, inadequate to fully utilize existing habitat.
- More adult steelhead return to some hatcheries than are needed to provide eggs for hatchery programs.
- Not enough is known about fishing-related mortality to include it in management planning.
- Our ability to provide a diversity of fishing opportunities is limited by our understanding of the magnitude and distribution of anglers and tribal fishermen and their preferences for different opportunities.
- Adequate access to desirable fishing water is often limited.
- Survival of hatchery fish is less than desired.
- Not enough is known about the magnitude of predation on steelhead at successive stages of their life cycle.
- Violation of existing fishing regulations is given low priority by the courts as opposed to other types of criminal violations.□

Adoption of the Steelhead Management Plan will not be the end of the process. New information and experience will be continually incorporated in department activities.

Implementation of the plan will include periods of comprehensive review, evaluation of progress and opportunities to appear before the commission to request amendments.

With statewide guidelines in place, development of basin plans will speed up.

Any comments about this update, or the plan in general, should be addressed to: Steelhead Plan, ODFW, PO Box 59, Portland, OR 97207.□

New S.W. Regional Supervisor

James L. Fessler, a 22-year veteran with the Oregon Department of Fish and Wildlife, has been named supervisor of the department's Southwest Region, beginning January 1. He succeeds Clyde Smith, who retired at the end of this year.

Fessler has most recently served as assistant regional supervisor in the department's Northwest Region. Previously, he was project leader for a fall chinook saltwater rearing research program in the Alsea basin and worked with other fishery research projects. He holds both bachelors and masters degrees in fisheries management from Oregon State University.□

Tip of the Hat

A Lakeview man may think more about illegal escapades as a result of the recent Justice Court ruling there. The violator was charged with taking a doe mule deer during closed season and wanton waste of a big game mammal.

The sentence for the violations was $610 in fines, plus $20 costs and suspension of hunting privileges for two years. A tip of the sportsmen's hat to Justice of the Peace Elizabeth Haskins of Lakeview for her handling of this case. □

Changes Considered for Elk Seasons

The Oregon Fish and Wildlife Commission has opened the door for broad changes in the manner elk will be hunted in the state. Following two days of public testimony December 6 and 7, the commission approved proposals that will encourage Roosevelt elk hunting in new areas. Proposals to limit the number of hunters in many Rocky Mountain elk hunt units were approved in concept.

Some changes were approved outright, and will be a part of the 1986 regulation package. Proposals approved in concept, however, will not necessarily be adopted for 1986. The commission did indicate their intent to maintain the current 30-day early bowhunting season.

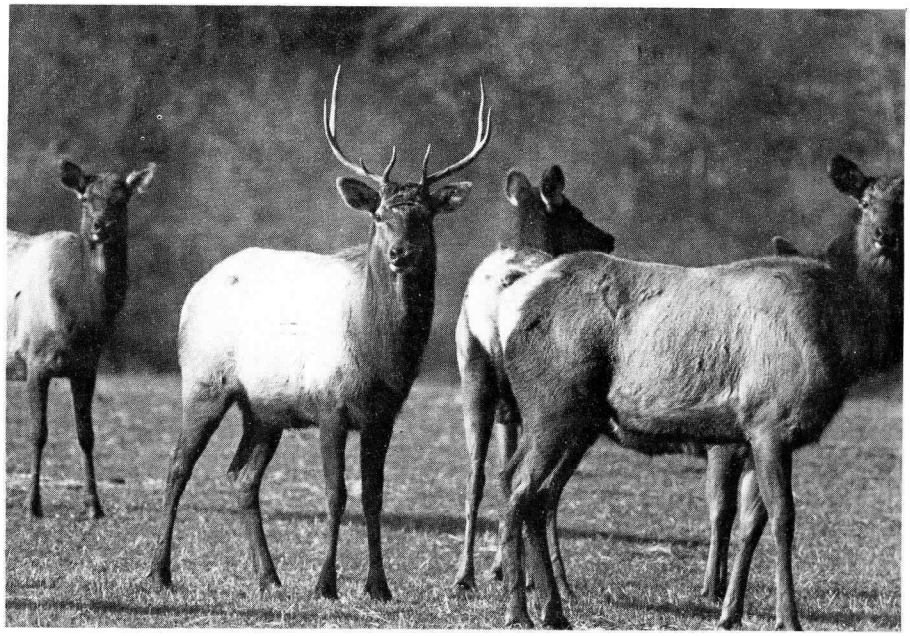
Commissioners will set the 1986 hunting season opening dates January 24. Season lengths, bag limits and action on proposed changes will be handled at the big game regulation hearings May 30 and 31, 1986.

