



# **OREGON WILDLIFE**

*NOVEMBER 1983*

# OREGON WILDLIFE

NOVEMBER 1983  
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OREGON FISH AND WILDLIFE COMMISSION

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**Cover** — Ocean rockfish have become a point of controversy. Fishermen see them as an income source while salmon resources are low. Biologists believe that populations are rapidly becoming depleted and reductions in harvest must be made. Our feature story beginning on page 3 examines the problem.

*Photo by Ken Durbin*

HUNTER EDUCATION  
PROGRAM  
INSTRUCTORS APPROVED  
Month of September ..... 56  
Total Active ..... 1,707  
STUDENTS TRAINED  
Month of September ..... 3,403  
Total to Date ..... 307,922  
HUNTING CASUALTIES  
Fatal ..... 2  
Nonfatal ..... 10

## Paradise Saved

A guest editorial by: Allan L. Kelly, Executive Director  
Oregon Wildlife Heritage Foundation

The successful Deschutes River fund drive and the purchase of the lands along the lower twelve miles of the Deschutes River is history. The Oregon Wildlife Heritage Foundation has conveyed title to the property to the State of Oregon.

The foundation was privileged, and sometimes concerned, to be selected as the organization to design and direct the fund raising effort, as it addressed the size of the dollar goal and the extensive organization needed to meet the objective, particularly at a time when Oregon's economy was in a depressed state.

Its concerns would have been relieved had it recognized the interest of Oregon's citizens in this magnificent river and their wish to preserve access to it. The support of the business community, foundations, outdoor and conservation clubs, and individuals was truly gratifying.

The campaign also enjoyed and benefitted from the significant role played by Governor Victor Atiyeh. His leadership, inspiration and early commitment to the cause lent prestige and credibility to the campaign.

Major contributions were needed if the drive was to reach its financial goal, and these were received from generous businesses and foundations. But it should be recognized that a large part of the total amount pledged came from unsolicited and spontaneous contributions from \$1 to \$1,000.

Conservation and outdoor clubs responded by producing a substantial amount of the total pledges received through direct solicitation of members, their friends and associates, and innovative money raising projects.

Contributions received from the readers of OREGON WILDLIFE, played a significant role in helping the foundation reach the goal. The second day after the first editorial appeared in OREGON WILDLIFE, soliciting reader support, the foundation received \$5,000. Pledges and funds continued to be received throughout the entire campaign from its readers. Checks were received from many states and Canada.

The correspondence which accompanied many donations indicated that senior citizens, many on Social Security or other fixed income, participated and expressed their love for this river, the state of Oregon, and their wish to be "a part of the campaign." Although a wide cross section of people contributed, the donations from those who could least afford it added a dimension showing great respect for this river and concern for its future.

The Oregon Wildlife Heritage Foundation's Board of Directors extends its sincere appreciation to the readers of OREGON WILDLIFE, its co-operative staff, and the Information & Education Section of the Department of Fish and Wildlife for the overwhelming success of this phase of the fund drive.

The project has shown the quality of Oregon's people, their environmental concern, and their sense of values as they relate to the outdoor needs of people. Lastly, it demonstrates their generosity in securing the success of a project that may only be exceeded in importance by the placing in public ownership of Oregon's beaches years ago. □

## Commission Meeting

*The Fish and Wildlife Commission will conduct a general business meeting beginning at 8 a.m. on Friday, November 18. The meeting will be held in the main conference room at Fish and Wildlife Department headquarters, 506 SW Mill Street in Portland. □*





A "dragger" as trawl boats are commonly known, prepares to dock with its load of ocean rockfish.

# To Conserve the Rockfish Resource

**Commercial fishermen have been skimming the cream from ocean rockfish populations. Now those populations have reached optimum levels and harvest cut-backs are needed.**

*By  
Robert E. Loeffel, C. Dale Snow,  
Jack G. Robinson  
Marine Region*

Because the ocean is so large, it is easy to believe that rockfish are in endless supply and that we can't possibly catch too many.

The story of the Pacific Ocean perch tells us differently. This once abundant rockfish was reduced to economic unimportance by overfishing in only three years, 1966-1968. Fifteen years later the resource has just partly recovered. Millions of dollars in lost revenue occurred because Pacific Ocean perch became depleted.

Industry and the people of Oregon are the losers, even though

foreign fleets caused most of the overfishing. We must now take steps to protect other similarly important rockfish species from depletion. This may mean fewer fish caught and hard times for some fishermen.

For other important rockfish species including widow, canary and yellowtail, we must ask how much of each species is in the ocean. Of that, how many can be prudently harvested each year? Where? When? Because so much is at stake these questions must be answered as best we can.

## **Rockfish Life History**

Rockfish, commonly called "red snapper" or just "snapper", look like a different colored version of the largemouth bass so familiar to freshwater fishermen.

All of the rockfish live a long time . . . up to 80 years or more. Some grow to more than 40 pounds. The four species mentioned are long lived but are mid-sized among the rockfish clan, ranging from an average of two pounds for Pacific Ocean perch to four pounds for canary rockfish.

These species give birth to living



Ocean rockfish are caught by trawling a funnel-type net. When fish are located, large catches are common. But some schooling species are quite vulnerable to overharvest.

young, releasing them in the near surface waters within 20 to 50 miles of the coast. Adult rockfish live in these same areas all year and do not appear to move around or migrate very far. Because they are hard to tag and release alive, we are not sure how much they move. What we do know from the old ages they reach is that their growth is slow and their natural loss to predation and disease is low.

The widow or "brown" rockfish lives off Washington, Oregon and California. Canary and yellowtail rockfish range from northern California into Canada, and the Pacific Ocean perch is found from northern California to the Aleutian Islands. Each species lives off more than one state and fishermen from each state fish adjacent state waters. For these reasons, the states and countries must work together to manage rockfish.

#### Taking Care of Rockfish

"Management" is the term which describes taking care of a resource. It involves balancing annual harvest to the sustainable production or yield of a rockfish species. One element of the balance is the abundance of the resource.

This can be estimated in several ways including "surveying" the grounds where the species is found. Surveys count the number of schools of rockfish swimming off bottom and/or the amount of fish on the ocean bottom in a known area. This rate is applied to the known range of the species.

Because surveys are costly, only part of the grounds can be covered, so the number which comes from a survey is only an *estimate* of abundance. Accordingly, its accuracy can be questioned.

As a check, it is good to make additional independent abundance estimates. This has been

done for some species of rockfish by using well established analytical methods that examine estimates of growth rate, natural death rates, age, amount of fish caught and the number of fish of each age in the catch and the population.

Having an abundance estimate, managers then ask how many can safely be taken. Fishing is only one action that affects ocean species of fish. Nature controls all other things happening to fish and this must also be considered.

The response of fish populations to fishing has been studied extensively. Procedures like those mentioned above were developed and mathematical "models" were made which, with computer assistance, can be used to "test" proposed management actions before they become regulations.

A fish population (and those of other animals or plants) has its greatest average size before any harvest occurs. That size, though annually variable, is determined when population growth through reproduction and through gain in weight is offset by decreases due to death by natural cause. The population, said to be in equilibrium, can stay in this status indefinitely.

Like game birds, fish have a habitat "carrying capacity" which limits their numbers. Often this limit is environmental. Without it the sea would be "wall to wall" fish. The carrying capacity may change from time to time as when "El Nino" phenomena exist.

