

The Rogue River Fisheries

Major Causes of Fish Run Decline Reviewed

Downhill Trend Starts When Man Moves Into Area

(Editor's note: This is the eighth in a series of articles on the Rogue river fishery and its management. Today's article is a general account of the factors that have been responsible for the decline of the migratory and resident fish populations in the Rogue drainage.)

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The runs of salmon and steelhead in the Rogue river system today are far below their former population levels. Actually, there are only a few people living who can recall the almost unlimited abundance of these fish before the decline began.

Prior to man's invasion, weather and the amount of spawning gravel were probably the only factors that limited maximum populations. Records show this not to be the case since about 1870, when man began to change the face of the Rogue river valley.

But it was not until the sports fishery became popular in the 1920's did the general public become aware that salmon and steelhead were becoming scarce in the Rogue system. This was over fifty years after the decline actually started. Yet, the Rogue runs today are in far better shape and are better utilized than those runs remaining in many other streams in Oregon and the Pacific Northwest.

Study Rogue's History
If readers would study thoroughly the Rogue's history in respect to its use and development they would understand the causes behind the decline and probably be amazed that any migratory fish remain. Truly, the Rogue salmon and steelhead are deserving of admiration.

Slides in the lower canyon, dams built without fishways, unscreened irrigation ditches and power developments, early mining activities, heavy silt loads, extensive commercial and sports fishing, lack of protective laws and adequate enforcement, and heavy egg-takes suggest that we have heavy reasons of fish in the Rogue to still be present in the numbers we have today.

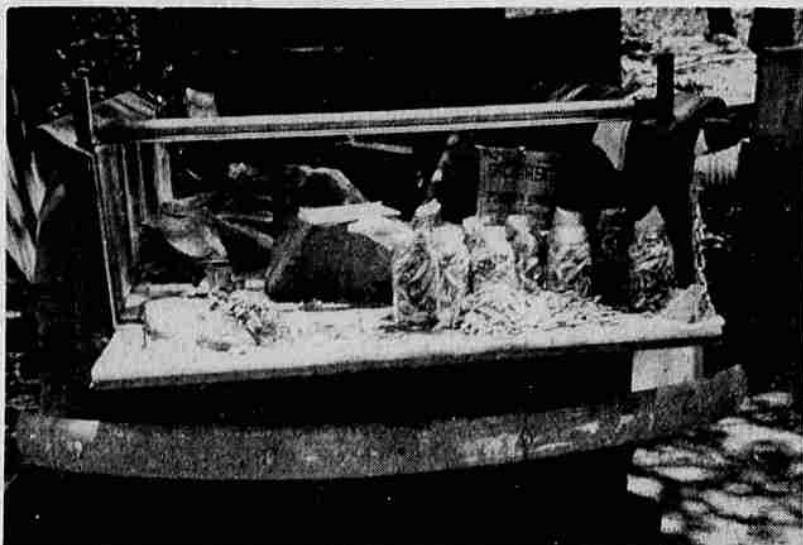
Too many words would be needed to describe in detail all of the factors that influenced the downhill trend, but a few of the major causes are described briefly.

Shortly after the turn of the century a dam was built across the Rogue immediately below the present Cameman bridge at Grants Pass. At this dam, steelhead and salmon had to make a nine-foot jump to pass to upstream spawning areas.

Hamper Runs
The Ament dam between Grants Pass and Savage Rapids seriously hampered the runs for 18 years, with an unsatisfactory ladder in operation during the last five years of the dam's existence. In 1927, the story goes, "some conservation-minded person floated a boatload of dynamite down on the dam. The result—no dam and free passage for salmon and steelhead."

Today, we know that salmon and steelhead that have trouble passing difficult barriers arrive in the headwaters with fungus infections, many dying as a result before they are able to spawn. In the past, these losses must have involved thousands of fish. Recent changes and improvements to fish ladders have eliminated most injuries and resultant losses.