There is one major change which will definitely be part of the 1986 elk season. Beginning next fall, hunters buying a general season Roosevelt elk tag will be asked to choose between either a coastal or Cascade hunting area. This subdivision of westside hunt units is designed to improve hunting opportunities on expanding elk herds along the west slope of the Cascade Range.

The commission also approved the concept that the Cascade season would be a longer single-period hunt rather than the shorter two-period seasons currently used statewide. The two-period approach will remain, at least though 1986, for Roosevelt elk hunting in the coast segment.

The bulk of eastern Oregon elk hunting units could go to limited entry during first period hunts. These same second period Rocky Mountain hunts units would remain open to all tag buyers even if the first period was on a drawing. A strip of eastern units primarily between highways 20 and 26 would go full limited entry.

Commissioners approved the approach in concept. The shift to controlled hunt application process for that general Rocky Mountain season could come as early as 1986. Final decisions on whether all, or any, hunt units will be changed to controlled hunt areas will be made in May. □



The following is a list of motions adopted by the commission.

1. *Modify tag for Roosevelt elk area and substitute CASCADES and COAST area choices* (to offer different hunting opportunities than now).
2. *Approve the concept of a single elk hunting season for the CASCADES* (t promote the extensive backcountry hunting opportunity without risking double-dipping).
3. *Approve continuation of two general season bull hunting periods for COAST area for now* (to accommodate present demand and to avoid excessive opening day crowding if only one season were offered).
4. *Approve the concept of controlled bull hunting seasons using two hunt periods (or one) in Northside, Murderers Creek, Beaulah, Malheur River, Silvies, Ochoco, Grizzly and Maury units* (to assure the management objective of 15 bulls per 100 cows is regularly met or exceeded and with the understanding one period might close in Ochoco, Grizzly and Maury).
5. *Approve the concept of a controlled bull hunting season first period (of two hunt periods) in Sled Springs, Wenaha, Walla Walla, Mt. Emily, Starkey, Ukiah, Sumpter, Desolation, Heppner and Fossil units* (to resolve first period crowding and to improve bull ratios in units that are regularly below the management objective).
6. *Approve concept of NORTH CENTRAL, SOUTH CENTRAL AND SOUTHEAST controlled elk hunting areas with beginning and ending dates that coincide with Rocky Mtn. general bull seasons* (to resolve concerns of some about hunter distribution problems that could impact southeast elk herds).
7. *Approve concept of an earlier and additional elk hunting season in the SOUTHEAST AREA* (to assure harvest of surpluses that are partly inaccessible in regularly scheduled hunting seasons).
8. *Approve an elk (include deer) controlled hunt application card offering up to six persons to apply as a party* (to lower risk of breaking up parties with additional areas going to a drawing).
9. *Direct staff to assemble a working group representing bow and rifle hunter biologists and officers to fully explore options and report back to the commission on ways to effectively deal with law violators and other problems associated with the concurrent elk and deer early bowhunting season as presently authorized.*□

UPDATE

Ore-Aqua Decision

The Fish and Wildlife Commission, on December 16, voted to recommend that the state secure an option for purchase of Ore-Aqua facilities at Newport and Springfield so that a full review and final decision can be made by the 1987 Legislature.