#### Using the Resource

When we decide to catch fish from this population we have to determine the amount that can be taken safely. As the amount of fish present increases, the yield or harvest they can provide also increases until a population weight equal to about one-half the unfished population size is reached. Then, even though population weight continues to increase, the yield that can be taken decreases. Thus, if we keep the rockfish population weight near one-half of the unfished population weight we maximize our continuing annual benefits from the resource. This



annual yield will equal 10 to 15 percent of the new reduced population weight.

The reason productivity is the highest at the midpoint is that average fish age, growth and reproductive capacity at this population size gives the most favorable balance between the production of new fish supplemented by growth of individual fish and loss of population weight by dieoff. Even though annual yield is highest at this population size, it is still equal to only five percent of the original population size.

Since the optimum population size is about one-half of the original population, anything over one-half is not needed and can be harvested. This amount which we take "off the top" we call "stockpiled" fish. These fish can be harvested — but only once — over a one year, two year or longer period. After it is taken, harvesting must be at the level of annual production.

#### Current Resource Condition

Let's look at the status of the four rockfish species of concern. The estimated unfished population sizes for these species are:

Pacific Ocean perch — 60,000 metric tons

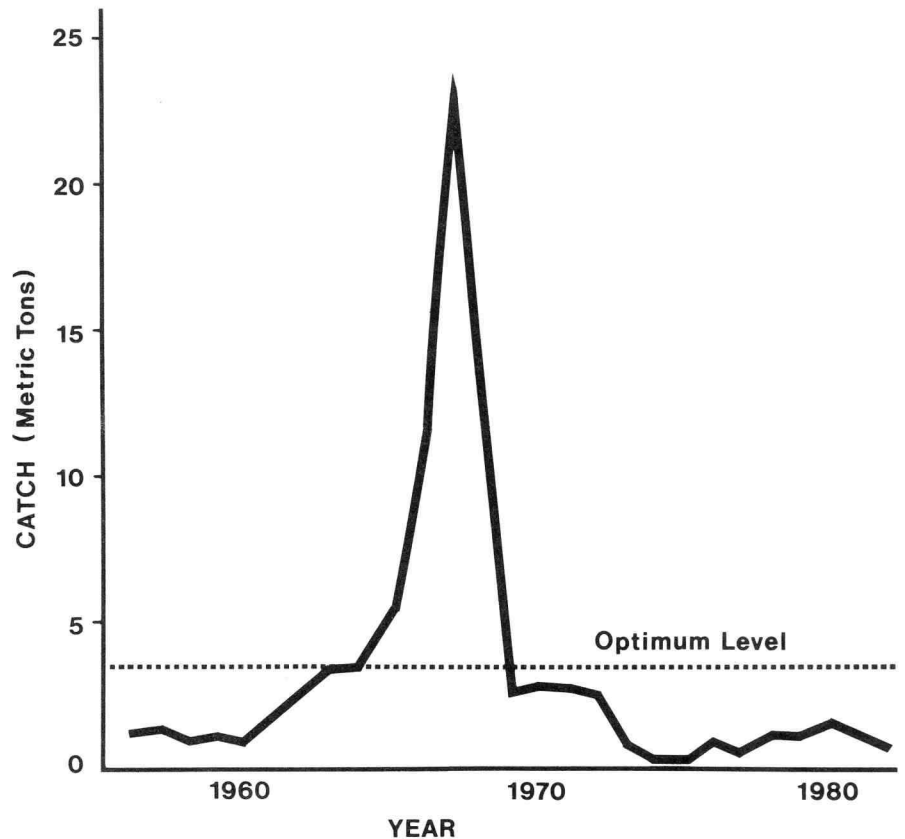
Widow rockfish — 90,000 metric tons

Canary rockfish — 40-60,000 metric tons

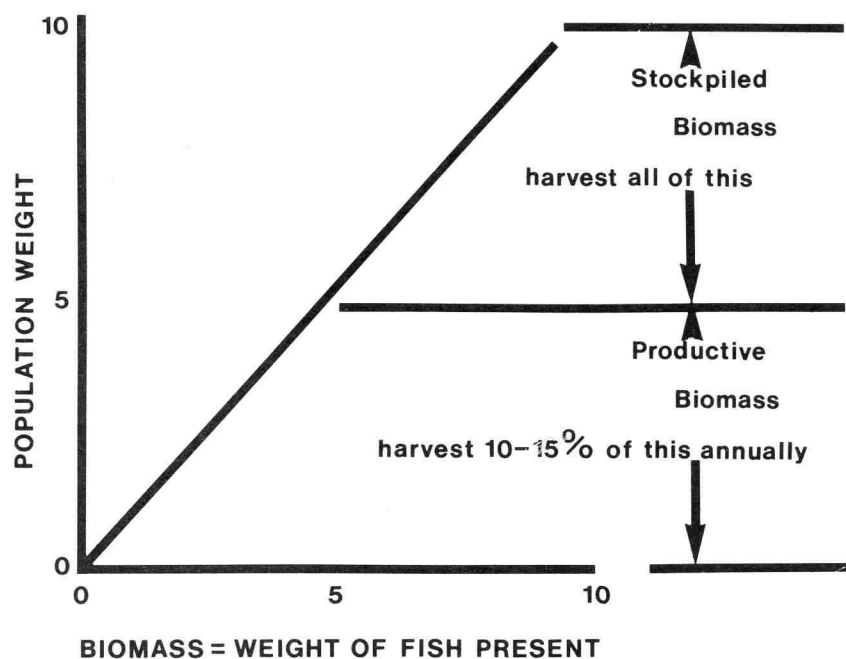
Yellowtail perch — 50-65,000 metric tons

While the numbers look rather precise, the estimates of abundance for some species aren't very good. Errors of 25 to 50 percent, either high or low, occur on estimates of the major species. Margins for error are even higher for the less important species.

In fact, industry contends that a significant underestimate occurs in the abundance value for yellowtail rockfish. This possibility is being investigated by managers. In some cases errors go undetected. In others, new data or reexamination of existing data and assumptions, as is happening now with the yellowtail rockfish, may cause the estimates to change. Typically, though, such adjustments will not



The graph above illustrates what has happened to Pacific Ocean perch. Heavy fishing pressure resulted in large catches in the late '60s and populations are now below levels which can provide best economic returns to the fisherman. This means substantial loss of income over the long haul, and the population may take as much as 20 years to rebuild to optimum levels. The graph below illustrates better rockfish management. The "stockpiled" portion of an unfished population is surplus and can be harvested, but only once. After that, harvest must be limited to ten to 15 percent of the remaining population annually.



be large and simply hasten or delay the day when harvest must ultimately be reduced to the level of annual production.

Fishermen believe the estimates are low because a lot of rockfish can be found where fishing occurs. What is often overlooked is that a healthy, productive population is about half as large in weight as the unfished population. That is still a lot of rockfish, and means that at optimum population levels with a ten percent annual removal, about nine fish remain in the ocean for each fish caught. It further means that *when fishermen can sense the population level is low, the resource is probably already in trouble and the fisherman is nearly out of business on the species.*

The Pacific Fisherman Management Council (PFMC) put a rebuilding plan into effect for Pacific Ocean perch in 1981, anticipating rebuilding to optimum population levels in 20 years. That rebuilding was and is occurring under reduced fishing, first on a voluntary basis in the late 1970s, and then by regulation since 1981. Even if recovery occurs sooner than expected, a large price will have been paid for abusing the resource.

Coastwide, we have seen a pattern of annual landings for widow rockfish similar to those for Pacific Ocean perch; heavy harvest rates over a three-year span in 1980-1982, followed by a considerably lower level of harvest. The difference is that the current widow rockfish population size is thought to be at or just below the optimum level where it should provide a relatively high and sustainable annual yield.