Took Egg Supplies
Because the runs of salmon and steelhead were thought to be inexhaustible, the U.S. bureau of fisheries in the early days took large supplies of eggs, many of which were shipped to all parts of the world. The records of these egg-takes show a decided de-



COLLECTED FISH—Quart jars are filled with small salmon and steelhead which were collected from an unscreened irrigation ditch before the Oregon state game commission began its screening program in 1945. This collection represents 1,465 fish taken from a ditch on the Applegate.

cline and by 1938 all but one of the stations had to be abandoned because so few fish were returning to the racks. General irrigation projects began in 1917 and 1918, but the big developments did not occur until after the drought of 1931 and 1932. Hundreds of ditches were developed, and only a few were provided with screens for the protection of downstream migrant salmon and steelhead. The losses of young fish in these irrigation canals were extremely heavy until 1945 at which time the game commis-

UAW Review Board Praised in Study By College Center

New York — (UPI) — A study published this week praised the work of a review board set up by the United Automobile Workers union to review appeals from some of the union's own decisions.

The report was written by Jack Stieber, director of Michigan State university's labor and industrial relations center; Walter Oberer, University of Texas law professor and a former executive director of the board, and Michael Harrington, a journalist specializing in labor problems.

Increased Awareness
Stieber said the board had brought about "increased awareness and respect on the part of UAW leadership for the importance of due process."

Oberer said guarantees of

Highway Officials Cite Seven Menaces

Washington — (UPI) — The American Association of Motor Vehicle Administrators lists seven types of motorists as "the biggest holiday menaces on the road."

Here are the seven types — and the association's comments on each:

—The Speeder: Going too fast was a contributing factor in 21 per cent of fatal accidents.

—The Drinker: About 10,000 of the 32,000 fatal motor-vehicle accidents involved a drinking driver.

—The Sleeper: Non-collision accidents (involving only one car) accounted for 40 per cent of the fatalities registered in rural areas and 16 per cent in urban areas. Fatigue was listed as a dominant factor in most of these accidents.

—The Weaver: Improper passing is listed as the cause of over 5 per cent of all accidents.

—The Highway Hog: More than 18 per cent of accidents were due to failure to yield right of way.

—The Road Bum: One out of five passenger cars and one out of four trucks safely checked were found in need of maintenance for safe driving.

—The Blinder: Defective headlights is the leading cause for rejects among cars submitted to safety inspections.

Costs Less To Feed A Larger Family

St. Paul, Minn. — (UPI) — While it may not be true that two can live more cheaply than one, the University of Minnesota's Institute of Agriculture says it costs less per person to feed a large family than a small one.

The per person cost of food in a family of five is 5 per cent less than in a family of four. In a family of six, it's 10 per cent less.

sion began its screening program.

For the first four years after completion, the Savage Rapids dam was without satisfactory fish ladders, seriously affecting a complete cycle of the salmon and steelhead runs. In addition, the turbine intakes and pumps took a heavy toll of downstream migrant fingerlings for 35 years before the installation of the linkbelt screens in 1958.

The losses of fish at the Gold Ray and Gold Hill power plants went unobserved for years. Work toward obtain-

ing corrections at these plants has been of recent history. Many studies in the Northwest show that the rise and fall of salmon and steelhead population are directly related to logging of the drainages and the changes that occur in the pattern of season water runoff. Some of the decline of the silver salmon, steelhead, and cutthroat trout in the Rogue system follows this same pattern.

There is little doubt that the complexing of the Rogue basin, with respect to cover and natural stream flows, has changed tremendously over the years. What were once stable tributaries now experience low and warm water flows during the summer months and scouring high waters in winter. With the wild scramble for available water, we are now facing critical shortages, not only in the tributaries but in the main Rogue channel as well.