In recommending the option, the Commission stated seven conditions to be considered by the state in any such acquisition. Basically they stated that the purchase and operation of the facilities should be with monies over and above the proposed 1987-89 budget and that the currently approved six-year hatchery plan should not be affected. Also, that no more than 50 percent of the funds for operation and maintenance should come from increases in commercial and recreational licenses.

Big Game Survey

If you purchased a big game tag in 1985, you are apt to get a telephone call one of these evenings. A group of trained surveyors are calling a ten percent sample of each of the various types of hunters to record their success, area hunted and a few other bits of information for less than one-half of the cost of the previously utilized mail survey.

New Angling Regulations

The 1986-87 angling regulations are available at license agents. They go into effect on January 1. Also, a new hunting and angling license is needed for the new year. As of the first, an angling license will be required to angle for any fish except smelt and shellfish. Also a new sturgeon tag goes into effect.

The new salmon/steelhead card costs $5.00 for ten fish. Each additional ten fish up to the limit of forty costs $5.00 more for a stamp to be added to the original card. The stamps for the fish over ten will not be to license agents until about the middle of January.

Court Rules on Wild Fish

The Oregon Court of Appeals upheld the salmon hatchery operation guidelines, wild fish management and several other related management policy rules adopted last year by the Fish and Wildlife Commission.

The petitioners questioned several points within the rulemaking process; claiming the commission exceeded statutory authority, acted in an arbitrary and capricious manner and failed to provide adequate public notice prior to adopting the rules.

Presiding Appeals Court Judge Michael Gillette rejected all claims.

Trout Stocking Tops 10 million

ODF&W released almost 11 million trout into the state's streams, lakes and reservoirs during 1985. Releases included about 2.5 million legal-sized rainbow and 300,000 legal cutthroat. The remainder included several different species released at fingerling size.

Hood River Passage

By Bruce Jackson
Engineering Staff

Steelhead found it. Also a few spring chinook found it. It was a 14-foot vertical falls on the west fork of the Hood River, several miles upstream from the stream's confluence with the main river.

With such a drop involved, few fish managed to get above this point to spawn. It was only during very specific water conditions that a small percentage of the fish reaching the area managed to make it on upstream.

This was no ordinary falls. It was growing each year further compounding the problem. Nature had created a set of circumstances that made for a real challenge to fish and to the engineers trying to assist the fish. This particular area of stream is made up of a six to seven-foot layer of cemented rock over a layer of erodable gravel. The "cementing" was the result of volcanic ash deposited in the area from past eruptions of Mount Hood.

As the erodable gravels moved out from under the cemented layer, an overhanding lip formed. Eventually this lip would break off and the whole process would start over again leaving the falls somewhat higher. And fewer of the migrataing fish would make it over the barrier.

The project was a result of priorities set up by the Northwest Power Planning Council. Bonneville Power Administration came up with the funds and contracted with the Department of Fish and Wildlife to come up with a solution to the fish passage and erosion problem.

Initially, blasting and rock and boulder filling of the area were tried to solve the problem. These turned out to be costly, temporary solutions requiring annual maintenance.

Finally, a consulting firm working with the ODFW engineering staff compiled all possible information to seek a low cost and low maintenance solution. Paul Johnson of the ODFW staff came up with the final design that is now in place.□

An unusual situation called for an innovative solution. This ladder on the west fork of the Hood River will open up some 23 miles of spawning and rearing area.

Photos courtesy of Sharon Blair, Bonneville Power Administration

At low water, underwater ports allow fish to pass. During high water stages, the water flows over the top of the concrete and fish may take either the high or low road.

The stream is crossed by a series of 10 weirs spaced 25 feet apart. These create pools with a two-foot heighth gain from one to the next. In addition, there are ports through the weirs so fish can pass when the water level is low enough that it does not spill over the tops.