Reports of widow rockfish scarcity are heard, however, giving managers concern, particularly since widow rockfish is a highly schooling species and therefore hard to survey and especially vulnerable to overfishing.

In the ocean north of Cape Blanco, canary and yellowtail rockfish are grouped for management purposes with all other rockfish (except widow rockfish and Pacific Ocean perch) into the "Sebastes complex". While annual harvest of

these combined species has been increasing, this has occurred on the "stockpiled" portion of the population. Managers think that the population is now down to optimum level and that harvest levels must be reduced to avoid the consequences of overfishing.

#### Difficult Times Ahead

Harvests of rockfish *must* be checked if the best benefits from the resource are to be retained. Fishing has to be curtailed drastically because returning a depressed resource to full productivity is a slow process. In the long run fishermen will benefit more from populations maintained at optimum levels than they will from overfishing stocks now.

Unhappily, west coast fishing fleets have already developed size, capability and efficiency toward the harvest of stockpiled rockfish resources. Processors have responded to the increased supply by developing new markets. They have increased processing capacity by investing dollars and have employed more workers.

This degree of development is or

will be unsupportable when the amount of rockfish taken each year is limited to the resource's annual production. The consequence will be reduced fishing opportunity for the fisherman, reduced product for the processor and less employment in the community.

That a cutback in fishing for rockfish is inevitable has been recognized in PFMC deliberations for several years. Much of the industry was aware of the need but found adjustment difficult so conducted business as usual or in some cases expanded efforts. The consequence now that the PFMC has determined limits on rockfish harvest are necessary, is displacement of boats, processing activity and employment.

Even though the rockfish population "numbers" can be questioned, there is every reason to believe that inaction would lead to even greater displacement with long lasting impact, and that it would occur in the near future.

We have no reasonable choice. We must protect the rockfish resource. To do so is in everybody's long-term interest.□



Processors have geared up to handle an increased rockfish harvest in recent years. Unfortunately, biologists say, populations will not be able to sustain this harvest level and fishermen, processors and coastal communities will feel the pinch.



# Eagle Poaching Revealed

Over the last three years between 200 and 300 bald eagles were illegally killed near a national wildlife refuge in South Dakota to supply feathers, beaks, talons and bones for a lucrative black market in Native American artifacts. The poaching effort was revealed following a major federal undercover operation concluded last June in eight states.

The two-year investigation by special agents of the U.S. Fish and Wildlife Service is expected to result in the charging of up to 50 individuals for their involvement in the killing or sale of 19 species of federally protected birds. Eighty federal and state conservation officers began contacting subjects and executing arrest or search warrants June 15 in Florida, California, Utah, Oklahoma, Montana, Colorado, North Dakota and South Dakota. Large quantities of bird parts and finished craft items were seized.

The bird feathers and parts were used to manufacture "authentic" reproductions of Indian artifacts such as headdresses, rattles, jewelry, lances, hair ties, wing and peyote fans, whistles and other ornaments. The items were then sold to collectors and hobbyists in other parts of the nation and in Europe, where interest in American Indian artifacts is strong.

Then Interior Secretary James Watt said that the investigation indicates the "feather traffic" exists in most states. "Nation-wide, it is thought to be directly responsible for the slaughter of at least 300 bald eagles every year along with other protected species. Last year's bicentennial celebration of the naming of the bald eagle as our Nation's symbol brought news that the species is beginning to recover from a number of threats," Watt said. "That's why it is particularly saddening to learn of this wanton slaughter."

The killing of migratory birds and sale of their feathers and parts are prohibited under the Migratory Bird Treaty Act.

## Elk Workshops Scheduled in 20 Cities

The Fish and Wildlife Department will be surveying Oregon elk hunters on the future of elk management and elk hunting seasons this winter. As part of the survey, 20 workshops have been scheduled in cities throughout the state. In addition, elk hunters will be contacted in the field by department personnel, and additional elk tag holders will receive a questionnaire through the mail.

The workshops were set up to provide hunters a chance to express opinions on elk regulations and to make recommendations for the Fish and Wildlife Commission to consider for future hunting. All meetings will begin at 7:30 p.m. in December, January and February. The schedule of cities and locations follows:

### Dec. 1983

- 12 The Dalles—Dry Hollow Grade School
- 15 Portland—Department of Fish and Wildlife

### Jan. 1984

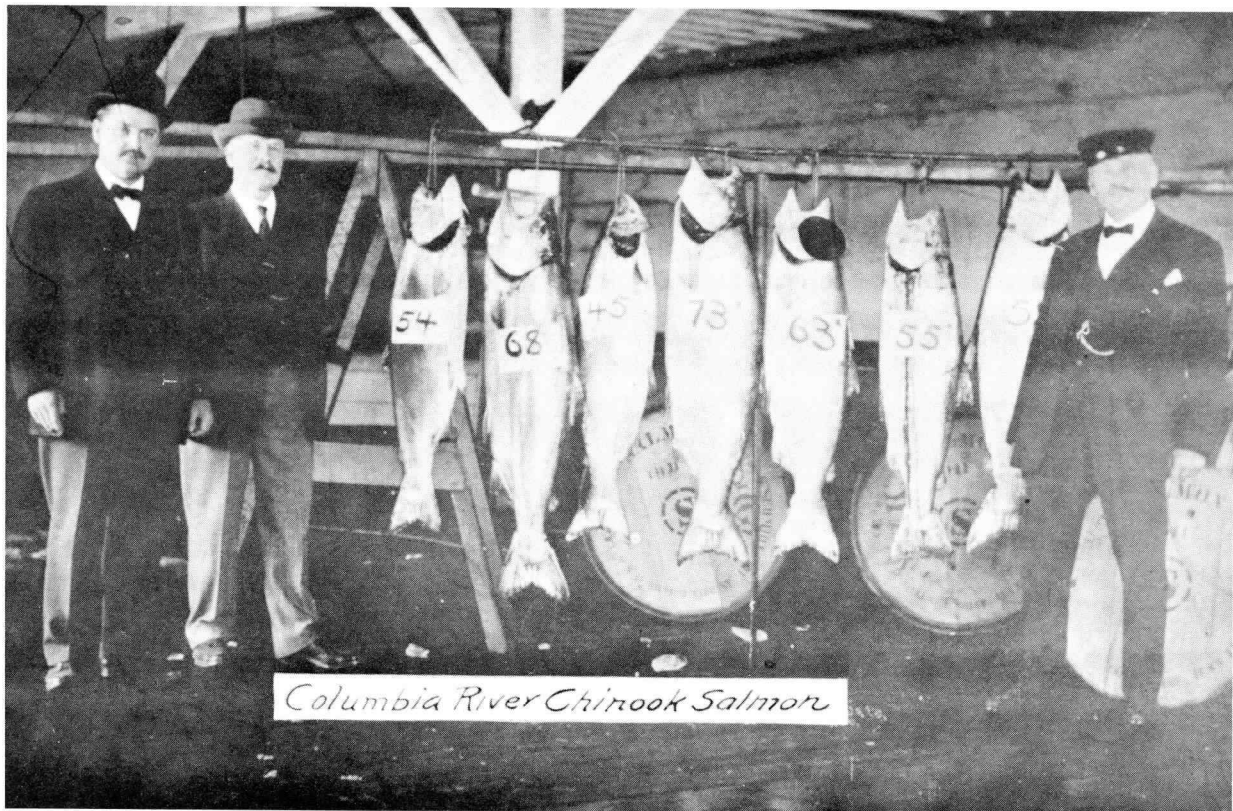
- 4 Bend—Bend High School
- 5 Eugene—Lane Community College
- 9 Astoria—Astoria High School
- 10 Tillamook—Tillamook High School
- 11 Newport—Marine Science Center
- 30 John Day—Grant Union High School
- 31 Baker—Baker High School

### Feb. 1984

- 1 La Grande—Eastern Oregon State College
- 2 Pendleton—Blue Mountain Community College
- 8 Salem—McKay High School
- 9 Roseburg—Umpqua Community College
- 13 Coos Bay—North Bend High School
- 14 Gold Beach—Gold Beach High School
- 15 Klamath Falls—Mazama High School
- 16 Medford—Medford High School
- 27 Ontario—Treasure Valley Community College
- 28 Burns—Catholic Parish Hall
- 29 Lakeview—Lakeview Community Center

For a brochure which describes the history of Oregon's elk management and concerns about elk management, write: Wildlife Division, Oregon Department of Fish and Wildlife, P.O. Box 3503, Portland, Oregon 97208.