More Valuable
Today, each salmon and steelhead that escapes to the spawning grounds becomes more valuable than ever. In spite of this, reports indicate that more spring chinook are being foul-hooked in the upper river sections than ever before. For every foul-hooked fish landed, better than four others are lost. Those that are lost usually die before spawning because of the serious wound which becomes infected and kills the fish. Pitchforking and gaffing of spawning salmon and steelhead from tributaries continue at an alarming rate.

Although a few appear in court each year, these flagrant violators are difficult for law enforcement agents to apprehend. In addition, most anglers turn their backs on the practice, and refuse to report or appear against the gaffers, pitchforkers or the foul-hookers.

The increased numbers of people that fish the Rogue annually, combined with the public's need for more outdoor recreation, are creating a fishing pressure problem.

Smaller Supply

As smaller supply of fish and fishing waters in the valley must be distributed among a larger number of anglers. The problem becomes even more acute in southern Oregon where anglers insist on more fish per angler day to be satisfied than in any other section of Oregon.

The sports fishing industry has attracted thousands of residents to the Rogue basin annually and it entertains large numbers of tourists each year. From three to five million dollars are spent annually in the pursuit of the Rogue fishery — dollars on which the basin's economy is in part dependent.

Many river systems have completely lost their migratory salmon and steelhead runs. The disappearance and decline follow a pattern that is related to the rate and kind of development. With valuable segments of the Rogue's resources still intact, we have a great opportunity to benefit from the mistakes made elsewhere. Public agencies and much of the public at large are truly concerned about the fishery in the Rogue river system, and they are striving to work out a program of orderly development.

Foresters Studying European Pine Moth

Seattle (Science Service) — Foresters of the U. S. forest service and the Washington state department of natural resources have begun an experimental program aimed at eradicating the European pine shoot moth, an insect whose larvae likes to chew on tender pine shoots, by fumigating the larvae.

The moths have begun infesting ornamental pines in parts of the Seattle area and could spread to lumber-producing pines in eastern Washington if not checked. Infected plants are covered with a plastic covering and methyl bromide gas is pumped into the enclosed area. The larvae do most of their damage in the spring. They chew the new pine shoots, which can damage shrubs without killing them. Distorted and dead ends of branches are evidence of attack.

United States Army helicopter pilots help out as cowboys during the annual roundup of buffaloes on the Wichita, Kan., wildlife refuge.

Moon Roundtrip, \$10,000

Cape Canaveral — (UPI) — Looking for a vacation that's different? How about a round-trip to the moon, or a one-way flight to Mars for only \$10,000?

Some American scientists predict that programs already underway to tame the unseen pieces of energy that make up the universe may someday make space travel as simple as air travel for Mr. Average Citizen.

The day may be less than a few decades in the future — and if this all sounds far-fetched, remember there was a time when predicting that jet planes would flit about the sky at faster than the speed of sound would not have been considered sane conversation.

Despite some startling accomplishments, the world still is in the gaslight era of space exploration — with "horse-and-buggy" chemical rockets that, at best, can lift only small payloads (anything under 10,000 pounds is considered small) into the skies.

The big dream is exploring and possibly colonizing the moon and planets. But human beings are delicate creatures, and the sheer weight of equipment needed to protect them would impose severe problems in getting sufficient rocket power.

Most scientists consider chemical rockets — solid or liquid fueled — almost out of the question. Instead, they are looking to the energy of atoms, ions and photons — the invisible "building blocks" of the universe — for power for interplanetary flights.

Nuclear Rover
The United States already has begun development of a nuclear-powered rocket called Rover which it hopes to test in space in 1965. Rover will be boosted by a chemical rocket, the 1.5 million-pound-thrust Saturn.

In the nuclear engine, hydrogen will be heated by a reactor and rammed through a thrust chamber. The result, says Maj. Gen. Don R. Osterlander, Air Force director of launch vehicle programs, is that Rover "can potentially double the thrust" of the most powerful liquid rocket.