The flattened flow, reduced velocity and lack of erosion is a situation that the fish can now deal with. As a result of the new installation, some 23 miles of spawning and rearing habitat has been reopened. The wo was completed just prior to the firs rains this fall, and on October 18, the first steelhead observed using the new facility was tallied.□

This and That

Deschutes Proposal

The proposed Deschutes National Forest plan will be available for public review about mid-January. Comments will be accepted through May 9, 1986.

Copies of the Reviewer's Guide to the proposal will be avalable from the Deschutes National Forest in Bend (503) 388-8561 or from the regional office of the Forest Service in Portland.

The proposal contains eight alternative ways to manage the forest for the next ten years. Some of the issues discussed include mule deer habitat and management objectives, recreational opportunities, nongame wildlife, timber harvest levels and the management of scenic areas.

Wetlands Disappearing

Of the 215 million acres of wetlands in America at the time of colonial settlement, less than half remain. In a recent U.S. Fish and Wildlife publication, "Wetlands of the United States: Current Status and Recent Trends," it's reported that 87 percent of this loss was caused by agricultural development.

Wetlands are vitally important, not only because they are the most productive habitat for wildlife, but also because they purify water and conrol flooding. Philadelphia's Tinicum Marsh, for example, a 512 acre freshwater tidal wetland, receives and purifies discharges from three city sewage treatment plants.

PA. Game News

Pack It Out

In many of the remote hiking areas of the state, users are reminded to leave only footprints by packing out everything they took in. No longer is it permissable to bury cans and other debris because of the amount of use the areas get.

One of our readers writes urging folks fishing the waters of the state to carry out their shrimp and eggs containers. He suggests the containers might be used to carry out old line and leaders that clutter the banks. Good idea!

Land Acquired

Sportsmen For Conservation Fund, an affiliate of Safari Club International, recently purchased almost 20 acres of deer winter range within the proposed boundaries of ODFW's White River Wildlife Area.

This land will be leased to the department for a nominal fee until puchase can be accomplished within five years.

The Conservation Fund purchased the land to protect it from development until the department has funds to buy the property outright. This is critical deer and elk winter range adjacent to lands currently part of the management area.

Retaking Homelands

Elephants on the island of Sumatra are mad and they're apparently not going to take it anymore.

About a year after the government of Indonesia herded a group of elephants off to a preserve, making room for human settlers and agricultural expansion, herds of 50 or 60 elephants have begun daily rampages through their old grounds, terrorizing villagers, smashing homes and destroying crops. Traditional methods of dispersing the animals have failed. Authorities now admit they may eventually have to concede the turf to the persistent elephants.

International Wildlife

Bathouses

Although bats are among the most relentlessly persecuted animals on earth, Europeans recognize their beneficial value to man as pollinators of fruit and nut trees. Bats are legally protected in all European countries as well as in Russia. In fact, thousands of bat "houses" have been placed in national forests throughout Europe, especially in England.

International Wildlife

Praying Predator

A praying mantis may be the answer to your prayers, if you have a cockroach problem. A Mississippi woman tried every roach treatment she could think of, then a praying mantis flew into her home. Within a week, the roaches were gone.

International Wildlife

Is It Gone?

It looks as if the ivory-billed woodpecker is going to be officially listed as extinct. It was native to S.E. United States.

This largest of North American woodpeckers was about 20 inches long with a pale ivory bill that gave it its name. With a shiny black body featuring a triangular white patch across the lower back and white stripe running from its cheek down the neck and across its back, the species was often confused with the smaller and more common pileated woodpecker.

The U.S. Fish and Wildlife Service is trying to determine if the bird is actually extinct. It has been listed as endangered since the creation of that designation in 1967. There has been no unanimously accepted sighting since the 1950's.

Never a target of hunters or poachers, the ivory-billed woodpecker was a victim of the clearing of hardwoods in the Southern United States.

Arkansas Outdoors

Potent Pigeons

Pennsylvania pigeons are literally burning bridges behind them. Apparently pigeon droppings mix with rain to form acids potent enough to eat through steel girders. According to the state bridge engineer, over several decades the droppings to the steel are weakening structures to the point where a weight limit must be imposed or the bridges closed altogether.