# The Columbia River Gill-Net Fishery

*A History  
By  
Burnie Bohn  
Columbia River Management*

Long long ago, before there were ocean trollers, before there were charter boats, before there was an inland sport fishery, there was a Columbia gill-net fishery. Some do not realize the net fishery was actually the first of the non Indian fisheries. The treaty Indian commercial fishery, as we know it in the 20th century, actually developed after the lower Columbia gill-net fishery had begun to expand. The ink was barely dry on the treaties of the 1850's when the foundation for the modern commercial fishery was laid.

## **The Early Days**

In the early 1850's, residents of the region began to catch and salt salmon for local consumption. As early as 1853, two men began fishing with gill nets for salmon below Oak Point, about 60 miles downstream from Portland. That same year two fish traps were also built near Oak Point, but proved unsuccessful. A successful trap was built in the fall of 1854. The first indication a fishing industry was taking shape was in 1861. In that year H.N. Rice and Jotham Reed began packing salted salmon in barrels

at Oak Point. The first season's pack was to 600 barrels.

It was the start of the canning industry that triggered a rapid expansion in the Columbia River commercial fishing industry. In 1864, the first salmon cannery in the U.S. was set up by Hapgood, Hume & Co. on the banks of the Sacramento River across the river from Sacramento, California. A scarcity of salmon resulted in a visit by William Hume to the Columbia River to investigate the potential for a cannery. He was favorably impressed, and a can-



nery was built at Eagle Cliff, Washington. The first pack of 4,000 cases of 48 1-lb cans was produced in 1866. From that point, the fishery expanded rapidly and by the 1890's, virtually every fishing device known to civilized man was in use to capture salmon. Gill nets, traps, haul seines, and fish wheels caught most of the fish. From the beginning gillnetters were always the most numerous group of fishermen employed in the fishery and caught over 50% of the fish.

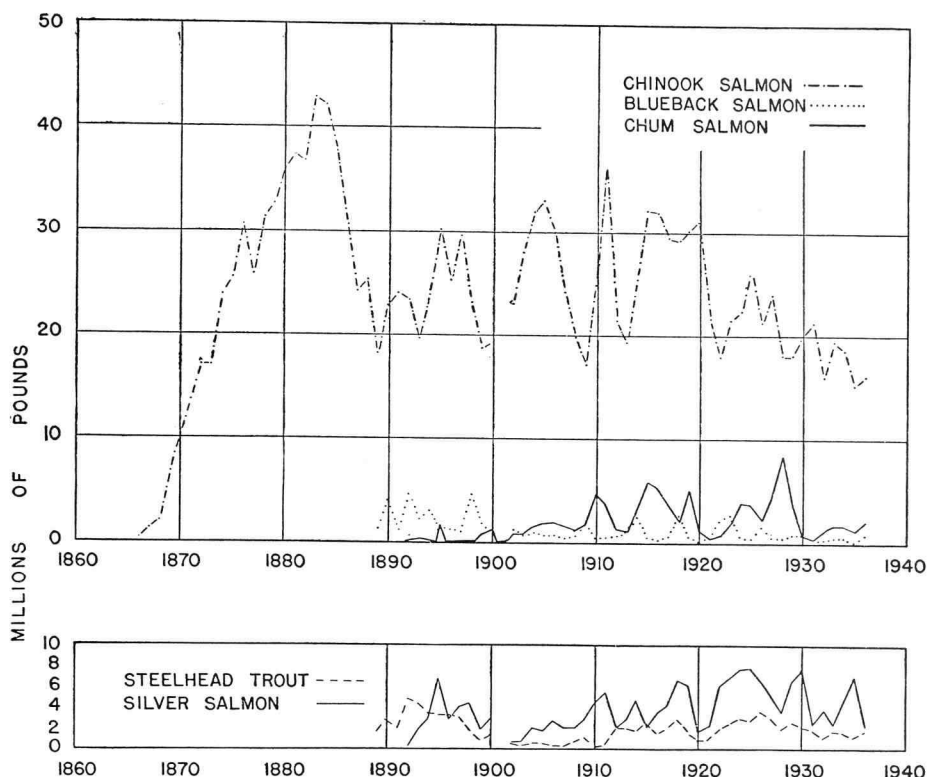
### The Rise and Fall of the Fishery

By 1873, there were eight canneries and ten years later the number had increased to 39. The period from 1883 to 1887 marked the peak with a range from 39 to 37 canneries operating on the Columbia River. By 1890, the number had dropped to 21.

The fishery was totally dependent on chinook salmon in the early years. The fishery reached its zenith in 1883 and 1884 when over 42 million pounds were landed each year.

Until 1890 the fishery was confined largely to prime quality spring and summer chinook. At that point no meaningful catch of lower quality fall chinook or shifts to other species had occurred. In 1889, sockeye and steelhead began to show in the landings, followed by coho in 1892 and chum in 1893 (see graph). In the graph, blueback is a formerly used common name for sockeye salmon and silver is the old common name for coho. Sockeye peaked soon after entering the fishery at 4.5 million pounds during 1892 and again in 1898 and declined thereafter. Coho landings peaked at 6.8 million pounds in 1895, then declined and remained relatively stable until the 1920's when effort again intensified. Steelhead landings reached a high of 4.9 million pounds in 1982, four years after entering the fishery.

From 1890 to 1920, the chinook catch fluctuated widely with no apparent trend. This was partially due to fall chinook entering the river in August and September being fished with increasing intensity. Another factor was better



Historical Columbia River salmon and steelhead landings

fishing methods including smaller net mesh and more efficient methods of fishing the nets.

During the 1920's and through the early 1950's, the downward trend continued despite further improvements in fishing gear and full exploitation of fall chinook and other species.

### What Caused the Fall?

Overfishing has long been suggested as the main cause of the decline in the formerly great Columbia River commercial fishery.

"It does not require a study of statistics to convince one that the salmon industry has suffered a great decline during the past decade, and that it is only a matter of a few years under present conditions when the chinook salmon of the Columbia will be scarce. Common observation is amply able to apprehend a fact so plain. Oregon has drawn wealth from her streams, but now, by reason of her wastefulness and lack of intelligent provision for the future, the source of that wealth is disappearing and is threatened with complete annihilation."