This means simply that a nuclear rocket will need less fuel for more power. Rover's first flights will test an atomic system that American scientists are seriously considering using to land a manned spacecraft on the moon and return a 10,000-pound payload to earth.

Engine Need Drops
Once in space, the need for gigantic rocket engines immediately drops off since the pull of gravity has been overcome and air friction is practically nil. Unless you are in a hurry, your spacecraft can use another type of propulsion — ion, plasma or photon.

Osterlander explained that ion or plasma systems rely on the speeding up of electrically-charged particles, rather than the physical expansion of hot gases, to get push. Photon systems would use the radiant pressure of light to drive a spacecraft on its way.

In contrast to the mighty power of chemical rockets, these "electrical" systems generate less push than the pressure of your little finger on a set of scales. But at interplanetary distances, a small but steady thrust can build up near-fantastic speeds.

The National Aeronautics and Space Administration (NASA) has ordered a test model of a small ion engine it said could send spacecrafts soaring among the planets. The Hughes Aircraft Co., of Culver City, Calif., is expected to have the engine ready sometime in 1961.

The government also has awarded Electro-Optical Systems Inc. of Pasadena, Calif., a \$1,190,000 contract to develop a tiny ion engine to control the direction of spacecraft, which would need only a small push to change course.

M. W. Hunter, a space systems engineer for the Douglas Aircraft Co. of Santa Monica, Calif., has taken things a step further and proposed what he called "the nuclear solution to the high cost of space travel."

Same Cost
Hunter suggested that refined nuclear rockets working on the Rover reactor principle, built to be used for at least 100 trips, "would be able to haul cargo and people around the solar system for essentially the same price and

degree of convenience that now applies on the surface of this planet."

In his calculations, "passenger costs are of the order of \$10,000 per roundtrip to the moon and the same price for a one-way trip to Mars," although Hunter explained this operation would be "limited to the tourist season."

He said further improvements in nuclear engines could reduce these figures to \$1,000 per roundtrip to the moon and \$3,000 one-way seasonal fare to Mars, "although the year-round price is still well over \$10,000 per passenger."

But even at that, \$10,000 is little more than some people pay these days for round-the-

world trips. And your travel agency may offer one of those "go now-pay later" deals—except, perhaps, on Hunter's one-way flight to Mars.

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Fellowship in Journalism Set At Columbia

New York — (UPI) — Columbia University President Grayson Kirk has announced establishment of a new advanced fellowship program in international reporting at the university's graduate school of journalism.

Kirk said the project will provide an opportunity for outstanding mass media reporters to spend an academic year at Columbia acquiring specialized knowledge for careers in reporting and interpreting international affairs.

One Year's Tuition
It is distinct, he said, from the recently established international fellow program, which is designed to give younger students in various Columbia professional schools improved backgrounds for careers in the international community.

The new fellowships cover one year's tuition and fees and provide grants of up to \$4,400 for travel and living expenses for the nine-month academic year.

At least six fellows will be accepted for the first year of the program, which begins in September, 1961.

Scientists Develop New Feed 'Wringer'

San Jose, Calif. — (UPI) — Scientists at Food Machinery and Chemical Corp. have developed new equipment that can literally wring water out of fresh fruit, vegetables, meat and fish without changing the shape or size of the product.

Food processed in this way will keep without refrigeration and weighs only a fraction of its original volume. And the product can be restored to its fresh state by a quick soaking in water.

The company researchers explain that the new equipment dehydrates foods by a freeze-drying principle.

Lady Cops Have Names Written on Pavement

Scituate, Mass. — (UPI) — Out-of-town motorists, passing through Scituate, are puzzled by names of girls on the pavement at various intersections.

Dotty, Peg, Rose and Helen — painted in 18-inch letters inside large ovals — designate the spots where trim-uniformed lady traffic cops are on duty to safeguard children going to and from school.

Police Chief William Kane says the idea of personalizing the women traffic guardians has proved popular with the townsfolk.

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