National Wildlife

Rainmakers

New research shows that forested land returns ten times the moisture to the atmosphere as deforested land, and produces 50 percent of the rain that falls on it.

It is thought that droughts such as the one in Africa are virtually self-perpetuating because the lack of rain causes increased cutting of the existing plants and new ones have little chance of getting started. As a result, the area gets progressively drier and has no forests or plant life to put moisture into the air.

Internatinal Wildlife

Nongame Wildlife Needs Your Help

Young Great Grey Owl

In 1923, the gates closed on a dam across the Deschutes River. The resulting water impoundment turned some ranchland on the east slopes of the Cascades into Crane Prairie Reservoir. This development became a classic example of how habitat evolves and how fragile it can be.

The reservoir builders left many of the trees standing along the river and in the pastures. The rising water flooded, then killed these stands of pine. The trees did not fall; at least not right away. They remained as stark testimony to what had been there before. Over the years, these snags became a unique symbol of the reservoir, and home to a variety of wildlife species.

For decades these tree skeletons have provided ideal perching and nesting places for the fish-eating hawks known as osprey. Their nesting activity and break-neck dives into the water to capture fish have entertained anglers and birdwatchers alike.

Time is taking all of that away, however. After more than sixty years of service, the trees are rotting at the base and falling. The loss of each snag means loss of osprey habitat, and ultimately ospreys.

Not to worry — Oregon taxpayers are helping save the ospreys of Crane Prairie. Donations to the nongame wildlife fund through the state tax refund checkoff are being used to finance construction of new nesting/perching platforms.

Ted Wise, a tree climber from Bend, has been contracted by the Department of Fish and Wildlife to blast the tops out of living pine trees and install platforms that can be used for both perching and nesting.

The ospreys are wintering in Mexico and Central America now. When they return in the spring, they will find the new high rise pads ready for use.

According to department nongame biologist Greg Robarts, these structures are going up just in time. "We estimate that as many as 30 pairs of ospreys nest at Crane Prairie in good years. Continued loss of the old trees, without providing new sites, would mean drastic declines in osprey numbers. Eventually, they would just be gone," he says.

Ospreys add depth to the outdoor experience at Crane Prairie. The place would not be the same without them. Money from the checkoff donations is going to many such projects. While the work or the animals of the other projects may not be as visible as

(Next page please)

the osprey, the value of the work is.

The subjects of a study by biologist Evy Bull in northeastern Oregon are so elusive, that once she finds them, she fits them with radio transmitters to track their movements.

Great gray owls are the largest owl species in Oregon. Despite their size, however, very little was known about the habitat needs or distribution of this bird.

The beeps of individual transmitters allows Ball to find out about the needs of these forest dwellers. Once that information is in hand, wildlife and forest managers can work together to preserve and protect this nongame species.