This quote comes from Hollister

D. McGuire, State Game and Fish Protector, in a report to the Governor on December 1, 1894.

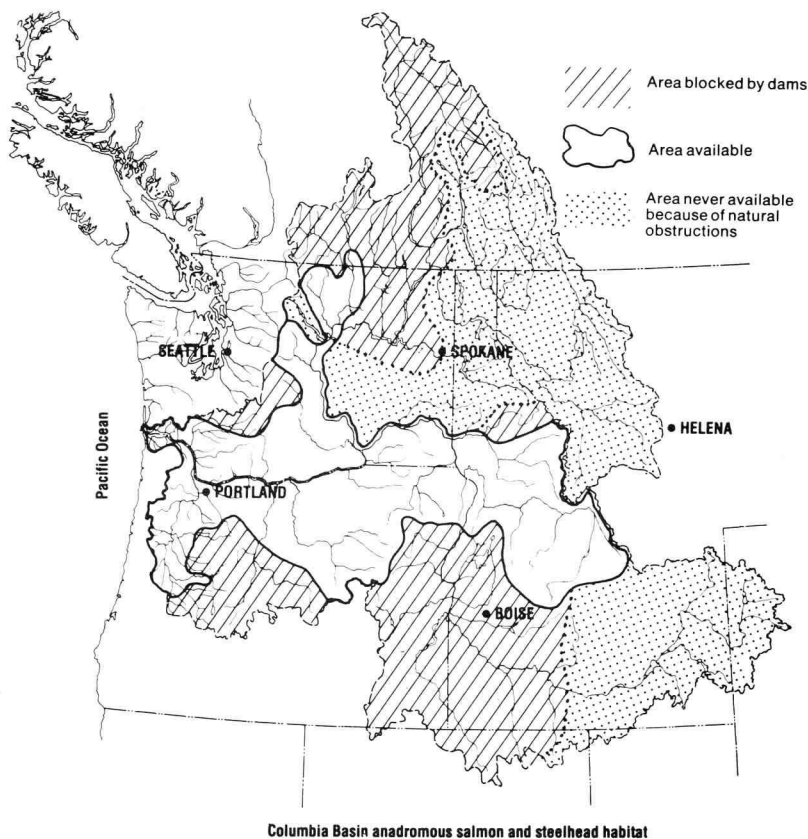
Before reaching a guilty verdict for overfishing, though, the jury must examine some other key factors. It was during the very years (1860's to 1880's) the fishery was peaking, that industry, agriculture, and civilization were bringing about a gradual but continual degradation of spawning and rearing areas. By the 1920's and 30's habitat destruction was rampant. In the 1930's, we entered the era of big hydro projects on the Columbia River system. Tributary dams began sprouting in the early 1900's.

Prior to modern man's influence, some 163,000 square miles of watershed habitat was ideal for salmon and steelhead. Today less than 73,000 miles remain accessible to anadromous fish. Dam construction was the primary cause of lost access (see table).

Other statistics are also revealing. The regional population increased from 135,000 in 1870 to 1.2 million in 1900, 3.1 million in 1930, and 6.5 million in 1970. Irrigation demands increased from 400,000 acres in 1889 to 4 million acres in

## MAIN-STEM COLUMBIA AND SNAKE RIVER DAMS WITH IMPACT ON ANADROMOUS FISH

Columbia River	Year of Initial Service	Snake River	Year of Initial Service
Rock Island	1933	Swan Falls	1910
Bonneville	1938	Lower Salmon Falls	1910
Grand Coulee	1941	Bliss	1949
McNary	1953	C.J. Strike	1952
Chief Joseph	1955	Brownlee	1958
The Dalles	1957	Oxbow	1961
Priest Rapids	1959	Ice Harbor	1961
Rocky Reach	1961	Hells Canyon	1967
Wanapum	1963	Lower Monumental	1969
Wells	1967	Little Goose	1970
John Day	1968	Lower Granite	1975



1934, and 7.3 million acres in 1966. Logging has increased from a modest 900,000 board feet in 1827 to 21 billion board feet in 1964. The point here is if habitat had not changed from what it was at the time the major fishery began, problems caused by overfishing could have been corrected. Over-exploitation is only one of many complex interrelated factors that caused the decline.

### History of Regulations

To combat declining stocks, fisheries regulations became an early partner in the fishery. Regulation of fishing gear began in 1866 when Washington banned fish traps that would reach more than two-thirds of the way across or wholly prevent the passage of fish up and down the Walla Walla River. Oregon's first gear regulation occurred in 1878, also dealing with

traps. The first actual regulation that applied specifically to gill nets was the adoption of a 5" minimum mesh size in 1915 by Washington. In 1927, the maximum length of a gill net was set at 250 fathoms by Oregon. This regulation was adopted by Washington in 1935. One by one all types of gear were banned until finally Oregon eliminated all fixed gear in 1949 (Washington already did this in 1935) and only drift gill nets were left. Since 1950, drift gill nets have been the only legal method to commercially fish for salmon in the nontreaty commercial fishery. Regarding gear regulation, most are not aware that Oregon attempted to prohibit trolling in the Pacific Ocean in 1921. Obviously that attempt failed.

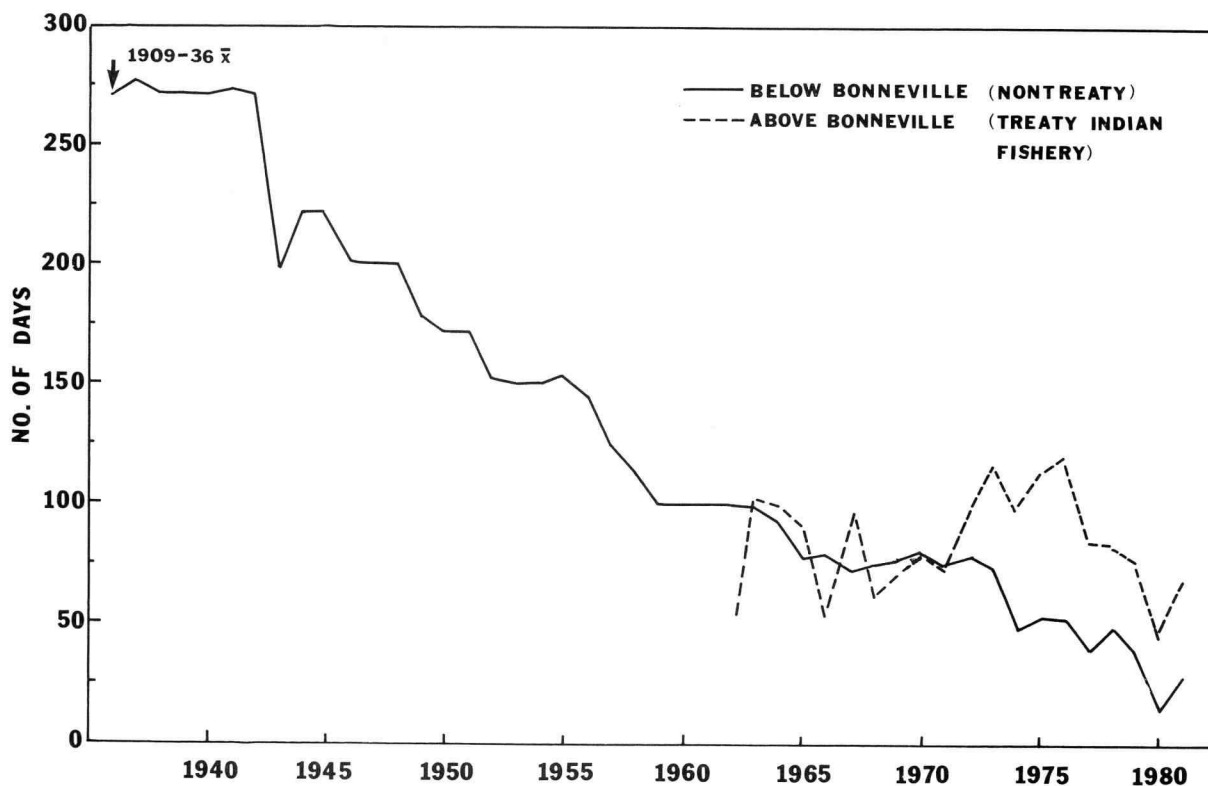
One of the most significant regulatory actions was the formation of the Columbia River compact between the states of Oregon and Washington. The compact was ratified by Congress in 1918. It provides for regulation of the commercial fisheries in concurrent waters of the Columbia River by mutual consent. To this day, all commercial fishing regulations on the Columbia River are regulated by the compact. Each state has one vote. The director of the Washington Department of Fisheries has a vote and the seven-member Oregon Department of Fish and Wildlife Commission has a vote.