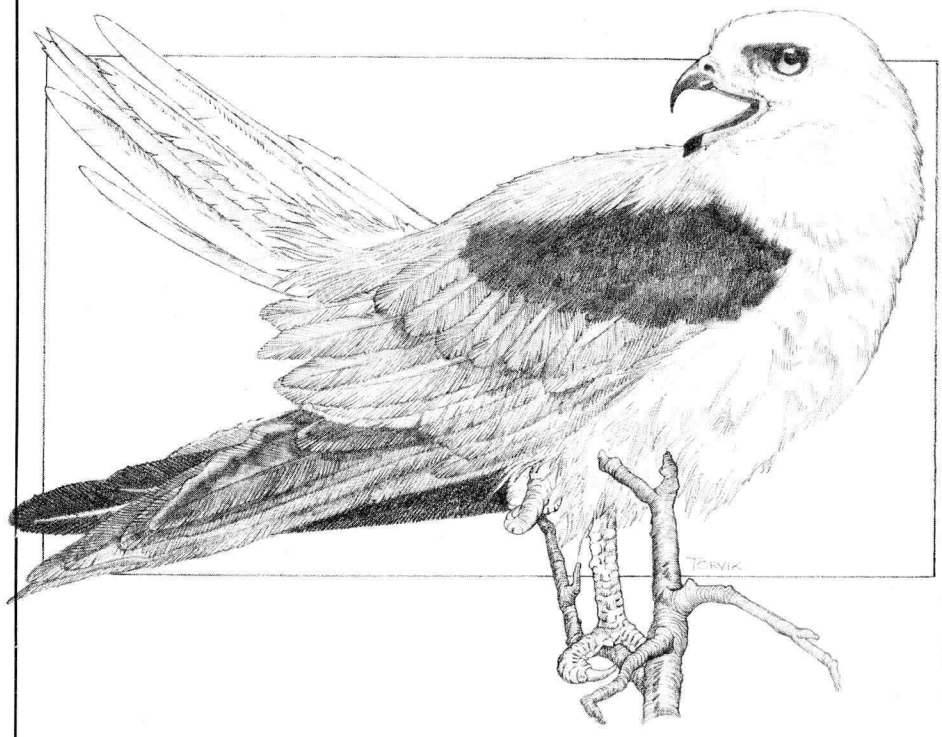
There are more than 500 nongame species in Oregon. None can be written off as having no value. Since the tax checkoff fund was established in 1979, contributions totalling more than $1.6 million have allowed biologists to help many of these birds and animals.

In addition to scientific research and habitat improvement, the nongame wildlife program also helps care for sick and injured wildlife, purchase critical habitats and protect or restore populations of endangered species.

For instance, the nongame program has funded an effort for the last three years to bring back the peregrine falcon to its native ranges in Oregon. This species was once common in Oregon, but has been very rare for decades. Now they may be returning.

Giving to the nongame program through the state tax checkoff is simple. Taxpayers receiving a refund on their taxes may check boxes deducting $1, $5 or $10 from their refund. There is also space to write in a larger amount. The contribution is painless, serves a good cause, and is tax deductible next year.

Persons not receiving a refund may also contribute by sending a check made out to the "Nongame Wildlife Fund," at the Oregon Department of Fish and Wildlife, PO Box 59, Portland, OR 97207. Contributins may also be taken at department regional and district offices around the state. □



Black-shouldered kite (formerly White-tailed kite)

The legendary Ben-Hur Lampman, a writer for *The Oregonian*, is credited with one of the first sightings of the black-shouldered kite in Oregon. In the 1920's, he spotted this member of the hawk family working fields along the Columbia River east of Portland.

While the kite is a fairly common bird in some areas of California, its presence farther north was a rarity, even when ornithologist Stanley Jewett made a confirmed sighting near Scappoose in 1933. Until the last decade, this bird has been considered a rare straggler to the state.

Not so anymore, say biologists. The bird, known scientifically as *Elanus caeruleus*, has been rapidly expanding its range. Now, frequent sightings report these birds in the Willamette Valley, and breeding pairs in southwestern Oregon and along the coast.

At a casual glance, the white belly, narrow wings and bluish back of the adult kite makes it a gull look-alike. Closer observation reveals the identifying black shoulder patch on the white underwing, and flaired white tail.

The kite is a graceful flyer with a number of different moves in its repertoire. It glides low over open grasslands like a northern harrier (marsh hawk). It also hovers like a kestrel while searching for its rodent or insect prey, then side-slips down to make a catch with extended talons. Their swooping climbs and effortless gliding earned the "kite" comparison.

Kites generally do not migrate, although they may travel over a fairly wide area. They usually build stick nests lined with grass near marshes or rivers. Both birds participate in nest building. The female takes care of brooding the three to five eggs, while the male takes responsibility for feeding the mate and young chicks. There are reports in California of several pairs nesting in loosely organized colonies.

At one time, populations of this bird were quite low in California. The boom and bust cycle of this species is well documented. The birds are booming now, and Oregon is a beneficiary of this recovery. □

Jim Gladson

Replacing The Swamp

Photos by Bob Sayre

A three-year project to restore nesting and wintering areas for thousands of ducks, geese and nongame shorebirds culminated October 18 at Summer Lake Wildlife Area.

On that date, the gates were closed on a new dike (named Gold Dike) that will flood 1,000 acres of dry land to create a new marsh. The area was marsh previously, but in 1964 flood waters deepened the channel of Ana River and as the waters receded, the marsh disappeared.

The project began in 1982 with construction of one and three-eights miles of dike. Funds for the construction came from hunting license fees, nongame checkoff contributions and the new state waterfowl stamp.

The newly flooded area will be surveyed throughout the winter to locate suitable sites for nest mound construction. Funds for this phase of the project will come from a national program sponsored by Ducks Unlimited and from Oregon duck stamp money.

Overall production of the new area is expected to be some 8,000 birds including various ducks and geese and shorebirds such as avocets, black-necked stilts, curlews and sandhill cranes. In addition to providing the nesting areas, the new marsh should produce additional food for spring and fall migrating birds in an area that currently has very little food.

Water depth in the area varies up to three feet, but the control gates in the dike will allow complete drainage for the construction of the nesting mounds and other habitat modifications. □

Looking down at Summer Lake from Winter Rim. The diagonal straight line in the upper part of the photo ending at the right margin is the new dike. Light area dow and to the left has now been turned back to marsh.

Looking at Winter Rim from the new dike with some of the new marsh in the foreground.

THE WAYS OF WILDLIFE

Learning By Experiencing

What Was That Critter, Anyway?

By Bill Hastie

With thousands of different kinds of animals in our state, it's no wonder some of them look a little bit alike. Unless you do lots of studying, it is sometimes hard to tell some of them apart. Here are a few tricky sets of such critters. See if you can tell the difference.

1. You are walking along a rocky stream bank next to the North Santiam River in Marion County. Suddenly, you spot a brown snake with dark markings on its back. You jump just as it strikes, but you do notice that the snake has a flattened head. Is it a rattlesnake or a gopher snake?

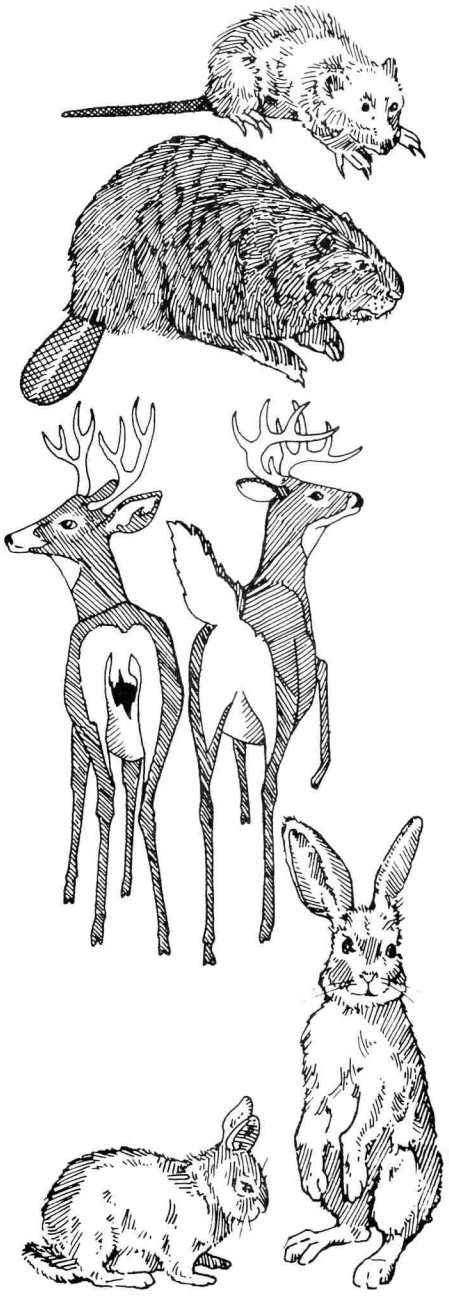
2. Near Molalla, a large brown rodent with a skinny, scaly tail gnaws on a cattail stalk on the bank of a pond. When you approach, it quickly dives into the pond and disappears below the surface. Is it a beaver or a muskrat?