The first regulation of seasons was enacted by Washington in 1877 followed by Oregon in 1878. Numerous season changes occurred between 1879 and 1909. From 1909 until the early 1940's, the length of seasons remained essentially constant with about 274 days annually open to commercial fishing. There has been steady decline from 1943 to the present with only 14 days open to commercial fishing in 1980 (see illustration).

### What Is Left?

It would be a gross understatement to say that today's gill-net fishery is a mere shadow of its former self. The present fishery still at times extends for the full 140 miles from the mouth upstream to the deadline 5 miles





**COLUMBIA RIVER COMMERCIAL FISHING DAYS, 1909-81**

below Bonneville Dam. The area is divided into five statistical landing zones corresponding to Washington County boundaries. However, several things have changed: gone is the spring (May) season for upriver spring chinook — last one 1977; gone is the summer season (June-July) — last one 1964; and gone is the early fall season (August) — last one 1979. Only short winter seasons (February-March) and a partial late fall season (September-November) remain. The salmon canneries are also gone, replaced by fresh and fresh frozen operations.

The peak landings of 42 million pounds of chinook in the 1880's sunk to 800,000 pounds in 1981. No longer is it possible to make a full-time living commercial fishing on the Columbia River. What remains is a small but hearty band of third and fourth generation gillnetters. These regular fishermen now augment their incomes by participating in other fisheries.

Even the normally reliable October-November coho season was poor in 1983. The ugly effects of

the warm waters of El Niño that plagued the ocean salmon fisheries this summer have been felt in the Columbia River.

What is the future of the Columbia River gill-net fishery? Only time will tell.

For further reading:

"Investigative Reports of Colum-

bia River Fisheries Project," July 1976; Prepared for Pacific Northwest Regional Commission.

"The History and Development of the Fisheries of the Columbia River," Joseph A. Craig & Robert L. Hacker, Bulletin of the Bureau of Fisheries 49 (1940).

## Tip of the Hat

This month's tip of the hat goes to a rather unusual recipient, not because of a fine or jail sentence rendered, but for an assist to law enforcement officers.

A Cottage Grove Traffic Trooper, on night patrol, found a recently wrecked stolen car along the freeway, according to a report from Major Sterling Norton of the State Police. The trooper's investigation revealed blood all over the inside of the car and he began a search for injured suspects.

Two suspects were located with blood on them, but they had no apparent injuries. As the story unfolded, the suspects had stolen a car from Cottage Grove and a short time later had hit a deer. Not wanting the deer to go to waste, they threw it on the back floor of the car and continued down the highway.

The newly acquired passenger was not dead, however, and upon waking apparently decided not to submit to the frying pan. It jumped up, causing the driver to run off the road and roll the car.

The two suspects were charged with auto theft and illegal possession of deer. The deer gets this month's tip of the hat!□

# This and That

Compiled by Ken Durbin

## Lose Those Poison Oak Blues

A new skin cleanser called Tecnu is giving hope to people who are highly allergic to poison ivy, oak and sumac. Poison oak, the only one of the three found in Oregon, is quite common in the Willamette, Rogue and Umpqua valleys, and elsewhere in the state.

The new product claims to break the bonds that form between the ivy irritants (called urushiols) and skin proteins. Such bonds form within 20 minutes after the poison plants come in contact with human skin. In clinical tests, 75 percent of tested individuals did not develop a rash if they cleaned their skin thoroughly with Tecnu within eight hours after exposure. Cleansing promptly after exposure was said to be almost totally effective.

The product is available only through selected safety and first-aid suppliers. For a list of them, contact TECNU Enterprises at 828 First Avenue E., Albany, Oregon 97321.

*American Forests*

\*

## Rabies in Perspective

Despite fears that bats are rabid, only ten people in the United States and Canada have died of disease from bats in more than 30 years, says *International Wildlife* magazine. In contrast, more people are killed annually in the U.S. by dog attacks, bee stings or lightning.

\*

## Busted Their Humps

In the 1800s, before railroads carried U.S. mail out West, camels were shipped from Egypt to move mail and supplies across the hot, dry Southwest deserts. It took some getting used to, but the 60 or so camels, known as the U.S. Camel Corps, proved worthy of the task.

*Ranger Rick magazine*

## Looks Never Change

Dinosaurs have come and gone, but the horseshoe crab is still around, and its looks have hardly changed over the past 300 million years, says National Wildlife's *Ranger Rick* magazine. Only a few other creatures, most notably the cockroach, look so much like their ancient ancestors.

\*

## 1983 Operation Fish Run Done

An annual juvenile fish transportation program on the Columbia and Snake rivers has been completed. A total of 7,581,000 young salmon and steelhead trout were collected and hauled from the Snake and upper Columbia rivers and returned to the river below Bonneville Dam to continue their migration to the ocean.

The Corps of Engineers Walla Walla District conducts the program, using four specialized barges and five tank trailers to haul fish from three collector dams — Lower Granite and Little Goose on the lower Snake River and McNary on the Columbia River.

The fish are given a ride around the intervening dams in order to hasten their journey and to avoid the hazards presented by passing through hydroelectric turbines.

In addition to the barge and truck transport, special spill and flow manipulations were put in effect beginning last year and repeated this year to aid fish passage during peak migration periods. The increased spills help pass more fish through spillways and speed their passage downstream.

\*

## Fishy Vision

At midday, when the sun is overhead, a fish can see objects perhaps 15 to 20 feet away in clear, shallow water. When the sun is not directly overhead, little light passes through to illuminate the underwater scene, and fish must rely on their excellent senses of smell, hearing and touch.

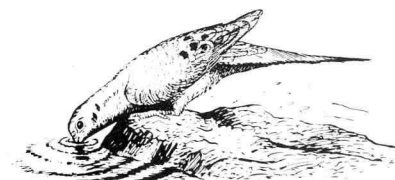
*International Wildlife magazine*

## Keep Eyes Open For Marked Burrowing Owls

The Canadian Province of Saskatchewan is trying to learn more about the migrating habits of burrowing owls, and last year marked a number of the creatures with colored plastic leg jesses. Jess colors are yellow, fluorescent red, light blue and dark green and are one centimeter wide and extend about 1.5 cm beyond the leg. Each marked owl carries a Fish and Wildlife band and from one to three of the colored jesses.

Persons observing color-marked owls are asked to record the following: location, date, color and position of leg jess or jesses, leg of attachment of metal leg band and jesses, and any other details of the owl's situation. Information should be sent to Bird Banding Office, Canadian Wildlife Service, Ottawa, Ontario, Canada, K1A 0E7, plus an additional copy to the bander, Elizabeth A. Haug, Department of Veterinary Anatomy, University of Saskatchewan, Saskatoon, Saskatchewan S7N 0W0.