3. You are on a headland near Newport. You can easily see some marine mammals resting on some offshore rocks. They are light colored with dark spots. Are they sea lions or seals?

4. During a hike near Wallowa Lake, you round a bend in the trail and surprise a large male deer with impressive antlers. As he bounds off into the forest, you notice his large ears and black-tipped tail. Is he a white-tailed deer or mule deer?

5. You are hunting for a Christmas tree in the foothills of the Cascades near Eugene. Suddenly, a small, slender animal about 14 inches from head to tail runs by. You notice the long, black-tipped tail, yellowish-white belly and chest and brown back. Is it a long-tailed weasel, mink or ermine?

6. Near Burns, a gray-brown bunny senses danger. She pricks up her long ears and lopes away on her long, strong legs. Is she a jackrabbit or a cottontail?



Answers

1. It could be either. The snakes have similar markings, and gopher snakes often imitate rattlesnakes by flattening their head and striking. Additionally, you can't count on a rattler to rattle before it strikes. In general, rattlesnakes are smaller and lighter colored than gopher snakes. Both are residents of the west slope of the Cascades.

2. It is a muskrat. The beaver has a large, flat tail, which it often slaps on the surface of the water to warn other beavers of danger.

3. They are harbor seals. These seals can be recognized by their light bluish-gray fur with black spots and irregular white rings and loops. Both California and Stellar sea lions are larger and have various shades of brown fur. Harbor seals are common along our coast and in our bays.

4. The large ears and black-tipped tail give him away as a mule deer. Oregon has very few white-tails. The Columbian white-tail is considered endangered and inhabits small areas of the lower Columbia River and the Umpqua Valley; the Idaho white-tail inhabits the northeast portion of the state. The white-tail is easily recognized by its broad, white underneath tail which is raised as it flees.

5. The contrasting lighter belly and darker brown back, and the long black-tipped tail tell you it is a long-tailed weasel. Ermine, also known as short-tailed weasels, are similarly marked but are much smaller, with a very short tail. Mink are generally darker and without the light belly and chest, although they may have irregular white spots under the chin. Mink are also much larger. The weasel and ermine may change to an entirely white coat in winter in areas where snow is common.

6. This is a jackrabbit. Cottontails have shorter legs and ears.□

Judge Rules For Wildlife

A federal district court judge in Wyoming has ruled that ranchers cannot erect livestock fences on public or private property, if those fences prohibit wildlife access to public land, the Wildlife Management Institute reports.

Judge Clarence A. Brimmer's ruling came as the result of a suit by the Wyoming Wildlife Federation and National Wildlife Federation against rancher Taylor Lawrence. It is a landmark decision.

Lawrence reportedly had erected a fence around his property in a way that blocked pronghorn access to intermingled public land. The area isolated by Lawrence is critical winter habitat for the antelope.

Judge Brimmer ruled that Lawrence's fence violated the Unlawful Inclosures of Public Lands Act (UIA), even though the woven wire fence was entirely on private land. He ordered Lawrence to take down portions of the fence within 10 days and to modify or remove the entire fence within 60 days.

Lawrence's attorneys argued that the UIA applied only to the exclusion of "people" from public land. Judge Brimmer said that the UIA did not refer only to "persons," and that Congress intended that it protect more than just people.□

The Society of American Foresters has issued a formal statement warning that human population growth and acid rain are threatening the nation's welfare. Leaders of this professional forestry organization have stated that the demands of our growing human population will create insatiable demands on our forest resources, and that there's an urgent need to find out more about the effects of acid rain on forests throughout the world.

PA. Game News

For more on Nongame see page 12.