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## Banquets for Birds

It is said that Americans spend about \$90 million a year on food for wild birds. But the odds are that neither the people nor the birds are getting the best use out of all those backyard feeders.

A new booklet entitled "Banquets for Birds" has recently been published by the National Audubon Society, which aims to help both parties in the bird feeding game. The publication gives tips on feeding the various types of birds, on controlling problems with predators, and on landscaping that will help attract a greater variety of feathered visitors to your yard.

The 24-page booklet is available at cost (\$1.60 including postage) from Information Services, National Audubon Society, 950 Third Avenue, New York, N.Y. 10022.

# To Release Shark Not Easy

Catch and release fishing, wherein a fish is caught by hook and line and then released unharmed to the water, is rapidly gaining increased acceptance. Usually to release a fish is a simple matter.

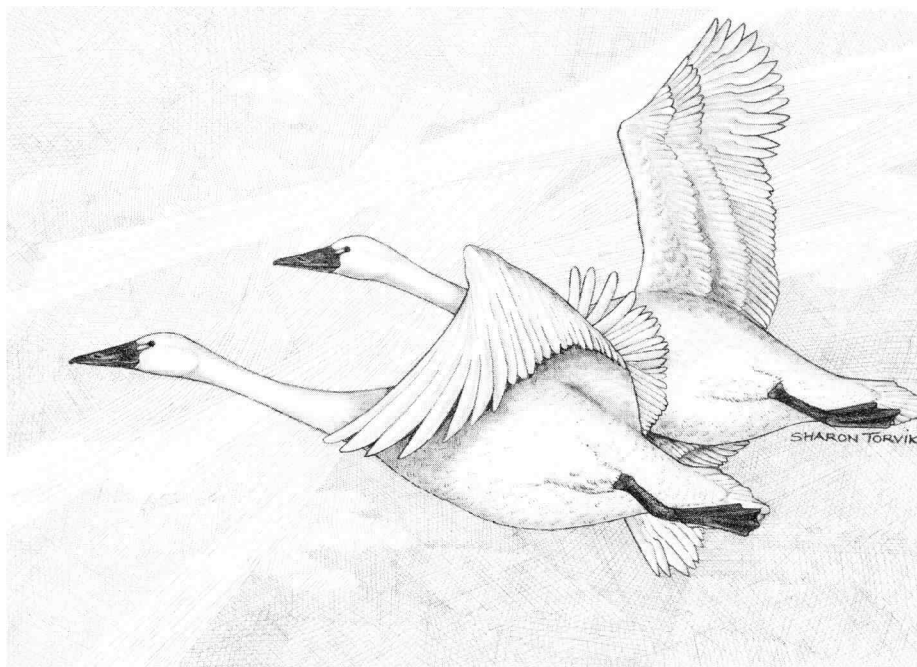
But not always, says Bill Barss who works for the Department of Fish and Wildlife's Marine Region. Try catching and releasing a 15-foot shark, Bill says, if you don't believe so.

Barss was aboard the chartered 85-foot trawler WARRIER II late last summer helping conduct this year's west coast groundfish survey. On the evening of August 31 the samplers captured a 15-foot, 550-pound thresher shark. "While the fish was caught at dinner time," Barss said, "we all wondered who had invited whom to dinner." The crew decided to *carefully* weigh the shark and return it alive to the sea.

The fish was easily identified by its very long tail which was as long as its impressive seven foot body. Thresher sharks have been reported to reach 25 feet in length, Barss said, and reach weights of more than half a ton. But the largest ones are found in tropical waters where they are also more abundant than they are in the cooler waters off our own coast. Threshers are distributed worldwide in warm and temperate seas, and are found as far north in the Pacific as British Columbia.

Threshers feed mainly on schooling fish such as herring, anchovy, sardine and mackerel. They are swift swimmers that habitually feed at or near the surface. It is reported, Barss said, that they circle a school of fish and stun or concentrate prey with thrashing movements of their powerful large tails.

The thresher shark is not listed as dangerous to man, but that applies in the water. On board a boat, Barss says, their size, long thrashing tail and mouth full of razor sharp teeth demand respect, no matter what the shark experts say.



## Whistling Swan

To the sun-worshipper, the thought of Oregon in November is enough to bring on depression. But bird watchers and hunters take a different view because with the rain and gloomy skies come migratory waterfowl by the hundreds of thousands. The flagship of this southbound fleet is the whistling swan.

This big, white bird — known scientifically as *Cygnus columbianus* — may reach an average weight of 16 pounds and sport a six to seven-foot wing spread. A similar species, the trumpeter swan, is larger and far less common in the state. Several thousand whistlers venture through Oregon each fall en route to wintering areas in California. Biologists believe the swan populations are quite healthy. In fact, several western states allow hunting for these birds. However, the whistler is still protected in Oregon.

During the fall and early winter Oregon is a favored stopover for the whistling swan. Willamette Valley waterfowl areas and coastal bays attract a portion of the migrants. But the Klamath Basin on the Oregon/California border and Malheur Refuge in southeastern Oregon host the largest concentrations.

Whistling swans breed in the tundra areas of western coastal Alaska and Canada. Nesting grounds include the Aleutian chain of islands and even areas above the Arctic Circle. In 1982, ornithologists officially recognized that the whistling swan of North America and Bewick's swan of Eurasia were the same species. To reflect this, both names were changed to the single common name — tundra swan. But to most swan fanciers, the traditional names remain.

Swans travel in small flocks and usually use the V formation flight pattern most often associated with the Canada goose. The whistler's wing strokes are slow and relatively flat. Although the name implies otherwise, their call is more like a high-pitched cooing than a whistle.

Whistling swans return to the northern breeding grounds by mid-April and begin pairing off. Nest construction follows: The new couples often dredge a moat around nesting sites by plucking out surrounding aquatic plants then building an elevated platform with the dredged materials. The females lay three to five eggs, and both parents protect the young cygnets until the new arrivals can take care of themselves.

Jim Gladson



# Outdoorsmen Help Wildlife by Installing Guzzlers

In September members of the Eugene Chapter of the Izaak Walton League and Explorer Scout Troop 869 helped install five new watering devices for wildlife in the dry rim country surrounding Alkali Lake in Lake County.

The Bureau of Land Management had purchased four fiberglass guzzlers of a new "parabolic" design, and the Department of Fish and Wildlife added one more. The devices were flown by helicopter to the installation sites by the BLM, as several of them are inaccessible by ground vehicle. The guzzlers collect water from rain and snow fall and store it for use by a wide variety of wildlife. Guzzlers have been found an effective method to improve wildlife habitat in areas where water has been a limiting factor.

Volunteers bolted the guzzlers together and did the excavation needed to put them in place. This winter they will fill with water and will be available for wildlife as needed next summer.

Southeast Regional Supervisor Bob Sayre of the Department of Fish and Wildlife credits Lakeview District BLM personnel Richard Gerity, Walt Devours and Alan Munhall for their cooperation in the project, and members of the Eugene Ikes and Explorer Troop 869 for a job well done. Members of the same groups were also active last year in guzzler installation in another part of Lake County. □

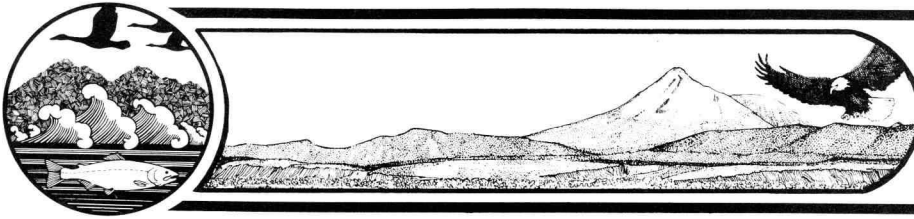


Volunteers prepare to move a fiberglass "parabolic" wildlife watering device into place.



Members of the Eugene Chapter of the Izaak Walton League and explorer scouts from troop 869 helped to assemble and install five new guzzlers in Lake County. The parts were flown by helicopter to the installation sites.

# THE WAYS OF WILDLIFE



*Learning By Experiencing*

## MALES AND FEMALES

In 1972, a plate engraved with this drawing was launched into space aboard Pioneer 10. It is hoped that this picture message will be found by intelligent extra-terrestrials (some call them E.T.'s!). The radiating lines and planets below will help the extra-terrestrials locate our solar system and planet in our galaxy.

The picture of the man and woman will tell the extra-terrestrials what kind of beings launched the spacecraft and that there are two kinds of humans; it will not tell the E.T.'s what these two types are called. If the E.T.'s landed in your backyard, you would of course tell them that we call human males men (or boys) and human females women (or girls).

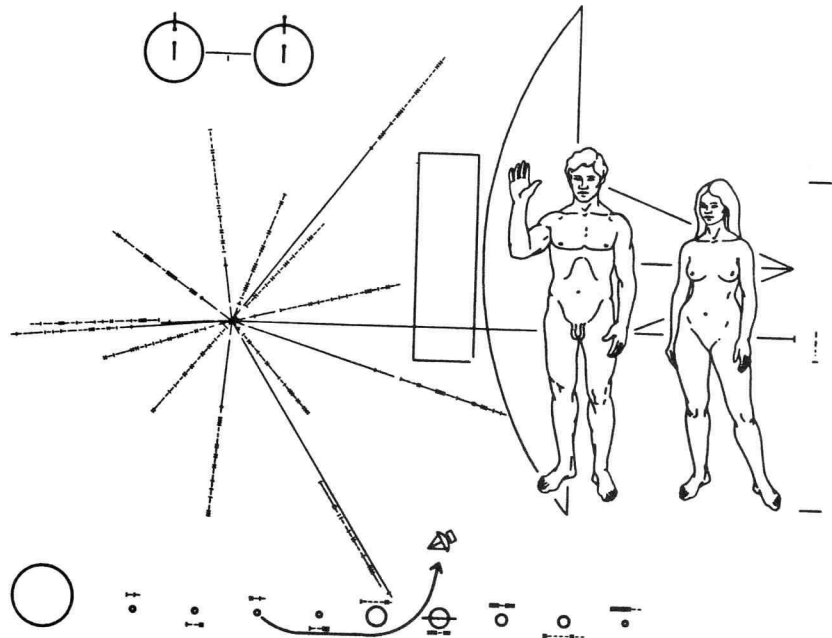
But what if the E.T.'s saw other animals? They would probably ask you what kind of beings these animals are. Could you tell the E.T.'s what they should call the males and females of the animals they see? Are you prepared for such questions?

Adjacent is a list of animals the E.T.'s are likely to see when they land. Test yourself to find out if you are ready for their questions. Using the list on the right, write the letter of the correct name for the male and female of each animal. Some may be used more than once. When you have finished, check your answers below.

*Bill Hastie*

Answer:

Cat P,H  
Deer U,E  
Duck U,E  
Elk O,G  
Fox F,B  
Goose C,L  
Hog R,M  
Horse D,K  
Pheasant Q,E  
Rabbit A,T  
Sheep A,T  
Swan J,S



## Match the Genders

(Thanks to John Campbell of Astoria for this quiz)

	Male	Female		
Cat	_____	_____	A. Buck	L. Goose
Deer	_____	_____	B. Vixen	M. Sow
Duck	_____	_____	C. Gander	N. Ewe
Elk	_____	_____	D. Stallion	O. Bull
Fox	_____	_____	E. Hen	P. Tom
Goose	_____	_____	F. Dog	Q. Rooster
Hog	_____	_____	G. Cow	R. Boar
Horse	_____	_____	H. Queen	S. Pen
Pheasant	_____	_____	I. Ram	T. Doe
Rabbit	_____	_____	J. Cob	U. Drake
Sheep	_____	_____	K. Mare	
Swan	_____	_____		

# More Steelhead Volunteers Needed

By  
Nancy MacHugh  
Steelhead Research Biologist

To effectively manage both the hatchery and wild segments of our steelhead resource, some basic questions must be answered. What percentage of the average of 150,000 steelhead caught annually is of hatchery origin? How does the hatchery to wild ratio of the catch vary between different streams? Do the more than five million smolts the department releases each year provide cost effective benefits? We are in the process of answering these and other questions, and we need the help of many steelhead fishing volunteers.

Since its inception three years ago as a joint effort by the department and the Association of Northwest Steelheaders, the Volunteer Steelhead Scale Program has grown substantially. It focused at first on the collection of winter steelhead scales from coastal streams. The program has since expanded to include both winter and summer steelhead from streams throughout Oregon.

Despite the low catch coastwide last winter, nearly 1,500 scales were received from anglers and district fishery managers. They came from 54 river systems on the Oregon coast and Columbia River tributaries.

In three years the Volunteer Steelhead Scale Program has proven itself a valuable tool. It is helping fishery managers to learn the catch composition in steelhead fisheries without resorting to costly creel survey programs. This basic biological data helps us now and may prove even more valuable in the future.

As more samples are turned in and more seasons of catch are analyzed, the program will continue to

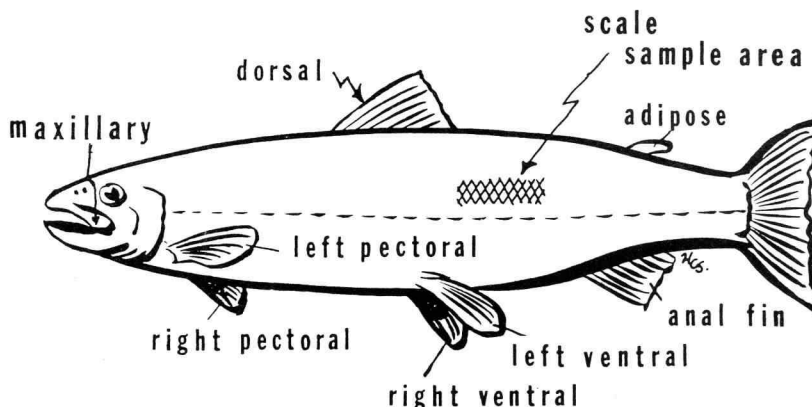
increase in value towards helping the management of our steelhead runs.

Beginning this year, all anglers who put their name and address on scale envelopes will be assigned a personal number, and the information from the scale samples they turn in will be stored on a computer. This will allow us to mail each participating angler a summary of information obtained from the fish they personally caught. In addition, each angler will receive a list of the hatchery to wild ratios in the catch from streams statewide. We are doing this in the hope that better feedback to the angler will stimulate

more participation in the program.

You can easily join this program. Pick up empty scale envelopes and a brochure describing the program from your local Northwest Steelheader chapter, sporting goods store, or department district office. Envelopes and brochures can also be obtained by writing to the Department of Fish and Wildlife, P.O. Box 1628, Corvallis, Oregon 97339.

Next time you catch and keep a steelhead, do something to help future management of the resource . . . send us a scale sample. If you help us, we'll be better able to help you with a better managed fishery. □



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